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The Mechanism of Institutional Governance for China's PPP Projects

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Abstract

Taking the current PPP governance in China as the research object, this paper explores the governance structure and the role of institutional governance. Grounded theory is used in this paper. There are 28 semi-structured interviews used as survey data. Based on these interview data, coding and convergence are carried out. The research group extracted five core categories, namely: institutional governance, relationship governance, contract governance, crisis governance, and project performance. There is a strong correlation among the above governance. The power of PPP governance mainly comes from relationship governance and contract governance. But China's special economic environment has created some crisis problems, reducing the role of the dual governance system composed of relationship governance and contract governance. Therefore, institutional governance is particularly important in China. This paper proposed the China's PPP project governance structure, and studied the governance mechanism for China's PPP projects.

Keywords

PPP, Institutional Governance, Relationship Governance, Contract Governance, Crisis Governance

1. Introduction

PPP (Public-Private-Partnership) is a cooperation model based on concession agreement. Through this model, the government cooperates with social capital to complete public infrastructure construction or other services. The PPP projects have the following typical characteristics as follows: at least one public and one private partner; mutually compatible (or complementary) goals; complexity/great need for coordination; procurement or task fulfilment; long-term

orientation ("life cycle"); bundling, utilization, and synergies of public and private resources; risk-sharing; gains in efficiency/effectiveness (Lienhard, 2006). China has a huge demand for public services, so PPP has a large market space. In recent years, PPP projects in China have shown blowout growth. Since 2014, China has accumulated 10,282 PPP projects with an investment of 16.4 trillion yuan; 7772 signed and implemented projects with an investment of 12.9 trillion yuan. The investment field includes multiple fields such as energy, transportation, municipal engineering, elderly care, education, etc. There are both "big projects" that lay a foundation and promote development, as well as "small projects" that benefit people's livelihoods and fill gaps. The PPP model has become an important measure for China to stabilize growth, promote reform, adjust structure, and benefit people's livelihoods. But there is a phenomenon worth paying attention to. There are 8654 projects in the PPP project database as of December 2018, with an investment of 13.22 trillion yuan RMB. According to the statistics of March 2018, 59% of all PPP projects are in the identification stage, 17% are in the preparation stage, 10% are in the procurement stage, and only 14% are in the project implementation or transfer stage. That is, 86% of PPP projects have not yet been substantially implemented. By the end of June 2022, 151 projects had slow progress, shutdown or even unfinished, resulting in a loss of state assets of 1.722 billion yuan; 10 regions illegally built 10 conference venues or landscape projects, involving a planned investment of 7.566 billion yuan. In 2023, PPP was suspended for several months, and the PPP center project database of the Ministry of Finance was suspended. Some local governments are rectifying the previous PPP projects, and the next step of PPP has attracted much attention. Why does this happen? Through the investigation, it is found that some local governments and social capital dissimilate PPP projects into the financing platforms, which has greatly increased the risk of implicit debt. As a result, most of the PPP projects are in the early stage. The transaction costs and risks of some PPP projects continue to rise, and project conflicts occur frequently.

From November 2017 to June 2018, the Ministry of Finance of China issued a number of regulations to firmly curb this trend. The Chinese government uses these regulations to solve the problems of non-standard operation and frequent crises of PPP projects. Governments at all levels are required to carry out rectification to curb the abnormal cost, slow progress and distorted operation of PPP projects. As of April 2018, the Ministry of Finance has cleaned up a number of illegal projects. There are 1695 projects that have been liquidated, with an investment of 1.8 trillion yuan RMB. There are 2005 projects required to be rectified within the time limit, involving an investment of 3.1 trillion yuan RMB. The social and economic system in China provides a special situation for PPP project governance, so the institutional governance plays a key role in China. What is the function of institutional governance? This is a matter of concern to people. In view of this, this paper uses grounded theory to analyze from practice. This

paper takes the current social and economic situation in China as the research background, takes the Institutional governance mechanism as the research object, and gives consideration to discussing the level structure of PPP project governance in China. The research group conducted semi-structured interviews with relevant personnel of government agencies, PPP project management companies and social capital participants, and collected data for analysis. Using interview records to code, the research group summarized the scope of institutional governance. This process helps to find out the manifestations and elements reflecting the institutional governance mechanism. On this basis, the research group further analyzed the governance level structure of PPP projects in China. These studies provide some research basis for reducing PPP project risk, controlling PPP project conflict and expanding the scope of PPP project governance research.

2. Theoretical Basis

PPP projects are highly uncertain, and the laws and regulations promulgated by the government cannot fully cover any possible situation (Koppenjan et al. 2022). The main risks of PPP projects include exchange rate risk, operational risk, technical risk, policy risk, and financial risk. Exchange rate risk refers to the inability of cash income obtained locally to be converted into foreign exchange at the expected exchange rate (Bodnar & Bartov, 2010). The reason may be due to currency depreciation, or it may be because the government artificially sets the exchange rate at a very unreasonable official level (Krechowicz, 2022). This undoubtedly reduces the value of income and lowers the investment return of the project (Hood & Mcgarvey, 2002). Operational risk mainly comes from the uncertainty of project financial benefits (Bala, 2016). In the process of PPP application, it is necessary to ensure that private partners can obtain reasonable profit returns, and therefore require service users to pay reasonable fees (Xu et al., 2010). However, in the actual operation process, due to various factors affecting the operation status or service provision process of infrastructure projects, the profitability of projects often does not meet the expected level of private partners, resulting in significant operational risks (Sun, 2010). Technical risks are directly related to the actual construction and operation of the project, and should be borne by private partners (Matsuda et al., 2021). Private partners need to operate and maintain infrastructure for a certain period of time after completion, so they are more concerned about reducing operating costs (Gupta et al., 2013). The increase in operating costs will reduce the return on investment for private partners, which will encourage them to complete infrastructure construction with high quality to reduce future operating costs (Veronica et al., 2022). Policy risk refers to the impact of changes in government policies during project implementation on the profitability of the project (Huang et al., 2022). In order to minimize policy risks, it is required that the legal and regulatory environment, as well as the appraisal and execution process of franchise contracts,

should be transparent, open, and fair (Qin, et al., 2022). Bureaucratic phenomena should not occur, and human interference should be minimal (Lee et al., 2024). Otherwise, all parties involved in cooperation will suffer losses (Li et al., 2022). The size of financial risk is directly related to debt repayment ability (Vrieling et al., 2023). Financial risk refers to the insufficient cash income from infrastructure operations to pay off debts and interest, which may lead to creditors resorting to legal means to force project companies to go bankrupt, resulting in the failure of PPP model application (Yuan et al., 2023).

The market economy determines that all participants can make as much profit as possible through PPP projects, and they are not entirely equal in terms of achieving project objectives (Zhang & Zhang, 2013). They pursue the maximization of their interests, whether subjectively deliberately planned or objectively made, with the goal of not harming their own interests (Hart & Zingales, 2015). Limited rationality and unpredictability of the future make it impossible for each participant to fully determine the optimal design of the current contract (Hart, 2016). This increases the likelihood that participants will engage in opportunistic behavior (Halonen & Hart, 2016). Hart (2011) points out that contractual rights include specific rights expressed in the contract and residual control rights not expressed in the contract. This reflects the incompleteness of the contract. The residual rights conflict is an important element of PPP project crisis. The research team investigated many PPP projects in China, and found that these PPP projects generally run smoothly in the identification stage. In the preparation and procurement stage, participants compete for residual rights under high risk expectations and high uncertainty. There will be a lot of contradictions and conflicts. In this process, government departments also participated in the competition. Halonen and Hart (2013) believe that the requirements of the participants for residual rights are implicit, and the conflict of residual rights will be highlighted only after the conflict of project objectives occurs.

Loosemore (2014) believes that the crisis in project implementation deserves attention. In order to maintain the high performance of the project, it is necessary to reduce the frequency of project conflicts. Relational governance and contract governance have always been considered as the important thrust of project governance. However, in China's current social and economic practice, the above-mentioned dual governance system has not yet formed a strong force to effectively control the crisis of PPP projects. On one hand, the contractual governance can enable participants to implement various plans and agreements, and has a positive incentive to promote PPP project performance. But some projects are relatively blind, so that local governments can meet the policy requirements of the central government. Some participants violate regulations and operate in secret for their own benefit, they only use PPP as a financing platform, which weakens the role of contract governance. On the other hand, the relational governance plays a key role in maintaining the relationship between all parties and shaping the cooperation situation. But China's current PPP risks

are relatively high, which will continue to reduce the mutual trust of all participants, resulting in a decline in the regulatory capacity of the credibility mechanism. At this time, the participants can only rely on stronger contract governance to adjust the conditions for achieving project objectives (Halonen & Hart, 2015). This condition can hardly be equated from the perspective of all participants, which weakens the beneficial effect of relationship governance (Li & Li , 2014).

Due to the blowout development of PPP projects in China in recent years, people generally overestimate the PPP dividend. After the PPP project crisis broke out at the end of 2017, the central government of China began to attach importance to a series of institutional governance in 2018. This paper focuses on these institutional governance, and studies its role in PPP project governance. At present, there is no specific research on the crisis of China's PPP project and its governance.

3. Research Design

The research team used grounded theory for analysis. Team members collect data systematically and compare the similarities and differences of related categories. Semi-structured interviews were selected as data collection methods. Members of the research team paid close attention to some sensitive reactions of respondents, including important non-verbal information. It is hoped that through this way the research team can acquire the real understanding of institutional governance. The interviews are not entirely dependent on the outline, and a harmonious atmosphere is important. This can stimulate the respondents' enthusiasm to discuss important issues and make them think pertinently. Researchers marked the issues that people were most concerned about in each interview and asked these problems in the next interview. The purpose of this is to further acquire valuable information based on natural emergence (Glaser, 2011).

Selection of respondents follows the following principles. 1) The research team gives priority to those who have participated in PPP projects. This ensures that the research sample is representative. 2) Respondents should have a certain knowledge of PPP. This ensures the validity of the research sample. 3) Respondents should have a certain amount of time to be interviewed. This ensures the feasibility of the research sample. Fassinger (2005) believes that the number of samples between 20 and 30 can satisfy theoretical saturation in the qualitative research using interviews as data collection sources. Therefore, after preliminary research and selection, the research team identified 28 interviewees, the basic information is shown in **Table 1**.

The interview dates ranged from December 2017 to December 2018. There were 22 individual interviews, 2 telephone interviews and 5 small meetings. The individual interview time is controlled in 60 - 90 minutes, the telephone interview is controlled in 20 minutes, and the small meeting time is controlled in 90 - 120 minutes. After the interview, the researcher collates the records and tapes to form the interview briefing, which is the original material for data analysis.

Table 1. Basic information of respondents (n = 28).

Basic information		Number of people	Proportion (%)
Departmental Type	Government sector	5	17.86
	University or Research Institute	5	17.86
	PPP Project Management Company	8	28.57
	Investors in PPP	10	35.71
Job Type	Executive Director	6	21.43
	Investment Analysts	5	17.86
	Project Manager	7	25.00
	Researcher	10	35.71
Educational Level	Doctor	7	25.00
	Master	12	42.86
	Bachelor	8	28.57
	No Degree	1	3.57
Working Time	More than 16 years	5	17.86
	11 - 15 years	13	46.43
	6 - 10 years	9	32.14
	3 - 5 years	1	3.57

4. Category Extraction and Modeling

4.1. Open Coding

The interview transcripts were arranged into two groups. The records of group B came from researchers of some universities (35.71% of the total sample), while the other records were grouped into the group A (64.29% of the total sample). There are 194 labels in group A and group B, of which 141 labels in group A are used to build models and 53 labels in group B are used to test theoretical saturation. These labels are the smallest analysis units. The research group summarized the problems represented by labels and conceptualized and categorized them. In these labels in the group A, 90 concepts are summarized. The research team compared these concepts and clarified the relationships among them. Further, the research team identified the valuable information implied in these concepts and classified the content-related concepts into a category. The research team finally refined 34 open categories, as shown in Table 2.

4.2. Spindle Coding

The research team sorted out the interrelationship and logical order of open coding to form the spindle coding. The spindle coding is obtained by further merging 34 open categories. There are 11 sub-categories and 5 main categories in the spindle coding, as shown in Table 3.

Table 2. Open coding.

Open Category	Concept
C_1 Low transaction frequency	D_1 First cooperation; D_2 Few times of cooperation
C_2 Strong asset specificity	D_3 Exclusive rights of project; D_4 Inequality of rights
C_3 Transaction uncertainty	D_5 Bounded rationality of Participants; D_6 Opportunistic behavior of Participants; D_7 Uncertainty in performance
C_4 Trust mechanism	D_8 Good atmosphere of cooperation; D_9 Trustworthy partner; D_{10} Relational foundation; D_{11} Cooperate Willingness
C_5 Communication mechanism	D_{12} Information Asymmetry; D_{13} Information opacity; D_{14} Insufficient information
C_6 Power restriction mechanism	D_{15} Power supervision; D_{16} Power restriction
C_7 Uncertainty handling mechanism	D_{17} Post-processing criteria; D_{18} Post-processing procedure
C_8 Unpredictable complex world	D_{19} Unpredictable results; D_{20} Incomplete rights and interests; D_{21} Unobservable Random action;
C_9 Indescribable plan	D_{22} Incomplete clauses; D_{23} Ambiguity clauses; D_{24} Language or writing errors
C_{10} Uncertain cognition of third party	D_{25} Unfamiliar content; D_{26} Weakened binding force;
C_{11} Risk-sharing mechanism	D_{27} Fair risk-taking D_{28} Equivalent risks and benefits; D_{29} Controllable risks-taking; D_{30} Difference of risk preference coefficient; D_{31} Low risk management cost; D_{32} Clear upper limit of risk-taking; D_{33} Dynamic risk-sharing
C_{12} Accountability mechanism	D_{34} Reasonable imputation principle; D_{35} Loss-taking Principle
C_{13} Incentive mechanism of contingency income	D_{36} Acquisition of contingency gains; D_{37} Reduction of potential losses
C_{14} Optimization design mechanism of Contract	D_{38} Mature exemplary text; D_{39} Multi-Round Consultations; D_{40} Normative contracting procedures; D_{41} Reasonable distribution of gains
C_{15} Reputation mechanism	D_{42} Establishment of Good Image; D_{43} Performance of Contract Obligations
C_{16} Selection mechanism	D_{44} Normative selection procedures; D_{45} Fair competition; D_{46} Equality and mutual benefit
C_{17} Abnormally rising of transaction costs	D_{47} Abnormal Expenditure on Projects; D_{48} Additional expenditure for project operation
C_{18} Trust loss	D_{49} Declining expectations; D_{50} Declining trust; D_{51} Decreased loyalty; D_{52} Decreased participation
C_{19} Risk runaway	D_{53} Unidentified risk; D_{54} Unmeasured risk; D_{55} Ineffective risk management measures
C_{20} Conflict control mechanism	D_{56} Actively dealing with Conflict; D_{57} Efforts to control conflicts; D_{58} Resolving contradictions and divergences
C_{21} Crisis management mechanism	D_{59} Flexible handling of unknown rights and obligations; D_{60} Clear Attribution of Surplus Capital
C_{22} Negotiation mechanism	D_{61} Defining the principle of risk sharing through negotiation; D_{62} Defining the principle of responsibility sharing through negotiation; D_{63} Gaining benefits through negotiation

Continued

C_{23} Incentive-oriented policies	D_{64} Loose policy environment; D_{65} Low restrictions on participation; D_{66} High freedom of participation
C_{24} Suppression-oriented policies	D_{67} Constrictive policy environment; D_{68} High restrictions on participation; D_{69} Low freedom of participation
C_{25} Incentive mechanism	D_{70} Favorable policies and regulations; D_{71} Participation with support
C_{26} Guidance mechanism	D_{72} Policy-guided project operation; D_{73} Appropriate policy basis
C_{27} Coordination mechanism	D_{74} Unhindered participant relations; D_{75} Effective policy platform
C_{28} Standard mechanism	D_{76} Strict rights and obligations; D_{77} Referenceable documents
C_{29} Evaluation mechanism	D_{78} Project evaluation criteria; D_{79} Project evaluation system
C_{30} Restraint mechanisms	D_{80} Restricted misconduct; D_{81} Reasonable project operation process
C_{31} Operating in accordance with the plan	D_{82} Excellent schedule; D_{83} Required quality; D_{84} Reasonable cost
C_{32} No negative impact	D_{85} Sustainable maintenance of good relations; D_{86} No negative effects for project operation
C_{33} Performance measurement	D_{87} Quantitative performance; D_{88} Reasonable performance measurement method
C_{34} Performance evaluation	D_{89} Reasonable performance evaluation technology; D_{90} Perfect performance evaluation criteria

Table 3. Spindle coding.

Main Category	Sub Category	Open Category
A_1 relationship governance	B_1 Imperfect relationship B_2 relationship mechanism	C_1 Low transaction frequency; C_2 Strong asset specificity; C_3 Transaction uncertainty C_4 Trust mechanism; C_5 Communication mechanism; C_6 Power restriction mechanism; C_7 Uncertainty handling mechanism
A_2 Contract governance	B_3 Incomplete contract B_4 Interim rights and interests mechanism B_5 Pre-incentive mechanism	C_8 Unpredictable complex world; C_9 Indescribable plan; C_{10} Uncertain cognition of third party C_{11} Risk sharing mechanism; C_{12} Accountability mechanism; C_{13} Incentive mechanism of contingency income C_{14} Optimization design mechanism of contract; C_{15} Reputation mechanism; C_{16} Selection mechanism
A_3 Crisis governance	B_6 Imperfect project B_7 Crisis management	C_{17} Abnormally rising of transaction costs; C_{18} Trust loss; C_{19} Risk runaway C_{20} Conflict control mechanism; C_{21} Crisis management mechanism; C_{22} Negotiation mechanism

Continued

A_4 Institutional governance	B_8 Institutionalization performance B_9 Institutionalization Effect	C_{23} Incentive-oriented policies; C_{24} Suppression-oriented policies C_{25} Incentive mechanism; C_{26} Guidance mechanism; C_{27} Coordination mechanism; C_{28} Standard mechanism; C_{29} Evaluation mechanism; C_{30} Restraint mechanisms
A_5 Project performance	B_{10} Project implementation B_{11} Performance management	C_{31} Operating in accordance with the plan; C_{32} No negative impact C_{33} Performance measurement; C_{34} Performance evaluation

4.3. Selective Coding

The main categories usually have strong generalization, high abstraction and strong correlation, which can explain the core problems of all levels of coding. The core relevance generated by the main categories of this paper can reveal a theoretical framework. This theoretical framework can explain some current PPP economic practice phenomena in China. The research team of this paper found that the dual governance system composed of relationship governance and contract governance could not effectively solve the problems of PPP projects in China. Crisis is implied in formal contracts and relational contracts, and is closely related to the role of institutions. Based on the analysis of the original data and codes at all levels, the research team found that the crisis is widespread in the development of PPP model in China. The correlation system including PPP project governance structure is established, and the model is shown in **Figure 1**.

The level of crisis governance affects project performance. Both relationship governance and contract governance can have a negative impact on crisis governance to a certain extent. Institutional governance plays two regulatory roles: the stronger the institutional governance, the stronger the negative effects of relationship governance and contract governance on crisis governance.

4.4. Tests of Reliability and Validity

4.4.1. Reliability Test

The research group communicated with the interviewees many times, gained the trust and support of the interviewees, and ensured that the interviews were open. After the interview, the research group carefully sorted out the transcripts and discussed the interview process repeatedly. The tone of voice is carefully studied in the recorded material. The above conditions can ensure that the information obtained from the interviewees is true and effective. The consistency of two or more researchers in judging the same material according to the same analysis dimension is an important index to ensure the reliability and objectivity of the analysis results. In this paper, "Interactive Observation" is used to ensure the

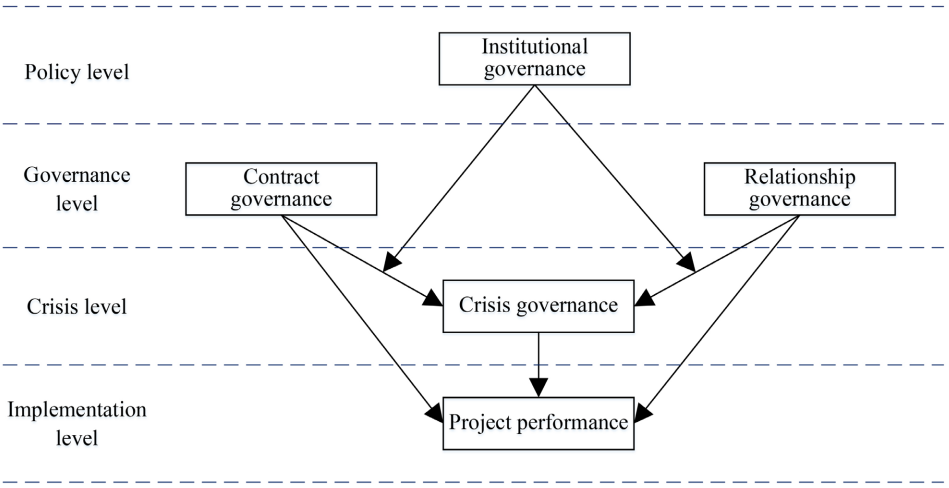

Figure 1. China's PPP project governance structure.

reliability of coding. The first researcher defined the concept based on the interview data. He extracted 25% of the data and gave them to the second researcher. The second researcher identifies the concepts based on these data. Reliability R is calculated according to Formula (1). The higher the consistency of the categories determined by the two researchers, the R is greater, so the explanation is more credible.

$$R = \frac{n \times k}{1 + (n-1) \times k} \tag{1}$$

Among them: The R is the reliability; the n is the number of the sample; the k is the average of the mutual agreement (the degree of mutual agreement between the two researchers).

Average mutual agreement (k) is calculated in the following manner:

$$k = \frac{2M}{N_1 + N_2} \tag{2}$$

Among them: The M is an inductive number that both researchers fully agree on; The N_1 is the number of columns analyzed by the first researcher; The N_2 is the number of columns analyzed by the second researcher.

The first researcher identified 194 tags, and the second researcher randomly selected 49 Tags to extract concepts in above 194 tags. After extraction, there are 33 uniform concepts in two researchers. On this basis, the average mutual agreement (k) is 0.272, the reliability (R) is 0.986. The second researcher randomly selected 23 of the 90 concepts identified by the first researcher. The two researchers summarized categories according to these concepts. There are 14 completely unified categories. According to the above data, the average mutual agreement (k) is 0.248, the reliability (R) is 0.967. Therefore, the data in this paper have good reliability.

4.4.2. Validity Test

This paper focuses on the theoretical sensitivity in the design and coding of in-

terview outlines. The triangular validation by multiple researchers is used to ensure the validity. The research group conducted a lot of validation and full discussion, and used multiple methods to obtain a multi-angle understanding of the research issues. The research team fully considered the complementarity and the mutual confirmation of the different interview materials. The validity of this paper is also guaranteed by the diversity of respondents and data.

4.5. Theoretical Saturation Test

Theoretical saturation refers to the inability to obtain additional data that researchers can further expand the characteristics of a certain category. In this study, theoretical saturation results were obtained by alternating data collection and analysis. The 53 Tags obtained from group B interview transcripts were not found to form new concepts and inductive categories through coding and analysis, nor were they found to be significantly related to existing categories. This shows that there is no theoretical supplement to the existing main categories. From this, it can be concluded that the model obtained by coding is credible. The data statistics in this paper are saturated in theory. In addition, 28 in-depth interview transcripts were used as research samples, which also conformed to the qualitative research saturation principle of in-depth interview between 20 and 30 samples (Fassinger, 2005; Creswell, 1998).

5. Analysis of Mechanism

5.1. Analysis Based on Literature Comparison

Document-based reanalysis of the theory formed by the grounded theory research method is helpful to expand the depth of the theory (Glaser, 1992). Based on the theoretical framework of grounded theory, this paper further discusses the governance mechanism of China's PPP projects combined with relevant literature. The research team analyzed the relevant concepts in Faisol et al. (2005), Meng (2012), Yan et al. (2014, 2016), Halonen & Hart (2016), Holmstrom (2016), Ding (2016), Qin (2016, 2017), and Yang (2017). The analysis is shown in **Table 4**.

5.2. Function Analysis

Transaction cost theory, contract theory and institutional theory provide an effective theoretical basis for the analysis of China's PPP governance structure and its relevance. The incomplete contract is the key factor to form the non-optimal state of the project. This lays the groundwork for the formation of conflicts among the parties. In some projects, transaction costs have been significantly increased. The dual governance system composed of contract governance and relationship governance provides a reasonable logical framework for PPP project governance in China and solves some practical problems. But sometimes, because of some crisis problems, the role of this dual governance system has been reduced. At this time, the regulatory role of institutional governance on the dual governance system is particularly important. The institutional governance

Table 4. Comparison of relational categories.

Faisol et al. (2005), Meng (2012)		Yan et al. (2014, 2016)		Halonen & Hart (2016), Holmstrom (2016)		Category convergence in this paper
Relational Category	Meaning	Relational Category	Meaning	Relational Category	Meaning	
Rrust	Tendencies or attitudes that are willing to rely on the behavior of partners	Rrust	Good expectations for the ability of partners and the realization of contracts			Trust mechanism
Long term	Cognition of Expecting Future Relationships to Continue					
		Promise	The desire for a stable partnership between partners, Actions to maintain the value of relationships			
Communication	Effective and open exchange of information	Communication	Open exchange of information			Communication mechanism
Information switching	Actively provide useful information to partners					
Power restriction	Limitation of contract power			Power reference	Shaping the scope of power beforehand	Power restriction mechanism
Solidarity	Consistency of interests and good partnership	Cooperation	Conscious collaborative behavior			
Intendance	Supervision of cooperator's behavior					
Flexibility	In response to unforeseen events or changes, the parties are willing to adjust their actions or countermeasures.			Uncertainty	Unforeseeable future condition	Uncertainty handling mechanism
Relationship planning	The powers and responsibilities of all parties in future emergencies					
Loss sharing and benefit sharing	Agreement between parties to share profits and losses	Risk sharing	Rational balance of risk cost and benefit	Risk sharing	Balance of risks for parties	Risk sharing mechanism

Continued

Risk sharing	Clearly define responsibilities and risks in the contract and fairly distribute risks					
No blame culture	When the problems arise, the partners are not anxious to blame, but focus on finding the best solution.	Accountability	Normative behavior associated with risk sharing			Accountability mechanism
		Remuneration	Incentive covenant	Revenue incentive	An incentive contract based on a performance or reward	Incentive mechanism of contingency income Optimization design mechanism of contract
		Selection	Market access qualification	Professional reputation	Reducing opportunistic behavior by controlling the market performance of partners	Reputation mechanism
				Moral risk	Dynamic moral concern	Selection mechanism
common goal	Unity of objectives and joint efforts					Conflict control mechanism
Conflict resolution	Applying flexible and informal mechanisms to resolve conflicts			Allocation of residual rights and interests	Control right of contractual residual capital	Crisis management mechanism
Divergence elimination	Process of effectively resolving differences					Negotiation mechanism
Performance measurement	Periodic performance evaluation					Operating in accordance with the plan; No negative impact; Performance measurement; Performance evaluation

Continued

Ding (2016)		Qin (2016, 2017)		Yang (2017)		Category convergence in this paper
Relational Category	**Meaning**	**Relational Category**	**Meaning**	**Relational Category**	**Meaning**	
Institutionalization incentives	Reasonable behavioral incentives	encouragement	Stimulation between norms and structural functions	Positive incentive	Supply of strong incentive power	Incentive mechanism
		guide	Guide and realize good operation			Guidance mechanism
	Balanced screening and coordinated social action	coordination	Coordination of social relations			Coordination mechanism
Legislative restraint	Organizational rules for restricting behavior choice	Restraint	Constraints of Interrelation	Accountability	Promotion of service consciousness; improvement of the quality of public services; promotion of Fairness	Restraint mechanisms
	Reflections of National Executive Power; Excellent Structure and Order	Standard	The Impact of Institutional Design			Standard mechanism
		Evaluation	Institutional Adaptability and Performance			Evaluation mechanism

determines the government's orientation of PPP model in China, which includes both institutional incentives and institutional restraints. Institutional incentives will stimulate the marketization and legalization of PPP, and promote the transformation of public goods market. In China, the government must create institutional conditions to implement PPP model. Therefore, institutional incentives play a vital role in the implementation of PPP model. Institutional restraint provides strict and systematic rule constraints, which can restrict the acts of participants in PPP. As the owner of state power, the government uses the institutionalization to correct the imbalance in the process of PPP operation.

Through the above research, this paper argues that institutional governance in the context of PPP model in China provides regulating effect (incentives and restraints) in the dual governance system, so that the dual governance system can better deal with crisis issues. Contract governance and relationship governance achieve different levels of governance under different institutional governance preferences. As shown in Figure 2.

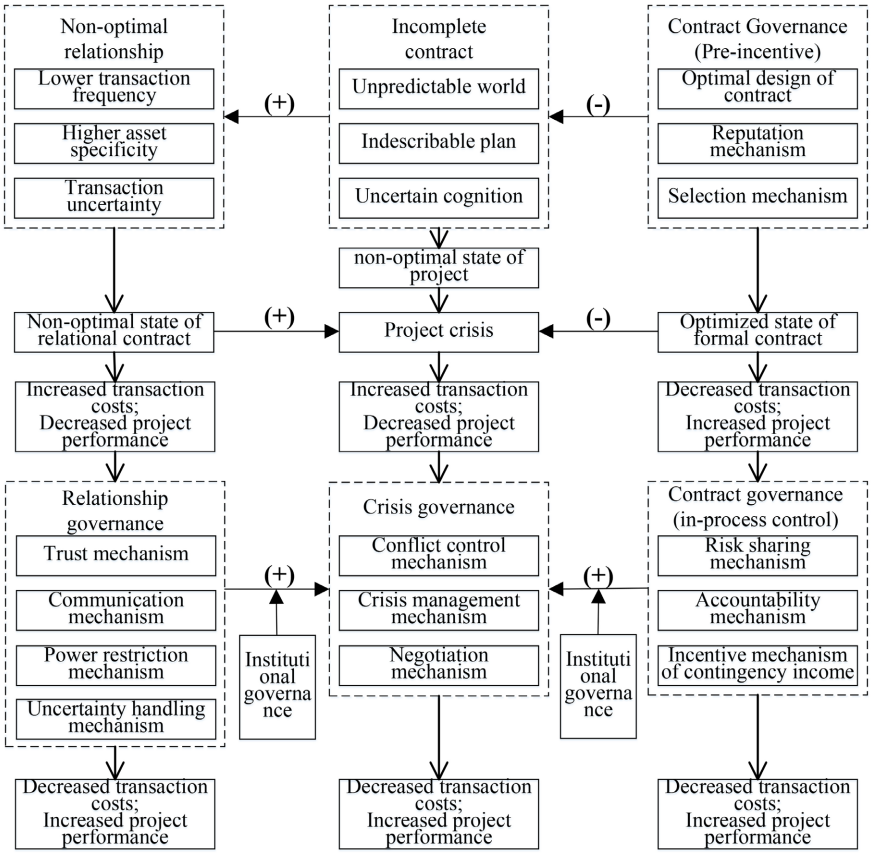

Figure 2. The structure of governance mechanism for China's PPP projects.

6. Conclusion

This paper analyses the current China's PPP governance structure and the Role of Institutional Governance. From 2014 to 2017, institutional governance tends to be incentive, and China's PPP projects have developed rapidly, forming a large scale in the short term. But behind the rapid development, many PPP projects have produced a lot of risk out of control and contract conflicts. This phenomenon has formed the crisis of China's PPP mode operation. From the end of 2017 to the first half of 2018, the treasury department of China adopted a restraint-oriented institutional governance, effectively pointing out the chaos, delineating the red line of the system and reiterating the rules. From late 2018 to the present, institutional governance has been taking a reasonable balance between incentives and restraints. The development of China's PPP model cannot be separated from institutional governance. Relationship governance and contract governance need to rely on the regulation of institutional governance to play a better role. Institutional governance cannot directly eliminate the crisis, but form an indirect impact. Relationship governance, contract governance and crisis governance all can reduce transaction costs, and have a significant impact on the improvement of project performance under the independent and combined effects. There is practical significance to further study the interaction of above three kinds of governance and institutional governance.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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