

Contract Incentive, Transaction Cost and Contractual Conflict: An Empirical Study Based on Construction Project Management Contracting

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Abstract: CPMC (Construction Project Management Contracting) has a complex multi-party contract environment. In CPMC, high proprietary investment, institutional adjustment and other issues can easily lead to a series of contractual conflicts. In the perspective of contractual conflict, contract incentive provides formal reference condition for contract system, and transaction cost makes contractors produce opportunistic behavior. Both above conditions are the key influencing factors. Through the establishment of the relationship model and taking empirical research, we found that: contract incentive has negative influence on contractual conflict, transaction cost has positive influence on contractual conflict, contract incentive and transaction cost has negative influence on each other. Studying the relationship among contract incentive, transaction cost and contractual conflict, aims to discuss the deep-seated problems of project conflict governance. This research paradigm provides an effective project governance path to resolve contractual conflicts and improve compliance performance.

1. Introduction

Participants of CPMC (Construction Project Management Contracting) include owner, contractors, suppliers and professional management team. So CPMC has a special multi-party contract environment, it is very complex. In CPMC projects, high proprietary investment, institutional adjustment and other issues can easily lead to a series of contractual conflicts. Because of the incompleteness of the contract, there is a tangible or intangible game and competition between the participants of the contract in the case of the scarcity of contractual resources and the pursuit of unlimited interests. This increases the transaction cost of contracts. Contract managers are constantly plagued by contractual conflicts. The contractual conflict reduces the performance of projects. Contract participants must complete the contract content and achieve the contract goal in the continuous of "conflict-cooperation".

Contractual conflicts exist objectively in the process of contracting and performing, and stimulate the contractual participants of CPMC to take opportunism behavior. Contractual conflicts will destroy the original contract balance, and have the explicit and implicit characteristics (Halonen and

Hart, 2016). This is the key and long problem to take measures to resolve and reduce the conflict. It is necessary to integrate the different interests through contractual arrangements. In this way, the contract participants with different conflicts of interest can cooperate better (Malhotra and Lumineau, 2011). This paper focuses on the relationship among contract incentive, transaction cost and contractual conflict, and analyzes the elements of project governance that is influence by contract incentive and transaction cost. The framework of the contractual conflict relationship is discussed. A theoretical model of the relationship among contract incentive, transaction cost and contractual conflict is set up in this paper. The empirical study is carried out. This provides a perspective of conflict governance for the study of project governance that covers the process of contracting and performance.

2. Theoretical Basis and Research Review

2.1 Influence of Contract incentive

Contract incentive is an important aspect of contract governance. Holmstrom (2014) is devoted to study the design of the optimal incentive mechanism and the complete arrangement of the contract system. Sannikov (2014) is intended to construct a precise contract clause and accurately define the contract transaction content by the prior arrangement. Holmstrom and Kaplan (2003) believe that the design of the optimal incentive contract can regulate the interests of the participants in the contract in order to facilitate the cooperative. The ideal contract obtained by contract incentive has good equilibrium and compatibility. An infinitely inclusive contract relationship is realized in these precise contract clauses. The ideal contract recognizes the recessive influence of the own utility maximization of participants in the performance process of the contract. In the contract incentive conditions, contractual participants can foresee a variety of results that may arise during the contract period, and make it as clear as possible to specify the responsibility of the participants to the contract in the future (Holmstrom, 1999). Contract incentive can reduce the penalty cost of breach of contract and promote the behavior of self-compliance, so contract incentives reduce the possibility of contractual conflicts. The contract incentive based on the perfect contracting performance makes the interests of the participants reach agreement at the beginning of the contracting. This can make the participants of the contract pursue the maximization of the profit. The contractual participants are intended to get Pareto's best output through pre event incentives. Using the prior negotiation and forming the optimal contract conditions, the good contracting mechanism and performance mechanism are realized.

2.2 Influence of Transaction Cost

Transaction frequency, asset specificity and transaction uncertainty are the important factors that cause the cost of contract transaction to increase. Low frequency transactions increase transaction cost, and asset specificity forms a larger transaction risk (Ahola, *et al.* 2014). In the face of the uncertainty or dynamic conditions of the contract environment, if the participants of contract do not have a good relationship system arrangement to promote the cooperation and interaction, it is difficult to guarantee the smooth progress of the contract transaction (Florence, *et al.* 2014). Thus the contractual conflict is produced. Williamson (2015) advocates the economy of transaction cost, and used the relationship contract to make up the incomplete of the formal contract. Board (2011) found that the economy of transaction cost is not only about the contract transaction cost, but also in finding a good contract order and a feasible contractual system arrangement. These two conditions are the necessary guarantee to reduce the conflict of contract. Some scholars pay attention to the efficiency of contract transaction and the arrangement of non-market contract trading system. They

discuss the nature of the contract transaction organization model and the logic behind the efficiency of the contract transaction. Williamson (2015) was intended to enable transaction costs to be operable, and used transaction costs to explain the contract efficiency boundary problem. In view of the negative impact of transaction costs on performance, contract participants should take contractual transaction nature as explanatory variables to build a governance framework of contractual relations, and then reduce transaction costs.

2.3 Contractual Conflict

In the condition of incomplete contract, the formulation of contract cannot contain every possible situation of contract. Contract participants have different interests, so this results in the incomplete equality among the participants in the pursuit of contractual objectives (Zhang C. L. and Zhang H. Q., 2013). Contract participants seek to maximize the income of the contract, whether it is deliberately planned or objective, they will achieve without damaging their own interests (Halonen and Hart, 2015). Under the condition of incomplete contract, contract participants can not directly observe the specific action of other contract participants, but only observe the result of their action. This result is produced by the action of contract participants and the interaction of the exogenous random factors, so contract participants have the conflict of interest (Hart, 2011). The limited rationality of contract participants and the unpredictability of the future make contract participants unable to fully determine the best design way of the contract, and the formal contract will be renegotiated (Hart and Zingales, 2015). This increases the possibility of the opportunistic behavior that is taken by contract participants (Lei, 2011). Contract participants may take actions to increase their profits. The actions may lead to the reduction of profits of other contract participants. This is the common moral hazard problem (Li, *et al.* 2011). Hart and Holmstrom (2008) also discuss contract governance in the theory of property rights in view of the above contractual conflict. They put forward that the incompleteness of contract results in the specific rights specified in the contract and the remaining control rights not specified in the contract (Hart and Holmstrom, 2008). The conflict of residual control right is the final result of contractual conflict. At the same time, Halonen and Hart (2013) believe that the requirements of the contract owners to residual control rights tend to be hidden. Only after the conflict of contractual objectives occurs, the residual control conflict will be highlighted.

3. Theoretical Model and Research Hypothesis

3.1 Theoretical Model

For CPMC projects, contract incentive is designed to obtain the best contract for the project, including the optimal clause design, good reputation mechanism, selection mechanism and standardized performance mechanism. This will weaken the incompleteness of the contract, thus reducing the possibility of the contractual conflict. The contract incentive mechanism is designed to design the optimal contract terms based on a certain performance index under the contract conditions of the compatibility about constraint and incentive. The incentive contract participant usually chooses the most favorable action for the performance of the project. The effective and optimal terms should eliminate the influence of external factors on the project contract as much as possible. At the same time, these provisions can also take into account the reasonable internal relationship of the project contract. Holmstrom (2015) extends the moral risk problem to the reputation mechanism and the selection mechanism, he pays attention to the influence of reputation mechanism and selection mechanism on the design of optimal contract terms under dynamic conditions. Therefore, contract incentive will weaken the defects caused by the incomplete contract

of CPMC project, and will have a certain inhibitory effect on the contractual conflict.

The existence and continuous increase of transaction cost increases the possibility of the contractual conflict (Bai, *et al.* 2016). If the uncertainty of a CPMC project contract is very small—for example, people have a lot of knowledge about the contract transaction process of a CPMC project—the contract participants will try to rely on the formal contract to deal with the contractual relationship. With the increase in the uncertainty of the contract, the contract participants will become more and more finite rational for the formal contract, and they are more likely to produce opportunistic behavior (Ning, *et al.* 2014). Therefore, the incompleteness of the contract strengthens the uncertainty of the transaction, resulting in the promotion of transaction costs, which increases the distrust between the agents of the contract. On the other hand, higher asset specificity and lower trading frequency will result in a substantial increase in transaction costs. The above conditions have a certain effect on contractual conflict.

Contract incentive is a guarantee for the formal contract to be concluded or performed, and it pays attention to the right and obligation of the contract participants as far as possible (Rai, *et al.* 2012; Wang, *et al.* 2011; Thomas, *et al.* 2013). For the control of transaction costs, scholars tend to implement through informal contractual relationship governance (Cao, *et al.* 2015). Zhou (2012) believes that the relationship governance belongs to the institutional arrangement. This arrangement forms the shared norms and social relations which are the main way of self-execution. On one hand, the formal contract is subject to strict institutional constraints, such as standard contract model, contract specification, contract law system, etc. On the other hand, the relationship governance aimed at reducing transaction costs can reduce the opportunistic behaviors of the contract participants (Yan, *et al.* 2016). This paper proposes forward the following theoretical framework: ①Contract incentive is designed to obtain the best contract. The optimal clause design, good reputation mechanism, good selection mechanism and standardized implementation mechanism will weaken the incompleteness of contract and reduce the contractual conflict. ②The uncertainty of contract transaction increases the distrust between the contract participants. The asset specificity of the contract results in a substantial increase in transaction costs and the possibility of contractual conflict. ③The contract incentive can greatly reduce the transaction cost, and the transaction cost also counteracts the incentive of the contract, weakening the effect of incentive. The relationship structure mentioned above is shown in Figure 1.

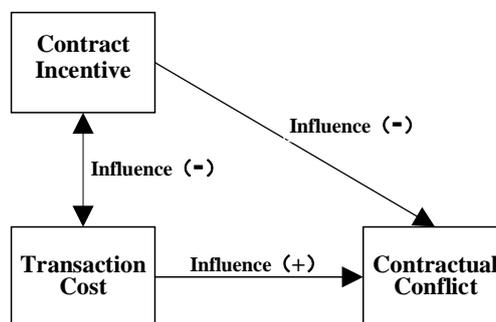


Figure 1: Relational model.

3.2 Research Hypothesis

According to the above theoretical model and the relationship structure, the research hypothesis is further discussed. Contract incentive is designed to build a fairer trading environment (Cheng, *et al.* 2016). Laffont (2009) also believes that contract incentive can solve the contractual conflict resulting from the moral risk between contract participants. Contract incentive binds the interests of

all contract participants on the basis of performance, and enables the performance indicators to be closely related to the actions of the contractual participants. This is a complete contract solution for economic governance based on "conflict-cooperative" (Li and Guo, 2016). Effective optimal clause design, selection mechanism, reputation mechanism and performance mechanism are conducive to the formation of reasonable internal contract relationship, and further reduce the impact of external factors on contracts. Each contract participant can make clear the rights and obligations in the future under contract condition, promote the self-fulfillment behavior, and reduce the possibility of contractual conflict (Holmstrom, 1999). Therefore, the contract arrangement formed by contract incentive can make the contract participants with different interests conflict better cooperate. According to this, the following assumptions are put forward:

H1 Contract incentive has a negative influence on contractual conflict.

As the measure and define for complete the contract transaction, the transaction cost is the sum of the cost of maintaining the order of the contract transaction. The higher transaction cost will cause contract participants to have differences and contradictions (Williamson, 1998). The logic from transaction cost to contractual relationship can be expressed as (Li X. and Li X. M., 2014): ①The existence of uncertainty affects the execution of contract transactions. ②Low trading frequencies increase the mutual dependence of the contract subject, and increase the limited rationality and opportunism behaviors of the contract participants. ③The asset specificity is not conducive to the good maintenance of the contractual relationship, because the contract participant always seeks more economic benefits. Furubotn (2009) argues that the frictionless competitive model is not reasonable, because these models are based on strict assumptions such as zero transaction cost, complete individual rationality and exogenous institutional structure. Especially, as the most important element of transaction cost, asset specificity will make contract transaction relationship more dependent and increase the possibility of contractual conflict. Especially, as the most important element of transaction cost, asset specificity will make contract transaction relationship more dependent and increase the possibility of contractual conflict. Compared with contractual transactions that do not involve specialized assets, contractual transactions with more specialized assets are more likely to restrain the behaviors of the contract participants and make the contract participants unable to get rid of the transaction relationship easily. There is the greater value of asset specificity, and there is the greater the transaction cost. So the contract participants has more dependence of other trading partners, there are the more likely damage by partner's opportunistic behavior, and contractual conflict is triggered (Guo Q. Y. and Li B. L. 2009). According to this, the following assumptions are put forward:

H2 Transaction cost has a positive influence on contractual conflict.

On one hand, transaction cost is formed among contract participants in a series of activities, such as bargaining, communication, information processing, and so on, which may be explicit and recessive. The invisible and uncontrollable transaction costs limit the enthusiasm of the participants to make strong binding commitments, which will reduce the incentive efficiency. Adelstein (2010) found that if a contract participant overprotects the own exclusive assets investment contained in the contract, the enthusiasm of other participants participate in the contract incentive will be reduced. The reason is as follows (Williamson, 2002): ①Contract participants are restricted by the asset specificity, and they are unable to enter or withdraw from the contract freely. ②Exclusive assets are also easily infringed by opportunistic behavior. Exclusive assets are also easily infringed by opportunistic behavior. Even if the contract participants do not consider this part of investment, other contractual participants will also work on setting up the contractual terms based on their own interests. At this time, once the contract is reached, the exclusive investment of assets will occur, which will have an adverse effect on contract participants with special property. ③Contract participants can predict the possibility in the process of contracting. This makes the contract

participants no longer pay too much attention to the incentive contract. With the stronger asset specificity, there is the higher the transaction cost and the worse incentive effect. How to reduce transaction costs, especially to reduce and protect proprietary investment, is a matter of concern for contractual incentive. Therefore, transaction cost, including contracting costs and expected performance costs, are negatively related to contractual incentive. On the other hand, Holmstrom (2011) points out that contract incentive makes the original complex contract transaction simpler, formal contractual constraints are conducive to reducing the high transaction costs. These transaction costs include the costs of search, negotiation, signing and supervision. Contractual incentive reduces transaction costs by means of a planned constraint. This is consistent with the transaction cost theory. This theory advocates protecting the limited rational participants from the opportunistic risk in the contract transaction. Furthermore, Holmstrom (2015) found as follows: ①Incentive contract requires contract participant to understand the potential distortion of the contract. ②Incentive measures, including the optimal terms, good selection mechanism, rational reputation mechanism and effective performance mechanism, can fill the contract loopholes, correct the error, and make contract effectively adapt to the interference of external factors. ③Incentive can reduce the uncertainty of the contract and the asset specificity, and achieve the purpose of controlling the transaction cost of the contract. Tang (2014) believes that incentives are intended to eliminate possible conflicts of interest in advance. Therefore, the contract incentive has a strong negative correlation to the transaction cost. According to the above two discussions, the following assumption are put forward:

H3 Contract incentive and transaction cost have a negative influence on each other.

4. Research Design and Research Results

4.1 Sample Selection and Data Collection

In the design of scale, three variables are constructed, including contract incentive, transaction cost and contractual conflict. Referring to Faisol (2005), Meng (2012) and Yan (2014, 2016) about the research on relationship governance and contract governance, so the latent variable "contract incentive" includes four observational variables: optimal clause design, selection mechanism, reputation mechanism and performance mechanism. Williamson describes the influence factors of transaction cost by the three dimensions used asset specificity, transaction uncertainty and transaction frequency (Williamson, 1998), so the latent variables "transaction cost" includes three observational variables: transaction frequency, asset specificity and transaction uncertainty. Referring to Hart (2016) about the study of contract incompleteness, we believe that contractual conflict has a "three-stage" trigger mechanism, namely the contractual conflict is a complete process, from goal conflict to residual rights conflict. So the latent variable "contractual conflict" includes three observational variables: goal conflict, the residual claim conflict and the residual control rights conflict. Before the large-scale questionnaire survey, the initial questionnaire was sent to 30 employees who participated in the CPMC projects and the professionals who were engaged in the project contract management. The pre feedback results of questionnaire are discussed by experts. According to the CITC index, a part of the measurement items were deleted and revised. In terms of related terms, expressions, and customary appellations, the scale has been amended to make it close to the management practice as far as possible. The Likert 5 scale method was used.

A questionnaire survey was used to collect structured data. We visited the top and middle managers involved in the survey, so as to ensure the reliability and practicability of the conclusion. In view of the problems involved in this study, the selection criteria for the survey sample include two following points. ①We try to choose such respondents who are directly engaged in the contract management of the CPMC project. The reason is that in order to ensure that the respondents are

competent to answer the questionnaire. These respondents should be able to understand the actual contractual problems in CPMC project, have some contractual control ability and understand the contractual relationship in CPMC project. ②The issue of the questionnaire is free, not compulsory. The reason is that it has a certain reliability to ensure the data collected. We try to choose the people who are willing and dare to answer the question. We tell the respondents that these data are used only for academic research, and they are anonymous. The respondents will not be worried about leaking the company's secrets or affecting the relationship network, so they do not deliberately avoid some problems or do not fill in the answers carefully.

A total of 450 questionnaires were issued, 378 valid questionnaires were recovered, and the effective recovery rate was 84%. Among all the respondents, 84.3% of them have a bachelor's degree or more. This ensures that the objects of the survey can better understand the purpose of the questionnaire and the conditions of measurement. The respondents working more than 3 years in the field of CPMC project management account for 89.2% of the total number of respondents. This ensures that the survey data have certain universality and the reliability. On this basis, we made a return visit to 8 respondents who had the decision rights of contract management of CPMC project. The above 8 people are able to contact the contractual conflict of CPMC project. The return visit provides a further guarantee for the reliability of the questionnaire survey data.

4.2 Variable Measurement and Scale Test

In order to test the reliability of the scale, SPSS 22.0 was used to analyze the sample. The results of reliability analysis are shown in Table 1. The Communalities values of all the measurements are greater than 0.6 (the threshold value is 0.4). All values of Cronbach's α are greater than 0.7 (the threshold value is 0.6). All factor loads is more than 0.7 (more than 0.7 is better, more than 0.45 is recommended). The combined reliability of the four latent variables was more than 0.8 (more than 0.7 is better, and the threshold value is 0.6). The above results show that the scale of the study has good reliability.

Table 1: Reliability coefficient.

latent variable	observation variable	communalitie	factor load	Cronbach's α	KMO	composite reliability	AVE
contract incentive	optimal clause design	0.670	0.819	0.820	0.801	0.8820	0.6516
	selection mechanism	0.635	0.797				
	reputation mechanism	0.678	0.824				
	performance mechanism	0.621	0.788				
transaction cost	trading frequency	0.799	0.894	0.844	0.716	0.9057	0.7621
	asset specificity	0.705	0.840				
	transaction uncertainty	0.781	0.884				
contractual conflict	goal conflict	0.647	0.804	0.754	0.682	0.8608	0.6735
	residual claim conflict	0.645	0.803				
	residual control conflict	0.729	0.854				

The shared variation between each observation variable is compared to verify the convergent validity of the scale. The average variation extraction (AVE) of each latent variable is calculated using the standardization coefficient of the corresponding observation variable. The calculated value is shown in Table 1. The values of the AVE are more than 0.6 (the threshold value is 0.5). This shows that the scale has better convergence validity.

The correlation analysis is used to verify whether the scale has multi-collinearity. This can also further verify the discriminative validity, as shown in Table 2. Through correlation data analysis, we found that the correlation coefficients of all observation variables were all less than 0.8, and the correlation coefficients between observation variables of different latent variables were all less than 0.6. Through correlation data analysis, we found that the correlation coefficients of all observation variables were all less than 0.8, and the correlation coefficients between observation variables of different latent variables were all less than 0.6. It can be found that there is no multiple collinear in the scale. At the same time, the square root of the AVE value of the observed variable in a range of the same latent variable is greater than the correlation coefficient between the construct and other constructs. The above findings indicate that there is a good discriminative validity among the variables. The correlation coefficients in the dimension range of a same variable are all significant positive correlation in the confidence interval of 1%. The follow-up hypothesis test can be carried out.

Table 2: Reliability coefficient.

observation variable	optimal clause design	selection mechanism	reputation mechanism	performance mechanism	trading frequency	asset specificity	transaction uncertainty	goal conflict	residual claim conflict	residual control conflict
optimal clause design	1									
selection mechanism	0.550**	1								
reputation mechanism	0.467**	0.554**	1							
performance mechanism	0.536**	0.546**	0.555**	1						
trading frequency	-0.553**	-0.498**	-0.536**	-0.625**	1					
asset specificity	-0.440**	-0.491**	-0.486**	-0.596**	0.619**	1				
transaction uncertainty	-0.541**	-0.499**	-0.534**	-0.643**	0.712**	0.595**	1			
goal conflict	-0.524**	-0.470**	-0.433**	-0.501**	0.588**	0.490**	0.540**	1		
residual claim conflict	-0.492**	-0.505**	-0.423**	-0.512**	0.540**	0.499**	0.552**	0.444**	1	
residual control conflict	-0.564**	-0.563**	-0.510**	-0.503**	0.501**	0.567**	0.533**	0.544**	0.541**	1

Note: It is clearly expressed as ** on the confidence interval of 1% ($P < 0.01$), and it is clearly expressed as * on the confidence interval of 10% ($P < 0.1$).

4.3 Hypothesis Model Test

The AMOS 21.0 software is used to test the model, and the structural equation is shown in Figure 2.

The fitting index of the model is as follows: CMIN/DF=1.736<3 , RMR=0.025<0.05 , GFI=0.971>0.9 , NFI=0.974>0.9 , IFI=0.989>0.9 , CFI=0.989>0.9 , AGFI=0.951>0.9 , TLI=0.984>0.9, RMSEA=0.044<0.05. These numerical results show that the fitting of the model is good.

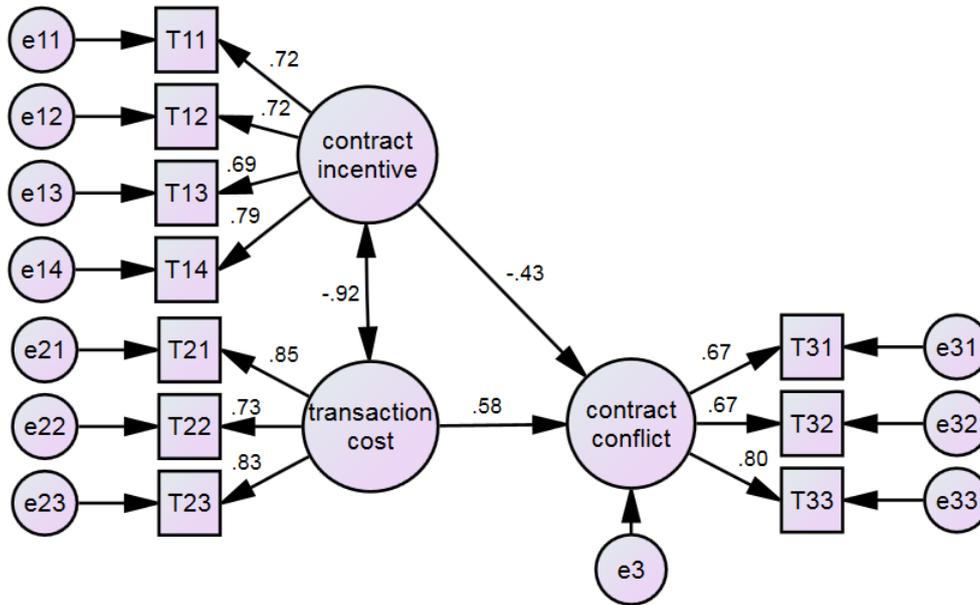


Figure 2: Structural equation modeling.

The fitting statistics of the structural equation model are shown in Table 3. From table 3, it is found that the absolute value of the critical ratio (C.R.) of the three groups of variables is greater than 1.96 in the 1% confidence interval, and they are significant ($P<0.01$). The error standard deviation (S.E.) is smaller, which indicates that the deviation between the data is controlled within the range of the license. The influence relationship of variables can be judged by the standardized system value, and the research hypothesis (H1, H2 and H3) have been confirmed. The results show that contract incentive has a negative impact on contractual conflict, and transaction cost has a positive impact on contractual conflict. There is a strong negative correlation between incentive and transaction cost.

Table 3: Fitting statistical values of structural equation model.

variable relation	S.E.	C.R.	standardized path coefficient	P	whether to support the original hypothesis
influence of incentive on contractual conflict	0.149	-2.811	-0.43	0.005	yes
influence of transaction cost on contractual conflict	0.134	3.781	0.58	***	yes
interaction between contract incentive and transaction cost	0.058	-10.387	-0.92	***	yes

Annotation: It is clearly expressed as *** on the confidence interval of 1% ($P<0.001$), It is considered through the test on the confidence interval of 1% ($P<0.01$).

In order to test the strong negative interaction between contract incentive and transaction cost, a competitive model is built based on benchmark model and compared with benchmark model. The

benchmark model represents a strong interaction between contract incentive and transaction cost, and competition model represents no strong interaction between contract incentive and transaction cost. The fitting index of the model comparison is shown in Table 4.

Table 4: Comparison between the benchmark model and the competition model.

model species	relationship between variables	fitting index	whether to fit
benchmark model	strong interaction between contract incentive and transaction cost	CMIN/DF=1.736, RMR=0.025, RMSEA=0.044, GFI=0.971, AGFI=0.951, TLI=0.984, NFI=0.974, IFI=0.989, CFI=0.989	yes
competition model	no strong interaction between contract incentive and transaction cost	CMIN/DF=11.719, RMR=0.310, RMSEA=0.169, GFI=0.877, AGFI=0.796, TLI=0.767, NFI=0.817, IFI=0.830, CFI=0.829	no

The fitting index of the competition model is as follows: CMIN/DF=11.719>5 (cannot fit), RMR=0.310>0.05 (cannot fit), GFI=0.877<0.9 (unideal), NFI=0.817<0.9 (unideal), IFI=0.830<0.9 (unideal), CFI=0.829<0.9 (unideal), AGFI=0.796<0.9 (unideal), TLI=0.767<0.9 (unideal), RMSEA=0.169>0.05 (unideal). This shows that the competition model cannot be fitted. According to the comparison of the fitting, the benchmark model is obviously better than the competition model. It shows that there is a strong negative correlation between contract incentive and transaction cost, and the hypothesis H3 is confirmed again.

5. Research Conclusions and Management Enlightenment

5.1 Research Conclusions

This paper focuses on the problem of CPMC project governance, and studies the relationship among contract incentive, transaction cost and contractual conflict. The structural equation model is established for the relationship among contract incentive, transaction cost and contractual conflict. Through questionnaires and semi structured interviews, the related data were obtained. The theoretical model and research hypothesis are empirically tested.

①Contract incentive has a negative influence on contractual conflict. The empirical study proves that the contract incentive can weaken the incompleteness of the CPMC contract and make the formal contract of the project better balance and compatibility. Constructing the precise contract terms that contain the contract relationship as unlimited as possible, can help the participants to maximize their utility. There is a hidden influence on the performance process. In view of the drawbacks caused by contract incompleteness, contract incentive enables all participants as much as possible to predict all kinds of outcomes that may arise in the performance process, and clarify contractual obligations under the future state of contract, so as to reduce the possibility of contractual conflict. The economic practice also confirms that prior incentive will reduce the penalty cost of contract participants in the process of performance, and promote the behavior of self-compliance. Therefore, contract incentive is an important measure to bind the interests of participants and urge all participants to pursue the maximization of the inevitable gains. This plays a key role in reducing contractual conflicts.

②Transaction cost has a positive impact on contractual conflict. The objective existence of transaction cost and the dynamic changes in its continuous improvement will have a great negative impact on the performance of the CPMC project. This is an important source of the contract conflict. Low transactions, transaction uncertainties and asset specificity are the important endogenous

factors for the increase of transaction costs, which will bring about transaction risks and form a contractual conflict. High transaction costs will lead to contractual differences and disputes, and form a bad relationship system, which will affect the cooperation and interaction between contractual partners and make contractual transactions impossible to carry out smoothly. Under the rule of society, the relationship governance based on reducing transaction costs is the internal mechanism of stable contract transaction relationship. It can quickly make participants solve contractual problems together, eliminate differences, reduce conflicts and improve satisfaction of all parties. The perspective of transaction cost economy is to establish good contract order and feasible contract system arrangement, which is a necessary guarantee to reduce contract conflict in new equity financing projects.

③Contract incentive can reduce the transaction cost, and transaction cost can reduce the effect of contract incentive. Contract incentive and transaction cost have a negative influence on each other. The empirical study proved two statements. On one hand, the transaction cost limits the initiative of contract participants of the CPMC project to establish a strong binding commitment. This will reduce the incentive efficiency. With the increase of transaction cost, the effect of contract incentive will be worse. On the other hand, contract incentive can make contract participants find the most favorable action to themselves, and then reduce the transaction cost. Although the pre event incentive may raise the cost of contracting, incentives make the complex contract transaction become simpler because of the formal contract constraint, and also reduce opportunistic behaviors and transaction uncertainty, thereby reducing contractual differences or disputes. Contract incentive is an important contract behavior to reduce contract conflict and greatly reduce the cost of performance. It is an objective need for the governance of the contract conflict that the contract incentive is combined with the relationship governance which aims to reduce the transaction cost.

5.2 Management Enlightenment and Prospect

Based on the above research, the following management enlightenment is provided.

①The relationship structure of contract incentive, transaction cost and contract conflict provides an effective analysis platform for building a project governance structure based on "conflict-cooperation" under the multi-agent condition. For contract conflict, we should focus on the influence of contract incentive and transaction cost on contract conflict, and also pay attention to the interaction between contract incentive and transaction cost. We should carry out the institutional arrangement of negotiations, and support the dynamic adjustment of risk sharing, accountability mechanism and contingency remuneration in the implementation process of contract parties.

②In view of the relationship among contract incentive, transaction cost and contract conflict discussed in this study, we can further discuss the three interaction relationships among contract governance, relationship governance and conflict governance. Most of the researches on conflict governance have been classified into contractual governance or relational governance. However, in the real economic practice, there are still a lot of contract conflicts that cannot be controlled under the action of the above two kinds of governance. It is necessary to expand the research dimension of conflict governance, focus on the nature of contract conflict, fully consider the role of conflict governance as an independent governance element, and investigate whether conflict governance can effectively improve performance. In addition, both contract governance and relationship governance can reduce performance costs. They play a significant role in performance improvement under the respective roles and functions. We can further investigate the improvement conditions and the mechanism of performance under the interaction of three governances under the condition of conflict governance.

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