A POLITICAL ECONOMY PATTERN OF CHINA'S HISTORY: ON REVOLUTION, REFORM, AND INVOLUTION UNDER DICTATORSHIP

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ABSTRACT

This paper aims to develop an integrated analytical framework for revolution, reform, and involution under dictatorship based on China's history. In order to grasp the essence of political and economic interactions in historic China, this paper gets some abstract variables from China's history, on the basis of which a political economy model is built. The autocrat plays an important role in determining authority form and development pattern, which endogenously brings about different outcomes of revolution, reform, and involution. When the economic system is closed, path-dependence plays an important role, however, when the system is open, we should not attach much importance to path-dependence.

KEY WORDS

revolution, reform, involution, dictatorship, path-dependence, China's history

CLASSIFICATION

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INTRODUCTION

Many economists and social scientists believe that special-interest groups usually play a negative role in economic development. As most of us know, collective actions are often accompanied by the free-rider problem, which determines that small or strong special-interest groups are more powerful than large or weak ones, as the former can overcome this difficulty more effectively than the latter. Just as Olson says [1]: "Indeed unless the number of individuals in a group is quite small, or unless there is coercion or some other special device to make individuals act in their common interest, rational, self-interested individuals will not act to achieve their common or group interests."

If the small or strong special-interest group represents the autocrat and his ruling class, then what can we infer from this special-interest-group perspective? When will the autocrat choose efficient institutions on behalf of his interest-group? And when will not? As Acemoglu argues [2, pp. 620-623]: "These inefficient institutions and policies are chosen because they serve the interests of politicians and social groups that hold political power at the expense of the rest … The theoretical case depends on commitment problem inherent in politics. First, those in power cannot commit to not using their power, as long as they don't relinquish it, in ways that benefit them in the future. Second, if the rulers relinquish their power, the citizens cannot commit to making side payments to them in the future because the former rulers no longer possess the political power to enforce such promises." So there is no political Coasian theorem which ensures that political power can match with economic development by voluntary political exchange. However, based on China's history I argue that there is a political economy theory about revolution, reform, and involution under dictatorship, and that there lies an implicit mechanism that can ensure the acceptable efficiency of the political process. As such, this implicit mechanism can give rise to different outcomes of revolution, reform, and involution.

This paper tries to integrate historic China's revolution, reform and involution into a unified analytical framework, under which all of these phenomena are endogenously engendered by autocrat's choice. The rest of the paper is organized as follows. Section 2 presents the basic model. Section 3 extends the basic model. Section 4 makes some concluding remarks.

BASIC MODEL

In order to convey my idea, I assume that there are only three classes, the upper class representing the autocrat's interests, the middle class representing the commercial and industrial interests, and the lower class representing the agricultural interests[1]. During different development periods, there are different institutions that are determined by the autocrat, which bring about different outcomes. The so-called political Coasian theorem works to some degree through the interactions between revolution, reform and involution.

In the model, α ($0 < \alpha < 1$) and u are the proportion and unit interest of the upper class, respectively. Similarly, β ($0 < \beta < 1$) and m are, respectively, the proportion and unit interest of the middle class. Finaly, $1 - \alpha - \beta$ ($0 < 1 - \alpha - \beta < 1$) and l are the proportion and unit interest of the lower class, respectively. The so-called unit interest stands for each actor's economic gains which are normalized according to the total population. As for the upper class which is represented by the autocrat, the unit interest denotes each actor's normalized incumbent gains during the course of providing public goods and services (such as bureaucratic governance). As for the middle and lower classes, the unit interest denotes each actor's normalized economic gains which are related to his average productivity during the course of production and transactions. It is taken that[2] $m > l$.

Inspired by the spirit of Aghion and Tirole [3], I assume that the tax rate of the middle class is θ ($0 \leq \theta \leq 1$), and that the tax rate of the lower class is[3] ρ ($0 \leq \rho \leq 1$). However, taxation should not be seen as a straight division of the pie because the autocrat provides some kind of protection and other public goods and services for the lower and middle classes.

As for the autocrat, the lower class is easier to be controlled than the middle class, because the former is more immobile and honest than the latter. In order to control the middle class effectively and make the lower class have no incentive to become the middle class, the autocrat has to take the taxation as a tool, which means $\theta > \rho$. So the autocrat faces a tradeoff between controllability and profitability. As most of us know, controllability is mainly a political problem, while profitability is mainly an economic problem. However, the autocrat is not only an economic person, but also a political person. Moreover, the autocrat's idea about controllability and profitability maybe changes according to the dominant thinking of that time.

As I have stressed in the introduction (Section 1), the autocrat represents the ruling class. The autocrat's utility derives from three terms. The first term is the autocrat's gains from providing public goods and services (such as bureaucratic governance). The second term is the autocrat's gains from the middle class' taxes. The third term is the autocrat's gains from the lower class' taxes. In fact, the autocrat's utility can be seen as a proxy for the economic performance. In order to defend this point, I will give two channels through which the autocrat can improve the economic performance. The first channel is to promote the bureaucratic governance, and the second channel is to expand the middle class.

The autocrat's utility function, S, is[4]:

$$S = \alpha u + \theta \beta m + \rho(1 - \alpha - \beta)l. \tag{1}$$

The autocrat himself has certain beliefs which determine the authority form and development pattern. If he appreciates social stability or he faces no external pressure, he may suppress the middle class and support the lower class, as the agricultural economy is easier to be controlled. If he appreciates economic prosperity or he faces great external pressure, he may support the middle class, as the commercial and industrial economy is pregnant with wealth. When the economy is closed and the information is impacted, there is no or little knowledge-based exchange with the outside world, so competitive pressure is very small and the autocrat has no idea of imitation. However, when exchange cost between nations becomes less and less, the competitive pressure plays a more and more important role in motivating laggards to catch-up. In order to reflect the importance of the degree of openness, I introduce the concept of survival gains in the extension of the basic model (Section 3).

In most cases ρ is a constant parameter, but when there are wars or irrigation works, the autocrat has to raise his taxes on the lower class, which will increase ρ to some degree. That is to say, ρ is a variable which can be controlled by the autocrat. Thus, if ρ is too big (e.g., $\rho \geq \bar{\rho}$) to sustain the lower class' living, a rebellious revolution will be incurred. So there is a rebellious revolution constraint:

$$\rho \leq \bar{\rho}. \tag{2}$$

Variable θ can also be controlled by the autocrat. If it is too big to keep the middle class exist (e.g., $\theta \geq \bar{\theta}$), economic development will be trapped in a low-level equilibrium which is called an involution[5]. In fact, in most times in China's history, the autocrat keeps the middle class as small as possible through the taxation tool. The middle class can not start a rebellious revolution, because its quantity is too small to form a valid threat. So there is an involution constraint[6]:

$$\theta \leq \bar{\theta}. \tag{3}$$

When the economic system meets the revolution and involution constraints, but the autocrat is not satisfied with the economic performance (e.g., $S \leq \underline{S}$), there will be a reform constraint:

$$S \geq \underline{S}. \tag{4}$$

The autocrat plays an important role in increasing or decreasing economic performance, as $\underline{S}$ is a subjective value which is determined by the autocrat's judgment. If the autocrat is ambitious or able, he may set $\underline{S}$ at a big value. However, if he is fatuous or incapable, he may set $\underline{S}$ at a small value. Certainly, external factors may influence the autocrat's judgment. For example, if there is a tax income boom, the autocrat may suffer from some kind of "resource curse."

To summarize, we have the following result:

Result 1: If an economic system under dictatorship doesn't meet the rebellious revolution constraint, then a rebellious revolution will be incurred. If this system meets the rebellious revolution constraint but doesn't meet the involution constraint, then an involution will be incurred. If this system meets the rebellious revolution and involution constraint but doesn't meet the reform constraint, then a reform will be needed.

If the economic system under dictatorship takes market-supporting or market-augmenting measures to promote its economic development, then the middle class will swell in quantity. When θ is less than a critical vale (e.g., $\theta \leq \underline{\theta}$), the middle class will be so powerful as to start a constitutional revolution to overturn the autocrat. So there is a constitutional revolution constraint:

$$\theta \geq \underline{\theta}. \tag{5}$$

Thus we obtain the second result:

Result 2: If an economic system under dictatorship is stable, then it must meet one of the following conditions: (i) $\rho \leq \overline{\rho}$ and $\theta \leq \overline{\theta}$, or (ii) $\rho \leq \overline{\rho}$ and $\underline{\theta} \leq \theta \leq \overline{\theta}$. When condition (i) is met, the system is locked in an involution, which is called super-stability characterized with old dynastic China. When condition (ii) is met, the system is on the track of development, which is called dynamic-stability characterized with contemporary transitional China.

The basic model is obviously very descriptive, as it is based on China's complex history and tries to get the abstract variables from the whole development process. A richer economic environment can be added in order to analyze the autocrat's different choices under different conditions.

EXTENSION OF THE BASIC MODEL

In order to grasp the essence of the institutional change, especially the political change, I extend my basic model in a two-dimensional way. The extensions correspond to China's history, too. In fact, we will find that there does exist an implicit mechanism that can ensure the acceptable efficiency of the political process.

When the economic system is closed, it can learn little from the outside world, and at the same time this exerts no competitive pressure on the autocrat. During the course of the evolution of the system, path dependence will play an important role. In order to control the system at a low cost, the autocrat will make a tradeoff between controllability and profitability. In fact, the autocrat may smother up the knotty problem of profitability in the absence of competitive pressure.

As I have assumed, the instability mainly comes from the middle class' mobility and speculation. For simplicity, I assume that the autocrat's political gain, R, is β's function,

which is strictly decreasing and concave ($R' < 0$, $R'' < 0$). So the autocrat's rational choice is to increase θ to $\bar{\theta}$, and at the same time β will drop to $\underline{\beta}$.

Economic losses, *EL*, will be[7]:

$$EL = (\beta - \underline{\beta})[(\bar{\theta} - \theta)m - \rho l]. \tag{6}$$

Political gains, *PG*, will be

$$PG = R(\underline{\beta}) - R(\beta). \tag{7}$$

The rational autocrat will let economic losses be equal to political gains at the margin, which yields the following equation:

$$R'(\underline{\beta}) = \rho l - (\bar{\theta} - \theta)m. \tag{8}$$

The condition $m > l$ can ensure $R'(\underline{\beta}) < 0$, which is compatible with the previous assumption.

Through the comparative static analysis, we obtain the third result.
Result 3: In a closed system under dictatorship:

$$\partial\underline{\beta}/\partial\rho < 0,\ \partial\underline{\beta}/\partial l < 0,\ \partial\underline{\beta}/\partial\theta > 0\ \text{and}\ \partial\underline{\beta}/\partial m > 0.$$

Proof: From equation (8), we get

$$\partial\underline{\beta}/\partial\rho = 1/R''(\underline{\beta}) < 0,\ \partial\underline{\beta}/\partial l = \rho/R''(\underline{\beta}) < 0,$$

$$\partial\underline{\beta}/\partial\theta = -m/R''(\underline{\beta}) > 0\ \text{and}\ \partial\underline{\beta}/\partial m = -(\theta - \underline{\theta})/R''(\underline{\beta}) > 0.$$

Result 3 implies that $\underline{\beta}$ is decreasing in ρ and l, respectively, while increasing in m and θ, respectively. The more ρ and l, the less $\underline{\beta}$, which is characteristic of the old dynastic China who was previously trapped in an involution. We can conclude that the more closed the system, the more possible it is locked in an involution. In fact, it shows that there are great path-dependence effects when the system is closed.

When the economic system is open, it can learn much from the outer world, and at the same time this exerts great competitive pressure on the autocrat. During the course of the evolution of the system, path dependence will play an insignificant role. In order to cope with challenges at a low cost, the autocrat has to trade off between profitability and controllability, which means that he must undertake a reform.

Competitive pressure is more important than path dependence, because the autocrat will adopt adaptive behavior according to his sufferings. In order to survive, the autocrat has to increase β to $\bar{\beta}$ at the cost of domestic instability. I suppose that survival gains, *P*, are the function of economic gains, *EG*, which are strictly increasing and concave ($P' > 0$, $P'' < 0$).

Economic gains will be:

$$EG = (\bar{\beta} - \beta)[(\bar{\theta} - \theta)M - \rho L]. \tag{9}$$

Survival gains, *SG*, will be[8]:

$$SG = P(EG). \tag{10}$$

Political losses, *PL*, will be:

$$PL = R(\beta) - R(\bar{\beta}). \tag{11}$$

The rational autocrat will make economic gains plus survival gains equal to political losses at the margin, which produces the following equation

$$R'(\bar{\beta}) = [1 + P'(EG)] \cdot [\rho L - (\bar{\theta} - \theta)M]. \tag{12}$$

Through the comparative static analysis, we have the fourth result:

Result 4: In an open system under dictatorship, the impacts of ρ, L, θ and M on $\bar{\beta}$ are all ambiguous.

Proof: From equation (8), we can get the related partial derivatives, and it is easy to find that their signs are all ambiguous.

Result 4 shows that path-dependence plays a trivial role when the system is open, just as we have anticipated. Great competitive pressure can easily break through path-dependence effects, as it produces additional benefits which are called survival gains. In order to increase S, the autocrat has to take effective measures to reform the economic system, such as raise β to $\bar{\beta}$. But when the autocrat chooses a market-supporting or market-augmenting development strategy under great competitive pressure, he will be overturned by a constitutional revolution when the middle class grows in strength to some critical degree. Dictatorship has a self-destruction mechanism in this sense, once it is on the track of market. This is the dictator's fatalism. Shen points out that a good dictator encourages private investment and the cost of this encouragement is that the ensuing higher growth rate will induce earlier democratization [4]. Zak and Feng's model also demonstrates that the economic position of the middle class determines the rate of transition from dictatorship to democracy [5]. Under this circumstance, accompanied by continuous high economic growth rate, China will have to undertake a series of political reforms which are oriented towards democratic process in order to reconcile the social and political conflicts.

CONCLUSION

In this paper, I mainly discuss the conditions of revolution, reform, and involution under dictatorship based on China's history. When the system is closed, path-dependence plays an important role, however, when the system is open, we should not attach much importance to path-dependence.

Certainly, we should not neglect the intergenerational negative externality of dictatorship, which has an important effect on the autocrat's choice and behavior. As Olson argues [6, p. 571]: "Many autocrats, at least at times, have had short time horizons: the examples of confiscations, repudiated loans, debased coinages, and inflated currencies perpetrated by monarchs and dictators over the course of history are almost beyond counting." Once the autocrat's predecessor has made wrong decisions, the successor has to bear their externalities. At the same time, the autocrat may form wrong expectations or make wrong judgment on ρ, θ and S. All of those will bring about different outcomes of revolution, reform, and involution.

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REMARKS

[1]This classification is obvious for developing economies, especially for China, but may be obscure for developed economies.

[2]This implies that the middle class faces more repression from the autocrat than the lower class. However, its number of population is too small to initiate a rebellious revolution, so it has to stand this kind of repression.

[3]The utility functions of the lower and the middle are $L = (1 - \rho)(1 - \alpha - \beta)l$ and $M = (1 - \theta)\beta m$, respectively.

[4]From this and note 3, we can obtain the social utility function $S + M + L = \alpha u + \beta m + (1 - \alpha - \beta)l$.

[6]It is easy for us to get the relation between $\bar{\theta}$ and $\bar{\rho}$, namely, $\bar{\theta} \geq 1 - (1 - \bar{\rho})l/m$.

[5]The so-called involution is a terminology which refers to being trapped in a stagnant state in which industrial revolution cannot come into being. This terminology is connected with the famous Needham puzzle (see [7, 8]), which is common sense for Chinese background scholars and coined as *neijuan* in Chinese language. Tullock's work [9] is conducive to understanding the nondemocratic system of the old empire of China.

[7]I assume that the middle class decreased will turn into the lower class, and that the middle class increased will be from the lower class.

[8]Survival gains are derived from external competitive pressure, which reflect a nation's quasi-natural selection process. So they are different from political gains.

REFERENCES

[1] Olson, M.: *The Logic of Collective Action*.
Harvard University Press, Cambridge, p. 2, 1965,

[2] Acemoglu, D.: *Why not a Political Coase Theorem?: Social Conflict,Commitment, and Politics*.
Journal of Comparative Economics **31**(4), 620-652, 2003,

[3] Aghion, P. and Tirole, J.: *Formal and Real Authority in Organizations*.
Journal of Political Economy **105**(1), 1-29, 1997,

[4] Shen, L.: *When will a Dictator be good*?
Economic Theory **31**(2), 343-366, 2007,

[5] Zak, P.J. and Feng, Y.: *A Dynamic Theory of the Transition to Democracy*.
Journal of Economic Behavior & Organization **52**(1), 1-25, 2003.

[6] Olson, M.: *Dictatorship, Democracy, and Development*.
American Political Science Review **87**(3), 567-576, 1993,

[7] Elvin, M.: *The Pattern of Chinese Past*.
Stanford University Press, Stanford, 1973,

[8] Lin, J.Y.: *The Needham Puzzle: Why the Industrial Revolution Did not Originate in China*.
Economic Development and Cultural Change **43**(2), 269-292, 1995,

[9] Tullock, G.: *Undemocratic Governments*.
Kyklos **55**(2), 247-264, 2002.

POLITIČKO-EKONOMSKI OBRAZAC KINESKE POVIJESTI: O REVOLUCIJI, REFORMI I INVOLUCIJI POD DIKTATUROM

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SAŽETAK

U ovom radu razvija se integrirani analitički okvir za revoluciju, reformu i involuciju u diktaturama, temeljen na povijesti Kine. Radi obuhvaćanja osnova političkih i ekonomskih međudjelovanja u kineskoj povijesti, u radu je izdvojeno nekoliko apstraktnih varijabli iz kineske povijesti. Na temelju njih je postavljen političko-ekonomski model. Autokrati su odigrali značajnu ulogu u određivanju oblika autoriteta i obrasca razvoja, što je kroz unutarnje procese dovodilo do revolucije, reforme i involucije. Kad je ekonomski sustav zatvoren, ovisnost o putu je značajna. Naprotiv, kad je sustav otvoren, ovisnosti o putu se ne smije dati veliko značenje.

KLJUČNE RIJEČI

revolucija, reforma, involucija, diktatura, ovisnost o putu, povijest Kine