Accountability in One-party Government: Rethinking the Success of Chinese Economic reform

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Version: June, 2010

[Abstract] Most people would expect that autocracy have significantly worse economic performances than democracy. However, the story is incomplete, because some autocracies also achieve success in growth and development, and their governments behave as accountable, too. Modern China is a case in point. Some scholars suggest that the lines of accountability in Chinese political system is a kind of "reciprocal accountability" between the top leader and the selectorate. This paper builds a theoretical model based on the selectorate theory to explain why Chinese central government willing to adopt economic-enhancing policies during the reform era in the absence of regularized election. We will consider a world in which incumbent leader may be either congruent or noncongruent, and real discipline to the noncongruent leader will be created if the selectorate’s grip on power is not too dependent on the specific leader. However, the "reciprocal accountability" cannot explain why China does not become kleptocracy or clientelism which are commonly seen in countries with China’s development level. This motivates us to add citizens as the third player into the model. We find that, facing the threat of revolution, the government will adopt growth-enhancing policies, using high economic growth to compensate unequal income distribution, as a strategy to legitimize their ruling and to resolve potential social unrests.

Key Words: accountability, selectorate, autocracy, democracy
1. INTRODUCTION

One fundamental question in political economy is how political institutions can affect economic outcomes and growth. The focal point of the existing literature has been democratic institutions where electoral competition is the main mechanism to restrain the behavior of politicians. Although most of human history was dominated by nondemocratic regimes and more than half of the countries now on earth are ruled by autocratic governments, the research of how nondemocratic institutions work has stagnated for a long time. Most people would probably expect that autocracy have significantly worse economic performances than democracy. However, this is not true for all autocratic regimes, especially in the postwar era. Some autocracies have also achieved success in growth and development; and some of them, including Singapore under Lee Kwan Yew, South Korea under General Park or China since the economic reform, are even among the countries with the highest growth speed in the world (Acemoglu 2009, ch.23). But at the mean time, there are more unsuccessful autocratic regimes, like some sub-Saharan African countries, their economy have been either stagnant or deteriorated for a long time. The first motivating question of this research is why some autocratic governments adopt good (especially growth-enhancing) policies and why others don’t?

China’s reform since 1978 has been widely regarded as a success. The country has maintained an average growth rate of 9.7 percent, the per capita GDP has increased from 250 USD at the end of 1970s to 3,330 USD (current prices) in 2008 and the number of people in absolute poverty has decreased from early 1980s figure of 300 million to 80 million today (NBS 2009). There have been a large number of researches on the economic growth in China. Many researches attribute China’s remarkable economic growth in part to the country’s fiscal and political decentralization. Fiscal decentralization is said to have generated “fiscal incentives” for the local governments to promote economic growth, which results in high investment and hard budget constraint (Oi 1992; Montinola et al. 1995; Qian and Weingast 1997; Qian and Roland 1998). Political decentralization is thought to have stimulated local policy experiments (Cai and Treisman 2006; Xu and Zhuang 1998; Qian and Weingast 1996). However, the role of political economy has been omitted from the literature. It ignores the role central government played in the reform process: Of course local actors were important in the story of Chinese reforms, but they were important as actors in a game directed from Beijing (Cai and Treisman 2006). Even if one dose not consider the huge amount of direct investment made by the central government, one should be aware that it is the central government who made the right decision to decentralize the country. The second motivating question of this research is: why and how did Chinese central government adopt good policies and choose the appropriate road to reform? Under what circumstances can the one-party government works well? This research is not intended to defend autocracy, but hope to gain further insights into the institutional basis of good government.

Existing literature on political economy of autocracy suggest that accountability in autocracy come from the "selectorate" comprising insiders who have the ability to depose a leader. Autocratic government works well when the power of the selectorate dose not depend on the existing leader remaining in office (Besley and Kudamatsu 2007). One important contribution of Besley and Kudamatsu’s model is that they introduce incomplete information into the game played between the

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1 A term adopted from British parliamentary politics to define the group within a political party that has the effective power to choose leaders (Shirk 1993, P71).
autocrat and selectorate. However, their model was attracted from an ethnically divided society, such as some sub-Saharan African countries, in which individuals have specific gains associated with their group identity. Bueno de Mesquita et al. (2003) who are the first to model accountability under non-democratic framework conclude that the larger is the selectorate, whose support is necessary for the incumbent politician to stay in power, the higher the level of public goods provided by the government. In democracy, the selectorate contains all the citizens in the society, hence, democracy increases public goods provision. So far, the "selectorate theory" has been the best theory that can explain the political economy behind the policy choices in autocratic governments. I will, therefore, use the "selectorate theory" as the framework for my analysis. However, my model is used to explain the political economy of China, so the conflicts between different ethnic groups will no longer exist in the model, instead, "reciprocal accountability" between the selectorate and the leader is the highlight of my basic model.

Some scholars have studied political institutions in China. According to Susan Shirk, the lines of accountability in Chinese political systems is a kind of "reciprocal accountability" in that “top leaders of the party appoint the subordinate officials of the party and government”, and in turn, “the officials in the Central Committee choose (or at least ratify the choice of) the leaders”. “Government officials are both the agents and constituents of the party leaders; local officials are both the agents and constituents of the central leaders. Officials hold their positions at the pleasure of the party leadership, but party leaders hold their positions at the pleasure of the officials in the selectorate” (Shirk 1993, P83). We can easily find evidences of this kind of “reciprocal accountability” during the reform progress: (1) Central ministries and state-owned sectors hold powerful positions inside the party and have vested interests in the central-planned economic system, so dual-track price system was introduced in the first decade of the reform to compensate their private benefits from the prereform system. The dual-track price system although had brought some improvements (Lau, Qian and Roland 1997), but price differences, created spaces for rent seeking. Enterprises and government officials who controlled the quotas could easily get rich by selling their quotas to other enterprises and individuals. At the end of 1980s, guan-dao, or official profiteering, became a popular phrase, creating deep public resentment. (2) Military plays an important role in the central committee, so they are also doled out a piece of the cake from the reform. There were many business operations run by the military, the policy and even the courts for the 1980s and much of the 1990s (Yang 2004). (3) Local governments, another important group inside the party, benefit more from decentralization and economic reform. The motivation behind decentralization promoted by Deng Xiaoping and the reformists in the party could be partly due to "reciprocal accountability" consideration. Because they want to get the support from local officials to overcome the resistance of the central bureaucrats toward reform. As a result, TVEs (Township and Village Enterprises) boomed during the first phase of the reform — although they had increased investment and employment, became the place where local officials can extract and hide their rents.

One may wonder could "reciprocal accountability" lead to good policies? My basic model will show that under certain circumstances, as long as the risk of being excluded from the new challenger’s coalition is not too high, the selectorate will be able to restrain the incumbent leader to adopt growth-enhancing policies. But this will not be an improvement for all the members in the society, because the leader will only distribute the fruit of the reform to the selectorate as the exchange for
their loyalty and support. Thus, the logic of “reciprocal accountability” could turn China into the kleptocracy or clientelism commonly found among countries with China’s level of economic development. At the end of 1980s, rampant corruption combined with high inflation finally drove people onto the street in the spring of 1989, which became the chilliest moment of modern Chinese history. After the Tiananmen Incident, the Chinese Communist Party (CCP) had faced the biggest challenge ever since the Culture Revolution, challenges from both domestic and abroad. At the beginning of the 90s, pessimism prevailed over the future of the economic reform. At the beginning of the 1990s scholars suggested that corruption in China was becoming systemic and some placed China right in the league of countries such as Philippines and Indonesia. One representative opinion was that the people who enjoyed the vested interests were CCP insiders, so this made further changes to the system very difficult (eg. Murphy, Shleifer and Vishny 1992). My basic model based on “reciprocal accountability” will make the same prediction as well: as the society has already settled into an equilibrium state where the selectorates enjoy high private gains from the old system, they do not have any incentives to reform, thus any attempts to change the system away from this equilibrium state would be extraordinary difficult. But the CCP proved this prediction wrong. Dual-track prices began to converge in the early 1990s; economic activities by the army and government branches were divested; oversized bureaucratic organizations were streamlined; SOEs (State-owned enterprises) and TVEs owned by local governments were privatized; reinforcement of anticorruption was adopted. Another shift in the reform policy was from decentralization towards remaking a strong central government (Yang, 2004). Updated articles in political science, tend to call the current Hu Jintao’s regime “Populist Authoritarianism” (Tony Saich, 2009) in the sense that “Policy has become more people-centered with populist gestures combined with attempts to tighten control over state and society in the name of preserving social stability as the key foundation for continued economic growth.” The above facts suggest that the CCP was not held back by vested interests. Instead, it had the resolution to eliminate the privileges enjoyed by its own insiders (Yao, 2009). Notice that the economic growth rate also reached its peak in the 2000s but not in the first part of the reform. We cannot relate this shift in policies and change of the ruling patterns to the “reciprocal accountability” political institution arrangements. If any, there appears to have been the pressure from the opposition outside the regime — protesting students and workers in 1989 and other potential social unrest afterwards. The logic beneath the changing patterns of governance in China seems very similar to Spain under Franco’s regime. Besley and Kudamatsu listed Spain under Franco as a successful autocracy which does not match the theoretical predictions. "Weirdly enough, the logic of successful democracy in our model seems to apply here, if not through regularized elections but through strikes and protests. Alternatively, Franco might have been a good policy maker in the terms of our model" (Besley and Kudamatsu 2007, P41). This inconsistency between the real world and the predictions of existing theory motivates us to add a third player — the citizens — into the basic model. And we find that, in existence of the commitment problem, the government will adopt growth-enhancing policies, using high economic growth to compensate unequal income distribution, as a strategy to legitimize their ruling and to resolve potential social unrests.

The remainder of the paper is organized as follows. The next section presents the basic model with two players, say, the incumbent leader and the selectorate. Section three analyzes the model, describes the equilibrium and contains a discussion on
the interpretation of the model and its results. Section four add the citizens into the basic model, who have the ability to undertake a revolution if the revolution constraint binds. Finally, the last section concludes.

2. THE GAME WITH ONLY TWO PLAYERS — THE LEADER AND THE SELECTORATE

The basic game is a two-period political-agency model with incomplete information played between the incumbent leader and the selectorate. Contrast to the standard political-agency model in democracy (Besley 2006, chapter 3; Berganze, 2000; Maskin and Tirole 2004), there is no regularized election, so the incumbent will be removed from office only if the selectorate choose to depose the leader. We will consider a world in which politicians may be either congruent or noncongruent and, especially, We will focus on the equilibrium that can make the noncongruent politicians to implement a costly but growth-enhancing action that benefit all citizens. It also differs from the model in Besley and Kudamatsu (2007) in that there is no ethnical division inside the citizens.

The world’s population of all the people is normalized to 1. Let \( \phi \leq 1 \) be the total number of the selectorate (\( S \)). The Party leaders in a communist system are chosen not by an electorate but by what we might call a "selectorate". The rest of the people who do not have the power to choose leaders are called citizens (\( Z \)), whose number is \( 1 - \phi \).

In each period, the (female) incumbent leader (\( L \)) makes two policy decisions. The first is a discrete "general interest" policy denoted by \( e_t \in \{0, 1\} \). This could be thought of as a growth-enhancing decision for the society which requires the incumbent leader to forego private benefits such as bribery by a special interest. The payoff to the people and the leader from this policy depends on the state of the world, \( \theta_t \in \{0, 1\} \), which is only observed by the leader. Nature chooses the state of the world, with \( P(\theta_t = 0) = P(\theta_t = 1) = \frac{1}{2} \) (this probability is commonly known). The people and the leader receive a payoff \( \Delta \) if \( e_t = \theta_t \) and a payoff 0 if \( e_t \neq \theta_t \). The second policy decision is a "distributive policy" denoted by \( \sigma_t \in [0, 1] \) which is the fraction an exogenous revenue \( X \) that the leader spends on patronage for the selectorate. \( X \) could be thought of as the revenue of the society (not include producers’ capital goods). In the extreme case, \( \sigma_t = 1 \).

The type of the incumbent leader is either congruent or noncongruent, \( T_t \in \{C, N\} \), and with probability \( \pi \) (this probability is also commonly known) that the leader is congruent. A congruent leader gets the payoff 0 by choosing \( e_t \neq \theta_t \). We think of this as having a moral stance so that they get no utility from earning rents. Hence, a congruent leader will always choose the growth-enhancing policy in the interest of the whole society. A noncongruent leader gets a private benefit \( r_t \) from picking \( e_t \neq \theta_t \), where \( r_t \) is drawn independently from a distribution whose cumulative distribution function is \( G(r_t) \) with \( E(r_t) = \pi \), \( G(\Delta) = 0 \), and \( G(r_t) > 0 \) for \( r_t > \Delta \).

At the end of the first period, the (male) representative member (\( S \)) of the selectorate only observes his utility in that period and, on the basis of this information, decides whether to support the leader or not. If the selectorate support the leader, then the leader still hold office in the second period with \( T_2 = T_1 \). If the selectorate decide to subvert the authority of their leader and want to oust her from power, they succeed automatically, as leader with no basis of support cannot survive. When the leader is deposed by her own supporters, other members of the selectorate that are
not in power will find it easier to use this opportunity to grab power. After winning the fierce contests for power, a new challenger enters the office and in order to hold on power she needs to form a new selectorate with minimal size of $\phi$. Suppose she randomly picks up the members of the new selectorate from the pool of the whole population. So if the representative member of selectorate deposed the incumbent leader in the first period, he then would only have a probability of $\phi$ to be included in the new coalition of the challenger.

The utility function of the representative member $(S)$ of the selectorate in $t \in \{1, 2\}$ is

$$U^S(e_t, \sigma_t, \theta_t) = \begin{cases} \Delta + \frac{\sigma_t X}{\phi} & \text{if } e_t = 1 \text{ and } \theta_t = 1 \\ \frac{\sigma_t X}{\phi} & \text{if } e_t = 1 \text{ and } \theta_t = 0 \\ \frac{\sigma_t X}{\phi} & \text{if } e_t = 0 \text{ and } \theta_t = 1 \\ \Delta + \frac{\sigma_t X}{\phi} & \text{if } e_t = 0 \text{ and } \theta_t = 0 \end{cases}$$

The utility function of the congruent politician $(C)$ is

$$U^C(e_t, \sigma_t, \theta_t) = U^S(e_t, \sigma_t, \theta_t)$$

The utility function of the noncongruent politician $(N)$ is

$$U^N(e_t, \sigma_t, \theta_t) = \begin{cases} \Delta + \frac{\sigma_t X}{\phi} & \text{if } e_t = 1 \text{ and } \theta_t = 1 \\ r_t + \frac{\sigma_t X}{\phi} & \text{if } e_t = 1 \text{ and } \theta_t = 0 \\ r_t + \frac{\sigma_t X}{\phi} & \text{if } e_t = 0 \text{ and } \theta_t = 1 \\ \Delta + \frac{\sigma_t X}{\phi} & \text{if } e_t = 0 \text{ and } \theta_t = 0 \end{cases}$$

If the leader is removed from office, she receives a period two payoff of zero.

Finally, all the players maximize the discounted sum of their expected utility in the two periods (one util in the second period is worth $\beta < 1$ in the first period).

The timing of the model is as follows:

1. Nature determines $(\theta_1, r_1)$ and whether the period one leader’s type is congruent or noncongruent. These are private information to the leader.
2. The leader chooses the policy vector $(e_1, \sigma_1)$ and period one payoffs are realized.
3. Members of the selectorate decide whether to retain the incumbent leader.
4. If the policy maker is ousted from office, a new challenger from the selectorate will enter office. Nature determines whether the new challenger is congruent or noncongruent. Then the new challenger will form her own coalition and, members of the selectorate who deposed the incumbent leader in the first period would only have a probability of $\phi$ to be included in the coalition of the challenger.
5. Nature determines $(\theta_2, r_2)$.
6. The period two leader chooses $(e_2, \sigma_2)$ and period two payoffs are realized.

Let $\lambda^N(\theta_1, r_1)$ be the probability that, in the first period, the noncongruent leader implements the right general interest action i.e. $e_1 = \theta_1$, given that the state of the world in that period was $\theta_1$, with $\theta_1 \in \{0, 1\}$, and the realization of the random variable $r_1$.

Let $\rho(\delta)$ be probability that the representative selectorate retains the incumbent leader, given that in the first period he obtained an payoff equal to $\delta \in \{0, \Delta\}$ from the general interest policy.

The definitions used in the game and the rest of the paper are summarized in the following table:
<table>
<thead>
<tr>
<th>Symbol</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>the incumbent leader</td>
</tr>
<tr>
<td>S</td>
<td>the selectorate</td>
</tr>
<tr>
<td>Z</td>
<td>the citizen</td>
</tr>
<tr>
<td>( \phi )</td>
<td>total number of the selectorate, ( \in [0, 1] )</td>
</tr>
<tr>
<td>e</td>
<td>policy decision on the general interest policy, ( \in [0, 1] )</td>
</tr>
<tr>
<td>( \sigma )</td>
<td>policy decision on the distributive policy, ( \in [0, 1] )</td>
</tr>
<tr>
<td>( \theta )</td>
<td>the state of nature, ( \in [0, 1] )</td>
</tr>
<tr>
<td>2</td>
<td>payoff from the general interest policy if ( e = \theta )</td>
</tr>
<tr>
<td>( \Delta )</td>
<td>exogenous revenue of the society</td>
</tr>
<tr>
<td>T</td>
<td>the type of the incumbent leader, ( \in {C, N} )</td>
</tr>
<tr>
<td>C</td>
<td>the type of the leader is congruent</td>
</tr>
<tr>
<td>N</td>
<td>the type of the leader is noncongruent</td>
</tr>
<tr>
<td>( \pi )</td>
<td>prior probability that the leader is congruent</td>
</tr>
<tr>
<td>r</td>
<td>rent the leader can extract</td>
</tr>
<tr>
<td>G(( r ))</td>
<td>cdf function of the rent</td>
</tr>
<tr>
<td>( \tau )</td>
<td>expected value of the rent</td>
</tr>
<tr>
<td>( \beta )</td>
<td>the discount factor</td>
</tr>
<tr>
<td>( U^S(e_t, \sigma_t, \theta_t) )</td>
<td>the utility function of the selectorate</td>
</tr>
<tr>
<td>( U^C(e_t, \sigma_t, \theta_t) )</td>
<td>the utility function of the congruent leader</td>
</tr>
<tr>
<td>( U^N(e_t, \sigma_t, \theta_t) )</td>
<td>the utility function of the noncongruent leader</td>
</tr>
<tr>
<td>( U^Z(e_t, \sigma_t, \theta_t) )</td>
<td>the utility function of the citizen</td>
</tr>
<tr>
<td>( \lambda^N(\theta_1, r_1) )</td>
<td>probability that the noncongruent leader implements ( e_1 = \theta_1 )</td>
</tr>
<tr>
<td>( \delta )</td>
<td>payoff selectorate get from the general interest policy, ( \in [0, \Delta] )</td>
</tr>
<tr>
<td>( V^S )</td>
<td>expected continuation payoff of the selectorate</td>
</tr>
<tr>
<td>( \rho )</td>
<td>probability that the selectorate retains the incumbent leader</td>
</tr>
<tr>
<td>( \mu )</td>
<td>the cost of revolution</td>
</tr>
<tr>
<td>( \alpha )</td>
<td>probability that the citizens initiate a revolution</td>
</tr>
</tbody>
</table>

3. ANALYSIS

The equilibrium concept to be employed is (pure strategy) perfect Bayesian equilibrium, where this concept differs from most other equilibrium concepts in that a perfect Bayesian equilibrium explicitly characterizes the beliefs of the players concerning the history of play at any point in the decision making process according to Bayes rule. This requires that, in every period, each type of incumbent leader behaves optimally given the contest rule in place. Members of the selectorate use Bayes rule to update their beliefs on the type of the period one incumbent leader accordingly and decide optimally whether to subvert the leader at the end of period one.

We will solve the game backwards.

3.1. Equilibrium in the second period

In the second period, both types of the incumbent leader will choose to implement the policy according to their short term preferences. This implies that in period two, a congruent incumbent will choose \( e_2 = \theta_2 \); while a noncongruent politician will choose \( e_2 = 1 - \theta_2 \). In terms of the distributive policy, both types of the leader will choose \( \sigma_2 = 1 \), i.e giving the biggest patronage she can to the...
selectorate (This is obvious, because the leader’s interest is in the same line with the selectorate on the distributive policy).

3.2. Equilibrium in the first period

3.2.1. Choices of the Selectorate

Next we derive the conditions under which the selectorate will choose to retain the incumbent leader i.e. $\rho(\delta) = 1$ or subvert her authority i.e. $\rho(\delta) = 0$. Given the period two policy choices, the selectorate will choose to support the incumbent leader if and only if the expected continuation payoff from retaining the incumbent is greater than the expected continuation payoff from subverting her.

Let $V^S(\rho = 0)$ be the expected continuation payoff for the selectorate if they subvert the incumbent leader.

$$V^S(\rho = 0) = \pi \Delta + \phi \cdot \frac{X}{\phi} + (1 - \phi) \cdot 0 = \pi \Delta + X \quad (1)$$

As the type of the newly picked up leader is unknown, she will produce $\Delta$ with probability $\pi$ and, distribute all the social revenue to the selectorate. But only with probability $\phi$ that the member of the selectorate who ousted the leader is able to be included in the new selectorate formed by the challenger and get the patronage $\frac{X}{\phi}$ in the second period.

Let $V^S(\rho = 1)$ be the expected continuation payoff for the selectorate if they support the incumbent leader.

$$V^S(\rho = 1) = P(C|\delta)(\Delta + \frac{X}{\phi}) + (1 - P(C|\delta)) \frac{X}{\phi} = P(C|\delta)\Delta + \frac{X}{\phi} \quad (2)$$

where $P(C|\delta)$ is the selectorate’s posterior belief on the incumbent leader is congruent given that in the first period he obtained an payoff equal to $\delta \in \{0, \Delta\}$ from the general interest policy.

The selectorate will retain the incumbent leader only if:

$$V^S(\rho = 1) \geq V^S(\rho = 0) \quad (3)$$

This implies,

$$P(C|\delta)\Delta + \frac{(1 - \phi)}{\phi} X \geq \pi \Delta \quad (4)$$

Note that when the selectorate is indifferent between supporting or subverting the incumbent, he always chooses to support the incumbent.

Moreover, $P(C|\delta)$ can be derived using Bayes rule.

$$P(C|\delta = \Delta) = \frac{P(C)P(\delta = \Delta|C)}{P(C)P(\delta = \Delta|C) + P(N)P(\delta = \Delta|N)} \quad (5)$$

$$P(C|\delta = 0) = \frac{P(C)P(\delta = 0|C)}{P(C)P(\delta = 0|C) + P(N)P(\delta = 0|N)} \quad (6)$$

Remark 1. The Selectorate will support the incumbent Leader if and only if (4) holds.
3.2.2. Choices of the incumbent leader

Given the condition in remark 1, there are two possible situations.

**Situation 1**: When \( \frac{1-\phi}{\phi} X \geq \pi \Delta \) In this situation, (4) always satisfied, the selectorate is completely loyal to the leader because they will always support the leader no matter what kind of general interest policy choice she had made. The noncongruent leader, knowing that she could always obtain support will choose actions that maximizing her short term utility, that is, \( \lambda^N(\theta_1, r_1) = 0 \) and \( \sigma = 1 \).

This could be the case if the size of the selectorate, \( \phi \), is sufficiently small. Why small selectorate can lead to loyalty? Suppose the selectorate defect the leader by switching allegiance to a challenger, then the challenger has the opportunity to form a new selectorate. But the defectors cannot be certain that he can be included in the new selectorate, for the challenger will only draw \( \phi \) members from the population. So there is a risk associated with defection which involves the chance of exclusion. As the size of the selectorate becomes smaller, the challenger is less likely to need the support of any particular individual when forming her new selectorate. Therefore, the smaller the size of \( \phi \), the riskier defecting becomes. "The risk of exclusion from a challenger’s long-term winning coalition drives loyalty to the current leader. Not surprisingly, leaders have tried to choose followers with the greatest risk of exclusion because they are the most loyal" (Bueno de Mesquita et al. 2003, P66). This point could explain why ancient Chinese emperors came to rely on eunuchs. The eunuchs were absolutely loyal to the emperor, because they were not accepted by the rest of the society; the emperor, therefore, was their sole support. We can also find the same kind of evidence during the Chinese Culture Revolution. During this era, Mao Zedong had absolute power in China. He only relied on small selectorate such as the Gang of Four which included his wife Jiang Qing and three of her close associates, and man like Hua Guofeng who was unconditionally loyal to him. Although Mao had made many serious wrong decisions, the small selectorate never had the thought to remove Mao. This was because their hold on power was dependent on Mao. After Mao’s death, the Gang of four was arrested and Hua Guofeng was removed from his position of General Secretary.

Small value of \( X \) also helps the condition that the selectorate always support the incumbent to hold. This means if the total revenue of the society is more salient compares to the gain from the general interest policy, then the selectorate do not want to remove the leader. That is why we can see natural resource curse in some kleptocratic polities, where certain kinds of resources abound. The governments there do not care about developing the economy, instead, they focus on ravening the resource.

Last but not the least, the probability of the incumbent being congruent, \( \pi \), also plays a role. If the challenger is expected to be as bad as, or, even worse than the incumbent, the selectorate would not have the resolution to defect the leader, plus defecting bears the risk of exclusion.

**Proposition 1.** When \( \frac{1-\phi}{\phi} X \geq \pi \Delta \), \( \exists a PBE \) where \( \rho(\delta) = 1 \), \( \lambda^N(\theta_1, r_1) = 0 \), \( \sigma = 1 \).

**Situation 2**: When \( \frac{1-\phi}{\phi} X < \pi \Delta \) When the condition in situation 1 does not hold, in order to find out the behavior of the incumbent leader, we need to compare her payoffs from congruent and noncongruent actions. If the noncongruent leader
stays in power, her expected two period payoff is $r + \frac{X}{\phi}$. If she is removed from office, then she will get a payoff 0.

Let $EU^N(\lambda = 1)$ be the noncongruent leader’s expected utility from choosing growth-enhancing action in period one i.e. $\lambda^N(\theta_1, r_1) = 1$.

$$EU^N(\lambda = 1) = \Delta + \frac{X}{\phi} + \rho(\Delta)\beta(\bar{r} + \frac{X}{\phi}) \quad (7)$$

where $\rho(\Delta)$ is the probability that the incumbent leader will stay in office if she produces a payoff $\delta = \Delta$.

Let $EU^N(\lambda = 0)$ be the noncongruent leader’s expected utility from choosing growth-enhancing action in period one i.e. $\lambda^N(\theta_1, r_1) = 0$.

$$EU^N(\lambda = 0) = r_1 + \frac{X}{\phi} + \rho(0)\beta(\bar{r} + \frac{X}{\phi}) \quad (8)$$

where $\rho(0)$ is the probability that the incumbent leader will stay in office if she produces a payoff $\delta = 0$.

It is easy to see the noncongruent leader will choose $\lambda(\theta_1, r_1) = 1$ if and only if:

$$EU^N(\lambda = 1) \geq EU^N(\lambda = 0) \quad (9)$$

that is,

$$r_1 \leq \Delta + [\rho(\Delta) - \rho(0)]\beta(\bar{r} + \frac{X}{\phi}) \quad (10)$$

Consequently, the probability that the noncongruent leader implements growth-enhancing action in the first period is:

$$\lambda^N(\theta_1, r_1) = G(\Delta + [\rho(\Delta) - \rho(0)]\beta(\bar{r} + \frac{X}{\phi})) \quad (11)$$

Two kinds of future rents motivate the noncongruent leader to choose the growth-enhancing policy in the first period. The first is the personal rent $\bar{r}$, the other is the rent from redistribution $\frac{X}{\phi}$. Interestingly, $\lambda^N(\theta_1, r_1)$ is a decreasing function of $\phi$. This implies that the size of the selectorate is not the bigger the better. Big size of the selectorate dilutes the patronage every member in the selectorate can get, and this will offset the incentives for the noncongruent leader to pick growth-enhancing policy.

In order to understand the term $\rho(\Delta) - \rho(0)$, we should examine the behavior of the selectorate. Observe that if the incumbent generates $\Delta$, then it is always optimal the retain her. Because she creates the highest patronage, and there is a higher probability of growth-enhancing behavior than would arise for the new challenger. Therefore, we have $\rho(\Delta) = 1$. If the incumbent generates 0, then it is always optimal to subvert her, i.e. $\rho(0) = 0$. Thus, there exist another PBE:

**Proposition 2.** When $\frac{(1 - \phi)X}{\phi} < \pi \Delta$, if $r_1 \leq \Delta + \beta(\bar{r} + \frac{X}{\phi})$, $\exists$ a PBE where $\rho(\Delta) = 1$, $\rho(0) = 0$, $\lambda^N(\theta_1, r_1) = 1$, $\sigma = 1$.

The proof of proposition (2) is in the appendix.
3.2.3. *Summarization of The Game Between The Leader and The Selectorate*

In the perfect Bayesian equilibrium, the probability that a noncongruent leader picks the growth-enhancing policy in period one is given as follows:

1. If \( \phi > \frac{X}{\pi A + X} \) then:

   \[
   \lambda^N(\theta_1, r_1) = G(\Delta + \beta(\tau + \frac{X}{\phi}))
   \]  

   (12)

2. If \( \phi \leq \frac{X}{\pi A + X} \) then:

   \[
   \lambda^N(\theta_1, r_1) = 0
   \]  

   (13)

   This result tells us when we can expect politicians adopt good policies to promote economic growth in absence of regularized election. First, when the selectorate’s grip on power is not too dependent on the specific leader, so they can create real checks to the leader’s behavior. This implies that the risk of exclusion from the new coalition is not too high, which means the size of the selectorate cannot be too small. If not, members in the selectorate will fear that after removing the leader, they will lose their privilege. This suggests that successful autocracies will tend to be those with strong selectorates who can commit to removing bad leaders. Second, when there are relatively few resources to be extracted in the society, so natural resource curse is less likely to happen. Third, when the leader is a good type. Because the weakness of the institution in autocracy, the quality of the people who rule the regime becomes important.

   However, successful autocracy may not be good for every member in the society. Since power is monopolized by the selectorate, the fruit from economic growth is only enjoyed by the members in the selectorate as \( \sigma = 1 \) in all equilibria. Successful autocracy can thus be represented as the solution to maximize a weighted social welfare function where all the weights are put on the selectorate. Particularly, there is no force in the above model that can change the equilibrium away from \( \sigma = 1 \). This can explain why although some autocratic polities have achieved success in economic growth, as far as social equality is concerned, democracy on average excel autocracy.

4. **THE POWER OF THE CITIZENS**

The above discussion highlights how we can think of successful autocracy as a situation that maximizes the utility of the ruling class (selectorate). However, as the distribution of wealth of the society is very unfair, the citizens, therefore, would have a constant desire to change the outcome, the policies and the regime. What prevents them is the fact that the elites control the political institutions and military power. But the citizens are the majority, they may be able to overthrow those who are controlling politics. Note that we should distinct between de jure political power and de facto political power. De jure political power is that which comes from political institutions. De facto political power is simply what a group can do to other groups and the society at large by using force. In nondemocracy, the citizens have no de jure political power, but they may have de facto political power, by virtue of the fact that they are the majority. (Acemoglu and Robinson 2006). Hence there can be certain constraints on the policies the ruling class would like to pursue and, we should not neglect the impact of social conflict put on the policy outcomes.
4.1. The revolution constraint

We now add the citizens as the third player into the original game without changing the information of the leader and the selectorate or their payoffs. Now assume at the end of the first period, the (male) representative citizen only observes his utility in that period which is:

\[
U^Z(e_1, \sigma_1, \theta_1) = \begin{cases} 
\Delta + \frac{(1-\sigma_1)X}{1-\phi} & \text{if } e_1 = 1 \text{ and } \theta_1 = 1 \\
\frac{(1-\sigma_1)X}{1-\phi} & \text{if } e_1 = 1 \text{ and } \theta_1 = 0 \\
\frac{(1-\sigma_1)X}{1-\phi} & \text{if } e_1 = 0 \text{ and } \theta_1 = 1 \\
\Delta + \frac{(1-\sigma_1)X}{1-\phi} & \text{if } e_1 = 0 \text{ and } \theta_1 = 0 
\end{cases}
\]

and, on the basis of this information, decides whether to initiate a revolution or not. We assume that there are no collective action problems. More specifically, we assume the revolution will always succeed; after the revolution, each citizen receives \( \frac{X - \mu}{1 - \phi} \) (i.e. poor citizens expropriate the full income of the society but destroy amount \( \mu \) which is the cost of revolution). Moreover, the state does not perform its functions after the revolution. This implies the utility for all the people in the society equals zero in the second period.

At the end of the first period the citizens after knowing their first-period utility have two choices: to revolt \((\alpha = 1)\) or not \((\alpha = 0)\). The expected utility a citizen will get after they choose to initiate a revolution is:

\[
EU^Z(\alpha = 1) = \frac{X - \mu}{1 - \phi}
\]  
(14)

The expected utility a citizen will receive without revolution is:

\[
EU^Z(\alpha = 0) = \rho P^Z(C|\delta)\Delta + (1 - \rho)[\phi(\pi \Delta + \frac{X}{\phi}) + (1 - \phi)\pi \Delta]
\]  
(15)

where \( P^Z(C|\delta) \) is the citizen’s posterior belief on the incumbent leader is congruent given that in the first period he obtained an payoff equal to \( \delta \in \{0, \Delta\} \) from the general interest policy. If the selectorate retain the incumbent at the end of period one, the citizen will get a payoff equal to \( P^Z(C|\delta)\Delta \). If the selectorate remove the incumbent, the citizen will get a payoff \( \phi(\pi \Delta + \frac{X}{\phi}) + (1 - \phi)\pi \Delta \). This term indicates the citizen has probability \( \phi \) to be included in the challenger’s coalition, getting \( \pi \Delta \) from the general interest policy and a private payoff of \( \frac{X}{\phi} \); while with probability \( 1 - \phi \), the citizen is not included into the newly formed selectorate and, only receiving \( \pi \Delta \). We can rewrite (15) as:

\[
EU^Z(\alpha = 0) = \rho P^Z(C|\delta)\Delta + (1 - \rho)(\pi \Delta + X)
\]  
(16)

It is easy to see that the citizens will initiate revolution if:

\[
EU^Z(\alpha = 1) > EU^Z(\alpha = 0)
\]  
(17)

or if

\[
\frac{X - \mu}{1 - \phi} > \rho P^Z(C|\delta)\Delta + (1 - \rho)(\pi \Delta + X)
\]  
(18)

We use a strict inequality here because, we assume that if the citizens are indifferent between revolt or not then they do not revolt.

Remark 2. If (18) binds, the citizens will initiate a revolution i.e. \( \alpha = 1 \).
4.2. Concessions of the leader

Consider at the end of the first period, before the citizens making any choice, the leader will declare the second period distributive policy, $\sigma_2$, in order to avoid a revolution. We use the notation $\hat{\sigma}$ to refer a specific value of $\sigma_2$ that can avoid revolution. For simplicity, we suppose there is no commitment problem. After observing $\sigma_2$, the citizens decide whether to undertake a revolution or not. If they don’t undertake a revolution, the game ends with payoffs

$$EU^Z(\alpha = 0) = \rho[P^Z(C|\delta)(1-\sigma_2)X + \frac{(1-\sigma_2)X}{1-\phi}] + (1-P^Z(C|\delta))\frac{(1-\sigma_2)X}{1-\phi}$$

expected payoff if the leader is retained by the selectorate

$$+(1-\rho)\left[\phi(\pi\Delta + \frac{\sigma_2X}{\phi}) + (1-\phi)(\pi\Delta + \frac{(1-\sigma_2)X}{1-\phi})\right]$$

expected payoff if the leader is ousted by the selectorate

We can rewrite (19) as

$$EU^Z(\alpha = 0) = \rho[P^Z(C|\delta)\Delta + \frac{(1-\sigma_2)X}{1-\phi}] + (1-\rho)(\pi\Delta + X)$$

(20)

The first question to ask is therefore whether such a distributive policy exists. The best distributive policy from the point of view of the citizens is $\sigma_2 = 0$. Hence the question becomes whether

$$\rho[P^Z(C|\delta)\Delta + \frac{X}{1-\phi}] + (1-\rho)(\pi\Delta + X) \geq \frac{X-\mu}{1-\phi}$$

(21)

If (21) dose not hold, then even the best distributive policy for the citizens is not enough to prevent the revolution. In this case, the unique equilibrium will involve the citizens initiating a revolution, i.e. $\alpha = 1$.

Remark 3. If (21) dose not hold, the citizens will initiate a revolution, no matter the value of $\sigma_2$.

The other case, which is arguably more interesting from the point of view of our analysis, is that where (21) holds. In this case, the value of $\hat{\sigma}$ is such that $EU^Z(\alpha = 0) = EU^Z(\alpha = 1)$ which is given by

$$\rho[P^Z(C|\delta)\Delta + \frac{(1-\hat{\sigma})X}{1-\phi}] + (1-\rho)(\pi\Delta + X) = \frac{X-\mu}{1-\phi}$$

(22)

4.3. The commitment problem

The discussion so far feature perfect commitment to one-period-ahead distributive policy by the incumbent leader. However when those with political power make promises to those without, the promise may be incredible. Many scholars have emphasized the fact that there is no third party that can enforce the promises made by the autocratic government (Acemoglu and Robinson 2006, ch.5). Taking the promise of distributive policy made by the incumbent for example, facing the threat of revolution, the incumbent would like to promise to choose $\hat{\sigma}$ in the second period that is more to the liking of the citizens. Whereas, after the revolution threat is gone in the second period, the incumbent get to decide these transfers and,
if it is not in her interest to be making them, she will renege on the promise made in the past. Thus, the concession made by the leader on the distributive policy is incredible and the only rational choice for the citizens is still to revolt when the revolution constraint is binding.

4.4. Fast economic growth to maintain social stability

Facing the commitment problem, the only possible policy choice left for the incumbent to avoid revolution is to implement growth-enhancing policy in first-period, by so doing, the belief of the incumbent is congruent \( P^Z(C|\delta) \) will be increased and the revolution constraint is less likely to be binding. To see this point, the updated belief of the citizens that the incumbent is congruent having generated \( \Delta \) from the general interest policy in period one (according to Bayes rule) is,

\[
P^Z(C|\Delta) = \frac{\pi}{\pi + (1 - \pi)\lambda_N(\theta_1, r_1)}
\]

which is at least as large as \( \pi \).

The updated belief of the citizens that the incumbent is congruent having generated 0 from the general interest policy in period one (according to Bayes rule) is,

\[
P^Z(C|0) = 0
\]

Since the right hand side of (18) is strictly increasing in \( P^Z(C|\delta) \), it is easy to see that growth-enhancing policy will make the revolution constraint less likely to be binding.

Again, the best effort the incumbent leader can do is to choose to generating \( \Delta \) in the first period. But if,

\[
\frac{X - \mu}{1 - \phi} > \rho \frac{\pi}{\pi + (1 - \pi)\lambda}(\pi \Delta + (1 - \rho)(\Delta + X))
\]

even the incumbent leader had adopted growth-enhancing policy in the first period, the revolution is still unavoidable.

On the contrary, if,

\[
\frac{X - \mu}{1 - \phi} \leq (1 - \rho)(\pi \Delta + X)
\]

the citizen will never initiate a revolution, even the leader adopted bad general interest policy in the first period.

We focus on the equilibrium that can make the noncongruent leader adopt growth-enhancing policy and we will get the following proposition:

**Proposition 3.** When \( \frac{X - \mu}{1 - \phi} \in ((1 - \rho)(\pi \Delta + X), \frac{\rho \pi \Delta}{\pi + (1 - \pi)\lambda} + (1 - \rho)(\pi \Delta + X)) \), there exist a PBE where \( \alpha(\Delta) = 0, \alpha(0) = 1, \lambda^N(\theta_1, r_1) = 1, \sigma = 1 \).

Proposition 3 said that the citizen will revolt if they get a payoff 0 from the general interesting policy in the first period and will not revolt if they get \( \Delta \). The noncongruent incumbent leader adopts good general interesting policy in the first period and distribute all the revenues to the selectorate.
As far as China is concerned, using fast economic growth to maintain social stability is a very important incentive for the central leaders to promote high economic growth. Deng Xiaoping started China’s economic reforms at the end of 1970s largely because he recognized the dangers to China of falling so dramatically behind the growth rates being achieved elsewhere in East Asia. Deng also saw the need to deliver material rewards to a population that had become bitterly disillusioned with ideological hyperbole by the end of the Maoist era (Liberthal 2004, P246). After the Tiananmen Incident, the legitimacy of the CCP’s ruling was again challenged. Although curtailing vest interests was a very tough task, CCP still had the resolution to do so, because the top leaders link domestic stability of China to the state of its economy. They recognized that in the short-run China’s high growth could be achieved from utilizing its relatively cheap labor force, but in the long-run unfair market environment, corruption, and too much involvements of government into business were inimical to productivity growth that can maintain fast economic expansion. This strategic vision at the top of the political system has guided the reform along its process. Nowadays, the leaders still feel the pressure to sustain high economic growth into the future, because they realize they must create new jobs rapidly to maintain social stability as many millions of people either enter the urban labor force for the first time or seek to shift from farm to nonfarm jobs. China, the leaders believe, is threatened with social and political upheaval if it seriously slows economic growth (Liberthal 2004, P247).

5. CONCLUSION

This paper tries to find the institutional basis of China’s fast economic growth in the reform era. It also attempts to discover the differences between successful and unsuccessful autocracies in terms of the forces that shape accountability in the absence of regularized elections. We first build a simple model played between the leader and the selectorate, and we find that the selectorate will be able to discipline the leader if they are not too dependent on her. Although economic development can be achieved, it is characterized by lose of social equality, since the leader only accountable to the vested interests in the society. Next, we add the citizens as another player into the game. The participation of the citizens creates another incentive for the leader to promote economic growth; the leader wants to use fast economic growth to maintain social stability. This model can explain China’s experience very well. The reciprocal accountability between the top leader and the selectorate leads to policies that only catering the interests of the groups holding powerful positions inside the party but hurt economic growth in the long-run. Nevertheless, the CCP seems do not hold back by vested interests, the governance improved and the policies become more people centered. I suggest the change of CCP’s ruling pattern was due to the pressure outside the regime — the threat of revolution by citizens. The CCP adopted good policies to promote economic growth, because they believe high growth rate would cover other social problems and, improvements in living standards can divert people’s demand of democracy. High economic growth helps to generate social stability, and social stability in turn provide China a peaceful environment to develop its economy. However, the two-digit growth rate cannot last forever, as China is facing more constraints than ever before, such as constraints on environment, energy and natural resources. At the same time, rich-poor gap, gap between rural and urban, ethnical conflicts in areas populated by minorities and, rent-seeking without proper order
tend to create more serious social tensions than before. As the strategy of using high growth to maintain social stability will lose effectiveness in the future, reform of the existing political system is a reasonable choice.

REFERENCES


When the $\frac{(1-\phi)X}{\sigma} < \pi\Delta$, there are four possible strategies for members of the selectorate depending on their payoff on the first period payoff. They are:

1. $\rho(\Delta) = 1$, $\rho(0) = 0$
2. $\rho(\Delta) = 1$, $\rho(0) = 1$
3. $\rho(\Delta) = 0$, $\rho(0) = 0$
4. $\rho(\Delta) = 0$, $\rho(0) = 1$

I will discuss them one by one.
Case 1 $\rho(\Delta) = 1$, $\rho(0) = 0$ The congruent leader will always make the right decision on the general interest policy so that $e_1 = \theta_1$.

Let $EU^N(\lambda = 1)$ be the expected utility of the noncongruent leader, if she chose good actions i.e. $\lambda^N(\theta_1, r_1) = 1$ in the first period.

$$EU^N(\lambda = 1) = \Delta + \frac{X}{\phi} + \beta(\bar{r} + \frac{X}{\phi})$$ (27)

Let $EU^N(\lambda = 0)$ be the expected utility of the noncongruent leader, if she chose bad actions i.e. $\lambda^N(\theta_1, r_1) = 0$ in the first period.

$$EU^N(\lambda = 0) = r_1 + \frac{X}{\phi}$$ (28)

The noncongruent leader will choose $\lambda(\theta_1, r_1) = 1$ iff

$$EU^N(\lambda = 1) \geq EU^N(\lambda = 0)$$ (29)

that is

$$r_1 \leq \Delta + \beta(\bar{r} + \frac{X}{\phi})$$ (30)

We then have two subcases:

(1.a) When $r_1 \leq \Delta + \beta(\bar{r} + \frac{X}{\phi})$, $\rho(\Delta) = 1$, $\rho(0) = 0$, $\lambda^N(\theta_1, r_1) = 1$ is a possible equilibrium. Substitute relevant values into (5), we get

$$P(C|\delta = \Delta) = \frac{\pi \cdot 1}{\pi \cdot 1 + (1 - \pi) \cdot 1} = \pi$$ (31)

Plug (31) into (4), we can see this condition always holds, which means that $\rho(\Delta) = 1$ is optimal choice for the selectorate. Whereas $P(C|\delta = 0)$ is an out of equilibrium belief in this case, so we can attach any value that insures (4) hold to it.

In this case, both congruent and noncongruent leaders will choose the right general interest policy in period 1.

(1.b) When $r_1 > \Delta + \beta(\bar{r} + \frac{X}{\phi})$, $\rho(\Delta) = 1$, $\rho(0) = 0$, $\lambda^N(\theta_1, r_1) = 0$ is a possible equilibrium. Substitute relevant values into (5), we get,

$$P(C|\delta = \Delta) = \frac{\pi \cdot 1}{\pi \cdot 1 + (1 - \pi) \cdot 0} = 1$$ (32)

Plug (32) into (4), we can see this condition always holds, which means that $\rho(\Delta) = 1$ is optimal choice for the selectorate.

Substitute relevant values into (6), we get,

$$P(C|\delta = 0) = \frac{\pi \cdot 0}{\pi \cdot 0 + (1 - \pi) \cdot 1} = 0$$ (33)

Plug (33) into (4), together with the condition of situation 2, we can see (4) always violated, which means that $\rho(0) = 0$ is optimal choice for the selectorate.
Case 2 $\rho(\Delta) = 1$, $\rho(0) = 1$

In this case, knowing she will be ousted for sure in the second period, both types of the incumbent leader would choose to implement her most favorite policy in the first period, i.e. $\lambda_C(\theta_1) = 1, \lambda_N(\theta_1, r_1) = 0$.

Therefore the updated belief of the selectorate given the above strategy of the incumbent leader is:

$$P(C|\delta = 0) = \frac{\pi \cdot 0}{\pi \cdot 0 + (1 - \pi) \cdot 1} = 0$$  \hspace{1cm} (34)

Plug (34) into (4), together with the condition of situation 2, i.e. $\frac{(1-\phi)X}{\delta} < \pi \Delta$, we can see (4) always violated, which means $\rho(0) = 0$ is the optimal choice for the selectorate. Hence $\rho(0) = 1$ cannot be optimal — A Contradiction!!

Case 3 $\rho(\Delta) = 0$, $\rho(0) = 0$

In this case, knowing she will be ousted for sure in the second period, both types of the incumbent leader would choose to implement her most favorite policy in the first period, i.e. $\lambda_C(\theta_1) = 1, \lambda_N(\theta_1, r_1) = 0$.

Therefore the updated belief of the selectorate given the above strategy of the incumbent leader is:

$$P(C|\delta = 0) = \frac{\pi \cdot 1}{\pi \cdot 1 + (1 - \pi) \cdot 0} = 1$$  \hspace{1cm} (35)

Plug (35) into (4), we can see this condition always holds, which means that $\rho(\Delta) = 1$ is the optimal choice for the selectorate. Hence $\rho(\Delta) = 0$ cannot be optimal — A Contradiction!!

Case 4 $\rho(\Delta) = 0$, $\rho(0) = 1$

This is an "unreasonable" equilibrium and we do not consider the equilibrium in this case.