

Tentative Study on County Governance Models of the National Top 100 Counties

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Abstract: County governance is a kind of local governance practice with strong empirical quality, and to summarize and exchange new exploration, new practices and new experiences of governance models of the national top 100 counties is vital to promote the county economic development in the new era. The exploration into the governance models of the national top 100 county governments in new era doesn't stress the system break and transition any more, instead, it intends to find out how to achieve scientific development under the socialism market economy system. Based on this principle, this thesis investigates and summarizes the governance models of the national top 100 counties according to their regions and types and provides useful references for the governance of other counties.

Key words: Comparison, governance model, modeling, top 100 counties

INTRODUCTION

A county's economic competitiveness is an important indicator of the development degree of the county and is also an important measurement to weigh the governance ability of a county. In all economically developed counties, there is surely an efficient government with high governance capability. Therefore, the strength of a county's economic competitiveness is a direct reflection of the governance capability level of a county government (Yu and He, 2003; Liu, 2008; Tang, 2008). The national top 100 counties are typical representatives of economically developed counties with no doubts, so they can offer governance models and experiences for other counties to borrow. The national top 100 counties the author referred to are the 10th Top 100 Counties (Cities) for National County Basic Economy Competitiveness released by the China County-level Economy Research Institute in August 2010, therefore, this thesis takes the governance models of these 100 counties (cities) as objects for the study.

Some of our folk academic organizations and experts evaluate and rank the economic competitiveness of all counties in China by establishing county economic competitiveness evaluation system and using the quantitative analysis method, among which, the most representative and authoritative is the national county basic economic competitiveness and scientific development evaluation conducted by China County-level Economy Research Institute (Wu and Yilin, 2009; Ma and Rui, 2008). China County-level Economy Research Institute evaluated and ranked the economic

competitiveness of all counties in China every year since 2000, and released the 10th Top 100 Counties (Cities) for National County Basic Economy Competitiveness in August 2010. (Li and Lirui, 2006) makes a discussion on governance theory and governance model for local government in china. (Luo, 2009) studies on governance model of county government under expanding rights and empowering the county. (Shen, 2006) discusses the government function and roles change in course of the integration strong county development based on the studies of functions of zhejiang provincial top 100 counties governments. National Top 100 Counties have been playing an important leading role during our country county economic development and are the benchmark for other county economic development. The reason why the National Top 100 Counties are able to achieve such an enormous economic success can be credited to the effective governance modes of the local government and it has a significant realistic meaning for them to summarize and promote their governance experiences.2) How to model under this architecture for robot.

This study presents a new methodology which guide us to model robotic system from the macro (system architecture) and micro levels (basic model-agent). And we expect to seek for common modeling method of building intelligent robotic system scientifically. Due to their wide distribution, the reality of the 10th National Top 100 differ greatly, while their governance models also have a distinctive regional characteristic, for which it is difficult to categorize those modes. This paper mainly studies and explores by way of cluster analysis, and makes tentative classification for the governance models of the National Top 100 Counties.

Table 1: Cluster analysis of governance capability of the national top 100 counties

Evaluation object	Evaluation indicator	Unit
Capability in economic development	Per capita GDP	Yuan/Person
	Per capita ordinary budget financial revenue of the local government	Yuan/Person
	Per capita net income of farmers	Yuan/Person
	Per capita disposable income of urban residents	Yuan/Person
	Per capita savings balance of urban and rural residents	Yuan/Person
Public service capability	Per capita retail sales of social consumer goods	Yuan/Person
	Number of doctors for each thousand people	Person
	Number of full-time teachers for each hundred of ordinary primary and secondary students	Person
	Per capita expenditure in science, education and health	Yuan/Person
	Density of highway mileage	k/k ²
	Coverage rate of new rural cooperative medical care	%
	Coverage rate of urban basic pension insurance	%
Environment protection capability	Energy consumption per unit GDP/Ton Coal/Ten	Ton Coal/Ten.Thousand Yuan
	Environmental protection investment ratio of GDP in the year	%
	Urban green coverage rate	%
	Urban per capita public green area	m ² /Person
	Urban household garbage green treatment rate	%
	Rural centralized household garbage collection and disposal rate	%

Cluster analysis of governance capability of the national top 100 counties: Cluster analysis starts from the sample data as shown in Table 1, make classification automatically and makes samples with the common characteristics gather together in order to analyze different types of samples Yu and Xuhong, (2003) (P68). While conducting the classification of samples, distance and similarity coefficient are generally used to measure the similarity between samples. In this thesis, the distance measurement method is adopted to classify the governance capability of the Top 100 Counties and samples with short distance are classified as a category while samples with long distance are classified as a different category. As for the specific method of cluster, the Squared Euclidean Distance method, a kind of Hierarchical Clustering Method, is adopted; that is, the Euclidean distance sum of squares from all samples in a category to the category center. Since the selected 18 evaluation units are different, when doing cluster analysis, they shall not be used directly and the sample data should be firstly converted and then used to calculate the distance. This thesis uses normalized method (Range 0 to 1) to process the data and standardizes them to values from 0 to 1. The formula is: if let. Use the statistical software SPSS 16.0 for Windows and make cluster analysis with the clustering methods above to conduct cluster analysis on the 2286 data of 18 evaluation indicators of the 126 national top 100 counties (data omitted due to space limitations), and the clustering results as shown in Table 2 can be gotten.

According to Table 2 the automatic classification of cluster analysis, 126 National Top 100 Counties governance models can be divided into four types. The first type takes regional group as an unit, including 30 counties from four provinces including Jiangsu, Zhejiang, Shandong and Henan provinces, whose governance model can be summarized as cross-regional cooperative

governance model; the second type includes 66 counties from six provinces (municipalities) including Jiangsu, Zhejiang, Shandong, Fujian, Shanghai, Guangdong, whose governance model can be summarized as flat governance model; the third type includes 20 counties from six provinces including Liaoning, Henan, Hebei, Hunan, Jiangxi and Anhui, whose governance model can be summarized as multi-center cooperative governance model; the fourth type includes 10 counties from seven provinces (autonomous regions) including Shaanxi, Shanxi, Sichuan, Jilin, Heilongjiang, Xinjiang and Inner Mongolia, whose governance model can be summarized as government-leading-pluralistic participation governance model Liu (2008).

CROSS-REGIONAL COOPERATIVE GOVERNANCE MODEL

Cross-regional cooperative governance model generally means: several economically strong and geographically closed counties or counties with similar economic aggregate or prosperity and economic development model within a region form a cross-regional deliberative organ to solve the cross-regional social public affairs Tang (2008). The aforementioned characteristics are just the reason why the first-category counties choose cross-regional cooperative governance mode. The main practice of these counties is to construct a cross-regional government cooperative organization and to construct various non-governmental organizations, such as "Symposium", "Coordination Committee", "Forum", "Trade Association", etc. between the different levels of government and between industry associations and civil organizations in different regions as well as to set up institutionalized mechanisms, such as regular consultations and exchange mechanism, special

Table 2: The cluster analysis results of governance models of national top 100 counties

Cluster			
1	30.000		Jiangsu Regional Group 1 (Jiangyin City, Kunshan City, Zhangjiagang City, Changshu City) Jiangsu Regional Group 2 (Rugao City, Dongtai City, Xinghua City, Jiangyan City, Dafeng City, Haian County, Rudong County) Zhejiang Regional Group (Haining City, Tongxiang City, Pinghu City, Changxing County, Jiashan County, Deqing County) Shandong Regional Group 1 (Jimo City, Jiaozhou City, Jiaonan City) Shandong Regional Group 2 (Laizhou City, Zhaoyuan City, Pingdu City, Lacey City) Henan Regional Group (Yanshi City, Xinzheng City, Xingyang City, Xinmi City, Yuzhou City, Dengfeng City)
2	66.000		Jiangsu Province (Wujiang City, Taicang City, Yixing City, Danyang City, Haimen City, Jingjiang City, Liyang City, Taixing City, Qidong City, Jiangdu City, Jintan City, Tongshan County, Pizhou City, Pei County, Yizheng City, Jurong City, Jianhu County) Zhejiang Province (Cixi City, Shaoxing County, Yiwu City, Yuyao City, Zhuji City, Yueqing City, Wenling City, Fuyang City, Ruian City, Shangyu City, Yuhuan County, Yongkang City, Ninghai County, Xiangshan County, Fenghua City, Dongyang City, Linhai City, Lin'an City, Shengzhou City) Shandong Province (Longkou City, Rongcheng City, Wendeng City, Zouping City, Xintai City, Zoucheng City, Tengzhou City, Shouguang City, Zhucheng City, Zhangqiu City, Feicheng City, Yanzhou City, Rushan City, Guangrao County, Penglai City, Qingzhou City, Gaomi city, Huantai County, Boxing County, Chiping County) Fujian (Jinjiang City, Fuqing City, Hui'an County, Nanan City, Shishi City, Longhai City, Changle City) Shanghai Chongming County
3	20.000		Liaoning Province (Wafangdian City, Haicheng City, Zhuanghe City, Pulandian City, Dashiqiao City, Donggang City, Kaiyuan City) Henan Province (Gongyi City, Yongcheng City) Hebei Province (Qian'an City, Wuan City, Zunhua City, Sanhe City) Hunan Province (Changsha County, Liuyang City, Ningxiang County, Wangcheng County) Jiangxi Province (Nanchang County, Fengcheng City) Anhui Province Feixi County
4	10.000		Shaanxi Province (Shenmu County, Fugu County, Jingbian County) Shanxi Province Xiaoyi County Sichuan Province Shuangliu County Jilin Province Yanji City Heilongjiang Province Zhaodong City Xinjiang Kuerle City Inner Mongolia (Jungar Banner, Ejin Horo Banner)
Effective value	126.000		
Missing data	0.000		

cooperation mechanism, project-driven mechanism, policy linkage mechanism, etc. regularly. The county governments can also sign cooperation agreements on major issues such as land use, urban spatial distribution, industrial development, etc.; the various industry associations and civil organizations can formulate unified standards on major issues, such as human resources development, information sharing, development of tourism services, industry certification and quality testing, etc., and utilize cross-regional cooperative governance for something actually useful. Seen from the economic development levels of the first-category counties, the implementation of cross-regional cooperative governance is a popular and effective county governance model, and it has effectively promoted the counties economic development and prosperity within the scope of regional cooperation.

Flat governance model: The distinctive features of the second-type county governance model is that: the administrative relations among provinces, cities and counties are transformed from the three-level management

"Province-City-County" to the two-level management "Province-City, Province-County"; while the county management is transformed from the current model of "Province leads city-city leads county" to "Province directly leads county", where the city is replaced by the province. And this is the said flat governance model. Under this governance model, the counties on one hand further expand their economic and social management authority of the county governments, and also they enjoy the same economic and social management authority as the municipalities and district in addition to the authority of making development plan, allocating important resource and managing major affairs; on the other hand, they reform and adjust the relevant management system and institutional settings and in addition to enhancing the functions of customs, entry-exit inspection and quarantine, foreign exchange management, the county governments also get the "privilege" of adjusting and optimizing administration structure and staff formation and integrating the existing institutions and their functions Wu and Yilin (2009). Through the "flat" reform of reducing administrative hierarchy, the counties can

improve their accuracy, effectiveness and management performance of the political information delivery and also they can improve their scientificity and systematicness as well as the overall coordination and layout characteristics of the county's strategic planning for economic and social development; besides, the counties can also strengthen their mastery of the overall coordination and social equity of the county's economic interests relationship and enhance the consciousness and initiative of overall coordination of the county's urban and rural areas.

Multi-center cooperative governance model: The third-type counties mainly spread in the central and northern regions where market economy is not very active, yet the social intermediary organizations, businesses and civil society groups are relatively developed and have more enthusiasm for governance participation. The county government mainly plays the role of guide and decision maker and implements the multi-center cooperation governance model. In this type of counties, the governments mainly focus on the development of society management resources, actively fosters and support social organizations, insist on managing social organizations by law, and at the same time, avoid random interference from administrative power on social organizations and earnestly safeguard their legitimate rights and interests. By strengthening social responsibility and legal concepts, social intermediary organizations, businesses and civil society groups enhance their self-government capability and improve the social public trust to carry out two-way communication between the state and the society, especially to encourage social organizations and individual citizens to directly participate in the supervision of government power operation, to strengthen the civil rights constraints on public power and to promote transparent, open and efficient operation of government affairs. By integrating civil power from different areas, governments can lead civil resources into local economic and social development to form a collaborative network of county governance, so that the county can achieve a harmonious state of unified coordination, common prosperity and collegiality Ma and Rui (2008).

Government-leading--pluralistic participation governance model: The fourth type of counties mainly spread in the northwest and northeast regions where the trace of the government-dominance is very clear and where even though the social intermediary organizations, businesses and civil society groups are less developed, yet still they often participate in the county governance through various channels, which is just the case of government-dominance-- pluralistic participation

governance model. Under this governance model, the government plays a leading role in the formulation of pluralistic governance policies and regulations as well as in the supply of public goods and public services. Governments should reduce their intervention and control on civil society organizations to achieve the separation of politics and society, support civil society organizations in aspects of funds, policies, training, human resources, etc. and gradually increase the self-governance capacity of the civil society. Civil society organizations should withdraw from the fields where only the government has the capability, market and more efficiency, leave the governments and enterprises handle the supply of pure public goods and profitable public goods respectively and engage themselves mainly in handling charitable and voluntary activities Li and Lirui (2006). In the case of government-dominance--pluralistic participation governance model, the government's role is mainly embodied in macro-control, autonomy encouragement, fund providing, personnel training, advice providing, etc., performing the functions of coordination, communication and guidance.

THE COMPARISON OF GOVERNANCE MODELS OF THE NATIONAL TOP 100 COUNTIES

It can be seen from the above analysis that governance models of the 126 National Top 100 counties can be divided into four types. Each type has its own distinct characteristics, while there are some similarities among them. After comparison, it's not hard to find out that not only are there several similarities among the different types but also there are significant differences.

Similarities among governance models of national top 100 counties' governments:

County government always plays a dominating role, while other organizations play the role of participators: China is still in the period of transition from planned economy to market economy. Though all kinds of social forces have been fully developed, they are not mature yet, therefore, how to participate in the county governance is still constantly being explored, and the solving of this problem can not be realized without the government proper guidance. As a result, no matter what type of governance model is adopted, the county governments should always play a dominating role. The cooperative bodies in the cross-regional governance model are the various county governments, and all the relevant cooperation frameworks, the cooperation agreements, the cooperation contents and the cooperation method, etc. are jointly formulated by relevant county

governments the flat governance model just reduces the management level and expands the county government's governance rights; while multi-center cooperative governance model and the government-dominance -- pluralistic participation governance model are actually pluralistic main bodies governance model with county government as the center, in the case of which the say of county governance still rests in the hands of county governments.

They vigorously promote right expansion and empowerment, thus governance authority of the county government is further expanded: There is always a strong and efficient county government behind a top 100 county, and expanding the governance authority of the county government will help change the government's role, optimize the power structure and reduce administrative levels so as to boost the county economy. The author finds that almost all the county governments with the above four types of governance models have gone through the process of right expansion and empowerment. After a comprehensive view of the practices and specific measures of right expansion and empowerment reform of these top 100 counties, it can be found that almost all of them follow the thread of removing the constraints of municipal governments to the county government on the system level and devolving power from provincial (municipal) government to the people and county governments. When municipalities are carrying out the reform of right expansion and empowerment, most of them start from devolving economic management authority, such as devolving trade, land resources, transportation and other authority, and then devolve other social management authority, such as household registration management, vehicle management, etc. Luo (2009) There are mainly two reform models of right expansion and empowerment of the top 100 counties: Firstly, provincial governments directly devolve approval authority to the county governments; Secondly, the municipal governments actively return the power to the county governments and gradually withdraw intervention from the county government administration.

The market mechanism is relatively active and equal cooperation partnership among pluralistic governance subjects is established: The four types of governance models of county governments above are all good at solving the dilemma that the government faces through the redefinition of the relationship between government and market, government and of society, breaking the monopoly situation of public service by county governments, fully brings in the market competition mechanism, leading competition between the public and

the private and make it possible for the public to choose freely Shen (2006). The county governments mainly undertake the functions of planning, organizing and supervising public goods, while the specific production and operation generally take forms of authorization, entrust, franchise, contract, contract outsourcing, service purchase, government subsidies, etc. by the government, concretely provided through methods of cooperation among other public sectors, government and private sectors as well as market competition in private sectors; and in the consumption of public products, voucher system, services vouchers and other government specified ways that consumers can choose freely from as well as the payment-by-user method are also adopted. This county governance mechanism of government providing, market producing and operating and consumers freely choosing can better display and meet the public demand for diversification and help improve the efficiency and effectiveness of public services.

The differences among governance models of the national top 100 counties: The 10th National Top 100 Counties (Cities) are located in 19 provinces (cities, districts), and despite some similarities of their governance models, there are much differences with regional characteristics, particularly in the aspects of governance subjects, governance objects and governance methods, etc.

The differences among governance subjects of the top 100 counties: Broadly speaking, the subjects of county governance include all individuals and groups that participate in the county management, such as governments, enterprises, nonprofit organizations, citizens, etc.; while in a narrow sense, the subjects of the county governance only refer to the county governments. The number of subjects and the participation degree of county governance has a lot to do with the county's geographical location, social environment, democratic atmosphere, citizens quality, etc. which further makes different types of counties choose different governance models. As for the counties that implement cross-regional cooperative governance model, the subject of its governance is the cross-county management association, which is composed of several cross-county deliberative organs for executing governance public affairs. These deliberative organs could be government organizations, social intermediary organizations or folk organizations of experts, which reflects a high degree of free participation. Flat governance model is defined in terms of governance level, so the governance subject is certainly the county governments, and the county government is responsible for overall management of the county's social public

affairs. However, due to greater authority under flat governance model, the county government can achieve good governance on its own, so it also needs the proper participation of enterprises, nonprofit organizations, citizens and other subjects. Subject scope of county governance of multi-center cooperation governance model is the widest, however, these subjects are equal partners and they participate in the county governance through complementing each other. Generally speaking, government agencies mainly govern the county through administrative resources, while enterprises mainly provide public goods through market mechanism, while non-profit organizations and citizens mainly involve in service areas that government and enterprises can cover. The subjects of government-dominance-pluralistic participation governance model and multi-center cooperation governance model are similar but this governance model is led by the governments. The governments govern the county through laws, regulations and administrative means and other subjects are generally auxiliary policy advisers.

The differences of governance objects of the top 100 counties: From a macro perspective, the governance objects of the county government include all social public affairs within the county, while from a micro perspective, the objects of each county governance are distinctive. For the county that implements cross-regional cooperation governance model, its governance objects involve in more cross-regional public affairs in addition to the county's social public affairs, such as building a commercial area together, talent exchange market, land resources development, etc. which requires the government involvement of both sides or multi counties. Under the flat governance model, the governance objects are relatively broad, and in addition to the traditional public affairs, it has to undertake the governance of public affairs that the provincial government and municipal government devolve or transfer, such as the county's finance, personnel, land resources development and so on. Under the multi-center cooperation governance model and government-dominance-pluralistic participation governance model, the main objects of county governance are the traditional public affairs within the county jurisdiction and don't include those cross-regional, devolved and transferred public affairs.

The differences of governance methods of the top 100 counties: Governance methods are the means and ways that governance subjects manage governance objects as well as the specific performances of ruling concept of the county government. Under cross-regional cooperation

governance model, the county generally uses the co-governance method for cross-regional public affairs, which means to jointly set up a cross-regional governance association by various relevant counties; the head of the association should be appointed by a higher level of government or designated by related counties in turns. The associations composed of government agencies generally deal with public affairs through administrative methods and those composed of enterprises, nonprofit organizations and citizens generally adopt the market mechanism or democratic method to manage public affairs. Under flat governance model, the county mainly relies on the county governments to manage public affairs; the government adopts the governance method of strong government and weak society. Under multi-center cooperation governance model and government-dominance-pluralistic participation governance model, the counties emphasize the equal partnership among county governments, enterprises, nonprofit organizations and citizens and they adopt the governance method of strong government and strong society, making the county governments, enterprises, nonprofit organizations, citizens and other governance bodies give full play to their own strengths, work together, complement each other and achieve good governance of the county public affairs through the method of communication, coordination and democracy.

CONCLUSION

In this study, we presents a new methodology which guide us to model robotic system from the macro (system architecture) and micro levels (basic model-agent). And we expect to seek for common modeling method of building intelligent robotic system scientifically. Moreover, we studies and explores by way of cluster analysis, and makes tentative classification for the governance models of the National Top 100 Counties.

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