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Official Tenure, Fiscal Capacity, and PPP Withdrawal of Local Governments: Evidence from China's PPP Project Platform

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Abstract: PPP withdrawal policy is helpful to reduce over-investment in PPPs leading to sustainable development. However, little is known about the role of local governments on over-investment in PPPs. Using the PPP Project Platform Data, a unique dataset, this article is able to quantify over-investment in PPPs by coding PPP withdrawal for the first time. This research tests the influencing factors of PPP withdrawal at the municipal level, according to the centralized withdrawal policy in late 2017 as an exogenous treatment. Based on the theory of over-investment to rapid economic growth, this study develops a two-pillar framework under the combination of political man and economic man assumptions to explain the PPP withdrawal of local governments. The results show that both official tenure and fiscal capacity are significant factors. In addition, debt partially mediates the mayor tenure on PPP withdrawal, and the land revenue growth can hinder the negative relationship between mayor tenure and PPP withdrawal. It implies that over-investment in PPPs is strongly influenced by official leaders' personal promotion incentive and official group members' collective benefit. Thus, our findings indicate that the centralized withdrawal policy is an effective instrument to prevent over-investment in PPPs. Moreover, a match should be formed between local development planning and investment plans to promote sustainable of PPP investment.

Keywords: PPP withdrawal; PPP Project Platform (PPP-PP); over-investment; official tenure; fiscal capacity

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1. Introduction

PPP (Public–Private Partnership) investment has boomed in China since 2014. According to the Ministry of Finance (MOF), local governments have initiated more than 10,000 projects with an investment of RMB 15.1 trillion (about USD 2.3 trillion) by June 2021. Large investment in PPPs aroused much controversy, which may lead to unnecessary public supplement, hidden debt, and budget burden [1–3]. However, little is known about local governments' role in the over-investment in PPPs. The centralized supervisory policy in China offers a unique opportunity to observe it. This study aims to investigate the influencing factors of over-investment in PPPs.

The central government established the PPP Project Platform (PPP-PP) in 2015. It reflects that the promotion of PPP investment in China via a top-down strategy [4]. The PPP-PP is characterized as dynamic management, such as approving entering PPP projects, supervising the implementation process, and withdrawing unqualified PPP projects. It is helpful to trace regional investment in PPPs. Once a PPP project behaves irregularly, it will be identified and suffered withdrawal. If a PPP project is withdrawn from the PPP-PP, it implies that the project is not in line with the regional investment plan. The summary statistics for local governments' PPP withdrawal can reflect regional over-investment in PPPs. Its advantage is

to offer an exogenous treatment rather than the initiation stage of PPP investment launched, which may suffer the endogenous problem. We choose the first centralized withdrawal policy occurred in late 2017 involving 1160 projects (about RMB 1.2 trillion).

Scholars argue that China's fast economic growth includes lots of over-investment in infrastructure construction. The explanation of local governments' role on over-investment is under two assumptions, including personal political promotion [5] and regional group benefit [6,7]. Local official leaders often use their power to pursue political goals [8]. While local official groups are keen to launch speed and over-investment for collective benefits [9]. The requirements of PPP-PP highlight that "local governments are not encouraged to initiate a PPP project if it bears demand risk, provided non-core services, or reimbursed the project's investment at a fixed rate of return". The motivations of over-investment in PPPs are inherently consistent with local governments' other investments in infrastructure and public service.

However, little attention has been paid to local governments' role in over-investment in PPPs. This research codes local governments' PPP withdrawal as a dependent variable of over-investment in PPPs for the first time, then offers a Large-N quantitative study to examine the key factors of PPP withdrawal at the municipal level. The data used in this research include 280 cities involving an over-investment of RMB 1.2 trillion initiated from 2012 to 2017. This study contributes to the existing PPP investment literature by taking the lens of PPP withdrawal as over-investment in PPPs. The findings shed additional light on local governments' role on over-investment in PPPs.

The remainder of this study is organized as follows. Section 2 reviews the literature on PPP investment. Section 3 presents the development of PPP-PP in China. Section 4 presents the framework and hypotheses. Section 5 reports the data and method used in the study, and the empirical results. The conclusions and discussions are provided in Section 6.

2. Literature Review

PPPs are characterized as long-term contractual relationships between government and enterprise, which does not indicate the government's diminishing role in PPPs [10,11]. The government's role is one of the most focal topics in the PPP investment [12], especially local governments' motivations of initiating PPP investment by passing barriers of limited budgetary constraints [13,14] and efficiency gains by providing better Value for Money (VfM) [15]. The collaborations of PPPs in China are quite different. The Chinese government collaborates not only with the private sector but also with state-owned enterprises (SOEs), which play an important role in China's market economy [16]. This phenomenon has spurred heated debates about China's incentives for investing in PPPs.

One stream of the literature on PPP investment plays close attention to key factors attracting market investment. Macro system quality helps to enhance PPP investment from the market [4]. Good governance, such as abiding by rules, clear enforcement mechanisms, and normalized organizations, is very important to conduct PPPs [17]. The difference of macro system in PPPs across different countries and jurisdictions has produced wildly diverse PPP market investment [18–20]. It indicates that system change is path-dependent and is a function of a variety of context-specific variables, implying no one-size-fits-all system instrument is universally applicable for PPPs [21]. Recent research examined how institutional, political, and governmental support structures effect PPP development of PPP-enabling fields [22,23]. Contract management is a typical instrument to help to ensure the supervision goals regarding PPPs in the context of competitive markets, involving rewards, persuasion, and deterrence in PPP contract management [24–26].

The other stream the literature on PPP investment focuses on local governments' motivation. Several studies have identified the key drivers of PPP adoption, which are broadening financing channels, enhancing supply capacity, and improving infrastructure supplement efficiency [27–33]. Scholars have proved that political opportunism and transaction costs are significant factors for investment in PPPs [2]. Others have discussed that local governments are manifesting political opportunism and administrative capacity in

PPPs [34]. In recent years, PPP investment has played a supplementary role in infrastructure investment in China as a response to the pressures of fiscal shortfalls and government debts [16]. A large amount of the literature has discussed local governments' motivation to PPP investment. For instance, Wang et al. has provided the mechanisms of promotion pressure and financial burden in relation to investments in PPP infrastructure projects. They suggest that a match should be formed between local economic infrastructure planning and investment plans to avoid over- or under-investment [35]. Moreover, Zhang et al. has found that local governments tended to initiate more PPP projects if they have great financial pressure, higher off-budgetary debts, or lower budgetary deficits [36]. PPP projects initiated under off-budgetary burdens were more likely to be inappropriate, which indicates over-investment in PPPs. However, little is known about local governments' role in over-investment in PPPs. Similar to Keynesianism, the involvement of the Chinese government may spur economic development but may also lead to hazards if it involves too much investment. Over-investment in infrastructure construction during China's rapid economic development has aroused great attention. Much of the literature has studied the influence factors of over-investment [37]. Several studies have investigated the factors of local governments' over-investment, involving pursuit of political promotion through GDP assessment [38,39], and pursuit of fiscal capacity [6,7,40]. The over-investment in PPPs is also involved to enhance infrastructure in the context of rapid economic development driven by local officials, but there is no evidence to support it. This study attempts to focus on local governments' role on over-investment in PPPs.

3. Development of PPP-PP in China

According to the MOF's guidebook, local governments are required to submit information about all their PPP projects to the PPP-PP. The PPP-PP is the largest one around the world, which have attracted many scholars' attention [1–3]. The PPP-PP in China characterizes as a supervisory instrument for normalization of local governments' investment in PPPs. By comparison, the World Bank's Private Participation in Infrastructure (PPI) project platform is a global recognized database, which supervises PPP projects according to four situations including concluded, active, cancelled, and distressed. Compared with the World Bank's PPI project platform, China's PPP-PP not only has a statistical function but also has a dynamic supervisory function. It helps the central government to control local governments' investment in PPPs in a rational range, which operates through step-by-step declaration and dynamic supervision in a whole project life cycle.

First, the PPP-PP adopts PPP withdrawal management as a supervisory instrument. According to the MOF's guidebook, those infrastructure projects with large investment scale, long-term stable demand, flexible price adjustment mechanism, and a high degree of marketization are suitable for PPPs. Furthermore, PPP projects should meet four requirements: (1) the period of contract is at least 10 years; (2) the cooperation of contract includes investment, construction, and operation; (3) the enterprise has a reasonable profit not exorbitant profit; and (4) the government does not provide a commitment to burden risks within the project. These four conditions are necessary for PPP projects to be not withdrawn in the platform. If a project no longer meets at any stage, it will be noticed to rectified, otherwise, it will be removed from the platform and be noticed to terminate, which is called PPP withdrawal from the PPP-PP.

Second, the PPP-PP adopts a phased dynamic management. According to the MOF's guidebook, the whole lifecycle of a PPP project is divided into five stages: identification, preparation, procurement, implementation, and transfer (See Figure 1). In the identification stage, a PPP project is initiated by a local governmental sector as the project executor approved by the local government. The finance department of the jurisdiction then assesses the feasibility of the proposal through a Value of Money (VfM) test and a fiscal sustainability test (called two tests). In the preparation stage, the local government sector prepares a detailed project implementation programme involving two tests for the approval application of the PPP-PP. In the procurement stage, the local government sector conducts

procurement and selects a winner among multiple bidders. If the process goes well, the government signs a contract with the winner for partnership. Finally, the PPP project moves into the implementation stage and then the transfer stage until the contract expires. At any time in the whole life cycle of a project, a PPP project may be withdrawn from the platform once it fails to meet the requirements, such as unqualified conditions, irregular operation, or imperfect information.

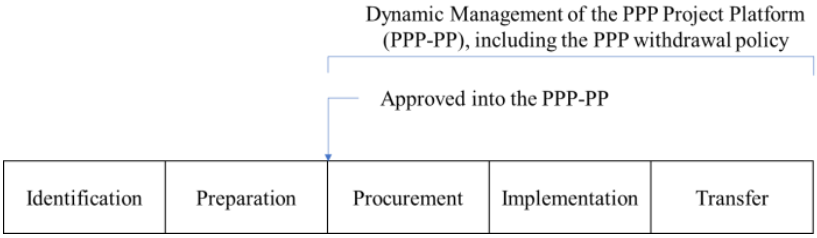

Figure 1. The PPP project platform in China.

The PPP project platform plays an important role of supervising local governments' investment in PPPs. According to the PPP project platform, the number and investment in PPP projects initiated by local governments doubled approximately every half year by the end of 2016. The expansion slowed down significantly in late 2017 after the central government issuing the central PPP withdrawal policy. A series of policies issued in 2017 and 2018 to mitigate the financial risks, most notably through a PPP clampdown of 'overinvestment' in PPPs. In early 2018, the PPP project platform withdrew 1116 PPP projects. The vast territory of China caused severe spatial difference of PPP withdrawal among municipalities (See Figure 2).

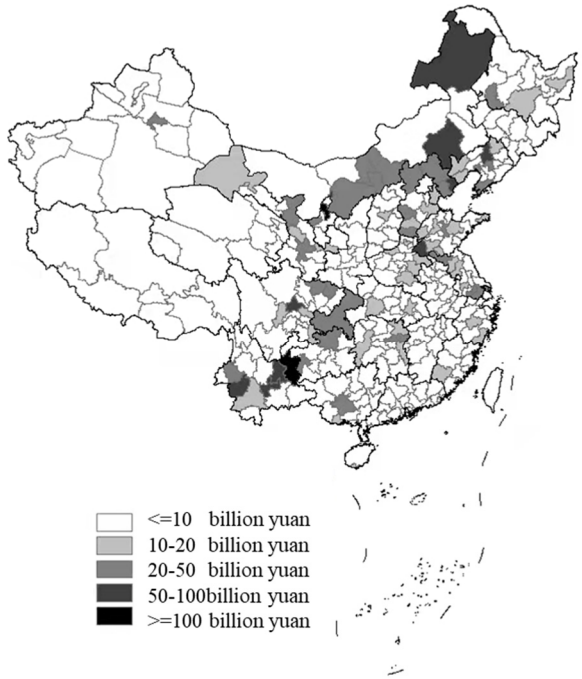

Figure 2. China's PPP withdrawal of local governments in 2014–2017. Note: The figure is made by ArcGIS software. It illustrates the PPP withdrawal of local governments. The total investment of PPP withdrawal is marked with different shades. The more PPP withdrawal, the darker the color.

4. Theoretical Framework and Hypotheses

Local governments' over-investment is an important issue in the infrastructure construction of various countries. As mentioned, an explanation of political promotion and

fiscal capacity are from centralization theory and decentralization theory, respectively. Increasing literature believes that the combination of economic financial decentralization and political centralization can better explain China's economic growth [41,42]. This article aims to examine the factors affecting over-investment in PPPs by taking the lens of over-investment to rapid economic growth theory.

4.1. Local Governments' PPP Withdrawal

The local governments' PPP withdrawal from the PPP-PP as discussed, offers a unique opportunity to observe whether local governments over-invested in PPPs or not. When initiating a PPP project, local officials in China do not have to favor voters but do have to impress their superiors and gain regional development. PPP projects have the characteristics of short construction period and long operation period, so that if local governments are eager to promote the construction of PPP projects, they may over-invest in PPPs through approving enterprises. It may have great risks during the operation phase but stimulate short-term economic growth, leading to over-investment in PPPs and real debt burdens for local governments. These PPP projects face the risk of withdrawal from the PPP-PP, which is called local governments' PPP withdrawal. In a word, PPP withdrawal can be used to measure over-investment in PPPs.

"Promotion Championship" and "Financial Federation" are two classical theories to explain local economic development. Local official management by the central government often relies on political promotion to promote economic development [43]. They correspond to two hypotheses, including official leaders as political man and official groups as economic man, respectively. Official leaders pay more attention to personal promotion probability, while official groups pay more attention to fiscal revenue. A local official leader's tenure in office as the most institutionalized and universal model in official management is an important factor affecting official leaders' ruling behaviors. Meanwhile, local fiscal capacity reflecting collective goals is another important factor affecting official groups' efforts. Based on the tenure system of official leaders and fiscal capacity of official groups, this study develops a two-pillar framework including official tenure and fiscal capacity to explain PPP withdrawal of local governments (See Figure 3).

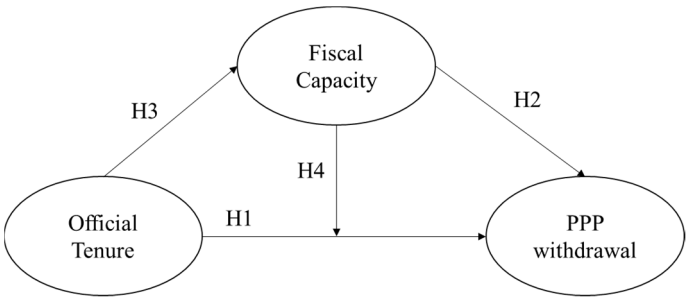

Figure 3. Theoretical framework of official tenure, fiscal capacity, and PPP withdrawal.

4.2. Official Tenure and Over-Investment in PPPs

Local official leaders will try their best to create the most satisfactory achievements of the higher-level government during the term to raise the promotion probability [44]. However, the relationship between tenure and economic development is still controversial. Some research proves official tenure affects GDP growth negatively through a decrease in public capital productivity [45]. Others have proved the opposite influence, which means that official tenure created an incentive structure for local leaders to increase government expenditures in strategy plans to enhance promotion probability [37,46]. There are also studies which show that the relationship between official tenure and economic growth is an inverted U-shape in China [47].

When an official leader is in the earlier time in office, he/she may have a strong incentive to save government expenditure but expand adopting PPPs to attract market

investment. What is more, mayors and secretaries, as local official leaders, are both important in local development. Therefore, we expect the following:

Hypothesis 1. *Official tenure has a negative impact on PPP withdrawal.*

Hypothesis 1a. *Mayor tenure has a negative impact on PPP withdrawal.*

Hypothesis 1b. *Secretary tenure has a negative impact on PPP withdrawal.*

4.3. Fiscal Capacity and Over-Investment in PPPs

Another motive is to make profits for regional collective interests. Local group members, who have limited promotion probability, are more concerned about their own benefits. The welfare of government members mainly comes from local fiscal capacity. The expenditure of budgetary income needs the approval of local people's congresses, while off-budgetary income, as self-supporting income of local governments, is not included in budget constrain management [48]. Under financial pressure, local group members are eager to attract market investment and may excessively enter certain industries in search of high profits [9].

Several studies have tested the relationship between fiscal capacity and PPP investment. Some scholars mentioned that fiscal capacity is negatively correlated with investment in PPPs [16,49,50]. For example, if local governments absorb more tax revenue of burden to lower debt, investment in PPPs will decrease [34,51]. In the opposite, some scholars put forward that governments with insufficient fiscal capacity are difficult to promote PPP projects [1]. Moreover, some scholars have proposed that, based on the interaction of "resistance" and "pull", the relationship between fiscal capacity and investment in PPPs may be an inverted U-shape [52]. Local governments facing huge fiscal pressure may seek to alleviate the pressure with the help of PPPs to attract investment from enterprises and realize debt deferment [53]. In turn, successful investment in PPPs makes local governments fiscal illusion, which drives them to initiate PPP investment exceeding local development planning. Local governments with less budget growth will have stronger incentive to initiate large amount of PPP projects, which may lead to over-investment in PPPs.

Fiscal capacity and investment in PPPs may be mutually causal through different mechanisms. There are two ways to enhance fiscal capacity including budget and off-budget. While local governments have more discretion in off-budget income, which is mainly related to the financing through debt and land exchange revenue. Local governments with more debt burden will have stronger incentive to initiate large amounts of PPP projects, while local governments with less land revenue growth will also have stronger incentive to implement irregular PPP projects. Thus, debt and PPP investment have a positive relationship, and land revenue and PPP investment have a substitution relationship. Based on the literature review, we can preliminarily assume that there is a clear correlation between fiscal capacity and PPP overinvestment. Thus, the second hypothesis is as follows:

Hypothesis 2. *Fiscal capacity has a negative impact on PPP withdrawal.*

Hypothesis 2a. *Budget growth has a negative impact on PPP withdrawal.*

Hypothesis 2b. *Debt has a positive impact on PPP withdrawal.*

Hypothesis 2c. *Land revenue growth has a negative impact on PPP withdrawal.*

4.4. Mediate and Moderate Effects

Scholars have mentioned the casual relationships between official tenure and fiscal capacity. For instance, even though local leaders are eager to initiate PPP investment, they are unable to search for partners due to insufficient fiscal capacity [54]. Although official leaders are at the top of the pyramid of official management, government intervention

in infrastructure construction needs other government group members. While official leaders pay more attention to political promotion, government group members pay more attention to regional collective benefits. As there are some officials with two attributes at the same time (such as associate official leaders), official leaders control the lower-level official groups through the personnel system. Thus, official leaders can influence official group members through fiscal benefits to modify the motivation of official groups on PPP investment. It means that the effect of official tenure on PPP withdrawal may differ depending on fiscal capacity.

However, the composition of government groups is relatively complicated. Official leaders can make relevant policies through the adoption system to directly influence the investment in PPPs. Official leaders as political man can also adjust the financial pressure of official groups by transferring and intervening the off-budgetary income. Thus, we do not deny the direct influence of official leaders on the investment in PPPs, while official leaders indirectly influence the investment in PPPs by influencing fiscal capacity. Official groups actively intervene in the investment in PPPs to achieve the supplement of public goods. It makes the collective goals of official groups the same as personal goals, which may not all be through their collective benefits. Other financing vehicles will affect PPP investment. Fox example, in the situation of high debt or low revenue (mainly from land revenue), investment in PPPs may be out of expectations. This has also become an important mediate and moderate effects to restrain official leaders from over-investing in PPPs. Thus, the third and fourth hypothesis are as follows:

Hypothesis 3. *Debt mediates the relationship between official tenure and PPP withdrawal.*

Hypothesis 4. *Land revenue moderates the relationship between official tenure and PPP withdrawal*.

5. Data, Method, and Results

This section introduces the data, methods, and results. The hypotheses are tested using the data mainly collected from the PPP-PP, China City Statistical Yearbook, Wind Database, China Land and Resources Statistical Yearbook, and Chinese Political Elite Database. We summarize the investment and number of PPP withdrawals at municipal level from the PPP-PP and merge it with the municipal data and the official data. Then, we build a panel data of 280 cities and 6 years from 2012 to 2017. At last, we test the hypotheses by using a multiple linear regression. Variables and results are discussed as follows.

5.1. Dependent Variable: Local Government's PPP Withdrawal

According to the MOF report, the PPP withdrawal are the expected investment in PPPs, which were initiated and approved into the PPP-PP at first, resulting to be withdrawal because of irregular behaviors after initiation. Any PPP project even initiated in a different time of one year is treated the same. The dependent variables *wd_invest* and *wd_num* are the investments and number of PPP withdrawals in one city, respectively. As shown in Table 1, the average investment of PPP withdrawal is RMB 170,800, and the average number of PPP withdrawals is 1.51.

5.2. Independent Variables

5.2.1. Official Tenure

In China, the mayor and secretary represent the de facto top power of the administration, which are popular variables to measure China's political system [2,37,46]. Due to the large scale and long period of PPP investment, officials will schedule investment according to their political tenure. We assess the official tenure hypothesis through two indicator variables, mayor tenure (*mayor)* and secretary tenure (*secretary)*, which measure the time in office of the local mayor and Communist Party secretary.

Table 1. Statistics for all variables used in this study.

Definition	Variable	Measurement	Mean	SD	Min	Max
Over-investment of PPP	*wd_invest*	Investment of PPP withdrawal in a year	17.08	73.94	0	1898.19
	wd_num	Number of PPP withdrawal in a year	1.51	5.46	0	127
Official tenure	*mayor*	Mayor's tenure	2.31	1.42	1	11
	secretary	Secretary's tenure	2.68	1.63	1	9
Fiscal capacity	*budget_gr*	(Budget revenue $_t$/budget revenue $_{t-1}$) − 1	0.127	0.375	−0.78	4.13
	debt	Log (bonds investment in a year)	1.23	1.64	0	5.54
	land_gr	(Land revenue $_t$/Land revenue $_{t-1}$) − 1	0.95	5.82	−0.99	99.76
Control variables	*PPP_invest*	Log (total investment of PPP)	8.27	6.32	0	16.78
	PPP_num	Total number of PPP	6.28	12.99	0	172
	fixinvest	Log (fixed assets investment in a year)	16.21	0.82	12.79	18.24
	loan	Log (bank loans in a year)	16.76	0.962	14.58	20.29
	indus	Gross industrial output value $_t$/GDP $_t$	8.27	6.32	0	16.78
	gdp	Log (GDP in a year)	16.37	0.932	12.76	19.23
	pop	Log (population in a year)	6.28	12.99	0	172

5.2.2. Fiscal Capacity

Fiscal capacity is divided into three variables, including budget revenue growth (*budget_gr)*, debt (*debt)*, and land revenue growth (*land_gr*). The budget revenue directly affects over-investment in PPPs, the data of which come from China Urban Statistical Yearbook.

The off-budget revenue has interaction effect involving mediating variable of debt (*debt)* and moderating variable of land revenue growth *(land_gr*). The mediating variable of debt is composed of the debt balance of Local Financing Vehicles (LGV) [2]. Specifically, the debts of LGV are the sum of short-term liabilities, notes payable, non-current liabilities, and so on. The data are drawn from Wind Database. The moderating variable is land revenue. The phenomenon of land exchange finance is widespread in China. The data is from the China Land and Resources Statistical Yearbook.

5.3. Control Variables

In order to control the influence of total investment and quantity of PPP on the withdrawal, we add *PPP_invest* and *PPP_num* in the models. Local government characteristics are also controlled, including the GDP, population, investment, and loans. They are municipal fixed assets investment (*fixinvest)*, bank loans (*loan)*, gross industrial output value to GDP (*indus)*, *GDP* (*gdp)*, and population (*pop*) in a year. All control variables are one-year lagged in all models.

Table 1 reports the descriptive statistics for all variables in this study.

5.4. Results

5.4.1. Main Effects

Table 2 shows the baseline results, which regress when official tenure and fiscal capacity affect PPP withdrawal. Model 1 reports the OLS regression between official tenure (*mayor* and *secretary*) and PPP withdrawal *(wd_invest*). The term of mayor has a negative impact on PPP withdrawal ($\beta = -4.460$, $p < 0.01$), while the effect of secretary is insignificant. It implies the mayor plays a more direct role than the secretary in the over-investment in PPPs. Thus, H1a is supported, but H1b is not supported. Therefore, H1 is partially supported.

Table 2. Impact of official tenure and fiscal capacity on PPP withdrawal.

Variables	Y = Investment in PPP withdrawal					
	(1) Official Tenure		(2) Fiscal Capacity			(3) Total
	1a	2b	2a	2b	2c	3
mayor	−4.460 ** (−2.50)					−4.695 ** (−1.99)
secretary		0.892 (0.47)				3.160 (1.17)
budget_gr			−13.661 *** (−3.06)			−14.190 *** (−3.12)
debt				0.797 (0.40)		0.894 (0.36)
land_gr					−0.707 ** (−2.15)	−0.703 ** (−2.13)
PPP_invest	1.129 *** (3.35)	1.234 *** (3.56)	1.911 *** (2.93)	1.201 *** (3.43)	2.093 *** (2.93)	2.085 *** (3.09)
PPP_num	2.120 *** (5.42)	2.143 *** (5.30)	2.196 *** (5.15)	2.135 *** (5.36)	2.154 *** (4.94)	2.129 *** (5.04)
fixinvest	1.820 (0.19)	−0.686 (−0.08)	7.180 (0.37)	−0.657 (−0.07)	4.918 (0.24)	5.661 (0.28)
loan	0.861 (0.03)	1.994 (0.08)	66.626 (1.26)	2.326 (0.10)	75.003 (1.22)	73.912 (1.22)
gdp	2.352 (0.07)	−1.932 (−0.06)	0.497 (0.01)	−1.331 (−0.04)	−0.802 (−0.01)	0.471 (0.01)
pop	10.320 (0.20)	8.147 (0.16)	−12.818 (−0.21)	8.298 (0.16)	−5.232 (−0.08)	3.348 (0.05)
indus	−0.521 (−0.48)	−0.479 (−0.45)	−0.775 (−0.44)	−0.475 (−0.44)	−0.760 (−0.41)	−0.924 (−0.51)
Time fixed effect	yes	yes	yes	yes	yes	yes
Municipal fixed effect	yes	yes	yes	yes	yes	yes
Observations	1394	1394	1115	1394	1067	1067
R-squared	0.185	0.181	0.182	0.180	0.177	0.186
Number	280	280	280	280	279	279

Notes: T-statistics are in parenthesis below the coefficient.** and *** denotes 10%, 5% and 1% level of significance, respectively.

In model 2, the independent variable is fiscal capacity (*budget_gr*, *debt*, and *land_gr*). In model 2a, the growth of the budget has a negative impact on PPP withdrawal ($\beta = -13.661$, $p < 0.01$). Thus, H2a is supported. In models 2b and 2c, the independent variable is replaced by debt (*debt*) and land revenue growth (*land_gr*), respectively. Similarly, the land revenue growth has a negative effect on PPP withdrawal ($\beta = -0.707$, $p < 0.05$). Thus, H2b is supported. However, the coefficient of debt is insignificant. It is possibly because that debt reflects the financing capacity of the government but also implies debt repayment burden. As a result, its impact on PPP over-investment may go two ways. It implies that a local government has greater motivation to implement more irregular PPP projects when burdening overloaded debt, which reflects the over-investment in PPPs by a local government. Thus, H2c is supported, but different from H2a and H2b. Therefore, H2 is partially supported.

In Model 3, when all variables are added, the results remain consistent. Our empirical analysis validates that the PPP withdrawal of local governments is influenced by both fiscal capacity and official tenure.

5.4.2. Mediating Effect

Table 3 reports the mediating effect of fiscal capacity for official tenure in PPP withdrawal. The mediating effect can indicate the influence mechanism of official tenure on PPP withdrawal. Models 1–3 show that debt financing (*debt*) has a partially intermediary effect of mayor tenure (*mayor*) on PPP withdrawal. In model 1, the mayor tenure can increase debt financing ($\beta = 0.045$, $p < 0.1$). In models 2 and 3, both mayor tenure ($\beta = -0.388$, $p < 0.05$; $\beta = -0.285$, $p < 0.05$) and debt financing ($\beta = 0.343$, $p < 0.05$; $\beta = 0.216$, $p < 0.05$) have a significant impact on PPP withdrawal. The conclusion is robust either with control variables or not. According to the three models, we can infer that debt financing plays a mediating role between mayor tenure and PPP withdrawal. Therefore, H3 is supported.

Table 3. Mediating effect of fiscal capacity for official tenure in PPP withdrawal.

	(1)	(2)	(3)
Variables	**Debt Financing**	**Number of PPP Withdrawals**	**Number of PPP Withdrawals**
mayor	0.045 * (1.82)	−0.388 ** (−2.12)	−0.285 ** (−2.07)
debt		0.343 ** (2.24)	0.216 ** (2.13)
budget_gr			−0.715 ** (−2.26)
PPP_num			0.294 *** (3.45)
fixinvest			−0.664 (−0.53)
loan			−2.829 (−1.07)
gdp			2.784 (0.68)
pop			1.320 (0.65)
indus			−0.034 (−0.48)
Time fixed effect	yes	yes	yes
Municipal fixed effect	yes	yes	yes
Observations	1678	1398	1115
R-squared	0.032	0.121	0.464
Number	280	280	280

Notes: T-statistics are in parenthesis below the coefficient. *, ** and *** denotes 10%, 5% and 1% level of significance, respectively.

5.4.3. Moderating Effect

Table 4 shows the moderating effect of fiscal capacity for official tenure on PPP withdrawal. The moderating effects show that land revenue (*land_gr*) enhances or hinders the negative relationships between mayor tenure (*mayor*) and PPP withdrawal. In model 1, the land revenue growth can hinder the negative relationship between mayor tenure and PPP withdrawal ($\beta = -0.186$, $p < 0.05$). Furthermore, model 2, including control variables, shows that the negative moderating is still significant ($\beta = -0.214$, $p < 0.05$), and the coefficients do not change much, which demonstrates the conclusion is robust. Therefore, H4 is supported.

In Figure 4, we present graphic demonstrations of the marginal effects of mayor tenure on the withdrawal of PPP investment on the condition of land revenue growth, centered within 95% confidence intervals. The solid line indicates the average change in probability of the PPP withdrawal upon the change in land revenue growth of the local government. When the land revenue growth is lower than 0, mayor tenure has a significantly negative

effect on city-level withdrawal of PPP investment with 95% confidence. The fitting lines of the high, medium and low estimators basically coincide with the linear model, which verifies that the interaction is linear.

Table 4. Moderating effect of fiscal capacity for official tenure on PPP withdrawal.

	(1)	(2)
Variables	**Investment in PPP Withdrawal**	**Investment in PPP Withdrawal**
mayor	−5.418 ** (−2.01)	−4.716 * (−1.77)
land_gr	−0.895 * (−1.71)	−0.876 (−1.47)
*mayor * land_gr*	−0.186 ** (−2.11)	−0.214 ** (−2.26)
budget_gr		−14.465 *** (−3.12)
PPP_invest		2.932 *** (3.79)
fixinvest		7.243 (0.32)
loan		65.153 (0.99)
gdp		−0.539 (−0.01)
pop		−3.772 (−0.06)
indus		−0.543 (−0.29)
Time fixed effect	yes	yes
Municipal fixed effect	yes	yes
Observations	1042	1039
R-squared	0.080	0.103
Number	279	279

Notes: T-statistics are in parenthesis below the coefficient. *, ** and *** denotes 10%, 5% and 1% level of significance, respectively.

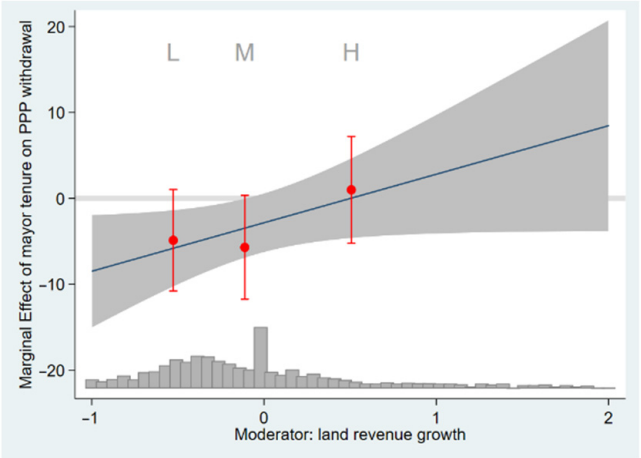

Figure 4. Moderating effect of results of land revenue growth for official tenure. Notes: According to the land revenue growth, the sample is divided into three groups: high, middle and low. H stands for high, M stands for middle, and L stands for low.

5.4.4. Robust Tests

The results for the relationship of official tenure, fiscal capacity, and PPP withdrawal of local governments need to be assessed for consistency. We tested robustness in two ways.

First, we replaced variables. In Table 5, the dependent variable is replaced by the number of PPP withdrawals (*wd_num*). In model 1, the term of mayor (*mayor*) still has a negative effect on the number of PPP withdrawals ($\beta = -0.259$, $p < 0.05$), even though we have controlled the total number of PPPs (*PPP_num*), and so do the interactive effects of the robust results with control variables or not. In model 2a, the growth of the budget still has a negative impact on PPP withdrawals ($\beta = -0.726$, $p < 0.05$). The debt has a positive effect on the number of PPP withdrawals ($\beta = 0.170$, $p < 0.05$). When a local government has too many debts, they will be initiated to implement more irregular PPP projects. In Model 3, when all variables are added, the results remain consistent, thus, the robustness of the conclusion is proved.

Second, we change the method. We examine the heterogeneity test, whose results are not obvious in regions, fields, or payment methods. This further proves that the personal promotion interest and group fiscal benefits are the key factors driving over-investment in PPPs.

Table 5. Robust test results.

	Y = Number of PPP Withdrawals					
Variables	**(1) Official Tenure**		**(2) Fiscal Capacity Constraints**			**(3) Total**
	1		2a	2b	2c	3
mayor	−0.259 ** (−2.28)					−0.289 ** (−2.05)
secretary		−0.031 (−0.33)				0.043 (0.39)
budget_gr			−0.726 ** (−2.24)			−0.727 ** (−2.26)
debt				0.170 ** (2.10)		0.206 ** (2.01)
land_gr					−0.019 (−1.27)	−0.018 (−1.20)
PPP_num	0.294 *** (3.51)	0.295 *** (3.50)	0.298 *** (3.43)	0.294 *** (3.50)	0.296 *** (3.29)	0.293 *** (3.31)
fixinvest	−0.512 (−0.60)	−0.615 (−0.71)	−0.678 (−0.54)	−0.698 (−0.80)	−0.718 (−0.54)	−0.658 (−0.49)
loan	−1.921 (−0.83)	−1.704 (−0.76)	−2.118 (−0.82)	−2.015 (−0.87)	−2.112 (−0.69)	−2.246 (−0.74)
gdp	−1.217 (−0.46)	−1.503 (−0.56)	2.437 (0.60)	−1.325 (−0.50)	2.289 (0.53)	2.349 (0.54)
pop	1.962 (1.09)	1.847 (1.04)	0.762 (0.38)	1.814 (1.04)	0.726 (0.36)	1.449 (0.70)
indus	0.024 (0.43)	0.028 (0.50)	−0.032 (−0.46)	0.025 (0.45)	−0.031 (−0.43)	−0.034 (−0.46)
Time fixed effect	yes	yes	yes	yes	yes	yes
Municipal fixed effect	yes	yes	yes	yes	yes	yes
Observations	1394	1394	1115	1394	1067	1067
R-squared	0.466	0.462	0.459	0.464	0.451	0.458
Number	280	280	280	280	279	279

Notes: T-statistics are in parenthesis below the coefficient. ** and *** denotes 10%, 5% and 1% level of significance, respectively.

6. Conclusions and Discussion

The PPP withdrawal policy is helpful to reduce over-investment in PPPs. More importantly, it is significant for sustainable development. This research pays attention to over-investment in PPPs through the centralized policy of PPP withdrawal in late 2017. We use OLS models of panel data to test key factors of local governments' PPP withdrawals. The results reveal that both official tenure and fiscal capacity are significant factors. (1) In the early years of the mayors' tenure, they implement more irregular PPP projects, which implies a higher probability of over-investment in PPPs, resulting in withdrawal after initiation. The result may fulfill "a new broom sweeps clean" to expand market investment for local development. (2) As fiscal capacity decreases, local governments implement more irregular PPP projects, which also imply over-investment in PPPs. (3) The intermediary effect suggests that debt partially mediates the mayor tenure on PPP withdrawal. (4) The moderate effect suggests that land revenue growth can hinder the negative relationship between mayor tenure and PPP withdrawal. (5) The robustness test shows that the effect on the number PPP withdrawals is also significant, and the heterogeneity test is not obvious.

The findings and implications might be beneficial to many transitional economies involving over-investment in PPPs by local governments.

First, this research offers a new perspective on PPP investment. Over-investment in PPPs is very likely to waste public funding on inefficient and costly projects, even expand the long-term debt of local governments [55,56]. We take a new dependent variable to measure over-investment in PPPs. The variable summarizes the PPP withdrawal at the municipal level from the PPP-PP. In China's vertical-control system, PPP withdrawal by the central government is a typical supervisory instrument to ensure that local investment in PPPs is controllable. The result is similar with Wang et al. [35] and Zhang et al. [36] and deepens the explanation of the over-investment in PPPs. It contributes to offering a unique opportunity to observe local governments' role in PPP investment through the centralized withdrawal policy as an exogenous treatment.

Second, this research bridges the gap between over-investment and PPPs in the literature. We provide evidence that China's PPP booms are not all economically driven, but a result of political-economic means [3]. This is consistent with the existing research such as Xiong et al.'s [2] and Bertelli's studies [34], who argued that PPPs are far from merely a public management issue but a complex political issue. Our results suggest that official leaders may have higher risk appetite in the earlier year in office, which leads to high probability of over-investment in PPPs. Meanwhile, group members may have higher incentive to enhance regional benefits when suffering a large fiscal burden, which also leads to high probability of over-investment in PPPs. Interestingly, secretaries' tenures do not have significant impact on over-investment in PPPs, while mayors' tenures do. It shows public goods provision may be the mayor's performance. However, the coefficient is in the opposite direction to Xiong et al.'s findings [2]. This research shows that mayors in earlier years are more likely to initiate over-investing in PPPs. The initiated PPP investment usually takes several years to be fully implemented, so that PPPs is different with general investment affecting economic development, which should be initiated in earlier years during mayors' tenure cycles. Hence, PPP withdrawal provides micro evidence for over-investment.

Third, our results also shed light on extent understand of government's role on PPPs. Local governments' incentives to expand budgets have been considered as one of the main drivers of PPP adoption [56,57]. This research adds evidence that official tenure and fiscal capacity are the main factors of over-investment in PPPs. Mayors in earlier years intend to manipulate the adoption process and initiate more investment in PPPs beyond the needs in a municipality. Our results suggest that local governments' fiscal capacity not only effect PPP withdrawal directly but also drive mayors to increase the decision making of PPP investment. Government capacity considerations, including budget constraints and debt payment burdens, work similarly in contracting-out decisions across different countries [58].

Thus, empirical research on other countries may use this theoretical framework to test the existence of irregular PPP behavior in different political systems.

The implications for China and other transitional economies are as follows. (1) Local governments' initiation of investment in PPPs should be managed by supervisory instruments to prevent irregular PPP projects. (2) To strengthen the training of PPP project implementation capacity and to improve the understanding of investment in PPPs, it will make official leaders invest in PPPs rationally. (3) Improve the information management of PPP projects. Along with the informatization process of the construction industry, it is a wise choice to advocate for the application of Building Information Modeling (BIM) technology in PPP projects. As a result, it will improve the visualization level of performance supervision. (4) Improve the market mechanism of PPP projects. For this purpose, we can provide applicable classification, guidance, and management of PPP investment according to different industries and regions. (5) Standardize the public finance system and rationally match the local development planning and investment plans to promote sustainable PPP investment.

Our research opens the black box of local governments' role on over-investment in PPPs. However, there are several limitations due to the measurement difficulties. (1) Official tenure is measured in China's political system, but future research can consider official cycle and promotion in strong democratic institutions. (2) Fiscal capacity can be expanded to other government capacity, such as organization capacity and strategic capacity. (3) Many relational variables, such as project investment, contract types, and service character, can influence PPP withdrawal at different level. (4) Other provisional approaches to public goods, such as collaboration with other governments, and contracts out for nonprofit organizations, are not involved. Future research can advance the research topic of over-investment in PPPs in the abovementioned perspectives.

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References

1. Tan, J.; Zhao, J.Z. Explaining the adoption rate of public-private partnerships in Chinese provinces: A transaction cost per-spective. *Public Manag. Rev.* **2021**, *32*, 1–20. [CrossRef]
2. Xiong, W.; Zhong, N.; Wang, F.; Zhang, M.; Chen, B. Political opportunism and transaction costs in contractual choice of public-private partnerships. *Public Adm.* **2021**, *32*, 1–20. [CrossRef]
3. Jones, L.; Bloomfield, M.J. PPPs in China: Does the growth in chinese PPPs signal a liberalising economy? *New Political Econ.* **2020**, *25*, 1–19. [CrossRef]
4. Wang, H.M.; Liu, Y.H.; Xiong, W.; Zhu, D.J. Government support programs and private investments in PPP markets. *Int. Public Manag. J.* **2019**, *22*, 499–523. [CrossRef]
5. Zhou, L. Governing China's local officials: An analysis of promotion tournament model. *Econ. Res. J.* **2007**, *7*, 34–50. (In Chinese)
6. Qian, Y.Y.; Weingast, R. China's transition to markets: Market preserving federalism, Chinese style. *J. Policy Reform* **1996**, *1*, 149–185. [CrossRef]
7. Qian, Y.Y.; Weingast, R. Federalism as a commitment to preserving market incentive. *J. Econ. Perspect.* **1997**, *11*, 82–92. [CrossRef]
8. Shleifer, A. State versus private ownership. *J. Econ. Perspect.* **1998**, *12*, 133–150. [CrossRef]
9. Shen, L.; Dai, Y. The formation of Chinese vassal economy and its disadvantage and root cause. *Econ. Res. J.* **1990**, *3*, 12–19. (In Chinese)

10. Jamali, D. Success and failure mechanisms of public private partnerships (PPPs) in developing countries: Insights from the Lebanese context. *Int. J. Public Sect. Manag.* **2004**, *17*, 414–430. [CrossRef]
11. Scharle, P. Public-private partnership (PPP) as a social game. *Innov. Eur. J. Soc. Sci. Res.* **2002**, *15*, 227–252. [CrossRef]
12. Torchia, M.; Calabrò, A.; Morner, M. Public–private partnerships in the health care sector: A systematic review of the literature. *Public Manag. Rev.* **2015**, *17*, 236–261. [CrossRef]
13. Yescombe, E.R. *Public-Private Partnerships: Principles of Policy and Finance*; Elsevier: Amsterdam, The Netherlands, 2011.
14. Cheung, E.; Chan, A.P.C.; Kajewski, S. Reasons for implementing public private partnership projects: Perspectives from Hong Kong, Australian and British practitioners. *J. Prop. Investig. Financ.* **2009**, *27*, 81–95. [CrossRef]
15. Hodge, A.; Greve, C. On public-private partnership performance: A contemporary review. *Public Work. Manag. Policy* **2017**, *22*, 55–78. [CrossRef]
16. Tan, J.; Zhao, J.Z. The rise of public-private partnerships in China: An effective financing approach for infrastructure investment? *Public Adm. Rev.* **2019**, *79*, 514–518. [CrossRef]
17. Kaufmann, D.; Kraay, A.; Mastruzzi, M. The worldwide governance indicators: Methodology and analytical issues. *Hague J. Rule Law* **2011**, *3*, 220–246. [CrossRef]
18. Casady, C.B.; Eriksson, K.; Levitt, R.E.; Scott, W.R. (Re)defining public-private partnerships (PPPs) in the new public governance (NPG) paradigm: An institutional maturity perspective. *Public Manag. Rev.* **2020**, *22*, 161–183. [CrossRef]
19. Van Den Hurk, M.; Brogaard, L.; Lember, V.; Petersen, O.; Witz, P. National varieties of public–private partnerships (PPPs): A comparative analysis of PPP-supporting units in 19 European countries. *J. Comp. Policy Anal. Res. Pr.* **2015**, *18*, 1–20. [CrossRef]
20. Siemiatycki, M. Public-private partnerships in Canada: Reflections on twenty years of practice. *Can. Public Adm.* **2015**, *58*, 343–362. [CrossRef]
21. Matos-Castaño, J.; Mahalingam, A.; Dewulf, G. Unpacking the path-dependent process of institutional change for PPPs. *Aust. J. Public Adm.* **2014**, *73*, 47–66. [CrossRef]
22. Verhoest, K.; Petersen, O.; Scherrer, W.; Soecipto, R.M. How do governments support the development of public private partnerships? Measuring and comparing PPP governmental support in 20 European countries. *Transp. Rev.* **2015**, *35*, 118–139. [CrossRef]
23. Soecipto, R.M.; Verhoest, K. Contract stability in European road infrastructure PPPs: How does governmental PPP support contribute to preventing contract renegotiation? *Public Manag. Rev.* **2018**, *20*, 1145–1164. [CrossRef]
24. Girth, A.M. A closer look at contract accountability: Exploring the determinants of sanctions for unsatisfactory contract performance. *J. Public Adm. Res. Theory* **2014**, *24*, 317–348. [CrossRef]
25. Brown, T.L.; Potoski, M.; Van Slyke, D.M. Managing public service contracts: Aligning values, institutions, and markets. *Public Adm. Rev.* **2006**, *66*, 323–331. [CrossRef]
26. Reynaers, A.M.; Parrado, S. Responsive regulation in public-private partnerships: Between deterrence and persuasion. *Regul. Gov.* **2017**, *11*, 269–281. [CrossRef]
27. Andrews, R.; Entwistle, T. Public–private partnerships, management capacity and public service efficiency. *Policy Politics* **2015**, *43*, 273–290. [CrossRef]
28. Boyer, E.J.; Scheller, D.S. An examination of state-level public-private partnership adoption: Analyzing economic, political, and demand-related determinants of PPPs. *Public Work. Manag. Policy* **2018**, *23*, 5–33. [CrossRef]
29. Hellowell, M.; Vecchi, V.; Caselli, S. Return of the state? An appraisal of policies to enhance access to credit for infrastructure-based PPPs. *Public Money Manag.* **2015**, *35*, 71–78. [CrossRef]
30. Reeves, E. The not so good, the bad and the ugly: Over twelve years of PPP in Ireland. *Local Gov. Stud.* **2013**, *39*, 375–395. [CrossRef]
31. Chan, A.P.C.; Lam, P.T.I.; Chan, D.W.M.; Cheung, E.; Ke, Y.J. Drivers for adopting public private partnerships: Empirical comparison between China and Hong Kong special administrative region. *J. Constr. Eng. Manag.* **2009**, *135*, 1115–1124. [CrossRef]
32. Malatesta, D.; Carboni, J.L. The public-private distinction: Insights for public administration from the state action doctrine. *Public Adm. Rev.* **2015**, *75*, 63–74. [CrossRef]
33. Riccio, L.J. Commentary: Public-private partnerships: Pitfalls and possibilities. *Public Adm. Rev.* **2014**, *74*, 50–51. [CrossRef]
34. Bertelli, A.M. Public goods, private partnerships, and political institutions. *J. Public Adm. Res. Theory* **2018**, *29*, 67–83. [CrossRef]
35. Wang, L.; Zhou, L.; Xiong, Y.; Yan, D. Effect of promotion pressure and financial burden on investment in public–private partnership infrastructure projects in China. *Asian-Pac. Econ. Lit.* **2019**, *33*, 128–142. [CrossRef]
36. Zhang, B.; Zhang, L.; Wu, J.; Wang, S.Q. Factors affecting local governments' public-private partnership adoption in urban China. *Sustainability* **2019**, *11*, 6831. [CrossRef]
37. Xu, X.; Wang, X. Promotion incentive and economic growth: Evidence from Chinese provincial officials. *J. World Econ.* **2010**, *2*, 17–36. (In Chinese)
38. Li, H.; Zhou, L.-A. Political turnover and economic performance: The incentive role of personnel control in China. *J. Public Econ.* **2005**, *89*, 1743–1762. [CrossRef]
39. Chen, Y.; Li, H.; Zhou, L. Relative performance evaluation and the turnover of provincial leaders in China. *Econ. Lett.* **2005**, *88*, 421–425. [CrossRef]
40. Jin, H.; Qian, Y.; Weingast, B. Regional decentralization and fiscal incentives: Federalism, Chinese style. *J. Public Econ.* **2005**, *89*, 1719–1742. [CrossRef]

41. Cai, H.; Treisman, D. Did government decentralization cause China's economic miracle? *World Politics* **2006**, *58*, 505–535. [CrossRef]
42. Zhuravskaya, E. Incentives to provide local public goods: Fiscal federalism, Russian style. *J. Public Econ.* **2000**, *76*, 337–368. [CrossRef]
43. Huang, Y. Managing Chinese bureaucrats: An institutional economics perspective. *Political Stud.* **2002**, *50*, 61–79. [CrossRef]
44. Downs, A. An economic theory of political action in a democracy. *J. Political Econ.* **1957**, *65*, 135–150. [CrossRef]
45. García-Vega, M.; Herce, J.A. Does tenure in office affect regional growth? The role of public capital productivity. *Public Choice* **2011**, *146*, 75–92. [CrossRef]
46. Tsui, K.Y.; Wang, Y. Decentralization with political trump: Vertical control, local accountability and regional disparities in China. *China Econ. Rev.* **2008**, *19*, 18–31. [CrossRef]
47. Zhang, J.; Gao, Y. Term limits and rotation of Chinese governors: Do they matter to economic growth? *Econ. Res. J.* **2008**, *11*, 91–103. (In Chinese) [CrossRef]
48. Marlow, M.L.; Joulfaian, D. The determinants of off-budget activity of state and local governments. *Public Choice* **1989**, *63*, 113–123. [CrossRef]
49. Zhang, Y.L. The formation of public-private partnerships in China: An institutional perspective. *J. Public Policy* **2015**, *35*, 329–354. [CrossRef]
50. Wang, Y.; Zhao, Z.J. Motivations, obstacles, and resources. *Public Perform. Manag. Rev.* **2014**, *37*, 679–704. [CrossRef]
51. Albalate, D.; Bel, G.; Geddes, R.R. The determinants of contractual choice for private involvement in infrastructure projects. *Public Money Manag.* **2015**, *35*, 87–94. [CrossRef]
52. Shen, Y.Y.; Guo, F.; Li, Z. Local fiscal capacity, business environment and attracting PPP investment. *Financ. Trade Econ.* **2020**, *41*, 68–84.
53. Luo, D.L.; She, G.M. Official's turnover and issuance of local government debt. *Econ. Res. J.* **2015**, *50*, 131–146.
54. Yang, Y.H.; Hou, Y.L.; Wang, Y.Q. On the development of public-private partnerships in transitional economies: An explanatory framework. *Public Adm. Rev.* **2013**, *73*, 301–310. [CrossRef]
55. Flyvbjerg, B.; Holm, M.; Buhl, S.L. How (in)accurate are demand forecasts in public works projects? The case of transportation. *J. Am. Plan. Assoc.* **2005**, *71*, 131–146. [CrossRef]
56. Buso, M.; Marty, F.; Tran, P.T. Public-private partnerships from budget constraints: Looking for debt hiding? *Int. J. Ind. Organ.* **2017**, *51*, 56–84. [CrossRef]
57. Engel, E.; Fischer, R.; Galetovic, A. Soft Budgets and Renegotiations in Public-Private Partnerships: National Bureau of Economic Research. Cowles Foundation Discussion Paper No. 1723. 2009. Available online: https://www.nber.org/papers/w15300 (accessed on 24 August 2009).
58. Kopańska, A.; Asinski, R. Fiscal and political determinants of local government involvement in public-private partnership (PPP). *Local Gov. Stud.* **2019**, *45*, 957–976. [CrossRef]