

# Research on Policy Change Based on Policy Process Theory—A Case on “Ban E-Bike” Policy in Guangzhou

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Received: September 22, 2015 Accepted: October 20, 2015 Online Published: January 22, 2016

doi:10.5539/par.v5n1p1

URL: <http://dx.doi.org/10.5539/par.v5n1p1>

## Abstract

Policy change includes policy innovation, policy succession, policy maintenance and policy termination, which involves result-orientation and process-orientation. The former focuses on scope and direction of policy change itself, and the latter are those factors affecting policy change. Based on policy process theory, multiple streams framework describes the pre-decisive process; advocate coalition and policy network theories explain interactive process from ideas and interests of different actors. Taking “ban e-bike” policy in Guangzhou as a case, to analyze why it arrived on government agenda by multiple streams framework, and explore policy process integrated advocacy coalition with policy network theory, could explain why the policy was repeatedly prohibited, why this policy change process was from single “ban riding” to more stringent “five bans”. Results show the reasons for policy maintenance and continuation that policy is inconsistent with relevant criteria, relative closed policy community, difficult to reconcile different beliefs between support-coalition and opposition-coalition, and lack interaction among network actors for differences in resource and power.

**Keywords:** policy change, policy process theory, “ban e-bike” policy in Guangzhou

## 1. Introduction

“Ban e-bike” is the abbreviation of ban riding electric bicycles, and the essential meaning of “ban e-bike” policy in Guangzhou was <The Notice on not allowing registration and run on the road for electric bicycles and other non-motorized vehicles equipped with power devices> released by Public Security Bureau of Guangzhou on 14<sup>th</sup>, November, 2006<sup>1</sup>. This policy regulated e-bikes were entirely banned registration and riding on the road in Guangzhou from 15<sup>th</sup>, November. However, its effect was not satisfactory even though implemented for almost eight years. On 14<sup>th</sup>, October, 2014, the Legal Affairs Office of Guangzhou did solicit public opinion on <Regulation on management of non-motorized vehicles and motors in Guangzhou (draft)>, which first regulated “ban selling”, “ban oil”, “ban riding”, “ban parking” and “ban sitting” (namely “five bans”)<sup>2</sup>, arouse the fierce public debate on ban and admission again. From ban riding in 2006 to the strict “five bans” at present, many problems were worth deep into consideration, for example, why the management of e-bikes in Guangzhou was again stressed after almost nine years, why locked back and how to explain the complex policy change etc.. Literatures show only few scholars briefly reviewed “ban e-bike” policy, namely Liu Zhibiao (2007) explored problems of policy process using public policy cycle model; Cai Feng (2009) proposed “negotiation decision model” to help solving the puzzle between ban and admission. Therefore, lack of analysis on resistance, motivations and reasons for failure, fail to analysis on decision-making and implementation process from multiple dimensions are the drawbacks, and also ignore specific variables of policy process such as interest groups, mass media and think tanks etc.. Nonetheless, “ban e-bike” policy has undergone the process of formulation, implementation, feedback and reformulation, which involves varieties of interests, leading to a series of policy issues.

The discussion begins with a review of theoretical approaches to policy change, suggesting the integration of perspectives is necessary to explain the complex policy process. Among them, multiple streams framework is to analyze pre-decisive process, explaining how to arrive on government agenda, and coalition advocacy and policy

<sup>1</sup> From the “Bulletin of Guangzhou Municipal Government”, 2006(24)

<sup>2</sup> See the draft from Baidu Encyclopedia

network theories explore interactive process from values, resource dependence and interests etc. in replace of a certain stage, explaining how the policy goes over time. Then the study examines the process of “ban e-bike” policy from 2006 to 2014 incorporating the integrated policy theories. The last section concludes with lessons and recommendations on the future of correctional “ban e-bike” policy.

## 2. Theoretical foundations of policy change

### 2.1 Analysis on Pre-Decision Process – Multiple Streams Framework

Multiple streams framework (Kingdon, 2003) mainly discusses agenda setting and alternative solutions, including four core concepts: problem stream, political stream, policy stream and policy window, which is applied to analyze how to arrive on the government agenda. Only when above three streams confluence together under the open of policy window did contribute to the occurrence of policy agenda. This framework is to describe government pre-decision process, pay attention to roles of contingency factors in policy process, and attach importance to roles of policy entrepreneurs<sup>3</sup> in softening up policy community. Of course, only in line with some criteria such as value acceptability, technology reasonability and future expectations about budget constraint and public default etc. could float out of the “primeval soup”. Although the framework has a certain explanatory power, there are some drawbacks such as lack of prediction, neglect macroeconomic environment, and impact of social development on the policy agenda. See figure 1 in details.

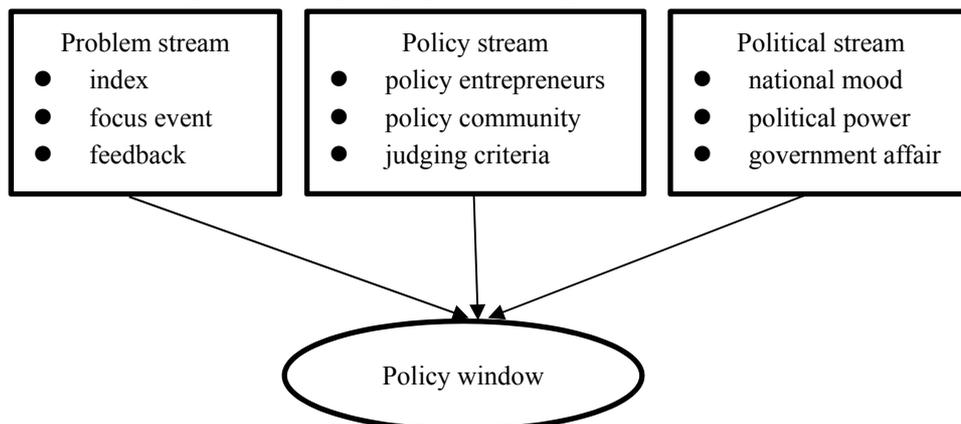


Figure 1. Sketch map of multiple streams framework

### 2.2 Analysis on Beliefs of Actors in Policy Process – Advocacy Coalition Framework

Advocacy coalition framework (Sabatier & Jenkins-Smith, 1993) mainly studies policy change and stability of long periods, and attempts to develop a systematic approach to effectively solve causes and dynamics of policy change, especially emphasizes roles of policy-oriented learning in policy change. The framework believes the dominant role of policy change are belief systems shared by actors rather than interests of decision makers, including deep core, policy core beliefs and secondary beliefs. Policy core belief is the glue of coalition. The mechanism of policy change is as follows: actors with different beliefs would form different advocacy coalitions in policy subsystem, and coalitions would absorb reasonable factors of opposition-coalition’s beliefs in order to gain competitive advantages, also called policy-oriented learning. Policy learning always changes the dominant coalition. Besides, external events such as natural resource distribution, social and cultural values, and other relative stability of system variables and the political, economic and other external events would affect the core beliefs of policy subsystem, and then create conditions of policy change. Members of coalitions may come from government organizations, interest groups, legislative bodies, and possibly from research institutions and media, and may be individual actors or collective actors (branches).

### 2.3 Analysis on Interests among Actors in Policy Process – Policy Network Theory

Policy network theory is mainly for policy process analysis, which can explain policy stability and change (Marsh, 1998; Smith, 1993). British scholar Rhodes posits policy network is the interactive relationship between governmental and non-governmental actors for resource dependence in policy process, which are a group of complex tissues for resource dependence forming alliances and different for structure fracture. Resource includes

<sup>3</sup> Policy entrepreneurs refer to advocators who invest their time, energy, reputation and money resources to improve current situation, and expect future interests etc. (Kingdon,1984:88)

authority, financial, legal, information and organization. Exchange of information and resource, alliance, power-seeking and relation coordination are the formation causes of policy network. Rhodes defines five types of policy network, including policy community, professional networks, intergovernmental networks, producer networks and issue networks. Resource dependence is the core of policy network analysis (Rhodes, 1986). Actors with sufficient resource constitute the dominant alliance of policy network, and share common values to define policy issues, make policy solutions more easily accepted etc. (Rhodes, 1986; Smith, 1993). The distance from decisive core for policy network members represents impacts on policy process, thereby affecting the magnitude and direction of policy change.

#### *2.4 Integration of above Three Theories*

Advocacy coalition framework has certain similarities with policy heuristic and other theories, including multiple streams, culture theory, punctuated equilibrium, policy network, policy entrepreneurs and institutional analysis and development framework(IAD) etc., thereby contributing to understand complex and comprehensive policy process<sup>4</sup>. For example, Smith (2000) believed study on policy process is not only to study how to be driven by actor's beliefs, and also driven by resource dependence of actors. Therefore the integration of advocacy coalition and policy network are appropriate to understand the policy process.

Particularly, multiple streams framework (MSF) is to explore pre-decisive process of policy change and analyze how to arrive on the government agenda; policy network theory (PNT) and advocacy coalition framework (ACF) put the sole discussion of a certain stage aside, and analyze the complete policy change process. The PNT analyzes the interaction between policy network environment and actors based on interests, in neglect of actors' preferences, game process and impacts on network for social environment and political power, which have disadvantages in explaining policy change; The ACF investigates the roles of policy network members. Differences among deep core, policy core beliefs and secondary beliefs reflect conflicts in interests and values among policy actors, which emphasize impacts on the outcome of policy change and make up shortcomings of policy network. Therefore, the sole theory is limited, which needs to combine other theories to explain complex policy change process in the same case.

### **3. Policy Change of “Ban E-Bike” in Guangzhou through Different Theoretical Lenses**

According to results of policy change, four different forms could be distinguished, namely policy innovation, continuation, maintenance and termination (Hogwood, Peters, 1983). For the “ban e-bike” policy, the notice on ban riding in 2006 and regulation on “five bans” in 2014 belong to policy maintenance and continuation, namely adding ban selling and sitting based on originals, and concurrently the notice transformed into regulation etc.. In this section, we analyze the policy change process through the above three theories.

#### *3.1 Analysis of the MSF*

##### *3.1.1 Problem Stream Indirectly Opened the Policy Window*

In the “ban e-bike” policy process, problem stream indirectly opened the policy window, namely large amounts of e-bikes brought about many social problems such as urban traffic order, traffic safety, ecological environment and urban management of Guangzhou, which had serious harm on citizens' health and life safety, especially traffic accidents and other security issues. Statistical data showed law enforcement authorities seized a total of 78.7 million “five kinds of cars”<sup>5</sup> from 2011 to 2013, of which e-bikes accounted 36.5%. Concurrently, the accident mortality rate was higher than other traffic accidents. Data provided by the Traffic Police Department (TPD) showed traffic accidents about “five kinds of cars” in Guangzhou occurred more than 1600 times, more than 1700 persons were injured, and the deadly was near 400, which accounted 65% of total traffic accident deaths, especially e-bikes always became the culprit<sup>6</sup>. Additionally, fire accidents caused by e-bike charging in Guangzhou increased by years since 2012, thus led to many people injured or killed. Currently, 90% of e-bikes in the market were used under the condition of lead-acid or even poor untested batteries, easy to cause fire under long charging in the confined space, and become the major fire hazard. The views and suggestions of e-bike problems reflected by some citizens are increased gradually, and deputies of National People's Congress (NPC) and members of the Chinese People's Political Consultative Conference (CPPCC) also voiced desire to strengthen management of e-bikes. For example, the provincial CPPCC member, and professor from Zhongshan

<sup>4</sup> Wang Chuncheng (2013). The logic of public policy process: advocacy coalition framework analysis, application and development. Beijing: China Social Sciences press, 110.

<sup>5</sup> Five kinds of cars refer to electric bicycle, motorcycle, tricycle, disabled motorized wheelchair car and modified car.

<sup>6</sup> Guangzhou intends to set up specialized agencies to study whether ban e-bikes (2014). People's daily..http://gd.people.com.cn/n/2014/0704/c123932-21582967.html.

University called Yang Zhongyi organized the special student volunteer team, and carried public opinion survey aiming to 888 citizens, whose results showed 59.9% believed abolition of e-bikes was feasible on the condition of strengthening management, and 71% with cars also supported it<sup>7</sup>. Additionally, the day before implementation of “ban e-bikes” in Guangzhou, the municipal government announced the public poll on e-bike management for million residents who were more than 16 years old through the local media, which showed 59.1% preferred bus, 70% supported ban, and 58.5% believed impacts on their life was little. The above indicators and feedback made government firmly believe ban e-bikes has become the policy issue.

### 3.1.2 Political Stream Directly Opened the Policy Window

Political stream directly opened the policy window, namely the power of administrative leaders. In October, 2006, Huang Huahua as the governor of Guangdong Province, transferred comments from the world’s top five hundred companies on suggestions of Guangzhou traffic to Guangzhou mayor called Zhang Guangning, whose reflection was “Guangzhou traffic order is more random”. Since the mayor had presided over the two special sessions for traffic police work, it’s required to come up with hard measures with fastest speed for improving traffic orders as soon as possible. The large quantities of over-speeding e-bikes occupied fast lane became the object which need more supervision.

### 3.1.3 Policy Stream Sped up Confluence of Streams

Policy stream is the policy-making of solutions. After the instructions of provincial and municipal leaders, the TPD of Guangzhou Public Security Bureau actively developed programs, such as establishment of inspection steering group for improving traffic order as soon as possible, and implementation of weekly bulletin, quarterly rewards and punishments. Concurrently, solutions were set after submitted to the municipal government. Additionally, the automotive industry was the important force of policy solutions.

### 3.1.4 Sets of Factors Directly or Indirectly Promoted the Open of Policy Window

In the “ban e-bike” policy process, policy window was the opportunity to create the policy agenda, which first manifested the occurrence of some particularly striking traffic safety incidents, then the powerful executive leaders, improvement of slow public transport system due to economic development in Guangzhou, ability to change way for citizens and city image maintenance of the Asian Games held in 2010 etc.. Additionally, spillover effects of “ban motors” policy in Guangzhou, namely replication policy experience also established the precedent for “ban e-bike” policy.

### 3.1.5 Summary

Although “ban-bike” policy entered into the government agenda in 2006 and 2014, policy solution was not coordinated with criteria including technical feasibility, value acceptability, cost reasonability and public acceptance etc.. The closed policy community led by government dominance made the agenda relatively stable. To achieve the major agenda change was very difficult, which could explain some reasons for policy maintenance and continuation.

## 3.2 Analysis of the ACF

### 3.2.1 Definition and Distinction of Two Advocacy Coalitions

The belief system of coalition is the standard to distinguish different advocacy coalitions. With the formulation and implementation of “ban e-bike” policy, there are two basic advocacy coalitions: support-coalition and opposition-coalition, whose bifurcation point of policy core beliefs was whether the implementation of “ban e-bike”, namely whether the travel choice of public transport return to the market, the public and the community. Three major aspects of belief system in these two coalitions are listed below (See table 1, table 2 and table 3).

Table 1. Deep core belief of “Ban e-bike”

Deep core belief	Support-coalition	Opposition-coalition
Value priority	life right; traffic safety	free right; economic development
Basic standard of distributive justice	the public; automotive industry beneficiaries	e-bike industry beneficiaries

<sup>7</sup> Fu Xuming (2006). “Ban e-bike” is behind interests of government hands. China economic times.

Table 2. Policy core belief of “Ban e-bike”

Policy core belief	Support-coalition	Opposition-coalition
Problem definition	conducive to protect traffic safety; reduce traffic congestion and pollution	reduce public travel burden; protect right of citizens’ travel choice
Scope of government and private activities	promote development of the automobile industry, also protect citizens’ safety	promote development of e-bikes industry economy
Fundamental tendency of policy conflict	human life	industry development
Choice of basic policy tool	legislation to punish e-bike owners	keep e-bikes fit in standards
Ideal decision participation	citizens, experts and organizations should play a more important role	attach great importance to e-bike dealers and its association
Relationship between government agencies	Public Security Bureau, Traffic Bureau should urge to help protect traffic safety	Industry Department should urge industry development

Table 3. Secondary belief of “Ban e-bike”

Secondary belief	Support-coalition	Opposition-coalition
Cost-benefit ratio	benefit outweigh the cost: reducing safety accidents; government revenues and employment opportunities	cost outweigh the benefit: occurrence of traffic accidents, fire and related medical expenses; reducing government revenues and unemployment
Necessity of system reform	effectively reducing security accidents	fail to change traffic congestion
Impacts on industry	revenue reduction of express and e-bike industries	take alternative measures, such as improvement of public transport

Data source: according to the three layer belief systems of advocacy coalition framework by Sabatier.

### 3.2.2 The Concrete Analysis of the Two Coalitions

Support-coalition included as follows: Guangdong provincial government, Guangzhou municipal government, Guangzhou Municipal People’s Congress (MPC), TPD, car manufacturers and distributors, car users and pedestrians, etc.. Among them, Guangzhou municipal government was the most important force in support-coalition, who was the active legislation promoter; the municipal government’s policy should be approved by Guangdong provincial government’s approval and support of Guangzhou MPC. TPD was the executive branch. Ban e-bikes created the space for cars because roads are limited traffic resource, thereby improving car sales significantly, and also brought about huge profits and tax income. Therefore automobile producers and sellers were the biggest beneficiaries; car users didn’t have to worry about the occurrence of breaching traffic rules and occupying fast lanes etc.as those potentially affected. Pedestrians didn’t have to worry e-bike owners took the sidewalk and may endanger their safety.

Opposition-coalition included as follows: e-bike owners, e-bike manufacturers and distributors, e-bike experts, Bicycle Industry Association of Guangdong Province (BIAGP) and policy researchers, mass media, lawyers, express delivery and other related industries, some citizens, potential e-bike buyers. E-bike owners, whose direct interest was impaired, were against ban. “Ban e-bike” would directly endanger e-bike industry, so that the performance of e-bike manufacturers and vendors would decline. E-bike experts and policy researchers could be classified as experts, who used their expertise to carry out technology research, such as battery technology, stopped the policy implementation. BIAGP is a non-profit social organization composed of bicycle & e-bike industries, social organizations of Guangdong province, whose purpose is to communicate relations among enterprises, industries and government, coordinate with industry interests, and safeguard the legitimate rights of

members and the whole industry interest. In the “ban e-bike” policy process, it’s mainly to assist drafting new national standards and change stereotype of TPD that “e-bikes caused serious security risks”. On 28<sup>th</sup>, November, 2006, Ma Zhushen, as the Association Secretary General of Guangdong Province (ASGGP), submitted the proposal with million signatures to State Bureau for Letters and Calls (SBLC), pointed e-bike belongs to non-motorized vehicles, and < road traffic safety law > did not give local government to ban e-bikes riding on the road. At the same time, public opinion survey and discussion meeting under relevant departments of Guangzhou were lack of broad public opinion, which cannot reflect the right of road equality. Under lack of force, public opinion propaganda become the main tool, mass media plays an important role and exerts pressure on relevant government departments and automotive enterprises. Lawyers analyzed ban e-bikes was not up to the upper law, encouraging e-bike dealers and consumer representatives consult and protect rights and interests through litigation. Express delivery and other related industries would face unemployment, increasing cost and other issues. Some citizens who chosen economic e-bikes as a means of transport would result in difficulties of travel, and even economic burden for the low-level residents.

Table 4. Coalition members of support-coalition and opposition-coalition

	Support-coalition	Opposition-coalition
Coalition members	Guangdong provincial government;	E-bike owners;
	Guangzhou municipal government;	E-bike manufacturers and distributors;
	Guangzhou Municipal People’s Congress (MPC);	E-bike experts;
	Traffic Police Department (TPD);	Bicycle Industry Association of Guangdong Province (BIAGP);
	Car manufacturers and distributors;	Policy researchers;
	Car users;	Mass media;
	Pedestrians.	Lawyers;
		Express delivery and other related industries;
	Some citizens;	
	Potential e-bike buyers.	

### 3.2.3 Resource Comparison of the Two Coalitions

The resource of coalition would affect action. Comparing resource would help understand particular conducts and outcome completely. Coalition resource included formal decision-making authority, public opinion, information, mobilize power, financial capital and effective leadership. From table 5, it was found the resource structures of two coalitions were different. In general, support-coalition had strong resource advantages, mainly from decision-making authority, financial capital and the automotive industry as the powerful force to mobilize, which had a correlation with obvious advantages of the coalition. As results, coalition resource and strategies restrict alliance action and effects.

Table 5. Resource comparison between support-coalition and opposition-coalition

Resource	Advocacy coalition	Support-coalition	Opposition-coalition
Formal decision-making authority		1	0
Public opinion		0.5	0.5
Information		0.5	1
Mobilize power		1	0.5
Financial capital		1	0.5
Effective leadership		0.5	0.5

Note: Figures 1, 0.5, 0, respectively, represent strong, middle and poor levels of resources.

### 3.2.4 Policy-oriented Learning and Policy Change

Policy change is the product of mutual learning, adjustment and compromise of advocacy coalition. In the “ban e-bike” policy process, both support-coalition and opposition-coalition tend to maintain consistence with policy core beliefs to understand objective information, who were impacted by “perceived filtering”, thus the interactive game fail to deep into the core belief system, realize policy goals and maintain the original policy.

Specifically speaking, opposition-coalition believed the choice of e-bikes was a citizen’s right, traffic congestion is the problem of road management and construction lag, battery pollution hazards can be improved through technology, and the middle and low level of people’s life should not be aggravated etc.. To this end, opposition-coalition member BIAGP tried to solve the problem by changing the national standard of bicycle or even traffic safety law, but failed to succeed. For example, during the annual session of the NPC and the CPPCC, vice chairman of BIAGP, a representative of NPC and board chairman called Zhang Tianren summited large numbers of proposals related e-bike industry. Solving the problem relied on ‘mediation’ and ‘guidance’ rather than ‘ban’ and ‘block’ in 2013. The new national standards were called up as early as possible in 2014, which showed increasingly important role in promotion of China's economic development and green China with the development of e-bike battery. E-bike industry accounted less in the economy was unable to change policy for almost no discourse right, either safeguard their own interests by complaint and petition, or refuse to implement policy, resulting in breach of orders. On the contrary, support-coalition believed e-bikes would bring about traffic congestion and chaos, battery pollution, safety accidents and urban management difficulties etc.. Municipal government and TPD implemented policy through legislation and law enforcement. In the meantime, support from the automotive industry was undoubtedly the strong force for ban e-bike policy. Besides, there were no policy brokers appearing to reconcile conflicts between two coalitions.

### 3.2.5 External Variables Directly or Indirectly Affected Policy Change

Advocacy coalition framework believed the main outside interference from subsystem was a necessary condition for the transformation of policy core characteristics. First is the indirect influence of social and economic environment changes. The improvement of living standards of Guangzhou and expansion of e-bike industry scale were all belong to the category of social economic conditions, which led to the reevaluation of influence of “ban e-bike” policy; the second is direct impact of dominant coalition. Obviously current executive leaders still advocate implementation of “ban e-bikes”; the third is the change of public opinion. The community expressed mixed reviews, each has hold a word, and difficult to promote policy change.

### 3.2.6 Summary

In summary, main reasons for “ban e-bike” policy to maintain included as follows: firstly, mutual conflicting belief system between support-coalition and opposition-coalition was still difficult to reconcile; secondly, support-coalition occupied leading position due to strong resource advantage, discourse power was stronger and influence on policy change was more directly; thirdly, two coalition cannot make compromise through negotiation because of “perception filter”, and no policy brokers can reconcile conflicts; fourthly, external variables didn’t have a strong impact, and not yet develop to influence decision rules and resource of subsystem actors.

## 3.3 Analysis of the PNT

### 3.3.1 Analysis of Policy Network Environment

The “ban e-bike” policy involved in various stakeholders and interactive relationship constituted the big policy environment, where network actors chose a specific behavior according to specific environment, and policy network environment would also have impacts on environment. According to policy network classification and specific features from Rhodes, policy network actors could be attributed to policy community, professional networks, intergovernmental networks, producer networks and issue networks, thus drawn out policy network of all actors in different policy network environment. (1) Policy community: Guangdong provincial government and Guangzhou municipal government, responsible for policy formulation; (2) Professional networks, which mainly included e-bike experts, NPC representatives and CPPCC members, EBAGP , of which took up multiple identities; (3) Intergovernmental networks: mainly TPD, and also the policy executive branch; (4) Producer networks: interest groups, including vested interest groups and pressure groups, who are powerful and closely with government departments. Automobile manufacturers and distributors, electric vehicle manufacturers and distributors, express delivery and other related industries etc. were included. Discourse power of car manufacturers and vendors were greater than e-bikes etc.; (5) Issue networks: loose structure, complex members, lied in the most external of policy network, relatively scarce internal member resources, edged role, and hard to

interact with other network actors. Potential buyers and mass media, car users, pedestrians, lawyers, e-bike users were included.

### 3.3.2 Interaction among Network Actors

To clarify “ban e-bike” policy network relationship was the important content of network analysis. Specifically, five points were included as follows: (1) Cooperation between policy community and intergovernmental networks. Guangzhou municipal government as a decision-making branch decided the direction of policy change with absolute power of problem definition, the jurisdiction and veto power, whose policy was implemented by the TPD; (2) Cooperative collusion between policy community and producer networks, “ban e-bike” policy could make room for car industry profits with strong bargain power of automobile producers and distributors, and increase tax revenues. The weak bargain power of e-bike manufacturers and sellers made it difficult to cooperate with governments; (3) Alliance and conflicts between producer networks and issue networks. On one hand, producer networks would seek assistance of industry associations and mass media, forming interest alliance, promoting policy formulation and implementation; or express support or opposition to professional networks; besides issue networks including the industry association and media also formed opposition-coalition, criticized policy drawbacks through mass media and Internet. The association and media would also cause concern and response through in-depth investigation of issue, so as to protect policy implementation through pressure on intergovernmental networks; (4) Relations between policy community and issue networks, issue networks exerted pressure on the government sector; (5) Cooperation among professional networks, policy community and intergovernmental networks. Representatives of the NPC, academics and other professionals would use their expertise to help the public understand and support decision-making and executive branches, however the government should also seek views of professional policy. See Figure 2 in details.

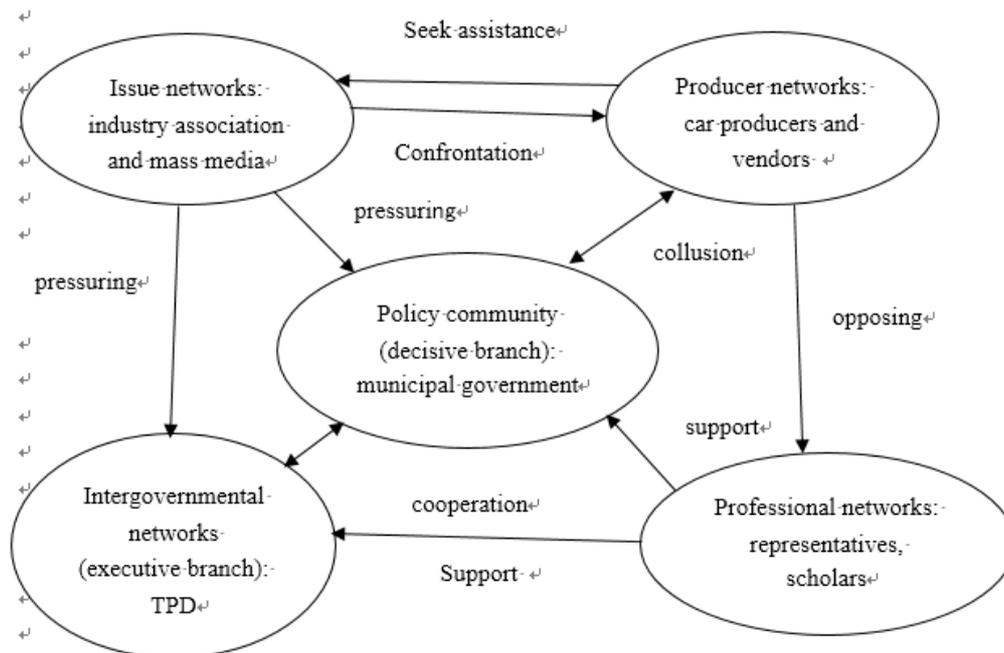


Figure 2. Diagram of interaction between network actors

### 3.3.3 Impact of Network Openness and Aggregation on Policy Change

According to analysis of policy network environment and actors' interaction, network openness was relatively limited, the government was dominant, network aggregation was not high, the distribution of resources was uneven, and the interaction was obviously insufficient. Firstly, part of stockholders were not present. For the dominant government and high threshold limits, interests of e-bike sellers, users, and some citizens were rarely taken into account for less participation and smaller discourse power. For example, representatives in attendance did not include e-bike manufacturers, distributors and consumer representatives in three meetings of soliciting opinions about ban e-bikes in 2006. Secondly, lack of effective communication and cooperation mechanism. “Ban e-bike” policy related stakeholders' demands, need communication, widely solicit views of parties, and

policy effect can be manifested. However, in the low-degree and open policy network, the government's dominant position made results of policy output more reflected needs of strong group, and lack of needs of poor groups due to lack of effective communication. In terms of "ban e-bike" policy, producers and sellers of producer networks had more power than the e-bikes and they were more organized. The tacit collusion among producer networks, policy community and intergovernmental networks could reflect interests of car industry in policy-making, nonetheless the interests of e-bike industry and issue networks cannot be responded and ensured.

### 3.4 Summary

Through the integration of above theories, it is not hard to find they have complemented, and enrich the research of policy change process. Generally speaking, the MSF explains pre-decisive conduct that why the policy is changing, and provides special guidance that how to promote policy change enter into the government agenda; the ACF analyzes the causes of policy change and explores feasible ways to realization based on different belief systems among coalitions; the PNT is to make up for deficiency in individual level, study complex interactive process from network actors, resource dependence and power, and analyze problems of network structures and its impacts on policy change.

## 4. Conclusions and Recommendations

Since "ban e-bike" policy has been implemented in 2006, its effect is not satisfactory. "Five bans" policy in 2014 was the only "enhanced version", which has not yet been conclusive. In this paper, we analyzed this change process, discussed reasons for policy maintenance and continuation, and eventually put forward corresponding policy recommendations.

Firstly, the prompted "ban e-bikes" policy twice into the government agenda included many aspects, especially the open of policy window and spillover effects of "ban motors" policy contribute to the confluence of three streams. In this case, there were many factors to open policy window, but the main force was administrative leaders. The policy solution was proposed and implemented by the government, thus closed the policy community, who played a limited role and the agenda was relatively stable. The policy solution had obvious downsides with value acceptability, cost and public expectation etc..

Secondly, there are two competing coalitions in policy network. Support-coalition with strong dominance led the direction of policy output, and opposition-coalition in a weak position can only change through a variety of strategies. The two competing coalitions are difficult to reconcile with different and stable belief systems. In fact, the values and beliefs of support-coalition are dominant for enough resource and strong discourse power, and the influence of values and beliefs of opposition-coalition is far from enough. Therefore, we can try to change beliefs through policy-oriented learning between advocacy coalitions, promoting the formation of policy consensus. For example, support-coalition could absorb reasonable factors of belief from opposition coalition, and adjust their unreasonable policy beliefs by learning concepts and models from other countries.

Thirdly, the participation, interaction and structure of policy network affect policy process and outcome to a great extent. The "ban e-bike" policy has been the output for close policy community. Therefore, we must break the closed policy network, expand the boundaries, so that more stakeholders and policy makers can enter, thus degree of network openness and integration can be improved. (1) Build the dialogue and consultation platform of multiple stakeholders, lead game center full forward. When discussed and studied policy solutions, we should strengthen exchange of views from experts and scholars, interest groups and the public through the platform, and consider the interests of many parties as far as possible. Several policy debates can be held to realize consensus when necessary; (2) Integrate interests of actors' needs in policy networks, establish coordination mechanism of interests with information disclosure and smooth communication; (3) Regulate cooperative coalition among policy community, intergovernmental networks and producer networks, prevent damage to public interest of issue networks; (4) Interaction frequency and intensity of network actors have positive correlations with actors resource, link degree and center degree. We should take measures to improve uneven conditions. Measures should be taken to ameliorate distribution of resources, such as reducing interests of producer networks, improving the influence of issue networks etc..

Finally, in order to ensure the legal and effective operation of policy, protecting the policy legitimacy is necessary, that is, the policy should comply with the constitution and law, but also widely supported by the public. For "ban e-bike" policy, the important reason for not ideal is that the legitimacy and rationality of policy have not been widely recognized. Government should cultivate the public rationality of issue networks, make policy entrepreneurs achieve softening-up, and reduce policy conflicts by education etc.

## References

- Cai, F. (2009). Negotiation decision: the way to solve the dilemma of public policy: public policy analysis of city electric bicycle. *Journal of Zhejiang provincial Party School of CPC*, 78-82.
- Durant, R. F., & Diehl, P. F. (1989). Agendas, Alternatives, and public policy: Lessons from the U.S. Foreign Policy Arena. *Journal of Public Policy*, (9), 179-180. <http://dx.doi.org/10.1017/S0143814X00008114>
- Kingdon, J. W. (2004). *Agendas, alternatives and public policy. Second edition. Dinghuang, Fangxing, translated.* Beijing: China Renmin University Press, 256.
- Klijn, E. H. (1996). Analyzing and managing policy processes in complex networks: a theoretical examination of the concept policy network and its problems. *Administration & Society*, (1), 90-119. <http://dx.doi.org/10.1177/009539979602800104>
- Li, D. (2014). Two cases of traffic accident, a "five kinds of cars". *Guangzhou daily*.
- Lin, J., Chen, X. Y., & Liang, B. Y. (2014). Guangzhou intended to ban electric bicycles totally arose controversy. *China Youth Daily*.
- Liu, Z. B. (2007). The policy circle analysis of Guangzhou "jinmo". *Professional circle*, 13-15.
- Marsh, D., & Smith, M. (2001). Understanding policy networks: towards a dialectical approach. *Political studies*, 49.
- Rhodes, R. A. W. (1996). The new governance: governing without government. *Political studies*, 44. <http://dx.doi.org/10.1111/j.1467-9248.1996.tb01747.x>
- Sabatier, P. A. (2004). *The theory of policy process.* Peng Zongchao et al. Beijing: Sanlian bookstore, 97-101.
- Smith, A. (2000). Policy networks and advocacy coalitions: explaining policy change and stability in UK industrial pollution policy. *Environmental planning C: government and policy*, 95-114. <http://dx.doi.org/10.1068/c9810j>
- Wang, C. C. (2013). *The logic of public policy process: advocacy coalition framework analysis, application and development.* Beijing: China Social Sciences press, 63-67.

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