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*Institutional Collective Action Mechanism in Asia: Collective
Problem Solving Mechanism in Multi-level Governance*

Title of the paper

*Institutional Collective Action and Interlocal Collaborative
Network in Urban Agglomeration of China*

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Institutional Collective Action and Interlocal Collaborative Network in Urban Agglomeration of China

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Abstract: Intergovernmental cooperative governance of urban agglomeration is not only an inevitable outcome, but also the necessary require of urban agglomeration development, which has formed the bilateral and multilateral network framework. The institutional arrangement which is participated with all members tries to promote intergovernmental cooperation. It influences and improves intergovernmental cooperation by the external constraint which is formed by the selective benefits motivation, transaction cost and contract risk of local government. The ideal relationship between institutional arrangement and intergovernmental cooperation network transition presents three periods---non-cooperative period, cultivating cooperative period and autonomous cooperative period. From 2006 to 2015, the data from National Urban Agglomeration Association presents that the approaches of provincial and inter-provincial intergovernmental cooperation transition are extremely different. Exactly, institutional arrangement has obviously put long triangular bilateral cooperation in motion, which causes this urban agglomerate cooperation developing from the cultivating period into autonomous period. However, Beijing-Tianjin-Hebei region is still in the transition period from pre-cooperation phase to cultivating phase. In order to further improve the intergovernmental cooperation, it is supposed to decrease the possible transaction cost and risk of intercity cooperation and make overall institutional arrangement according to different frameworks.

Key Words: Urban agglomeration; Association; Cooperation governance; Network framework

1.0 Urban Agglomerate Development and Intergovernmental Cooperation

Along with social and economic development, the trans-regional characteristics of urban public affairs are constantly enhanced. Local government of single administrative boundary cannot handle it effectively, so the coordination and cooperation between cities become more important. The characteristics of regional local governmental cooperation in our country are: the participation of multi-subject, the support of multi-level, the cooperation of multi-field and the overlapping of multi-zone. As the important carrier of urbanization, urban agglomerate development and intergovernmental cooperation are inseparable and mutually reinforced. Urban agglomeration refers to a relatively complete city aggregation which has a number of cities of different characteristics, types, grades and ranges in the specific geographical range. With the help of modern transportation tool, the accessibility of integrated transport network and high-speed information system, it depends on certain natural conditions, confirming one or two large or mega cities as the core, establishing and developing the internal relationship between urban individuals.

With the promotion of urbanization strategy in China, urban agglomeration is regarded as the important carrier and manifestation of the regional economic and social development. Currently, the total acreage of urban agglomeration in China occupies 25% of the country, but concentrates 60% of the country's total population, 80% of the economic aggregate, 70% of the fixed assets investment, 85% of the college students, 92% of the mobile phone users, 98% of the foreign funds and 48% of the foodstuff, which will develop into nineteen urban agglomerations including different levels and different scales. Urban agglomerate development is mainly manifested as the development of integration, shared mode, and intensive mode. It can achieve high-degree integration of economic and social resources in the context of spatial connection. However, the collaborative management of urban agglomerations

has practical importance, urgency and necessity on urban agglomerate development. At present, the development of urban agglomerations in China has unreasonable layout, insufficient internal division of labor and low cluster efficiency. What's more, each local government goes its own way, which is the obstacle to the development of urban agglomeration for a long time. By reinforcing urban agglomeration as the main subjective pattern of new urbanization and establishing inter-regional coordination mechanism for urban development, New Urbanization Development Plan in 2014, central city working conference in 2016, the National Plan for 13th Five-Year, and the Yangtze River/Chengdu Chongqing Delta Urban Agglomeration Planning make breakthrough on the construction of urban agglomeration governance mechanism which includes multi-subject and multi-governance model. On one hand, it puts forward higher requirements for the scientificity, standardization and high-efficiency, on the other hand, it increases cooperative governance's crucial role in the development of urban agglomeration. In a word, intergovernment cooperation also becomes the new trend of the urban agglomeration governance. In this context, we are supposed to further research and understand how to achieve this goal, what are the characteristic, trend and influence factor of the cooperation among local governments in urban agglomeration in order to practice the policy, strengthen policy guidance and regulation and achieve this goal scientifically.

In theory, intergovernmental cooperation of urban agglomeration issue has been gradually concerned by plenty of public administration and public policy scholars after 2000. As for research method and research object, the research on urban agglomeration is divided into two types. The first type expands generalized research on public administration, regional governance, intergovernmental game and regional partnership of urban agglomeration from the overall level of the region. The other type expands its research on the concrete urban agglomeration or concrete field, for instance: Beijing-Tianjin-Hebei, Yangtze River Delta, environmental protection and air pollution control.

These researches show us the regional development disciplines of urban agglomeration and the cooperative dilemma under the context of multiple realistic

complex factors. However, these two researches can seldom answer the question like the comparative selection and discipline of the diversity pattern of urban agglomeration governance. Though the first research pays attention on regional characteristic of urban agglomeration and tries to establish the general framework of urban agglomeration cooperation, it ignores the individual motivation, action and transition of local government which is the member of urban agglomeration as the rational selective subject and the differences in the collaborative model of their representative actions. It is also lack of the realistic basis of how to evaluate and judge from the aspect of regional integration. The second research pays attention on the concreteness of urban agglomeration and tries to come up with the construction methods of breaking cooperative barriers in some urban agglomerations, but it ignores the changing tendency and action mechanism of the cluster collaboration in urban agglomeration.

We can see, now that urban agglomeration is used for planning and coordinating the overall development, cooperative relationship is supposed to establish on all members. However, in the practice of intergovernmental cooperation in the specific urban agglomeration, not all cooperative relationship happened on all members. In contrast, a number of cooperative relationships happened between two or several member cities. Thus, it cannot be explained that why various collaborative methods happened, what are their features, and what are the internal associations between different types of collaborations. Different from usual researches which focus on the benefit conflicts of intergovernmental cooperation and analytic paradigm of case countermeasure, institutional collective action theory pays attention on the “relationship” level of intergovernmental cooperation. In this theory, with “relationship” regarded as the research object, it expands individual collective action to the organization level from relationship property, and provides selective theory perspective for us to answer the questions above.

We have tried to analyze three fields including the environment, hygiene and innovation of Pan-pearl River Delta and the innovative regions of Chengdu Plain Economic Zone. However, on one hand, existing efforts do not research on wider

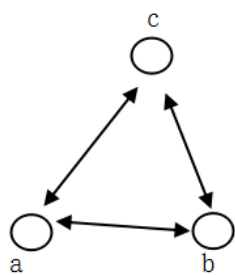
range of urban agglomerations, on the other hand, the research on general discipline of intergovernmental cooperation of urban agglomeration is not enough. Thus, we try to reveal the behavioral motivation of urban agglomerate local governmental cooperation and the relation framework thus formed, according to the institutional collective action theory framework.

2.0 The Network framework of Local Governmental Cooperation

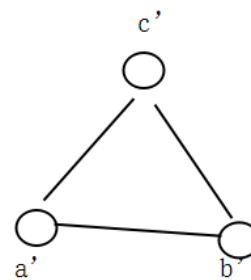
Recently, scholars pay more and more attention on the important significance intergovernmental agreements which can be called Interlocal Agreements impacting on the supply of public goods. Ordinarily, local governments promote cooperation by agreements, for instance, various cooperative frameworks, cooperative declarations and cooperative ideas, etc. Interlocal Agreements become an important analytic part of institutional collective action theory and application. It is regarded as a voluntary act which is based on decisions making for minimizing uncertainty under transaction risk. Every Interlocal Agreement which is the act result of voluntary reciprocity embodies binary or multiple relations. Thus, Interlocal Agreements not only depict regional cooperative relationship, but also formalize the network connections of local governments. Institutional collective action framework points out the diversity of autonomous cooperative governance network of local governments and further distinguishes the complexity of Interlocal Agreements, which includes subdividing intergovernmental relations from the angles of scale, issue and type and inferring the formation mechanism of these relationships. Therein, the scale of cooperative party is the important research issue. At present, in the researches of domestic regional governance, the relationship and framework of local governments are seldom focused on. The characteristic and functional differences between bilateral cooperation and multilateral cooperation is obviously existed, while the lack of its research is a pity.

The relative literature of institutional collective action point out that bilateral cooperation which has lowest transaction cost is the simplest formation of regional cooperation. Multilateral cooperation needs more transaction costs on partner

selection, rule building and network maintenance. The distinctions between bilateral agreement and multilateral agreement are embodied as two parts. On one hand, in multilateral agreement, local governments' preferences can reach an agreement as long as any agreement is adopted, instead of a series of agreements. On the other hand, the complexity of multilateral cooperative issues is higher, while the degree of coordination function which is undertaken by regional organizations is higher.



Picture1-Bilateral
Network Framework



Picture1-2Multilaterel
Network Framework

Figuratively speaking, the first picture represents two kinds of network frameworks. Although there are three actors in both two pictures, the network is different. In the left picture, the network is composed by bilateral relations. There are three cooperative relations which connect a, b and c. Every cooperative relation is independent. For instance, the cooperative relation between a and c is combined without the participation of b. The other two relations are the same. The right picture represents the network which is composed by multilateral relations. There is a single cooperative relation among the three actors, which means this cooperative relation includes a, b and c.

Furthermore, when a local government is confronted with choosing to act together with other local governments, bilateral and multilateral cooperation also appear. Bilateral agreement is the most directive formation, because the establishment of bilateral relationship needs long-term credit accumulation to break the dilemma. As for the cooperative governance of public affairs, the decision of high put and high risk is needed. Usually, the participants of bilateral cooperation will describe more detailed restriction on concrete design of cooperative process, executive authority and

output requirements. Once bilateral cooperative relation is established, the participants will constantly enhance this relation which is based on the principle of reciprocity and cost minimization. This is a tight binding framework in network.

2.0 The Micro Motivation of Local Governmental Cooperation

Intergovernmental cooperation is established for providing regional public service for two or more local governments. It is crucial for members to participate in collaborative decision or not. Institutional collective action framework claims that the autonomous cooperation among local governments is started from the rational consideration for local government, which means it only happened when cooperative profits are more than cooperative costs. However, this is different from the analytic model of traditional standard rationality, Feiock introduces The Second Agent Hypothesis. Different from the ideal condition of complete information in the First Agent Hypothesis, the second one is closer to reality, which assumes that economic actions need to consider the factors of information incompleteness, information asymmetry, risk and uncertainty, while the rational selections of local actors not only rely on the profits which are brought by single public service collaboration itself. Thus, institutional collective action framework divide the cooperative motivations into two parts: collective profit and selective profit. Therein, collective profit is the cooperative profit we usually understand. Regional public affairs cannot be achieved by single local governmental action, so participating collective cooperation is the result of rational behaviors. Firstly, Intergovernmental cooperation allows participants to supply and service beyond administrative boundary; secondly, intergovernmental cooperation offers the expected behavior information of partners; thirdly, intergovernmental cooperation frameworks the decisive choice of participants so that it can bring effective and equal income distribution which concretely includes the possible scale economy of cooperation and internalizing externalization. In multi-center mode, decentralized local government increases their technological efficiency by competition, but more boundaries are produced and negative

externalization is also produced. Thus, cooperation can decrease the cost of public services provided by local governments. For instance, local government intends to improve its investment environment, and the large-scale investment of framework stagnates this region. If adjacent governments could join together to invest, the cost will be decreased by a wide margin, and the local investment environment of all members can be improved.

What deserves our more attention is the selective benefit, which is an important part of exploring intergovernmental cooperation in ICA framework. Differing from previous research, local government considers the diversity of collective motivation caused by cooperative embeddedness besides gaining economy of scale and overcoming externalization. Granovetter points out that embeddedness is just like all social behaviors and the results. Economic behaviors and results will be influenced by the relationship of actors and the total network relationship. The social factors like interpersonal network and institution play an important role in economic behaviors, and the explain about economic behaviors are supposed to be in progress under the social context. On this basis, Feirock considers that some local governmental officials are voluntary to enter into some intergovernmental cooperative arrangements to gain their personal benefits which include social reputation, accumulating trust and expanding influence. As for institutional collective action theory, these benefits may have different purposes and degrees for the subjects of the same cooperation, which is different from that collective benefit will benefit all members. The proposal of this benefit provides us with a new perspective to reveal the mechanism diversity of local governmental cooperative governance in urban agglomerations.

Thus, institutional collective action framework effectively distinguishes the dual motivation of local governments in autonomous cooperative governance. For instance, three local governments reach an agreement on communication service integration, which makes the toll charges of every member city decrease. This is collective benefit. At the same time, this cooperation of public service needs some formations of embedding in social network to achieve. This interactive behavior which is based on common interests brings benefits of relation attribution for members of the cities. For

instance, they expand their influence, accumulate social capital, enhance their understand of other members and reinforce the trust of other members. As for cooperative project itself, these benefits have expansibility. Of course, comparing with collective benefits, these benefits are more covert and more difficult to measure.

3.0 The External Restraint of Local Governmental Cooperation

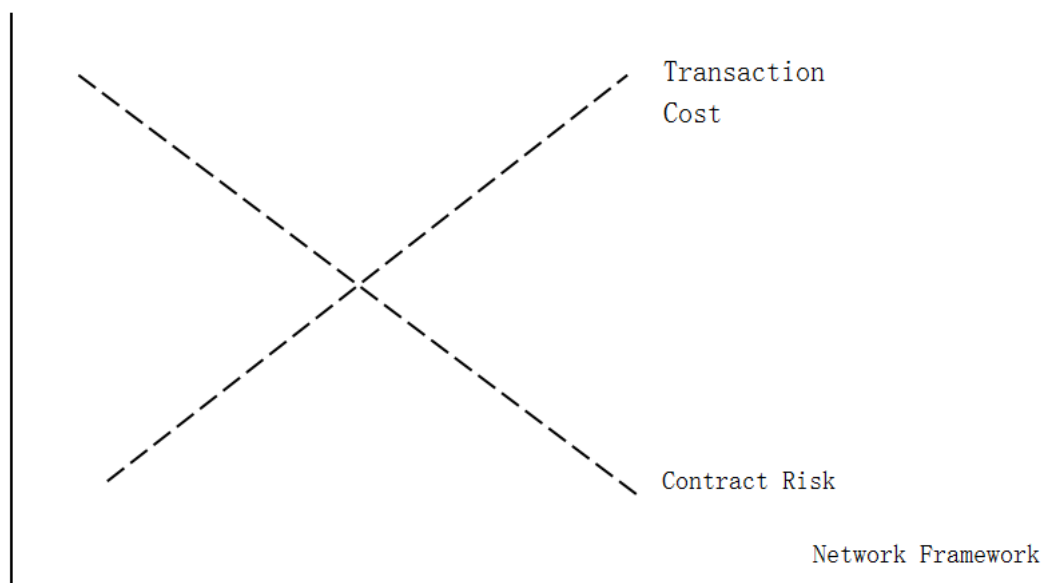
As for local governments, collective benefits and selective benefits are the dynamic mechanisms which decide whether implement the intergovernmental cooperation. However, beyond this inner motivation, the establishment and achievement of intergovernmental cooperative mechanism will be double effected by external transaction cost and contract risk.

Firstly, transaction cost is the key factor which influences intergovernmental cooperation. The achievement of intergovernmental cooperation needs to minimize the transaction cost. From the perspective of internal framework division, the transaction costs of intergovernmental cooperation mainly includes information cost, implement cost and agency cost. These transaction costs may appear in the establishing period of the cooperative relationship, also may appear in the achieving period of the cooperative relationship.

Secondly, contract risk is the other key factor which influences the intergovernmental cooperation. In nature, intergovernmental cooperation is based on the implementation of the implicit or explicit contract which participants approve, assign or promise. Coordination is decided by the trans-boundary of contract participants and the complexity of the task. The difficulty to achieve the equilibrium of each participant's obligation and responsibility causes the risk of dividing the work, because the possible quit or dishonest of any member no mater before or after the event cause the contractual betray risk. Comparing with the transaction cost, risk is more recessive and more difficult to measure.

Thus, the two implicit and explicit factors constitute the decisive factors which local government facing with in intergovernmental cooperation. As the cooperative

subjects are increasing, the cost of establishing cooperation will increase, while the risk of collaborative failure will decrease. The relationship between both of them and cooperative network is shown in the following picture (picture two). According to the two-dimensional model of “transaction cost-contract risk”, we can reveal the internal mechanism of how local government makes choices about cooperative network mechanism. With the decrease of transaction cost and contract cost, the cooperation will increase, which means the factors which influence cooperation are transaction cost and contract risk. As for local government, it is a dilemma that which network mechanism should be chosen, which means they have to make decision on establishing cooperative relationship or achieving cooperation. Bilateral relationship is easier to establish, but the possibility of achieving no results is relatively large. Multilateral relationship is more difficult to establish, but once it is established, the possibility of being broken will decrease.



Picture2 Two-dimensional Model which effects Intergovernmental Cooperation Selection

Because multilateral cooperation is related to more participants, the cooperative and collective progress which needs to be considered are more complex. For instance, how to make rules for collective action is more complex than in bilateral relationship.

However, in bilateral relationship, only two sides promise about cooperative actions in future, this cooperative relationship can be achieved. However, in multilateral relationship, to achieve collective benefits or satisfy collective preference, the rule of unanimity or the simple majority rule are all possible to be adopted, which means the transaction cost will be higher. As for the implement angle after making collaborative decisions, the risk factor begins to play a part, which means whether the cooperation can be implemented effectively. Relatively speaking, due to the large number of participants in multilateral relationship, the possibility for supervisors to collaboratively execute is large, thus the individual default cost and the possibility of commitment being implemented will increase. In contrast, in bilateral relationship, only one side stops, all previous efforts will be lost, so the risk of unsuccessful cooperation is relatively high.

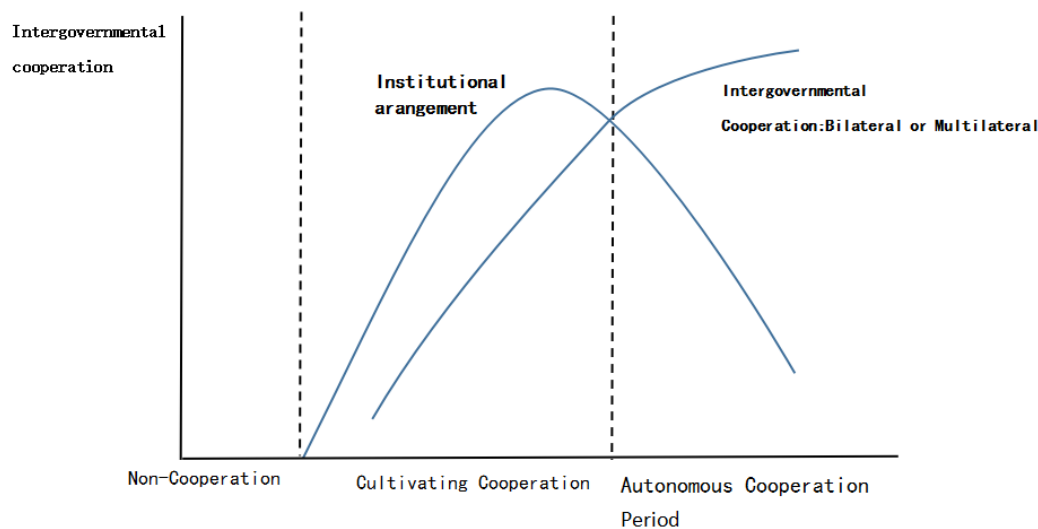
4.0 The Ideal Trend of the Cooperative Transition of Local Government in Urban Agglomeration

In the practice of intergovernmental cooperation in urban agglomeration in China, we find there is an institutional arrangement which is built facing the collaborative basic system besides the bilateral cooperative mechanism facing cooperation and the multilateral cooperative mechanism facing integration. This cooperative mechanism is a non-autonomous cooperation based on governments of higher levels instead of autonomous cooperative mechanism. Its existing goal is to enhance the efforts on the mutual understanding, trust, rule making and risk reduction of potential cooperative actors by some mechanisms consciously, and its nature is to promote the cooperation. The main characteristics of this institutional cooperation are: firstly, the non-autonomous method characterized by top-down, which is organized and formed by the local governments who participate the cooperation; secondly, the cooperative participation model characterized by total participation, which means all potential members in this regional range participate; thirdly, the cooperative contents coded by policies and rules, which concretely includes ascertaining the practicable

implementation documents, overall regional planning, cooperative statements, cooperative agreements and cooperative to-do lists which are required by higher-level governments. These written collaboration becomes the accordance which establishes the behavior rule of all members. Overall action includes all actors in the region. This action appearing is often based on the common rules established, and because of the certainty of early common rules and extensive supervision, its transaction cost is relatively low.

As for a potential cooperative member, the ideal evolution trend should be in accordance with picture three. It means institutional arrangement should be more advanced than autonomous cooperation. With the thorough of institutional arrangement, bilateral and multilateral cooperation will be increased gradually and finally exceed non-autonomous cooperation to form the mechanism of regional cooperation. That's because, with the enhancement of external push, the sharing and trust relation of information between potential cooperative actors is reinforced gradually. The transaction cost and contract risk of them to establish autonomous cooperation are constantly decreased, and the historical mission of institutional cooperation will disappear gradually.

In this thesis, the period before institutional arrangement intervenes is called "non-cooperative period"; the period when institutional arrangement increases and exceeds over autonomous cooperation is called post-cooperative period; the period which autonomous cooperation exceeds over institutional cooperation is called cooperative period. The progress of the cooperative transition in the whole urban agglomeration is a progress which evolves from non-autonomous cooperative period to post-cooperative period, and to cooperative period. Whether this evolution progress can be achieved is the symbol of whether non-autonomous cooperation can success, which is also the symbol of whether the intervention and support of high level policy can effectively promote the goal achievement of autonomous cooperation in relative urban agglomerations.



Picture3 The Trend of Institutional Cooperation and Autonomous Cooperation

5.0 The Realistic Analysis of Local Governmental Autonomous Cooperation in Urban Agglomeration

5.1 The Data Selection of Intergovernmental Cooperation---The Local Government Association

Based on the theoretical frameworks abovementioned, in order to further measure and analyze intergovernmental cooperation in urban agglomeration in China, the first thing needed to be solved is the selective issue of cooperative data. At present, local governments have explored so much on the cooperative mode in urban agglomeration which multiple cooperative modes have been established. For instance: regional planning, city association, intergovernmental agreements, transition visits and collective statements, etc. These methods promote the cooperative governance in urban agglomeration by the governance practice of local governments. Therein, association provides us with a typical and convenient tool to observe cooperative relationships among local governments in urban agglomeration. That's because from the perspective of practice, the participant scale of association and the aspects involved are comprehensive and wide. At present, according to the track of overall fifty member cities in several important urban agglomerations which include Yangtze

River Delta, Pearl River Delta, Beijing-Tianjin-Hebei and Chengdu Plain in China, we find that all cities have established associations of all levels on some regional public issues in different quantities no matter conventional or unconventional, long-term or temporary during the past ten years. For instance, the Economic Coordination Mayor Contact in Yangtze River Delta which executes for many years, the Association of Beijing-Tianjin-Hebei Regional Development and Reform Commission Work, the Association of Earthquake Prevention and Disaster Reduction in Pearl River Delta and the Association of Economic Cooperation in Chengdu Plain. Especially the most famous Economic Coordination Mayor Contact in Yangtze River Delta whose scale has been held for sixteen sessions. Its scale develops from fifteen member cities to more than thirty member cities until now, and its level develops from the leading offices of the economic cooperative department in member cities to mayors in member cities, achieving the coordination and cooperation of multiple fields in three provinces and one city in Yangtze River Delta. Existing researches also point out that the exist of the association of the local governments not only promotes the definition and understanding of regional range issues, but also boosts the frequent discussions on it among local officials, so the cognizance of the value and necessity of long-term comprehensive planning and temporary cooperation in metropolitan region is raised. At the same time, it is good to decrease the prejudice and hostility among local members. Thus, we choose the city associations as samples to observe the intergovernmental cooperation governance level in urban agglomeration.

According to the combination of urban official websites and official newspapers, from 2006 to 2015, the data acquisition text searches 55 cities in four urban agglomerations including Yangtze River Delta, Pearl River Delta, Beijing-Tianjin-Hebei and Chengdu Plain, whose population occupies 27% of national population. What's more, it chooses 2006 as the research starting point of the association to search for the research the regional cooperation fact of local government during the periods of eleventh Five-Year planning and twelfth Five-Year planning. Although there also has been some scattered text information about the association, like the second meeting of planning work association in two provinces

and one city in Yangtze River Delta was held in Nanjing in January 2005, the associations had not formed scale at that time and were not typical. What's more, by the extensive query, we find that other three urban agglomerations have not ever used the cooperative form of association besides Yangtze River Delta which had been held the association before 2005. Thus, we choose 2006 as the research starting point of the association.

5.2 The Development of the Intergovernmental Cooperation in Urban Agglomeration

Firstly, the quantitative characteristics. According to research and data cleaning, there are 584 local government associations of different regions, different types and different functions. Generally speaking, these 584 associations are increasing steadily as time goes by, which presents the interaction of intergovernmental cooperation is gradually enhanced. As what picture four presents, we can see the total development progress of local government associations in urban agglomeration can be divided into three stages. The first stage is from 2006 to 2008. During this time, associations gradually appeared in some urban agglomerations and increased steadily year by year. One of the reasons why the associations in urban agglomerations gradually appear and popularize is the studying progress of benefit experience from Yangtze River Delta. The second stage is from 2009 to 2012. This stage is the surging time of association. From the picture we can see that association developed a lot in 2009, and then it had kept the development trend of steadily increasing until it reached its peak in 2012. In this stage, association was widely adopted by some local governments and became the frequent regional cooperative method. The third stage is from 2013 to 2015. In this stage, the holding of associations fell a little after previous dense magnitude. However, it was still held for 60 times every year, and presented an extremely steady development trend.



Figure 4 Joint trend of local governments in four urban agglomerations

Secondly, the regional distribution. According to the data contrast, we can see the development of association is regionally different. The holding of associations in Yangtze River Delta and Pearl River Delta is more active, and the holding number of times of associations in Beijing-Tianjin-Hebei and Chengdu Economic region is less. At present, they are in two different development levels and stages. This distribution disequilibrium is closely related to the economic and social conditions and the regional cooperative present situation and atmosphere. Its concrete internal relations and the causes of the differences deserve our subsequent research and exploration.

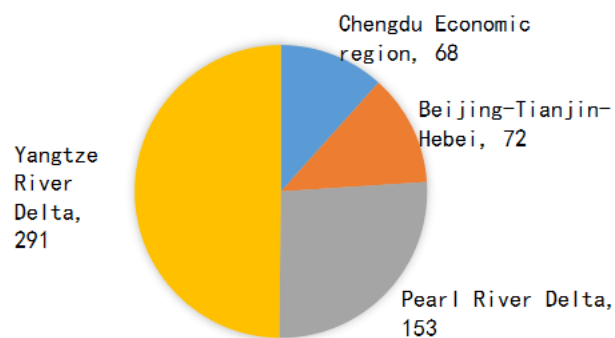


Figure 5 Distribution of regional zones

5.3 The Stages of Cooperative Network framework Transition

From the data collection and analysis of local government associations in urban agglomeration, institutional arrangement is concretely embodied as three forms including the cooperation facing institutional establishment which is attended by all

members, autonomous intergovernmental cooperation which is embodied as the bilateral cooperation facing collaboration and the multilateral cooperation facing coordination. Totally speaking, in the realistic intergovernmental cooperative practice, three forms are adopted widely. For instance, in Yangtze River Delta, the total number is 291, and the non-autonomous total associations are held for 55 times. Just like the Urban Economic Coordination Association of Yangtze River Delta and the Urban Party Committee Director of Political Research Office Association in Yangtze River Delta. Besides, the autonomous associations are held for 263 times, therein, bilateral associations are held for 63 times. Just like the Suzhou-Nantong Urban Association attended by Suzhou and Nantong and the Overall Governance Cooperation Association of the Regional Water Environment attended by Jiaxing and Huzhou. Multilateral associations are held for 173 times. Just like the Mayor Association of Zhedong Economic Cooperative Region and the Mayor Association in Hangzhou Metropolitan region.

There are two different conditions existing in the four agglomerations. Beijing-Tianjin-Hebei and the Yangtze River Delta are urban agglomerations which are across three provinces and cities. Pearl River Delta and Chengdu Plain are urban agglomerations in a province. We find that the fluctuation trend of intergovernmental cooperative network in the two provincial urban agglomerations fluctuates widely, and the clear cooperation evolution trend is not formed. We think the emerging of this condition is because that the public affairs coordination in provincial cities is frequently carried out by the provincial governments towards the single city. Thus, it is not equipped with the strong demands of intergovernmental autonomous cooperation in urban agglomerations.

However, after comparing the trans-provincial urban agglomerations involved with trans-region administrative levels with the irregular transition in provincial urban agglomerations, we find that the transition of institutional cooperation and bilateral, multilateral cooperation network in the two trans-provincial urban agglomerations including the Yangtze River Delta and Beijing-Tianjin-Hebei presents two typical trends. As mentioned earlier, overall association is a fundamental and foreshadowing

arrangement for the cooperation, so we can wonder whether this cooperation is related to the realistic cooperation actions. From picture six we can see, the multilateral cooperation mechanism of the Yangtze River Delta is in a steady high-level operation trend, which is basically surrounded by the magnitude of fifteen times annually. However, the bilateral trend is always increasing steadily. Before 2012, the magnitude of bilateral cooperation mechanism was always increasing, while it was lower than the institutional cooperation arrangement. After 2012 the institutional cooperation arrangement declined and was lower than the trend of bilateral cooperation trend. From the transition trend of the intergovernmental cooperative network in Yangtze River Delta we can see, multilateral intergovernmental is operated in high-level steadily, which presents the autonomous framework of the Yangtze River Delta can establish relatively steady and frequent multilateral cooperation relationships by the autonomous coordinating mechanism. What's more, we can see that it does not present the obvious and struggling relationship with the institutional cooperation. As the struggle of the institutional cooperation, bilateral cooperation network is promoted and demanded constantly. We can see the effects of the institutional arrangement are embodied in bilateral cooperation network.

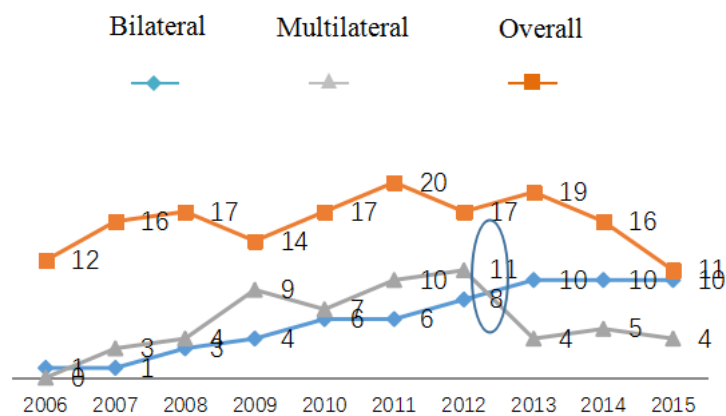


Figure 6 Yangtze River Delta collaboration network mechanism evolution trend

As for the case of Beijing-Tianjin-Hebei, from picture seven we can see that the Association of Beijing-Tianjin-Hebei has not formed a relatively obvious intergovernmental cooperation mechanism in total. Before 2013, the urban associations among local governments in Beijing-Tianjin-Hebei were seldom held,

and the three cooperative mechanisms were in the stage of non-cooperation because they seldom appeared. However, as nation raised the Integrated Development of Beijing-Tianjin-Hebei as national strategy, the overall associations which are represented as the institutional cooperation showed a trend of surge, and the bilateral cooperation also began to raise. But as for the overall judgment, Beijing-Tianjin-Hebei urban agglomeration was turning from non-cooperation period to the cultivating cooperation period in 2013. However, the cooperation was totally in relatively low level, which is the pre-cooperation period.

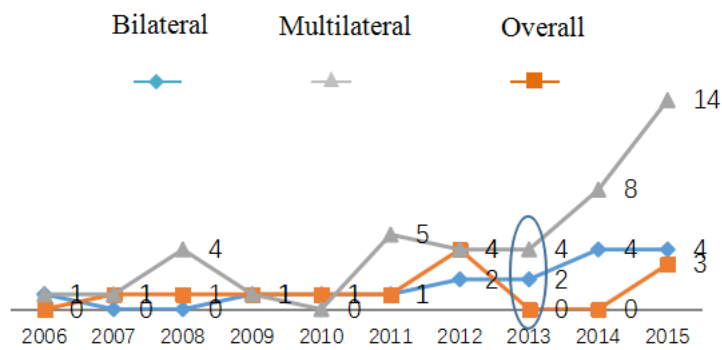


Figure 7 Beijing-Tianjin-Hebei cooperation network mechanism evolution trend

According to the comparing between the Yangtze River Delta and Beijing-Tianjin-Hebei we can see, the institutional cooperation in Yangtze River Delta has been promoted bilateral cooperation, while Beijing-Tianjin-Hebei is still in the primary stage which is major in institutional cooperation, or the pre-cooperation period.

However, we can also see, in the practice of the Yangtze River Delta, we can consider the multilateral cooperation relationship in the Yangtze River Delta is relatively independent, but this also reflects the efforts which overall associations of the institutional arrangement making on promoting multilateral intergovernmental cooperation are weak.

6.0 Research Findings and Discussions

6.1 Research Findings

According to the institutional collective action framework, this thesis establishes the theoretical model of the formation, framework and evolution of the intergovernmental cooperation network. In the theoretical model, we point out that the formation of intergovernmental cooperation network is rooted in two motivations including collective benefits and selective benefits of local governments. Therein, collective benefit is the understanding approach to the intergovernmental cooperation motivation mechanism for us, but it can only explain whether local governments cooperate or not. However, the selective benefit includes the choice of local governments engaging in different actions of intergovernmental cooperation. Thus, intergovernmental cooperation network mainly includes the bilateral cooperation network framework which is major in cooperative demands and the multilateral cooperation network framework which is major in coordinate demands. Intergovernmental cooperation network framework is effected by transaction cost and contract risk. Therein, the bilateral cooperation network framework is characterized as low transaction cost and high contract risk, and the multilateral cooperation network framework is characterized as high transaction cost and low contract risk, which also explains when local governments choose the network action, the basis is to make a dilemma between transaction cost and contract risk.

On the basis of the concrete practice in China, we come up with the institutional arrangement which is attended by all members of urban agglomerations and the promoting hypothesis of bilateral and multilateral relationship which is attended by partial members. Intergovernmental cooperation of urban agglomeration can be divided into three periods: non-autonomous cooperation period, cultivating cooperation period and autonomous cooperation period. The characteristics of the three periods are : the low interaction frequency and the random formation selection among local governments in the non-autonomous period, the obvious raising trend of

the institutional cooperation arrangement in cultivating cooperation period and the low trend of other autonomous cooperation actions. The decreasing institutional cooperation , the establishment of the cooperative system and rules and the transcendence of autonomous cooperation actions over institutional cooperation actions.

As the data discovery, the transition of the cooperation trend in provincial urban agglomeration is relatively random. From the perspective of the data analysis results of the associations in the Yangtze River Delta and Beijing-Tianjin-Hebei, the total frequency of associations in the Yangtze River Delta is higher than Beijing-Tianjin-Hebei's. At the same time, on the evolution of the network framework, the Yangtze River Delta is embodied with the transition and transformation from cultivating cooperation period to autonomous cooperation period, which behaves as the institutional cooperation arrangement is exceeded by bilateral cooperation actions. As for Beijing-Tianjin-Hebei, it presented the transformation from non-autonomous period to cultivating cooperation period. It means the institutional cooperation arrangement began to raise obviously, while the bilateral and multilateral cooperation arrangement are still relatively low.

6.2 Discussion and Suggestions

The actual occurrence of the formation, framework and transition of intergovernmental cooperation network proves the characteristics of local governments in the intergovernmental cooperation choice in urban agglomeration. It means the selective benefits provide multiple choices for local governments to establish or enter into cooperation network. However, these multiple choices are effected by transaction cost and contract risk, so the network framework choice of local governments is also a dilemma.

We can see, if we want to promote the integration of urban agglomerations, the focus of the superior institutional arrangement is how to decrease the transaction cost to promote the multilateral cooperation and how to decrease the contract risk to promote the bilateral cooperation, which is also the approach to decrease transaction

cost and contract risk.

The practice in the Yangtze River Delta which is in the autonomous period presents the promotion of the institutional arrangement or outside policy power is relatively effective to decrease the cooperation risk. This risk reduction is probably achieved by reinforcing mutual trust and cooperation supervision. It means the activities of overall associations has done more obvious arrangement on promoting mutual trust and punishment on possible breaking-contracts. In contrast, we can still find although the institutional cooperation in the Yangtze River Delta is gradually decreasing while the autonomous cooperation is gradually increasing, which makes the urban agglomeration entering into a virtuous circle of intergovernmental cooperation governance period. However, we can still find the multilateral in the Yangtze River Delta is relatively steady while the institutional cooperation has no or little effect on it. It proves that the transaction cost reduction of the institutional cooperation arrangement is not enough. In the arrangement of overall associations and other members, more consideration should be given to establish a cooperation platform for member cities and decrease the information search cost, negotiation cost, cooperative execution cost and supervision accountability cost among members.

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