

# Officials' Social Networks and Local Indebtedness - A Study Based on Provincial Data

Yinming Lyu \*

Affiliated High School of Qingdao University, Qingdao, Shandong, 266001, China

\* Corresponding author: Yinming Lyu (Email: 2509369142a@gmail.com)

**Abstract:** This paper takes the average annual growth of indebtedness of provincial party secretaries and the places where they serve from 2006 to 2017, and aims to investigate whether the social network of officials significantly affects the indebtedness of places. This paper adopts the linear regression method and establishes a unique evaluation system of officials' social networks. It is finally found that officials' social networks have a significant impact on the indebtedness of local governments. At the same time, the provincial officials' tenure, during which the growth of the indebtedness of other provincial governments also significantly affects the indebtedness of that provincial government.

**Keywords:** Local government, Social networks, Indebtedness.

## 1. Introduction

Under China's current party system, whether or not one's social network is strong is a key factor in determining whether or not a local official is able to make a difference in the economy. In the eyes of the general public, those officials with more background seem to be more "open". First of all, even if they encounter resistance to their policies, they can ask for help from their own network of connections. Secondly, unlike some officials with no background, who are often afraid to make mistakes, officials with strong social networks are less afraid of making mistakes (which can sometimes bring very good benefits to the places they govern). In general, officials with backgrounds always give people the impression that they are "bold and daring".

As living in Qingdao, I am very familiar with this topic. From time to time, I have heard my elders talk about the distinctive features of Secretary Yu Zhengsheng's administration in Qingdao. Later, I learned that this was perhaps due to Secretary Yu's unusual status.

On April 6, 1992, Yu Zhengsheng, who had just become the secretary of the Qingdao Municipal Party Committee, criticized the state of cadres and citizens at a meeting on the city's construction work, saying that Qingdao people had fallen into a blind state of self-appreciation and self-satisfaction from which they could not extricate themselves. This led to lagging economic development. "Blue sea, blue sky, red tiles and green trees", Qingdao people proud of their hometown complex, suddenly accused of "a disease", Qingdao people is really a small shock. Subsequently, Yu Zhengsheng also announced to the city: Qingdao construction to the eastern part of the development of the "Eighth Five-Year Plan" period to vigorously develop the city, out of the city's best lots to domestic and foreign auctions and transfers, municipal offices to the east of ..... and so on in the eyes of the locals is very radical! The city's office buildings were moved to the eastern part of the city.

Through reviewing the information, I realized that Yu Zhengsheng has an unusual social background. Due to his position in the Kanghua Development Corporation, which is widely regarded as a powerhouse for Deng Pufang (Deng Xiaoping's son), he is often regarded as an official with a deep

political background and a deep and extensive social network. This is often cited as one of the reasons why he was able to take such a radical approach to economic development in Qingdao. But is this dramatic impact on the local economy due to the varying degrees of social networks of the officials in charge an isolated case or is it widespread across the country?

At the same time, in order to offset the negative impact of the 2008 financial crisis on economic development, local governments in China have relied on the "land finance" model and have raised large-scale debt to promote the construction of urban infrastructure through the establishment of various types of financing platforms. These financing platforms, which include development zones and parks, transportation financing platforms, public utility financing platforms, land reserve centers and State-owned asset management centers, have become an important tool for local governments to incur hidden liabilities.

Local governments usually allocate assets such as reserve land, stakes in State-owned companies, fees and revenues from State bonds to these platforms, which in turn obtain loans from banks or raise funds in the debt market through the issuance of urban investment construction bonds. Some credit-deficient cities, especially in small and medium-sized underdeveloped areas, raise funds from the shadow banking system at higher interest rates through finance leasing, project financing and trust private placements.

A large number of underdeveloped regions, especially in the eastern and central-western parts of the country, have constructed new urban areas and industrial development zones to promote economic development. However, many of them have not achieved the expected results in terms of attracting investment and gathering population. Data show that from 2010 to 2020, China's infrastructure investment totaled RMB 108 trillion, with many of these projects failing to generate sufficient cash flow and requiring debt repayment through fiscal revenues.

Local government debt has grown from 5 trillion yuan in 2008 to about 94 trillion yuan by the end of 2022, with local explicit debt at 35 trillion yuan and local investment and financing platform debt at 59 trillion yuan. The actual total local debt is estimated to be around 90 trillion yuan,

indicating that the level of local government debt has reached a historically high level.

In this context, I think it is meaningful to explore whether there is a causal relationship between officials' social networks and local indebtedness. This is because studying the impact of officials' social networks on local indebtedness can reveal how social networks influence local governments' debt decision-making and management through mechanisms such as resource acquisition, policy coordination, and project promotion. This helps to understand the deep-rooted causes of local debt formation and provides theoretical support for local debt management.

This paper collects a sample of all provincial party secretaries from 2006 to 2017 and tries to examine the impact of local officials' social networks on local indebtedness at the level of provincial party secretaries.

This study will enrich the research literature on local government debt management and local officials' social networks, provide new theoretical perspectives and empirical evidence, and promote the development of related research. It will also provide local governments with practical suggestions for debt management, help local officials rationally utilize social networks in economic development, balance economic growth and debt risk, and enhance local governance capacity.

This study aims to comprehensively reveal the impact of local officials' social networks on local indebtedness, and provide scientific basis and policy recommendations for optimizing local debt management. This is of great significance for enhancing the governance capacity and financial health of local governments and promoting the sustainable development of local economies.

## 2. Literature Review

There is a wealth of research on how the government level affects the local economy, and a large part of this research examines the impact of local officials on economic growth from a promotion incentive perspective. A large part of these studies examines the impact of local officials on economic growth from the perspective of promotion incentives. Li and Zhou (2005) analyze provincial data since the reform and opening-up period, and they find that there is a significant correlation between the promotion of local officials and the economic performance of their jurisdictions.<sup>3</sup> Specifically, for every 1% increase in economic growth, the likelihood of promotion of governors and party secretaries increases by 10%. Specifically, for every 1% increase in economic growth, the likelihood of promotion of provincial governors and party secretaries increases by 10%. This provides some evidence that promotion incentives exist [1]. Zhou Li'an (2007) further examined the relationship between the promotion of local officials and economic growth, and put forward the widely known "Tournament Theory of Promotion of Local Officials" [2] Xu (2011) systematically demonstrates how growth-oriented promotion incentives have led to competition among local governments under a system that combines political centralization and economic decentralization, and thus promoted China's market-oriented reforms and economic development [3].

However, there are also studies that discuss the "impact of local officials on the local economy" from the perspective of non-promotion incentives. For example, Tao Ran and Su Fubing et al. (2011), after empirically reevaluating the economic and promotion data of a large number of provincial

officials during their terms of office, argue that there is no empirical evidence that the GDP growth rate at the provincial level has a significant impact on the political promotion of local officials in China, and that the so-called "promotion tournament" does not exist.... [4] Zhang Jun and Gao Yuan (2007) examine the impact of inter-provincial exchanges of local officials on economic growth [5] Wang Xianbin et al. (2008, 2009) examined the impact of local officials' tenure and turnover on local economic growth [6]. Zhang Ping, Zhao Guochang et al. (2012) found that central government officials have a more significant impact on the economic growth of the provinces where they originate from the impact of central government officials on the economic growth of their home provinces was found to be significant [7].

## 3. Theoretical Mechanisms and Research Hypotheses

### 3.1. Borrowing Capacity and Willingness

Unfortunately, the impression of the public is not a scientific basis. A more professional approach is needed to study specifically whether "officials with background are more daring in economic construction". Here, I think the debt situation of local governments is an indicator worth referring to.

First of all, in the context of China's reform and opening up, if you want to make the local economy develop rapidly, you can't avoid borrowing heavily. However, officials with weak social networks have very big defects in this aspect. First, because of their weak social networks and the strict scrutiny of officials within the Chinese system, these officials are less likely to engage in risky behavior such as borrowing heavily. However, if officials with strong social networks are really as economically bold as we think they are, these two problems are nothing to them. First, as people with "backing", they would be more bold in making decisions about borrowing. Second, under the influence of their powerful social networks, it is reasonable to believe that banks at all levels will be willing to grant them loans.

### 3.2. Meaning of Local Government Debt Levels

In addition to development, debt sometimes poses a risk to local governments. Therefore, the level of government indebtedness that local officials are willing to keep under control during their tenure of office can vary greatly depending on their own attributes. I believe that the social network of officials is an important factor affecting this indicator. Obviously, a strong social network will make officials bolder and more aggressive in the local economy, thus increasing the level of indebtedness.

There are many indicators of local government indebtedness. Of these, I believe that changes in local government debt ratios are the most appropriate for examining whether "officials with backgrounds are more economically daring". First, the debt ratio has a direct role in explaining the structure of local government finances; it reflects how much the local government is willing to lend as a proportion of its finances over a given period of time. This effectively excludes the effect of the amount of local debt across economies. Accordingly, if debt stock is used as the core variable instead of debt ratio, large differences in economic size significantly affect the final judgment.

At the same time, the indebtedness of local governments in

other parts of the country during the tenure of a certain official is also a must. It is just like the fluctuation of the entire market is a factor that cannot be ignored when we examine the performance of a stock during a certain period of time. There are officials who seem to be very aggressive in their borrowing moves, yet they may only be considered conservative when compared to the moves of other local governments in the country during the same period. Some officials may not have seen much fluctuation in their government's indebtedness during their term of office, but when compared to other local officials of the same period, they may be absolutely radical. Here I argue that this problem can be effectively solved by including in the control variables the level of change in debt of the national average of local governments during the tenure of an official.

Hypothesis: the stronger the official's social network, the faster the government debt grows where he or she serves.

#### 4. Variable Design and Data Sources

First of all, there are many indicators of the indebtedness of local governments. Of these, I believe that changes in local government debt ratios are the most appropriate for examining whether "officials with backgrounds are more economically daring". First, the debt ratio has a direct role in explaining the structure of local government finances; it reflects how much the local government is willing to lend as a proportion of its finances over a given period of time. This effectively excludes the effect of the amount of local debt across economies. Accordingly, if debt stock is used as the core variable instead of debt ratio, large differences in economic size significantly affect the final judgment.

At the same time, the indebtedness of local governments in other parts of the country during the tenure of a certain official is also a must. It is as if the volatility of the entire market is a factor that cannot be ignored when we examine the performance of a stock over a certain period of time. There are officials who seem to have made very aggressive borrowing moves, yet when looking at the initiatives of other local governments in the country over the same period of time, he may only be considered a conservative. Some officials may not have seen much fluctuation in their government's indebtedness during their term of office, but when compared to other local officials of the same period, they may be absolutely radical. Here I argue that this problem can be effectively solved by including in the control variables the level of change in debt of the national average of local governments during the tenure of an official.

Secondly, before conducting empirical research, we must of course, for the sake of research rigor, concretize the abstract "social network" into some observable concepts. This kind of distinction between different levels of "background" is not uncommon. The simplest way to distinguish between different levels of background is to look directly at the administrative rank of the people in an official's social network. However, administrative rank should not be the only criterion, and there are some special circumstances that need to be taken into account.

First, "Low in name but high in reality"

Secretary Yu in the story we just told is a good example. As a member of the "second generation of the Reds," Yu's father, Huang Jing, was by no means lowly in rank, but he was obviously not comparable to Deng Xiaoping, who was the supreme leader (in essence). However, the gap between Yu and Deng in the "Second Red Generation" is much lower than

the gap between Huang Jing and Deng Xiaoping's nominal position in the Party: Yu held very high positions in both Deng's Disabled People's Foundation and Kanghua Company, which is a clear indication of Deng's closeness to Yu and Yu's high rank. Clearer evidence is that Yu Zhengsheng became the Party Secretary of Qingdao in 1992, when Bo Xilai, another "second-generation Red", had just become the Mayor of Dalian (in China, the Party Secretary has more power than the Mayor). Even taking into account the age difference, Yu's promotion and career path is obviously faster and smoother than Bo's. If we consider the family's nominal position, we can see that Yu's career is much more successful than that of Bo. Such an outcome clearly doesn't make sense if one is unilaterally considering the family's nominal party status.

Secondly, "Promotion over the ranks"

As a good way to consolidate political power, cross-level promotion has always been common in Chinese politics. Generally speaking, officials who have been promoted over the ranks are generally more favored by higher-level cadres; even though they may not have crossed paths with the leaders who promoted them in the past, such officials clearly have a greater advantage in their social networks than those who have not been promoted over the ranks.

After giving due consideration to the two special cases above, I will materialize the strength of local officials' social networks with the following rule.

Is there some kind of connection with the higher-ups? (Scale: 3 points out of 3, minimum 1 point) Has there been any experience of serving in a central ministry? (ditto) Is there some kind of connection with the leadership of the business group? (ditto)

In this study, the provincial party secretaries and governors of provincial administrative districts were used as the subjects of the study, and the scoring criteria were as follows:

Item 1: A score of 3 will be given to those who had political contacts with the Supreme Leader or several members of the Politburo Standing Committee prior to taking office in the local government; a score of 2 will be given to those who had political contacts with one Politburo Standing Committee member or several members of the Politburo; and a score of 1 will be given to those who do not meet the above conditions.

Item 2: If the secretary of the municipal party committee of Beijing, Shanghai, Chongqing and Tianjin is usually also a member of the Politburo, it can be regarded as 3 points; or if he/she has held a full ministerial leadership position in the Central Government, it can also be regarded as 3 points; or if he/she has held a non-functional leadership position in the Central Government, it can also be regarded as 2 points; if the above conditions are not met, it will be regarded as 1 point.

Note: Some cadres have held leadership positions in the Central Committee of the Communist Youth League, but such central positions are quite different from other central positions, and the social network advantage provided to these cadres by their Central Committee biographies clearly intersects with the advantage provided by the factor of "political contacts with superiors or not". Therefore, in this section, cadres who have served in the Central Committee of the League are given a score of 2. This is true even for the First Secretary of the Central Committee of the League, who is at the level of a full minister.

The third item: if there is a special relationship with the leaders of business groups such as CITIC Group, Everbright Group, etc., it will be rated 3 points; if one has held a full-time leading position in economic management departments

such as the State-owned Assets Supervision and Administration Commission (SASAC), the Central Bank of China (CBOC), and the Ministry of Commerce (MOFCOM), this is also regarded as 3 points. If he/she has held a non-regular leadership position in the economic sector, it will be considered as 2 points. If the above conditions are not met, it is regarded as 1 point.

Take Bo Xilai, Secretary of Chongqing Municipal Committee, as an example. During his tenure in Chongqing, his close relationship with Zhou Yongkang, then a member of the Politburo Standing Committee of the CPC Central Committee, can be considered as scoring 2 points for the first item. As Chongqing Party Secretary and a member of the Politburo, the second item can be considered as 3 points. In addition, Bo Xilai is the younger brother of Bo Xiyong, the chairman of Everbright Group, and has served as a minister in the Ministry of Commerce, which can be regarded as 3 points for the third item. Therefore, Bo Xilai's social network rating is 8 points.

Take Wang Xiankui, Secretary of the Heilongjiang Provincial Party Committee, for example. Not having a deep relationship with his superiors, the first item scores 1 point. Having been the director of the Political Department of the Ministry of Railways, the second item can be regarded as 2 points. Not having deep relationship with large business groups, the third item scores 1 point. Therefore, Wang Xiankui's social network rating is 4 points.

In the next step, the score of each sample in the previous session is multiplied by three to obtain the "benchmark score". The benchmark score is then adjusted slightly to take into account the official's service history and promotion. The following are the adjustment criteria:

Considering the changes in the political environment, even if leaders with a CYL resume after the 18th Party Congress fulfill the conditions of "having experience in the central government" and "having political contacts with a number of Politburo Standing Committee members", it is difficult to consider that they have the same advantages in terms of social networks as leaders who had the same situation before the 18th Party Congress. It is difficult to consider that they have the same advantages in social networks as cadres with the same profile before the 18th National Congress. Therefore, for the samples with a history of the Communist Youth League and after the 18th National Congress, 3 points were

subtracted from the base score. (Only one point is subtracted if the person is generally considered to have "disassociated" himself/herself from his/her Komsomol experience.)

Individual samples will have certain conflicts with their colleagues in their past postings. Therefore, if colleagues with whom they have contradictions are later in high positions; for example, entering the Central Government or even rising to the Politburo Standing Committee, or working in strong departments such as the Organization Department or the Political and Legal Committee, it is reasonable to believe that these cadres will be negatively affected by their previous histories in their social networks. Considering the special status of the Politburo Standing Committee, three points are subtracted from the base score for officials who have conflicts with the Politburo Standing Committee. Other leaders with conflicts with their superiors are only subtracted 1 point from the base score.

## 5. Experimental Design and Results

### 5.1. Variables Setting

Firstly, the explained variables: The explanatory variable is the value of the average annual change in local government debt ratios over the term of office.

Secondly, core explanatory variables: The core explanatory variable is officials' social network level.

Finally, control variables: The control variable is the value of the change in the average annual debt ratio of provincial governments across the country during an official's term of office.

### 5.2. Analyzing Processes

Data source: Officials' social network ratings were obtained by consulting online information (e.g., official platforms such as Xinhua and People's Daily)

For the change in the debt ratio of each local government and the annual average change in the national local government debt ratio, it was obtained by consulting the statistical yearbook of each local government. Some of the data (e.g., officials who took office in the middle of the year) involved some degree of estimation.

### 5.3. Descriptive Statistics of The Main Independent Variables

**Table 1.** Descriptive statistics of the main independent variables

variable name	sample size	maximum values	minimum value	average value	(statistics) standard deviation	upper quartile	variance (statistics)
social network	69	26	8	15.899	3.671	16	13.475
Average annual change in national local government debt ratios over the term of office	69	0.135	0.019	0.059	0.035	0.054	0.001

## 5.4. Detailed Findings

**Table 2.** Results of linear regression analysis

Results of linear regression analysis n=68									
	Non-standardized coefficient		Standardized coefficient	t	P	VIF	R <sup>2</sup>	Adjustment of R <sup>2</sup>	F
	B	standard error	Beta						
a constant (math.)	-0.075	0.024	-	-3.126	0.004***	-	0.772	0.563	f=3.695 p=0.000***
social network	0.005	0.001	0.354	3.56	0.001***	1.515			
Average annual change in national local government debt ratios over the term of office	0.961	0.13	0.644	7.388	0.000***	1.162			
area fixed effect	be	be	be	be	be	be			
Dependent variable: change in average annual debt ratio over the term of office									
Note: ***, **, * represent 1%, 5%, and 10% significance levels, respectively.									

## 5.5. Chart Description

The above table shows the results of the analysis of this model, including the standardized coefficients of the model, t-values, VIF values, R<sup>2</sup>, adjusted R<sup>2</sup>, etc., which are used to test the model and analyze the model's formula.

(1) Linear regression model requires that the overall regression coefficient is not zero, i.e. there is a regression relationship between the variables. The model is tested based on the F-test results.

(2) R<sup>2</sup> represents the degree of fit of the curvilinear regression, the closer to 1 the better the result.

(3) VIF value represents the severity of multicollinearity, which is used to test whether the model presents covariance, i.e., there is a highly correlated relationship between the explanatory variables (VIF should be less than 10 or 5, strictly 5)

(4) F-test is to determine whether there is a significant linear relationship, and R<sup>2</sup> is to determine how well the regression straight line fits this linear model. In linear regression the main concern is whether the F-test passes or fails, while in some cases there is no necessary relationship between the size of R<sup>2</sup> and the degree of model explanation.

The analysis of the results of the F-test can be obtained that the significance P-value is 0.000\*\*\*, which presents significance at the level and rejects the original hypothesis that the regression coefficient is 0. Therefore, the model basically meets the requirements.

The model is formulated as follows:  $y = -0.075 + 0.005 \times \text{Social Networks} + 0.961 \times \text{Annual Average Change in Local Government Debt Ratio Nationally over the Term}$  -

## 6. Conclusion

From the above table we can find that social networks have a significant and positive effect on the level of local indebtedness. For each additional unit of social network, the level of local indebtedness increases by 0.005 units on average. The wider the social network of officials, the higher the level of local government indebtedness, possibly reflecting the important role of social networks in resource acquisition and policy implementation.

At the same time, the change in the national local

government debt ratio during the term also has a significant effect on the level of local indebtedness. For every unit increase in the annual change in the national local debt ratio, the annual change in the local debt ratio increases by 0.961. By controlling for province fixed effects, the model results are more reliable and accurate, revealing the importance of social networks in local debt management.

These findings provide new perspectives for understanding the role of officials' social networks in local financial management and provide a basis for local governments to consider social network factors when formulating debt management policies.

## References

- [1] Li H, Zhou L A. Political Turnover and Economic Performance: The Disciplinary Role of Personnel Control in China [J]. *Journal of Public Economics*, 2005, 89(9):1743-1762.
- [2] ZHOU Li'an. A Study on the Promotion Tournament Model of Local Officials in China [J]. *Economic Research*, 2007, (07):36-50.
- [3] Xu, "The Fundamental Institutions of China's Reform and Development", *Journal of Economic Literature*, 2011, 49:4, 1076-1151 <http://www.aeaweb.org/articles.php?doi=10.1257/jel.49.4.1076>
- [4] Tao R, Su Fubing, Lu X, et al. Can economic growth lead to promotion? --A Logical Challenge and Provincial Empirical Reassessment of the Theory of Promotion Trophy Race [J]. *Management World*, 2010, (12):13-26. DOI:10.19744/j.cnki.11-1235/f.2010.12.003.
- [5] Zhang Jun and Gao Yuan, "Official tenure, cross-location exchanges and economic growth ---- Evidence from provincial-level economies", *Economic Research*, Vol. 11, 2007, pp. 91-103. 103 pp.
- [6] Wang Xianbin, Xu Xianxiang. Local Officials' Sources, Destination, Tenure and Economic Growth-Evidence from Chinese Provincial Governors and Party Secretaries [J]. *Management World*, 2008, (03):16-26. DOI:10.19744/j.cnki.11-1235/f.2008.03.003.
- [7] ZHANG Ping, ZHAO Guochang, LUO Zhi. Source of central officials and local economic growth [J]. *Economics (Quarterly)*, 2012, 11(02):613-634. DOI:10.13821/j.cnki.ceq.2012.02.003.