

# Why Chinese Anti-Corruption has Not Yet Promoted Economic Growth?

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## Abstract

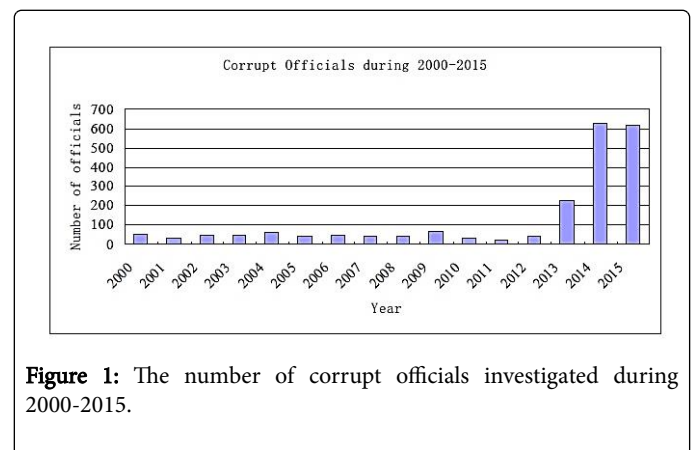
Economists always have disputes over the relationship between corruption and economic growth. From the end of 2012 to the present, the Communist Party of China has launched a fierce anti-corruption campaign so that a large number of officials suspected of corruption were investigated. Anti-corruption, however, did not actually promote economic growth. To explain this, we build a framework based on government regulation and mixed oligopoly. The basic views are as follows: First, on the premise of meeting the government's budget balance, fighting against corruption accompanied with removing inefficient regulation is the optimal anti-corruption policy, which will facilitate economic growth. Second, given there are inefficient regulations, lower cost of corruption and superior employment pressure; no anti-corruption is a better choice than anti-corruption. Current Chinese anti-corruption campaigns focusing solely on anti-corruption rather than removal of regulation are useless to economic development. These movements contribute to the development of the state-owned enterprises at the cost of private sectors' growth. As a result, the whole economic growth has been dragged down.

**Keywords:** Corruption; Anti-corruption; Regulation; China

## Introduction

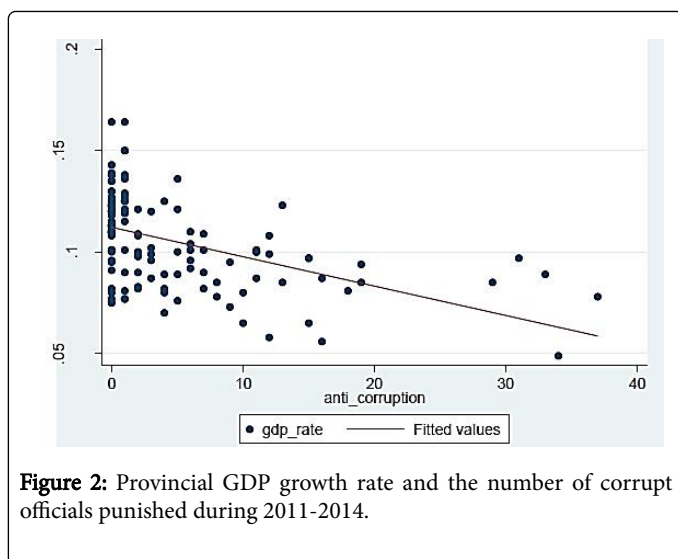
It has long been believed that corruption will impede economic development [1], because corruption would destroy property rights, hinder technological innovation [2], increase transaction cost, and distort talent distribution [3]. Political scientists and sociologists are deeply convinced of this statement. Moreover, they also believe that corruption undermines social justice and trust. According to the view above, governments of all countries are supposed to massively take anti-corrupt actions. And if the view is reasonable, we should have witnessed substantial economic explosion after violent anti-corrupt campaigns. However, we actually observe the opposite result in china.

After the ending of Eighteenth National Congress of the Communist Party of China in November 2012, the new General Secretary Xi Jinping and CPC top leaders have launched the most severe anti-corruption campaign since the founding of China. This campaign is known as its great strength, wide range, and prolonged period. Up to now, the movement has lasted more than 3 years with no sign of ceasing or weakening. In China, every time the new supreme leaders came into power, they would put forward the "anti-corruption" slogan. But previous leaders had never achieved such success. We count the number of suspected corrupt officials who have deputy department (equivalent to a vice mayor in prefecture) level or above and are investigated by the government from the year of 2000-2015. As the result shown in Figure 1, the number of corrupt officials detected in 2014 and 2015 is more than the sum of previous ten years (2000-2010 years). There is no doubt that the CPC Central Committee represented by Xi Jinping really takes tough measures to combat corruption.



**Figure 1:** The number of corrupt officials investigated during 2000-2015.

However, the anti-corruption has not yet promoted China's economic growth. In fact, there is a negative relation between anti-corruption efforts and speed of economic growth. We take the provincial annual growth rate of GDP to measure economic growth (vertical), and the number of corrupt officials who have deputy departmental or higher level and were investigated by the government is used to represent anti-corruption efforts (horizontal axis). By analyzing the correlation between them (Figure 2), to our surprise, provincial growth rates of GDP are negatively related to anti-corruption efforts. Similarly, with monthly data from January 2013 to August 2014 on China's 254 prefecture level cities, Long and Huang [4] uses the number of officials being arrested to measure anti-corruption efforts and discovers significantly negative effect of anti-corruption on growth rate of city's fixed asset investment.



**Figure 2:** Provincial GDP growth rate and the number of corrupt officials punished during 2011-2014.

So the question arises: why anti-corruption can't contribute to economic growth, but impede economic growth instead? The theory we have mentioned at the beginning of this article seems unable to explain this paradox. This paper attempts to give an explanation from the perspective of regulation and anti-corruption.

Provincial GDP growth rate and the number of corrupt officials punished during 2011-2014.

There are some interesting interpretations on the relation between corruption and economic growth among economists. They believe that corruption is conducive to economic growth to a certain extent, for the reason that corruption will increase officials' income so as to offer incentives to officials to work hard [5], or corruption can help enterprises to avoid unnecessary government regulation to increase output. Therefore, anti-corruption will decrease the income of officials, and thus reduce the level of their efforts, then eventually lower economic growth [6].

Our point of view is associated with regulation, but is obviously different from above argument. According to these economists' points of view above, the government should keep inefficient regulation, which can increase the income of officials and promote economic growth at the same time. In our opinion, the optimal anti-corruption policy should not only match regulation policy, but also consider the governmental income from state-owned enterprises.

Specifically, our points of view are as follows [7]. First, on the premise of meeting the government's budget balance, fighting against corruption accompanied with removing inefficient regulations is the optimal anti-corruption policy, which will facilitate economic growth.

Second, given there are inefficient regulation, lower cost of corruption and superior employment pressure; no anti-corruption is a better choice than anti-corruption. According to our research, Chinese anti-corruption campaign merely focusing on anti-corruption rather than removing regulation is just a temporary policy instead of a total solution, which brings about little contribution to economic development. This kind of policy leads to the expansion of state-owned enterprises at the cost of private sectors' growth. But on the whole, economic growth has been dragged down. Therefore, considering the overall downward stage in the Chinese economy as well as huge employment pressure, the optimal policy must implement anti-

corruption and relax regulation simultaneously. Only in this way will the anti-corruption campaign promote Chinese long-term economic prosperity.

## Methods and Results

This part introduces our formal research results. By combining analytical method of game theory and the mixed oligopoly model, we propose the following assumptions:

- There are three players in an entry regulated industry: a government G, a state-owned enterprise S and a private enterprise P. State-owned enterprise is an incumbent firm of the industry. Private enterprise can enter this industry by bribing government officials (occurrence of corruption), and then compete with state-owned enterprise in quantity of product (Cournot competition).
- The state-owned and private enterprises produce homogeneous products. Both types of them keep unchanged marginal cost of production without fixed cost of production.
- The government is risk neutral and concerned with the tax revenue and employment. It imposes uniform tax rates for per unit of sales of both types of enterprises. The output of the enterprises is used to represent employment because producing more output typically needs more employees.
- Enterprises are risk neutral. The primary goal of private enterprises is profit maximization. If they enter an industry through bribery, a certain cost of corruption has to be paid, which can be regarded as a percentage of the sales. State-owned enterprises are concerned about profit and sales revenue (or scale) at the same time, and the later represents their political position and social responsibility.

The government is faced with three kind of anti-corruption policies: The first policy, allowing the existing of regulation and bribery, is characterized as "inaction". This can be regarded as a policy to maintain the status quo. The second policy is so-called "treating symptoms". That is retaining regulation but fighting against bribery of private enterprises and corruption of officials. The third policy is marked by "treating the root". This kind of policy requires removing industry regulation, and encourages fair competition between private and state-owned enterprises so that bribery and corruption will disappear completely.

Three types of anti-corruption policies correspond to different results. In the "inaction" policy, private enterprises will enter regulated industries by bribing officials, and compete with state-owned enterprises for production. Consequently, total output and employment can increase. Under the "treating symptoms" policy, by taking anti-corrupt actions, the government prevents private enterprises from entering the industry, and there are only state-owned enterprises in the industry. The monopoly of state-owned enterprises gives rise to the decline of the total output and employment while increase of price. For the "treating the root" policy, private and state-owned enterprises compete fairly without cost of corruption, so total yield and employment are both the highest. As the objective function of state-owned enterprises includes sales volume, generally, tax paid by state-owned enterprises is more than private sectors. For state-owned enterprises, Cournot competition will lower relative market share and tax paid to the government. Therefore, the government is faced with a tradeoff between expanding employment and reducing tax from state-owned enterprises. There exists no universally optimal anti-corruption policy. That is, the optimal policy is always condition-dependent.

Through model analysis and numerical simulation, we obtained the following Conclusions: First, on the premise of meeting the government's budget balance, fighting against corruption.

Accompanied with removing inefficient regulations is the optimal anti-corruption policy, which will facilitate economic growth. And this is the "treating the root" policy. Once industrial regulation is removed, private enterprises can compete freely with state-owned enterprises, which would generate the optimal state of society with the highest output and employment. However, it will cause a decline in the market share of the state-owned enterprises and subsequent government's total tax revenue. After relaxing regulation, if the government's total tax revenue received is not enough to achieve a balanced budget, the government will not take "treating the root" policy [8].

Second, given there are inefficient regulations, lower cost of corruption and superior employment pressure; no anti-corruption is a better choice than anti-corruption. If the government does not remove regulation and only combat bribery of private enterprises, private enterprises will not enter the regulated industry. If the corruption cost of private enterprises is low enough, anti-corruption policy will bring about a serious decline in production and employment, which obviously damage the interest of the government. On the contrary, by allowing corruption, the government can incur low cost (reduce some tax from state-owned companies) to increase total output and employment and obtain tax compensation from private enterprises, which is a sub-optimal anti-corruption policy.

Let's take an example. As is known to all, Chinese banking industry has strict entry regulation and credit control. For small and medium sized private enterprises without political background, it is hard to obtain loans from state-owned banks. If the government takes the "inaction" anti-corruption policy, private enterprises can receive loans through bribing bank managers or government officials so as to improve social total output and employment. Conversely, if the government is to crack down bribery while not relax the credit control, the output of private enterprises, the total output of society and the level of employment will all decline. At this time, implementing the "treating symptoms" anti-corruption policy is worse than not to do so. Of course, if the government completely abolishes the credit control, private enterprises will enjoy a period of fast expansion. This will cause the decrease in the market share of state-owned enterprises. But in the long run, benefit of expanding private enterprises will exceed loss suffered by the state-owned enterprises, and the economy eventually will expand faster.

## Conclusion

Chinese anti-corruption campaign has attracted the attention of the whole world. However, the public is more concerned about its political

and social effects with little attention put on economic results. This paper fills up the blank of this area. Our analysis shows that, if inefficient industrial regulation has not been removed, it is better not to fight against corruption, for the reason that mere anti-corruption could lead to lower production and employment. The best policy is to conduct anti-corruption and removal of control at the same time. According to our view, the reason why the violent anti-corruption campaign launched in China beginning at the end of 2012 does not facilitate economic growth lies in not matching and revolutionizing regulation policy. Our conclusions imply that, under the condition of heavy employment pressure or high efficiency for private enterprises, the government is more willing to remove regulation and take "treating the root" anti-corruption policy. This will lead to long-term economic growth.

Due to limited space, we haven't described the details of the game and the process of solving the game. In addition, we do not provide regression analysis based on Chinese data. Our next step is to collect data on anti-corruption and regulation in China and carry out rigorous econometric regressions to test the conclusion of this paper.

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