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institutionnels sur le marché chinois des voitures
d’occasion**

Xiaoxiang Deng

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1985-2016: The political work and the institutionalized relationships ——Research on Institutional Changes in China's Used Car Market

Thèse de doctorat de l'université Paris-Saclay

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Xiaoxiang DENG

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Presentation

Used car market and the automotive industry in China

China's used car market has a relatively short history. Since 1985, some "road markets" have been spontaneously formed, and it has been 34 years old since then. This corresponds to the history of China's automobile industry development and the long-term planned economic system after the founding of the People's Republic of China. Under the planned economic arrangement, the used car and used car market are relatively rare. With the great changes in China's reform and opening up in the late 1970s, the entire social and economic structure was transformed from a planned economy to a market economy, and the used car market was born. The road markets that were spontaneously formed in the 1980s caused a problem for city authorities everywhere: the demand for used car trading was reasonable and real, but the road markets created many troubles for urban traffic. More importantly, the road markets were markets with no thresholds and no supervision, anyone who wanted to buy or sell used cars can participate. Scrap cars and accident cars were all over the place, and fraud was everywhere. As buyers of used cars, they were often at a disadvantage of information asymmetry. Beijing's local government departments have made institutional innovations, opening up a special venue for trading in used cars next to an existing specialized commodity market, and more importantly, establishing government regulation. Scrap cars are not allowed to enter this market for trading, and must not arbitrarily defraud used car buyers. Used car dealers entering the market must register and file with the management of the market and pay a deposit. Once a consumer who buys a car discovers fraud, he can directly complain to the management of the market, the Beijing Municipal Administration of Industry and Commerce. This is a combination of specific social, economic and institutional spaces - the old motor vehicle trading center. Such a market institution spread from Beijing to the whole country, and soon almost every prefecture-level city had at least one old motor vehicle trading center, in

which used car transactions accounted for the vast majority of market share. After the reform and opening up, the initial stage of China's market economy is inseparable from the government's national construction^①. From another perspective, the initial stage of the transition is still the government management path of the original planned economy, but only opened up a special market for free trade.

The used car market is a place where motor vehicles are second-flowing. It has the dual attributes of intermediary service providers and commodity operators. Specifically, the functions of the used car trading market include: second-hand car appraisal, acquisition, sales, consignment, purchasing agency, leasing, replacement, auction, inspection and maintenance, parts supply, beauty decoration, after-sales service, and providing customers with transfer, register the car license plate, insurance and other services. From the history of the development of the used car market, the used car market has experienced a transition from simple commodity trading to commodity trading plus intermediary service platforms. Nowadays, in the used car market in China, we can mainly see the old motor vehicle trading center, brand-certified used cars, chain used car dealers, used car auction companies, and used car e-commerce. Among them, the old motor vehicle trading center is composed of many independent brokers, small-scale used car dealers, some chain used car dealers and used car auction companies that operate used car business. Brand-certified used cars are the used car business entities established by various auto manufacturers distributor network, selling used cars of this brand in 4S stores. What is the relationship between China's new car market and the used car market? Or what is the relationship between car manufacturers and used car market?

To answer this question, we need to find out the dominant model in the field of new car sales in China, namely the 4S store model. The car 4S store mode is the brand monopoly system. In the automobile sales market, car manufacturers and auto dealers

^① Fligstein N. The architecture of markets: An economic sociology of twenty-first-century capitalist societies[M]. Princeton University Press, 2002: 36-41.

signed contracts to authorize auto dealers to engage in marketing and sales activities of designated brands in certain regions, forming a brand monopoly. The automobile 4S store is the product of the development of the brand store to the 1990s. The 4s store is a comprehensive automobile marketing and sales mode featuring the “four-in-one” of vehicle sales, maintenance services, parts supply and information feedback, which is the main business of the chain-type brand of automobile manufacturers. This car distribution system originating in Europe was established in China in the early 21st century and formed a monopoly on the sale of new cars. However, automakers quickly discovered that there is an institutional factor in China that hinders their business development, that is, used cars must go to the old motor vehicle trading center for trading, and cannot be carried out in the showroom of their 4S store. This kind of hindrance is not convenient for the 4S shop to carry out the old car replacement business. Secondly, it has made it impossible to establish the advantage of the brand-certified used car business because it has to set up booths in the old motor vehicle trading center. The brand authorization of the 4S shop and the brand power of the franchise are not reflected, and the brand-certified used cars cannot use the luxury showroom of the 4S store. It is precisely under the impetus of the manufacturers that the “Used Vehicle Circulation Management Measures” issued by the Ministry of Commerce of China canceled the requirement that used cars must go to the old motor vehicle trading center for trading. The political activities and political lobbying of the manufacturers as stakeholders in the used car market have changed the regulatory rules in the used car market, which indicates that car manufacturers are important stakeholders in the used car market. At the same time, it also shows that the development of the used car business has an important impact on the automobile dealership business carried out by automobile manufacturers and 4S stores.

Then, is the used car market in China an independent field from the automotive industry?

What is an industry?

The development of the automotive market does not only refer to the development of the new car market, the second-hand car market can not be seen as a low-priced version of the new car market. In fact, the used car market is a socio-economic structure consisting of professional used car dealers and their specific relationships with consumers. The used car market can be seen as a resistance and substitution to the large-scale, industrialized new car market. The frequent social and economic relationship between used car dealers and consumers is a substitute and resistance to the market segmentation strategy of large car companies and their dealers. To answer whether the used car market is an independent industry, it is necessary to see whether there is an institutional order in this field that distinguishes itself from other industries. Institutional order is composed of four main institutionalized relationships in the industry: purchase IR (Institutionalized Relationship), finance IR, commercial IR and employment IR. These institutionalized relationships link public policy and collective action through commercial activities, and reduce uncertainty through the gradual stabilization of their own relationships, thus making economic activities predictable for each stakeholders involved. In this regard, the institutionalized relationship not only constrains but also initiates the actions of individual producers and merchants, and thus gradually rises to the corresponding institution.

The institutionalism of Bernard Jullien and Andy Smith

Institutions around the production and sale of goods and services always focus on four types of constraints and opportunities—employment, finance, sourcing, and commercialization^①—by stabilizing these factors to establish their corresponding institutionalized relationships. There are four institutionalized relationships in an

^① Imai K, Itami H. Interpenetration of Organization and Market: Japan's Firm and Market in Comparison with the US[J]. International Journal of Industrial Organization, 1984, 2(4): 285-310.

industry: employment relationships, purchase relationships, financial relationships, and commercial relationships. These institutionalized relationships link public policy and collective action through commercial activities, and reduce uncertainty through the gradual stabilization of their own relationships, thus making economic activities predictable for each actor involved. In this regard, the institutionalized relationship not only constrains but also initiates the actions of individual producers and merchants, and thus gradually rises to the corresponding institution.

Through four institutionalized relationships, we can continually explore the integration process of economics and politics. For example, the institutionalized relationship of employment will limit the working hours, training or salary conditions of employees. The institutionalized relationship of purchase determines the stability or fragmentation of the supply of vehicles in the used car market. These institutionalized relationships are not only the political outcomes in a particular structure, but also a dynamic process of constant revision. The actor's proposal, criticism or revision of public or collective interest topics is constantly forming new institutions or removing old institutions^①.

On the other hand, we believe that the inherent consistency of institutionalized relationships reflects the political dimension of “market trade”, and those political actions that establish and reproduce institutionalized structures can explain “the architecture of markets”^② and “the life and death of their institution”^③. Another important concept related to this is where is the “Arena” where actors compete? Or in which region of the market transaction shaped by institutionalized relationships becomes more important, whether it is in the region or the country, Europe or the world? It is important to know that the four institutionalized relationships do not correspond to

^① Jullien B, Smith A. Conceptualizing the role of politics in the economy: industries and their institutionalizations[J]. *Review of International Political Economy*, 2011, 18(3): 358-383.

^② Fligstein N. *The architecture of markets: An economic sociology of twenty-first-century capitalist societies*[M]. Princeton University Press, 2002: 36-41.

^③ François P. *Vie et mort des institutions marchandes*[M]. Paris: Presses de Sciences Po, 2011.

a fixed geographical area^①. This requires us to carefully handle the scope of the topic under discussion, namely scale of government.

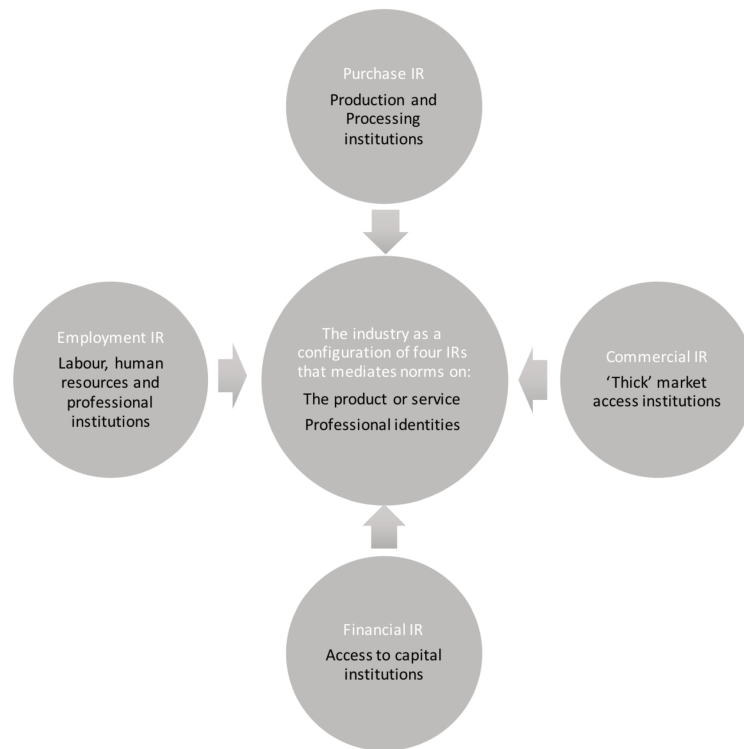
Most industries have been institutionalized for decades (such as cars), even for hundreds of years, so it is easy to ignore or not realize that their existence as a unique industry is based on the institutional order of four IRs^②. The extent to which a business activity is classified as an industry and the professional identity of its participants depends, in fact, on the institutional order formed by the collection of four IRs. In figure 1.1, although each IR is relatively independent, a stable industry will only exist in a field that can form a center for industrial problem debate. Among them, it includes the social meaning of products in the industry. The conceptualization of IO is similar to the analysis of “institutional complementarity”, where producers and regulators usually strive to achieve, but at the same time fall into “coherent” public policy^③. An analysis based on institutionalized relationships provides a way to explore “consistency” within the industry, a concept that can always be controversial and thus a way to reveal its dynamics.

^① Jullien, B., & Smith, A. *Industries and globalization: the political causality of difference*[M]. Springer, 2008.

^② Jullien B, Smith A. Introduction: Industries, globalization and politics[M]//Industries and Globalization. Palgrave Macmillan, London, 2008: 1-28.

^③ Hall P A, Soskice D. *Varieties of capitalism: The institutional foundations of comparative advantage*[M]. OUP Oxford, 2001.

Figure 1.1 An Industry as an Institutional Order of four Institutionalized Relationships.



At the same time, the conceptualization of IO can help rebalance the study of industrial political economy, that is, no longer only analyze the employment and financial IR, but explore the often neglected purchase and commercialization issues. Many studies on industrial political economy in the 1970s focused on the field of “industrial relations”, such as “Capitalism Variety”^① or before the new corporatism^②. The focus on employment issues in the literature is mainstream. Of course, issues such as salary levels and wage bargaining mechanisms are important. Similarly, finance, banking and accounting are also important aspects of understanding contemporary capitalism over the past 40 years^{③④⑤}. However, many of the key institutional

^① Hall P A, Soskice D. Varieties of capitalism: The institutional foundations of comparative advantage[M]. OUP Oxford, 2001.

^② Lehmbruch G, Schmitter Ph. Patterns of corporatist policy-making[M]. London: Sage, 1982.

^③ Froud J, Johal S, Leaver A, Williams K. Financialization and Strategy: Narrative and Numbers[M]. London: Routledge, 2006.

^④ Posner E. The Origins of Europe’s New Stock Markets[M]. Cambridge (Ma): Harvard University Press, 2009.

^⑤ Büthe T., Mattli W. The New Global Rulers. The Privatization of Regulation in the World Economy[M].

characteristics of an industry are also in the long-neglected areas of procurement and commercial IR. More and more economic sociologists^①, geographers^② and international relations experts^③ have correctly studied these issues, but for the conceptualization of IR and IO seeks to bring these topics into the central arena of the political economy. In particular, research on purchase systems (such as environmental protection) and market access systems (such as trade barriers, trade protection) can reveal the value choices made by an industrial government as much as labor and capital research.

The automobile industry has been institutionalized for decades. In fact, the history of the development of the automobile industry in the early days will find that the industry's independent existence as a factor different from other industries depends on its own four institutionalized relationships and the institutional order formed by the former four IR together.

In the field of distribution and service of automobiles, the purchase relationship is an important part, or the critical to distinguishing this field from other industry classifications. The law in the automotive industry allows automakers to have a dominant position in the procurement relationship, which is derived from the exemption they receive from the competitive policy, allowing them to:

- to refuse to sell to any distributor that they had not chosen;
- to ensure that their sales outlets conformed to a certain number of norms considered essential to represent the make and, above all, to oblige their dealers to sell their entire range, to maintain guaranteed levels of inventory for spare parts and to offer service and repair activities;
- in return, carmakers offered a “territory” over which the dealer had a monopoly.

Princeton: Princeton University Press, 2011.

^① François P. Vie et mort des institutions marchandes[M]. Paris: Presses de Sciences Po, 2011.

^② Gereffi G., & Korzeniewicz M. Commodity Chains and Global Capitalism[M]. London: Praeger, 1994.

^③ Murray D, Raynolds L, Wilkinson, J. Fair Trade: Transforming the Challenges of Globalization[M]. London: Routledge, 2007.

It is these unique purchasing relationships that make the automotive distribution industry different from other industries.

In this sense, it is obvious whether China's used car market is an independent industry. Whether there is a unique institutionalized relationship that distinguishes it from other businesses in the automotive industry and its institutional order becomes a tool for monitoring this assertion. From the empirical investigation and analysis conducted in this research, China's used car market has unique institutionalized relationships and its institutional order, which are also very different from other parts of the auto industry in China. Therefore, China's used car market can be seen as an independent industry.

The stakeholders of an industry and the political work

Stakeholders in the industry are the main force to promote the institutionalization, de-institutionalization and re-institutionalization of the industry. This is also the focus of this research on the industrial institutional changes of the used car market in China. So what are the stakeholders in the used car market in China? The old motor vehicle trading center promoted by the local government's industrial and commercial bureau has evolved into an independent actor, which is not only different from the local government management department, but also different from the commercial body in the market economy. This is the most unique stakeholder. Many small and medium-sized used car dealers and independent brokers operating used car business in old motor vehicle trading centers are also stakeholders in the used car market, and they often make appeals through representatives of the old motor vehicle trading centers. In addition, brand-certified used cars, used car auction companies, and chain used car companies are all industry stakeholders. Among them, brand-certified used car companies represent the interests of auto manufacturers, and are a direct extension and will manifestation of auto manufacturers in the used car market. The brand-certified used car companies are usually the same body as the manufacturers authorized new car 4S

stores. The used car e-commerces are the important stakeholders that have risen in recent years. Behind them are Internet giants.

Beyond the stakeholders of these business entities are local governments in various places and relevant ministries and commissions of the State Council of the Central Government. When the relevant ministries and commissions of the State Council formulated national industrial policies and market supervision policies, they shaped the outline of the used car market, and local governments also participated in the development of industrial supervision and local policies based on their own interests. Under the civil law tradition in China, the administrative department itself can influence the entire industrial activities through the establishment of local regulations and law enforcement processes. Therefore, paying attention to industrial stakeholders and their political work in industrial development has become an important aspect of analyzing the changes of industrial institutions. The industrial institution is in the process of continuous formation, transformation, and disappearance. Observing the industrial institutionalization process and the political work carried out by industrial stakeholders, especially policy makers, can reveal the value choices behind it.

Since the theory of industrial institutionalization takes the analysis of the overlap between politics and economy in the industry as the focus of studying the dynamics of the industrial institution, institutionalization has replaced the system itself as the main object of research. Because industrial institutionalization theory holds that the continuous cycle of institutionalization, de-institutionalization, and re-institutionalization is the normal state of industrial institution development. The asymmetric relationship between different stakeholders in the automotive industry, the unsuccessful goals of the industry, and strategic conflicts will lead to the instability of these institutions, such as industrial supervision and economic structure. The industrial institution is constantly changing from one imbalanced form to another. On the other hand, the shift to the study of institutionalization reflects the focus on legalization in the study of industrial institutions. "Institutions are not just actual institutions, nor are

they objective products of power relations. They are the legitimate elements of a political order, and their 'efficiency' is mainly based on general beliefs about their utility, and more fundamentally, their dignity"^①. The study of the industrial system provides a means for itself to link supervision, legalization, and industrial structure analysis. Political work includes two basic concepts: the process of occurrence, change, and disappearance of "public problems" on which policy instruments for public action in industry are based; and the other is political work that can legalize policy tools, that is, politicization.

In the daily activities of industry actors, they usually face a series of conditions, such as transportation costs, wage levels, finance costs, and tax rates. When these conditions are not raised, then they will maintain a stable state without the process of problematization^②. However, once actors try to modify them, they become a problematic form, claiming new collective, public or political action. Only when the definition of a problem is shared by a series of actors can these actors enable themselves to collectively propose a motion for change, which becomes a "problem" in political work. In other words, the starting point of the analysis is that collective and public "problems" are structured through negotiation, compromise, and conflict^③. Based on these general theoretical perspectives, our research on industry focuses on the political work that takes place in many fields and processes, which collectively contribute to the definition of collective, public and political "problems".

After the "problems" were raised, our research also needed to distinguish between these problems as collective, public, or politicized. As long as a representative group of non-public actors agrees on its content and pools resources to solve this problem, a collective problem arises^④. When actors in the public administration (at least have a

^① Lagroye J. Les processus de politisation[M]// La politisation, Paris, Belin, 2003: 359-372.

^② Kingdon J W, Stano E. Agendas, alternatives, and public policies[M]. Boston: Little, Brown, 1984.

^③ Rochefort D A, Cobb R W. The politics of problem definition: Shaping the policy agenda[M]. Univ Pr of Kansas, 1994: 1-39.

^④ Friedberg E. Le pouvoir et la règle. Dynamiques de l'action organisée[M]. Le Seuil, 2015.

responsibility to protect the public interest) share their definitions, collective problems become public problems. As Padioleau said, public problems "involve public debate and, in most cases, intervention by legitimate public authorities"^①.

In China, an area related to car retail is the problem of ground parking spaces in residential communities in large cities. This was not a "problem" originally, but with the continuous increase in car ownership, the ground parking spaces in the community cannot meet the needs of all car owners. Then those owners who bought cars later raised this "problem". The owners of the same demand in the community signed a letter to change the rules for the exclusive ground parking spaces, so this "problem" became a "collective problem". Such problems are accepted by community officials and discussed internally or through public hearings in the local government, and this becomes a "public problem".

There may be another step after "problems" become "public problems", which is the "politicization" of "problems". Politicization is a strategy for building alliances^②. As a strategy, the purpose of politicization is to mobilize and build support for action plans by publicly proclaiming its impartiality and (possibly) effectiveness. The media is clearly an important channel for this strategy-this explains the focus of "communication" in industry and public actors. Activity through the media is also a way to lift the support of a person or an actor.

Take the parking problem in China as an example. When the public hearing of the local government is not satisfactory, or after many local government discussions and decisions (local policies and regulations) converge into a politicized trend, the problem of ground parking in the community will eventually rise to the level of politicization and change the relevant regulations of the "Property Law"- Ground parking is owned by all owners. The evolving process of "problems" as depicted in Table 1.1 below.

^① Padioleau J G. L'Etat au concret[M]. Presses universitaires de France, 1982.

^② Lagroye J. Les processus de politisation[M]// La politisation, Paris, Belin, 2003: 359-372.

Table 1.1 The process of problematization.

<i>Type of problem</i>	<i>Type of argumentation</i>	<i>Locus of alliance-building</i>
1. Company condition or issue	Definition and defence of a private interest	Within companies and groups
2. Collective problem	Aggregation and defense of the interests of a profession or industry	Cooperatives, trade associations and lobbies, 'interprofessions'
3. Public problem	Discrete deliberation Intervention of public actors	Industrial Communities
4. Politicized problem	Publicized deliberation Mediatized communication Explicit references to values	Industrial Communities and Trans-industry Networks

In summary, this example and many other cases of technicization legitimation help to emphasize the heuristic value of distinguishing between private, collective, public, and politicized problems (see Table 1.1). In doing so, we first see that problems of types 2 to 4 are the objects and results of political work. We also see more clearly that Type 2 and Type 3 problems are limited to the institutional order of related industries, and Type 4 problems will also involve cross-industry networks and the actors they contain.

Despite this type of politicization "problem", it is also affected in many other industries by a second type of legitimation: "technicization" of public problems^①. Contrary to the politicization of legitimation, technicization shirk publicity, categorize public issues, and constantly seek to cover up problems of values. As a strategy for alliance building, what is sought is the selection of "internal" actors and political elites. This is usually done by limiting the debate to the boundaries of specific industrial policy networks, in which technical and legal language can act as a barrier that keeps outsiders from knowing and being slandered as illegal policymakers. Most importantly, the main model of argument used in the form of the technicization of legitimation is expertise in

^① Dubois V, Dulong D. La question technocratique : de l'invention d'une figure aux transformations de l'action publique[M]. Presses universitaires de Strasbourg, 1999.

“policy legitimacy” and “efficiency”^①. In doing so, avoid explicitly mentioning values in support of expert reports and the invocation of legal doctrine^②. Of course, upon closer inspection, the values and purpose of the participants involved can be seen. However, they are hidden behind terms such as "national interest" or "community law." Therefore, technicization is part of political work, and the role of politics in industry.

European automobile distribution industry experience shows that technicization political work takes a specific form. The institutional order of the automobile distribution industry is to subsidize the interests of manufacturers and new car buyers at the expense of used car buyers who have higher service costs. The 2000 Monti report questioned this mindset, which was titled "Putting Consumers in the Driver's Seat." By way of technicization of public problems, automakers manage to reinterpret rules in such a way that they are compatible with the duplication of institutional order. In China, the technicization of public problems is very common. The local governments' policies on restricting the relocation of used cars have taken a technical form to avoid discussing the problem of values, and obtained legitimacy through binding with air pollution indicators, thereby obscuring the local governments' consideration of tax losses.

As evolutionary economists have shown^③, industries are structured around a "technical paradigm" that includes "their own definition of progress." Therefore, the policy instruments in public action are not neutral. Instead, everyone will institutionalize the values formed by the interpretation of the societal world and how best to regulate the societal world. Policy instruments cannot therefore be analyzed in purely functionalist terms that conceptualize industrial regulation in terms of reducing transaction costs and seeking efficiency. These policy instruments are more than tools.

^① Radaelli C M. The public policy of the European Union: whither politics of expertise?[J]. *Journal of European public policy*, 1999, 6(5): 757-774.

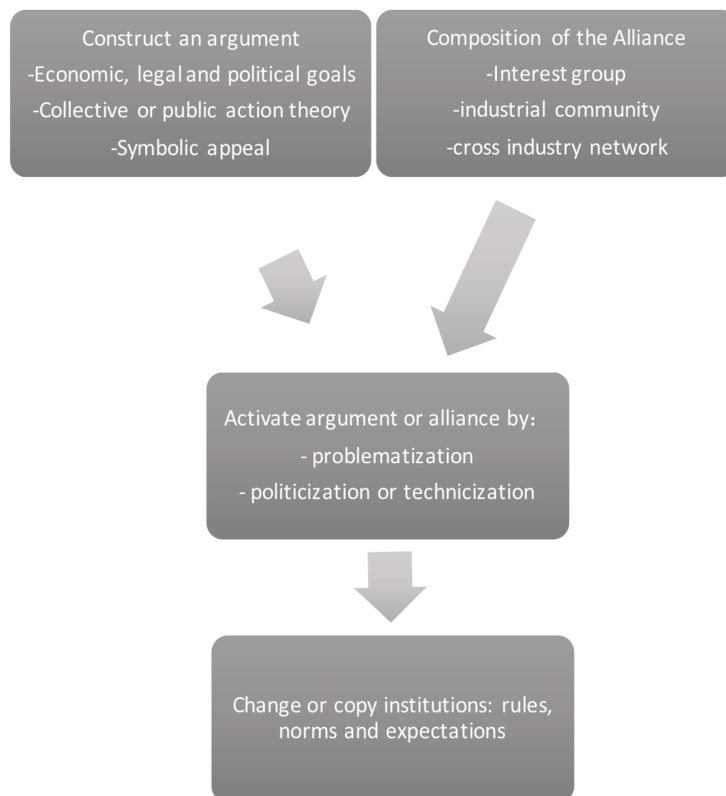
^② Robert C. Doing politics and pretending not to: the commission's role in distributing aid to Eastern Europe[M]//*Politics and the European Commission*. Routledge, 2004: 33-45.

^③ Dosi G. Technological paradigms and technological trajectories: A suggested interpretation of the determinants and directions of technical change[J]. *Research policy*, 1982, 11(3): 147-162.

They are exactly the same as what will be achieved.

More generally, this section attempts to illustrate how to use the concept of political work that combines problematization and politicization intermediate concepts to study the role of politics in the institutionalization process experienced by any industry. As shown in Figure 1.2, this political causality can and must be closely tracked. By providing a basis for research design, the framework provides an analytically powerful alternative that can take a more abstract or formalistic approach to the role of politics in industry, and more broadly, to the theorizing of capitalist diversity. In particular, it encourages attention to how industrial actors seek ubiquity in the industrial institutional order. Industrial actors develop their multiple positions within their constituents and, where possible, beyond the network of the industry itself.

Figure 1.2 Analyzing the framework of political work in industrial regulation



The methodology of the collected data and interviews

At the field, the researchers used participatory observations, which directly entered various auto companies for several months of continuous observation, and selected typical interviewees for “deep description”. The interviews included not only various front-line staff, but also corporate managers and industry policy makers. In addition, on the basis of personal interviews, this study also collected relevant information and industrial policy implementation and drafting documents within the industry, and finally constructed the concrete practice of the industrial institution change logic of the used automobile market on the basis of the combination of the two.

Personal interviews are the main qualitative research methods used by the author. Government policy makers, corporate actors, industry association actors, advisory intelligence agencies, local government policy makers and implementers are all interviewed by the author. Interviews with important actors summarized from the literature, and then finds new key actors through snowballing; introduces to relevant government departments (vehicle management offices) through acquaintances; interviews with related used cars market participants (old motor vehicle trading center used car dealers, brand certified used car companies, used car information service companies). Interviews generally use semi-open interview outlines as a framework. For pre-prepared questions, it comes from the previous literature review and theoretical review. In the process of interviews, new questions are gradually formed, and new questions are further questioned, which can get sufficient and accurate interview materials.

In terms of data collection, in order to supplement the data and arguments of the research, this research also made extensive use of existing research resources, as well as research reports from well-known domestic and foreign research organizations, as well as relevant government statistics. For example, China Statistical Yearbook, China Automobile Industry Association Statistical Report, and China Automotive Circulation Association Annual Data Release.

The structure of the dissertation

This paper has presentation and Chapters 1 to 8. The second to seventh chapters are empirical research, which studies and analyzes the history of institutional changes in the used car market in China. The Chapter 1 explores the interaction and connection between historical institutionalism and economic sociology from the beginning of the theory. Then it sorts out the debate between industrial policy and competition policy in Chinese industrial research. Finally, it discusses the market and state in the industry. The discussion of empirical cases begins with a summary of theoretical issues. This research explores the redefinition of political concepts in China's industrial economic activities based on the accumulation of historical institutionalism, economic sociology, and socio-technical paradigm theory, and then communicates with the role of the state and the market. The discussion starting from the theoretical problem is embodied in the case of empirical research, and finally returns to the summary of theoretical problems. This is the basic structure of this paper.

The contents of the second to seventh chapters are gradually developed according to the history of the evolution of the Chinese used car market institution.

The second chapter mainly sorts out the development process of the used car market in the United States from the 1920s to France in the 1960s, Japan in the 1960s, and Poland in the 1990s. The development of the used car market in each country will have its own characteristics. This is the result of the mutual shaping of market building and state building.

The third chapter outlines how the old motor vehicle trading center, a unique form of Chinese used car trading, was established, and then developed into a general institutional arrangement of used car market across the country. The relevant departments of local governments are the key forces driving the formation of this institution. State construction and state participation have shaped the structure of the market. The development of China's market economy has clearly reflected this assertion.

The "Old Motor Vehicles Transaction Management Measures" issued in 1998 confirmed this institutional arrangement, and also restrictively stipulated that used car transactions can only be carried out in the old motor vehicle trading center, then the monopoly is formed.

The fourth chapter discusses after the old motor vehicle trading center was established as the basic institution of the used car market in China, the "Used car circulation Management Measures" issued in 2005 cancelled the regulation that used car transactions can only be carried out in the old motor vehicle trading centre. The original monopoly was deconstructed. Before the introduction of the "Measures for the Management of Used Vehicles", automobile manufacturers became an important promoter of the introduction of this regulation. The political activities of the industrial stakeholders and the supporting coalitions are important driving forces for promoting the relationship between industrial supervision and institutionalization within the industry. At the same time, the brand-certified used car, chain used car companies, used car auction companies and the old motor vehicle trading center form a symbiosis. The first three are the social-technical subaltern systems under the dominant system.

The fifth chapter cuts into the institutional changes from the 2011 Beijing new car license plate lottery policy. The unintended consequence of this policy is to expand the scale of cross-regional circulation of used cars, which in turn has created the rise of used car e-commerce. From the perspective of socio-technical transformation theory, the rise of used car e-commerce has the goal of replacing the old motor vehicle trading center institution in the dominant position of the used car market in China. The institutional order formed by the institutionalized relationships of purchase, financial, employment, and commercial in the industry is an observing tool for the transformation of industrial economy, and is also the main content of an industry that is different from other industries. The used car e-commerce is completely different from the old motor vehicle trading center in terms of four institutionalized relationships. As an innovative social-technical system, it will take time to witness whether it can successfully replace

the latter as the dominant system.

The sixth chapter discusses the used car restriction policy that began in the 2008 Beijing Olympic Games, and then reached its climax in 2013, and finally was abolished by the State Council in 2016. The national used car restriction policy is not a product of intentional design, but a response strategy adopted by local governments in the face of environmental pressures and fiscal and tax disadvantages brought about by used cars. Many local government's coping policies have combined to form a national used car restriction policy, and its policy instruments are technicalized vehicle emission standards, which are technicalized to avoid discussion of public values.

The seventh chapter begins with the promulgation of the “Several Opinions on Promoting Convenience of Used Cars” issued by the State Council in 2016 to explore local protectionism rooted in China's national governance structure. The industrial supervision policy promulgated by the State Council has been extended from two months of implementation to more than two years before it is fully implemented. During the period, there was a round of supervision and inspection activities organized by the relevant ministries and commissions of the State Council. The central government’s policy will and the actual implementation gap are the resistance and game of local protectionism. The topics that are often discussed in the study of industrial politics and economy include the scale of the government behind a policy and the jurisdiction in which it works.

After the six chapters of empirical research is Chapter 8 to summarize and finally discuss the issues studied in this paper. Whether it is the research context of historical institutionalism and economic sociology, or the debate between industrial policy and competition policy, or the institutionalized relationship between industrial sociology and institutional order, a fuller discussion can be obtained after the empirical study.

Chapter 1 General Introduction

1.1 Theoretical Background: Historical Institutionalism and Economic Sociology

1.1.1 Grand theory and Middle range theory

Both economics and rational choice theory attach importance to the construction of "grand theorizing". The behaviorist revolution in the occidental social sciences of the 1950s and 1960s was a major revision of the old, descriptive, and lacking analysis of the old institutionalism paradigm. Behaviorism believes that simply listing various detailed institutional structures does not explain actual political and economic behavior. Social science research should pay more attention to informal power distribution, attitudes, and behavioral effects on outcomes^①. Economics began to attach importance to the establishment of a mathematical model based on the universal application of hypothesis. Political science and sociology abandon the old institutional analysis that pays attention to the characteristics of national institutions, and begin to develop concepts and variables that can be widely applied in cross-country comparative analysis and based on large-scale statistical analysis. Such an academic paradigm has spawned the similar tendency of the theory of modernization, which emphasizes transcending the political and economic systems of various countries and advocates the theory of convergence. Although the paradigm of behaviorism has many positive effects, one of its main weaknesses is that it greatly limits the scope of social science analysis. Although behaviorism itself values the characteristics, attitudes, and behaviors of individuals and groups, it often ignores many important factors in the venue of behavior and cannot answer an important question it has raised earlier: why are the attitudes, behaviors, and resource allocations of various groups in political and economic life vary

^① Thelen K. Historical institutionalism in comparative politics[J]. Annual review of political science, 1999, 2(1): 369-404.

greatly from country to country?^① New institutional economics should be considered the most likely branch in economics to dialogue with economic sociology. However, the new institutional economics is still essentially trying to establish a universal theory, except that they attempt to replace the efficiency embodied in input and output with the efficiency reflected by transaction costs. Moreover, the new institutional economics is still a normative theory in essence. It is very different from the characteristics that economic sociology attaches to the empirical theory and attaches great importance to the huge differences between the economic institutions of various countries.

During the collapse of the Bretton Woods system in the 1970s and the oil crisis, the different responses of developed countries and their huge differences in later economic performance presented serious challenges to the research paradigm of behaviorism and greatly promotes the development of the historical institutionalism. The historical institutionalism abandoned the general concepts of universality and modernity adopted by modernization theory, and began to develop such as strong state, weak state, development-oriented state, and regulatory state, which can capture the diversity of developed countries. They pursue variables with medium-range explanatory ability such as trade unionism, policy networks, and party structures, and pay attention to how these variables affect the motives of the various actors and limit the strategic choices they face. As the opposite of the universally applicable grand theory, the historical institutionalism has focused on institutions that reflect differences between countries from the very beginning. At the same time, unlike the old institutionalism, the historical institutionalism values the influence of the institution on the main goal of the action, and the distribution of power and resources of a country among different actors^②. As a medium-range analytical concept, these institutions can provide a concrete explanation for the political and economic differences between

^① Steinmo S, Thelen K A, Longstreth F. Structuring politics: historical institutionalism in comparative analysis[M]. Cambridge University Press, 1992.

^② Steinmo S, Thelen K A, Longstreth F. Structuring politics: historical institutionalism in comparative analysis[M]. Cambridge University Press, 1992.

countries through the constraints on the main actors.

Both economics and rational choice theory adopt the basic assumptions of rational behavior, and both regard rationality as a priori attribute of any institution, which owned by a single actor. In other words, the institution constitutes a scene or game rule for the strategic behavior of the actors, which constrains the behavior of the actors to pursue their own interests. However, the actors can still pursue the maximization of its own interests under the rules of the game. Economics and rational choice theory usually treat the preferences of the choice of actors as hypotheses, and rarely care about the source of the preferences. This hypothesis of rational behavior and methodological individualism together constitute the basic elements of the universally applicable “grand theory”. In contrast, the combination of the organizational institutionalism and the historical institutionalism of economic sociology is characterized by denying the transcendental and external rational assumptions adopted by economics and rational choice theory. They reject the methodological individualism adopted by economics and rational choice theory, and abandon their pursuit of constructing a "grand theory" beyond the limits of specific time and space conditions. Differently, they pursue the theoretical interpretation of the middle-range. It can be seen that the institutionalism school of sociology has a systematic and essential disagreement with economics and rational choice theory on how to construct social science theory.

The organizational institutionalism and the historical institutionalism school have two levels of criticism of the basic assumptions of rational behavior in neoclassical economics and rational choice theory: One level is that many human behaviors cannot be analyzed with rational behavioral assumptions. The organizational institutionalism emphasizes that human behavior is often not driven by utilitarianism, but under the pressure of coercion, imitation, and norm. It is more convergent for reasons of

legitimacy or cognitive reasons^{①②}. Another level is that the choice of rational behavior itself comes from the institution, not a transcendental, external existence. The institutionalized rational myth and the norms of the institution itself construct the choice preference of rational behavior in an endogenous form^{③④⑤}. The most essential feature of the organizational institutionalism is the interpretation of institutions through human cognition. It defines the institution as “the ways in which action is structured and order made possible by shared systems of rules that both constrain the inclination and capacity of actors to optimize as well as privilege some groups whose interests are secured by prevailing rewards and sanctions”^⑥. The organizational institutionalism school explain the convergence phenomenon in the institutionalization process at the macro level through the cognitive characteristics of individuals at the micro level, emphasizing that among the factors affecting individual actions at the micro level, cognition, emotion and value each represent a pole in the three-dimensional culture of Parsons^⑦. The pole of the value represents the rational judgment, while the cognition represents the daily knowledge of the classification, the routine, the language and the schema, which are completely neutral in terms of emotion and value. The organizational institutionalism believes that in the interaction of daily life, people always use their common sense knowledge to understand the status quo. In this sense, the institution does not internalize a priori value to the individual, but a product that is constructed in

^① Meyer J W, Rowan B. Institutionalized organizations: Formal structure as myth and ceremony[J]. American journal of sociology, 1977, 83(2): 340-363.

^② DiMaggio P J, Powell W W. The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields[J]. American sociological review, 1983: 147-160.

^③ Steinmo S, Thelen K A, Longstreth F. Structuring politics: historical institutionalism in comparative analysis[M]. Cambridge University Press, 1992.

^④ DiMaggio P J, Powell W W. Introduction. The new institutionalism in organizational analysis[J]. The New Institutionalism in Organizational Analysis, University of Chicago Press, Chicago, IL, 1991: 1-38.

^⑤ Hall P A, Soskice D. Varieties of capitalism: The institutional foundations of comparative advantage[M]. OUP Oxford, 2001.

^⑥ DiMaggio P J, Powell W W. Introduction. The new institutionalism in organizational analysis[J]. The New Institutionalism in Organizational Analysis, University of Chicago Press, Chicago, IL, 1991: 1-38.

^⑦ Parsons T. Culture and social system revisited[J]. Social Science Quarterly, 1972: 253-266.

the process of individual interaction. In other words, the so-called institution is nothing more than "the type of behavior of the subject of behavior as a group of members shared among internal members"^①. Such an action under the influence of cognitive factors cannot be explained by the rationality based on value judgment.

In the process of the organizational institutionalism explored from the traditional field of organizational sociology to the development of economic sociology, it made a major amendment to the early paradigm that focused on the study of irrational convergence in the non-profit sector, and began to directly study the for-profit sector, namely the so-called convergence actions of enterprises directly driven by market forces. They began to pay attention to the social factors in the process of constructing classical rational behavior with emphasis on interests and competition, such as economics or rational choice theory. As the metaphor of the "culture as a tool kit" shows, for the organizational system, the actors in economic life always seek resources from their cultural and institutional environments when defining their own interests and goals and when formulating strategies to achieve them^②. This important amendment opens the door to a new direction of research that studies the rational social construction of economic life.

Although both the organizational institutionalism and the historical institutionalism value the institution, their focuses are significantly different. In contrast to the organizational institutionalism that values the cognitive factors that are completely neutral in terms of emotion and value, the historical institutionalism pays more attention to the role of norms involving value judgment. The historical institutionalism believes that the definition of interests and goals by the actors is carried out in a specific institutional environment. Therefore, rationality and institution are

^① DiMaggio P J, Powell W W. Introduction. The new institutionalism in organizational analysis[J]. *The New Institutionalism in Organizational Analysis*, University of Chicago Press, Chicago, IL, 1991: 1-38.

^② Swidler A. Culture in action: Symbols and strategies[J]. *American sociological review*, 1986: 273-286.

inseparable^①. They believe that rationality can only be concrete, rather than defining a priori choice preference before a specific scenario, as advocated by economics and rational choice theory. Institutional factors such as economics, politics, and ideology directly shape the definition of goals and interests of actors in a given time-space condition^②. Unlike economics and rational choice theory treat interests as a hypothesis, the historical institutionalism regards how the actors define interest as a problem, or a dependent variable. They believe that unless we understand the specific institutional environment, the assumption that the behavior of the actors is driven by their own interests is very hollow. The historical institutionalism does not deny that actors can pursue strategies to achieve their goals, but emphasizes that only historical research can reveal what specific interests the actors are trying to maximize and why they focus on some goals rather than others^③.

Contrary to the methodological individualism adopted by economics and rational choice theory, the object of the organizational institutionalism is “an interest in properties of supraindividual units of analysis that cannot be reduced to aggregations or direct consequences of individuals’ attributes or motives”^④. They believe that although people often face choices, they always draw on the experience of others in similar situations and use the socially accepted code of conduct as a frame of reference. The organizational institutionalism uses the “field” as the unit of analysis. They believe that the institution at the macro level is not the accumulation of single and pursuing self-interest individuals; on the contrary, individual behavior is always affected by the behavior of others at the assembly level. The organizational institutionalism uses the

^① Thelen K. Historical institutionalism in comparative politics[J]. *Annual review of political science*, 1999, 2(1): 369-404.

^② Lindberg L N, Campbell J L. The state and the organization of economic activity[J]. *Governance of the American economy*, 1991: 356-395.

^③ Steinmo S, Thelen K A, Longstreth F. *Structuring politics: historical institutionalism in comparative analysis*[M]. Cambridge University Press, 1992.

^④ DiMaggio P J, Powell W W. Introduction. The new institutionalism in organizational analysis[J]. *The New Institutionalism in Organizational Analysis*, University of Chicago Press, Chicago, IL, 1991: 1-38.

concept of structuration proposed by Giddens to illustrate this effect. The structuration process consists of four parts: first, the interaction of individuals or individual organizations in one field is greatly increased; second, there is a ruling structure or alliance between individuals or between organizations within the field; third, the amount of information sent and received by each individual or organization in the field is greatly increased; fourth, individuals or individual organizations in the same field develop a clear understanding of each other's existence. In such a structuration process, the typical rule system shared in the field, rather than the individual a priori rational existence, is the decisive factor affecting individual behavior. Because of this, the field replaced the methodological individualism as the research method and unit of analysis of the organizational institutionalism^①.

1.1.2 The politics in historical institutionalism

The historical institutionalism either derives individual interests from the institutional level, or directly analyzes the interests at the assembly level, and does not discuss how individual strategic behaviors form such assemblies^②. Because of this, the units of analysis used by the historical institutionalism are generally the main actors at the assembly level such as political parties, trade unions, and industrial groups. As a new development of the historical institutionalism, the research paradigm of varieties of capitalism is centered on the framework of action. The main body of action can be an individual or a single enterprise, or a producer group or government. Although its analytical framework gives enterprises a more important position, unlike the methodological individualism of neoclassical economics and rational choice theory, the paradigm of varieties of capitalism research is to grasp the enterprise from the

^① DiMaggio P J, Powell W W. Introduction. The new institutionalism in organizational analysis[J]. *The New Institutionalism in Organizational Analysis*, University of Chicago Press, Chicago, IL, 1991: 1-38.

^② Thelen K. Historical institutionalism in comparative politics[J]. *Annual review of political science*, 1999, 2(1): 369-404.

connection, which includes the relationship between employers and employees, shareholders and managers, and the relationship between enterprises. These relationships will constrain the company's strategic choices. Acknowledging that the strategic interactions of the actors have an impact on the outcomes highlights the importance of the political and economic systems that historical institutionalism have consistently advocated that directly influence such strategic interactions^①.

Historical institutionalism defines an institution as a stabilized system of rules, norms and expectations, thereby constructing the prime features of contemporary economic models^{②③}. Applying institutionalism to the core of the political and economic discussion has generated considerable new information about what structures economies^{④⑤}. How and why institutions in the economy change or reproduce have also become the focus of debate and propositions^{⑥⑦}, especially the 'politics' needs to be systematically 'included into theories of the formation and transformation of capitalist models'^⑧, which is now widespread contention. At the same time, institutionalism is also used to focus on the dynamics of individual industries and their respective regulations, the making and implementation of the institutions that 'regularize' production, processing and marketing of goods or services^⑨. The automotive industry^⑩

^① Hall P A, Soskice D. Varieties of capitalism: The institutional foundations of comparative advantage[M]. OUP Oxford, 2001.

^② Steinmo S, Thelen K A, Longstreth F. Structuring politics: historical institutionalism in comparative analysis[M]. Cambridge University Press, 1992.

^③ Hall P A, Soskice D. Varieties of capitalism: The institutional foundations of comparative advantage[M]. OUP Oxford, 2001.

^④ Howell, C. Varieties of Capitalism: And Then There Was One?[J]. Comparative Politics, 2003, 36 (1): 103-124.

^⑤ Deeg R, Jackson G. Towards a more dynamic theory of capitalist variety[J]. Socio-Economic Review, 2007, 5(1): 149-179.

^⑥ Thelen K. Introduction: Institutional change in advanced political economies[J]. Beyond Continuity: Institutional Change in Advanced Political Economies, 2005: 1-39.

^⑦ Hall P A, Thelen K. Institutional change in varieties of capitalism[J]. Socio-economic review, 2009, 7(1): 7-34.

^⑧ Deeg R, Jackson G. Towards a more dynamic theory of capitalist variety[J]. Socio-Economic Review, 2007, 5(1): 149-179.

^⑨ Boyer R. Les analyses historiques comparatives du changement institutionnel: quels enseignements pour la théorie de la régulation?[J]. L'Année de la régulation, 2003, 7: 167-203.

^⑩ Boyer R, Freyssenet M. The productive models. The conditions of profitability[M]. London: Palgrave, 2002.

and the pharmaceutical and defense industry^① are examples of research in elucidating both diversity between industries and their respective dynamics. However, thus far politics has been defined in excessively formal, general or metaphorical ways, most studies had remained insufficiently explicit about how one operationalizes the paper that economic configurations are caused, changed or reproduced by politics. The role of politics within capitalism is still stuck in these consensual general theoretical premises, and the institutional political economy lacks operational research designs which generate knowledge about its precise causality. In particular, institutionalism needs to develop intermediate concepts—analytical tools which allow one to rigorously link, and mediate between, theoretical standpoints and empirical enquiry^②.

Specifically, institutionalists have three different tendencies in defining “politics”. One definition is synonymous with equating politics with political parties and how they intervene in the economy when in government^③. Similar research also emphasizes the role of “dominant social blocs” and “social political compromises” in sparking or obstructing change in the way parts of economies are regulated^④. Unlike this, another type of definition of politics is established in a more general sense. Here the term ‘coalition’ is now used to describe the political alliances which anchor “institutionalized arrangements”^⑤ for governing the economy which incorporates leaders of collective action and representatives of large firms. Politics here is conflated with polity, the systems of actors, rules and norms which structure the taking of public decisions in a given territory, or industrial sectors. Finally, many institutionalists complement the

^① Montalban M. *Financiarisation, dynamiques des industries et modèles productifs: une analyse institutionnaliste du cas de l'industrie pharmaceutique*[D]. Bordeaux 4, 2007.

^② Jullien B, Smith A. Conceptualizing the role of politics in the economy: industries and their institutionalizations[J]. *Review of International Political Economy*, 2011, 18(3): 358-383.

^③ Molina O, Rhodes M. Conflict, complementarities and institutional change in mixed market economies[J]. Hancké, Rhodes, and Thatcher, *Beyond Varieties of Capitalism*, 2007, 228.

^④ Amable B, Palombarini S. A neorealist approach to institutional change and the diversity of capitalism[J]. *Socio-economic review*, 2009, 7(1): 123-143; Immergut E M, Jochem S. The political frame for negotiated capitalism: Electoral reform and the politics of crisis in Japan and Sweden[J]. *Governance*, 2006, 19(1): 99-133.

^⑤ Hall P A, Thelen K. Institutional change in varieties of capitalism[J]. *Socio-economic review*, 2009, 7(1): 7-34.

second definition, which argues that the coalitions of actors not only change institutions, but more often feature heavily in “a politics of institutional stability”...(which) “depends on a stream of action that is political in the sense that it entails conflict designed to test the limits of cooperative arrangements and mobilization to bring other actors in line with those arrangements”^①. Therefore, politics is a conflictual activity engaged in by actors seeking to copy or change institutions.

Although all three definitions can generate interesting hypotheses and discoveries, in the end they cannot conceptualize politics with sufficient precision, making its existence in the economy the object of systematic empirical research. Indeed, political economy now finds itself in a strange position where politics is defined either too restrictively around formalistic conceptions of partisanship, or remains a vague black box within which institutional ‘configurations’ and ‘complementarities’ are somehow made to function and maintain their respective patterns of interdependence^②. In both cases the perpetual activity actors in industries engage in to change or reproduce their respective institutions are either ignored or treated anecdotally. The overall, and highly serious, consequence is that the impact of politics upon the economy continues to be underspecified and therefore understudied.

1.2 Reality Background: Argument between Industrial Policy and Competition Policy

1.2.1 Civil Law and Common Law

After the Great Depression of 1929-1933, it was widely believed that the free market economy had failed. As an alternative model of economic governance, many capitalist countries have seen a common trend, namely the establishment of a guild-style industrial order based on cartels and compulsory industry guilds. Although this

^① Hall P A, Thelen K. Institutional change in varieties of capitalism[J]. *Socio-economic review*, 2009, 7(1): 7-34.

^② Howell, C. Varieties of Capitalism: And Then There Was One?[J]. *Comparative Politics*, 2003, 36 (1): 103-124.

trend appeared in the United States, Japan, and Germany at the time, it only existed in the United States for two years, but in Japan and Germany it is popular. What factors ultimately led to a guild-like governance model that produced completely different results among the three countries?

Tracing back to the source is the difference in the power distribution between the state structure in the judicial, legislative and executive powers^①. The United States is a common law country. The common law system has the tradition of case law, that is, the judgment made by the judge is binding on subsequent judgments in similar cases. Therefore, the case law actually gives the judge's representative judicial system partial legislative power. Even in the contemporary American constitution, the judicial system still has some legislative power. At the same time, in the common law system of the United States, the administrative department has little power in the legislative process. In contrast, in the civil law countries, the judicial system has no legislative power at all, and the legislative power belongs to the Congress. However, the executive branch is deeply involved in the legislative process in civil law countries and, in many cases, participates in the law enforcement process. Before the Second World War, many countries in the civil law system had economic laws of public law nature, directly stipulating the relationship between the government and private enterprises. The United States emphasizes the principle of competition in the market. Its competition policy is often enforced by a neutral administrative department, and the judicial system also plays an important role. On the contrary, in civil law countries with greater administrative power, the administrative department is more deeply involved in economic governance. Many countries practice industrial policies and allow cartels^② to exist as anti-competitive mechanisms.

^① Gao B. Economic ideology and Japanese industrial policy: Developmentalism from 1931 to 1965[M]. Cambridge University Press, 2002.

^② Osborne D K. Cartel problems[J]. The American Economic Review, 1976, 66(5): 835-844.

China's social science community has always had major differences on whether to implement industrial policies or competition policies. In the analysis of industrial policies, Chinese neoclassical economists have developed new structural economics^① to regard comparative advantage as an objective existence. It refers to the natural endowment as a factor of production in the trade process. On this basis, new structural economics argues that comparative advantage should serve as the basis for trade strategies and government industrial policies. But from the perspective of economic sociology, comparative advantage is a product of social construction, and it is not an objective existence in an absolute sense. Only when a trading partner recognizes it can a natural endowment of a country as a factor of production be transformed into a comparative advantage in the trade process.

The new structural economics^② believes that industrial policies must be successful, provided that the government's guidance should meet potential comparative advantages. Most industries supported during the period of China's planned economy were completely violating comparative advantages, and thus required a large amount of financial support. At that time, China was short of funds, which only could support one enterprise in each industry and eventually led to monopoly. In fact, the problem of China's industrial policy is often the institution embedded in its society, not necessarily the policy itself. In China's economic management system, the past planned economy has a strong institutional inertia. This system often uses tough administrative methods when implementing industrial policies, which means that to develop one, all other options are not allowed to develop^③. This is very different from Japan's industrial policy. Japan's industrial policy can tilt resources in a certain direction, but at the same time

^① Lin Yifu. Theoretical Framework of New Structural Economics[J]. Industrial Economic Review, 2013 (2013-02): 18-23.

^② Wang Yong. "Promising Government" in New Structural Economics[J]. Economic Information Translation Series, 2016 (2): 1-4.

^③ Gao Bai. New Developmentism and Classical Developmentism—A Comparative Analysis of the Chinese Model and the Japanese Model[J]. Sociology Research, 2006(01):114-138.

the Japanese government won't limit other industries or enterprises to develop. In addition, there are two major differences between China and Japan: one is that in China, the central government and local governments all have industrial policies, but in Japan only the central government has industrial policies. The industrial policies adopted by local governments in China can contradict the central industrial policies. Local governments interpret and implement the central government's industrial policies according to their own interests, or local governments can flock to implement the central government's industrial policies according to their own understanding, which can have unintended consequences. Another difference is that China has state-owned enterprises, and state-owned enterprises often become an important instrument for the government to implement industrial policies. When the government tilts resources to state-owned enterprises and at the same time interferes with other enterprises by administrative means, it will inevitably lead to unfair competition. In addition, the existence of corruption has also led to collusion between government and business, which is also an important factor leading to a large number of unfair competition.

As a country with a civil law system, if China replaces industrial policy with competition policy, it means that in China's national structure, the power of economic governance must shift from administrative system to judicial system. This possibility is a big question mark. Looking back on China's 40 years of reform and opening up, China has adopted the basic strategy of "one center, two basic points" in dealing with the challenges of globalization and the third wave of democratization: One center is to focus on economic construction; the two basic points are to persist in reform and opening up and adhere to the four basic principles. The four basic principles are to uphold the socialist road, adhere to the people's democratic dictatorship, uphold the leadership of the Communist Party of China, and adhere to Marxism-Leninism and Maoism. This strategic approach has made the Chinese government's administrative system highly adaptable in the past 40 years, because it has developed different characteristics, including authoritarian, neoliberal, developmental, refined socialist,

predatory, and corporatist (The emergence of predatory local governments is not in the design, but the consequences of corruption)^①. The deep involvement of the administrative departments in the civil law tradition in the legislative and law enforcement process not only restricts the distribution of power in the legislative, judicial, and administrative systems throughout the national structure, but also ultimately affects the overall economic governance model. Advocating fair competition and market order is undoubtedly correct, but advocating competition policy instead of industrial policy may seriously underestimate the administrative power in the traditional state structure of the civil law system and the important constraints on the form of economic governance. In this sense, China's economic sociology should shoulder the responsibility of calling for a correct view of the interactive relationship between industrial policy and competition policy.

1.2.2 Developmentism in Japan and South Korea

Since the reform and opening up, China's coastal areas have participated in the international division of labor in accordance with the new developmentalism^② advocated by Professor Lin. The new structural economics can undoubtedly explain China's experience before 2004, because China's industrial policy at that time was completely different from the industrial policies of Japan and South Korea. The similarities between the two are: First, they all practice industrial policies; second, they encourage exports. The difference between the two is that China is more radical than Japan and South Korea in two aspects: First, the introduction of foreign capital, China began from the reform and opening up, especially after Deng Xiaoping's southern tour, hope that the more foreign capital, the better, and Japan and South Korea has always

^① Gao B. The Rubik's Cube state: A reconceptualization of political change in contemporary China[M]//Work and Organizations in China After thirty Years of Transition. Emerald Group Publishing Limited, 2009: 409-438.

^② Yu Yongding. Reconstruction of Developmental Economics——A Comment on Lin Yifu's New Structural Economics[J]. Economics (Quarterly), 2013 (2): 1075-1078.

restricted the entry of foreign capital in order to protect its own naive industries^①; Second, China's attitude toward foreign goods entering the domestic market is much more positive than that of Japan and South Korea. Although China's new developmentalism industrial policy also encourages exports, it does not encourage the export of high value-added products, but encourages the export of labor-intensive products that meet the natural endowment of production factors.

The three events in 2004 marked a shift in China's industrial policy. The first thing is that the report on China's auto industry published by Professor LU Feng of Beijing University has sparked a discussion about auto innovation^②; the second thing is that CCTV's documentary about the dismantling of Yun-10 aircraft has triggered public opinion about the research on large aircraft; the third thing is that China's introduction of foreign technology to promote high-speed rail technology innovation. From this point in time, China's industrial policy began to move closer to classical developmentism, pursuing the development of strategic industries with high added value. If the current big debate in China's economics is brought into the developmentist literature, especially the dichotomy between the regulatory government (such as the United States) and the developmental government (such as Japan) set by Chalmers Johnson^③, therefore, the former only cares about maintaining market rules, and everything is left to the market to decide, while the latter is concerned about the actual consequences of industrial structure in international trade. In this sense, Professor Wu Jinglian's claim^④ to replace industrial policy with competition policy is tantamount to

^① Gao B. Economic ideology and Japanese industrial policy: Developmentalism from 1931 to 1965[M]. Cambridge University Press, 2002.

^② Lu Feng, Feng Kaidong. Why is self-development the best way to learn foreign technology?—Taking the experience of automobile industry development in Japan and South Korea as an example[J]. China Soft Science, 2004 (4): 6-11.

^③ Johnson C. MITI and the Japanese miracle: the growth of industrial policy: 1925-1975[M]. Stanford University Press, 1982.

^④ Wu Jinglian. China's industrial policy: not for survival or abolition, but for transformation [J]. China's circulation economy, 2017, 31 (11): 3-8.

advocating the transformation of the Chinese government from a Japanese-style developmental government to an American-style regulatory government.

However, the alignment with Japan – to replace industrial policy with competition policy faces a big challenge: in the past 40 years, Japan’s total GDP and per capita GDP have risen less than doubled, while the total GDP of China has increased by 32 times, and the per capita GDP has increased by 26 times^①. Suppose Japan actually replaced industrial policy with competition policy in the late 1980s, while China was the country that has practiced the most industrial policies in the past 40 years. Does this data prove that China practices industrial policies and Japan abandons industrial policies, which is precisely the important reason why China surpasses Japan? Looking at another perspective, how many of the industries that are favored by the world in China are leaving industrial policies and relying only on market competition to develop? Mobile payments, for example, may seem to depend on the market. However, if there is no market access restriction and foreign capital enters in a large amount, the situation may be different. In fact, this market access restriction is also a side of industrial policy. So the key question is: If China completely abandons its industrial policy from now on, can it still achieve industrial upgrading? If there is no industrial upgrading, can China jump out of the middle income trap? This is a theoretical issue that we must face. This is also the practical significance of this research.

From the perspective of institutional economics, thinking about China's industrial policy logic is to think about whether to advocate industrial policy or competition policy, or both. This study follows the perspective of economic sociology and believes that it is necessary to first explore social embedding and social construction in the automotive industry before proposing policy recommendations. This study will cut through the used car market and sort out the institutionalization process, institutionalized

^① Gao Bai. New Developmentism and Classical Developmentism: A Comparative Analysis of the Chinese Model and the Japanese Model[J]. *Sociology Research*, 2006 (1): 114-139.

relationship, institutional order and transformation path of the market structure in the industry, and attempts to describe the process of rational construction and the way of value mobilization in this field, and then demonstrates the “thickness” of political and economic overlap in the industry for policymakers and industry practitioners.

1.3 Research Implications: The industrial sociology and Politics in Industry

1.3.1 The industrial sociology

The research focuses on economic, social, and political activities within the industry, and my academic training is mainly derived from the tradition of sociology. Then I must answer a question when conducting this research, namely: as a branch of economic sociology - how does industrial sociology structure itself? In economic sociology, there are two well-known theoretical dimensions about the relationship between state building and market building. The first is the view of Neil Fligstein's market building to promote state building^①. Fligstein believes that when a country enters the capitalist stage, the inter-firm relationship in the market will be highly unstable, that is, a status of disorderly competition. If inter-firm competition is all-encompassing, all companies in the market will suffer great losses. In this case, the market needs to establish certain rules so that the company has a more precise grasp of the competitive relationship between them. The market itself does not have the authority to produce rules, but only through the construction of the state. This is the logic that drives the state to be built by market building. In contrast, Frank Dobbin's theory of the state construction shapes the market construction. Dobbin believes that there are many possible ways of governance in the same market, and different states always use their different institutionalized political logic to establish unique market

^① Fligstein N. The architecture of markets: An economic sociology of twenty-first-century capitalist societies[M]. Princeton University Press, 2002: 36-41.

rules. In his research on the railway policy of the United States, Britain and France^①, he found that the three countries copied the unique political governance methods they formed in history to the emerging railway industry. This is the logic of national construction to guide market construction.

For the historical institutional school, the state constructs the economy by directly or indirectly affecting the choice of governance mechanisms. In the capitalist economy, the governance model is directly influenced by the strategic behavior of the economic actors and the distribution of power. Both the actions of the state and the form of the state institution can restrict the strategic behavior and power of the economic actors. The state can influence the choice of formal or informal organizations to govern the economy, as well as the bilateral and multilateral forms of exchange; it can affect the production and allocation of resources and information in economic life, and can also control the behavior of economic actors by manipulating property rights^②.

The state is both a subject of action and a structure.

States that act as actors are often considered to have autonomy. It can get rid of the influence of various interest groups in the society to a certain extent, and safeguard national interests with its own policies. On many occasions, such a state is used as a concept that is completely opposite to the market. However, in the actual case of analysis, this simple approach to state-to-market is so limited that it prevents us from conceptualizing the differences between many capitalist countries. For example, in the relatively traditional free market economy and the East Asian developmentism represented by Japan and South Korea, the opposition between the state and the market is not very obvious. These countries have both a market economy and a strong government. Moreover, the governments of these countries do not replace the market in economic life, but use various non-market governance mechanisms to limit the

^① Dobbin F. Forging industrial policy: The United States, Britain, and France in the railway age[M]. Cambridge university press, 1994.

^② Lindberg L N, Campbell J L, Hollingsworth J R. Economic governance and the analysis of structural change in the American economy[J]. Governance of the American economy, 1991, 5: 3.

market and supplement the market^①. In other words, the state "creates not only the relationship between civil society and public authority in a whole, but also the many important relationships within civil society^②".

As a structure, the state provides a political arena for economic actors. This political arena offers different institutional opportunities to various interest groups. Therefore, different interest groups have different degrees of influence on the process of national policy formulation. At the same time, the state represents an organizational configuration. In the relationship between the state and the economy, the historical institutional school and the organizational institutional school have different views. In the view of the latter, market instability has led to a demand for state functions^③. In the view of the former, the separation of state legislation, judicial and executive power, and the competition for management authority among various functional departments can often lead directly to the instability of the governance structure of the economic sector. At the same time, the state has a major impact on the allocation of resources in a country's economy, and this impact is critical to the strategic choices of firms and the relative opportunities of economic actors in interaction.

Differences in national institutions have a major impact on economic governance models. In history, the traditions of the common law system represented by the United States and Britain and the tradition of the civil law system represented by the German and France have far-reaching influence on the formation of modern constitutions in these countries. The difference in constitutional system is also an important institutional condition for different economic governance models^④.

In terms of methodology, since the historical institutional school has consistently

^① Gao B. Economic ideology and Japanese industrial policy: Developmentalism from 1931 to 1965[M]. Cambridge University Press, 2002.

^② Stepan A C. The state and society: Peru in comparative perspective[M]. Princeton University Press, 2015.

^③ Fligstein N. The architecture of markets: An economic sociology of twenty-first-century capitalist societies[M]. Princeton University Press, 2002: 36-41.

^④ Gao B. Economic ideology and Japanese industrial policy: Developmentalism from 1931 to 1965[M]. Cambridge University Press, 2002.

advocated understanding interests at the level of assembly, it naturally values the governance structure at the industrial or sectoral level. Different from the classical behavior of the neoclassical economics through the single action subject at the micro level, the historical institutional school believes that in order to develop, produce and market its products and services, enterprises must be involved in the social exchange network in the industry^①. Therefore, the governance structure of the industry is the institutional arrangement for managing these relationships at the assembly level. At this point, the view of the historical institutional school is quite different from the network school. The concept of governance of the historical institutional school is predicated on the existence of individual interests and social networks, but it grasps the individual enterprise or enterprise network from the level of assembly, and emphasizes the stability of the relationship between individuals through the public institutional arrangement in the form of governance structure. In contrast, network theory presupposes the interests of individuals. Although the existence of other individuals in the same network can constrain the interests of specific individuals, such constraints are informal. The public nature and the governance structure of the network is much weaker.

All of the above are the analysis and understanding of industrial activities in the context of sociological research. From state to market to industry, the sociological perspective is largely based on relationships. Different from the perspective of economics, industrial sociology is built to create a unique research framework. The supplement or limitation of state to the market largely influences the activities of the market and industry and the stakeholders among them. These important mechanisms promote the continuous development of industrial sociology, and are also the value judgment and theoretical framework of this research.

^① Lindberg L N, Campbell J L, Hollingsworth J R. Economic governance and the analysis of structural change in the American economy[J]. *Governance of the American economy*, 1991, 5: 3.

1.3.2 Facilitating State and Efficient Market

Economics generally believes that the market exists alone, but its normal operation may be affected by other factors. In the process of analysis, the market and the government are two separate and opposite concepts. Chinese economists point out that the premise of an effective market is that there is a promising government, and it is mentioned that this is an ideal state. It is considered that as long as the market is effective, the government has no need to intervene^①. This argument implies the assumption that there are various functions at the beginning of the market, but for some reason some functions are covered, so the government needs to reproduce the covered parts. But economic sociology believes that the market is not operating in a vacuum, but embedded in the various political systems of society, leaving the government can not talk about the market. Economic sociology looks at markets and governments in an evolutionary perspective. It sees the market as a developmental process, and the role of the government is actually to help the market continue to develop new functions and make it more efficient^②. Economic sociology also believes that an effective market can also have a negative impact. If we simply emphasize the market competition strategy, going to extremes will lead to the formation of monopoly, because competition will inevitably lead to winning or losing, and eventually the big fish will eat small fish. In addition, the market is not omnipotent. Some things cannot be completed simply by relying on the market. This is not a question of whether the market is effective. Therefore, economic sociology emphasizes that state building and market building are complementary processes, and the two are mutually premised^③.

The development of Yiwu Small Commodity Market in Zhejiang Province, China

^① Wang Yong. "Promising Government" in *New Structural Economics*[J]. Economic Information Translation Series, 2016 (2): 1-4.

^② Nee V. Organizational dynamics of market transition: hybrid forms, property rights, and mixed economy in China[J]. *Administrative science quarterly*, 1992, 37(1).

^③ Fligstein N. *The architecture of markets: An economic sociology of twenty-first-century capitalist societies*[M]. Princeton University Press, 2002: 36-41.

is a successful example of interaction between market building and state building^①. Its success depends mainly on the following two points: First, the local government strictly controls the property rights of the mall infrastructure construction. All the mall buildings are owned by local state-owned enterprises, and private enterprises have no right to build. Second, the local government came forward to completely rationalize the original chaotic logistics industry. The local government of Yiwu firmly grasps the property rights and logistics of the Small Commodity Market, and gives the business of each booth in the mall to the market. This positioning of the government function is a state building in the market development process. Later, many other local governments learned Yiwu experience, but they neglected the relationship between state building and market building. It is often that the government first invested much money to build a professional commodity market and then privatize the property rights of the market. As a result, the rent of the booths increased and the tenants have to leave. In Yiwu, the local government resolutely controls the property rights of infrastructure, does not allow private enterprises to intervene, and then completely rationalizes logistics, and controls the freight rate to a level that is competitive in the market, thus achieving the complementarity between state building and market building.

The evolution of China's used car market is also an empirical case of exploring the interaction between state building and market building. The used car market used to be called the lemon market in the United States. It means the defective market. Due to the information asymmetry, buyers tend to measure the value of a specific product by the average market price, in which case the seller can only maximize the profit by operating low-quality goods. In the 1970s, Akerlof inferred that in the United States the used cars with poor quality would drive out good ones. Thus the high-quality used cars would withdraw from the market, and the whole market would gradually shrink or even

^① Zhai Zhihong, Gao Bai, Feng Qiushi. Government Construction or Market Construction: The Rise of Yiwu Small Commodity Market[J].Social Sciences Research,2016(03):107-114.

disappear^①. However, the average size of the US used car market in the past decade is 2.5 times that of the new car market. The used car market has not only not disappeared but has become the mainstay of the auto market. Why is Akerlof's judgment so different from reality? The development of the lemon theory itself can explain this question. Heal, inspired by the game theory, found that only when the seller is very short-sighted and only pays attention to immediate interests, there will exist a phenomenon of defective products expelling. Otherwise, buyers and sellers will tend to transact with high-quality products in the long-term game^②. Akerlof responded that the premise of a cooperative game between buyers and sellers is an institution that links their past, present and future. For example, providing a guarantee in a transaction and building a brand play this role^③. From the end of the 1990s to the present, the used car market in China has increased by 50 times, from 200,000 vehicles a year to 13.82 million vehicles last year^④. What role does the government play in it? What institution is connecting their past, present and future? These are the exploring goal of this research.

From an economic point of view, the state is an external presence for the economy. It can help capital accumulation, that is, disrupt, destroy or accelerate capital accumulation, but it cannot fundamentally affect the coordination of economic organization's form and economic activities. The government can be strong and weak, but it rarely becomes a transformative force in economic life^⑤. For the organizational institutionalism and the historical institutionalism, "politics is not above the economy, it directly penetrates the economic structure"^⑥. The organizational institutionalism believes that state building and market building is an interactive and inseparable process.

^① Akerlof G. The market for lemons[J]. Quarterly journal of Economics, 1970, 84(3): 488-500.

^② Heal G. Do bad products drive out good?[J]. The Quarterly Journal of Economics, 1976: 499-502.

^③ Akerlof G A. Reply to professor Heal[J]. The Quarterly Journal of Economics, 1976, 90(3): 503-503.

^④ Organize the data release from CADA over the years.

^⑤ Lindberg L N, Campbell J L, Hollingsworth J R. Economic governance and the analysis of structural change in the American economy[J]. Governance of the American economy, 1991, 5: 3.

^⑥ Lindberg L N, Campbell J L, Hollingsworth J R. Economic governance and the analysis of structural change in the American economy[J]. Governance of the American economy, 1991, 5: 3.

Technological advances and competition have made the market often unstable, and a major task for companies is to maintain stability in their relationships with competitors, suppliers and employees in the market. The social relations in the process of exchange of market economy have been in a very volatile status. In order to solve this instability, the parties to the exchange will always push the enterprise to the state. For countries just establishing modern capitalist markets, creating stable conceptions of control is more difficult precisely because property rights, governance structures, and rules of exchange are not well specified^①. In order to establish a stable market, any capitalist economy needs the state to formulate property rights, governance structure, rules of exchange and conceptions of control. A state can be understood as a field consisting of a series of policy areas. Each field constitutes a stage for political action. On this stage, representatives of various interest groups develop and implement policies aimed at providing stable rules and governance structures for interaction between actors. From this point of view, market building is inseparable from state building. The role of the state in creating market stability is not only reflected in allowing companies to use various governance mechanisms to deal with competition and conflicts, but also by directly intervening in market behavior to achieve stable goals^②.

To explore the mechanism of institutional evolution in China's used car market, we must first answer how this market space is built. Rather than focusing on the construction of physical space, it is more important and more fundamental to answer how the building of its institutional space is completed. Here, this study will apply the methodological framework developed by European historical institutionalists—the institutionalized relationships and the institutional order, to demonstrate how China's used car market institutional space is built, and where the state building and market building interact, and the portrayal of critical actors. By answering "How is the used

^① Fligstein N. The architecture of markets: An economic sociology of twenty-first-century capitalist societies[M]. Princeton University Press, 2002: 36-41.

^② Fligstein N. The architecture of markets: An economic sociology of twenty-first-century capitalist societies[M]. Princeton University Press, 2002: 36-41.

car market in China developed?" -- This empirical case at the meso-level, and then try to answer the question of how market building in China's "socialist market economy" interacts with state building.

1.4 Transformation Analysis Tools: Socio-Technical Transformation Map

1.4.1 Dependency path and Transformation trajectory

Drawing on the analysis of the social-technical research paradigm for the transformation of technological paths in social economic activities^{①②③④}, the author will conceptualize the analysis tool needed for this research—socio-technical transformation map. This analysis tool, combined with the institutionalized relationships and institutional order framework, will be used to analyze the institutional transformation of the development and evolution of the used car market in China.

The socio-technical research paradigm and institutionalists have a close relationship with regard to path dependence. Path dependence plays a very important role in the process of technological competition, because when a technology happens to take the lead, it will use this position to get more returns, and on this basis become the dominant system^{⑤⑥}. In response to the history that the technical path of gasoline vehicles became the dominant system in the early 20th century, Nelson^⑦ pointed out:

^① Moloney S, Horne R. Low carbon urban transitioning: from local experimentation to urban transformation?[J]. Sustainability, 2015, 7(3): 2437-2453.

^② Bristow A L, Tight M, Pridmore A, et al. Developing pathways to low carbon land-based passenger transport in Great Britain by 2050[J]. Energy Policy, 2008, 36(9): 3427-3435.

^③ Seto K C, Davis S J, Mitchell R B, et al. Carbon lock-in: types, causes, and policy implications[J]. Annual Review of Environment and Resources, 2016, 41: 425-452.

^④ Geels F W. A socio-technical analysis of low-carbon transitions: introducing the multi-level perspective into transport studies[J]. Journal of transport geography, 2012, 24: 471-482.

^⑤ David P A. Clio and the Economics of QWERTY[J]. The American economic review, 1985, 75(2): 332-337.

^⑥ Arthur W B. Competing technologies, increasing returns, and lock-in by historical events[J]. The economic journal, 1989, 99(394): 116-131.

^⑦ Nelson R R. Recent evolutionary theorizing about economic change[J]. Journal of economic literature, 1995.

By chance inventors tended to concentrate on it, or by chance big advances were made. However, once the gasoline engine had developed to a point where it was significantly superior to steam or electrical engines, investing time and resources to advance these other technologies came to appear a bad bet...If the roll of the dice early in the history of automobiles had come out another way, we might today have had steam or electric cars.

The victory of gasoline cars is a historical accident, but it contains the inevitability of institutional evolution. When a technology achieves economies of scale, habits, network externalities, increased information returns, and technical interconnectivity, it means that the application of this technology will bring increasing returns. One of the strengths of institutionalist path dependency theories is that they point to mechanisms that help to lock-in and provide stability to winning technology. Other disciplines have added more reasons to illustrate the stability and lock-in characteristics of existing socio-technical systems. Established systems may be stabilized by legally binding contracts^①. Cognitive routines make engineers and designers look in particular directions and not in others^②. This can make them ‘blind’ to developments outside their focus. Core capabilities can thus turn into core rigidities^③. Businesses have sunk investments in machines, skills and knowledge that they don't want to lose. Therefore, it is difficult for established companies to turn to breakthroughs in destructive capabilities^④. The system is stable because they are integrated into society. People adapt to their lifestyles, develop favorable institutional arrangements and formal regulations,

^① Walker W. Entrapment in large technology systems: institutional commitment and power relations[J]. Research policy, 2000, 29(7-8): 833-846.

^② Nelson R R. An evolutionary theory of economic change[M]. Harvard university press, 2009; Dosi G. Technological paradigms and technological trajectories: a suggested interpretation of the determinants and directions of technical change[J]. Research policy, 1982, 11(3): 147-162.

^③ Leonard-Barton D. Core capabilities and core rigidities: A paradox in managing new product development[J]. Strategic management journal, 1992, 13(S1): 111-125.

^④ Tushman M, Anderson P. Technological discontinuities and organization environments[J]. Administrative Science Quarterly. 1986, 31: 493–465.

and establish appropriate infrastructure. The alignment between these elements leads to technological ‘momentum’^①. The importance of these alignments between heterogeneous elements is highlighted in concepts such as the techno-institutional complex^② and techno-economic networks^③. These methods emphasize various aspects of the stability of existing systems, but socio-technical paradigm researchers believe that they do not solve the problem of transitioning from one system to another. Path dependency literatures can help understand lock-in, but how can we understand "lock-out"? The socio-technical paradigm research is developing and evolving under the pursuit of this problem.

1.4.2 Socio-technical Transformation Map

The social-technical paradigm concept from the technical paradigm was first used to explain that engineers tend to be specific to certain directions or technological paths during product efficiency improvements. This fact indicates that there is a core technical framework in which engineers associated with it share and recognize this technical framework^④. The technical paradigm is the cognitive structure of such a core technology framework and the organizational structure of the actors involved^⑤. This concept was subsequently expanded, and the complex interaction between the technical framework and other social factors was incorporated into the concept, forming a socio-technical paradigm. By observing the synergy and evolution of the seven dimensions of science, industrial structure, technology, market and user practice, policy and culture, the social-technical paradigm researches understand how social-technical systems are

^① Hughes T P. Technological momentum in history: Hydrogenation in Germany 1898-1933[J]. *Past & Present*, 1969 (44): 106-132.

^② Unruh G C. Understanding carbon lock-in[J]. *Energy policy*, 2000, 28(12): 817-830.

^③ Callon M. Techno-economic networks and irreversibility[J]. *The Sociological Review*, 1990, 38(1_suppl): 132-161.

^④ Dosi G. Technological paradigms and technological trajectories: a suggested interpretation of the determinants and directions of technical change[J]. *Research policy*, 1982, 11(3): 147-162.

^⑤ Dosi G, Nelson R R. An introduction to evolutionary theories in economics[J]. *Journal of evolutionary economics*, 1994, 4(3): 153-172.

embedded in complex processes, core technology frameworks, personnel structure and the cognition of problem definition. The social-technical paradigm is widely used to explain the different transformations of technology, society, culture, and norms. The prime reason is that the “lock-in” effect of its interpretation breaks the previous linear causal determinism of technological change. For example, in the transformation of the automobile industry from internal combustion engines to new energy vehicle, the social-technical paradigm dominated by fossil energy consumption and internal combustion engine technology will not naturally transition to a new energy vehicle social-technical system. The existing policies, consumption habits, market rules, and infrastructure are all coordinated with the existing dominant systems, strengthening the existing track, so it will inevitably have a resistance to alternative technologies^①.

How to understand and describe the role of the 'lock-in' of the dominant social-technical system against the substitution of alternative technologies? Or what are the steps if alternative technologies and alternative systems are to break the lock-in of the dominant system and replace the existing dominant system to create a new social-technical system? The multi-level perspective of MLP proposed by Geels explains the above process from the perspective of epistemology. He believes that transformation is inseparable from three levels of interaction: The socio-technical landscape provides a macro-level exogenous socio-economic phenomenon and trend for transformation^②; The dominant system refers to a stable and powerful social-technical system that is locked in and strongly influenced and co-existed with other social-technical systems, and the process of transformation is to break this dominant socio-technical system and form a window^③; The niche is protected under the pressure of the dominant system,

^① Shove E. Beyond the ABC: climate change policy and theories of social change[J]. *Environment and planning A*, 2010, 42(6): 1273-1285.

^② Geels F W. Technological transitions as evolutionary reconfiguration processes: a multi-level perspective and a case-study[J]. *Research policy*, 2002, 31(8-9): 1257-1274.

^③ The concept of subaltern or residual social-technical systems has recently been introduced in the literature on socio-technical research in order to consider social-technical configurations that are not dominant systems or niches. This new trend means that the use of the word "regime" should be abandoned as a synonym for "dominant

providing disruptive innovation, breaking the original system and forming a new dominant system. The niche market protects radical innovation and acts as an incubator to promote these innovations to develop and ultimately become competitive. Existing researches focus on how to develop a niche that can challenge the dominant system to promote a more sustainable urban transportation system under the dominant social-technical system of personal car consumption driven by internal combustion engines^{①②③}.

To further clarify the dynamics of the transition path, Geels and Schot propose two criteria for distinguishing between them^④: the time of interaction between the landscape, the dominant system and the niche, and the intrinsic nature of these interactions. Using these two criteria, they proposed four different transitional approaches: transformation, reconfiguration, technical substitution, de-alignment, and realignment. How to understand the dynamic characteristics of this social-technical system? In simple terms, the dynamic changes in social-technical systems can be viewed in two broad categories: the dominant socio-technical system's adaptation process to external trends and the socio-technical niche system's attempt to replace dominant positions. The dominant adaptation process can be conceptualized as a process of maintaining stability, with institutions, markets, and technologies fine-tuned and absorbed along established transition paths. This dominant adaptation is supported by an alliance of actors within the dominant system and is committed to its own sustainability and survival. The other type means that when a socio-technical niche system tries to gain dominance, everything will be completely different: this process requires an unlocking process to

social-technical systems": in social-technical terms, "regime" is a set of specificities shared by social-technical support alliances, which is a subaltern system.

^① Geels F W. Disruption and low-carbon system transformation: Progress and new challenges in socio-technical transitions research and the Multi-Level Perspective[J]. *Energy Research & Social Science*, 2018, 37: 224-231.

^② Spickermann A, Grienitz V, Heiko A. Heading towards a multimodal city of the future?: Multi-stakeholder scenarios for urban mobility[J]. *Technological Forecasting and Social Change*, 2014, 89: 201-221.

^③ Marletto G. Ten memos for effective policies[M]//*Creating a Sustainable Economy*. Routledge, 2013: 276-279.

^④ Geels F W, Schot J. Typology of sociotechnical transition pathways[J]. *Research policy*, 2007, 36(3): 399-417.

release the resources, knowledge, actors, etc. locked in the dominant system; new institutions, technologies, and markets must be established; the alignment process for this new system in multiple dimensions must be triggered and gradually accumulated in order to be successful^①. In the process of adaptation, the niche system is clustered with the dominant system and absorbed by the leading system; in the process of replacement, the niche system is in a threatening position, and then tries to obtain a new dominant position^②.

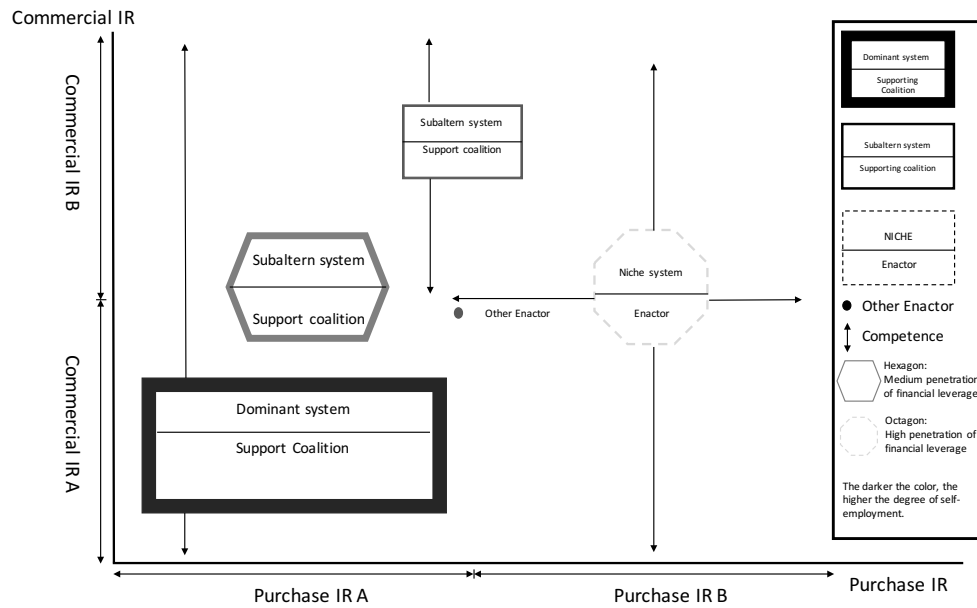
Combining the framework of institutionalized relationships and institutional order with the dominant adaptation and niche replacement of the socio-technical research paradigm, the outline of the socio-technical transformation map becomes visible.

The institutional order consisting of four institutionalized relationships forms a primary institutional attribute within an industry. In the process of transformation, it is possible to judge whether there is a fundamental change in the institutional order within the industry by observing changes in the four institutionalized relationships. According to the analysis tools of socio-technical research, transformation can be divided into two different paths: dominant adaptation and niche replacement. At the beginning of the transformation, there is a dominant socio-technical system in the industry, and its relative counterpart is related to the existence of a socio-technical niche system. In addition to these systems, there are subaltern systems in the industrial activities, and they all have corresponding support coalitions.

^① Foxon T J. A coevolutionary framework for analysing a transition to a sustainable low carbon economy[J]. *Ecological Economics*, 2011, 70(12): 2258-2267.

^② Schot J, Geels F W. Niches in evolutionary theories of technical change[J]. *Journal of Evolutionary Economics*, 2007, 17(5): 605-622.

Figure 1.3 The Socio-technical transformation map at the beginning.^①

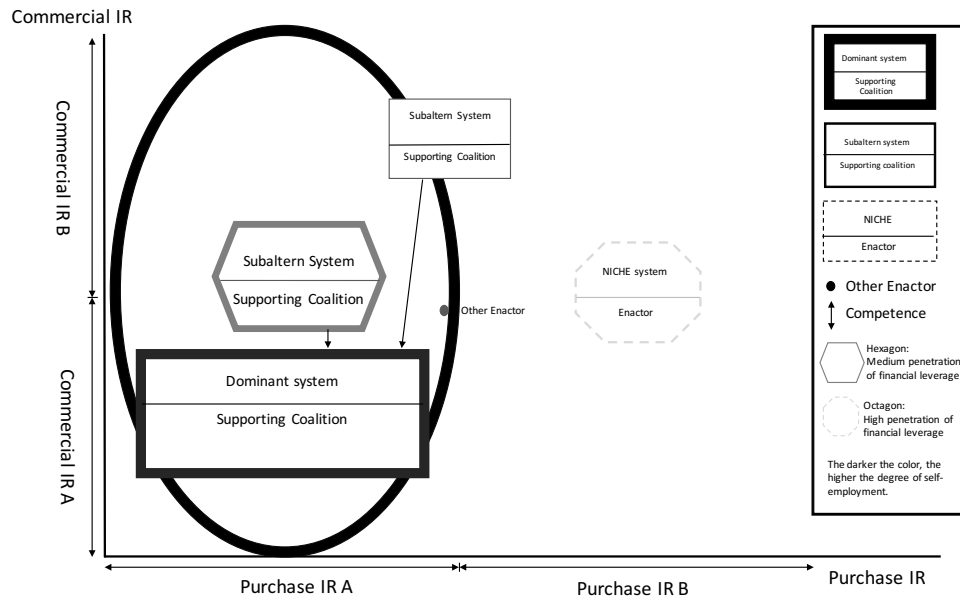


Purchase IR constitutes the X-axis in the socio-technical transformation map, while commercial IR constitutes the Y-axis, so that we can easily observe the changes in the purchase IR and commercial IR by different socio-technical systems during the transformation process. In figure 1.4 we can see that the dominant system in the socio-technical transformation map has the thickest border outline, which also represents its dominant position and the resources, institutions, technologies, talents, and financial resource lock-in it. The border of the niche system is the dotted line, which indicates that the innovation status is still unstable and the uncertainty is high. The socio-technical systems outside these two extremes belong to the subaltern systems. The hexagonal frame in the figure indicates that the financial leverage penetration of the system is medium level, while the octagonal frame indicates that the financial leverage penetration level of the system is a high level. The closer a regular polygon is to a circle, the higher the level of financial leverage penetration of its system. In addition, the darker the color of the frame of the system in the figure, the more the labor relationship in the system is self-employed. The labor relationship in the system is more fragmented.

^① Marletto G. Car and the city: Socio-technical transition pathways to 2030[J]. Technological Forecasting and Social Change, 2014, 87: 164-178.

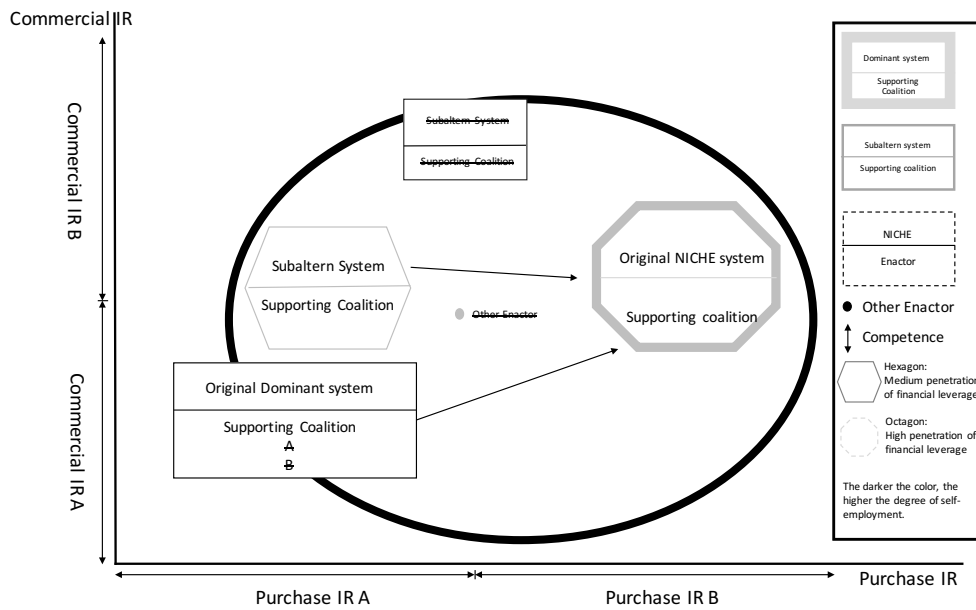
Conversely, the lighter the color of the border, the more formalized and divided the labor relations tend to be.

Figure 1.4 The adaption process of the socio-technical dominant system.



The transformation path that dominant adaptation in the socio-technical transformation is the transition path with a higher incidence rate, because resources, institutions, technologies, talents, funds, etc. are locked in the dominant system. At the same time, its supporting coalition will try their best to maintain their dominant position, so they will encourage the development of the technology path and social path along the original, and absorb other subaltern systems in the field to further consolidate the dominant position. In this process, the range of competence of the dominant system may expand, such as the expansion in figure 1.6 from the commercial IR A to the commercial IR B.

Figure 1.5 The replacement process of the socio-technical niche system.



The niche replacement path in the socio-technical transformation is visualized as shown in figure 1.6, and the original niche system has grown into a new dominant system, replacing the original dominant system. Its border outline is also the thickest, meaning it realigns many resources. The original enactors of the niche system formed their own supporting coalition after uniting new supporters. In contrast, the original dominant system's border became thinner, becoming a system similar to other subaltern systems, and some support alliances within the dominant system disappeared. Part of the subaltern systems has also disappeared in the process of transformation, which also reflects the disruptive nature of the niche replacement path. The original niche system formed a new dominant system, and the range of competence of the new dominant system may also change, expanding in the purchase IR and commercial IR dimensions.

Chapter 2: Lemon Market or Alternative Space

2.1 Used cars become a problem

Although the analysis of the supply and demand of the used car market can help us better understand its consumption behavior, but used car consumers and used car suppliers who have not participated in the new car market have in fact expressed a negative evaluation of the mainstream new car market. On the contrary, by participating in the activities of the used car market, they actively created this alternative space different from the new car market. In this sense, social sciences should not underestimate the importance of the used car market, and should not treat the used car market merely as a low-cost derivative market. Rather, we can regard the used car market as a socio-economic structure composed of professional used car dealers and specific interpersonal relationships between them and consumers.

In other words, the used car market cannot be viewed as just a low-cost new car market. Because used cars provide all consumers and professional car dealers with a more suitable space and the possibility of a "good deal". For many reasons, these consumers and second-hand car dealers have not had the opportunity to be integrated into the mainstream market around new car sales. There is no doubt that there are economic factors, but it is not just this reason.

One of the models in the used car market is the interaction and connection between the new and old car markets created by car manufacturers, but their efforts often encounter difficulties, and these difficulties justify the existence of another model. That is, the activities of ordinary used car consumers and professional used car brokers outside the market organized by large car manufacturers have created this alternative market model. To understand the interaction between these two different used car market models, we must recognize the evolution over time and the important differences in the forms of interaction brought by different regions. This recognition

requires us to think about how car manufacturers deal with the issue of used cars from a historical perspective. At the same time, it is necessary to examine how successful market participants use many social and economic spaces neglected by car manufacturers to conduct activities and transactions in the used car market from different regions of the world.

Despite the fact that most of the business in the automotive industry has to consider the issue of second-hand cars, car manufacturers always face difficulties in facing the challenges posed by second-hand cars. American and European automakers have historically been unable to successfully integrate used car-related activities in the market, and the used car market will always be and will still be the "problems" that automakers have to deal with. It is the indecision of car manufacturers for the used car issues that has created an independent and alternative used car market.

2.1.1 US Used Car problems

The 1910s to 1940s were the era when American automakers gradually managed their relationship with dealers. It is also in this era that the rules and models that are still the cornerstone of the automobile dealership market have matured, and the question of how car manufacturers handle the used car market is also contained in these rules.

After a series of failed efforts, Ford developed its most efficient car distribution system in the late 1910s. A sales network owned by the manufacturer was used to supply a large number of independent distributors throughout the country. Compared with other manufacturers at the time, this was a more integrated system, so it gave Ford the ability to control the distribution channels beyond its competitors. Henry Ford generally did not trust salespeople, so Ford's attitude towards its dealer network was basically equivalent to a strong supplier imposing its will on his weak partners. Ford will require its distribution agency to accept an exclusive contract, which means that it cannot do other companies' distribution business.

In contrast, GM's president, Alfred Sloan, showed a less hostile attitude toward

their company's distributors. Nevertheless, GM has also chosen to distribute their cars through numerous independent dealers. For example, in 1939, GM had 17,000 dealers, and these dealers employed 125,000 employees. For both companies, the reasons for not integrating the distribution system into the company are the same. First, the scale of investment required to do so is too large; second, the key to a successful car manufacturer is the scale effect they have in production, and managing thousands of different dealer systems does not fit this scale effect principle^①. However, the market itself is changing. An important reason is the expanding market itself. When the Ford T model was introduced to the market in 1908, there was only one car for every 20 American households. By 1920, every third family owned a car. Distribution networks increasingly need to accept a replacement used car to sell new cars to consumers. GM was more successful in adapting to this change, and Sloan himself said:

“When the used car came into the picture in a big way in the 1920s as a trade-in on a new car, the merchandising of automobiles became more a trading proposition than an ordinary selling proposition. Organizing and supervising the necessary thousands of complex trading institutions would have been difficult for the manufacturer; trading is a knack not easy to fit into the conventional type of a managerially controlled organizations.”^②

With this market transformation, automakers still counted on a network of loyal and stable franchised dealers. Indeed, as legal scholar Friedrich Kessler noted: “The manufacturer is vitally interested in the success of his dealer organization since it is his sole outlet to the public.^③” Harlow Curtice, as GM’s president, later reaffirmed this mutuality: “Legally the dealer is not the agent of the manufacturer. Yet, in his community he is looked upon as the manufacturer’s representative.” The dealer’s success, in turn, “is determined in substantial degree by how well his ‘representatives’

^① Tedlow R S. *New and Improved: The Story of Mass Marketing in America*[M]. Boston, MA, 1999: 162.

^② Sloan Jr A P. *My years with General Motors* (J. McDonald & C. Stevens, Eds.)[M]. NY: Doubleday & Company, 1964: 282.

^③ Kessler F. *Automobile Dealer Franchises: Vertical Intergration by Contract*[J]. *Yale Law Journal*, 1956, 66: 1135.

the dealers – perform their functions. An unusual mutuality of interests exists between the automobile manufacturer and the dealer.”

2.1.2 Japanese Used Car Problems

The Japanese automobile market started in the 1960s, and the used car market began to grow rapidly in the early 1970s, and reached a relatively saturated state in the mid-1990s. Car ownership no longer increased significantly, and basically maintained at more than 75 million. According to statistics, about 13 million vehicles in use in Japan enter circulation every year. Among them, about 8 million have entered the used car market. Japanese new car sales and used car circulation are relatively constant.

In the 1960s, with the recovery of the Japanese economy, automobile consumption shifted from group users to private users. Household cars began to spread among civilians, and the automobile market began to enter a stage of rapid development. In 1960, new car sales in Japan were 408,200, of which 142,500 were sedans. At that time, there were 1,353,500 cars in the society. By 1969, the number of new car sales in Japan reached 3.354 million, the number of cars sold was 2.0367 million, the number of cars held was 15,126,700, and the number of cars per thousand people was 147.5^①.

Although the Japanese new car market has made considerable progress in the 1960s, the second-hand car market is still underdeveloped. Apart from buying and selling between individuals, most of the second-hand car is the business of "trade-in" in new car sales shops. In order to control the risk of the price of used cars, the Japan Appraisal Association developed a standard for appraisal and evaluation of second-hand cars, which was implemented in new car sales shops in the replacement business in 1966. At this stage, Japan's first used car dealers were born, and most of them were salespeople at new car dealerships. They saw huge market potential, and used their experience and connections in new car sales stores to start buying a large number of

^① Luo Lei. Japanese Used Car Circulation System [D]., 2009.

used cars from new car sales stores. In order to sell used cars, they began to establish their own display sales venues, forming the prototype of the used car market. During this period, used car sales prices became a commercial secret for used car sales companies, and prices were opaque. Only when the consumer wants to buy a used car, the used car salesperson will inform the price orally, which is very arbitrary.

2.1.3 The problem of used cars in Europe

The problems of the United States in the 1920s occurred in Europe in the 1950s^①. By this time, the problems of second-hand cars that plagued auto makers had two periods in the history of the French automobile industry. The first was in the 1930s, when there was a lot of discussion about market saturation; the second period was immediately following After World War II, it was feared that the market would be in short supply due to lack of productivity. Historical research has revealed the strong positions of Ford and GM in the US market^②. To a large extent, European car manufacturers followed their American counterparts because they lacked the ability to democratize cars which were still considered a luxury at the time. Despite the success of models such as Mathis, Rosengart, and Simca in the 1930s, France's largest car manufacturer did not develop their first reliable small car until 1935, but in the end this model was abandoned because of fear of their loss-making distribution dealers cannot afford a successful launch. In 1936, Boulanger relaunched the 2CV program as the general manager of Citroen, and introduced this model at the 1939 Paris foire automobile.

Under the aegis of Pierre Michelin, Citroën conducted the first market study of the French car market. This study included the used car market and hoped to broaden the appeal of cars to low-income people. Between 1935 and 1940, only 10% of the 21,000

^① Loubet J L. Citroën, Peugeot, Renault et les autres: soixante ans de stratégies[M]. Le Monde-Éditions, 1995.

^② Bardou J P, Chanaron J J, Fridenson P, et al. The automobile revolution--the impact of an industry[R]. 1982.

annual car sales were new cars. As can be seen in Table 2.1, most consumers spent less than 10,000 francs when buying a car for the first time, which means that they bought an affordable used car.

Table 2.1 Purchase cost of the first car between 1935 and 1940 (new and used cars)

	number	%
Less than 2000 francs	50400	24
2000 to 5000 francs	67200	32
5000 to 10000 francs	52500	25
10000 to 15000 francs	18900	9
15000 to 20000 francs	18900	9
More than 20000 francs	2100	1

Source: Citroen internal data, quoted from Jean-Louis Loubet, *Citroën, Peugeot, Renault et les autres: soixante ans de stratégie* (Paris, 1995), p.301.

Between 1935 and 1940, the types of new cars that automakers could provide did not meet consumers' potential demand for their first car. In a country with a population of 41 million like France at the time, only 2.6 million new cars were sold, and most of them were sold to people who already had cars. The lesson is obvious for Citroen. To expand the market size and market share, then the most important social class is those who can only afford used cars. The models offered to this segment must be between 5000 and 10,000 francs.

The phenomenon of this period is very interesting to show us that the only way to own a car at that time was to buy a used car. This also shows that automakers will expand the market size as selling more new cars. If this is the case, the lack of new cars in the market will limit the supply of used cars. The increase in the number of cars on the road can only be achieved by extending the life of the car.

During the post-war reconstruction period, the French automotive industry had many plans for large-scale car production, but it was not until 1948 that they waited for government approval. In addition, the government faced a shortage of raw materials

due to damage to roads and distribution channels for gasoline and cars during the war. The production of automobiles was not considered a priority at the time, and in 1947 finally increased production was also for export in support of the currency plan of the time. Nevertheless, the market still shows demand for cars. Since 1939, car ownership has fallen to one million. Market research concluded that the potential demand at that time was concentrated on three types, the demand for mid-range and high-end cars was as before the war, and the demand for the popular car segment.

It is strange that the most successful models are targeted at those who trade on the war and post-war black markets. They were the only customers for small-scale new car sales in the early post-war period. The first to be sold in 1946 was the 90,000 military vehicles of the British and US forces, followed by light trucks, and then in late 1946, small passenger cars entered the market. In 1946, only 67,000 of the 619,000 registered cars were bought that year. The lack of raw materials prompted the government to develop a purchase certificate system, not everyone can buy a car. The black market has developed rapidly, and a 9-year-old car can sell for more than 50% of the same new car. It was also during this period that the French auto retail industry gained a bad reputation for traitors and scammers. This also explains why French families generally do not trust car dealers and use small ads to avoid dealing with these people when buying and selling cars.

From a regulatory perspective, this period also shows the persistent difficulties faced by policymakers when facing the used car market. Because this is an alternative market, it is difficult to regulate and there are not many applicable regulations. Policy makers, along with automakers, find it difficult to find a solid and well-documented position in the used car market.

2.1.4 Problems with Used Cars in Emerging Countries

A large part of the problem of used cars in emerging countries comes from the influx of external used cars after the market was opened. Due to the price gap, the influx

of used cars from the outside is more attractive than new cars sold locally, thus suppressing the sales of new cars locally. After joining the European Union, Poland and Romania have adopted different attitudes towards the influx of used cars in Western Europe, which have had a significant impact on their domestic car market, especially new car sales.

Poland adopts a more open attitude, or it is more cautious in the European Commission's market competition policy environment. After the initial policy attempt, no more stringent policy measures were introduced to stop the flood of used cars. The consequence of this is that the proportion of new car sales in the growth of car ownership has dropped significantly.

Before Poland joined the European Union, the total number of passenger cars in Poland increased by 1.3 million in 2001 and 2003, equivalent to an average annual growth rate of 4.2%. During this period, new car sales accounted for 78.6% of the total. From 2004 to 2010, passenger car ownership increased by 6 million cars, equivalent to an average annual increase of 7.6%, while sales of new cars accounted for only 34.1% of the total increase (source: PZPM). The decline in the contribution of new car sales to the growth in ownership is due to the surge in used car imports since 2004. Although Poland imported 600,000 used cars between 2000 and 2004, Poland imported 3.5 million between 2004 and 2008, six times the original number.

Initially, most of these used cars were very old vehicles: more than 72% of used cars imported in 2004 had a lifespan of more than 10 years, and less than 4 years were only 3.7%. Despite the gradual decline in the life of imported cars, in 2011, 46.7% of cars were over 10 years old. The influx of old cars has affected the rapid aging of inventory. In fact, the number of cars over a decade has increased from 56% in 2004 to 72.3% in 2010, while the proportion of cars less than 5 years old has fallen from 19% in 2004 to 11% in 2011.

In other words, this means that the pollution caused by passenger cars used on the road in Poland has increased significantly, and is older than before joining the European

Union, and therefore greatly reduced safety. If we consider that the EU's two main goals in terms of automotive policy are to reduce carbon dioxide and improve safety, this is a surprising result of EU integration (Poland and other Central and Eastern European countries).

2.2 A problem evolves into an institution

The above section brings together the problems encountered in the development of the used car market in several countries and regions, or the "used car problems" encountered in the development of the auto market. Used cars have always been treated as problems. The reason for this is because of the way of thinking in the car market, that is, the power to define problems comes from new car manufacturers and new car dealers! When used cars appear in the market and are considered to cause trouble for new car sales, used cars are defined as a problem. The following cases are the responses to the second-hand car problem in each country and region in the previous section. They are also different institutions and solutions that evolved from the second-hand car problem.

2.2.1 US institution: Authorization of distributors

Despite increasing complexity, both GM and Ford chose to run their automotive markets through an independent dealer network. Although Mr. Sloan recognized that the techniques used in an exchange business are different from mere sales behavior, GM has not been able to avoid falling into the same dilemmas and conflicts as Ford when dealing with its dealership.

Given the details in marketing automobiles, it was not simply that management addressed the question of profitability in terms of the efficient distribution of vehicles, as Sloan maintained, but that they also faced a marketing dilemma. Automakers had sought consumers' loyalty, but the three parties – consumers, dealers, and management

– confronted on another uneasily in the marketplace because one party's gain came at the expense of the other two.

How did managers develop their relational ties with franchised retailers to cope with the marketing dilemma? By the mid-1920, managers were aware of this dilemma and responded in different ways. First, they tried to shift costs to dealers; second, they worked with dealers and tried to shift costs to car buyers. Then, during the late 1930s, the FTC and the Justice Department intervened in the market and attempted to establish a fairer basis for market transactions^①. Sloan had pictured a process of management that made certain dealers adhere to a given standard of efficient operation. Yet, the marketing dilemma meant that manager's task was more complicated – trying to manage the conflicting interests but unable to resolve them. The modern form of mass distribution as a system of dealer franchises made evident that the goal of efficient operations could not be separated from the power that management exerted in the marketplace. Unable to resolve the marketing dilemma, the distribution system instead fostered a modern basis of distrust among the market's participants.

Many consumers in the car market in the 1920s were looking for an option to replace their existing cars, so the task of selling new cars is increasingly dependent on the conditions that dealers can give to the replacement of old cars. However, in the eyes of car manufacturers, their focus is still on integrating the latest emerging technologies into new models to stay competitive in the market. Second-hand cars are only regarded as an inevitable "evil", which is a loss that dealers need to try to reduce. At first, this phenomenon only annoyed the dealers, but in the end the problem of replacing the old ones also troubled the auto makers. They realized that on the one hand, the funds required for the replacement of old cars would affect the financial stability of dealers, and on the other hand, they would affect their efficiency in selling new cars. In fact, if the loss ratio in the trade-in business is too large, then those dealers that already operate

^① Clarke S H. Closing the Deal: Gm's Marketing Dilemma and its Franchised Dealers, 1921-41[J]. Business History, 2003, 45(1):60-79.

in the low-margin range will tend to sell fewer new cars. Automakers will use quota restrictions and threaten disqualification to reduce this effect. Not only that, they will also take measures to control the problem by destroying used cars and even seek government support.

However, as these measures were not enough to solve the above dilemma, dealers were forced to try to make the profits lost in the replacement of old cars from consumers. They mainly use two methods, but this has caused consumers to have a long-term distrust of dealers. The first is that they created a team known as the "bureau" to specifically disseminate the replacement conditions of used cars for consumers in order to avoid temporarily giving prices in transactions; the second is to obfuscate the final price of the new car, especially when consumers need to provide loans, which allows dealers to rely on the ambiguity of the new car price to earn back their lost profits on the replacement of the old car.

These problematic methods have caused long-term complaints from consumers and new regulatory measures. The new regulatory measures require the introduction of a label on the new car window glass, which clearly indicates the sale price, taxes and transportation costs, and provisions on the amount of interest on consumer loans. However, despite these regulatory measures, there are so many factors involved in the sales of a new car that it is unlikely to completely limit the various methods of disguising and obscuring the final sale price by dealers and car manufacturers.

These distribution conflicts and contradictions not only occurred to GM in the 1920s and 1930s, but also occurred to Ford in the 1930s. Early Ford companies were able to avoid these contradictions because their main focus was to sell as much of their particularly successful T model as possible, but by the end of the 1920s, the problem of trade-in was a large-scale issue in their dealership. In the 1930s, competitive pressure from GM also caused Ford to shift to a multi-model strategy and launch a new model every year. This makes Ford dealers also face inventory management when their needs

for increasingly different products are not being met^①.

Overall, the analysis of the US case during this period tells us that the important decision taken by car manufacturers is that they choose to remove the responsibility for car distribution from themselves. Accompanying this decision is their contempt for the dilemma facing dealers and their doubts about whether dealers will stand on the stand of maximizing the interests of manufacturers. The main conflict between automakers and dealers is the issue of used cars. Automakers later tried to recapture some aspects of the car distribution system through sophisticated assessment and reward and punishment systems, but at the same time still let go of other aspects of the business, including the used car business. Car dealers in the United States are relatively free to conduct used car businesses as long as these businesses do not infringe on their new car sales. There is a mix of different rules in the same distribution network: at one end is a centralized and highly integrated new car marketing culture; at the middle is greatly relaxed and supported by weakened after-sales service business; and at the other end is completely autonomous independent used car business.

2.2.2 Japan's Solution-Export

There are two solutions to the problem of used cars in Japan. One is that the used car auction system has become the hub of its used car market, and the other is that used car exports occupy a high market share.

In 1977, through the continuous improvement of government industry policies and the implementation of industry self-discipline management by industry organizations, relevant Japanese departments have greatly improved the used car market environment. At the same time, some second-hand car operating companies have completed the accumulation of original capital, began to focus on brand image, and standardized

^① Clarke S H. Trust and Power: consumers, the modern corporation, and the making of the United States automobile market[M]. Cambridge University Press, 2007.

operation has become the industry consensus. With the development of the market, some professional second-hand car operating companies have changed the phenomenon of unfair transactions with different purchase prices from new car dealers due to different strengths. The auction method, through open bidding, circumvents the discrimination against small-scale operating companies in the second-hand car bulk purchase process, and is welcomed by small-scale used car sellers. Used car auctions quickly gained popularity in the 1970s.

In terms of laws and regulations, the "Used Goods Management Law" regulates the operating entities engaged in second-hand car business, and the "Consumer Contract Law" restricts the violation of second-hand car sales^①. But this only guides the market at a macro level. In the specific implementation process, various associations and organizations have played a very important role. In terms of price evaluation, Japan has adopted a common calculation method, namely "evaluation price = basic evaluation price - standard maintenance costs and standard miscellaneous costs - adjustment points of various companies - plus and minus points", of which the basic evaluation price comes from the evaluation association monthly Issued a guidebook that estimates vehicle prices through a used car market information system; Standard maintenance costs and standard miscellaneous expenses refer to the necessary maintenance costs for the normal use of the car. This value is set by the companies themselves, and about 15% of the gross profit is added to it; The adjustment points of each company are determined according to the company's warranty period, the company's purchase and sales capabilities, etc.; the addition and subtraction points are based on the benchmark established by the evaluation association to determine the addition and subtraction points.

In traditional car auctions, cars, buyers and sellers gather in a central auction venue. By the late 1970s, Japan had introduced a new system called a "point of sale (POS)" auction format, where buyers simply credited their bids with the push of a button.

^① Wang Dong. Auction is the center of circulation of used cars in Japan [J]. China Auction, 2013 (6): 29-29.

Usually before the auction, a car engineer without special training will inspect the car, and the inspection fee is 300 yen per car. A "slide auction" appeared in the early 1980s, using color 35mm slides to display images of cars. At first this auction was not popular. Most people think that the reason for the failure is the lack of a standard inspection process. AUCNET's founder Fujisaki started the used car industry in 1967, established Fulai Motor Co., Ltd., and became a major used car retailer in Tokyo. In 1984, in order to expand Japan's Fulai into a company operating computer systems and other electronic equipment, AUCNET, a subsidiary of Japan's Fulai, was established, with Oriental Finance Co., Ltd. as the second shareholder. The goal is to build a business that uses computers and advanced communications technology to engage in auto auction business. After one year of development, the first television auction was held in June 1985, and annual profits have increased by multiples since then.

AUCNET's business focuses on online auctions of used cars^①. The auction feature is that the auction service can be connected in real time through multiple address conversions of satellite communications. Used car auction sales accounted for 76.4% of total sales. As the company's reputation grew, the company joined forces with other used car dealers and expanded the scope of online auction merchandise to used motorcycles, flowers and even used computers. Specifically, the main business and characteristics of AUCNET are as follows:

(1) TV Auto Auction (TVAA). TVAA is AUCNET's main business and main source of profit. It leads and manages the company's online auctions. TVAA is a real-time online auction system managed and controlled by AUCNET. The auction is controlled by AUCNET's central computer and an operator. They all have a dedicated personal computer, which is connected to the central host of AUCNET through a dedicated line, and the buyer bids through a button on the joystick. During the auction, the seller can change the predetermined price with his joystick. When someone bids on

^① Pan Yong. Network Trust Strategy——A Case Study of Japan AUCNET Co., Ltd. [J]. MODERN JAPAN ECONOMY, 2007, 2007 (2): 35-38.

the other party, the computer beeps. After a car is sold, the buyer's name is displayed. The auction process is quick and easy.

(2) Live Link Auctions. Live Link Auctions is a real-time connection auction system. It signs agreements with 30 on-site auction markets throughout Japan to provide real-time connections for these auction markets. They bid through a dedicated terminal provided by AUCNET. AUCNET uses this system to deliver 1.95 million used cars to its partners each year, and the number and variety of used cars that are auctioned and consigned are increasing every year.

(3) Internet Bidding Services. Internet Bidding Services is an Internet quotation service. It does not require a dedicated terminal. It mainly provides TVAA and 59-site auction markets to provide quotation services for consignment vehicles.

AUCNET's revenue comes from auction commissions, which include membership fees, vehicle consignment fees, equipment and system rental fees and sales and information service fees (vehicle inspection fees). Therefore, the growth of the company's revenue mainly depends on the growth of auction members and participants, as well as the increase in the number of consignments. AUCNET's equipment rent is 29,000 yen per month, and AUCNET pays for the communication between all front-end computers and the central computer. After the new satellite system is adopted, a satellite receiving antenna is installed for the user's location free of charge. The vehicle inspection fee for logging in to this system is 2,500 yen per vehicle. If the car is successfully sold, the buyer and seller will need to pay an additional fee of 7,000 yen. If it is not sold, it can be resold next week without further inspection.

The sharp increase in Japanese used car exports occurred around 1988. Looking at the data of the Japan Auto Appraisal Institute, it was found that Japanese used car exports did not exceed 60,000 units per year between 1975 and 1987, and in 1988. Since then, there has been a sharp increase. From 1990 to 1994, 160,000-190,000 second-hand cars were subject to export inspections each year. Until May 1995, any used car valued at more than 50,000 yen will become a designated commodity under export trade

regulations. Only in accordance with the relevant regulations, after receiving the inspection of the Japan Auto Appraisal Institute and obtaining a second-hand car export inspection standard certification certificate recognized by the association, used cars can obtain the export license of the Ministry of International Trade and Industry.

Export doubling after 1988 was due to its rapid growth in exports to New Zealand. New Zealand, like Japan, has cars on the left (right steering wheel). In 1988, New Zealand's import tariffs fell, and Japanese used cars exported to New Zealand also increased sharply. In addition, at the time when Japan was entering a booming bubble economy, the number of new car sales in 1990 alone was nearly 13.5 million, and the number of second-hand cars that were replaced by old ones also naturally increased.

Table 2.2 Changes in the number of used car inspections by the Japan Auto Appraisal Institute (1975-1994)^①

year	number	year	number
1975	14,605	1985	42,227
1976	14,802	1986	29,699
1977	24,596	1987	36,260
1978	50,264	1988	77,984
1979	39,243	1989	135,550
1980	58,666	1990	167,980
1981	42,966	1991	163,293
1982	47,752	1992	180,362
1983	48,304	1993	166,960
1984	58,789	1994	187,496

Source: Author based on statistical data of Japan Auto Appraisal Institute (<http://www.jaai.or.jp/>).

^① Pan Yong. Network Trust Strategy——A Case Study of Japan AUCNET Co., Ltd. [J]. MODERN JAPAN ECONOMY, 2007, 2007 (2): 35-38.

2.2.3 European automakers follow their U.S. counterparts

The shortage of economy in the early years of the postwar period followed by a decade of development and the increase in household purchasing power. As Mr. Michelin predicted in the 1930s, small and affordable cars became popular and became the first cars for many customers. The French car market has become a renaissance market, so dealers have to start to deal with the replacement of old cars, and their relationship with customers and car manufacturers has been troubled. French automakers understand what happened to their American counterparts^① and the impact these changes have had on their distribution networks, but they have not done much. Slowly, when these problems were unavoidable and had an impact on the success or failure of a new model, manufacturers introduced financial support and incentives.

In this regard, there are two interesting examples^②. The first occurred in 1958, when ID19 and DS were difficult to resell in the second-hand market, Citroen learned a trick from Simca and adopted a method of putting a quality label on second-hand cars to help sales. This label can bring the same repairs and warranty as new cars, and the manufacturer's sponsorship of repair costs. These methods were later extended to other models, and Renault also created its own used car warranty, called the "Garantie OR (Used Renault)". The second example was when Peugeot released its 204 model in 1965 to enter the generalist consumer market. They had no similar models in this market before. However, their dealers found that they were forced to accept replacements from other brands, but it was difficult to sell them in their own channels. Peugeot originally hoped to solve this problem through financial support, but had to establish a network of used car sales centers to digest the already used car inventory.

These two examples show that the strategic consciousness of French car makers, like other countries, has not escaped the idea of Mr. Sloan authorizing car distribution

^① C. Gautrlet announced to his dealership in 1962 that they would soon be like Americans and would no longer sell cars but would trade and exchange them, quoted in Loubet, Citroën, Peugeot, Renault, p. 321.

^② C. Gautrlet announced to his dealership in 1962 that they would soon be like Americans and would no longer sell cars but would trade and exchange them, quoted in Loubet, Citroën, Peugeot, Renault, p. 369-370.

to the outside world. They do not want to integrate used car sales into their own systems and develop a business strategy that suits them. Their main concern is how to ensure that issues related to used cars can not affect their main business of selling new cars. Crossing this boundary will involve competition and risk, and these are best left to the dealer network, which in this period is developing in the market space left by automakers.

Therefore, although the second-hand car market has been developed through the official sales network of car manufacturers, but the manufacturers only excluded the second-hand car market from the mainstream just to increase sales of new cars. Dealers, on the other hand, deal with many professional used car dealers and the consumers day after day in this field.

2.2.4 Emerging countries restrict inflow of used cars

One of the main arguments put forward by the Polish Automobile Industry Association (PZPM) in 2011 to obtain some form of used car inflow regulation from the Polish government was "Poles deserve newer cars!", especially safer and more environmentally friendly cars (PZPM 2011). After several years of indifference, the impact of the crisis did make PZPM aware of the danger of an industry relying entirely on foreign markets (exports accounted for 98% of Polish passenger car production) and was threatened by further shifts to cheap CEE countries.

On December 12, 2011, PZPM organized a large conference on the future of the Polish automotive industry through its "Friendly Travel" platform, with the theme "Synergies of Development". The keynote address was given by Grażyna Henclewska, Deputy Minister of Economy, and other government members attended the meeting. The results of the meeting are summarized in five recommended assumptions:

1. Let power come from the internal market!
2. Poles should have newer cars!
3. Let's tighten up the inefficient vehicle test system!

4. Environmental tax is better than consumption tax!

5. The scrap system is too crap! "(PZPM 2012).

Prior to 2004, Poland banned the import of cars that did not meet Euro II emission standards for gas registration and imposed a 22% value-added tax on the purchase of used cars, thereby protecting the Polish market from the import of used cars. But after the EU merged in May 2004, both protections disappeared because they contradicted the EU legal framework. To reduce the expected inflow of used cars, the Polish government imposed a consumption tax on purchased second-hand cars from any EU country in January 2004. Unfortunately, for the Polish government, the consumption tax is inconsistent with Articles 25, 28 and 90 of the European Commission, according to which the import and export duties are banned between EU member states, and EU member states cannot impose any domestic taxes on goods with higher import tariffs, rather than taxes on similar products sold on the domestic market.

The Polish government has also started implementing an ecological tax to replace the consumption tax on passenger cars. Nonetheless, the draft bill implied that passenger cars were taxed based on their age and compliance with Euro emission standards. The draft bill was dropped on February 2, 2007. This could be a side effect of the Europe Commission Justice decision. However, the lack of government willingness to advance this issue can also be understood in other ways. First, as we mentioned earlier, consumers have begun to enjoy cheap "car" services since 2004, which has largely contributed to the rapid growth of the Polish car fleet. Once a country leases millions of old cars that are mainly bought by families, it becomes politically difficult to collect taxes that discriminate against such vehicles.

Secondly, such a large number of used car imports has contributed to the parallel economic development of a network of new car dealers made by thousands of garages. This small business network has become a major importer of used cars in Poland, not only selling them to customers, but also having enough spare parts to provide after-sales support, which is especially important for older cars. PZPM explains how these

garages have grown large enough to gain political influence on a local scale in some cases, and how some members of Congress have become sensitive to their interests, as small and medium-sized Polish businesses stand with large foreign investors together.

Finally, most cars sold on the Polish market are actually too expensive for Polish average income. For example, according to PZPM data, the average prices of new cars in 2009 and 2010 were 17,000 euros and 19,625 euros, while the average customs declaration price of imported used cars in 2007 was 1,566 euros (the average cost of a car less than 4 years was 6,600 euros, the average cost of a car over 10 years is 1,300 euros)^①.

2.3 Institutional changes and de-institutionalization

We know that automakers are ignorant of the importance of the used car market, and they have not been able to successfully find a business model that integrates into the used car business. To a large extent, this lack of capability stems from the strategic choice of early car manufacturers, which is to authorize their dealer network to manage the commercial dependence between the new and used car markets. In this way, car manufacturers have little knowledge of consumers' behaviors on used cars, and their attempts to control dealer activities have been questioned by dealers. More case studies will be developed below, mainly explaining the perspectives of actors in the used car market. We will see that with the deepening of the second-hand car problem and the different actions taken by industrial actors in different countries and regions, the institution in the industry will also change from the original form or even disappear.

2.3.1 United States: Auto Supermarket Breaks Manufacturer Control

At the end of the 1980s, there was a huge turmoil in the US auto distribution

^① Tommaso Pardi, Bernard Jullien. Working paper “Beyond overcapacity: The Political Construction of the European Automobile Market”.

market. The source was the emergence of a group of professional second-hand car companies. Newcomers' ambitions and first-time successes are a testament to the market space neglected by automakers. By changing the less formal used car trading model that has been used in the past, these companies have found opportunities that automakers have overlooked^①.

Although these new companies are different from each other, they are all in the same market environment. Many restrictive policies and regulations in the new car market have not appeared in the used car market. In addition, although the overall development of the automotive market is stagnant, the market size of used cars is much larger than that of new cars. In the United States, this ratio is basically maintained at 2.5 to 1. Selling a new car also means trading 2.5 used cars. As models become more reliable and durable, and auto makers extend their warranty years, creating a quality second-hand car business becomes feasible. The last contributor to the formation of an attractive and regulated used car replacement market was the rise in new car prices relative to people's income. In 1979, the price of a new car was equivalent to a median income of 18.1 months for American households, and by 1996 that number had risen to 27.5 months.

For new entrants, another factor to consider is the level of competition of existing companies. In this respect, opportunities also outweigh risks. The purchase of a used car is either directly from the previous home to the next home through a small advertisement, or it is one of two formal business channels. One of them is a sales network with 23,000 agents, but their main target is new car sales. The other is a network of 63,000 independent intermediaries who have a bad reputation in the eyes of car buyers. The cars in their hands were deemed unreliable, and their sales model was too aggressive and questioned.

This new entrant into the fragmented market can also take advantage of a

^① Bernard Jullien. *The Second-Hand Car Market As A Form of Resistance*[M]// *Alternative exchanges: second-hand circulations from the sixteenth century to the present*. Berghahn Books, 2008: vol 10.

significant advantage, that is, a large number of high-quality used cars were put on the market between 1996 and 1997. The reason for this is because the car rental market began to explode in 1996 and quickly accounted for 25% of new car sales. There were 1.7 million vehicles in the rental market in 1996 and 3.1 million in 1997, and these vehicles appeared in the second-hand car market in the next two years. This provides a rich supply of quality used cars for those new to the market.

It is in this environment that an innovative model of the automobile supermarket has emerged. These auto supermarkets are made up of many brands and have a large inventory of used cars that are one to five years old. Detailed vehicle information is displayed on the computer touch screen, and after a series of control methods, the merchant can provide warranty for used cars. The price is clear and cannot be bargained, which instead avoids the process of bargaining and dispels doubts about the price. The clerk in the car supermarket uses customer satisfaction as the evaluation standard, not the sales performance of the car.

CarMax was the first brand in a car supermarket and became a household name in 1996. This company is a pioneer in this field, and its parent company is a giant in the home appliance retail industry. The original intention was to transfer the experience of its parent company in the field of home appliance retail to the used car market. The two have similarities. Its success can be summarized into four factors: large-scale advertising, recruitment and motivation of sales force, financial management experience and strategic measures in service and maintenance. CarMax's first store opened in 1993, and in 1996 the company decided to become a national company. CarMax uses the car supermarket model to expand its network stores, and consumers can find 500 to 1200 cars in each of their stores. The goal of each store is to sell 3,000 units a year, thereby becoming a leader in the US market.

CarMax's success story has attracted a large number of imitators. The most important of these is the Driver 's Mart brand, which was founded by many "giant car retailers" and uses a business model very similar to CarMax. Other new players in the

market are small and focused on a certain market segment. For example, HPR Automotive Superstore created smaller auto supermarkets for small towns with a population of about 100,000. Ugly Duckling and Smart Choice are two companies whose method is to sell used cars to low-income people and provide them with loans, which are usually regarded by credit institutions as risk groups. Their cars are cheap to sell, usually under \$ 10,000, but the annualized interest on the loans they offer is nearly 30%.

In the same period, another alternative model was used by Republic, which in turn became a leader in the US automotive distribution market. The company entered the field by acquiring two large car rental companies in 1996. In 1997, the group started buying car retailers, hoping to get buybacks promised by automakers for new car sales. These used cars have become sources of goods in Republic's car supermarkets. Through its extensive presence in different distribution areas, the company has met all consumer mobility needs: including new and used car buying and leasing services.

Republic, in fact, seeks to maximize its earnings on every car it gets from a car manufacturer. Every car bought by the company can be sold in the Republic's three to four channels, can also be rented out, and can also maximize the benefits through consumer loan interest and repair services throughout the life of the car. To achieve this goal, Republic established its own brands and physical stores in 50 different regions across the US market, while streamlining its supply chain system and setting up holding companies to provide centralized financial services. Such a system can not only bring economic benefits of scale, but also protect itself from cyclical troughs in certain individual areas. The Group President pointed out in 1997 that history shows that the decline in new car sales is often accompanied by the increase in used car sales. As a result, for the Republic company, it can get stable monthly returns with or without recession.

Although not all new enterprises entering this market have survived to the new

century, many still survive^①. The dynamism in the US market during this period also precisely indicates that there are business opportunities in the used car market. Although car manufacturers resist or cannot take advantage of it, others can profit from it.

2.3.2 Changes in Japan

After May 1995, Japan relaxed its export controls. Most used cars no longer require export approval, and there is no need to undergo inspection by the Japan Auto Appraisal Institute. As a result, the number of used cars inspected by the Institute has plummeted. Second-hand vehicles that must be inspected are vehicles over 50,000 yen, and private vehicles under 50,000 yen, carried by overseas personnel, and ship and aircraft crew members are not included in the inspection target. At the same time, many used cars under 50,000 yen are exported as parts. It is also reported that the use of cargo ships to smuggle used cars for export is about 150,000 to 200,000 per year.

Since 1995 (see Table 2.3), the number of used cars exported overseas through formal procedures has increased by 100,000 annually, and by 2000 it had reached an annual export of about 700,000, which was close to 14% of Japan's scrapped vehicles that year. In other words, one out of every 7.3 scrapped cars in Japan was for export. From 2006 to 2008, due to the surge in the number of used cars exported to the Russian Far East, the number of Japanese used car exports exceeded the one million mark, and in 2008 it reached a record of nearly 1.35 million. In 2009, due to a variety of negative factors, a significant drop of nearly 50% occurred, and about 680,000 vehicles were exported that year (see Table 2.3). After a few years, it gradually recovered. By 2011, about 860,000 vehicles were exported.

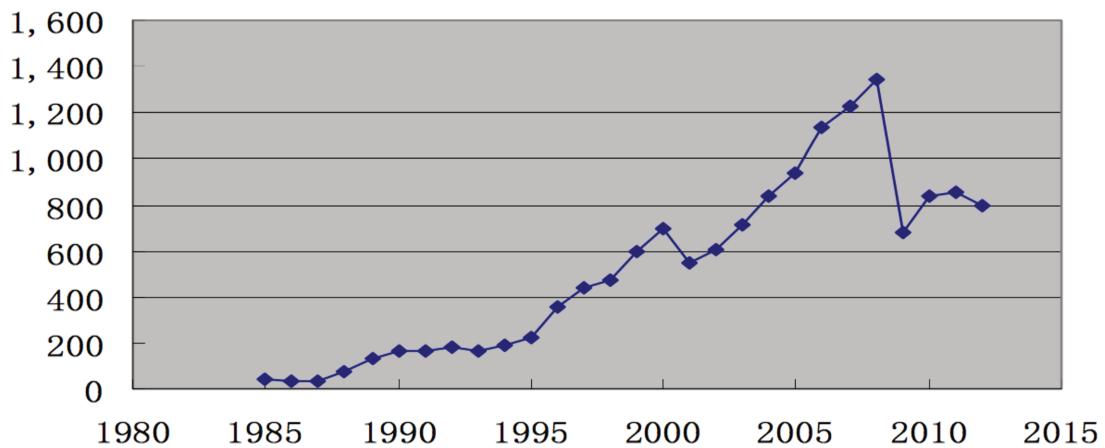
^① Jullien B. The Internationalization of American Automobile Service Companies and Changes in Distribution[M]//Globalization or Regionalization of the American and Asian Car Industry?. Palgrave Macmillan, London, 2003: 95-116.

Table 2.3 Statistics of Japanese Used Car Exports in 1995-2011

year	numbers(thousand)	year	numbers(thousand)
1995	223	2004	835
1996	359	2005	940
1997	438	2006	1,137
1998	474	2007	1,229
1999	597	2008	1347
2000	700	2009	676
2001	545	2010	838
2002	604	2011	856
2003	713		

Source: Author based on statistics from Japan Used Car Overseas Market Research Association and Japan Auto Appraisal Institute (<http://www.exguide.jp/>).

Figure 2.1 Changes in the number of used car exports in Japan (1985-2011)



Source: Author based on statistics from Japan Used Car Overseas Market Research Association and Japan Auto Appraisal Institute (<http://www.exguide.jp/>).

Entering the 1980s, Nissan's used car exports have been growing rapidly all over the world. However, the square agreement signed in the mid-1980s caused the yen to appreciate, making Japanese used cars lose their price advantage overseas and stagnated.

The export volume in 1985 was 42,227 units. After the signing of the Plaza Agreement in 1986, it plummeted to 29,699 units. In 1987, there were only 36,260 units, none of which recovered to previous levels. However, two major changes have taken place since 1988. First, exports to New Zealand have increased sharply, and there were no records of exports to New Zealand before 1980, only 415 in 1986 and only 1,168 in 1987. By 1988, it had increased sharply to 27,988, 63,828 in 1989, and 78,157 in 1990. Since then, New Zealand has maintained a 2-4 position on the list of imported Japanese used cars. Second, as Gorbachev implemented reforms in the former Soviet Union, exports of Japanese used cars to the former Soviet Union began to increase. Prior to 1988, there were almost no vehicle inspection records for Soviet exports. However, in 1989, 1,302 vehicles suddenly popped up, reaching 11,477 in 1990 and 20,936 in 1991, and the number of exports thereafter increased. Since 2005, Russia has risen to become the largest importer of used cars in Japan. Except that it fell to the fourth place in 2009, other years have always been the number one in Japan's used car export target countries.

Since Japan started the export trade of used cars to the Soviet Union (Russia), in addition to the normal export business carried out after passing the export vehicle inspection mentioned earlier, there is another aspect that cannot be ignored, that is, the export of used cars with luggage, that is, carry exports. The so-called carry-export means that when a foreign person such as a Soviet (Russian) crew member brings a used car back to his country as carry-on baggage, as long as the vehicle cancellation registration certificate and invoice are submitted to the customs, used cars under 50,000 yen can be exempted from customs clearance. Of the Japanese used cars exported to the former Soviet Union, this kind of carry- exports accounted for a very large proportion.

2.3.3 Europe: External competition and the abolition of spare parts supply institution

In the last decade of the twentieth century, automakers appeared ready to revisit

their traditional neglect of the used car market. Until then, as we have seen before, the used car market is still considered a necessary evil, and manufacturers' energy is focused on the sale of new cars. Automakers' distribution channels represent only a small part of the used car deal, and they don't see the deal as profitable. In reality, they did not develop a corresponding business approach for this market segment, so they gave up the business in it to other players. Because of this, they give up a large part of the families that need to buy a car, and the after-sales service brought by the sale of used cars.

In the Anglo-Saxon market, an alternative business model for relatively new second-hand cars is beginning to emerge. Improvements in the reliability of used cars have made it possible to guarantee them. Credit support and warranty have made used cars an alternative to new cars. The loyalty strategy has shifted from the corporate market to the consumer market. The specific methods adopted are through leases and points, and also include repurchase methods. These increasingly involve the issue of car depreciation. The generous offer that can be provided at the initial sale requires effective management of the profits of subsequent repurchase of cars. Generally speaking, the share of European automakers in the after-sales service market gradually decreased during this period. In 2002, the abolition of the auto parts supplier's monopoly supply system accelerated the loss of manufacturers' share in the after-sales service market. Increasingly competitive from independent chain stores, auto makers are trying to find alternative sources of profit for their dealers. As auto makers have to resist external competitors from entering the European market, the issue of dealers is more complicated, and their new car gross profit margins have remained low for a long time.

These factors will trigger a series of new proposals aimed at transforming the original car dealership system into a more standardized used car business. An important element is the "quality label" for used cars created by car manufacturers. Although such attempts have been less successful in the United States, they have spread widely in

Europe. To a large extent, European automakers are more dominant in their car dealership network than their American counterparts. European dealers are more willing to overcome suspicions and accept the "quality label" and corresponding used car programs.

These attempts have also shown, to some extent, that automakers are willing to accept that there is an alternative car market outside their control, and that is what they choose to ignore. The analysis of this change in attitudes and actions of automobile manufacturers is to recognize the evolution of income inequality in Western societies since the 1980s. As inequality worsens, so will the proportion of households that can only achieve motorization through second-hand cars. As the importance of this market segment increases, it becomes increasingly difficult for automakers to ignore its existence^{①②}.

Similar research results have also played an important role in the discussion of regulatory issues in the European automotive distribution market. At first policy makers focused only on the price of the new car, but their attention quickly shifted to the inconsistencies of the manufacturers' discussion of the natural connection between sales and after-sales service. It is ridiculous that for decades auto makers have chosen to ignore the sale of used cars and also ignore their after-sales services. But isn't the after-sales service of used cars more important as older cars? It's ridiculous for automakers to emphasize the natural link between new car sales and after-sales service.

In the case of sales of used cars, which represent the majority of European car deals, buyers do not expect any connection between the purchase of a used car and subsequent repairs and maintenance. When a customer buys a used car, no one expects the seller to fix the problems on the body. The seller does not ask the buyer to go to the

^① Lipietz A. La société en sablier: Le partage du travail contre la déchirure sociale. Suivi de" 1998: l'audace après l'enlèvement?"[M]. La découverte, 2013.

^② Froud J, Haslam C, Johal S, et al. Les dépenses de motorisation comme facteur d'accentuation des inégalités et comme frein au développement des entreprises automobiles: une comparaison franco-anglaise[J]. G. DUPUY, F. BOST, L'Automobile et son monde, Ed. de l'Aube, 2000: 75-96.

original spare parts supplier to repair the car or perform after-sales service. As a result, we find that the organizational structure of the used car market is significantly different from that of the new car market, and the logic that the car manufacturers are trying to defend is not working.

In summary, the used car market provides a more realistic market outlook and practice than the new car market. There are many more problems in the real world than when car manufacturers and their dealer networks are simply trying to sell more new cars. In the second-hand car market, car manufacturers do not dominate, and industry competition is the main way to satisfy consumers. Recent developments have allowed us to better understand the "underground world" of the car. The used car market has developed into a strategic, commercial, and regulated priority market. This tells us how narrow the automaker's perspective is when it comes to a comprehensive understanding of the used car market, and it also prompts us to look at this field from another alternative perspective.

2.3.4 Changes in emerging countries

Romania's trajectory is somewhat similar to Poland's, especially after joining the European Union in 2007, but there are also very important differences. New car sales in Romania were higher than in Poland in 2006 and 2007. Although the population is half that of Poland, GDP per capita is 35% lower than Poland, and total monthly wages are five times lower than Poland. How can that be?

The answer lies in the alliance between Dacia-Renault and the Romanian state, which led to the production and sale of the first low-cost European car, Logan, in Romania at \$ 5,000. The story begins in 1999, when Renault bought Dacia for less than \$ 50 million, which was almost nothing by the standards of the automotive industry. After a series of extraordinary innovations, the Logan (sedan) was launched for \$ 5,000 in 5 years. In the first year, it sold 77,837 vehicles, accounting for 38.5% of the total market. Sales have continued to grow until reaching 102,000 units in 2007, which

largely contributed to the overall increase in new car sales in Romania^①.

Because the Romanian market is important to Dacia, and because Dacia is important to Romania, the government did everything in its power to block or restrict the import of used cars after the EU 's integration in 2007. It first levied a registration tax of about 140 Euros for a new car. Depending on its age, a used imported car can cost up to 8,000 Euros. In March 2007, the European Commission warned Romania that registration taxes violate Article 90 of the EU Treaty. Prime Minister Popescu Tariceanu said the country would not abandon the tax: "If one dislikes its name as 'first registration tax', then we will call it a tax for a clean Romania or a tax to preserve jobs"^②. A more formal response from the Romanian government states that Romania has one of the oldest fleets in Europe, and the goal of reducing carbon dioxide and other harmful emissions can only be achieved by updating the fleet. For instance, the 1,6 million cars in Romania aged more than 15 years pollute as much as 80 million new "Euro 4" cars. Although the argument did not convince the European Commission to begin the second phase of the infringement proceedings in November, it asked Romania to change its legislation and threatened its government to bring the matter to the European Court of Justice. At the same time, despite the first registration tax, the number of used car imports has increased by 49,9%, from 248,909 in 2007 against 166,342 in 2006.

This time, the Romanian government agreed to amend the law to make no distinction between imported used cars and domestic used cars. The new "makeover" registration tax, also known as the pollution tax, came into effect on July 1, 2008, meaning that the tax on imported used cars will be greatly reduced, while the tax on sale of new cars will increase slightly. The direct impact of this evolution is the surge in the number of imported used cars, which largely explains the decline in new car sales in 2009 due to the impact of the financial crisis. Faced with these disastrous results, in 2010, the government re-imposed a pollution tax on imported used cars (up to 30% of

^① Midler C, Jullien B, Lung Y. L'épopée Logan[M]. Dunod, 2012.

^② Midler C, Jullien B, Lung Y. L'épopée Logan[M]. Dunod, 2012.

its value), but the European Court of Justice again declared it illegal in April 2011.

Despite the collapse of the domestic market, the success of Dacia's low-cost brands in Western markets, especially in France and Germany, allowed exports to compensate for the decline in domestic sales. This is why Romania's trajectory after joining the European Union is similar to that of Poland and other Central and Eastern European countries, as they are clearly characterized by the differences between the growth in production exported to the EU-15 and the stagnation or decline of the domestic market. However, what is important is the differences in Romanian cases, especially in the period before joining the European Union, and the attitude of the Romanian government towards the European Union and the pressure of the European Union. As we have previously emphasized, Romania was the poorest country in Central and Eastern Europe between 2004 and 2007, and its car market grew the fastest, with the highest proportion of the 1,000 new cars sold in the region. This trend is driven by the locally produced affordable car Logan, which is designed for the Romanian market and adapted to the needs and income of the average family.

Therefore, it can be said that the Romanian government has been working to combat the flood of imported used cars and the stubborn pressure of the European Union, which is the possibility of an alternative road to the road taken so far in Poland and most Eastern European countries. This path could prevent Romania from becoming a low-cost manufacturing export base for Western markets, which are vulnerable to further relocations and tend to drive down wages to attract or retain foreign direct investment. However, by raising wages, domestic production and domestic sales can sustain each other, thus contributing to the development of true domestic car manufacturers.

2.4 Conclusion: Re-institutionalization

In France, the sales ratio of new cars to used cars is not as disproportionate as in developing countries. However, the gap between the average vehicle value of a new car

and an old car is huge. This is because most of the used cars sold in France are older than 5 years and they have lost about 70% of their value. This is a remarkable case that shows that consumers who buy new and used cars are different, except for those who buy relatively new second-hand cars. This means that these consumers engage with professional car dealers in a completely different way in the automotive market.

The first step in understanding the structure and scale evolution of the used car market is to analyze the characteristics of existing used cars. Motor vehicle ownership in France is increasing by 2% to 3% each year, and it is aging. The average life span of a French family car was 5.8 years in 1980, 7.5 years in 2000, and more than 8 years in 2006. This reflects the total number of new cars around two million per year. Since the age of these vehicles will continue to increase from the average of 12.5 years, this does not correspond to the number of scrapped 1.5 million vehicles per year.

The degree of regulation in the French automotive market is lower than that in the United Kingdom, but higher than in Italy and Spain^①, so the French market has become a market where manufacturers' dealers and professional car dealers co-exist. But at the same time, they both ignored a very important subdivision, which is the field of old cars and very old cars. It is these cars that make the age of on-road motor vehicles in France continue to rise. The three main channels of the French used car market transactions are manufacturers' dealers, professional used car channels, and direct small advertising transactions between consumers. They occupy 35%, 15%, and 50% of the market share, respectively. Naturally, these channels do not evenly occupy the market share of different types of used cars, so the competition between them is also greatly weakened due to the difference in the division of labor. The used car market is essentially a market where an independent seller sells cars to an independent buyer. Manufacturers' dealers pay more attention to newer cars, so they leave older cars to professional used car

^① Bernard Jullien. L'après-vente-Derrière l'occasion, la pièce, l'entretien et la réparation, la réalité des consommations et des offres automobiles: la diversité et la difficulté des constructeurs à y faire face[J]. EBG, L'Automobile, Elenbi Editeur, 2003.

dealers out of their system. And these deals can satisfy families looking for older used cars.

In France, the demand for used cars is more important than the demand for new cars. There is therefore a gap between the reality of automobile consumption and typical travel cost studies, as these studies are written by experts employed by manufacturers' distribution systems. From a car manufacturer's perspective that is different from their dealers, the demand for used cars is a potential problem that could threaten the demand for new cars. This happens when used cars are seen as alternatives to new cars and costs are similar to new cars. Although this is a rational possibility and has gained a lot of enthusiasm as a business concept over the past decade, in reality this view does not apply when people are considering buying a used car. For most car owners, buying a used car gives them an alternative because they simply don't have the money to buy a new car. Studies show that families buying new and used cars have only a limited overlap. This result shows us in which families, the question of whether to buy a new car or a used car will make them hesitate. Studies show that among 100 households seeking car replacement, 20% to 25% of consumers who have already bought a new car choose to continue to buy a new car, and 50% to 55% of consumers who have bought a used car choose to continue to buy a used car. A quarter of this population is the part that switches between new and used cars. More than half of this last group have changed from consumers of used cars to consumers of new cars, but there are also more than 10% of consumers who have changed from new car consumers to used car consumers, of which one third in order to enter the higher-end market.

When used cars are receiving a lot of attention from automakers as a substitute for new cars, the real story doesn't stop there. In general, most used cars are not sold to consumers who have transformed from new car users. In order to make an effective comparison, we first remove the part of the second-hand car transaction that involves the relatively new second-hand car (within three years). The depreciation of these cars is around 40%, and these transactions account for 20% to 25% of the above types. The

average transaction price of the remaining three quarters of the transactions is less than 15% of the average transaction price of the new car. Obviously, the price figures of most used car sales are very different from those of new cars, and they cannot be an alternative to new car sales. Therefore, second-hand car sales cannot be described as another form to meet the demand for new cars. It is really a different demand, and the annual transaction volume in France is 4 million.

This shows that for an important proportion of households, owning and using a car is a necessity, but this demand cannot be met in a professional network provided by car manufacturers. These families must consume in a sub-system that is on the fringe of the official car market. In this field, traditional automotive marketing methods are meaningless. In reality, the marketing of new cars only involves products and services within 5 to 10 years. After that, new cars will become second-hand cars, three-hand cars, and four-hand cars. At this time, their initial characteristics will be greatly changed due to wear and tear, and service and repair will be transferred to a repair shop outside the official dealership system. In addition, these households' expenses on the car will mainly come from the expenses on use, so their criteria for choosing a car are based on minimizing the risk of extra costs in the future. This should be achieved through a good relationship with the car repair company or by buying a solid and reliable car.

As a result, the consumption behaviors of these majority households are different from those envisaged by automobile manufacturers, but it is precisely that manufacturers create their development strategies and promote products and services based on this assumption. Three main factors explain the difference:

~ For these consumers, the cost of buying a car only accounts for a small part of their overall car expenditure. In their view, the cost of use and maintenance is the most important factor, not the performance and aesthetic characteristics of the car.

~ Because they often can't afford those used cars with warranty, these buyers will seek a quality assurance that relies more on interpersonal relationships. The study found that the most important reason for consumers to choose a used car is the

recommendation of the owner or the personal relationship with the seller, while the brand and model are secondary.

~ The marketing methods used by auto makers are based on market segmentation models, and their characteristics are completely different from used car buyers by definition. Their target market is composed of new car buyers who have already bought new cars from their dealers or competitors' dealers. As these buyers overlap with larger second-hand car buyers with a small population, the concept used by manufacturers to release their new cars is no longer applicable to second-hand car buyers. In addition to the socio-economic differences between the two groups, there is another time axis difference. Over the past 15 years, automakers have been updating their product categories more and more frequently, based on their belief that consumer demand is changing faster and faster. However, consumers will use it for an average of five years, which shows that the manufacturer's strategy has little effect.

Based on the above reasons, it is critical to understand the differences in motivation for buying new and used cars. Used car consumer groups generally do not choose between car brand or model appearance. To get a deeper understanding of behavioral motivations and consumption patterns among different segments, a report on the annual family budget is just a matter of inquiry. This report shows that not only do different consumption patterns coexist, but they are interdependent.

The data in Table 2.4 compares the way and behavior of car consumption in the richest and poorest households in France. These two columns of numbers clearly reveal the reality of the coexistence of the two systems of use. Since a car is very much needed socially and economically to live in France, Table 2.4 shows the huge differences in the ways in which socioeconomic classes acquire cars.

The first column in the table represents the car buying behavior of the poorest households. It clearly shows that most of the expenses are incurred during the use of the car, mainly gasoline and maintenance expenses. The type of consumption of these poor families can be summarized as buying a used car, which usually consumes more

fuel than new cars. It is more likely to be in a bad state, and there is no warranty service, because most of these transactions are done between individuals. Obviously, most of these consumers are not customers from manufacturers' distributors. It is estimated that only about 20% of the car costs of poorer families are related to the official system.

Table 2.4 Structure of automobile expenditure in the French market

	The lowest 20%	The highest 20%
New car cost	16.7%	38.9%
Used car cost	21.7%	22.3%
petrol	39.5%	23.9%
Other use cost	22.1%	14.9%

Source: INSEE Household Budget Survey, 1995.

Another column of data shows that 20% of the wealthiest households in France spend their car consumption on new car purchases. Generally speaking, they tend to buy more cars, and they are more likely to own several cars at the same time, even those who buy used cars also buy those relatively new second-hand cars. In the 1995 market, new cars purchased by this 20% group accounted for one-third of total new car sales. It is precisely because this group has purchased a corresponding number of new and relatively new second-hand vehicles, and these vehicles appeared in the second-hand car market a few years later, providing low-income families with a choice of mobility motorization. Conversely, it is the low-income family's demand for used cars that has shortened the number of years that a car can be renewed in a household buying a new car. It is in this sense that the two groups are interdependent.

The automotive market is different from other mass markets, such as the food market or the consumer electronics market, because the formal market space in the automotive market cannot meet the needs of all households. This difference is increasingly widening as the reliability of cars increases allowing the used car market to meet the car needs of a growing proportion of households. When car manufacturers and their dealers are meeting specific consumer needs, the above research shows that

most participants in the used car market in different historical periods and in different regions have operated activities outside the formal market system. With the exception of the "auto supermarket" in the American market in the 1990s, the market opportunities left by automakers did not attract alternative, organized suppliers to the used car market.

As a result, different types of vehicle acquisition channels are only partially controlled and organized by official channels. The examples of developed and developing countries show that the used car market and its maintenance service market exhibit a self-organizing characteristic, which thrives in a wide marginal area beyond the narrow market boundaries constructed by car manufacturers. For the social sciences, the interest in studying these subsystems is not just that they ensure that a large part of the society will not be isolated from car use due to the narrow supply of car manufacturers. The emergence, persistence, and diversity of these alternative markets outside of official channels are a large proportion of consumers and professional car dealers voluntarily rejecting the logic of the new car market. By choosing to buy a used car, a large number of consumers are constantly resisting lasting commercial efforts from car manufacturers to attract them to buy new cars. These potential new car consumers can be seen as contempt of so-called market segmentation theories in economics, new product development models, and those "mature" marketing techniques. Instead, they favor an alternative informal market, which provides them with a series of more reasonable choices.

Chapter 3 : The occurrence of an institution

The used car market used to be called the lemon market in the United States. It means the defective market. Due to the information asymmetry, buyers tend to measure the value of a specific product by the average market price, in which case the seller can only maximize the profit by operating low-quality goods. In the 1970s, Akerlof inferred that in the United States the used cars with poor quality would drive out good ones. Thus the high-quality used cars would withdraw from the market, and the whole market would gradually shrink or even disappear^①. However, the average size of the US used car market in the past decade is 2.5 times that of the new car market. The used car market has not only not disappeared but has become the mainstay of the auto market. Why is Akerlof's judgment so different from reality? The development of the lemon theory itself can explain this question. Heal, inspired by the game theory, found that only when the seller is very short-sighted and only pays attention to immediate interests, there will exist a phenomenon of defective products expelling. Otherwise, buyers and sellers will tend to transact with high-quality products in the long-term game^②. Akerlof responded that the premise of a cooperative game between buyers and sellers is an institution that links their past, present and future. For example, providing a guarantee in a transaction and building a brand play this role^③.

The discussion of this issue in economics stops at recognizing the importance of institutions in the market; in fact, this is only the beginning of research in sociology! The development of the automotive market does not merely mean the development of the new car market and used car market cannot be regarded as a low-priced version of the new car market as well. The used car market is a socio-economic structure

^① Akerlof G A. The Market for Lemons: Quality Uncertainty and the Market Mechanism[J]. The Quarterly Journal of Economics, 1970.

^② Heal G. Do bad products drive out good?[J]. The Quarterly Journal of Economics, 1976: 499-502.

^③ Akerlof G A. Reply to professor Heal[J]. The Quarterly Journal of Economics, 1976, 90(3): 503-503.

consisting of professional used car dealers and their specific relationships with consumers. The socio-economic relationship between the used car dealers and the consumers itself can be seen as a kind of resistance and substitution to the large-scale, industrialized new car market and the segmentation strategy of large-scale car companies and their dealers. It is necessary to see whether there is an institutional order(IO) in this field that distinguishes the used car market from other industries. IO is composed of four primary IRs in the industry: purchase IR (Institutionalized Relationship), finance IR, commercial IR and employment IR. These IRs link public policy and collective action through commercial activities and reduce uncertainty through the gradual stabilization of their relationships, thus making economic activities predictable for each subject involved. In this regard, the IR not only constrains but also initiates the actions of individual producers and merchants, and thus gradually rises to the corresponding system.

Through four IRs, we can continually explore the process of integration of economic activities and politics. These IRs are not only the political outcomes in a particular structure but also a dynamic process that is continuously revised. The actor's suggestion, criticism or revision of public or collective interest topics is continuously forming new systems or terminating the system^①. Changing or re-manufacturing its system through the value judgments of "good" and "bad" is a way in which industry is continuously being politicized^②. From this perspective, the exploration of the independency of the used car industry requires both a specific political outcome and a dynamic process of the revision of political activity in this field.

^① Jullien B, Smith A. Conceptualizing the role of politics in the economy: industries and their institutionalizations[J]. *Review of International Political Economy*, 2011, 18(3): 358-383.

^② Muller P. Les politiques publiques comme construction d'un rapport au monde[J]. *La construction du sens dans les politiques publiques: Débats autour de la notion de référentiel*. Paris: L'Harmattan, 1995: 153-79.

Section 1. How is an institution possible?

The development of the automotive market does not merely mean the development of the new car market and used car market cannot be regarded as a low-priced version of the new car market as well. The used car market is a socio-economic structure consisting of professional used car dealers and their specific relationships with consumers. The socio-economic relationship between the used car dealers and the consumers itself can be seen as a kind of resistance and substitution to the large-scale, industrialized new car market and the segmentation strategy of large-scale car companies and their dealers. To answer whether the used car market is just a low-priced version of the new car market, we need to look at the origins of the used car market, the links with the new car market, and the structure of the used car market itself.

China's used car market is highly dispersed and fragmented. The national market consists of more than a thousand physical old motor vehicle trading centres, and each of them involves hundreds of car dealers and brokers. Since used car transactions require venues for used car parking and exhibitions, the old motor vehicle trading centre requires much space. The development of China's cities has led to an increase in land prices. Consequently, the old motor vehicle trading centre has gradually become farther away from the core of the city as the city develops, and is always on the edge of the city. From the angle of location, the new car sales exhibition hall is generally more glamorous than the old motor vehicle trading centre and is closer to the centre of the city. China's used car market was mostly formed in the 1990s when cars were scarce, and authority units owned most of the passenger cars. At that time, private companies were beginning to emerge. It was rare that a single individual owned cars.

3.1 From "road market" to "old motor vehicle trading centre."

The Chinese used car market has been in development since the 1980s and has a history of more than 30 years. Before 1998, the second-hand car market traded with individual car dealers as the primary method, basically no formal second-hand car

dealers. In 1998, the Ministry of Trade issued the "Old Motor Vehicle Transactions Management Measures", determined the establishment of the "old motor vehicle trading centre", and implemented a grading approval system. In principle, each city at or above the prefecture-level has approved the establishment of one market. In October 2005, the more standardized "Used Vehicle Circulation Management Measures" was re-released. The Chinese used car market began to move toward a standardized development path. Then, before the enactment of the "Old Motor Vehicle Transactions Management Measures" in 1998, how was the used car transaction carried out? Alternatively, how is the institution of the "old motor vehicle trading centre" established in the "Old Motor Vehicle Transactions Management Measures" formed? How did the old motor vehicle trading centre become an institution? From the grey transaction that wanders on the edge of the law to the formal economic activity that is managed and controlled by the government, this inevitably involves the innovation and occurrence of the institution. In the early 1990s, policymakers in cities across China faced such a problem, how to incorporate more and more old motor vehicle transactions into the supervision of local governments?

The old motor vehicle market played a transitional role from the planned economy to the market economy in the field of automobile circulation in China. The distribution and transaction of vehicles initially allocated in the planned economy and then changed to free competition among private brokerage companies. The old motor vehicle trading centre in each city is a legal entity established under the arrangement and supervision of the government. It is a state-owned enterprise, but this enterprise assumes the functions of the administrative organ. Half of it is the administrative organ with supervisory duties, and the other half is also a state-owned enterprise seeking profit. This "semi-official and semi-enterprise" feature reflects the specific performance of China's market economy transformation pattern. The history of Beijing's old motor vehicle trading centre can reflect in this evidence.

In 1978, China began to reform and open up. Since then, the market economy has

gradually recovered in China as a percentage of overall economic activity. The Beijing Municipal Administration for Industry and Commerce resumed the rural bazaars in Beijing and restored urban marketplaces in cities, all of which were composed of private individual vendors. After the recovery of urban and rural markets, commodity listings, private partnerships, vendors, and traffickers in these markets need motor vehicles to transport. However, at that time, motor vehicles still belonged to the production materials in the planned economy, which were managed by the government material management department. There was no legal marketplace for the trading of old motor vehicles. As a result, there have been many old motor vehicle trading behaviours among individuals in society. They do not have a fixed place. They generally park their vehicles on the side of the roads for trading and inspection vehicles. These are all "road market". At that time, the Beijing Municipal Administration for Industry and Commerce discovered these new trends. In particular, they were concerned that the transactions in these road markets were subject to price confusion, unsound procedures, and affecting traffic order.

At the same time, the most severe problem was the existence of many scrapped vehicles. These scrapped vehicles have high fuel consumption, poor quality and frequent accidents, causing many adverse social impacts. The Beijing Municipal Administration for Industry and Commerce believed that the key to the above problem is that no fixed trading market can trade old motor vehicles under the supervision of government departments. At the same time, the transaction of old motor vehicles tended to expand continuously. Therefore, the Beijing Municipal Administration of Industry and Commerce and the Beijing Municipal Public Security Bureau and the Beijing Municipal Bureau of Materials initiated the creation of the old motor vehicle trading centre in Beijing. Their original intentions mainly have three aspects, regulating the old motor vehicle transactions, maintaining the traffic order in Beijing, and stopping the illegal activities against speculation. These three purposes correspond to the responsibilities of the above three departments.

On April 12, 1985, the three administrative departments jointly sent a report to the municipal government on the establishment of the old motor vehicle trading centre in Beijing^①. This report includes specific methods for the establishment of the old motor vehicle trading centre. The Beijing Municipal Administration for Industry and Commerce would uniformly manage the old motor vehicle trading centre, be responsible for implementing relevant national policies and decrees, and investigate and deal with various speculative and illegal activities. The Beijing Municipal Materials Bureau was responsible for the market-specific organization, transactions and services. The vehicle management office of the Beijing Public Security Bureau was responsible for handling the transfer procedures of the vehicle, provided that the transaction certificate issued by the old motor vehicle trading centre was required. After the establishment of the old motor vehicle trading centre, regardless of the old motor vehicles of any individual or unit, all transactions would be conducted in the old motor vehicle trading centre. Otherwise, the vehicle management office of the Public Security Bureau would not handle the transfer procedures, and the Beijing Municipal Administration for Industry and Commerce would also impose penalties.

After the Beijing Municipal Government approved the report, the old motor vehicle trading centre in Beijing officially opened on July 1, 1985. At that time, many newspapers in Beijing and even national newspapers used the front-page headlines to report the official opening of the old motor vehicle market, because this was a significant event during the transition from a planned economy to a market economy. The Beijing old motor vehicle trading centre was initially set up in the left gate of Zuo'anmen, Beijing. It covered an area of about 15,000 square meters and shared a piece of land with the production materials market at that time. In order to run this market well, the Beijing Municipal Administration for Industry and Commerce had set

^① Liu, G. The Creation and Development of the Old Motor Vehicle Trading Centre in Beijing[J]. Beijing Party History, 2002, (005): 48-50.

up an office in the old motor vehicle trading centre and sent government personnel familiar with market transactions to manage the office on the spot. In the nine months from July 1, 1985, to the end of March 1986, a total of 2,955 vehicles were sold in this market, with a turnover of more than 45 million RMB and more than 3,860 consultations. On May 15, 1986, the half-monthly publication of "Industrial and Commercial Administration" published an article "The Beijing Old motor vehicle trading centre Actively Transacted", which had a significant impact on the industrial and commercial administration departments of various provinces and cities across the country. The relevant departments of many provinces had specially sent people to visit. After returning to the local area, many old motor vehicle trading centres have established nationwide.

With the continuous expansion of the old motor vehicle trading volume, the old motor vehicle trading centre in Beijing moved to the west exit of the Chemical Road in Chaoyang District on July 1987 and then moved to the Caihuying in the east in 1992. It had reached 50,000 square meters and had six parking lots and transfer hall, as well as office buildings. In 2000, the market obtained independent legal personality and established Beijing Old motor vehicle trading centre Co., Ltd. with a registered capital of 87 million RMB. The business scope included: sales of motor vehicles (including small cars), hosting the old motor vehicle trading centre in Beijing, market Internal property management, and motor vehicle evaluation pricing and acquisition, consignment sales, leasing, auction, inspection and maintenance, spare parts supply and information services. The market Co., Ltd. could also provide transaction transfer, licensing, insurance services, hosting exhibitions, rent commercial facilities, and sell daily necessities, packaged foods. From the second half of 2001, all the old car transactions required to enter the old motor vehicle trading centre in Beijing must sign the "Beijing Old Motor Vehicle Sales Contract", which was a formal contract supervised by the Beijing Municipal Administration of Industry and Commerce. Rights and obligations, the necessary conditions of the vehicle can reflected in the contract.

In 2002, the old motor vehicle trading centre was relocated to Sihezhuang, Huaxiang, Fengtai District, and has been at this address until today. At present, many new old motor vehicle trading centres have developed in Beijing, but the largest one is this market in Huaxiang, Fengtai District. The annual trading volume has reached 450,000, which is the largest used car trading market in Asia. At present, this market covers an area of 330,000 square meters, equipped with a multi-functional trading hall of 5,400 square meters and a multi-function auction hall with 1,386 seats. Six hundred used car merchants settle in, employing nearly 10,000 people, and the daily average passenger flow exceeds 15,000. The number of transactions per day exceeded 1,000 vehicles, and the daily display vehicles were over 10,000 vehicles.

The old motor vehicle trading centre established in 1985 was the earliest old motor vehicle trading centre in the country. It was during the establishment of this market that the "old motor vehicle trading centre" was shaped as an institution that influenced the entire used car market. The leading promoter of this institution is the Beijing Municipal Administration for Industry and Commerce. It joined forces with the Beijing Municipal Materials Bureau and the Beijing Municipal Public Security Bureau to submit a report to the Beijing Municipal Government requesting the establishment of the old motor vehicle trading centre in Beijing. From the establishment of the market in 1985 to 2000, the market obtained the status of an independent legal person and established Beijing Old motor vehicle trading centre Co., Ltd., the old motor vehicle trading centre administrative office of the Beijing Municipal Administration of Industry and Commerce has been the de facto management entity of the old motor vehicle trading centre. Even after obtaining the status of an independent legal person in 2000, and the establishment of the state-owned limited company, there is still the management and coordination of the Beijing Municipal Administration for Industry and Commerce. At this time, the characteristics of China's transition from a planned economy, that is, the government's regulatory authorities themselves participate in market construction, and become one of the leading players in market operations.

The spontaneously formed old motor vehicle “road market” has been problematized, and the process of this problem has gone through from company and personal issues to collective problem, public problem, and politicized problem^①. At that time, during the transition period to the market economy, the operators of individual marketplaces had the legitimacy of purchasing old motor vehicles as transportation means, and the units with old motor vehicles also had the legitimacy of selling cars, but this was not a natural matter at the time. It is a kind of legitimacy that needs to debate. It is illegal to buy and sell motor vehicles before the reform and opening up. Private individuals can not hold all motor vehicles as a means of production. Therefore, after the reform and opening up, the Beijing Municipal Administration of Industry and Commerce created the old motor vehicle trading centre as a pioneering undertaking and a destructive innovation in the legacy of the planned economy.

As the direct manager of various markets in Beijing, the Beijing Municipal Administration of Industry and Commerce has close ties with the operators of the market in daily management and is acutely aware of the motor vehicle needs of these operators and commodity traffickers. That is to say, the government authorities involved in the company and individual issues in the first place, which is a Chinese characteristic. In the planned economy, the administrators of the government tightly integrated with the subjects in economic activities. Many times, some of the local government authorities are themselves the mainstay of economic activity. When many operators and traffickers respond to the same needs, the demand for motor vehicles by market operators in the marketplace has become a "collective problem". Since the government administrators were around them, the process of their debate did not go through industry associations and lobby groups. At the time, there was no such group or organization. The boundaries between collective and public problems, in this case, have become blurred, because public actors have involved, just around the individual

^① Jullien B, Smith A. Conceptualizing the role of politics in the economy: industries and their institutionalizations[J]. *Review of International Political Economy*, 2011, 18(3): 358-383.

and the company, once the individual and the company's demands become a collective problem. Then this becomes a public problem. At the process of this public problem becoming a politicized problem, the act of alliance is apparent. The Beijing Municipal Administration for Industry and Commerce, in conjunction with the Beijing Municipal Public Security Bureau and the Beijing Municipal Materials Bureau, submitted a report to the Beijing Municipal Government. The spontaneous formation of the old motor vehicle "road market" transaction has a significant public hazard, which is to endanger the public transportation order, which belongs to the management scope of the Beijing Municipal Public Security Bureau. At the same time, the establishment of the old motor vehicle trading centre is to break the motor vehicle plan quota initially managed by the Beijing Municipal Materials Bureau, and in fact, violates the power of the Beijing Municipal Materials Bureau. As a result, the alliance is imperative. In the final plan, there are also three divisions of labour, each of which manages one aspect.

After the establishment of the old motor vehicle trading centre in Beijing, the media has widely reported this. The internal magazines of the National Administration for Industry and Commerce also conducted reports and analysis, which prompted the industrial and commercial administrations across the country to visit and quickly spread to all parts of the country. Another aspect of Chinese characteristics is that the contagion and diffusion effects of various policies are particularly noticeable. It is also because of the transitional system. Many institutions try to select some pilot cities first, or some cities spontaneously explore some economic institutions, and then those successful institutions are spreading rapidly. Finally, the central government will confirm, revise or negate or eliminate these economic institutions. The policy of used car restrictions on the past ten years is a typical case. It has also started from the creation of this policy in Beijing and has spread rapidly to the whole country, and finally formed a de facto national policy institution. In the face of this fait accompli policy institution, the central government has formed the decision to negate and eliminate this policy after a series of discussions and appeals among trade associations, public opinion.

The "political work" carried out by individuals and companies in the face of problems is also very unique. There is such a case in the old motor vehicle trading centre in Beijing: In June 1986, the Chinese general manager of Beijing Jeep Automobile Co., Ltd., with the sales manager, came to the old motor vehicle management office of the Beijing Municipal Administration for Industry and Commerce (the Beijing old motor vehicle trading centre administrative office at that time). They suggested removing the "old" word from the name of the old motor vehicle management office and including the sales channels of the new car. Beijing Jeep Automobile Co., Ltd. was a joint venture between the Chinese and American companies. The vehicles it sold were charged in US dollars and had the effect of creating foreign exchange earnings for the government authorities. A country's Beijing office wanted to buy Cherokee, but there was no quota. At that time, the purchase of motor vehicles needed to go through the government material management department and purchased it with the planned quota. The foreign agency in Beijing directly found Beijing Jeep Automobile Co., Ltd., and hoped to buy the car directly from the manufacturer. Therefore, Beijing Jeep Automobile Co., Ltd. came to the old motor vehicle management office of the Beijing Administration for Industry and Commerce for help. The old motor vehicle management office believed that it should break through the planned economic exclusion zone, agreed that the manufacturer would directly sell the car to the user, and issued a certificate to allow Beijing Jeep Co., Ltd. to sell the car to the Beijing-based agency. After internal discussions within the Beijing Administration for Industry and Commerce, the auto manufacturers were allowed to sell their cars directly. After hearing the news, the auto manufacturers in other provinces and cities applied to the Beijing Municipal Administration for Industry and Commerce to allow them to sell their cars directly to users in Beijing. The Beijing Municipal Administration of Industry and Commerce approved it, so the automobile market in Beijing was open to the national automobile manufacturers. The opening of the old motor vehicle trading

centre has driven the entire automotive market to be active. Since 1986, Beijing has had "free" motor vehicle trading activities. By 1989, the Beijing market was open to all car manufacturers in the country.

The economic institution in the old motor vehicle market has brought about changes in the entire automobile market system. The industrial stakeholders and policymakers in Beijing from the planned economy to the market economy had a legitimate source – breaking the planned economic exclusion zone! It was an adventurous activity, but at the time it attracted many stakeholders and policymakers to conduct bold institutional experiments. This is an era of institutional innovation!

3.2 Establishment of national policies

Before 1998, the second-hand car market traded mainly by car dealers. There was no formal used car dealership and used car trading market. The market in this period can be called the "road market". In 1985, Beijing first established the old motor vehicle trading centre. It was the first in the country, and the different local industrial and commercial, administrative departments went to study and visit. They brought back the institution of the old motor vehicle trading centre for the provinces and cities across the country.

In 1998, the Ministry of Trade issued the "Old Motor Vehicle Transactions Management Measures", determined the establishment of the "old motor vehicle trading centre", and implemented a grading approval system^①. In principle, each city at or above the prefecture-level has approved the establishment of one market. As a result, the fundamental economic institution in the used car market, "Old motor vehicle trading centre", was established at the national level. In October 2005, the "Used Vehicle Circulation Management Measures" was issued, and some provisions in the "Old Motor

^① "Old Motor Vehicle Transactions Management Measures" issued by the ministry of trade, <http://www.mofcom.gov.cn/article/b/d/200307/20030700112496.shtml>

Vehicle Transactions Management Measures" in 1998 were revised^①. These new changes have broken the rules that used car transactions can only be carried out in the old motor vehicle trading centre. These new modifications allow transactions to be made at fixed locations outside the old motor vehicle trading centre, allowing different entities to participate in the creation of new old motor vehicle trading centres. However, until today, used car transactions in the old motor vehicle trading centre are still the largest share of the used car market in China, and this institution is deeply rooted.

When the Ministry of Trade issued the "Old Motor Vehicle Transactions Management Measures" in 1998, the old motor vehicle trading centres across the country had generally established. The role of this "Measure" is to confirm this institution and further clarify some principles. One of the most critical principles is that the transactions of old motor vehicles can only be carried out in the old motor vehicle trading centre established by local governments. Article 3 of the "Old Motor Vehicle Transactions Management Measures" stipulated: "The circulation of old motor vehicles involves vehicle management, traffic safety management, state-owned assets management, social security management, environmental protection management, etc., which are special commodity circulation and must be carried out at the approved old motor vehicle trading centre." Since old motor vehicles are particular commodities, they must trade at the old motor vehicle trading centre. If it is a transaction between an individual seller and an individual buyer, it must also be carried out in the old motor vehicle trading centre; otherwise, it cannot be transferred and registered. Article 32 stipulated: "In the case of old motor vehicle transactions, the seller must issue a letter of introduction or certification to the old motor vehicle trading centre (required to hold a resident ID card for the individual selling), motor vehicle driving license, original car purchase invoice, transaction invoice, purchase surcharge certificate, vehicle and vessel use tax mark, road maintenance fee payment certificate, etc. The purchaser must issue

^① Yan, D. China's old motor vehicle circulation policy issues and Japanese experience[J]. Japanese Studies, 2006, (2): 23-27.

a unit introduction letter or personal identification card. The administrative department for industry and commerce shall verify the transaction certificate of the old motor vehicle trading centre or the enterprise with the old motor vehicle operating right, and the old motor vehicle management office shall handle the property transfer procedures by this certificate".

Article 4 of the "Old Motor Vehicle Transactions Management Measures" specified: "The administrative department of commodity circulation of the State Council is responsible for the management of the circulation of old motor vehicles throughout the country." This provision is in line with Article 14, which stipulated: "The old motor vehicle trading centre shall, under the leadership of the local people's government, establish an 'old motor vehicle transaction administrative committee' involving the domestic trade department, industry and commerce department, public security department. The management committee shall establish a regular meeting system, and an emergency meeting may be convened by the chairman in case of an emergency." From the provisions mentioned above and principles, we can see that the Central State Council's positioning of the old motor vehicle trading centre is a legal entity, and it is under the management of the committee composed of the internal trade, industry and commerce, and public security departments. This is an organization that is closer to the government agencies than state-owned enterprises so that the old motor vehicle trading centre is a semi-official organization. At the same time, however, Article 7 also stated: "The old motor vehicle trading center refers to the economic entity relied on the business operation activities, supplemented by the necessary government coordination functions, with the evaluation, acquisition, consignment, purchasing, leasing, auction, inspection and maintenance, parts supply, beauty and information services of old motor vehicles, and provide for the property transfer, licensing, insurance and other services". The image of the old motor vehicle trading centre in Article 7 is more like a for-profit enterprise, providing various services for the parties in the market.

Moreover, the old motor vehicle trading centre, based on providing booths and parking lots for the old motor vehicle dealers, also participates in the trading behaviour in the market, which contradicts the semi-official nature of its supervision. When the referee himself is also competing in the field, how can he judge the game fairly? In the "Used Vehicle Circulation Management Measures" issued in 2005, the above contradictions have been modified. The old motor vehicle trading centre is no longer directly engaged in the trading and evaluation of old motor vehicles but dedicated to providing services to merchants in the market.

3.3 Summary and discussion: the occurrence of an institution

Although in the story mentioned above, the author emphasized the early transition from a planned economy to a market economy, and there was a close relationship between private actors in the market and public policymakers. Moreover, in the process of establishing the old motor vehicle trading centre, the public sector managers themselves had become the main body of the daily operation of the market. However, we still have to emphasize that in the economic field, the difficulty from a private enterprise becomes a "problem" that collective and public organizations need to solve through policy means a lengthy and costly process. As an explorer in the transition period of the market economy, the pioneering public sector managers have done much work in them, which can be summarized as political work in the theoretical system of historical institutionalism. This political work is not suitable for the theoretical logic of "rational choice" and "interest-driven" advocated in economics. We believe that these premise hypotheses are all pseudo-propositions without research. In contrast, the findings of sociological studies^{①②}. Also, political science^③ give a more reasonable

^① Gusfield J R. Drinking–Driving and the Symbolic Order[J]. *Morality and Health*, 1997: 201.

^② Callon M. Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay[J]. *The sociological review*, 1984, 32(1_suppl): 196-233.

^③ Rochefort D A, Cobb R W. The politics of problem definition: Shaping the policy agenda[M]. *Univ Pr of Kansas*, 1994: 1-39.

explanation and generalization of these political work. That is the three steps of political work: problematization, instrumentalization and legitimation.

Before the government intervened, the problematization¹ process has already occurred in the arguments and alliances of public issues. Markets and industry stakeholders are continually arguing about whether they are in space or economic activities that require more, newer, or less public policies. In the above case, an institution like the old motor vehicle trading centre is seen more as a function of public goods provided by the government in economic activities, and not as a collection of public policies. The foundation of this institution is a collection of public policies. Here, the process of raising public issues to politicization reflected in the fact that institutional experiments conducted by local governments have been promoted to industrial management regulations at the level of state ministries. Although the process of legislation is not involved here, considering that in the context of China's system, the regulations of the national ministries have already been equivalent to the provisions of the law. We also saw that after the release of the first regulations on used cars in 1998, another different regulation of managing used car circulation was released in 2005. This is proof that uninterrupted collective activities shape the problematization.

In the process of the establishment of the old motor vehicle trading centre, we saw that the most critical policy instrument was that Beijing's industrial and commercial administration required all old motor vehicle transactions to go to the old motor vehicle trading centre. This policy instrument was later confirmed in the 1998 "old motor vehicle transaction management measures" used car transactions outside the old motor vehicle trading centre to shape the entire Chinese used car trading market. This instrument itself became the essential part of the institution, or the institution itself^①. Obviously, it had affected the efforts of new car dealers and car manufacturers to participate in the used car market, so that the second-hand car circulation management

^① Lascoumes P, Gales P L. Introduction: Understanding Public Policy through Its Instruments—From the Nature of Instruments to the Sociology of Public Policy Instrumentation[J]. *Governance*, 2010, 20(1):1-21.

measures in 2005 removed this policy instrument, which was the result of the political work of car manufacturers and new car dealers. However, this institution has profoundly shaped the structure of the Chinese used car market so that after it was cancelled, so far, the main trading volume of the market's main body has still been carried out in the old motor vehicle trading centre. In other words, the institution is still exerting influence. It is also because the changes in market structure and institution are not only derived from the activities and laws involved in civil servants and politicians. The more frequent influence on the market structure is the industrial IR and IO maintained and recognized by producers, traders and intermediaries.

China's public issues often point to issues that are answered and recognized within the administrative areas of local governments. A local consensus and alliance was reached after the political work of the continuing industrial stakeholders and the involvement of the government. This kind of local consensus and alliance sometimes needs the confirmation and affirmation of the central government, and sometimes it does not tend to get the attention of the central government and the media. The development path of China's public problems has its particularities as well as its universal laws. The general rule is that the politicization or "legalization" of public issues is also of two different types, namely, continuous public support through public debate, and then legalization in social and public spaces^①; the other is to avoid media coverage, avoid the discussion of values, conduct expert discussions in closed fields, and cite efficiency and expertise to depoliticize or technicalize their problematization processes^②. What is unique is that in such a vast country with a large population and local complexity, the central government and local governments maintain a very close relationship. Many institutional test methods derived from the transformation system have contributed to the local attempts, the mutual imitation of each place, and the

^① Lagroye J. Les processus de politisation[M]// La politisation, Paris, Belin, 2003: 359-372.

^② Radaelli C M. The public policy of the European Union: whither politics of expertise?[J]. Journal of European public policy, 1999, 6(5): 757-774.

central feedback mechanism. As a result, many attempts to publicize public issues and policy instruments in different industries have become the interaction between the experimental economic system of many local governments and the central government's national policy feedback. In the process of the formation of the old motor vehicle trading centre system, the mode explored by Beijing in 1985 has been learned and imitated by many other provinces, which is inseparable from the propaganda in the newspapers and periodicals. Although the implementation of this institution depends on small meetings between officials of local municipal governments, from the perspective of national proliferation and news reports, the formation of this institution is open and publicized. Finally, the central government confirmed this institution at the national level.

The legitimacy of public issues is, therefore carried out in a very different way. By combining the concepts of problematization, instrumentalization, and legitimization, one is best able to study the three institutionalized forms defined by Lawrence and Suddaby^①, namely, the institution creating, maintaining and disrupting of Table 3.2.

Table 3.1 Three forms of institutionalization

<p>Creating: designing rules and boundaries for access to material resources</p> <p> configuring beliefs & theories of action</p> <p> altering the categories and rehierarchying the values behind beliefs</p>
<p>Maintaining: ensuring adherence to rules</p> <p> reproducing belief systems</p>
<p>Disrupting: disconnecting practices from rewards</p> <p> disassembling theories of action</p> <p> undermining assumptions & beliefs</p>

^① Lawrence T B, Suddaby R. 1.6 institutions and institutional work[J]. The Sage handbook of organization studies, 2006: 215-254.

In fact, the interesting part in studying the Chinese used car market is through the phenomenon of political work and the above three dimensions, to observe how the institutionalization, deinstitutionalization and re-institutionalization takes place in this market and the entire automotive industry.

Section 2. Is this institution independent?

Interview question asked: Based on your experience in the industry, do you think the used car is an independent industry?

Answer from Mr. Wu, the General Manager of Car Win: Definitely Yes. We are different from the new car market. New cars are produced while the used cars are used by consumers^①.

(Car Win is a company that provides service on used car customer relationship management and used car auction systems for car dealers, serving more than 7000 4S stores.)

Compared with the used car market in China in the 1990s, which originated from the modification and repair of scrapped vehicles, the United States saw the world's first mass-market for automobile consumption in the 1910s and 1940s. The US used car market was also formed during this period. Many consumers in the US auto market in the 1920s were looking for an alternative to replacing their existing cars, so selling new cars is increasingly dependent on the conditions for replacements of old cars that dealers can give. However, in the eyes of auto manufactures, their focus was still on competing in the market by integrating the latest technologies into new models. Used cars were only regarded as an inevitable "trick and evil", a loss that dealers needed to try to reduce. At first, such a phenomenon only annoyed the dealers, but eventually, the old-for-new problem also plagued the car manufacturers. They recognized that the funds needed for

^① From interview 9.

the old car replacement business would have an impact on the financial robustness of the dealers, which in turn would affect their efficiency in selling new cars. If the loss in the old-for-new business were too significant, then those dealers who were already operating with low margin would tend to sell fewer cars. Auto manufacturers would use quota restrictions and threats to cancel distribution qualifications to reduce this impact. Not only that, but they also controlled this problem by destroying used cars, and even sought government support.

Overall, the analysis of the case of US auto market during this period showed that the critical decision taken by auto manufacturers was that they chose to remove the responsibility of car dealership from themselves, along with this decision was their contempt for the dilemma faced by dealers and doubts about whether the dealers would stand on the standpoint of maximizing the interests of automakers. The central conflict between car manufacturers and dealers was on the issue of used cars. Automakers later tried to recapture certain aspects of the auto dealership through a sophisticated appraisal and rewards system, but at the same time they remained untouched of other aspects of the business, the used car business was one of them. American car dealers are free to conduct used car business as long as these businesses do not infringe on the sales of the new cars. There is a mix of different rules in the same distribution network. On one end is a centralized, highly integrated new car marketing culture; in the middle is a loose and significantly reduced support of after-sales service business; on the other end is the used car business which is entirely independently operated.

Automakers in China were even more ignorant of the used car business. Early authorized dealers seemed to ignore the market wholly or altogether regarded the used car business as crooked. In this field, it was the "self-employed" dealers who dealt with consumers for a long time. They also regarded used cars as a completely different business from the new car business. In the long-term transaction, a sub-culture system represented by business gang has developed. The used car market appeared to be highly decentralized and individualized, but in the same trading market, it was effortless to

form several business oligopolies. In response to threats from external competition and falling profits, organizations would adopt a combination of alliance and monopoly, or improve their efficiency and add additional services. In the next part of our discussion, we will see how the intermediary brokerage group of used car transactions can improve their efficiency and add additional services to face external competition apart from alliance and monopoly, as well as the defects and changes of the market itself.

The used car market cannot only be seen as a low-priced new car market because used cars offer all consumers and professional car dealers with a more suitable space for them and a possibility of a "good deal". For many reasons, these consumers and used car dealers do not have the opportunity to be integrated into the mainstream market around new car sales. There is no doubt that there are economic factors, but not just that. One of the models in the construction of the used car market is the interaction and connectivity between the new car market and the old car market that car manufacturers are trying to create; but their efforts often encounter difficulties, which justifies the existence of another model that consumers and professional used car dealers created an alternative market model outside the market organized by big automakers.

The used car market offers a more realistic market view and practice than the new car market. The real problem is much more than car manufacturers and their dealers' attempt to sell more new cars. In the used car market, automobile manufacturers do not dominate, but the competition is the primary approach to satisfy consumers. Recent developments have enabled us to better understand the "underground world" of the auto industry. The used car market has evolved into a strategic and regulated priority market with its business model. It tells us how narrow the automaker's views are in fully understanding the used car market, which also prompts us to look at this field from an alternative perspective.

3.4 Car acquisition: Highly dispersed used car dealers

In the early time, private cars were mostly operating vehicles. In the inland areas

where the economy is less developed, a famous saying is that the private cars in early time were mainly illegally operated taxis, "the black cars". Because of the cost constraints, used cars have become the best choice for "black car" owners. As a result, the used car market has emerged. It is the origin of the used car market in most underdeveloped areas in China.

A typical case of the used car market in the East District, City A, China. City A located in the northwest of China. The used car market in city A first appeared in village B in the eastern suburbs. It was founded by the village committee to rent the collectively-owned land of the village community to the used car dealers. Village B is a typical village of ethnic group Han and Hui. Less than 300 meters from the village committee, there stands one of the famous mosque in city A, Mosque Y. The earliest merchants in this used car market also can be regarded as the founder of the used car market in city A, are those Hui merchants who returned to his hometown to work. Due to different living habits and some other reasons, it was difficult for the Hui people to work outside the home, and they returned to their hometown. At that time, this group of people was also known as the blind stream. In the present words, they are unemployed youth.

In the early 1990s, the earliest founders of the market were a group of migrant workers who returned home from the eastern coastal cities. They found that the purchasing power of local people was limited as they could not afford new cars, but they did have demand for cars, so the founders started the used car business. They contacted their fellow villagers who still worked in the eastern region and transported a batch of taxis that were mandatory scrapped in Shanghai to Xining. However, since there existed no qualified auto repair shops in City A, most vehicles were shipped back to City A as used cars after being repaired and modified in the neighbouring province^①. It was challenging to get a driver's license in the early 1990s. The first buyers of the used cars were mainly the veterans who retired from the military disarmament in the

^① From interview 8.

late 1980s. They bought these used cars for informal taxi operations, as mentioned above, the "black cars". The "black cars" then became the best choice for private owners due to cost advantage. It is consistent with the development approach in most underdeveloped regions.

After running a certain period of "black car" business, these veterans began to engage in used car repair and modification business. The business requires a place convenient for parking. Around 2000, it appeared a severe situation similar to the current that the car dealers occupy the sidewalks for operation as recalled by Mr. Wang, the interviewee, that on the weekend, from East Delingha Road to Huangzhong Road, all the sidewalks were blocked by the used car business. At that time, City A coincided with the implementation of the policy of creating a civilized city, and Village B faced tremendous pressure. Besides, due to the city development and some other reasons such as demolition, the level of economic development of Village B was gradually improving. The used car market has thus changed from the initial economic growth point of the village to the enormous burden that jeopardized the appearance of the city. Eventually, the land in which the used car market located was sold to local merchants under the dual role of city government planning and village committee's decision. A hostel was built on the site, and soon after, the hostel was renamed as a hotel. The hotel is still operating at the original location. A handful of used cars in the VW 4S store across the street seems to tell the past glory of the place.

Today, the used car market approved by the municipal government located in the industrial park in the East District of city A, which belongs to Town L, East District, city A, in terms of administrative division. From the earliest village B to the current industrial park, the used car trading market has undergone several constructions and transfers. It can be said that each time it is transferred outward because of the expansion of urban space. The used car market always located on the edge of the city, which is similar to the positioning of the used car market in the entire economic activity. The used car trading merchants in this area are complicated and can be divided into three

types: The first type is the dealers who operate in the government-approved used car trading market or in the government-approved ground parking lots; the second type is the merchants who rent stores on the main road in the above-mentioned areas, and park their vehicles for sale on the sidewalks in front of their stores and street parking spaces; the third type is those who take modified vans as places of business without physical stores. They use public spaces or roads on both sides to park vehicles for sale. One distinct feature that can be drawn from this is that a large proportion of used car dealers in the region operate in public places and sidewalks. The actual scope of the used car trading market is hence far greater than the area delineated by the municipal government for the above reasons. In China's unique economic and social environment, used cars are also regarded as a "bad door" in economic activities, on the edge of economic activity, and the edge of urban space.

The critical factor determining the structural characteristics of the used car industry comes from the purchasing IR of the industry. Different from the new car market, the source of used cars comes from the used car dealers who were collecting the vehicles from the market.

China's new car market and used car market are two separate markets, which stem from initial policy restrictions. The "Old Motor Vehicle Transactions Management Measures" promulgated in 1998 stipulated that transactions in used cars can only be carried out in the "old motor vehicle trading centre". This made it impossible for new car dealers to use the existing exhibition halls to sell used cars. In the old motor vehicle trading centre, leasing booths for business activities has no advantage for them, so the early new car dealers did not do the used car business. The undeniable connection between new car dealers and used cars is that they must accept the demand for used car replacement in the hands of consumers. After receiving replacement used cars, these new car dealers will choose to resell these used cars to used car dealers at the fastest speed. In the old motor vehicle trading centre, many second-hand car dealer companies are generally small in scale, and the funds for acquiring vehicles are limited. The

average number of vehicles acquired in one time is 4 to 5. This basic situation has created a unique institutional relationship in the used car market.

The purchase IR in the new car market based on a set of exclusive relationships between car manufacturers and new car dealers: an independent new car dealer can only represent a brand of new car sales; new car dealers are required to sell all models of its agent brand; automakers delineate exclusive areas for new car dealers. Such a purchase relationship exempted from general competitive legal norms shaped the primary landscape of the new car dealership industry. China's new car dealership industry has also established such an order. However, the used car market is different from the mature market, which the used car market has not become the freest business in the hands of new car dealers. On the contrary, it has become the business of others. At the beginning of 2000, JV of SAIC and GM established GM Xincheng used car company, hoping to enter the used car market through its dealers. However, due to the regulations at the time, used car transactions must be carried out in the old motor vehicle trading centre, so GM Xincheng used car company can only rent a booth in the old motor vehicle trading centre in Shanghai. Despite the quality certification advantages of car manufacturers, the used car business that cannot be placed in a showroom with new car sales has no advantage for new car dealers, so these businesses have not improved.

At that time, the second-hand car dealers were small-scale brokerage companies with small scale, low capital and low staff. They could only buy a few cars at the time of second-hand car collection. The large-scale, all-vehicle procurement model in the new car market has nothing to do with them. Therefore, the purchase IR in the used car market was also very different from that of the new car market. The dominant model in this field was the fragmented market transactions, which is an acquisition of old cars that are limited to the specific space of the old motor vehicle trading centre. In the 1990s and early 2000, private passenger cars were not widely used. The most used cars in this period came from state-owned enterprises, government agencies, private and foreign-funded enterprises. However, due to the restrictions on the "old motor vehicle

transactions management measures", these legal entities can only go to the old motor vehicle trading centre when selling their used cars. After the promulgation of the second-hand car circulation management method in 2005, the restrictions on trading in the old motor vehicle trading centre were cancelled, and the 4S shop system for new car dealerships was established. A new part of the proportion of used car sources has been the replacement used cars in 4S stores. However, even so, the attitude of new car dealers on used cars is still to sell as soon as possible, so as not to occupy funds, occupy the venue, which lead to losses. They still sell the used cars acquired in the replacement to the used car dealers in the old motor vehicle trading centre.

Compared with the exclusive purchase relationship of the new car market, the purchase relationship of China's old motor vehicle trading centre can be said to be a relationship in a fully competitive environment. Even so, auto parts that are necessary consumables for used car consumption are still associated with new car dealers and new car manufacturers. However, due to the existence of the "after-sales no matter" business transaction model, as an essential part of the maintenance and repair of automobiles, the business of auto parts does not necessarily have to be in contact with second-hand car dealers.

3.5 Self-employment: Alliance and monopoly in the market

The most significant feature of the employment and labour relationship in the used car market is self-employment, which is the characteristic of employment IR in the used car market. Unlike the dealers of new cars who hire a large number of sales force and managers, car dealers in the used car market are mostly self-employed.

These hundreds of car dealers in every old motor vehicle trading centre across the country can quickly form a "business gang", a de facto alliance that creates monopoly effect in market transactions. It allows them to obtain a relatively maximum benefit.

The formation of business gangs has gone through two stages. From the initial loose organization to the following interest group, the incentives for the formation of

business gangs may come from the occasional external pressure, or it may also due to internal reason such as the emerge of a leader of charisma. In the development of the used car market in city A, it was more like a combination of the two, that is, this group of merchants were under external pressure, and at the same time, some authoritative figures within the organization have led the birth of this group. In the "civilized city" campaign, under the requirements of city appearance renovation, City A demolished the used car market in B Village. Merchants who lost their main business premises semi-voluntarily relocated the used car market to a 5 km east away from the former place. In this relocation, the business gang was formed. The new trading market was originally a deep ditch in Village C, but it was unable to carry out agricultural production because of the formation of stagnant water in the rain. An extraneous businessman contracted the ditch from the village committee at a meagre price, and then pulled the garbage from several garbage disposal sites in the city to fill the ditch. Since the land was filled with garbage, it was impossible to grow vegetables or rice, so village C can only rent this land to the businessman. The businessman then seized the opportunity to lease the land to the used car market for operation.

The milestone in the formation of used car business gangs was the birth of used car trading companies. Because the used cars in City A were basically purchased from extraneous cities and shipped back to A City, this type of vehicle has a license issued after the transfer. From a policy perspective, a temporary license can only use for one month. If the vehicle does not apply for a license within the time, it will become an illegal vehicle. However, most of the local used car dealers are unable to sell all the cars within one month. As City A's motor vehicle management regulations become more and more strict, such violations will affect the sales of used cars. To solve this problem, some influential used car dealers registered companies and linked the used cars in the name of the company. In other words, previously, most of the used car dealers operated without a corporate entity. It is the real situation of the early development of China's market economy. Since at that time, the capital requirement for the establishment of a

company was cash paid rather than subscription, the used car dealers with insufficient funds were unable to create their own companies. Many of them affiliated themselves with companies with strong financial strength. They still operated separately, except that they applied the licenses for their used cars under the name of the company to which it was affiliated. The market price of the affiliation was RMB 300 per year. So why is this a key event for the formation of used car dealers? The reason is that the businessmen in the used car industry were relatively independent of each other. Although some of them had close contact, they were still trading on an individual basis. Moreover, their transaction behaviour was relatively simple, only buy and sell and there was no apparent division of labour or differentiated duties.

After the appearance of the affiliation, the used car operators were not only satisfied to earn money through buy and sell. At the same time, the gradual expansion of the market has further intensified the competition, and the market has forced used car dealers to seek new outlets. Under this condition, the dealers had only two choices: first, to seek market monopoly through various means; second, to enhance their competitiveness. The influential dealers in the used car market chose the two aspects at the same time. First of all, the dealers in the market began to form subgroups composed of different companies.

Mr. Xu: At that time, several bosses drank well-had tea together every night. They rented all the parking lots and set up a price. Parking fees of all the used cars on this site had to base on their price. Different people had different prices. The annual price which we took was the lowest.

Author: Then what is the price for the extraneous?^①

Mr. Xu: It was 20RMB per night for the extraneous, and 2000RMB per year for us.

Of course, this measure can only cover the regular trading places that charge parking fees. However, how to deal with the used cars near the sidewalks and roads, as mentioned above? For those that cannot be included in the system, the business gang

^① From interview 3.

tried to squeeze their living space by improving the service internally. Since then, the used car dealers in the group have had an apparent division of labour. The interviewee said that there were dealers who were paid a fixed salary to take care of the cars, which was to guard the used cars using a modified van as the place of business and park the van by the road. Some cashiers were responsible for negotiating the price between the dealers and the buyers and collected money. After the sale of the used car, there was a specific person to prepare for the license transfer and then passed it to the license issue specialist who queued for the buyer and experienced in dealing with the procedure of issuing the license in the vehicle administration bureau (VAB). The interviewee indicated that such "specialists" generally had some personal relationship with the VAB so that they could exempt from queuing and their requests could be immediately processed. After the license plate issued, there was a professional responsible for collecting and delivering the license plate to the buyer. Most of these services were free of charge. The process took no longer than one week. They even offered to expedite service if the buyer pay. However, according to standard procedure, if a buyer handled it by himself, including the time for preparing the materials, it would take at least half a month to get the license.

The example of the used car dealers forming a business gang does not represent all regions or the case of the old motor vehicle trading centre. However, it is logical for the used car dealers to form a certain degree of alliance against external competition and threats. After allying, the dealers will naturally seek to maximize their interests, while monopoly is a more reliable way of making profit, compared with efficiency improvement or disordered competition.

3.6 Poor After-sales: Used car labelled as negative

The most criticized point in used car trading is its one hammer commercial relationship. Once the used car sold, no matter what happens, it is out of contact with the dealer. The poor after-sales service is a portrayal of the commercial IR in the used

car industry. This model has forced a large number of consumers to turn to the new car market where they enjoy the security of the "warranty".

As mentioned above, in the early days of automobile development, when manufacturers had to face the "problem" of used cars, they regarded them as cars from crooked and dishonest channels in the automobile industry, as well as in the automobile sales market. In the Chinese language, "Second-hand goods" is not a good word, meaning something that others have used and left. In the pursuit of "ownership", "luxury" and "new" consumerism, the words "second-hand goods" and "used cars" themselves are stigmatized. In addition, most of China's used car market began to be active in the early 1990s, when most of the vehicles that flowed into the used car market reached age and mileage of scrapping. There was a huge gap in terms of quality and performance between used cars and new cars. Based on the factors mentioned above, "used cars" is treated as a derogatory term by public opinion and media.

It is also related to the perception of people at that time. A car is a durable consumer product. At that time, the unit price of a car is very high compared to the income. No matter a company or an individual owned the car, both parties would like to use the car as long as possible. Otherwise, they will not consider for sale to the used car market. Another possibility was the cars suffered accidents, the owner of which wanted to sell them as soon as possible. A large part of the media coverage of used cars was to remind consumers of the traps to avoid or to pay special attention to when buying used cars. The media repeated that it was impossible to get advantage from the dealers.

The accident vehicles and scrap cars accounted for a large proportion in the used car market at that time. So, when consumers who did not know the tricks came to buy a car, it seemed that they have bought with a meagre price, but after they drove the car home, they realized that the car could only work unless they overhauled the car. Moreover, often the cost of overhaul was higher than the price of buying a car, and they felt cheated. This kind of story has confirmed the prejudice against the used car market. At the same time, because of this prejudice, the cars in the used car market could not

sell at a reasonable price. Naturally, the owners of used cars with better conditions were also less willing to sell the cars to the dealers. Such a reinforcement spiral has confirmed the story of bad money expelling good money^①. However, what we have to see is that, in general, since consumers held the idea that a car should be used until scrapped, as a consequence, there were not many good used cars in the market.

In various media reports, used cars associated with transaction disputes, traffic accidents, and violations of regulations. Let us take a look at the news report below^②:

From 80,000 to 230,000 kilometres, who fiddled with the odometer?

It was a cold winter, Ms. Yang of Chengdu ordered a used car, paying a total of 40,000 RMB, including a deposit, vehicle insurance and license transfer expense. Ms. Yang knew little about the market or purchase details. After all the formalities completed, Ms. Yang drove the car home. "The car looks like a new one on the surface, but if you observe it closely, there are many problems." She then asked a friend who worked in the 4S shop to test the car, which made her dumbfounded: "First, the car bumper damaged and front light was faulty. Second, the vehicle identification code on the driving license was different from the number posted on the windshield. Third, the historical maintenance record of the car showed multiple accidents, and besides, when the car was repaired two years ago, it ran more than 230,000 kilometres, which was inconsistent with the 80,000 kilometres the boss introduced." Her friend told her that the car was almost completely replaced.

There were many problems with the used car Ms. Yang bought. On 25th January, Ms. Yang went to the dealers for an explanation.

On the same day, the reporter found that there were only a sales agreement and a driving license in the documents provided by Ms. Yang. According to Ms. Yang, the boss told her that she would have to wait for a while before they could give her the other

^① Akerlof G A. The Market for Lemons: Quality Uncertainty and the Market Mechanism[J]. The Quarterly Journal of Economics, 1970.

^② Guo, H. Used car trading carefully "stepping on the thunder"[N]. China Insurance News, 2004-02-27 (005).

copies, including the mortgage loan agreement. After several rounds of negotiations, Mr. Chen, the car dealer and Ms. Yang, began to argue with each other. During the quarrel, Mr. Chen told Ms. Yang that if the car had some minor problems, she could fix it at any time, but Ms. Yang felt that she had been cheated and it was not a problem of repair. However, the next words of the car dealer made her even more angry. "The mileage of the car may have been transferred." "Since you did not ask these questions when you bought the car, why should we say?" However, about the questions of Ms. Yang, the car dealer insisted that they did not juggle with the data. "Now that the car has been transferred to me. Still, I suspected that you adjusted the odometer!" Ms. Yang said: "Are you deceiving consumers like this?"

The quarrel became fierce, and finally, Ms. Yang called the police. Then the police came. After understanding the reasons for the quarrel, the police suggested that Ms. Yang call the "12315" hotline to make a complaint, or resolve it with the legal approach. Five minutes later, the security guards and the responsible person of the used car trading market came to the scene. Regarding the disputes and conflicts between the two parties, the responsible person said, "Now that the problem already occurs, we will actively negotiate and resolve it. I also hope that Ms. Yang can obtain the identification certificate from an authoritative appraisal and evaluation agency and take the legal approach then." This made Ms. Yang helpless and angry. She not only bought an old problematic car but also had to prove that the car was old and problematic.

The case above in the news media reflects the problems in the used car trading. The image of used cars in the minds of consumers is gradually shaped with the negative reports. The origin of the used car trading market from scrapped cars transactions, highly dispersed car dealers and the negative image from the media reports, have all hindered the development of the used car market in China. In another word, consumers do not dare set foot in the used car trading market.

3.7 Cash: The Financial Relationship in the Market

In the earlier days, the dealers in the used car trading market liked to carry a significant amount of cash to collect the cars. Once they saw a good car source, they would immediately request a cash transaction, and then went to the vehicle management office for license transfer. Cash trading is a prominent feature of the financial institutionalization in the early development of the used car market in China. Nowadays, it is a trend to promote zero down payment of financial loans in the new car sales. However, the penetration rate of loans in the used car market transactions is still extremely low. It is related to the highly fragmented market itself, in which a large number of used car dealers are unable to provide financial services.

<Traffic World>, a magazine of the 1990s reported that a consumer in Beijing often went to the used car market in Xuanwu District^①:

Once arriving at the trading market, he was surrounded by the dealers with a stack of 100 RMB in their hands, asking if he would like to sell his car. Car dealers have six or seven years' experience with cars, so they can estimate the value of this car when they pick up the car. They are the best at car beauty. No matter how broken the car is, as long as they think it is valuable, they can make the car clean and beautiful from the inside out. In fact, they only did the surface treatment, repairing the damaged parts of the car body through painting and sheet metal replacement, as well as cleaning the engine. However, they do not care about the internal faults. They will also adjust the odometer. The car dealer can give the consumer a zero-kilometre car of ten years old. Some car dealers even pretend to be car owners, but the fact is that most of the people in the used car trading market are car dealers.

The cash trading pattern is matched with the customer relationship of poor aftersales service. Due to the high proportion of scrapped cars and accident cars in the early used car market, used car dealers can avoid risks through this business model. Even car dealers with many years of experience can inevitably encounter some cars that

^① Sun, J. The secret of the used car market[J]. World of Transportation, 1997, (07): 38-39.

look good outside, but malfunction when they drive because precision components such as engines and gearboxes can only be ensured problem-free after dismantlement and close examination. Since there is no complete and comprehensive vehicle maintenance tracking system, it is impossible to trace whether a car has had an accident or how far it has been driven. Another advantage of cash trading is tax evasion. In China, used car dealers are required to pay a tax amount of 2% of the sales revenue, but if the transactions are between individuals, they are exempt from tax. Therefore, most used car dealers trade with the buyers in the name of their own so that they can avoid the 2% tax. Cash as an untraceable financial instrument is particularly suitable for this transaction model.

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The structure of the new car market is different from that of the used car market. The differences also occur in terms of institutionalized financial relationship. Since the new cars sold in 4S stores, it represents an integral part of the formal economy, on which the tax imposition is strict. At the same time, new car sales are supplemented with

quality insurance and maintenance services, 50000 kilometres in three years, or even 100,000 kilometres in five years. Therefore, new car sales have no particular preference for cash trading. Since 2009, the loan penetration rate of new car sales has increased stably. It can say that dealers of new cars increasingly dislike consumers to buy a car with cash payment or full payment. By taking a loan, the dealer can work with the bank or financial institution that provides the loan to earn a commission fee, which can help them offset the increasingly diluted profit margin of new car sales.

China's first auto finance company was SAIC General Motors Finance, which established under the approval of the China Banking Regulatory Commission in 2004. By 2017, a total of 25 auto finance companies opened, maintaining a pace of two establishments per year. The total assets also changed from 6.271 billion at the end of 2005 to 419.06 billion at the end of 2015, an increase of about 70 times in 10 years. At the end of 2015, the overall penetration rate of China's auto finance was about 35%, which is growing every year, but still at a relatively low level compared with the mature auto market.

3.8 Discussion: inferior and low-priced versions?

The used car market is not a low-priced and inferior version of the new car market, and in China, the new car market and the used car market are still two separate market spaces. The most important policy tool in the " Old Motor Vehicle Transactions Management Measures" promulgated in 1998 fundamentally shaped a special industrial purchase relationship, that is, used car transactions can only be carried out in the old motor vehicle trading centre. What does this mean? This means that under this IR, the connection between new car dealers and used car transactions is cut off; car manufacturers also separated from used car transactions; the attempt to enlarge the used car dealership company has also suffered setbacks from the beginning. The used car trading market has become a highly competitive market with thousands of car dealers.

Let us review the primary connotations of the four IRs that exist in the industry:

purchase relationship, employment relationship, financial relationship, and commercial relationship. In the used car market in China, what kind of IR is formed by the market order established by the fundamental institution of the old motor vehicle trading centre? The first is the institutionalized purchase relationship. Since any transaction can only be carried out in the old motor vehicle trading centre, this is an on-site spot transaction for most transactions, and competition is ubiquitous due to the large number of merchants in the market. At the same time, this system also excludes the participation of new car dealers, and their original carmaker certification and gorgeous new car sales showrooms have no use. It is a purchase IR occupied by fragmented used car dealers. Each used car dealer is small in scale and has few funds. However, all the used car dealers in the old motor vehicle trading centre have combined to form the vast majority of the market. Second, the financial relationship corresponding to the purchase IR showed the same fragmentation. The penetration of financial instruments here is shallow, even in today's used car market, the overall penetration rate of financial instruments such as car loans or leasing is still very low. Auto finance companies have gone to serve large enterprises and new car dealers, thus used cars do not dominate the mainstream. It is contradictory to the high financing needs of low-income people targeted by used cars. The root cause lies in the purchase IR that determines the structure of the market. Used car dealers are small intermediaries with few people, so it is difficult for them to connect with large auto finance companies. Therefore, the financial IR of the used car market is characterized by the mainstream of cash and the low penetration rate of financial instruments.

Third, the institutionalized employment relationship also exhibits the characteristics of the purchase IR – self-employed. The self-employed employment relationship is the most prominent feature of the staff structure in this field. Most of the salespeople who are active in the market are the bosses themselves. After accumulating experience in some small-scale second-hand car agencies, these so-called apprentices will also tend to open their own company. It is quite similar to the craftsmanship

characteristics of the employment relationship in the early European distributors, but the difference is that the Chinese case is more representative of the high frequency of personnel movement. It is precisely because the employees employed have a high tendency to stand on their own, so second-hand car dealers will try to reduce the size of the company's personnel, or cultivate employees among the relatives and fellow villagers. It is another feature of the employment relationship, which is the emergence of business gangs in the market. Initially, the temporary license for used cars required the company's qualifications to be processed. Therefore, the individual second-hand car dealers without the company's qualifications were all affiliated with second-hand car dealers of the company's qualifications. The business was still doing the same, sharing some service fees to the companies that were affiliated. It formed those different business gangs. For the more marginalized space of the used car business, a certain degree of ethnic monopoly has been discovered by a particular group of people, such as Japan's 'Pakistan' used car dealers^①. In the second-hand car entity market in northwestern China, the phenomenon of Muslim people gathering had formed, which had formed the structure of the business gang. Therefore, we can summarize the characteristics of the employment IR in the used car market in China, which is characterized by small-scale self-employment and the formation of the business alliance.

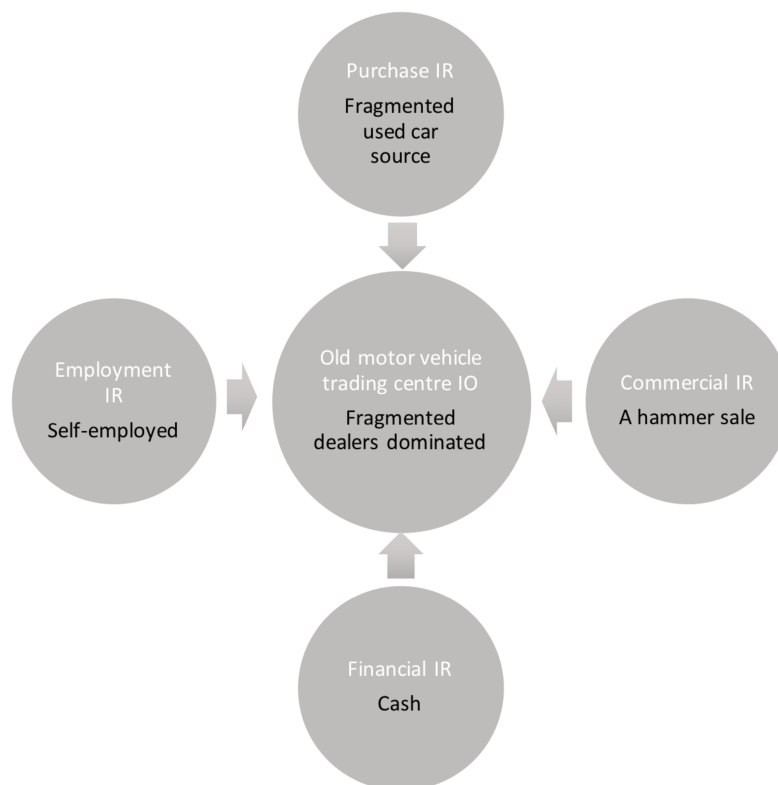
The last IR is closely related to the above three, and the commercial IR shows the characteristics of poor after-sales. Since used cars are durable goods for low-frequency trading, it may take several years for a single consumer to re-purchase after a transaction. Fragmented, self-employed, cash-operated used car dealers form a commercial IR of one hammer sale. It is also a significant source of criticism of the industry by consumers. In the early days, a large number of scrapped cars were returned to the hands of individual consumers by these one hammer sales. The larger the city, the stronger the

^① Fukuda T. Public Policies and Ethnic Entrepreneurs Dealing Used Cars and Car Parts from Japan to the Global Market: Focusing on Pakistani and South Asian Transnational Migrants[C]. Gerpisa colloquium, 2019.

heterogeneity, and the higher the possibility of strangers trading. Therefore, sellers and buyers in the used car market cannot establish a long-lasting personal relationship. Consumers cannot rely on the trust of car dealers to consume. They can only believe in their own eyes. The eyes are often easily deceived, and many of the main components inside the used cars that look new and shiny are already overwhelmed. According to the logic, the old motor vehicle trading centre was set up to overcome these drawbacks, but the fact is that the car dealers in the "road market" moved into the old motor vehicle trading centre, but the credit did not. The old machine can do an excellent job in supervision in the country. There are few old motor vehicle trading centres in the country that can do an excellent job of supervision.

From this, we can get the figure below.

Figure 3.1 IRs and IO of the used car market in China before 2005.



The IRs not only constrain the transaction subject in economic activities but also facilitate the occurrence of transactions. Under the conditions of the time, the old motor vehicle trading centre is similar to the flea market. It is a familiar trading model. Both

parties agree with such IRs, which in turn leads to the occurrence of transactions^①. The IO created by the above four IRs is completely different from the new car market. The purchase IR shapes the distinctive feature of the latter, that is, an order exempt from general competitive rules:

- to refuse to sell to any distributor that they had not chosen;
- to ensure that their sales outlets conformed to a certain number of norms considered essential to represent the make and, above all, to oblige their dealers to sell their entire range, to maintain guaranteed levels of inventory for spare parts and to offer service and repair activities;
- in return, carmakers offered a “territory” over which the dealer had a monopoly.

Obviously, in the new car market in China, the authorized dealership of automakers from Europe and the United States is entirely different from the IO of the used car market. It can say that they are exactly opposite. Therefore, we conclude that the used car market in China is independent! It is the Beijing municipal industrial and commercial administration department, the material bureau, and the public security bureau that shaped the market structure in the 1980s. These political actors established such an institution, and later, all the prefecture-level cities across the country have produced at least one old motor vehicle trading centre. It is the reproduction of the institution, which is the "construction of the market"^② and “the life and death of their institution”^③.

^① Jullien B, Smith A. Conceptualizing the role of politics in the economy: industries and their institutionalizations[J]. *Review of International Political Economy*, 2011, 18(3): 358-383.

^② Fligstein N. *The architecture of markets: An economic sociology of twenty-first-century capitalist societies*[M]. Princeton University Press, 2002: 36-41.

^③ François P. *Puissance et genèse des institutions: un cadre analytique*[J]. *Vie et mort des institutions marchandes*, Paris, Presses de Sciences Po, 2011: 39-77.

Chapter 4 Symbiosis: Subaltern System and Dominant System

After more than ten years of development since the end of the 1990s, the Chinese used car market, which is dominated by the system of the old motor vehicle trading centre, has formed a market order dominated by small-scale fragmented used car dealers and has also developed some more substantial, better quality used car companies. They still based on local used car transactions, but the quality of used car sources is significantly different from the average car dealers. Luxury cars, business vehicles, massive displacement, expensive used cars are their expertise. At the same time, with the promulgation of the "Used Vehicle Circulation Management Measures" in 2005, some of the new car dealers have also developed their own branded used car business, which is under the same brand with their new car business. None of these market participants trade in the old motor vehicle trading centre and have their independent car showroom.

If the old motor vehicle trading centre system is the leading system in the social-technical paradigm perspective, the brand-certified used car and chain used car companies outside the old motor vehicle trading centre are subaltern systems. The introduction of the social-technical paradigm here will help us better understand the dynamics and diversity of the development of the used car market in China, as the dominant system, subaltern systems and niche markets appear prominently in this field – that is, used cars E-commerce (see above, p.182). The social-technical paradigm concept from the technical paradigm was first used to explain that engineers tend to be specific to certain directions or process paths during product and process efficiency improvements (see above, p.54). Geels and Schot propose two criteria for distinguishing the dynamics of the transition path (see above, p.56).

Let us observe through empirical research how the dominant system of the old

motor vehicle trading centre in the used car market in China interacts with the subaltern systems of brand-certified used cars, chain used car companies and used car auction companies.

4.1 2005 “Used Vehicle Circulation Management Measures”

The "Used Vehicle Circulation Management Measures" promulgated in September 2004 has the following characteristics^①: First, the business entity of the old motor vehicle was clarified, and the acquisition activities of the old motor vehicle company were recognized. Article 6 of the "Circulation Management Measures" stipulates that: "The business entity of the old motor vehicle refers to the old motor vehicle operating company, the brokerage company, the auction company and the old motor vehicle appraisal organizations". The old motor vehicle operating company refers explicitly to "enterprise engaged in the trading of old motor vehicles (including automobile production enterprises and automobile sales enterprises)". In the eighth article, the old motor vehicle transaction is defined as "the old motor vehicle operating company acquired and engaged in the sales activities of the old motor vehicle", thereby recognizing the acquisition business of the old motor vehicle operating company. It can be seen from Article 6 that the "Circulation Management Measures" also recognizes that automobile manufacturers and new car sales companies participate in old motor vehicle trading activities. In the past, because old motor vehicle transactions can only be carried out in the old motor vehicle trading centre, none of the above entities can participate in the trading activities of used cars.

Second, the restrictions on the old motor vehicle trading venues were abolished. Prior to the promulgation of the "Circulation Management Measures", the business premises of the old motor vehicle brokerage company (intermediary company) must be

^① Yan D. China's old motor vehicle circulation policy issues and Japanese experience[J]. Japanese Studies, 2006, (2): 23-27.

established in the old motor vehicle trading centre designated by the administrative agency, and the brokerage company is not allowed to set up business premises outside the old motor vehicle trading centre. Article 10 of this "Circulation Management Measures" stipulates that the operation of an old motor vehicle operating company must have the following qualifications: 1. A fixed business premises is required. 2. Have the ability to acquire and sell old motor vehicles. 3. Have the ability to provide customers with after-sales service for used vehicles. 4. Provide customers with four qualifications such as identification of old motor vehicles, property transfer, handling of various insurances for vehicles, and taxation services. There is no geographical restriction on the operation of the old motor vehicle operating company, and in fact, the first restrictions on the old motor vehicle trading venue are abolished. In this way, the old motor vehicle operating company can set up a sales place outside the trading market designated by the administrative agency. At the same time, the new car sales company can also carry out the acquisition and sales of the old motor vehicle in its display room. At the same time, in order to diversify the market operation, the old motor vehicle trading centre can allow new car sales companies to set up sales outlets in the old motor vehicle trading centre so that the old motor vehicle market can sell not only old cars but also sell new cars.

Third, the functions of the old motor vehicle trading centre companies are clarified. The "Circulation Management Measures" promoted the transformation of the functions of the old motor vehicle trading centre companies. Previously, the operating companies of the old motor vehicle trading centre could also engage in the business activities of old motor vehicles, which could be the acquisition of old motor vehicles, as well as for the sale and purchase of old motor vehicles, intermediaries, auctions, and identification of old motor vehicles. This time, the "Circulation Management Measures" has divided the old motor vehicles market company with the old motor vehicle trading companies. Article 7 of the "Circulation Management Measures" stipulated that "the old motor vehicle trading centre is established based on regulations and provides centralized

trading places for buyers and sellers of old motor vehicles. However, the legal person enterprise of the old motor vehicle trading centre may not directly carry out the business activities of the old motor vehicle." In this way, the business activities of the acquisition, sale, intermediary, auction, and appraisal of the old motor vehicles initially allowed by the old motor vehicle trading centre companies were prohibited. However, the "Circulation Management Measures" did not issue the legal person enterprises of the old motor vehicle trading centre could or could not set up an old motor vehicle dealership company. This may not have been anticipated by the policymakers of the "Circulation Management Measures", or it may be the countermeasures that the legal person enterprises of the old motor vehicle trading centre may take in order to recover the benefits they are about to lose after the introduction of the "Circulation Management Measures".

Fourth, the possibility of automobile manufacturers and new car dealers participating in the establishment of old motor vehicle trading centre corporations and old motor vehicle auction companies has increased. Article 9 of the "Circulation Management Measures" stipulated that "the old motor vehicle trading centre must have the following qualifications: 1. Corporate legal person. 2. Comply with the relevant regulations of the development of the city and the commercial development of the city. 3. Can provide the necessary fixed places and facilities for the operation of the old motor vehicle. 4. Provide customers with an appraisal of old motor vehicles, property transfer, and various insurance procedures for vehicles." In addition, Article 12 also stipulates that "the old motor vehicle auction company must have the following qualifications: 1. Comply with the relevant provisions of the Auction Law. 2. There is a fixed auction site". As can be seen from the above terms, the procedures for the establishment of the old motor vehicle trading centre corporation and the old motor vehicle auction company are not as harsh as before, and severe restrictions have been cancelled. Such a provision is equivalent to allowing automobile manufacturers and new car dealership companies to participate in the establishment of old motor vehicle

trading centre corporations and old motor vehicle auction companies.

The "Old Motor Vehicle Transactions Management Measures" in 1998 and the "Used Vehicle Circulation Management Measures" in 2005 can be regarded as two distinct institutions.

Table 4.1 The comparison of two management measures in 1998 and 2005

	1998 "measures"	2005 "measures"
Old motor vehicle trading centre	Engaged with direct trade	Not engaged with direct trade
Old motor vehicle transaction	Only inside the market	Both inside and outside the market
Old motor vehicle trading centre entity	The committee of internal trade, industry and commerce and public security departments	Any qualified legal person enterprise
Number of old motor vehicle trading centre	Only one of each prefecture-level or above city	No limit

The comparison of the above two management measures can be seen as a process of institutionalization and deinstitutionalization.

Due to the two different regulations, there are two different IOs. The IO of the used car market corresponding to the 1998 "Old Motor Vehicle Transactions Management Measures" is a unique and monopolistic purchase relationship. All the used car transactions must be carried out in the old motor vehicle trading centre. C2C, B2C, B2B and other transactions must be traded in the space of the old motor vehicle trading centre, which in turn evolved an IO dominated by fragmented used car dealers. A hammer trading relationship, a cash-finance relationship, and a self-employed employment relationship formed a different IO (see above, Figure 3.1).

After the promulgation of the 2005 "Used Vehicles Circulation Management

Measures"^①, it broke the monopoly that used cars transactions must be carried out in the old motor vehicle trading centre. The critical purchase IR has changed, and the multi-channel and diversified purchase IR has been formed. That is to say, the supply of used vehicles in the old motor vehicle trading centre has competitors. In fact, who is the competitor? The actor who promoted the introduction of the "Used Vehicle Circulation Management Measures" in 2005 was the alliance of competitors. After 2005, the brand-certified used cars led by automobile manufacturers gradually emerged. Automakers are the promoters of breaking the monopoly of the old motor vehicle trading centre because they find that the regulation in 1998 is an obstacle for them to carry out the used car business. The interest alliance group, represented mainly by automobile manufacturers, has won the possibility of amending the "Old Motor Vehicle Transactions Management Measures". In the "Used Vehicle Circulation Management Measures" in 2005, the monopoly of the old motor vehicle trading centre for used car transactions was cancelled. It is the result of appeals to the Ministry of Commerce and other central ministries by the interest alliance group represented by the automobile manufacturers.^②

Before and after the promulgation of the "Used Vehicle Circulation Management Measures" in 2005, a large number of automobile manufacturers entered the used car market to establish their own brand-certified used cars business. At the same time, used car auctions companies and chains used car companies all poured into this field. In April 2005, Manheim Corporation of the United States officially opened an office in Shanghai and announced that it would soon establish a joint venture car auction company with a Chinese company. On June 25, 2005, Shanghai Xietong and Japanese second-hand car sales company QUINLAND jointly invested in forming the first used car joint venture company in China, Shanghai Xietong Used Car Management

^① <http://www.mofcom.gov.cn/article/b/g/200510/20051000518582.shtml>

^② Yan D. China's old motor vehicle circulation policy issues and Japanese experience[J]. Japanese Studies, 2006, (2): 23-27.

Company. On June 29, 2005, the first nationwide used car network company – Aipu used car was officially approved for operation. Aipu used cars born out of Yafei Automobile have established more than 130 chain stores in nearly 100 cities nationwide in 2005^①.

The 2005 regulation changed the 1998 regulation and opened a window. The used car market operation mode different from the old motor vehicle trading centre was born in this window, including brand-certified used cars and used car chain company, used car auction company. So can this process be seen as a process of adaptation or replacement in the MLP model^②? The change of regulations promoted by stakeholders has opened the lock of the dominant social-technical system. Some resources have been invested in the subaltern systems of brand-certified used cars, used car chains companies, and used car auction companies, occupying a particular share of the used car market. These new business models are called subaltern systems because they are not a substitute relationship with the dominant system but a symbiotic relationship. We will analyze each of them from the discussion in the following sections.

4.2 Subaltern Systems

The purchase IR in the new car market based on a set of exclusive relationships between car manufacturers and new car dealers: an independent new car dealer can only represent a brand of new car sales; new car dealers are required to sell all models of its agent brand; automakers delineate exclusive areas for new car dealers. Such a purchase relationship exempted from general competitive legal norms shaped the primary landscape of the new car dealership industry. China's new car dealership industry has also established such an order. However, the used car market is different from the

^① Liu W. Looking at the future trend of the used car market from the current market situation and policy trends[J]. *Automobiles and Accessories*, 2005, (40): 22-25.

^② Schot J, Geels F W. Niches in evolutionary theories of technical change[J]. *Journal of Evolutionary Economics*, 2007, 17(5): 605-622.

mature market, which the used car market has not become the freest business in the hands of new car dealers. On the contrary, it has become the business of others. At the beginning of 2000, JV of SAIC and GM established GM Xincheng used car company, hoping to enter the used car market through its dealers. However, due to the regulations at the time, used car transactions must be carried out in the old motor vehicle trading centre, so GM Xincheng used car company can only rent a booth in the old motor vehicle trading centre in Shanghai^①. Despite the quality certification advantages of car manufacturers, the used car business that cannot be placed in a showroom with new car sales has no advantage for new car dealers, so these businesses have not improved.

At that time, the second-hand car dealers were small-scale brokerage companies with small scale, low capital and low staff. They could only buy a few cars at the time of second-hand car collection. The large-scale, all-vehicle procurement model in the new car market has nothing to do with them. Therefore, the purchase IR in the used car market was also very different from that of the new car market. The dominant model in this field was the fragmented market transactions, which is an acquisition of old cars that is limited to the specific space of the old motor vehicle trading centre. In the 1990s and early 2000, private passenger cars were not widely used. The most used cars in this period came from state-owned enterprises, government agencies, private and foreign-funded enterprises. However, due to the restrictions on the old motor vehicle transactions management measures, these legal entities can only go to the old motor vehicle trading centre when selling their used cars. After the promulgation of the “used vehicle circulation management measures” in 2005, the restrictions on trading in the old motor vehicle trading centre were cancelled, and the 4S shop system for new car dealerships was established. A new part of the proportion of used car sources has been the replacement used cars in 4S stores. However, even so, the attitude of new car dealers on used cars is still to sell as soon as possible, so as not to occupy funds, occupy the

^① Liu W. Looking at the future trend of the used car market from the current market situation and policy trends[J]. *Automobiles and Accessories*, 2005, (40): 22-25.

venue, and thus lead to losses. They still sell the used cars acquired in the replacement to the used car dealers in the old motor vehicle trading centre.

4.2.1 Brand certified used car

Shanghai GM has launched the "Chengxin Used Car" brand since 2002, and its operations before 2005 were relatively embarrassing because it was not allowed to trade used cars in the showroom of the authorized dealers according to the "Old Motor Vehicle Transactions Management Measures". It is necessary to set up booths in the old motor vehicle trading centre for the sale and purchase of used cars. He Ping, the used car marketing manager of Shanghai General Motors Co., Ltd., expressed his understanding of the current used car market in an interview with *Auto and Accessories*^①. He said: *"The current used car market in China is still the traditional used car trading market. If only focus on the used car transaction volume, the overall volume of brand certified used cars only accounts for 3% to 5% of the total transaction volume, which is still very low. Many manufacturers only regard the used car business as a support tool for new car sales, and it is an embellishment of new car selling points. In fact, in addition to improving the residual value of vehicles and slowing down the rate of new car price reduction, the brand used car business is still a breakthrough for manufacturers to intervene in the downstream industrial chain of automobiles."* As can be seen from his discourse, the market share of brand-certified used cars is very low, which is much lower than the proportion of brand-certified used cars in mature markets.

He introduced "Chengxin used car" as an example: "In the second half of 2007, Shanghai GM launched the second-hand car certification business. At present, Shanghai GM's brand used car service system includes two large blocks, new car replacement business and certification business. Any new car replacement business can be done by any Shanghai GM 4S shop, and the second-hand car certification business

^① Li Y. I see the development of the used car market[J]. *Automobiles and accessories*, 2009, (11): 34-36.

requires Shanghai GM's authorization. Based on introducing and drawing on some advanced practices and experiences of GM's used car business, 'Chengxin Used Cars' has developed 33 professional technical tests in combination with the actual situation in China, and there are a total of 106 evaluation and testing standards for seven types of recycled used cars. At the same time, the original warranty of 1 year / 20,000 kilometre is also provided for the certified vehicles. These initiatives are relatively advanced in the industry. As China's auto market matures, it will form a situation where new car profits are getting thinner. If second-hand cars do not make money, dealers will shrink, which will inevitably affect the sales of the entire car brand. Shanghai GM 'Chengxin used car' certification business is becoming more and more evident with the intangible value of brand used cars."

In conclusion, brand-certified used car does not occupy a mainstream position in China's used car market. Their annual trading volume accounts for only 3% to 5%, but car manufacturers pay more and more attention to the used car business. The used car business is an embellishment and a selling point for automakers to upgrade their new car sales. Consumers will increasingly consider the value of the car in the used car market when buying new cars. At the same time, the existing used car business is also a pivotal link to retain the existing car owners, through the old car replacement and subsidies, the car owners will stay in the brand's consumption. For luxury brands, the sale of certified used cars can also help to open up the market space, providing consumers with limited purchasing power with more brand models within their budget. The used car business is an essential tool for automakers to extend their market penetration and is an important part of maintaining their customer relationships.

There is a symbiotic relationship between the brand-certified used car and the old motor vehicle trading centre. The most important reason is that the authorized dealer of the car manufacturer needs to receive the replacement used car of each brand in the customer's hand, but only their brand used cars can be sold under their brand certification. Therefore, the rest cars do not belong to their brand will flow to the old

motor vehicle trading centre.

The brand of BMW Approved Used Car was introduced to China in December 2005. In 2016, BMW held the second-hand car appreciation day in Shanghai. The standard of car acquisition included that car age must not exceed six years; the driving mileage should not exceed 120,000 kilometres; it must pass the BMW 100 professional technical tests; all use BMW original parts maintenance; complete vehicle repair and maintenance records. Besides, the brand-certified used car has an after-sales service guarantee system, such as BMW's second-hand car to provide 12 months or 30,000 kilometres of warranty commitments, and 7 × 24 hours BMW roadside rescue service standards are similar to the new car provides after-sales service.

Since the beginning of 2005, many brands have established their brand-certified used cars, such as "BMW Approved used cars" as of 2016, with 316 dealerships and seven used car centres nationwide. Also, the BMW Used Car Appreciation Day held in several cities across the country makes consumers have a one-stop shopping channel. The 2016 BMW Approved Used Car Appreciation Day in Shanghai brought together 200 used cars, which contain almost all models of the BMW and MINI brands.

As the first used car dealer in Shanghai, Shanghai Fande used car manager Jin Jun said in an interview with a financial reporter^①:

“As the early manufacturer of brand-certified used cars in China, BMW has been attracting more and more consumers' attention every year. Nowadays, with the acceptance of the concept of used cars and the improvement of the BMW used car system, more and more consumers are choosing to buy used cars.”

Duan Jianjun, vice president of BMW Huachen JV, said in response to a reporter's question:

“We believe that the development of new cars at high speeds in the past few years has indeed given the second-hand car market a significant opportunity for future development. With the rapid development of new cars, these new cars will be

^① First Financial Network 2016/06/07 reported <https://www.yicai.com/news/5024807.html>

transferred to the used car market in the next few years. The future development of the market, especially the luxury used car, of which we believe that the potential is still enormous."

He highlighted the model unique to BMW's selection of used cars in operation - the used car centre: *"The 4S store of the used car mentioned just now. We call it the used car centre. The first one BMW used car centre in April this year has been opened in Shenzhen. This used car centre is only for the marketing and sales of used cars. Its business is from accepting used cars, preparing used cars to finally selling used cars, including used car after-sales service, so it is overall a 4S store for used cars. The concept of a used car centre is an important pillar for BMW to carry out the used car business in the future. We are also the only one of all luxury brands to open a dedicated used car centre. The used car centre is more suitable for large and medium-sized cities with a relatively great demand for used car market in China. Why did we open the first one in Shenzhen? Because the Shenzhen market is very mature, it is more mature than other cities in terms of the concept of used car consumption. In the future, we will consider setting up a used car centre in Chengdu."*

He also explained BMW's positioning for the development of used car business:

"Another point to share with you. When it comes to the development of the used car market and the development of the new car market, it has a rule. The development of the used car market is a continuation of the new car market. Due to the rapid development of new cars in the past few years, after several years a group of car owners will consider buying a second BMW so that the first BMW may be sold. We have to provide an excellent platform and environment when they consider this idea. Like the place where the used car centre was just said, they were able to sell their beloved BMW cars to us with great confidence. We know our products best, including our used car centre and the qualification of BMW used cars 4S stores. After the acquisition of these vehicles, the identification of the vehicle conditions and the necessary maintenance of the vehicles, BMW's network is the most professional. We also have the responsibility

to take back their car and hand it over to the next customer in an excellent condition. So everyone can think of it as a perfect value chain, that is, the story of our new car selling is not over. We hope that after a few years, when the consumers consider changing the car, we can use the reasonable price and thoughtful service to help the consumers recover the car and perfect it to a good standard before transferring it to the used car user. This will ensure that BMW can guarantee its value, whether it is a new car or a used car."

It can find that in the BMW strategy, the used car business can ably fill the value chain gap of the new car business, and enhance the value of the new car business and maintenance business through the used car business. Duan Jianjun said:

"It is BMW that puts the new car after-sales service and used car into a complete chain and hopes to serve customers in this chain, to ensure that not only the products but also our after-sales service. Including when the customer wants to sell the used car, he will find that the maintenance and repairs that were previously done at the BMW authorized dealer are the second investment of the BMW vehicle. When we purchase the customer's BMW vehicle, we can repurchase at a relatively reasonable price, which allows customers to purchase a new BMW car with a higher preservation rate. In the first half of this year, we have a 'BMW quality repurchase' project. During the event, we will purchase BMW vehicles that have been used by customers for a certain period at a relatively high price. We have professional pick-up personnel and vehicle evaluation and appraisal services, which can provide customers with a one-stop solution. In other words, customers can rely on our BMW Premium second-hand car professionals to help them get everything done, including used car testing, identification, evaluation, reasonable purchase price, and vehicle transfer. The Beijing market has its own particularity, as well as the issue of vehicle license indicators and the problem of transfer. Our professionals will help customers solve all these problems and make the owners feel very relaxed. We do everything possible to provide customers

with perfect, thoughtful and caring service.”^①

In the strategy of automakers, brand-certified used cars are an extension of new car sales. As Duan Jianjun, vice president of BMW Huachen JV, said, they hope that the effect will be for BMW consumers, whose industry chain can cover car full life cycle. Through BMW approved used car business can help new car buyers to deal with the used cars they want to replace; it can help BMW new car consumers win back their investment in maintenance and maintenance; it can help young, entry-level consumers buy one affordable BMW used car, as to cultivate the habit of using BMW cars in order to transition to the purchase of high-end BMW new cars in the future. This is a set of logic that favours new car consumers, even though the topic of discussion has always been BMW used cars. Through the interviews with the car manufacturer's senior management, we saw the core of car manufacturers' vision for developing their brand-certified used cars – helping to solve problems in new car sales.

Mercedes-Benz Starelite is a luxury used car service brand of Mercedes-Benz China founded in 2009. The corporate function positioning is to provide consumers with used car replacement and brand certification business^②. If Mercedes-Benz consumers choose to buy used cars for Mercedes-Benz or replace a new Mercedes-Benz, the original vehicles will appear in the showroom of Mercedes-Benz dealers and be sold together with the new cars. In addition to ensuring high vehicle quality, Mercedes-Benz also offers a one-year warranty and additional value-added services for used cars. From the original intention of the establishment of Mercedes-Benz Starelite, the business of the used car closely related to the new car business. With the increasing car ownership and the damage to the Mercedes-Benz brand reputation in the market for low-quality Mercedes-Benz used cars, and the demand for old car replacement by Mercedes-Benz new car consumers, Mercedes-Benz decided to enter the used car

^① Aika Automotive Chengdu Auto Show Interview with Duan Jianjun, Vice President of BMW Brilliance Automotive http://info.xcar.com.cn/201109/news_301518_1.html

^② Liu J. Mercedes-Benz Starelite used car marketing strategy research [D] (Doctoral dissertation, North China University of Technology), 2015.

business, which is driven by the rapid development of new cars. At the same time, strengthening the used car business will stimulate new car sales.

Table 4.2 The condition for Mercedes-Benz Starelite used car business

Mercedes-Benz Starelite used car business promise include:	
Car age	No more than four years
Mileage	No more than 100 thousand miles
Next maintenance	More 5000 miles
Warranty period	12 months or 20 thousand miles
Free Road rescue assistance	12 months (24 hours)

As shown in Table 4.2, for the Mercedes-Benz brand certified used vehicle, through the above criteria, the high-quality used vehicles with good condition and no structural damage, and the vehicle age and total mileage less than four years and 100,000 kilometres are selected to enter the brand certification. In order to increase the reliability of the certification, Mercedes-Benz also introduced a third-party certification body, Decker Certification Company. Only vehicles that have passed all of the above links will be certified to enter the showroom for sale. In the after-sales service, Mercedes-Benz Starelite has provided a 12-month or 20,000-kilometer warranty period and one-year road rescue assistance.

Mercedes-Benz Starelite used car company will subsidize used cars consumers. The subsidies for used cars are divided into cash subsidies, insurance and boutique accessories. For replacement customers, the manufacturers will give certain subsidies according to different models. The replacement vehicles will enjoy additional discounts for new or used cars, and in addition to cash discounts, commercial insurance and auto parts will be given along with the vehicles.

So what is the symbiotic relationship between brand-certified used cars and the system of the old motor vehicle trading centre? The critical point is that the brand-certified used cars opened by auto manufacturers can only sell their brands of used cars,

but the cars in the hands of consumers who come to replace the vehicles are all brands, so in order to promote the sales of new cars, brand-certified dealers also have to accept used cars that are not their own brands. For the treatment of these used cars, the brand-certified used car company who choose to sell to the dealers in the old motor vehicle trading centre, the sooner, the better, not taking up funds.

Che Win Company is a company that provides licensed car dealers with used car customer management and used car auction systems, serving more than 7,000 4S stores. The starting point of its founding was to help the 4S store manage the replacement used car source. Because if this business is left unchecked, it is easy to generate collusion between employees in 4S stores and used car dealers in the old motor vehicle trading centre. The employees in the 4S store will guide the consumers who come to 4S store to replace their used cars to the other used car dealers in the old motor vehicle trading centre, and acquire the used cars at a higher price than the purchase price of the 4S stores. This situation has been widespread in car 4S stores across the country, which will lead to a reduction in the used car business of 4S stores, especially the well-maintained, high-quality used cars are more sought-after by those used car dealers in the old motor vehicle trading centre.

Interview questions^①: Do you help 4S stores to optimize their processes and manage the replacement used car business?

General Manager Wu replied: Yes, through the store process management system we created, we can record information from the customer to the store and its replacement vehicle. This will prevent 4S store employees from introducing this car source to the other used car dealers. The managers of each 4S store have contact information for local used car dealers. When we did not have our system, they could privately introduce the business to the used car dealers, so the 4S shop owner lost.

Interview question: Is the 4S shop owner not interested in this part of the business, so they did not care before?

^① From interview 9.

General Manager Wu replied: They may not care about it before, and certainly cannot do it now. If their second-hand car business do not work, it will affect the new car sales business. If a customer sells his used car to a used car dealer, he may not have to buy your new car. He has more choices because his used car has sold already.

Interview question: How do you deal with the replacement used car in the 4S store through your system?

General Manager Wu replied: Some 4S stores have their own brand certified used cars, so the car with good quality, they will keep selling themselves, and other cars with other brands sold through the used car auction platform in our system.

Interview question: Who are they sold to?

General Manager Wu replied: They sold to local or national used car dealers. Our auction system is for used car dealership companies across the country. We extract a portion of the commission from these transactions, which is the primary source of our current revenue.

As can be seen from the interviews, 4S store bosses now generally value the used car business, but they do not expect the second-hand car business to bring them much profit, instead they hope that the smooth operation of the used car business can help them sell new cars. By accepting used cars in the hands of consumers, they lock consumers and motivate them to buy new cars. The brand certification of used car manufacturers is based on the network of new car dealers authorized by them, so the logic of operation is the same. The core of its logic is to give priority to new car sales, and the used car business is the lubricant for new car sales. In addition to the high-quality used cars of their own brand, other used cars that are replaced in the eyes of these authorized dealers are the trouble of taking up funds, not the source of profit, and selling them as soon as possible is the best choice.

Guansong Group is a multi-brand automobile dealer group centred on Shanghai. The Guansong Group has 4S stores authorized by many automobile brands such as Toyota, Daimler Benz, Audi, Volkswagen and BMW. Deputy General Manager Yao is

responsible for the management of the Group's sales.

Interview question: Does the used car business account for a large proportion of all businesses?

Yao: How to say? The used car business accounted for a small proportion, and the used cars that we replaced were basically processed as quickly as possible. In addition to Mercedes-Benz, Audi, these luxury brands of used cars will stay and sell by ourselves. These luxury brand car manufacturers will give us subsidies, a Mercedes-Benz for a subsidy of 10,000 to 20,000 RMB, an Audi car for subsidy of 10,000 RMB.

Interview question: Can these used cars bring profits?

Mr. Yao: In fact, the profit of the new car is also very low. In addition to the profit of the luxury brand, other economic brand models are not too profitable and used cars also. Therefore, in addition to these luxury brands of used cars, other brands of used cars are sold as quickly as possible^①.

Only luxury brands of new and used cars can bring considerable profits to authorized car dealers! This may be a self-protected way of talking like a businessperson, not inclined to be honest about his lucrative profits, but rather to talk about areas that make their losses or meagre profits on their balance sheets. However, as a multi-brand authorized car dealer group, its advantage lies in the fact that it can compare the differences between different brands and different grades of positioning models, and compare new and used car business from more aspects.

4.2.2 Chain used car dealer

The development of China's chain used car companies has so far been a failure case, the most typical of which is Aipu used cars. Aipu used car brand is owned by Beijing Aipu Old Car Management Co., Ltd. It is the first pilot enterprise of used car

^① From interview 10, 30/09/2018.

operation approved by the government on April 15, 2005^①. It is committed to building China's Aipu second-hand car chain operation network with chain operation as the organization form, integrated second-hand car acquisition, sales, maintenance and preparation, quality assurance, customer service and other functions as one. It integrates new and old car replacement, auto credit, car auction, car rental and many other business methods. However, having dozens of franchise chain stores in the country at most, such a chain of second-hand car companies that have been highly anticipated in the past eight years of hard work in 2012, eventually lost business in China. There are still several franchise stores in the country that continue to operate, but the chain network has ceased to exist.

This chain used car brand originated in Yafei Group in Beijing. In 2001, Yafei Group was the first institution to engage in used car finance. It began to do second-hand car staging financial business but had to terminate this used car financial business due to problems such as overdue bad debts. Around 2003, Yafei Group established a joint venture with Japan's Shuangri Trading Company and Japan's third-largest used car company, Apple Used Car, to introduce the second-hand car chain model to China. Japan Apple used car management philosophy is to provide customers with: transparent assessment, high-quality acquisition, quality assurance, brand service through a transparent and fair evaluation system and humanized service specifications, thus establishing a scientific and complete used car operation service system.

In 2005, the management concept introduced by it was quite advanced and unique to the Chinese used car market. The three major handcuffs – quality assurance, evaluation systems and online trading platforms – were not available to other car dealers who were engaged in used car operations at the time. The strategic goal of its investment management is to set up 1,000 direct or franchise stores in 300 cities nationwide by 2010, with 80% of franchise stores as the reference ratio. According to the different conditions of the Chinese market, Aipu used car planed five levels: flagship store,

^① <http://news.sina.com.cn/o/2005-06-29/16536303020s.shtml>

centre store, large store, standard store, small store. Aipu used car hoped to establish a second-hand car entity management network: in accordance with the unified business philosophy, the use of direct or franchise combination, to provide support for franchisees with trademarks, trade names, used car resources, business management technology, Internet trading platform. The profit plan of Aipu used car franchise stores, and direct sales stores was derived from the acquisition and sale of used cars, parts supply, maintenance of used cars.

Han Ningping, vice president of Aipu used cars, said in an interview with "Automotive and Accessories" magazine^①: *"In 2005, the country began to encourage the development of the used car industry. The used cars officially entered the market in the name of 'commodities'. The landmark event was in 2005 the formulation of the 'Used Vehicle Circulation Management Measures' and the subsequent formulation and revision of several laws and regulations, which have promoted the development of the used car industry in China. Two points in the development of used cars in China have been restricting the rapid development of the used car market. First, the inconsistency of local policies makes it difficult for the used car industry to form resource circulation, and it is challenging to promote the faster development of the used car industry. Second, the four forms of transactions stipulated by the policy are not balanced. The forms of brokerage and personal transactions have developed better and faster, while the forms of distribution and auction have not progressed so far, mainly due to the influence of tax rates and consumer perceptions. Therefore, at present, the used car market in China is still dominated by brokerage companies, but it is limited by the operating conditions and cannot meet the development of the automobile market and the needs of individuals. As a result, it has created operational integrity issues in terms of quality and price. In addition, due to the vast difference in the operating policies of used cars around the country, the imbalance in development has hindered the circulation of used car resources nationwide."*

^① Li Y. I see the development of the used car market[J]. Automobiles and accessories, 2009, (11): 34-36.

Han Ningping pointed out that a key factor hindering the development of second-hand car chains is the different tax rates for different business entities of used cars. If the second-hand car business entity is an individual or a brokerage company, it can basically be traded by transferring the used car in the name of the individual, that is, the form of transaction between individuals does not generate VAT; the difference is that second-hand cars that are traded in the form of used car auctions and distributions, the chain used car companies or used car auction companies that are the subject of the transaction are subject to a 2%-4% VAT. The average gross profit margin of trading in the used car market in China is also 7% to 8%, which shows the difference in competition between different trading entities.

“Since the establishment of Aipu used car in 2005, there are currently five direct used cars stores in Beijing, and 36 franchise stores nationwide, providing high-quality branded used car services to second-hand car consumers nationwide. After years of practice, we found that the operation of the Chinese used car market was not as easy as it was originally expected. In Beijing, Aipu used cars is the only used car company operating outside the old motor vehicle trading centre. This shows that our strength is fragile. For various reasons, the operating cost of Aipu used cars is too high. At the same time, the current consumption concept of the used car market in China has not been properly guided. Consumers pay more attention to price than service, which makes the development of Aipu used car service difficult. The development direction of the used car market in China is the same as that of the used car market in developed countries, but it has obvious Chinese characteristics. In fact, the used car market in developed countries was also embarking on a path of healthy scale development from ‘non-standard’ to ‘norm’, from untrustworthy to honest, from disorder to order. In the process, our recommendations are: First, the national policy requires to create a fair market environment, especially in terms of taxation. Secondly, in terms of the market environment, operators should be self-disciplined, increase investment, cultivate customer loyalty, and guide consumers to the correct concept of second-hand car

consumption. Furthermore, the operating policies of used cars in various places should be unified.”

Although it is impossible to determine the key reasons why Aipu used car company finally withdrew from China, the tax rate problem, consumption habits, operating costs and price sensitivity mentioned by Vice President Han Ningping are all obstacles to its development. He has summarized these obstacles into Chinese characteristics. The dominant old motor vehicle trading centre system caused by the IO unique to the used car market in China has locked in most resources, and the scope of application of policies and regulations is delineated. The 2%-4% VAT payable by the operating entity in the used car transaction is the tax rate applicable to general merchandise. However, in the old motor vehicle trading centre, all the tax collection links can be bypassed by storing used cars under the name of the individual. In turn, a competitive advantage has been formed. Under such a competitive environment, chain used car companies have finally withdrawn from China.

Compared with the development obstacles encountered in the used car market in China, the development of the chain used car business in the United States has entered a virtuous circle. In the United States in the late 1980s, there was a huge turmoil in the automobile dealership market. The source came from the emergence of a group of professional large-scale chain used car brands. By changing the less formalized used car trading model that has been used in the past, these companies have found business opportunities that car manufacturers ignore. For the development of chain used car dealers, there is an identical background, that is, many restrictive policy norms of the new car market have not appeared in the used car market, and the development of the overall car market has stagnated. The size of the used car market is much larger than the new car market. The size of the new car and used car is stable at a level of 2.5:1. Selling a new car means that 2.5 used cars are traded. The success of these chain used car dealers was related to several changes at the time. On the one hand, car manufacturers extended their warranty period, the car itself became more reliable and

durable, and the quality of used cars was significantly improved. On the other hand, the price of new cars has risen relative to family income. In 1979, the price of a new car was equivalent to 18.1 times the median monthly income of American families. By 1996, this indicator had risen to 27.5 times^①.

The market competition environment at that time was also conducive to the success of new entrants. There were only two main ways of trading used cars, that was, through small advertisements directly from the seller to the buyer; or it was through the sales network of 23,000 new car dealers to trade, which was similar to the new car 4S store model in China, in addition to the network of 63,000 independent intermediaries. The former's focus was mainly on new cars, and the latter's goodwill in the eyes of consumers was problematic, which created opportunities for new entrants. In 1996 and 1997, a large number of high-quality used cars were put into the market. Since the car rental market broke out in 1996, it quickly occupied 25% of the sales of the new car market. In 1996, there were 1.7 million vehicles in the rental market. In 1997, it reached 3.1 million vehicles. In the following two years, these vehicles appeared in the used car market, which provided new entrants with business opportunities.

CarMax was born in such a market environment. It became famous in 1996 and became a pioneer in the innovative model of automobile supermarkets. The automobile supermarket can provide quality assurance for used cars, the price is transparent and not counter-offer, and the sales personnel are based on customer satisfaction as the evaluation standard rather than the sales performance of the car. CarMax's parent company is a home appliance retail giant. The combination of the business methods in the field of home appliance retailing is applied to the used car market. Four factors are considered to be the secret of its success: large-scale advertising, recruitment and incentives for sales personnel, financial management experience and services, and strategic measures for maintenance. The first CarMax store opened in 1993 and

^① Bernard Jullien. *The Second-Hand Car Market As A Form of Resistance[M]*// *Alternative exchanges: second-hand circulations from the sixteenth century to the present*. Berghahn Books, 2008: vol 10.

transformed into a nationwide company in 1996. Consumers can see between 500 and 1,200 cars in each of its stores, with an annual sales target of 3,000 for each store.

In addition to CarMax, there are Driver's Mart, HPR Automotive Superstore, Ugly Duckling and Smart Choice, both of which are imitators of CarMax. Driver's Mart was founded by many major auto retailers and its corporate strategy is similar to CarMax. HPR Automotive Superstore is focused on building small-scale car supermarkets for small towns of 100,000 people. The strategy of Ugly Duckling and Smart Choice is to sell used cars to low-income people and provide loans, and cheap used cars are combined with high-end car loans.

Republic's strategy was to adopt vertical integration. After acquiring two large car rental companies to enter the market, the group would continue to purchase auto retailers. In this way, the replacement vehicles and the used cars that the car rental company replaced each year can be obtained through internal channels, which became the main source of used cars in the Republic automobile supermarket. After each car was bought by the company, it can be sold in three or four channels of the Republic, and can be rented out. It can also maximize the benefits through the consumer loan interest and maintenance services throughout the life of the car. Republic actually seeks to maximize its revenue on every car it gets from a car manufacturer. To achieve this goal, Republic had established its own brand and physical store in 50 different regions across the US market, while streamlining its supply chain system and establishing a holding company to provide centralized financial services. In addition to the economies of scale, such a system can protect itself in the cyclical downturn of certain individual domains. The group president pointed out in 1997 that history shows that the decline in new car sales is often accompanied by the growth of used car sales. As a result, for Republic, a stable or monthly return can be achieved if the economy declines or does not decline.

Not all of these companies have survived in the 21st century, but at least they have achieved temporary success. The dynamism in the US used car market also shows that

the car manufacturer's neglect of the used car business can only prove its own limitations. Then, a problem naturally emerges: Why is the chain used car business successful in the United States, but has failed in China? The obvious difference is the degree of development of the car rental market and the huge difference in tax rates for Chinese used car sales. Beyond this, China's market is characterized by the existence of a second-hand car entity trading network consisting of more than 1,000 old motor vehicle trading centres across the country. The institutional structure constructed by this dominant system is both thick and powerful! In this system, most of the resources are locked in. The relevant regulations in this field are centred around the dominant system and are built and reproduced from the starting point.

4.2.3 Used car auction company

In April 2006, Shanghai Manheim Guopai Motor Auction Co., Ltd. was established. It was jointly invested by Manheim (China) and Shanghai Guopai. It is the first joint venture company in the used car auction industry, and Manheim held 60%. Since one is the world's largest car auction company and one of the largest auction companies in China, the joint venture company has been hailed as a strong team. At the time, the two sides said that they were optimistic about the future of the used car market in China. Because used cars sold in the United States through auctions account for about 23% of the total used car transactions, in some countries it is as high as 50%. China's used cars sold through auctions were less than 1% of the total, and the potential is huge^①.

However, after three years of operation, the American auction company Manheim has quit since three years after entering Shanghai. Manheim withdrew from Shenzhen in 2008, and the Beijing joint venture, which was opened in 2008, is still operating, but it is also in poor condition. Founded in 1945, the American Manheim company has

^① Jing Y. The world's largest car auction house withdraws from Shanghai [N]. China Business News, 2009-12-31 (006).

handled more than 9 million vehicles a year, with global annual sales of \$50 billion. In the United States, Manheim uses advanced online auction platforms and satellite information synchronization transmission equipment and other advanced used car auction technology products to provide a full set of auction services for users of 115 auction sites around the world. However, why is the international used car auction giant in China failed?

After establishing a joint venture company in Shanghai in 2006, Manheim also established the Manheim China Merchants Corporation in Shenzhen. In 2008, it established a joint venture named Manheim Baic used car auction with Baic Group in Beijing with a 60:40 shareholding ratio. According to informed sources, Manheim exited the Shanghai market because it was not worth the loss. It is reported that in the first year of its opening, it almost used up more than 1.6 million US dollars of registered capital. On the one hand, the market environment and policies were not supported, and the source of used cars was small; on the other hand, Americans liked to invest heavily and the cost was too high. The auction site of Shanghai Manheim Guopai Motor Auction Co., Ltd. was covering an area of more than 50 acres and a construction area of about 3,000 square meters. The average auction company only needs four or five people and does not need too many fixed venues.

In addition, B2B and B2C businesses were not good because the used car auction has not formed a climate in the used car market. At present, companies that only do used car auctions were basically in a state of low profit. Globally, there are 65,000 dealers in the Manheim company, and its main business model is “B2B”. The principals of the auction vehicles are mainly automobile manufacturers, car rental companies, government departments, etc. The main buyers are automobile brokerage companies, and the buyers refurbished the vehicles and then sold them to consumers. Automobile manufacturers recycle old cars by “trade in”. The leasing company is also constantly introducing new products in car replacement. In China, there are very few such large-scale replacements. The after-sales service of automobile companies is mainly

concentrated on new cars, and most of the buyers of used cars are consumers.

Jiang Bin, deputy general manager of Shanghai Manheim Guopai Motor Auction Co., Ltd., told the reasons why used car auction companies can't make profits^①:*“At present, the used car market in China can be said to be deformed. why would say this? The brokerage company should be an intermediation act, and the earning should also be the agency fee. For example, real estate brokerage companies are intermediary companies that do not participate in direct transaction activities. However, in China's used car market, brokerage companies are directly involved in used car transaction activities, which is very irregular. In addition, although China's implementation of third-party used car testing, seemingly fair ‘third party’, there is no justice. The results of different third-party testing agency evaluation reports (car prices) are completely different, and the fees paid vary widely. At the same time, there is no supervision by the authority of a third-party testing organization, and such test results are even more unconvincing.”*

He continued: "In the world, whether it is the American model of the market or the Japanese model of the market, auctions are one of the most important forms of used car transactions, and are based on the B to B model. For example, in the United States, used vehicles traded through auctions account for 55% of all used car transactions. In China, the auction model has not been fully accepted, and used vehicles traded through auctions account for only 1% of all used car transactions. Why is it so different? This is because the market environment of used cars in China makes it difficult for us to expand our business, mainly because there are fewer vehicles. At present, our auction vehicles come from new car dealers, vehicle manufacturers, leasing companies and official cars. It is completely different from foreign auctions. Due to insufficient supply of vehicles, we have also developed B to C and C to C modes. For various reasons, it is difficult for us to make a profit. The unreasonable taxation of used car circulation is a big reason. For the auction company to charge 4% of the value-added tax is the highest

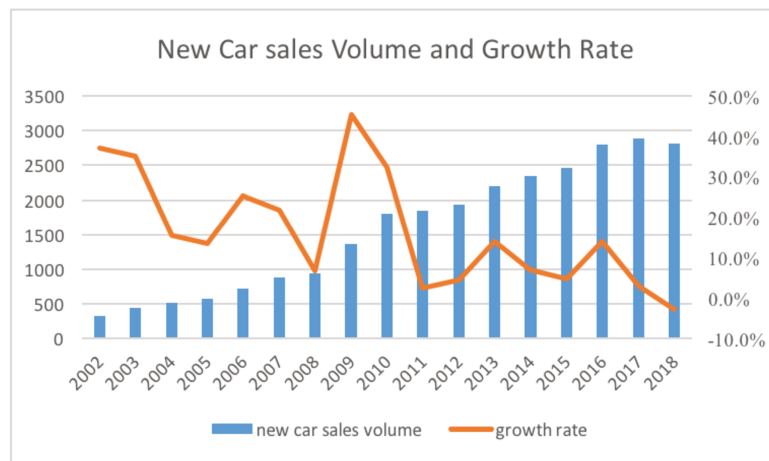
^① Li Y. I see the development of the used car market[J]. Automobiles and accessories, 2009, (11): 34-36.

among all the used car operators. At first, ‘Manheim Guopai’ also paid VAT, but it could not bear this tax at all. Therefore, all the vehicles currently auctioned are still going to the corresponding brokerage company to handle the relevant procedures.”

Traditional used car auction companies cannot survive because of the lack of vehicles and high taxes. Most of the individual used vehicles are collected by the fragmented used car dealers in the old motor vehicle trading centre. The market share of the replacement vehicles in the leasing companies and new car dealers is very small, and also accustomed to selling these vehicles through used car dealers. Second-hand car dealers in the old motor vehicle trading centre can enjoy nearly zero tax treatment for used car transactions. In terms of taxes and fees on used car transactions, the competitive disadvantage of used car auction is too great to compete effectively and be profitable.

4.3 The biggest variable in the Chinese used car market: Car Ownership

Figure 4.1 New Car Sales Volume and Growth Rate in China



China's auto sales increased rapidly from 2001 to 2010, with an average annual growth rate of 24%; from 2010 to 2017, the average annual growth rate was 5.7%; in 2018, it was down 2.76%, the first negative sales growth since 1990. Since China’s car sales exceeded 10 million units in 2009, it has maintained its number one position in the world for new products for 10 consecutive years. This is a phrase that Chinese auto

industry practitioners often hang on their lips to express the huge scale of the Chinese auto market. Since 2002, we can see that the sales volume of new cars is only 3.25 million units. By 2009, it has grown to 13.64 million units. In 2010, it reached 18.06 million units, with an average annual growth rate of 24%. From 2010 to 2018, although the growth rate of new car sales has dropped to an average annual rate of 5.7%, the total number of new car sales is still rising, and it has dropped back to 28.08 million in 2018^①.

Figure 4.2 Used car trade volume and growth rate since 2000 in china

^① The data has been compiled from the China Automotive Industry Association over the years.

Figure 4.3 Used car trade volume and growth rate since 2011 in china^①

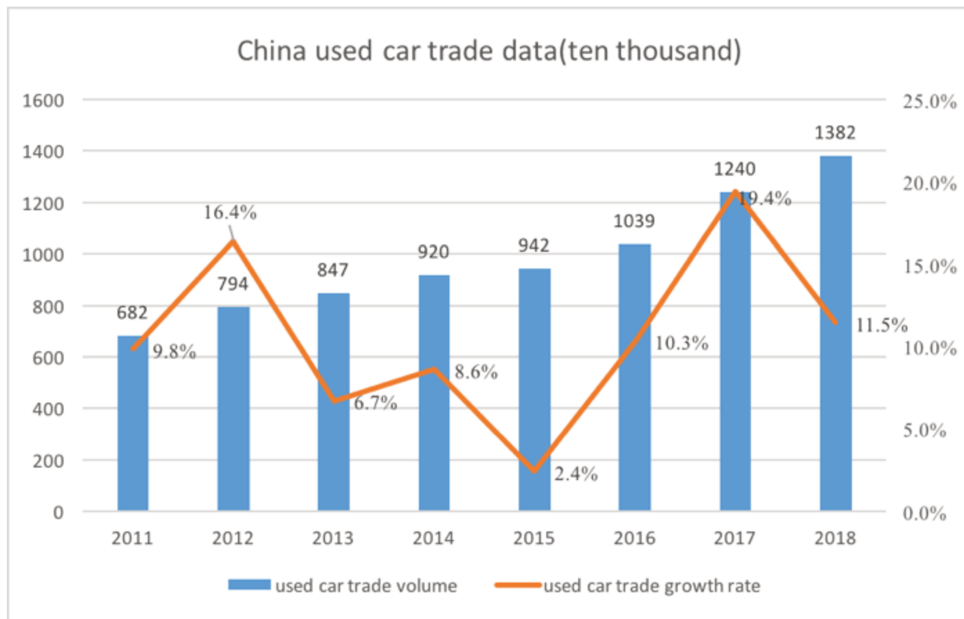
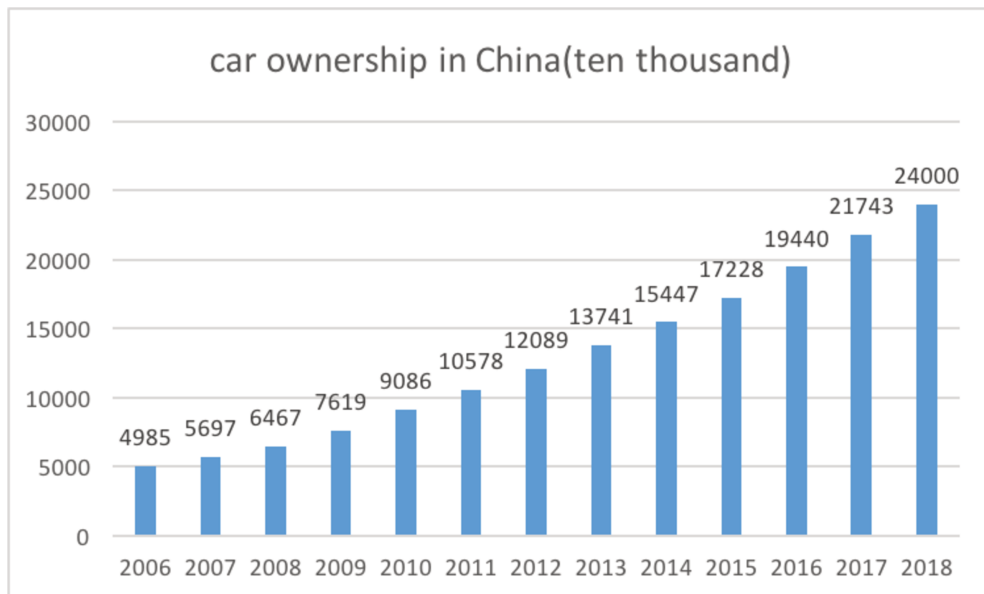


Figure 4.4 Car ownership in china since 2006



Regardless of whether the growth rate of new car sales slows down or not, the growth of car ownership is certain. From 2006 to 2018, the number of cars increased from 49.85 million to 217.43 million in 2017 and 240 million in 2018, an increase of 4.8 times in 2006. The important development factor of the used car market lies in the

^① The data comes from the China Automobile Dealers Association. The statistical caliber changed around 2011. Before 2011, it was based on the data of 600 old motor vehicle trading centres nationwide. After 2011, it was the overall data of all markets.

scale and structure of the car source. From 2006 to 2018, the car ownership has increased by 4.8 times, and the source of used cars has also expanded significantly. The scale of used car transactions has also experienced rapid growth, from less than a million transaction at the beginning of the twentieth century to a total of 13.82 million in 2018, and the transaction size has expanded more than tenfold.

After the scale of the transaction expanded, the average age of the transaction continued to decline, and the corresponding transaction price also increased. From the data, it can be seen that the proportion of used car transactions within 3 years is getting bigger and bigger, and the average transaction price of used cars is rising. From 46,200 rmb in 2010 to 62,200 rmb in 2018, although there are ups and downs in the middle, but the overall trend is rising, which is related to the reduction of the age of used car trading. As the age of used cars grows, the expected transaction price in the market will also go down. Conversely, the reduction in the age of used car trading will also increase the transaction price of used cars.

Figure 4.5 The national used car trade average price (2000-2018)

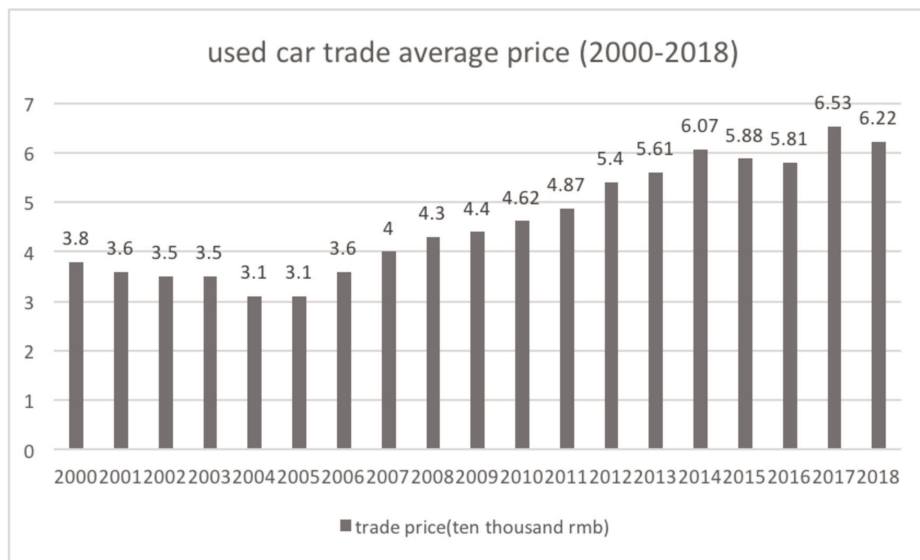
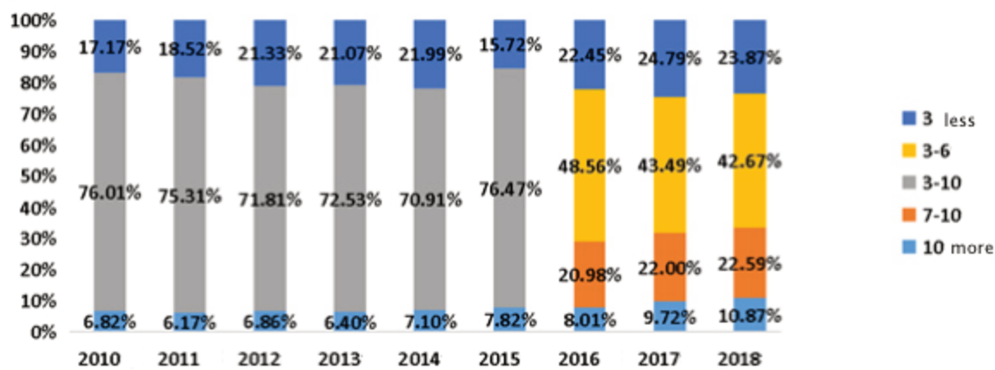


Figure 4.6 The proportion of different trade age for used cars in China (2010-2018)



So why is the size of the used car market growing nearly 10 times? Why is the transaction price of the used car going up? The age of the trading vehicle declined? If the used car market only has the single character of the lemon market that Akerlof^① discussed in 1970, why should used cars with higher prices and shorter ages continue to be traded in this market? What can be seen is that the expansion of the market scale is not a single-scale expansion, but also changes in internal structure. The proportion of used cars with better quality, shorter ages and higher expected prices is also expanding. The structure of the used car market in China has completely changed! It is no longer a scrapped car transaction! This can be attributed to the establishment of the old motor vehicle trading centre institution, which is this institution to curb the transaction of scrapped cars and illegal vehicles. Later, the transactions in the used car market gradually shifted from the mode of low quality, long driving age and accident vehicles to the trading mode with priority for low-age cars, accident-free vehicles and joint venture vehicles. Why is this happening? Because the supply of used car vehicles has become sufficient from scarcity, it has become more and more able to meet market demand from the total. Used cars with better quality, shorter age and higher prices have gradually become the target of car dealers in the market.

From the perspective of the proportion of used cars (transaction volume /

^① Akerlof G A. The Market for Lemons: Quality Uncertainty and the Market Mechanism[J]. The Quarterly Journal of Economics, 1970.

ownership), the transaction volume of used cars in 2018 was 13.82 million, and the car ownership in the same period was 240 million, with a precipitation ratio of only 5.76%. Compared with the 10% of the developed car market in the United States, there is still a large growth potential, or there are still many obstacles and defects. Domestic second-hand car market stakeholders generally believe that the most important reason for the low proportion of used cars is that there is a serious information opacity problem in used car transactions. There are many deceptive behaviors, such as the adjusting the odometer, the occurrence of major accidents or the problem of water tankers are deliberately concealed. As a result, the potential consumers of second-hand cars are discouraged, and there is a situation in which they want to buy and dare not buy. In the end, consumers leave the used car market because the vehicle information is opaque, which makes the used car market shrink and scale down. Popularly speaking, Chinese consumers feel that the used car market is too deep and does not dare to easily enter the opaque market.

On the one hand, the scale of the used car market is expanding, the trading vehicle age is decreasing, the transaction price is increasing, and the quality of used cars is constantly improving. However, on the other hand, there are still many problems with a low precipitation rate of used cars, the information opaque and so on. Why? This indicates that this market is still in the process of transition. The original leading system is still playing a major role, namely the old motor vehicle trading centre and its accompanying policies, stakeholder alliances, infrastructure, and trading rules still dominate the market. At the same time, as a new-born used car e-commerce niche system is growing. This niche system absorbs some of the resources of the dominant system, and subverts some of the dominant system models, but still in the challenger status. At the same time, the leading old motor vehicle trading centre system itself has also made some positive feedback, actively improving the quality of the vehicle source, expanding after-sales service, improving the quality of practitioners, increasing the evaluation service of used cars, etc. The market is moving in a benign direction.

There is a gap between objective data and the subjective feelings of consumers. The structure of China's used car market is indeed improving, but consumers' image of the used car market is still negative. Especially for those who have not entered this market. Even in the US market and the European market, disputes in used car consumption are common in the news media. The used car is a non-standard product used by the previous owner. Compared with the new car, it is always not as good as standardization. However, this does not mean that used cars must be inferior to new cars and cannot compete with new cars, because from the perspective of cost performance, used cars have the advantage that new cars do not have. In fact, in the early used car market in the United States, there were also dealers tampering with VIM, adjusting the odometer, re-selling a large number of used cars that were not suitable for re-entering the market, and using the means of deceiving consumers to obtain illegal profits. However, the United States began to implement vehicle certification and establish a quality assurance system for vehicle historical archives, and set up a professional third-party vehicle evaluation agency to protect the rights and interests of used car customers, so that consumers feel that buying used cars is also a reliable choice. This has made the United States thriving in the development of the used car market. The establishment of professional vehicle evaluation agencies and the promotion of national policies have made the problem of opaque information on used vehicles gradually resolved to some extent.

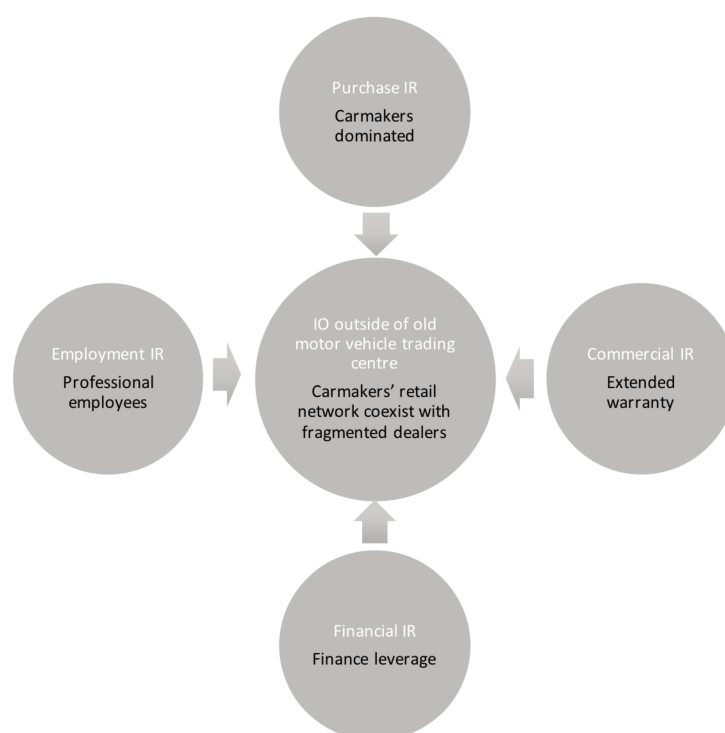
4.4 Symbiosis: Subaltern System and Dominant System

Parallel subaltern systems were born outside the dominant social-technical system of the old motor vehicle trading centre. Brand-certified used cars, chain used cars and

used car auction companies are subaltern systems outside the dominant system^{①②}. There is a symbiotic relationship between these subaltern systems and the dominant system. Brand-certified used cars, chain used cars and used car auction companies will not replace the old motor vehicle trading centre and become the dominant system in the Chinese used car market. We can explore from the specific IO.

The IO in the old motor vehicle trading centre can be summarized by the following figure. Fragmented used car dealers dominate this market. Self-employed, fragmented used car sources, cash transactions and a hammer sale are the IRs of the old motor vehicle trading centre. After buying a used car, consumers have no connection with these used car dealers.

Figure 4.7 The IOs after 2005 management measures



^① Geels F W, Kemp R. The multi-level perspective as a new perspective for studying socio-technical transitions[M]// Automobility in transition? A Socio-technical analysis of sustainable transport, Routledge, Abingdon (UK), 2012.

^② The concept of subaltern or residual social-technical systems has recently been introduced in the literature on socio-technical research in order to consider social-technical configurations that are not dominant systems or niches. This new trend means that the use of the word "paradigm" should be abandoned as a synonym for "dominant social-technical systems": in social-technical terms, "paradigm" is a set of specificities shared by social-technical support alliances. The rule, that is, a subaltern system.

Compared with the IRs in the above figure, the IRs of brand-certified used cars, chain used cars and used car auction companies are different. In the process of car acquisition, brand-certified used car companies usually stipulate that cars within 5 or 6 years, within 100,000 or 120,000 km mileage, are eligible to enter their purchase list, not include accident vehicles or scrap cars at all. This limits the scale of the brand-certified used car, chain used car and used car auction business to a small part of the used car market. In addition, the used car companies of various car manufacturers can only certify and sell their own brands of used cars. It even limits the scale of its business operations. According to the interview content and market data, the transaction volume of brand-certified used cars accounts for only 3% to 5% of the total market transactions, and the transaction volume of traditional offline used car auction companies accounts for only 1%. From this point of view, brand certification of used cars, chain used cars, used car auction companies and the old motor vehicle trading centre must not be an alternative relationship.

From the "Old Motor Vehicle Transactions Management Measures" in 1998 to the "Used Vehicle Circulation Management Measures" in 2005, although the regulatory rules for monopolized used car transactions in the old motor vehicle trading centre have been cancelled, and brand certified used cars, chain used car dealers and used car auction emerged in the market, but the old motor vehicle trading centre, the IO of this dominant system still continued down to today. In other words, the process of de-institutionalization has not changed the original IO, but only opened up the windows for the birth of the subaltern systems. Brand-certified used cars, used car auction companies, and chain used car dealers are symbiotic with the old motor vehicle trading centre system. The first three act as subaltern systems with the dominant system.

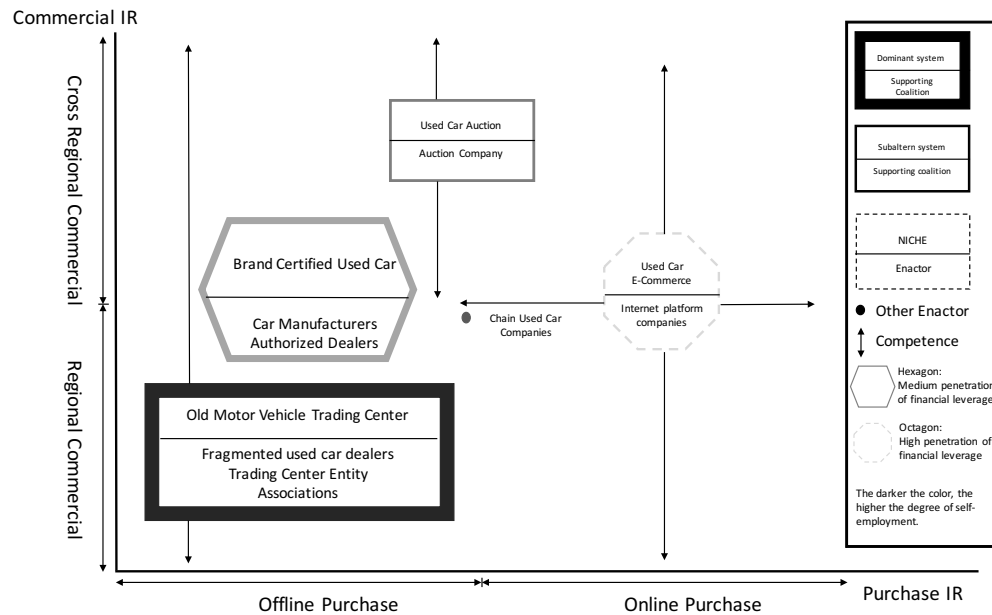
Localized trading is a distinctive feature of the old motor vehicle trading centre model. The old motor vehicle trading centre originating in the road market in Beijing was initially satisfied with the demand for localized used car transactions, with the continuous growth of car ownership in Beijing. The Beijing used car market gradually

developed into an important source of used cars nationwide. Brand-certified used car business is also mainly for localized transactions. Under the efforts of automakers to internalize the used car business into a sub-function of its brand sales system, the first thing to satisfy is the replacement of local consumers and the demand for used car purchases. The rise in the average transfer rate of used car transactions nationwide has followed the new car purchase restriction policies of many first-tier cities, and this trend has directly led to the rise of the Internet used car auction company represented by Youxin and Che Yipai. Why did the original traditional used car auction company not become a direct beneficiary of this trend change, but instead gave birth to new competitors? This is related to the online and offline company strategy. The online used car auction company of Internet Gene is good at building a high-quality trading platform and convenient transaction process, and with the abundant financing of the development of the Internet industry, it has implemented a flow-oriented development model, thus it is possible to quickly establish a nationwide used car trading network platform. The traditional used car auction company, adhering to the concept of service car dealers, is gradual and does not tend to expand rapidly, especially for models and regions where returns are not clear.

The symbiotic relationship between the subordinate system and the dominant system corresponds to the adaptation process in the concept of social-technical research. In short, the dynamic changes of the social-technical system can be seen as two categories: The dominant social-technical system adapts to external trends or the social-technical niche takes over the dominant position. The adaptation process can be conceptualized as a process of maintaining stability, with institutional setting, markets and technologies fine-tuned and absorbed along established transition paths. This adaptation is supported by an alliance of actors within the dominant system and is committed to its own sustainability and survival. In the Chinese used car market, the alliance is dominated by stakeholders in the old motor vehicle trading centre. They include fragmented used car dealers, used car trading market management entities, and

provincial and municipal used car trading associations. In the process of adapting to policy changes, this alliance of operations is housed in chain used car companies, used car auction companies and brand-certified used car operators.

Figure 4.8 The social-technical systems map of used car market in China



The dominant system of the thick border in the above picture represents the solid and strong influence of the dominant social-technical system. This solidity is reflected in its lock-in effect on resources, talents, technology and institutional setting. With the promulgation of the "Used Vehicle Circulation Management Measures" in 2005, this lock-in has been opened with a window. Brand-certified used cars, used car auctions, and chain used cars have emerged from this window. Each of them has its own support coalition actors, but there is an inextricable link between these actors and the coalition actors of the dominant system. Used car auction companies help used car dealers in the old motor vehicle trading centre to conduct cross-regional used car transactions; brand-certified used car operators, in addition to keeping the brand of used cars with good condition and low age, other replacement vehicles will flow into the old motor vehicle trading centre, providing the latter with a relatively stable quality of used car sources.

Brand-certified used cars focus on the acquisition of localized replacement vehicles and the sale of used cars of their brand. It also involves the quick release of

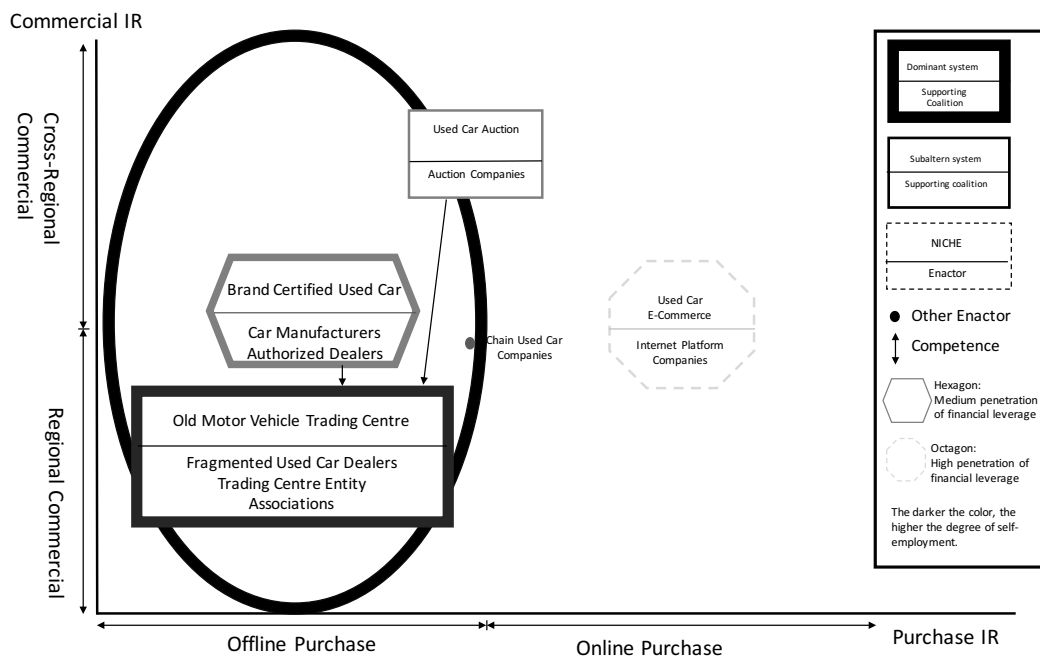
used cars that are not under the brand and used cars that are older. This section includes auctions of used cars across regions. A large proportion of the traditional used car auction company business comes from the replacement used cars of 4S stores. Although the chain used car company has a certain degree of competition with the old motor vehicle trading centre model, the former model does not have obvious advantages but faces higher costs. This is also the reason for the bankruptcy of many chain used car companies in the country or the withdrawal from the Chinese market. Brand-certified used cars, used car auction companies, chain used car companies and the old motor vehicle trading centre are in a symbiotic relationship, regardless of localized transactions, cross-regional transactions rely on the ecosystem of the old motor vehicle trading centre in operation.

In the above figure, each business model has its own supporting alliance. Behind the dominant old motor vehicle trading centre system, there are not only the largest number of used car dealers, but also the main body of each old motor vehicle trading centre and the related local authorities, the used car associations in the provinces, and the national automobile circulation associations. It can be seen from the earliest 1998 "Old Motor Vehicle Transactions Management Measures " that the strategy implemented in this legislative process is a strategy of technicization. Contrary to legitimization by politicization, technicization shirks publicity, sectorizes public problems and constantly seeks to bury the question of values. As a strategy for coalition building, what is sought is the selection of "insider" actors and political elites (see above, p.20). The three functional departments of the Administration for Industry and Commerce, the Transportation Bureau and the Vehicle Management Office of the Public Security Bureau have decided how to establish and follow the principle of the old motor vehicle trading centre in a region after the closed meeting. The rise to the national level means that the Ministry of Commerce has established the "Old Motor Vehicle Transactions Management Measures" based on the experience of local governments in establishing old motor vehicle trading centres, especially in Beijing.

The lock-in effect and “thickness” of this dominant system also stems from the monopoly of the decision-making mechanism on this market regulation.

As the interests of the used car market become more diversified, the institutional rules on the used car market are gradually openly discussed. The entry of automakers has led to important changes in this discussion. A monopoly system design in the old motor vehicle trading centre was abolished and replaced by diversified business entities and diversified business spaces. However, because resources, talents, habits, and government services (the used car transfer halls in each city are in the old motor vehicle trading centre) are still tied to the old motor vehicle trading centre, the policy changes have not led the change of the status of the system.

Figure 4.9 The social-technical systems adoption map of used car market in China



On the contrary, emerging stakeholders and business models are increasingly absorbed and integrated into the old motor vehicle trading centre, forming a symbiotic relationship. That is, the old motor vehicle trading centre adapts to new trends, and the subaltern systems continue to cluster toward the dominant system. The used car e-commerce generated by the Internet platform economy is not a subaltern system. This is a niche system that is sought to reconstitute the old motor vehicle trading centre system. The fifth chapter focuses on it.

Chapter 5 Replacement: The Rise and Development of Used Car E-Commerce

The old motor vehicle trading centre institution was invented in Beijing in 1985, and then the "Old Motor Vehicle Transactions Management Measures" was officially issued by the Ministry of Internal Trade in 1998. In 2005, the Ministry of Commerce issued the "Used Vehicle Circulation Management Measures", although used car market has the corresponding regulations and gradually mature markets and institutions, but always can not get rid of the image of the lemon market. Public opinion is full of complaints and negative evaluations of used cars. The quality of used cars, the reputation of used car dealers, and the after-sales service of used cars are all areas of disputes. At the same time, however, the structure of the used car market has undergone tremendous changes. With the continuous increase in production and sales every year, especially after breaking through 10 million vehicles in 2008, car ownership has risen rapidly. The source of used cars comes from existing vehicles in the road, so the sharp increase in car ownership will bring about a substantial expansion of used car sources. Along with the decline in the ratio of car prices to disposable income of residents, cars are no longer an unattainable luxury for ordinary residents, but durable consumer goods in daily consumption. The speed of car-renewal is greatly accelerated, accompanied by the declining trading age of used cars. These gradual changes are all important factors that have contributed to the structural change of the used car market in China. It is precisely because of this macro background that the quality of the car source structure in the used car market has changed. In turn, the channels, finance, trade, organization and other modes will be transformed one by one. Used car e-commerce as a new thing was born under such a background. From the initial B2B cross-regional used car auction mode, used car e-commerce gradually developed business models covering the full value chain.

Among them, the restriction policies for new car licenses in major first-tier and

second-tier cities have promoted the outward circulation of used cars in these cities, forming a phenomenon that used cars are circulated from first- and second-tier cities to third- and fourth-tier cities. The original intention of the new vehicle license restriction policy in these first-tier and second-tier cities was not aimed at the used car market, mainly for the problem of urban traffic congestion and automobile exhaust emissions, but it fundamentally changed the used car market structure in big cities. Take Beijing as an example. Before the 2011 restriction policy was issued, 80% of the transactions in the used car market were local transactions. After the policy, 90% of used car transactions became sold to other provinces, which led to Beijing become the country's largest source of used cars.

A policy that is not intended to impact the used car market, but it has caused huge changes in the used car market, which in turn has promoted the booming of used car e-commerce. Then the reason for the main influence of this policy is to break the original social-technical system? That is to say, the old motor vehicle trading centre is the main trading space, and the localized market trading is the main business model of this dominant social-technical system. This system has been gradually replaced by another new niche system, which is a system based on used car e-commerce and a national cross-regional used car circulation business model. From the current structure of China's used car market, it is still dominated by localized transactions in the old motor vehicle trading centre, but the share of used car e-commerce transactions and cross-regional used car exchanges continues to expand and has gradually formed an alternative trend. From the related research of the social-technical paradigm, it can be found that the transformation of technology, society, culture and norms does not occur naturally in a linear way due to the existence of the "lock-in" effect. Existing policies, consumption habits, market rules, and infrastructure are all coordinated with existing lead systems, which will reinforce existing trajectories^① and create resistance to

^① Hughes T P. Networks of Power: Electrification in Western Society, 1880 - 1930 [M]. Baltimore: Johns Hopkins University Press, 1983.

alternative technologies, alternative models, and alternative designs^①.

From this perspective, the exploration of the Chinese used car market will bring a lot of inspiring conclusions and opinions. Let's start with some exploration here.

5.1 The alternative used car e-commerce

Since China's used car market originated from scrap car transactions and is full of fraud and inferior products, why has it grown from the 1990s to today's huge scale (13 million vehicles per year)? The huge change in the market's quantity is the most important factor! China's car ownership has risen from a few million in the 1990s to more than 200 million. The Chinese new car market has maintained the world's number one production and sales scale for more than a decade. Every year, more than 20 million new cars are put into the road system of this country. The source of used cars is no longer illegally modified from those scrapped vehicles! At the same time, there is also an important factor that is the reason for the improvement in the scale and quality of used car sources, that is, the ratio of car prices to household income has dropped significantly. Cars that previously had a price equivalent to ten years of household income can now go home with just one year's income. A reliable guess is that the decline in the ratio of car prices to household income has greatly shortened the average car life. In the past, it was necessary to drive a car to scrapped before considering the purchase of the next car. Today, the average car life in Beijing has been shortened to about 7 years.

From figure 4.6, we can see the change in the proportion of vehicle trading age in the used car market in China in recent years. The proportion of used cars under the age of 3 years has risen to about 23%. This reflects the acceleration of the update rate of some consumers' car consumption, which may be related to the quota restriction policy for new licenses of vehicles in large cities. It can be seen from figure 4.6 that after the

^① Shove E. Comfort, Cleanliness and Convenience: The Social Organization of Normality [M]. Oxford and New York: Berg Publishers, 2003.

implementation of this policy in 2011, the proportion of used car transactions under the age of 3 years increased rapidly. At the same time, however, the proportion of used car transactions over 10 years old is also rising, which is not unrelated to the increase in the durability of the car.

The used car market, which used to be different from the new car market, has seen a new trend in the past decade, that is, the used car market has become an alternative to the new car market. The improvement of vehicle quality, the increase of quality assurance services, and the birth of large-scale used car e-commerce have changed the IO of this industry. This area, which has long been neglected by automakers, has ushered in active new players, both used car e-commerce startups driven by venture capital firms, and existing stakeholders to extend to the used car sector, such as Insurance companies, e-commerce, electrical products retailers, etc. Obviously, although the stakeholders of these industry interests do not have the advantage of automobile manufacturers in terms of professional and technical knowledge, they are more interested in the used car market. The used car market, as an industrial sector with a unique IR and IO, is closely linked to the entire automotive industry and is an important option for providing travel service solutions to consumers. At the same time, from the perspective of the whole life cycle, used cars and new cars complement each other. Caring for the used car market is an important part of the value chain, and it plays an important role in promoting the development of the entire value chain. However, automakers are ignorant of the importance of this field, or they have never found a good business model to integrate used cars into their systems. This lack of capacity is largely due to the early mass-market pioneers who chose to license the dealer network and give dealers the freedom to handle the used car business. Automakers are ignorant of the behaviour of consumers on used cars, and their attempts to control dealerships are also questioned by dealers.

The informal, fragmented used car market does not mean that there is no market space to enter, and the business opportunities that car manufacturers ignored are found

by newcomers in the late 1980s in the United States. A group of professional used car dealers entered the used car market. Their ambitions and subsequent success also showed business opportunities that were ignored by car manufacturers in this field. By changing the less formalized used car trading model that has been in use, these newcomers have found a way to incorporate used car transactions into the formal economy.

The used car market with unique IRs and IO is also a non-negligible link in the automotive industry value chain. Stakeholders in this field include used car consumers, offline used car dealers, and large used car e-commerce, auto finance companies, used car appraisers, etc. The presence of these stakeholders ensures the healthy operation of the entire automotive industry, enabling a car to reflect its value throughout its life cycle and provide different options for travel services. Policymakers have been in a passive position for a long time in this field. It is often the emergence of new problems in the development of the used car market that will cause concern and intervention by policymakers. The consumption and use of automobiles are multi-layered. However, the current automobile industry policy system is very simplistic. Most of them focus on the new car consumption market and its corresponding new car manufacturing activities while ignoring other levels of economic activities, such as the used car market. If we can establish a multi-level policy system between different regions and different levels of automobile consumption, this is an important challenge for the development of the current automotive industry.

5.2 New car license plate restriction policy

The entry point for the development of used car e-commerce is rooted in the vehicle purchase restriction policy that was implemented in many large cities nationwide around 2011. The implementation of these local policies has led to the inability of local used car sources to be digested locally and forced to move to provinces outside the big cities. In this way, these large numbers of vehicles have become the

basis for the development of the used car e-commerce.

To solve the problem of urban traffic congestion and air pollution, there are currently seven cities in the country that have adopted a policy of restricting the number of new vehicle licenses issued each year.

Since 1994, Shanghai has implemented a quota auction system for new passenger car quotas. Shanghai adopted the "auction system" for new car license plates. For each auction, the "price" is determined according to the owner's bid, and the used car can be transferred with the car license plate. After more than ten years, the price of a Shanghai car license plate has exceeded 80,000 RMB, which is hailed as "the most expensive iron sheet." Later, the rules for the transfer of plates were changed. If the license plate of all used car sellers is not transferred to another car for personal use, it will be sold back to the vehicle management office, and the price is calculated based on the average price of the previous month.

Beijing has implemented a total amount of control on small passenger cars since 2011. Beijing adopted the lottery system for the monthly quotas for newly added motor vehicles license plates, and used cars cannot be transferred with the plates. In other words, if you want to get to the Beijing car license plate, you have to rely on luck. Someone got the license plate for the first time, and some people have not been "winning" for several years^①.

In July 2011, Guiyang launched the small passenger car license plate auction management system. To further control the growth rate of cars in the old town of Guiyang, the "Interim Provisions on the Management of Small Passenger Car license plate in Guiyang" was implemented. The small passenger new cars in Guiyang City can only enter the urban downtown after obtaining the plate through the lottery.

On June 30, 2012, Guangzhou issued a notice on the regulation and control of small and medium-sized passenger cars, which implemented the total control of automobile ownership for small and medium-sized passenger cars in the city. In

^① Shi Y. The domino effect behind the limit[J]. Environment, 2012, (9): 9-11.

December 2013, Tianjin introduced a purchase restriction policy for new cars. Perhaps they have learned the lesson of "one size fits all" in Shanghai and Beijing. Later, the two cities that restricted the licenses, Guangzhou and Tianjin, adopted the "half-lottery, half-auction" system for the allocation of new quotas for motor vehicle license plates. This also means that it is possible to obtain a license plate if you spend money or luck^①.

At 19 o'clock on March 25, 2014, the Hangzhou Municipal Government suddenly held a press conference to announce the start of new motor vehicle license plate restrictions from 0:00 on March 26. In the administrative area of Hangzhou, small passenger new cars license plate would be managed with incremental quota indicators, and incremental indicators need to be obtained through "lottery" or "bidding".

Shenzhen Limit Order for passenger new car license plate: from 18 o'clock on December 29, 2014, the validity period is tentatively set for 5 years. Shenzhen became the seventh limited city after Hangzhou.

Since 2011, Beijing has issued the lottery system for the new passenger vehicles license plates, and the seven cities new car license plate restriction policy has had a profound impact on the used car market in China. The new car restriction policies of large cities has accelerated the speed of car-renewal in these cities, resulting in a large volume of used car sources. Most of these used car sources are not digested locally but are sold to remote areas and low-tier cities through transfer. Along with the large cities new car restriction policy, the restriction policy of used car was adopted by small and medium-sized cities. Although the policy objective of new car restriction policy in large cities is to control urban traffic congestion rather than exporting used cars, the unintended consequence is that this policy promoted the renewal speed of motor vehicles and newer used cars in used cars. The proportion has dropped significantly, thus exporting a large number of used car sources. The proportion of used cars in newly licensed cars has dropped significantly, while at the same time a large number of used

^① Zeng Z. "Limited" of "Beijing Shanghai Guangzhou": Injury in domestic brands, Benefits in high-end brands[J]. *Automobiles and accessories*, 2012, (031): 28-29.

car sources have been exported. Why is this change happening? Logically, the cost of acquiring licenses has increased dramatically, so most of the new licenses each year are used to buy new cars instead of used cars. At the same time, due to the difficulty of obtaining new licenses or the high price, people will pay attention to updating old cars with existing licenses. This kind of action logic promotes the reduction of the age of the used car source and the improvement of the used car condition.

Along with the introduction of the Beijing new car restriction policy, almost at the same time, the auction business of used car e-commerce companies such as "Che Yi Pai" leapt forward and quickly spread across the country. The starting point is that Beijing has the function as a used vehicle source distribution base to transport the used vehicle source to other parts of the country through an online e-commerce auction platform to realize the circulation of used cars nationwide. Although, along with the new car purchase restrictions in large cities, there have been used car restriction policies in a large number of small and medium-sized cities, which have seriously restricted the circulation of used cars. The e-commerce platform originally hoped to realize the nationwide used car circulation and explosive growth, then it was temporarily shattered. However, the transaction volume of used cars has been steadily increasing, especially the rising of used car e-commerce has become an important emerging force in the market.

Figure 5.1 Beijing used and new car trading data between 2008 and 2017^①



From figure 5.1, it is obvious that there is an important dividing line in the proportion of used cars and new cars in the Beijing auto market over the years, which is 2011. In the three years before 2011, the sales of new cars were far greater than the volume of used cars, and there was even a year-on-year decline in the ratio of used car trade volume to new car sales. However, this trend reversed in 2011. The main reason for the reversal of the proportional change trend is the sharp decline in the sales volume of new cars. From the peak of nearly 900,000 vehicles in 2010 to the bottom of 400,000 vehicles in 2011, the power of this new vehicle license restriction policy can be seen. Although the trading volume of used cars in the Beijing market has also been negatively affected by the 2011 new car license restriction policy, the overall trend has shown a steady upward trend. By 2017, used car trading volume in Beijing has exceeded 1.4 times of new car sales, and a large proportion of used cars are sold to outer provinces of Beijing.

How do the new car license restrictions in these seven cities become a factor in stimulating the structural changes in the used car market? At the objective data level, the relationship between this policy and the cross-regional circulation of used cars and the expansion of the share of used car e-commerce can be established. Practitioners of

^① The data is sorted out from the release information of CADA.

used car e-commerce have repeatedly explained the relationship between their business model and this policy. Although used cars are not directly affected by the new car license restrictions in large cities, the market structure of used cars is deeply related to these new vehicle license restrictions. In Beijing, for example, after the municipal government began to limit the annual quota of new vehicle license plate through a lottery, the probability of consumers obtaining a new license plate was greatly reduced. And because used cars can't be sold with the plate, the consumers need to get a new license plate at the same time or before the purchase of used cars. The convenience of used cars in car consumption of these large cities is greatly reduced.

As shown in figure 5.2, the sales of new cars in the Beijing market have decreased significantly since 2011, while the volume of used cars has steadily increased. The proportion of used car trading volume has reversed. The original 80% of used car transactions are local transactions. After 2011, 80% of the transactions became a cross-regional used car transaction.

5.3 Cross-regional circulation: replacing the old motor vehicle trading centre

The rise of used car e-commerce itself reflects an effort to break or surpass the old motor vehicle trading centre system, because the earliest mode of the rise of used car e-commerce is the cross-regional auction of used cars. The original entity used car trading market model is not conducive to the cross-regional circulation of used cars. Through the participation of e-commerce and the establishment of used car evaluation standards, the efficiency of cross-regional circulation of used cars has been greatly improved.

The development history of used car e-commerce can be divided into the germination exploration period, the rapid development period, the survival of the fittest period, the convergence period, and the future.

-2003-2011 exploration period: Combining the first wave of China's Internet, the early

second-hand car online information platform emerged, and constantly explored the combination and innovation of e-commerce and used car industry.

-2011-2015 rapid development period: Starting from 2011, several second-hand car e-commerce head enterprises are on the line, representing the second-hand car e-commerce industry entering a new stage of development, a variety of different business models of used car e-commerce platform. The emergence of the industry has shown a rapid development trend.

-2015-2017 Survival of the fittest period: In 2015, "Youxin" used cars and "Guazi" used cars were established. The industry's huge advertising wars also led the platform competition to become hot. In 2016, the industry encountered capital winter, and once appeared mergers and closures of the platforms.







-2017-2019 Convergence period: In 2017 and the following two years, the industry's reshuffle and iteration are still happening, and the industry's different business models boundary is gradually blurred, and the advantage of superior enterprises makes the development of the industry relatively stable.

-2019-Future: After the smooth development stage, the industry operation mode and business layout are relatively complete, and the development of related technologies, finance, logistics and other industries will be mature.

Second-hand car e-commerce makes full use of the conditions provided by Internet technology, breaks the time and space constraints, combines rich used car resources, and forms an online used car information and transaction service mechanism, which is different from traditional used car detection, sales and marketing method. The traditional second-hand car industry chain characteristics have spawned a variety of trading models in used car e-commerce, including C2B auction mode, B2B auction mode, C2C consignment mode, C2C virtual consignment mode, B2C mode, used car information platform mode. Each mode focuses on the resource docking, car collection, distribution, and sales of used car e-commerce transactions. From the early success stories of used car e-commerce, it can be seen that in the B2B transaction link, used car

e-commerce played a role in communicating the national market and promoted the circulation of used cars nationwide. The efficiency of traditional used car dealers is much lower than that of used car e-commerce, or it can be said that the emergence of used car e-commerce has greatly promoted the efficiency of second-hand car dealers circulating used cars nationwide, because the operators on the e-commerce platform are still those traditional used car dealers, and they also in charge of the delivery of used cars offline.

Table 5.1 Used car e-commerce type.

Used car e-commerce type	Characteristics	Representative company
B2B auction mode	<p>Client: B-side merchant</p> <p>The link: "circulation"</p> <p>Mode features: online auction. Provide bidding transaction services for used car transactions between merchants to help used cars to flow in the same city or different places.</p>	  www.cheyipai.com
C2B auction mode	<p>C2B mode</p> <p>Clients: C-side car sellers and B-side car dealers (all merchants with car-collection needs)</p> <p>The link: "production (collection)" link</p> <p>Mode features: online auction. Help car owners sell cars at high prices, quickly and conveniently; and help car dealers get one-handed car sources. Increase the number of vehicles for the used car industry.</p>	  
	<p>C2R mode</p> <p>Clients: C-side car sellers and B-side used car retailers (merchants selling vehicles directly to individual consumers)</p> <p>The link: "production (collection)" link</p> <p>Service mode: online auction. It helps car owners to sell cars quickly, at high prices, and conveniently, while helping car dealers get first-hand car sources; but only sell them to retailers who sell vehicles to consumers</p>	

	to ensure that car owners sell cars at high prices and users buy cars at the bottom price.	
C2C consignment mode	<p>Clients: C-end car sellers and C-end car buyers</p> <p>The link: "sales" link</p> <p>Mode features: online information release + offline store sales. The vehicle is stored in the store, and the merchants match the transaction, helping the used car to flow to the downstream terminal, focusing on the retail of the store.</p>	 
C2C virtual consignment mode	<p>Clients: C-end car sellers and C-end car buyers</p> <p>The link: "sales" link</p> <p>Mode Features: Online Information Release + Offline Matching Transaction. Most of the vehicles are stored in the hands of the sellers. The merchants match the transaction and help the used cars to flow to the downstream terminals, focusing on intermediary services.</p>	 
B2C mode	<p>Clients: B-end car dealers and downstream terminal buyers</p> <p>The link: "sales" link</p> <p>Mode Features: Online Information Release + Offline Matching Transaction. There is no self-operated store to help B-side car dealers to sell cars, merchants match transactions, and focus on intermediary services.</p>	 
Used car information platform mode	<p>Clients: All users and car dealers who have used car buying and selling needs</p> <p>The link: The previous "resource docking"</p> <p>Mode features: online resource release and docking. Information services, less involved in used car transactions, profit models to charge advertising fees.</p>	   

Source: iResearch Report 2015 China Used Car E-Commerce White Paper^①

Let's take a look at one of the used car e-commerce companies “Che Yi Pai” (means car easy to auction). “Che Yi Pai” is the first used car online trading platform of C2B2B mode in China by Beijing Dianfeng Technology Co., Ltd, which can realize remote trade without seeing the vehicle at the scene. After years of development, “Che Yi Pai” has signed contracts with 2,000 dealers in more than 70 cities across the country, providing a total of more than 80,000 users with used car sales and replacement services. It also provides second-hand car replacement services for nearly 500 4S stores of more than 10 brands including BMW, Audi, Honda and Mazda. It is the most widely used replacement service partner for 4S dealers in Beijing. In 2012, the annual trading volume of the “Che Yi Pai” e-commerce platform exceeded 1 billion RMB, becoming the first used car company in China with a transaction volume of 1 billion RMB. “Che Yi Pai” received the “2012 Business Model Innovation Award” and the “2012 Service Model Innovation Award” awarded by the China Automobile Dealers Association. “Che Yi Pai” has built two regional operation centres in North China (Beijing) and East China (Hangzhou) and secondary logistics after-sales service centres in Zhengzhou, Shijiazhuang, Xi'an and Guangzhou, and is accelerating its expansion nationwide.

From the perspective of e-commerce, the biggest difficulty in online trading of used cars is that it is difficult to standardize the condition of the car. The condition of used cars is complicated, “one car and one situation”, and the vehicle evaluation relies heavily on the experience of the appraisers. This not only makes the price opaque, the dealer can't win the trust of the seller, and it is difficult to achieve large-scale copying. “Che Yi Pai” developed a “268V”^② used car detection system based on “cloud computing”, which can achieve standardized testing and results. The system promises

^① Zhang L. How big is the used car market? The policy of restricting the used cars is lifted, and the market of trillions of scale is released[J]. China Economic Weekly, 2017, (3): 10.

^② Ren L. Research on the second-hand car network transaction mode based on e-commerce——Taking the “Che Yi Pai” trading platform as an example[J]. Automotive Industry Research, 2013, (12): 28-33.

to the buyer that if the test result is inconsistent with the actual vehicle condition, then the loss caused to the user is borne by the “Che Yi Pai”. This is the only used vehicle inspection and appraisal standard in the country, which can propose a promise to buyers. With such protection, the buyer can directly bid after reading the report, and the delivery of the vehicle can be completed after confirming the price. Based on the standardization credit system of the vehicle condition, “Che Yi Pai” proposed a new concept of second-hand car trading, that is, “see the report without looking at the real car” to trade. In contrast, most online platforms at home and abroad need to bid online, determine the deal, and then pay the transaction and transaction after watching the real car. The network is only used as a bidding tool. And “Che Yi Pai” is to pay immediately after confirming the transaction. This has led to an increase in the circulation speed of the entire industry.

Due to the large transaction volume and long history, the used car trading in developed countries has formed a huge database of information on various types of vehicles. It can provide price reference for vehicle transactions by issuing various types of used car price indices. The development of China's used car industry is short, and most of the transactions are done through a large number of scattered and small brokerage companies and individuals. The transaction volume is small and the information is untrue, inaccurate and difficult to count. This makes it impossible for the country to accumulate sufficient data resources for guiding the transaction price. The collective bidding method based on the network platform is a more effective way to obtain fair prices based on the special environment of the used car industry in China. Take the “e replacement” business of “Che Yi Pai” as an example, which consists of four parts: quotation display, vehicle condition monitoring, bidding transaction and management analysis. The core function is to conduct real-time, open bidding, quotation and fast transactions for replacement used cars based on test reports. It can effectively improve replacement success rate, service standardization and management transparency. This is currently the most popular service for users and the market.

After the online bidding is completed, “Che Yi Pai” also provides buyers with comprehensive after-sales service from safe payment, vehicle handover, transfer, external migration, various procedures to logistics, making buyers' transactions more efficient and convenient. “Che Yi Pai” describes the future for the signing merchants: “By the sun on the beach in Hainan, with a click of a mouse, your car can enter your yard.” The timeliness of the e-commerce transaction model, the richness of information transmission and the menu-based service method can better accelerate the efficiency of auction and circulation of used cars. For the individual owner, the most popular service of “Che Yi Pai” is convenient and quick instant transaction, that is, “one hour, not leaving the house to sell the country”^①. Regardless of the 4S shop service or the direct service, the core service of “Che Yi Pai” is to check the car, “ie, immediately check, immediately shoot”. Through the “268V detection system”, the vehicle condition is tested for about half an hour, and then the test report is posted on the Internet to all the contracted merchants, and the merchants bid according to the test result. For the individual owner, “Che Yi Pai” promises to complete the transaction within one hour. The owner only needs to confirm the final transaction price, and the rest of the formalities such as handling procedures are completed by “Che Yi Pai”.

The core value of the e-commerce platform lies in transparency, openness and fairness. It is regarded as a good solution to solve the problems of information asymmetry, lack of integrity and unspoken rules in the used car industry, but if there is no strict supervision measures and industry self-discipline blocking Fraudulent vulnerabilities, e-commerce platforms can also be set up with many opaque grey areas using technical means, and the crisis of trust in the used car industry will continue. At the end of 2012, a Beijing “Fit” owner complained that “Che Yi Pai” signed an independent agreement with the buyer and the owner respectively. The actual transaction price of the buyer (43,700 RMB) was higher than the auction maximum bid (40,800 RMB). The technical means are used to conceal the bidder's actual bid, which

^① Zhao X, Zhao N. Che Yi Pai: The long tail logic of “e-car dealer”[J]. Chinese SMEs, 2014, (5): 39-41.

has the behaviour of concealing the difference. "Easy to shoot" responded: "There is no problem of misappropriating the price difference. The higher part is the channel service fee and transaction service fee charged to the buyer. The channel service fee is the profit margin given to the 4S shop." The used car business of the 4S shop belongs to the one-stop mode of collection and sale. Previously, the used car manager negotiates with the owner to collect the old car at a low price and then finds the final buyer through the familiar car dealer. The 4S store manager can get the difference from it. However, because the 4S shop cooperated with the e-commerce platform to unify the acquired used car for online auction, it cut off the source of the used car manager and the traditional interest chain. Only by guaranteeing the inherent interests of the relevant personnel of the 4S shop, can we ensure that they cooperate with the "Che Yi Pai" for user promotion and delivery of vehicles. Therefore, the so-called channel service fee is the "opaque fee" used to balance the interests of the auction platform and 4S shop related personnel.

"Che Yi Pai" claims: "We will set a fee for ourselves, which is to ensure the interests of the channel, so it is not an open expense". But the public questioned: "How do you know that this money is for 4S stores?", "Why can't 4S stores earn this money openly?" "Is the channel service fee returned to the 4S store?" Although the complaint was finally proved to be a deliberate smear of competitors, the opaque transaction process established by "Che Yi Pai" provided an opportunity for questioning. This also shows that the used car industry lacks self-discipline and there is a blind spot in supervision.

5.4 Full-time employment: the team of used car appraisers

The used car e-commerce platform "Gua Zi" originated from the "58 Good Car" service channel of 58 Group, which is an Internet company that provides same-city services based on the online platform. Starting from the second half of 2015, the "Gua Zi" became independent of the 58 Group and registered as an independent used car e-

commerce platform. Its model, as described above, is the C2C consignment mode. The first step is to accept the commission of the used car seller and carry out the inspection, and then give a consignment price, and guarantee to sell the used car within one month^①. If the seller accepts the price, he will receive a deposit of about 10% of the price given by the company, and the car will be sent to the special car park. The information and data of this used car will be uploaded to the network to wait for the search and watch of used car buyers. When the buyer sees the used car information online, he will see the price given by "Gua Zi". If the buyer accepts the data of the used car and accepts the price, he can sign the contract to transfer the ownership of the vehicle^②.

The "Gua Zi" has strict restrictions on the vehicles that can be traded. According to the setting of the "Gua Zi", only the cars with the production date less than 6 years and the driving mileage is less than 100,000 kilometres and the cars that have been changed by no more than twice before meeting the requirements. Luo Yi, the president of the Institute of 58 groups, said that " 'Gua Zi' is very firm in these qualities and standards because this is the key to building trust with customers. The more traded on the market may be used cars of about eight or nine years old. But inevitably, these cars have started to be damaged. We have to reject these vehicles, otherwise, this trust can't be continued - we have to ensure that the brand of 'Gua Zi' is only linked to the perfect car."

The most important part of the whole business of 'Gua Zi' is to inspect the used car and give a price. This price is the seller's car price, and it also corresponds to the price that will be given to the buyer in the future. 'Gua Zi' hand over this part to a large number of inspector teams, and they need to test and upload 259 data, which will be calculated by a data computing system called "Gua Zi Algorithm". Then the key price will be given after this system. This business, which relies heavily on the experience of individual practitioners, has become a business that can be replicated on a large scale

^① Yang H. The ultimate model of used car e-commerce is C2C[J]. Chinese entrepreneurs, 2015, (20): 30-31.

^② Zhou H. Used car of Gua Zi: Breaking the "Lemon Market"[J]. Business: Comments, 2015, (10): 62-63.

and operated by large companies. All inspection steps are completed by the inspector sent by 'Gua Zi', including taking pictures of the vehicle from various directions, writing evaluations, test driving, and placing them on the website. In addition to providing all the services that the seller needs, the vehicle payment can be directly completed on the used car platform. Upon completion of the transaction, the buyer can enjoy 14 days of no reason to return, and one year or 20,000 km warranty service. The 'Gua Zi' system breaks down the detection of the vehicle into 259 steps, and the appraiser performs it in strict order. To ensure that the collected data is standardized and structured, the vehicle description is designed as a multiple-choice question, and the appraiser only needs to tick, which can also avoid the inaccuracy caused by the differences in language and work habits of different appraisers. After the detection is completed, the appraisers will input all the test data and its evaluation summary into the system. The data will be transmitted to the cloud. After passing the manual review in the background, the algorithm will generate the pricing.

The 'Gua Zi' platform believes that the reason why Chinese traditional used car dealers cannot form a large-scale company is that the used car business is more dependent on personal experience. In the Huaxiang market, the largest used car trading market in Beijing, a big car dealer has a store that can accommodate hundreds of high-end cars. The average price of the cars is one million RMB and the cheapest is half a million RMB. During his day's working hours, there was constant sales running in and asking how much the BMW could sell? How much should that Audi be? Then the big car dealer will pick up the phone, look through a bunch of numbers, think about it for a moment, and give the final judgment of yes or no. Looking at the boss on the sofa, this room seems to have become a miniature version of the Wall Street Stock Exchange.

Interview question: "You do such a big business, why can't sales decide the price, every car has to come over and ask you?"

Mr Chen said:

"They don't know the price. Besides, every car in the store for one day, the venue,

capital, and personnel all have costs. How much money can be sold? Who can sell it? How long it can be sold? It all depends on my experience." ^①

The boss, who manages the hundreds of cars in the Beijing Huaxiang used car market, has consumed all his energy. He has to shut down the new store that had already expanded to Shenyang.

As far as the business model is concerned, the 'Gua Zi' will charge the seller a 3% service fee, but still, the given price of the car is higher than the used car dealer's price. Usually, the amount given by the 'Gua Zi' is at least 30% higher, and with many supplement service. As a party that is not sensitive to the price, the seller usually does not mind the service fee.

Faced with a large team of employees, "Gua Zi" need to deal with a variety of different cases, the "Gua Zi algorithm" is constantly facing the challenges of complex environments based on breaking individual experience and energy constraints. Using new technologies to solve the problem of traditional industry, this is the typical thinking of the Chinese Internet industry. In the face of the used car industry, these Internet entrepreneurs are also convinced of this. In the field of the used car industry in China, the organization of labour practitioners is mainly self-employed. That is, the used car dealers are their bosses, sales and vehicle appraisers, and there is no clear division of labour. With the advent of large-scale used car e-commerce, their labour organization is bound to be a clear division of labour and a huge team. Through the addition of the "Gua Zi algorithm", the management team links to their team of appraisers, sales, and city managers.

The author interviewed the employees in the third-tier cities, some of whom are from the original self-employed form to the "Gua Zi" company. This new employment model is more secure for them. Big company's work processes and standardized daily work can also make them grow faster. These reasons are the driving force to attract them or can be said to be the initial motivation. Although the "Gua Zi algorithm" is

^① From interview 24.

very powerful, and it has created a used car business that has never been seen before. However, in the face of the complexity and variety of the used car market, it still seems to be incapable in many aspects.

For the management of a large number of appraisers and sales teams, the “Gua Zi” also choose to use the "Gua Zi algorithm^①" to solve the problem. Zhang Xiaopei, the CTO of the “Gua Zi”, visited a grassroots company site and found that there were always a few tables in an office filled with flowers and chocolate. The owner of the table is young girls, and because they have mastered the power of dispatching different appraisers and the sales to different used car business, all the appraisers and sales will find ways to get along with them, so that assigned to a better deal, a better commission. Surprisingly, the CTO of this big company decided to let the algorithm replace the young girls as the master of this core power.

In the second half of 2016, the "Gua Zi" was put on the line for the sales scheduling system. Each sale has its portrait. For example, someone may be suitable for selling Japanese cars, mid-range prices, SUVs, and even better at dealing with intellectual clients... The "Gua Zi" hope that the algorithm can make good use of people and assign tasks that are more suitable for different sales. In the efficiency of the appraisers, the Gua Zi algorithm will also match the best order and route to the appraiser for different inspection locations, and strive to achieve the maximum efficiency of one-day inspection. However, there are always some cases that cannot be quantified in the algorithm. For example, the original sales A is the sales champion of the Japanese car, but in the face of a single business, the city manager hands the order to the sales B to complete. The reason given by the city manager is that the customer of this single business came from the same hometown of sales B, and the customer's trust in sales B is definitely higher than that of sales A. In another case, for example, the clients are a couple, and obviously the wife has more right to speak than the husband. At this time,

^① Lei R, Wu H. User satisfaction analysis of Gua Zi used car in direct sales network[J]. Science and Wealth, 2017, (36): 92-92.

the city manager will adjust the order to sales C, because sales C is as same as the female client, a mother who has recently given birth to a child. She has a better understanding of her communication.

Each sales portrait is labelled in the company employee's database according to the data of each employee's name in the past. This "language" of computer science is too simplistic. In the used car market, different car owners and car dealers have long been dealing with each other, and the interaction between them is complicated. This is why both Ford and Sloan have chosen to license the car dealership to external dealers. The employment relationship structure in the used car industry is closely integrated with its business model, supply chain relationship and financial solutions. Then, can the innovative practice of Gua Zi change the structure of the employment relationship in the field of used cars market in China, or change their financial, purchase, and business models? It should be said that from investing huge amounts of money in human resources costs, investing in offline stores in many cities can see its determination to change the IOs and the IR within the industry. The used car business, which was originally excluded by automobile manufacturers and authorized dealers because of its complex business form, is highly fragmented and self-employed. Nowadays, the entry of used car e-commerce has undergone tremendous changes.

According to Yang Haoyong, the CEO of the Gua Zi told the media that because the pricing of the Gua Zi algorithm was not accurate enough, the company lost a total of 30 million RMB in 2017. But he thinks it is worth it^①.

5.5 Warranty: Standard configuration of used car e-commerce

Since 2009, China's used car market has entered a period of rapid growth, and third-party extended warranty service providers have also entered the market in 2010. Some third-party extended warranty service providers have launched quality assurance

^① Yang H. "Change" is a standard for business management[J]. Manager, 2017, (4): 12-13.

products for used cars. They have overseas reinsurance support. Rely on the huge data support of overseas reinsurance organizations, third-party extended warranty service providers can design more reasonable and more accurate quality assurance products that better control risk. However, due to imperfect policies, market irregularities, and consumers' lack of awareness and distrust of quality assurance and extended warranty, the development of used car warranty services is still difficult.

In 2012, with the rapid development of the domestic auto industry, the sales volume of new and used cars increased tremendously. Many automakers, 4S store groups, extended warranty service companies and insurance companies began to carry out car extended warranty and used car warranty business. In 2013, the implementation of the Auto Three Guarantees Act^① and the introduction of the anti-monopoly policy made the car warranty service begin to heat up. The consumers' attention to the car warranty service continued to increase, and third-party car extended warranty service providers began to appear in large numbers.

In 2014, it was the first year of automobile e-commerce. The used car e-commerce quickly flooded into the market, and the used car market received high attention and rapid development. The government's improvement of the used car market policy, the urgent need for e-commerce for after-sales service, the strong concern of consumers for the quality of used cars, and the more attention paid to the integrity of the used car dealers have prompted third-party car extended warranty services shift the business to the used car warranty.

Participants in used car warranty services mainly include reinsurance companies, insurance companies, third-party quality assurance service providers, used car dealers, used car e-commerce platforms, used car inspection and evaluation agencies, and maintenance plants. Insurance companies and overseas reinsurance companies are not

^① This is the abbreviation of "repair, replacement, and return guarantees" for retail enterprises. This refers to a credit guarantee method adopted by the seller within a certain period after the goods enter the consumption field and the seller is responsible for the goods purchased by the buyer.

included in the table below.

Table 5.2 Used car warranty service participants and processes^①

Before sales	Car collection and preparation	used car dealer used car e-commerce
	Evaluation test	used car evaluation test organization
In sales	Warranty service sales	used car warranty service provider used car dealer used car e-commerce
	Car sales	used car dealer used car e-commerce
After-sales	Troubleshooting	used car warranty service provider repairer
	Repair claim	used car warranty service provider repairer

It should be said that although the used car warranty service is aimed at all market participants, including used car e-commerce, used car dealers in the used car trading market and consumers, but the carrier that makes the used car warranty into the most extensive consumer concept is the used car e-commerce.

Let's sort out the status quo of used car warranty in different main modes:

1. The first is the certified used car model of the automakers. The factory-certified warranty with the manufacturer's guarantee makes the trust high, but the disadvantage is that only their own brand used car is certified. This is an insurmountable gap. For example, the BMW 3 Series replaced in the Audi 4S store. No matter how good the car conditions are, 'Audi recommended' can not do anything. The car can not be endorsed for certification.

2. Secondly, the used car trading market model. The used car entity trading market accounts for the majority of the Chinese used car market share. The trading market is relatively closed, although many are considering transformation, but the speed is too slow. Many used car dealers have also introduced third-party quality assurance service providers, but overall the operating efficiency is low, and the concept is greater than the

^① Liu B. Warranty, not an extended warranty[J]. Operator, 2016, (16): 278-282.

actual.

3. Used car independent dealers model. The big car dealers as the backbone of the used car main force, once monopolized the middle-end and high-end used cars boutique in the Chinese used car market. In the tide of "Internet +", big car dealers are also actively transforming, forming alliances, sharing resources, and building their brands. However, for what the used car warranty can bring benefits to the used car business, they only stay at the level of "if the used car warranty can be used to improve the trading price difference".

4. The used car e-commerce platform model. The used car e-commerce platforms attach the highest priority to used car warranty. As emerging e-commerce platforms, they want to penetrate consumers in a short time, and let consumers dare to buy used cars, dare to go to the platform to buy used cars. The preferred entry point is the "safe feeling", and the warranty just meets this demand point. Buy a used car that you can rest assured, buy a used car that is reliable, and buy a used car with a warranty.

For example, the Gua Zi platform for used car e-commerce offers a 30,000-kilometer warranty and full-car maintenance service for 18 months. The Renren car is backed by a 20,000-km or one year warranty. Youxin provides one year warranty for the main system (engine, transmission, etc.). The used car e-commerce platform represented by Gua Zi introduced the used car extended warranty service with partners in 2015. In the second half of 2016, it also launched its extended warranty service. At present, about 70% of Gua Zi clients will purchase extended warranty services when they purchase used cars. The extended warranty business mainly provide consumers with maintenance services that exceed the manufacturer's warranty period and warranty coverage. At the beginning of the Chinese auto industry, the extended warranty business was mostly provided to car owners in the form of value-added services or car purchases.

The awakening of user awareness has also appeared in the field of used car transactions. "I bought a used car in Gua Zi platform, and the salesman told me that the service fee included a warranty service of 20,000 kilometres or one year. For thousands

of dollars, the car can be safely driven for another year"^①, said Mr Liu. Mr Liu believes that when the vehicle has passed the warranty period, it sometimes costs tens of thousands of dollars to repair the fault. It is worthwhile to extend the warranty, so he did not hesitate to buy it. There are many clients like Mr Liu.

However, there are still many problems with the used car warranty service that remain unresolved. The warranty service for used cars is a property-plus-insurance service. If there is no good insurance company's system to participate in it, it is very likely to generate more than expected maintenance service costs, which will cause the company providing the service to fail to survive and go bankrupt. Many dealers simply associate the quality of the warranty product with the after-sales service and even directly link the warranty profit to the repair garage profit. There are a lot of used car warranty products in the Chinese market, and a large part of these warranty service companies have not included insurance companies to share the risk of compensation. If there is no insurance company to endorse, during the early market development period, the warranty company's operating expenses are huge, and the self-built fund pool may be unable to make ends meet. The unreliable company may divert the funds for reserve claims into operating expenses. The result is that there is no money left to pay, and the capital chain is stretched. These companies can only refuse to pay.

In the used car forum, there is such a case. Mr Chen of Beijing purchased a used Skoda Hao Rui through the Youxin used car e-commerce platform. After signing the agreement, Mr Chen found that the vehicle showed oil pressure abnormal. Mr Chen said: "At that time, I called the salesman of Youxin. He said that it was fine. Just do car maintenance." However, when Mr Chen sent the vehicle to the 4s shop for maintenance, he found that the used car not only had problems with the oil pressure system but also had 14 problems with the accessories. The maintenance personnel told him that all the repairs required more than 8,000 RMB. According to the agreement of Youxin, the

^① Xu X. Used car seeds: How to make used cars and "Gua Zi" equal[J]. Sales and Management, 2017, (001): 20-23.

vehicle purchased by Mr Chen belongs to the "Yuxin Certification" vehicle, and the warranty includes "30 days return" and "one year warranty". However, when Mr Chen and Youxin after-sales personnel discussed maintenance matters, the after-sales personnel refused to pay Mr Chen for repairs and did not give Mr Chen a reasonable reason, but repeatedly emphasized that it was not covered by the warranty. Mr Chen said: "When you choose to buy a car on the Youxin platform, you are fancy that they can guarantee for one year, but at the moment the vehicle has detected the problem, and they are not guaranteed. Is this not a joke"^①?

It is quite possible that the warranty contract signed between Mr Chen and Youxin platform does not include the parts that are subject to maintenance problems after the purchase of the vehicle, because the warranty of the used car usually only includes the core components. Therefore, Youxin can easily evade the responsibility of these warranty and maintenance costs. However, we can see from similar disputes over the used car transaction that used car e-commerce companies tend to adopt a vague strategy when communicating with consumers. Used car e-commerce companies are pushing as much responsibility as possible, and only hope to attract consumers by promoting strategies of used car warranty service. Used car e-commerce companies still do not completely get rid of the information asymmetry in the used car market, and the lack of integrity.

5.6 Financial leverage: the ultimate weapon

The financial IR of used car e-commerce is not only one of the driving forces for its development, but also the life-saving straw that many used car e-commerce companies have developed to the end. Due to the rapid development of China's overall Internet industry, the development of the used car entity industry is sluggish, and it is precisely because of the non-standardized product attributes of used cars etc., which

^① Li L. Used car trading integrity problem[J]. Legal person, 2017, (8): 54-55.

has caused big capital to flow into the used car industry. Faced with the huge used car market, the newcomers with huge amounts of capital have a natural advantage. They cut into the used car industry focusing on the transaction link, so lead to the emergence of new models of B2B, B2C, C2C, C2B and other modes of e-commerce platform in the used car circulation. Since then, the pattern of the entire used car industry has changed^①. Along with the emergence of the used car trading platform, in the used car service link, it has spawned a variety of derivative service organizations such as valuation, testing, logistics, quality assurance, and inventory management.

Outsiders may feel that there will be a lot of quality combinations in it, and even a perfect trading loop. But the basic logic of the trading platform is the realization of traffic, and huge traffic costs and labour costs, as well as the scarcity of the car source, making these seemingly huge trading platforms difficult to achieve profitability. Taking the most controversial C2C platform Gua Zi, even if it is a big deal, it is constantly improving the service fee^②:

- The first stage: the service fee is "Car price \times 3%, minimum 2000 RMB, maximum 8,000 RMB"

- The second stage: the service fee is "Car price \times 3%, minimum 2000 RMB"

- The third stage: the service fee is "Car price \times 3%, minimum 2,500 RMB"

- The fourth stage: the service fee is "Car price \times 3%, minimum 3,000 RMB"

- The fifth stage: the service fee is "Car price \times 4%, minimum 3,500 RMB"

Take a Buick Excelle 2011 1.6LE-AT model as an example. The owner of the car offers 45,000 yuan, while the service fee displayed on the platform is 3,500 yuan. The gross profit margin of the platform service fee = $3500/45000 \times 100\% = 7.78\%$, the gross profit of nearly 8 points. Due to the lowest price of the platform service fee is 3,500 yuan, if the used car price is less than 50,000 yuan, it is equal to the final charge of 7% service charge. In the current market environment, the difference in the price of used

^① Zhang Y. The battle for the used car market[J]. China Economic Weekly, 2017, (3): 16-25.

^② Lu Y. Auto Finance "Red Sea" Competition[J]. 21st Century Business Review, 2017.

car dealers in the entity trading market is generally difficult to reach 7%. From the other side, it can reflect the slogan of Gua Zi - There is no middleman to make the difference - is a pure language game^①, because the service fee charged by Gua Zi has been higher than the difference made by the traditionally used car dealer.

Despite this, high advertising costs (up to hundreds of millions of yuan in advertising costs), operating expenses (layout of hundreds of cities), labor costs (team size of thousands of people), bad debt disposal (business, after-sales), man-made, etc., a variety of costs, Gua Zi to achieve profitability is still very difficult^②. Gua Zi can be said to be a typical representative of the currently used car e-commerce, other used car e-commerce are also facing greater profit pressure, are in the slump of losses.

Those derivative service organizations, valuation, testing, logistics, extended warranty, inventory management, etc., rely heavily on the trading platform. Under the current immature market environment, self-healing cannot be achieved. Overall, the innovation of the trading platform model of the entire used car once again fell into the infinite loop of the battle for the source of the car. The used car e-commerce trading platform can only continuously try to stretch the business chain and seek new profit margins. From the front-end detection to the after-sales service, after continuous trial and exploration, the importance of financial leverage was finally discovered. What the trading platform can do is to promote the accelerated circulation of the intrinsic used car market, but it does not allow the entire used car market to increase. Only auto finance can enable more new cars to flow faster and better to the used car market, making the cake of the entire used car market bigger.

In 2015-2017, entrepreneurs in the used car industry talked about the trading model. In the past two years, entrepreneurs in the used car industry talked about the financial model. Almost all used car trading platforms, whether B2B, B2C, C2C or C2B,

^① Miao Q. "There is no middleman" is the biggest marketing lie[J]. *Manager*, 2017, (22): 94-95.

^② How competitive is the used car competition? E-commerce model competition: Is it reliable for removing dealers?. *China Economic Weekly*, (3), 12.

are connected to auto finance. With the promulgation of the new "Automobile Sales Management Measures", the new car sales channels are further liberalized. Selling new cars in used car channels is no longer an attempt. Inventory vehicles, resource vehicles, such as new car resources, will not be a unique resource of a very small number of "related" used car dealers. The sale of new cars in used car channels may become a new model. This is also the best time for auto finance.

Some used car e-commerce platforms began to use finance as a link to start a new car business, which is intended to produce used car sources and to become as a manufacturer for used cars. Some financial platforms have also begun to use new cars as a link to start a second-hand car trading and service business, which is intended to stretch the industrial chain and achieve a closed-loop of transactions. Data are showing that the average financial penetration rate of the Chinese auto market is only about 35%, and the proportion of auto financing leases to total auto finance is less than 2%. Therefore, improving the domestic automobile financial penetration rate and promoting the automobile financing leasing model has become the only way for the development of the industry.

The form of used car finance consists of two parts, one is the financial services provider for the B-end, and the other is the financial services provider for the C-end. The financial services for the B-end mainly include mortgage loans and inventory financing. Mortgage loans are financial services in the procurement of car sources and are generally provided by financial institutions, such as Ping An Bank. Inventory financing is the financing demand for car dealers in the vehicle storage chain. Currently, it is mainly provided by the emerging second-hand car financial service platform, such as the first car loan, the spare tire gold service, and the Meri car finance. Financial services for the C-end include consumer credit, financial leasing, and after-sales extension. Among them, consumer credit and financial leasing services are the most important components.

Regarding the status quo and prospects, overall, for the C-end used car

consumption staging, financial leasing business, the market has more participants, and the development situation is better than the B-end business. The main reason is that the current operating data of most used car dealers is opaque, and the used cars are non-standard products. It is difficult to handle and the market value evaluation standards are different. These factors have led to different types of financial institutions with different emphasis on the risk assessment of used car dealerships. On the B-end, the pre-lending segment is the core part of risk control. The bank has extremely high requirements for the credit information and guarantees of the used car dealers. The risk control feature is to filter the merchants that can provide quality asset guarantees by raising the pre-lending risk control standards. The used car financial platform generally only provides financial services to the cooperative dealers, to realize real-time control of the real operating conditions of the used car dealers. Therefore, the B-end used car financial business is limited in scale. In many cases, it is an additional service based on the C-end consumer credit business of the used car financial platform.

The C-end used car finance business is the core part of used car finance, and it is also the focus of current industrial development. With the increasing trading volume of used cars and the increase in financial penetration, the used car finance market is growing into an industry that rivals the new car finance market. At the same time, unlike the new car finance, which dominates the mainstream of banking and manufacturer finance, the used car finance industry has put forward more requirements for offline channels, manpower and risk control because of the non-standard nature of products. The field is dominated by market-oriented participants, including Internet auto finance platforms, used car e-commerce, and financial leasing companies.

Table 5.3 Used car financial service players^①

Used car financial service provider	Financial service	Product feature	advantage	trends	players
Bank	Consumer credit	high ratio of down payment, high demand for credit, high condition vehicle, focus on medium and high-end vehicles.	Low capital costs and low-interest rates	Gradually increased cooperation with the used car financial platform, providing financial support to the latter	Ping An Bank ICBC Pudong Bank
Auto finance company	Consumer credit	Mainly 30%-50% of down payment	Supports from carmakers	Start channel penetration, mainly on new cars, small scale of used cars	SAIC-GMAC automotive finance, Audi finance, BMW finance
Used car financial service platform	Financial leasing	Minimum 0, generally 30% down payment, some products decrease	High efficiency, Free up to 15 minutes , Rich products and good service	Business expansion, service efficiency, offline channels, risk control become the key to competition	Mlcjr.com Yixincars.com
Used car e-commerce platform	Financial leasing	Minimum 0, generally 30% down payment, some products decrease	Traffic advantage, review loose	Rely on the trading platform to moving closer to the used car financial service platform	Youxin.com Guazi.com
Financial leasing company	Financial leasing	Minimum 0, generally 30% down payment, some products decrease	Low down payment, rich products	\	Cangoonline.com Xftm.com

^① Gan Jun, Fang Yuanyuan, Dawn, Ma Wenrui, Wang Wei, & Zhang Jie. Research on the current situation and countermeasures of China's used car market[J]. Chinese and foreign entrepreneurs, 2016, (3Z), 39-40.

The current car consumption credit provided by the used car e-commerce platform is mainly based on third-party cooperation, that is, access to external institutions for credit review and lending, and the platform is more responsible for acquiring the customers. After the transaction conversion is completed, a certain percentage of service fees will be drawn. The traditional practice is to cooperate with the bank in the car loan business. However, as the market penetrates, the loan qualifications of the buyers may not be approved by the bank. Therefore, some online lending companies also take this opportunity to actively seek cooperation and provide consumer loans with higher interest rates.

However, from the perspective of funding sources, the current mainstream used car e-commerce platforms are mainly bank-based. For example, Renren vehicles reached strategic cooperation with the ICBC, Agricultural Bank of China and Bank of Beijing last year. The partners of Gua Zi include several banks including Ping An and CITIC. However, such sources of funds are often subject to certain regulatory restrictions. A few platforms also choose to build their financial capabilities. According to industry sources, Youxin already has its financial team; Yi Xin is backed by the Yiche Group, one of the financing channels of its financing business is from the group's borrowing; and Gua Zi has also announced the launch of self-financing products, known as car loan is not limited to their platforms, in order to further enhance their financial services penetration rate^①.

5.7 Conclusion and Discussion

This chapter mainly discusses why the subaltern systems in the offline used car market that emerged after the introduction of the used car circulation management measures in 2005 cannot replace the old motor vehicle trading centre? Then, as a

^① Yin Xiangyu, Cheng Tianyu, Kong Qingjing, Yu Jiali, & Bi Yujiang. Problems and suggestions in the development of China's used car market[J]. *Modern business*, 2018, (24), 16.

dominant system in the field, why is the old motor vehicle trading centre replaced by used car e-commerce?

From the socio-technical research path, it is judged whether a social-technical dominant system will be replaced by a niche system, depending on whether the macro landscape trend gives sufficient transformation pressure; Whether the system itself is shaken and a transformation window appears; whether the niche system can gather enough resources and support alliances.

Simply put, the dynamic changes of the social-technical system can be seen in two categories: the adaptation of the dominant social-technical system to external trends and the attempt by social-technical niche systems to take over the dominant position. Geels and Schot propose two criteria for distinguishing the dynamics of the transition path (see above, p.56).

So is the dominant position of the old motor vehicle trading centre system in China's used car market threatened by used car e-commerce? What is the macro landscape trend in this field? Car ownership continues to grow; used car trading volume continues to grow; used car reliability and durability continue to increase; average used car trading age is declining; average used car transaction prices continue to rise, and cross-regional trading ratios in used car transactions continue to rise. All of the above are the trends of the landscape of the used car market in China. In the entire consumer retail sector, China's macro landscape trend is the acceleration of digitalization, and the wave of retail consumer electronics driven by the electronic retail giants such as Alibaba, JD.com and Pinduoduo is surging. Another trend is that the cross-regional exchanges of used cars are characterized by the flow from first-tier cities and second-tier cities to third- and fourth-tier cities and inland provinces. Of course, the specific analysis is much more complicated than this, but this trend reflects to a large extent the characteristics of the mainstream. Under such a macro trend, will the dominant position of the old motor vehicle trading centre be shaken?

To further clarify the dynamics of the transition path, Geels and Schot propose two

criteria for distinguishing them^①: the time of interaction between the landscape, the dominant system and the niche, and the intrinsic nature of these interactions. Using these two criteria, the authors propose four different transitional approaches: transformation, reconfiguration, technical substitution, de-alignment, and realignment (see above, p.56). How to understand the dynamic characteristics of this social-technical system?

It is to distinguish between the two different transition categories explained above: dominant adaptation and niche replacement. The key content discussed in the fourth chapter is the adaptation process of the old motor vehicle trading centre as the dominant system. After the promulgation of the "Used Vehicle Circulation Management" method in 2005, the monopoly of the old motor vehicle trading centre was broken, which is the premise of the "dominant system adaptation" transformation. This trend brought about by policy changes was neutralized by the adaptation of the old motor vehicle trading centre system. The dominant system adaptation of the old motor vehicle trading centre has successfully continued its dominance in the IO of the entire used car market. However, with the rise of the Internet economy in China and the implementation of the policy of restricting the annual increase of automobile licenses in Beijing and other major cities in 2011, the proportion of used car transactions across regions has increased rapidly. The used car e-commerce auction business first rose, and then produced several different trading models of used car e-commerce companies, covering B2B auction, B2C, C2B and C2C mode. These newcomers of used car e-commerce based on the Internet digital platform have become the niche system in the used car market, which has a great momentum to replace the old motor vehicle trading centre as the dominant system.

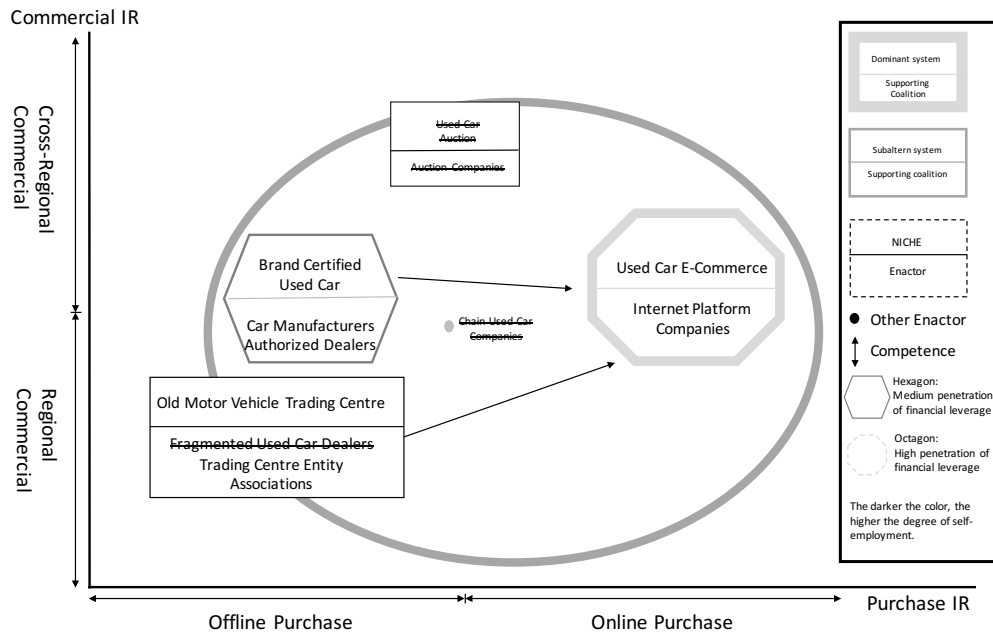
See as Figure 4.6, the starting point for the transformation of the social-technical system in the used car market is the dominant old motor vehicle trading centre system. Its thick border represents the lock-in resources, technology, talents and policy systems

^① Geels F W, Schot J. Typology of sociotechnical transition pathways[J]. *Research policy*, 2007, 36(3): 399-417.

established under the dominant position. After the promulgation of the "Used Vehicle Circulation Management Measures" in 2005, there were successively brand-certified used cars, used car auctions and chain used car companies, and then gradually emerged as a prototype of used car e-commerce. Used car e-commerce gradually grew after 2011. The hexagonal frame in the figure indicates that the financial leverage penetration of the system is medium level, while the octagonal frame indicates that the financial leverage penetration level of the system is a high level. The closer a regular polygon is to a circle, the higher the level of financial leverage penetration of its system. In addition, the darker the color of the frame of the system in the figure, the more the labor relationship in the system is self-employed. The labor relationship in the system is more fragmented. Conversely, the lighter the color of the border, the more formalized and divided the labor relations tend to be.

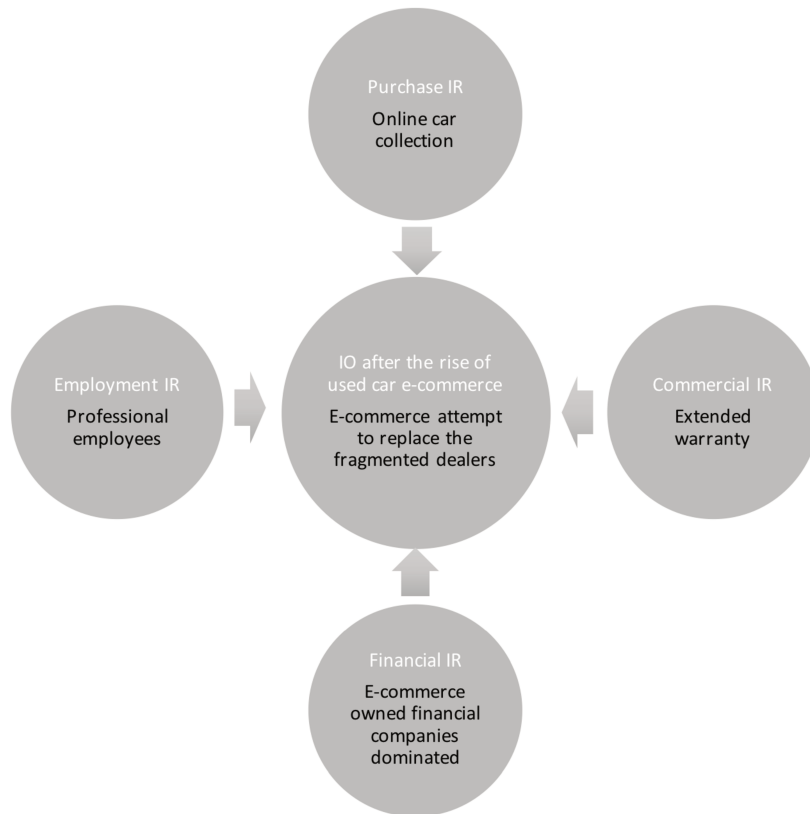
See as Figure 4.7, the first transformation path is the dominant adaptation transformation path. The old motor vehicle trading centre gradually absorbs these newcomers after facing emerging market participants. The resources, talents, and even the policy system and fiscal and tax incentives locked in the old motor vehicle trading centre are too strong. Brand-certified used cars, chain used cars, and used car auction companies cannot shake the dominant position, so they either launch or be absorbed into a specific part of the old motor vehicle trading centre. In short, they have become a part of the new IO after the dominant adaptation transformation.

Figure 5.2 The social-technical systems replacement map of used car market in China



The rise of used car e-commerce after 2011 represents another path of transformation – the niche alternative transformation. Used car e-commerce started from the cross-regional used car e-auction. The used car e-commerce represented by Che Yi Pai and You Xin Pai built a virtual market and transparent detection standard for convenient transactions from its Internet digital platform. Subsequent B2B used car auctions quickly expanded. Subsequently, Internet start-ups such as Renren used cars and Guazi used cars extended the business model of used car e-commerce from B2B to C2B, B2C, C2C, and extended from online digital platforms to offline stores, which challenged the dominant position of the old motor vehicle trading centre. The full-time hiring team of inspectors, the 20,000-kilometre or one year used car warranty, the used car financial loan, and the natural trading convenience and complete categories of the used car e-commerce, which are the different aspects of the IRs, are all inherent models that subvert the old motor vehicle trading centre.

Figure 5.3 The IO of the used car market after the rise of used car e-commerce



In the transition path of niche replacement, the traditional offline second-hand car auction company disappeared and replaced by the B2B mode actors in the used car e-commerce system. Chain used car dealers have also disappeared, replaced by B2C and C2C actors in used car e-commerce. What we found in the empirical investigation is that before the rise of used car e-commerce, chain used car dealers and used car auction companies have experienced large-scale shrinkage and withdrawal. They were defeated by the dominant system of the old motor vehicle trading centre. The remaining chain used car dealers and used car auction companies gathered around the old motor vehicle trading centre, becoming the extension of this system, and with the rise of used car e-commerce, they were first replaced.

Is there a phenomenon of transformation and reconfiguration in the old motor vehicle trading centre? The first thing that happened was the reconfiguration of talent, and a large number of used car practitioners were absorbed into the full-time employee program of used car e-commerce. They were originally small-scale second-hand car

dealers, independent and fragmented individual used car dealers, and even the owner of used car trading companies. Now they are absorbed into the undercarriage of used car e-commerce giants, adopting a flexible income distribution method and enjoying an organized and secure teamwork environment.

Structurally, second-hand car e-commerce is still only a small part of the used car market, that is, low-age used cars that are similar to new cars. On the one hand, this kind of screening shows that the second-hand car e-commerce hopes to establish a brand image and product quality assurance different from the offline entity trading market, but it also reflects the defects in the evaluation and quality control ability of the used car e-commerce. In terms of the four IRs, used car e-commerce can be said to be different from the fragmented used car dealers in the old motor vehicle trading centre. Most of the offline used car dealers are self-employed or small groups, while used car e-commerce is a large-scale hired car inspector team and sales team; offline used car dealers choose more cash transactions, while used car e-commerce provide financial loans to consumers as much as possible to increase their profit margins; offline used car transactions are generally sold in a single hammer, regardless of whether the quality is good or bad after the transfer, and used car e-commerce currently provides a 20,000-kilometer or one year warranty; for the procurement process, offline used car dealers are self-employed because of their labour organization model, so they accumulate with personal experience when collecting cars, while the used car e-commerce stipulates a set of vehicle inspection system, which is completed by the hired vehicle examiner and evaluated by the system algorithm, and the core is information transparency.

The rise of used car e-commerce itself reflects an effort to break or surpass the old motor vehicle trading centre system, because the earliest mode of the rise of used car e-commerce is the cross-regional circulation of used cars. The original old motor vehicle trading centre system is not conducive to the cross-regional circulation of used cars. Through the participation of e-commerce and the establishment of used car evaluation standards, the efficiency of cross-regional circulation of used cars has been

greatly improved. It should be said that the old motor vehicle trading centres in large and small cities of China as a whole is an institution itself, and the formation is not a one-step process. It also includes the process of forming a specific policy tool and the political actions behind it. The old motor vehicle trading centre in China is a field with a unique IO, which is very different from the new car market in all aspects of purchase relationship, financial relationship, employment relationship, and commercial relationship. With the addition of new entrants represented by used car e-commerce, the used car market in China is gradually changing the main structure of the IO, which will have a profound impact on the entire automotive industry.

Chapter 6 Technicisation and Politicisation: Used Car

Restriction Policy in China

How is China's industrial policy shaped? How do the jurisdictional powers of the central and local governments affect each other? This paper reveals the changing process of the used car industry policy in China's auto industry, that is, how the change of automobile exhaust emission standard in the daily management of a local government administrative department has become a used car industry policy affecting the whole country, which in turn affects the development of the entire automobile industry. What is behind the "problemization" and then "politicization" of one topic is the path of stakeholders' influence on economic activities and the basic position of politics in economic activities.

The entanglement between the central government and the local governments is an ancient theme of China. In the game of used car industry policy, it brings some elements of Chinese characteristics to the research in this field. In China, stakeholder groups' lobbying for the central government has always been a game played under the desktop. In the end, what kind of path and method do stakeholder groups use to carry out their "political work"? The second part of this paper mainly explores this issue. When the central government faced the localized protectionism of the used car market in the country and the technical policy tools it used, the central government abolished local protectionism based on the overall development of the automobile industry, especially the consideration of new car sales. However, in the face of various local soft-resistance and delays in implementing the abolish policy, the central government's strong and authoritative image has been broken. In fact, when discussing industrial policy, we are discussing issues at two different levels, one is the national policy effectiveness jurisdiction, and the other is the local policy effectiveness jurisdiction. The policy effects produced by these two jurisdictions are different when it comes to different types

of problems.

Introduction

One of the characteristics of China's transition from a planned economy to a market economy is that the central government and local governments still play an important role in economic activities, especially in the industrial economy. Victor Nee's^① "market transition theory" highlighted the transformation of economic mechanism which underestimates the importance of the centre re-distributor. Nee's view caused drastic controversy about the Chinese economic reform, and the new-institutional school argued for an institutional analysis to the transition economy. By criticizing the former's simplicity, the latter paid attention to the transformation of institutional constraints under which different kinds of agents seek to maximize their own interests and thus regard the transition economy as a process of re-configuration of the market structure^②.

This chapter reveals the internal structure of China's auto market through a survey and analysis of a ten-year policy change within the automotive industry. Most industries have been institutionalized for decades or even longer, so it is easy to forget that the existence of an industry as a relatively independent entity depends on the fact that the industry has IRs that are different from others. The used car restriction policy that began in 2008 allowed us to observe the institutionalization and de-institutionalization process of China's used automobile industry and the automobile industry as a whole, as well as its ongoing political activities and games.

Local governments in China regard the transaction of used cars and the accompanying series of economic activities as an economic and political "trouble". Therefore, the Beijing Municipal Government established a technical mechanism to get

^① Nee V, Stark D. Remaking the economic institutions of socialism: China and Eastern Europe[M]. Stanford University Press, 1989.

^② Granovetter M. Economic action and social structure: The problem of embeddedness[J]. American journal of sociology, 1985, 91(3): 481-510.

rid of this "trouble" by virtue of the legitimate opportunity generated by the Olympic Games. This technical mechanism is to set a very strict emission standard to limit extraneous used cars to immigrant and re-register to the city. This technical mechanism was not subjected to any legislative and discussion process at the time of its birth, and was purely regarded as a technical indicator of the traffic management department in the daily process. However, as Beijing began to limit the number of vehicle licenses in 2011, Beijing used cars largely spillovers around the capital city and this technical mechanism was quickly adopted by these regional governments to withstand the "trouble" caused by the immigration of used cars. In turn, this technical mechanism was widely adopted throughout the country, and the technical indicators originally buried in the daily inspection process of the Beijing traffic management department were transformed into national automobile market policies. This policy mechanism has thus obtained a name "used car restriction policy". From this name, it can be guessed that this is the slogan the stakeholders of the used car transaction use to mobilize and appeal. This is another value concept involved "fair market access" to counter the "environmental protection" legitimacy. In 2016, the central government finally made its debut under the multi-year appeal of relevant entities, and issued a policy to cancel this "used car restriction policy". However, from March 2016, the State Council promulgated this policy, it was not until September 2018 that the goal promulgated by the policy that should have been completed within two months was fully achieved. The efficiency of such an implementation is far away from the strong image that the Chinese government often recognizes internationally, but in fact, the game of power between the central government and local governments is a continuous topic in China.

6.1 Changes to an administrative technical indicator before the Beijing Olympic Games

Interestingly, the traces of the Beijing government's restrictions on the registration of used cars from extraneous places 10 years ago in 2008 were completely absent.

Neither news reports, government websites, or academic articles have any specific information about the policy that Beijing government began in 2008. Only the China Quality News has been discussed in the 2017 article. *“According to the understanding, the used car restriction policy began in Beijing. In 2008, Beijing set a strict environmental protection threshold for the registration of used cars from extraneous places in Beijing in the name of the governance environment. Since then, various provinces and cities across the country have followed suit, making this policy almost universally implemented throughout the country”*^①. Such a policy that later influenced the country was so quiet at the time of its birth. As a result, there was no discussion of this policy change in all news reports on the used car sector in Beijing during this period. This policy seems to be only a small change in the technical indicators, that is, the registration of the used cars required to be moved in Beijing needs to meet the emission standards for the new local cars. This change seems only occur in the daily work changes of the Vehicle Management Office of the Beijing Public Security Traffic Management Bureau. According to the requirements of the local new car in Beijing, the extraneous area used gasoline vehicles under the first stage of the national standard and the extraneous used diesel vehicles under the third stage of the national standard cannot be traded and registered in Beijing. But it seems that this policy has no effect on Beijing's used car market.

Obviously, when the policy of used car restriction was first set up, the officials would not have thought that it would have such a big impact on the national auto market in the future. At first, it was just a small "technical change" envisaged in response to the Olympic Games. In the text, it is not called restriction policy and it is the most easily overlooked among the many environmental protection measures. In fact, the concept of “used car restriction policy” in Chinese vocabulary was later invented by the car dealers associations and the media. In the second half of 2011, Beijing's public opinion and the

^① Zhang Haiyan. The nature of environmental protection is the local protection [N]. China Quality News, April 5, 2017 (005).

market really noticed this policy because the neighboring city Shijiazhuang was preparing to introduce this policy, and until then they did not know that Shijiazhuang was studying policy in Beijing.

In the policy notices of the official website of the Beijing Environmental Protection Bureau, all the policy notices in 2008 did not mention the restrictions on the registration of extraneous area used vehicles into Beijing. However, throughout the year, Beijing EPB policy notices have shown the pressure on air quality control brought about by the hosting of the Olympic Games. The Beijing Environmental Protection Bureau, the Transportation Committee and the Traffic Management Bureau jointly held a press briefing on December 30, 2008 to introduce Beijing's comprehensive measures to strengthen the prevention and control of high-emission motor vehicle pollution. At the briefing, it was stated that on September 27, 2008, the Beijing Municipal Government formulated and promulgated the <Notice on the Control of Air Pollution Measures in the Fifteenth Phase of Beijing Municipality>, requiring “strict access to newly purchased motor vehicles and strict management of motor vehicle emission from foreign provinces”.

There are indeed many reports on Beijing's used cars in a year about policy changes: From March 1st, Beijing took the lead in implementing the National 4 emission standards, which was an environmental commitment to the 2008 Beijing Olympic Games; from July 1st, the country would fully implement the National 3 emission standards, and new cars that fail to meet the standards will also face the fate of not being sold, not registered, and not being put into use; Beijing issued the regulations for the single and double number of car plates for the Olympic Games held in August; from October 6th, after buying a used car in Beijing, the car buyer needed to go to the vehicle management office to re-apply the vehicle license plate, if the original car owner purchased a another car within 6 months, the original car number plate can be kept for the new one.

Beijing Business Daily February 26, 2008 article "Environmental Protection New

Deal to promote the renovation of the city's car market"^① report:

"From March 1st, Beijing motor vehicles will take the lead in implementing the national IV emission standards in two stages in the country. Vehicles that do not meet the requirements will stop selling and registering... From the news that '2008 Beijing will implement the National IV emission standard for motor vehicles in advance', the industry and experts have asserted that the implementation of the National IV standard will be a factor that will have the greatest impact on the 2008 Beijing auto market... After the official implementation of the National IV standard, many vehicle models will inevitably withdraw from the Beijing market forever. However, the staff of the old motor vehicle trading centre in south fourth circle told reporters that consumers who love the delisted cars are not too frustrated because even after exiting the Beijing market, these classic models can be found in the used car market for a long time. The staff said that because the new policy of the National IV emission standard has the 'new standard for new cars, the old standard for old cars', its implementation will not affect the used car market, and some classic models of national III or national II emission standards will be favored by nostalgic people in the old car market. Just like now, Alto, which has already withdrawn from the new car market in Beijing more than two years ago, is still a protagonist in the used car market.... 'This implementation of the National IV standard in Beijing is an environmental commitment to the 29th Olympic Games in 2008. At the same time, the Beijing Environmental Protection Bureau has set a one-month 'buffer period' to reduce the impact on dealers and the Beijing auto market.' Yang Yang, manager of Zhonglian Auto Market Planning Department”。

On June 6, 2008, Modern Logistics News reported on the issue of "Before National III Standards arrive, National II Cars play 'The Last Madness'"^②:

“On January 1, 2006, Beijing took the lead in implementing the National III

^① Jing Yu. The world's largest car auction house withdraws from Shanghai [N]. China Business News, 2009-12-31 (006).

^② Xiao Dong. Before National III Standards arrive, National II Cars play "The Last Madness"[N]. Modern Logistics News, 2008-06-06 (B03).

emission standard. On July 1 this year, two and a half years later, the country will implement the National III emission standard for new cars of light-duty vehicles. This means that the National III standard will be implemented ‘ultimately’, and new cars that fail to meet the standards will also face the fate of not being sold, not registered, and not being put into use. In fact, in order to allow major automobile manufacturers and distributors to gradually adapt to the national III emission standards, the State Environmental Protection Administration has reserved a transition period of more than one year for the sales of existing national II products and the upgrading of national III standard technologies for some enterprises.”

On July 21, 2008, Beijing Daily reported on the issue of "The Private Car Owners Plan Their Own ‘Restrictive Countermeasures’"^①:

After the release of the single and double travel policies^②, many private car owners began to plan their own 'limited measures'. Zhang Wei, a foreign company employee who worked in Yizhuang, told the reporter that after a round of investigation, she found that it is the most cost-effective way to buy a used car with a high hedging rate for two months and then resell. She said that the safety of the ride is not guaranteed, the time of carpooling is not good; the price of renting a car is ten thousand a month. The purchase of a used Xiali or QQ for two months and then to resell only accounts for maximum 3,000 RMB, and security and convenience are guaranteed.”

On October 6, 2008, Beijing Business Daily reported on the issue of "To Buy a second-hand car now needs to re-apply for the car number plate"^③:

“After buying a used car in Beijing, the car buyer needs to go to the vehicle

^① Wang Dongliang. The Private Car Owners Plan Their Own “Restrictive Countermeasures” [N]. Beijing Daily, 2008-07-21 (007).

^② The single and double number restriction system is a transportation system that is created to alleviate urban traffic pressure and exhaust pollution. During the 2008 Beijing Olympics, from July 20 to September 20, Beijing began to limit single and double numbers. On the single day, only the number at the end of the car plate number is a single that can be on the road. When the number is double, only the number is the double that can be on the road.

^③ Guo Ying. To Buy a second-hand car now needs to re-apply for the car number plate [N]. Beijing Business Daily, 2008-10-06 (001).

management office to re-apply the vehicle license number plate, if the original car owner purchased another car within 6 months, the original car number plate can be kept for the new one. Yesterday, the Municipal Traffic Management Bureau announced 16 new service measures, which will be implemented today... The 16 new measures also include that when the overdue vehicles are transferred to Beijing, they do not need to return to the original vehicle management office for inspection. As long as the owner can submit the motor vehicle safety technical inspection certificate and the motor vehicle traffic accident liability compulsory insurance certificate, the owner can directly apply for transfer registration.”

On October 9, 2008, Beijing Business Daily reported with the title “Signs of the Policy-driven Car Market in 2009”^①:

"After September, the sales data of the auto market this year is still not optimistic. According to the statistics of the China Association of Automobile Manufacturers, in September, the national automobile production and sales stopped falling and stabilized, showing a significant increase in the chain. However, compared with the same period last year, the ratio did not end the negative growth situation. Although the total production and sales of automobiles in January-September exceeded 7 million units, the growth rate was further reduced compared with the previous eight months. The overall automobile production and sales situation is still grim. Faced with this year's bleak sales report, domestic auto dealers have not seen the dawn of this year's auto market prospects. A rumor that Beijing will carry out total control of automobile licenses next year will also cause waves in the auto market. When the auto industry faces the cold current, the most uncomfortable thing is not the manufacturers but the dealers. In 2004, the auto market had a short-term adjustment. At that time, there was no death of a car manufacturer, but a group of dealers died. This fully proves that the dealer is the end of the car eco-chain.”

On January 8, 2009, Beijing Daily reported on the topic "Selling 400,000 used cars

^① Qian Yu. Signs of the Policy-driven Car Market in 2009 [N]. Beijing Business Daily, 2008-10-21 (A01).

in Beijing last year"^①:

According to the statistics of the old motor vehicle trading centre in Beijing, the total number of used car transactions in Beijing reached 400,000 in 2008. The transaction volume of new cars in the same period was close to 500,000. The transaction ratio of new and old cars was 1:0.8. This is the region where the sales of new and old cars are the closest in China. Last year, the city's second-hand car trading volume increased by 18% year-on-year, the new car trading volume increased by 15% year-on-year, and the second-hand car growth rate was faster than the new car for the second consecutive year. The accelerated elimination of the old models has made Beijing's second-hand cars "lower age" and more expensive. In addition, the city's yellow label car restriction policy has also accelerated the replacement of old vehicles. In the last three months of last year, the city eliminated 20,000 yellow-label vehicles.”

From the above-mentioned policy changes related to the used cars in Beijing in 2008, we can see that the environmental pressure brought by the 2008 Olympic Games to the Beijing Municipal Government is enormous, and the pressure to control traffic congestion is also very large, so Beijing issued a policy of single and double number plate limit for cars on the road, and implemented the national 4 emission standards in advance. In the process of gradually increasing the emission standards of automobile exhausts in China, Beijing as an administrative jurisdiction has always implemented stricter emission standards before the whole nation. The largest cities such as Shanghai, Shenzhen and Guangzhou also follow the pace of Beijing and execute more stringent emission standards earlier than the whole nation. The continuous upgrading of vehicle exhaust emission standards is a policy instrument for city policymakers, which plays an important role in new car sales, used car market, urban road rights planning.

The author visited the Vehicle Administration Bureau of the Shanghai and conducted an interview on the Shanghai standard for outer used vehicles^②.

^① Wang Liufang. Selling 400,000 used cars in Beijing last year [N]. Beijing Daily, 2009-01-08 (010).

^② From Interview 21.

The author asks: When was the policy on the restrictions on the used cars in Shanghai issued?

Captain of the Vehicle Administration Bureau: There is no restriction policy for outer used vehicles in Shanghai. Shanghai's exhaust emission standards for motor vehicles are always strict. Our current requirements are to meet the national 5 emission standards before they can be given the car license plates of Shanghai area. If the vehicles coming from other places cannot meet the national 5 emission standards, then they cannot get the plates, and if they meet the national 5 emission standards, they will be able to get the plates. This standard is treated equally.

The author asks: But this is the standard for the new car. Is this standard too high for used cars?

Captain of the Vehicle Administration Bureau: This is difficult to evaluate. Shanghai is an economically developed area. It is normal to ask for a higher level than others.

The Chinese words of “used car restriction policy” did not appear in the official discourse system, so the Captain of the Vehicle Administration Bureau in Shanghai has never heard of any used car restriction policy. In fact, this state is a deliberate consequence and an "artefact".

Why did such a policy that has evolved into a national influence in the future so quietly at the time of its birth? In fact, the “legitimation” approach is important, and in order to obtain sustained public support, laws and regulations must be legalized in social and public spaces such as the media or parliament. In China, the public space could be simply referred to the media. The practice of legalization is therefore deployed, and this approach often takes one of two forms. In some cases, stakeholders of a particular public issue will politicize it by explicitly arousing the value judgments on which it is based and engaging in communication issues and encouraging its open debate^①. It will be seen below how stakeholders in used car trading continue to put the

^① Lagroye J. Les processus de politisation[J]. La politisation, Paris, Belin, 2003: 359-372.

problem of “used car restriction policy” in public space for discussion and thus evoke public support. In other cases, however, actors tend to use functionalist languages and limit issues to closed and discontinuous fields for discussion. They will de-politicize or technicalize the issue by submitting experts' “efficiency” reports on their expected outcomes^①. Obviously, the Beijing Municipal Government has adopted this approach in the issue of restricting the immigration of extraneous used cars. It is completely technicalized and depoliticized to avoid this problem from entering the public space for discussion.

6.2 The overflowing of the “trouble” and Local governments’ political and economic calculation

Beijing's car market had experienced several rounds of ups and downs like a roller coaster in the years since 2008. The reasons for these ups and downs are due to policy changes. The first is a series of restrictive measures for high-emission motor vehicles for the Olympic Games in 2008, which majorly focus on the immigration of used cars from extraneous provinces. The second low valley is due to the policy of Beijing’s Vehicle registration lottery, which was implemented on December 23, 2010. Only local citizens with Beijing “Hukou^②” or residents who have paid social security for five years in Beijing can apply for the lottery. The implementation of this policy made the Beijing auto license very rare, which led to the local transaction volume of the used car market in Beijing reduced to one-tenth of the original. In 2010, about 80% of the used car market were local transactions. In 2011, 90% of the used cars sold in Beijing were moved to other provinces, and only 10% of the transactions were local internal transactions. However, in the second half of 2011, cities in the surrounding provinces

^① Radaelli C M. *Technocracy in the European Union*[M]. Routledge, 2017.

^② Hukou means a household registration system, and each city has its own Hukou system. A city's hukou means corresponding medical insurance, educational resources, etc. China's urban authorities will also manage the city through the hukou system. For example, the policy change of Beijing's Vehicle registration lottery is based on the hukou system.

of Beijing have successively implemented used car restriction measures. Those extraneous areas used gasoline vehicles under the third stage of the national standard cannot be moved in and registered in these cities, including Hebei Province and Shandong Province, which were originally the main destinations for used cars sold in Beijing. The used car transaction structure in Beijing had again undergone major changes.

“The increase emission threshold for extraneous area used car registration and the expansion of the cities with restriction have caused the prices of used cars to continue to decline.” Yan Jinghui^①, deputy general manager of the used car market of Asian Games Village in Beijing, recalled the situation at that time.

The introduction of the restrictions on used cars in various provinces had been issued, resulting from the performance evaluation of environmental indicators. Li Kunsheng^②, director of the Motor Vehicle Emissions Management Office of the Beijing Municipal Environmental Protection Bureau, said: “Since the Ministry of Environmental Protection has included the indicators of nitrogen oxides particulate matter in the political performance appraisal, many local governments have shackled the restrictions on used cars. The Beijing Municipal Environmental Protection Bureau has also envisaged giving financial rewards to second-hand car dealers with a large amount of outward trading volume, but the actual reality is that once the local government sets a threshold for environmental protection, even if there are thousands of Yuan of subsidies, it is difficult to enter the local market. After all, thousands of Yuan could not solve environmental problems, and local cities were learning from Beijing.” What he said in his mouth "At that time, all cities were learning from Beijing" refers to the high threshold measures for the emission standards for used cars registration from other provinces and municipalities that Beijing has implemented since 2008.

^① From interview 14.

^② Fan Wenqing. Beijing V is ready to go out: investigation of Beijing 1 million used cars affected by the policy [N]. 21st Century Business Herald, 2013-02-27 (022).

On March 1, 2013, with Beijing officially implementing the Beijing V emission standard, the used car industry in Beijing faced another market transformation after the “Beijing’s Vehicle registration lottery” policy. According to the statistics of the Beijing Municipal Environmental Protection Bureau, there were more than 1.5 million green and yellow-label vehicles under second stage of emission standard in Beijing at that time. At that time, the number of cities that introduced the policy of restricting used cars’ registration had reached 223. The strict restriction policy will cause millions of used cars in Beijing below nation II emission standards to face difficulties in moving out. Since March 2012, 61 cities have set the threshold for used cars that do not meet the national III emission standards, and the out-migration rate of used cars in Beijing has fallen and fell. According to statistics from the Beijing Asian Games Village Auto Trading Market, the out-migration rate of used cars in Beijing in January 2013 was 41%, down 14 percentage points from the previous month. Before the cities began to restrict the registration of used cars from Beijing, the out-migration rate of used cars in Beijing was as high as 70%. “Beijing has become a resource-exporting city. In the future, the new car trading volume in Beijing's auto market will be more dependent on replacement, and the entry barriers for used cars set up everywhere will threaten the sales of new cars if the barriers won’t be removed by a new policy.”^① Shen Rong, deputy secretary-general of the China Automobile Dealers Association, envisaged the use of economic means to remove the entry barriers of used cars in various places. However, under the pressure of the carbon index policy, the number of restricted cities for used cars has gradually increased.

From the perspective of the city authorities, the impact of Beijing used cars on foreign cities is indeed not light. *"Beijing has out-migrated 70,000 vehicles a year before Beijing’s Vehicle registration lottery policy, and after the number is around 300000 to 400000. There is indeed a big impact on the automobile market in other cities*

^① Fan Wenqing. Beijing V is ready to go out: investigation of Beijing 1 million used cars affected by the policy [N]. 21st Century Business Herald, 2013-02-27 (022).

around Beijing. Because it is the car that Beijing moved out, the other local government cannot get the Tax in the trading session, and thus they naturally tend to restrict on used cars moving in"^① said Wang Tiezhong, chairman of Beijing Cheyipai e-market of used cars.

A used car dealer from Shijiazhuang recalled: *"Before I heard the sound of policy changes, Fukang, which was shipped in 1997, could take over 6,000 yuan after several rounds of bidding, but when I heard the policy (Shijiazhuang restricted used cars) might be implemented soon, I would not see such a car again."*^②

Reducing nitrogen oxides is an important part of controlling PM2.5, and motor vehicle emission is one of the main ways to produce nitrogen oxides. In recent years, in order to further curb the growing trend of nitrogen oxides, China's "12th Five-Year Plan for National Economic and Social Development" has clearly defined the reduction of nitrogen oxide emissions by 10% during the "Twelfth Five-Year Plan" period. The North China region around Beijing, the Shandong Peninsula, and the north-central Shanxi have become the key monitoring targets. These areas are the main destinations for used cars from Beijing. In an investigation, Li Kunsheng, director of the Motor Vehicle Emissions Management Office of the Beijing Municipal Environmental Protection Bureau, found that the area where the used cars from Beijing were out-migrated to had already exceeded those 200 cities that had introduced the restriction policy. "Those smaller cities or more remote cities, mainly using agricultural vehicles or low-speed trucks, have no concept of environmental protection, which provides conditions for the entry of used cars from Beijing^③." Li Kunsheng said. However, this did not alleviate the dilemma of the out-migration of used cars in Beijing. According to a survey, since October 2012, Gansu, Hunan, Hubei, and Northeast China have successively replaced Hebei and Shandong province as the main destinations of Beijing

^① From interview 19.

^② From interview 5.

^③ Fan Wenqing. Beijing V is ready to go out: investigation of Beijing 1 million used cars affected by the policy [N]. 21st Century Business Herald, 2013-02-27 (022).

used cars, and these areas are more than 1,200 kilometers away from Beijing. In order to find more used cars out-migration destinations, there was even a boom in used cars export business in 2012, but this hot spot soon became short-lived.

"The east of China is Japan and South Korea, the north is Russia and Mongolia, and the west is West Asia. These countries have higher requirements for vehicle emission standards. Therefore, our used car exports are mainly based in South Asia, but the far transportation cost directly limits the export volume of used cars."^① Shen Rong, deputy secretary general of China Automobile Dealers Association, analyzed.

In order to solve the dilemma that the extraneous cities have set up the restricted barriers that caused the local used cars to be unable to out-migrate, on December 25, 2012, the Beijing Municipal Environmental Protection Bureau officially released the <2013 Beijing Municipality "On the further promotion of the old vehicle elimination program in the city (2013-2014)", which clearly stipulated that the subsidy for the old motor vehicle elimination can be up to 16,500 rmb (Equivalent to 2000 Euro). The vehicle age applied for the elimination subsidy is also adjusted from 6-8 years and above to 6-10 years and more than 10 years. After the introduction of the program, many Beijing car owners chose to scrap the old cars in their hands, and the number of used car transfers between the locals also climbed. According to statistics from the Asian Games village market, in January 2013, Beijing sold 58,900 used cars, a year-on-year increase of 24.5%, of which more than 50% of used cars were digested locally. However, this model of locally digesting used cars is not favored by industry insiders.

"The rapid development of used cars is the trend of the times. The state should comprehensively plan and introduce relevant policies to support the development of the used car market, instead of restricting each other's cities for their own development."^② Shen Rong, deputy secretary-general of CADA, believes that *"the used car market will be transmitted to the new car market if it is harmed, so the sales of new cars will lose*

^① From interview 4.

^② From interview 4.

40% to 50%.”

Shen Rong once envisaged if the subsidy sponsored by the relevant government departments can follow the used car and given to the place where the used car is settled, and become a fund component of the local environmental protection project, so as to break the restriction barriers with economic leverage instrument and form a large national circulation of a unified market. The Beijing Municipal Environmental Protection Bureau has also envisaged giving funds rewards to used car dealers with a larger sales volume, but the reality after an investigation is that once the local government sets the environmental protection threshold, even if there are thousands of yuans of residual value subsidies, it is difficult to enter the local market. *"After all, thousands of yuans can't solve environmental problems, and now all local cities are learning from Beijing."*^① Li Kunsheng said.

6.3 An technical indicator becomes a de facto national policy

“Instrumentation” is important because if defining a problem is an important part of an organization’s reproduction or change, then it basically is invalid if it does not cooperate with its policy instruments. The instruments themselves, such as prohibiting the legal provisions of certain practices, or encouraging subsidies, or elaborate techniques such as statistical indicators, often become institutions^②. Some of these instruments are purely collective tools of action, neither involving the law nor involving representatives of public authorities. However, many others mean involve civil servants and politicians, even if this does not necessarily mean that the latter dominates the formulation and implementation. The used car restriction technical indicators as instruments become a unique institution for the used car market, shaping China's used

^① Fan Wenqing. Beijing V is ready to go out: investigation of Beijing 1 million used cars affected by the policy [N]. 21st Century Business Herald, 2013-02-27 (022).

^② Lascoumes P, Gales P L. Introduction: Understanding Public Policy through Its Instruments—From the Nature of Instruments to the Sociology of Public Policy Instrumentation[J]. Governance, 2010, 20(1):1-21.

car industry. This is the most unique and high-profile industry feature in this field in the past decade.

“By December 2013, nearly 300 cities across the country implemented the restriction policy for used cars, which greatly hindered the nationwide circulation of used cars.”^① Yan Jinghui, deputy general manager of Beijing Asian Games Village Auto Trading Market, said.

Take the Beijing market as an example. In 2013, the out-migration rate of used cars in Beijing has been around 40%, which is 10% lower than that in 2012. More importantly, there are nearly 1 million National II cars in Beijing that cannot be relocated, resulting in the inability to complete these transactions.

Shen Jinjun, vice president and general secretary of China Automobile Dealers Association, said at the first half of 2013 information conference *“The automobile industry anti-monopoly investigation is not limited to the imported car field, and is gradually extending to the used car field, trying to break the local unfair restriction policy for used cars and provides a fair trading environment for used cars.”*

Previously, due to the governance environment of local cities, strict restrictions on used cars were introduced, and the standards were far higher than the local emission standards for vehicles on the road, thus limiting the circulation of used cars in different places. According to the data, the cities that implemented the restriction policy on used cars in 2013 have accounted for 93% of the total Prefecture-level cities in the country. A total of 314 Prefecture-level cities across the country have emission restrictions on used cars' immigration, of which 13 only allowed the immigration of national V or higher emission standards used cars, and 250 cities only allowed the immigration of national IV or higher emission standards used cars.

An analyst pointed out *“The regulations of the restrictions on the immigration of used cars in various places are on the surface to control the input of pollution sources, but in essence they are a local monopoly in disguise. In fact, in order to limit the inflow*

^① From interview 14.

of used cars to adopt double emission standards, it will not solve the problem of motor vehicle pollution. For example, the local new car emission standard itself is lower than the national V, but blindly restricting the immigration of used cars from extraneous places, which will not only slower the local private car update, but also make these vehicles with lower emission standards only be confined to local jurisdiction for a long time. The final effect is not conducive to the improvement of motor vehicle pollution.”

①

The restriction policies of the Prefecture-level governments are not a small blow to the national used car market. We can see that the growth rate of used car trading volume has been in a downward trend since 2011 until 2015 (see above, Figure 4.3).

In view of the above drawbacks, the China Automobile Dealers Association recommended in 2013: to cancel the unreasonable restriction policy issued by each locality; to clarify the annual inspection emission standards for motor vehicles as the only standard for used cars immigration; the immigrant used cars shouldn't be treated by a “double standard” discriminatory policy, and as long as it meets the emission standards of local vehicles in use, it can be allowed to register. The association believed: *“The most fundamental thing is that to unify standards and achieve fair trade. Only when used cars are circulated, can we accelerate the upgrade of replacement of vehicles, perhaps this is the best way to effectively reduce vehicle emissions.”*

Beijing Business Daily, July 3, 2014, *“The ‘anti-monopoly wind’ has once again blown into the auto industry, and the Ministry of Commerce is reviewing potential monopolistic behaviors in the world’s largest auto market, including the abuse of power by local governments. The policy of restricting used cars in various places has become a common phenomenon. As of the end of April, the cities that implemented the restrictions on used cars have accounted for 93% of the total prefecture-level cities in the country. However, the resulting chain reaction is gradually appearing: the second-hand car is not well circulated, the price of used car has dropped sharply, and the*

① From interview 15.

consumption of the car replacement has been suppressed. Second-hand car transactions are always regarded as the blood of this industry. Once they are unable to flow because of the restrictions, the flow of the used cars in the country is blocked, which in turn affects the sales of new cars. The whole industry is damaged. Therefore, when used cars are baked back and forth on fire shelves, no one can predict how much impact this will have on the future of the automotive industry.”^①

On October 28, 2014, an article entitled "Second-hand Vehicles Restriction Should Also Be the Focus of Anti-Monopoly" expressed a little disappointment at the anti-monopoly investigation of the automobile market conducted by the Ministry of Commerce at that time. *"It is worth noting that when the Ministry of Commerce just conducted an anti-monopoly investigation on the automobile market, the industry agreed that the focus of this anti-monopoly will be on the local restrictions on used cars. ... It turns out that the anti-monopoly investigation of the Ministry of Commerce is aimed at the phenomenon of 'imported car profits' and 'high-priced maintenance fees'. When seeing the various policies of the car will usher in major changes due to anti-monopoly, it is hoped that the relevant government departments will also conduct an anti-monopoly investigation on used cars to make the development of domestic used cars more convenient.”^②* This report tells us that from the beginning of the Ministry of Commerce to conduct anti-monopoly investigations, the industry insiders suspected that the used car local restrictions will be investigated, and finally confirmed that there is no investigating local restrictions. This article is an appeal, and in the same article, there is the speech of Shen Jinjun, secretary general of the China Automobile Dealers Association, *"At present, the used car policies introduced by various levels of the governments, such as temporary property rights, used car taxation and current restrictions policy are not mature."* It can be seen that the China Automobile Dealers

^① Qian Yu. Breakout used car "restrictions" [N]. Beijing Business Daily, 2014-07-03 (005).

^② Qian Yu. The restrictions on used cars should also be the focus of anti-monopoly [N]. Beijing Business Daily, 2014-10-28 (A02).

Association is the main source of promotion for the removal of restriction policy on used car, and the target of the news media, industry associations and used car dealers is the Ministry of Commerce of China. They mobilized the concept of anti-monopoly values, and at the same time tried to deconstruct the concept of environmental protection value used by local governments in the process of restricting used cars.

In the analysts interviewed by the news media, restrictions on used cars do not reduce the level of environmental pollution. However, analysts did not say that environmental protection also has jurisdiction. Local officials are not interested in the state of environmental protection throughout the country. They are only interested in environmental indicators that will be recorded in their performance assessments in their jurisdictions. The reason why the national used car restrictions will be formed is mainly because the used cars flow from big cities to small cities and coastal cities to inland cities. The officials of small cities are using the restrictions on used cars to avoid the troubles.

6.4 Appeal from representatives of industry associations

The earliest call for the cancellation of the used car restriction policy came from the used car dealers, used car e-commerce and CADA's secretary-generals. A major appeal channel is newspaper media. For example, "Che Yi Pai" is a second-hand car e-commerce company covering the whole country. Every quarter, a press conference called "Second-hand car trend" will be held. In addition to newspaper media, there are also Shen Rong, deputy secretary-general of CADA, and Yang Xuejian, CEO of Che Yi Pai. At the press conference held in October 2012, Yang Xuejian believed: *"The used cars' wide circulation across regions is in line with China's unbalanced economic development, which not only meets the needs of the sustainable development of the automobile industry in the first-tier cities, but also meets the needs of economically underdeveloped regions. It plays a positive role in narrowing the regional lifestyle differences and forming a nationwide integrated healthier automobile consumption*

culture. In October last year, the restrictions on used cars was introduced throughout the country. The used cars below the National level 3 emission standard are not allowed to immigrant. In May of this year, the number of cities with the restriction policy reached 223, and there are few cities that can receive vehicles below the national level II, both in Beijing and other provinces. The channel is blocked and the market is bound to be affected^①". According to the CEO of the used car e-commerce company, from October 2011 to May 2012, in just 8 months, 223 cities across China have introduced the policy of second-hand car restrictions, and the policy spread was very fast.

Shen Rong, deputy secretary-general of CADA, said that *"Strictly restricting the used cars immigration policies in various regions is not conducive to the healthy development of the automobile industry. From the survey of several dealer groups by the China Automobile Dealers Association, the contribution of the new car dealer's used car business has reached 58%. In other words, at least 580,000 new car transactions were realized for every 1 million used car transactions. Based on the 7 million used car transactions this year, used car transactions will drive sales of 4.06 million new cars. Replacement is becoming the main force for first-tier cities to promote new car sales. The replacement sales in first-tier cities are basically over 30%, and they are rapidly increasing to 50%. For example, cities like Beijing have even exceeded 50%. Strict restrictions policies resulted in the difficulty of second-hand car circulation, and may lead to the rapid emergence of the car dumps in first-tier cities within two or three years. More than 60% of the replacement vehicles that drive the sale of new cars are vehicles of national I and national II emission standards. These vehicles were previously transferred to the economically underdeveloped areas of the province or to farther economically underdeveloped areas. Strict restrictions on these used cars will result in nowhere to go. In Beijing, for example, there are 2 million vehicles of this standard in Beijing. In addition to Beijing's Vehicle registration lottery, local people are not able to digest these vehicles. They only have to scrap or extend the service*

^① Jin Chao. Che Yi Pai Do not let first-tier cities become car dumps [J]. China Automotive, 2012 (10): 100.

period of 3-5 years, but these vehicles still have value in use. Most car owners prefer to extend their use and will not scrap these vehicles. In this way, the old cars in this city still exist and will not improve the environmental protection effect. The same is true of other first-tier cities. In the long run, all cities will encounter similar problems. In the newly restricted Guangzhou area, the impact will be even more serious.”^①

Yan Jinghui, deputy general manager of Beijing Asian Games Village Auto Trading Market, believed that to solve the problem of the development of used car market, it should be regulated from three levels:

“First, cancel the restriction policy of each city, and facilitate the national circulation of used cars. Second, Adjusting VAT is beneficial to used car transactions. Third, upgrade and renovate the used car market, establish a second-hand car trading information platform, and develop used car brands, auctions, replacements, etc.”^②

Luo Lei, deputy secretary-general of the China Automobile Dealers Association, also believed that although the sales of used cars in China have grown rapidly in recent years, the lack of relevant policies on used cars had made it difficult to form a second-hand car business, which had constrained the development of the used car market. *“The used car market needs to achieve greater development. It should also be used in various ways to make the cross-regional circulation become the normal operation of the used car market.”^③* Luo Lei told the Beijing Business Daily reporter that the national circulation is an international practice. In addition, the timely introduction of relevant policies is also the key to the rapid development of the market.

The China Automobile Dealers Association is an association representing China's vast auto dealers and related stakeholders. This is the case with the association's own description, which is a national association of automotive service trade organizations. Sales of automobile (including used cars), sales department of automobile production

^① Jin Chao. Che Yi Pai Do not let first-tier cities become car dumps [J]. China Automotive, 2012 (10): 100.

^② From interview 14.

^③ Qian Yu. Breakout used car "restrictions" [N]. Beijing Business Daily, 2014-07-03 (005).

enterprises, automobile multinational corporations in China, automobile auction companies, used car appraisal and evaluation, brokerage companies, auto parts, motorcycles and accessories sales enterprises, automobile tangible market, automobiles Clubs, auto decoration and beauty products sales service companies, car rental companies; local automobile circulation industry organizations; relevant scientific research, teaching units, social groups; relevant media, websites and individuals voluntarily participate in the CADA, which is headquartered in Beijing. The CADA is formally approved by the Ministry of Civil Affairs in 1990. In fact, many new policies or adjustments to existing policies in the field of automobile circulation were first drafted by the CADA. They provided policy drafts to the Ministry of Commerce, the Ministry of Industry and Information Technology, and the National Development and Reform Commission etc., and then these ministries met to decide whether to issue or modify them. It should be said that the interaction between the CADA and the central ministries is two-way. Because the ministries actively seek advice from CADA and understand the situation, CADA will also make calls or appeals to relevant ministries according to the general reaction of its member units. The introduction of many policies is done in such a two-way interaction. The CADA represents the voice of stakeholders in the automotive circulation field. Therefore, communication between the ministries and CADA is the most convenient channel for understanding the market and grassroots conditions.

At the beginning of June 2014, the CADA represented 3,761 automobile circulation enterprises nationwide to submit a report to the Ministry of Environmental Protection “Recommendations on Cancelling the Unreasonable Provisions for Relocation of Used Cars in Local Cities”. The report recommended that the Ministry of Environmental Protection regard the annual vehicle emission standards as the sole standard for the relocation of old motor vehicles, and should not adopt a “double standard” policy for used vehicles that need to be moved in.

In June 2014, the Ministry of Commerce issued the Notice on Conducting

Monopoly Questionnaires on the Regional Blockade Industry to the CADA, and collected opinions and appeals from the Association and its member units on the issue of “breaking regional blockades and industry monopolies”. The Ministry of Commerce has conducted monopoly investigations on foreign imported products for many times, but it is the first time to investigate regional blockade and industry monopoly. The Ministry of Commerce's questionnaire had seven questions, including whether the company has experienced discriminatory charges, discriminatory fees, or discriminatory price issues in off-site operations; whether the company has experienced abuse of administrative power by local governments in different places, hindering or restricting corporate products or services enter the local market; whether the company has seen local government or departmental documents containing regional blockades and industry monopoly regulations in market economic activities.

On August 12, 2014, the Order Department of the Ministry of Commerce held a symposium on “eliminating the regional blockade and breaking the monopoly of the industry”, and 11 national associations including the CADA participated in the symposium. On behalf of the CADA, Luo Lei, the deputy secretary-general of the CADA, told the Ministry of Commerce at the symposium 3 outstanding issues, which are the “restriction” problem of the regional blockade, the “inventory” problem of the monopoly of the industry, and the “co-insurance” problem in new car insurance market of Wuhan. Regarding the issue of “restriction”, the CADA believed that more and more cities have adopted the emission standards that restrict extraneous used vehicles to re-register locally. It is unreasonable for some cities to adopt an even higher emission standard for extraneous used vehicles than the new vehicle registration standards. Restrictions on extraneous used vehicles can not completely solve the problem of environmental pollution. Environmental pollution problems and traffic congestion problems require comprehensive management; restrictions will inhibit the circulation of used cars; restrictions will harm consumers' interests; restrictions will extend the cycle of consumers to change cars, which is not conducive to consumption. It is

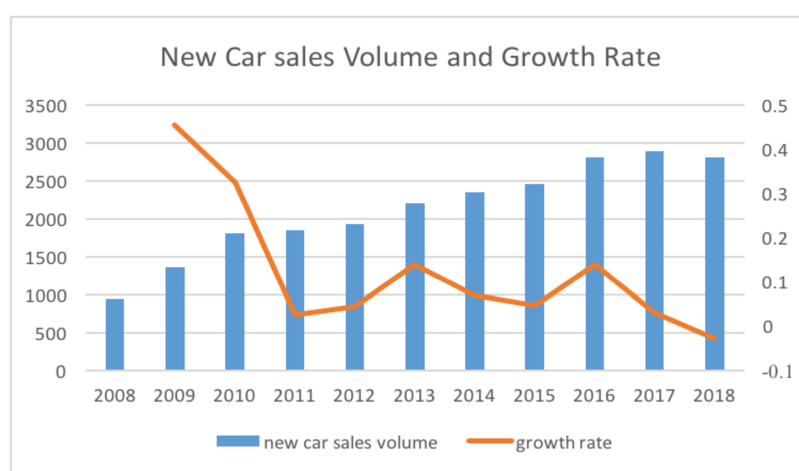
recommended that the competent authorities coordinate the local governments to adopt the annual standard for the use of motor vehicles in the country as the sole criterion for motor vehicle relocation, and to eliminate the “double standard” discrimination policy for the used vehicles.

In 2015, the Guangdong Provincial Environmental Protection Department issued the “Notice on the Implementation of the Fifth Phase of National Motor Vehicle Air Pollutant Emission Standards by Guangdong Province”. It is clear that since March 1, 2015, the 9 cities in the Pearl River Delta will first implement the National Five Standards; July 1 of the same year, the whole province implemented the national standard for light gasoline vehicles. This requirement meant that used cars in this area can only be licensed on the place of origin or moved outside the Guangdong province. The interests of local used car dealers would be greatly damaged. Founded in 2005, the Guangdong Second-hand Car Industry Association was later renamed the Guangdong Automobile Dealers Association. The President of the Association, Ms. Yan Fei, recalled the situation at the time, “At the time, the association made a big risk to stand up, but it is our aim to ‘serve the industry, serve the members, and serve the government’. We must stand up and actively play the role of the bridge between the industry and the government. On the one hand, the association called on all dealers to maintain rationality and calmness, focusing on the overall situation of the state, society and environmental protection, reasonably and legally reflecting demands and avoiding disrupting normal social order; on the other hand, with intensive action, in-depth research, we let the data truly and precisely reflect the problem and propose to give an appropriate transition period and accelerate the circulation of used cars. At the same time, the association communicated with various automobile manufacturers, and requires them to help dealers to deal with the difficulties by replacing the dealer inventory and granting subsidies.^①” After listening to the opinions of all parties in the

^① Ye Qing. In order to activate the used car market, Guangdong Automobile Dealers Association shows new actions [J]. Big Society, 2016(03): 42-45.

automobile circulation industry, the Guangdong Provincial Environmental Protection Department revised the implementation time of the policy in late March of that year. The implementation time of the 9 cities in the Pearl River Delta is in principle no later than December 31, 2015, and other regions should be no later than 2015. June 30th. However, for the Guangdong Automobile Dealers Association, their efforts have only made a small change -the implementation time of the National Five Standards has been postponed, but the restrictions on the used car market have not changed.

Figure 6.2 China new car sales volume data between 2008 and 2018



It can be seen that the sales growth rate of new cars has reached a low point in 2015, and the stimulus policies were introduced in the year to try to reverse the weak momentum of the development of the automobile industry. From October 1, 2015, the government promulgated temporary tax measures to levy a vehicle purchase tax on passenger vehicles with a displacement of 1.6 liters or less at a rate of 5%, which is only half of original tax rate. This policy has once again ignited the auto market. In 2016, the sales volume of automobiles increased by more than 3.4 million units compared with 2015. On such a high base, the sales volume of automobiles in 2017 increased by more than 0.8 million units compared with 2016. In March 2016, the State Council issued the measures to cancel the restrictions on the used vehicles. It was one of a series of policies that the central government responded to the overall economic downturn in the economic environment. It can be said that this measure was taken to save the decline in sales of new cars. In the repeated appeals of relevant stakeholders,

it is possible to see the point that the callers often link the smooth flow of used cars with the growth of new car sales. It is this reason that has touched the central government.

6.5 Conclusion: Technicisation and Politicisation of policy instruments

The restrictions on used vehicles allow us to see the importance of policy instruments to industrial IRs. If there are no corresponding policy instruments in the IOs, then the efforts of political work to promote the reproduction or change of industrial IRs will basically become ineffective. In different industries, the government adopts more elaborate statistical indicators, or prohibits certain practices by laws and regulations, or encourages subsidies for certain economic activities. These instruments often become institutions, thus constantly affecting the IO and IRs of the industry^①. Some of these elaborate instruments are at the level of collective action and do not involve the law and representatives of public authorities. However, other measures involve the participation of civil servants and politicians, even if these politicians are not the actors who dominate the formulation and implementation of these instruments. So the institutionalization of policy instruments is worth exploring, because as a series of norms, they set the boundaries of the market while establishing the constraints of industrial practice. Functionalist terminology only positions industrial regulation from a narrow standpoint of reducing transaction costs and improving efficiency. The fact is that policy instruments are not applicable to such simplified analysis. Behind the transaction costs and efficiency are a non-neutral means of public action. Everyone involved has a general explanation of economic activities and how to explain the best regulation with its own values, which are continuously strengthened and institutionalized in the interaction. The “Technological paradigms” is the cornerstone

^① Lascoumes P, Gales P L. Introduction: Understanding Public Policy through Its Instruments—From the Nature of Instruments to the Sociology of Public Policy Instrumentation[J]. *Governance*, 2010, 20(1):1-21.

of an industry's construction, and the paradigm contains the definition of “progress”, which is associated with the instruments of public action^①. The asymmetric mobilization of values is hidden behind the establishment, replication, updating and replacement of policy instruments. In fact, the coordination between different stakeholders and the misplacement of roles among different enterprises can avoid degrading industrial competition into a price war^②. This means that most of the time asymmetric power is universally accepted and legalized, especially the law.

Environmental protection has been increasingly recognized as a value concept by the Chinese society since the 2008 Olympics and the US Embassy announced the Beijing PM2.5 Index. This value has a direction impact in different industries, so the concept of environmental protection value has become a horizontal system that spans a range of industries. Such a system is particularly important for the automotive industry, which is linked to governance and innovation within the automotive industry. In particular, the treatment of air pollution is directly related to the vehicle emission, which has led to a series of institutionalization and deinstitutionalization processes for the automotive industry, and thus making environmental protection, a trans-industry regulation, internalize into a system, which deeply integrated in this particular area of the automotive industry.

This can be done by comparing examples of the meaning of the European automotive retail and service industries. In Europe for decades, companies and regulators – in this case the DG Competition - believes that automotive-related service issues should be based on "automobile distribution", that is, in terms of the challenges manufacturers face in managing their products. Until recently, these issues were truly seen as competition between automakers, distribution networks, and others to capture

^① Dosi G. Technological paradigms and technological trajectories: a suggested interpretation of the determinants and directions of technical change[J]. *Research policy*, 1982, 11(3): 147-162.

^② Fligstein N. *The architecture of markets: An economic sociology of twenty-first-century capitalist societies*[M]. Princeton University Press, 2002: 36-41.

the value associated with the expenditure linked to a car's utilization^①. For example, as mentioned earlier, the structure of the European automotive distribution industry is largely shaped by competition between automakers' franchisees and independent garages. However, even when public policy actors seek to change industry rules, they ignore this issue and still focus on the relationship between automakers and their dealers.

From the establishment of the old motor vehicle trading centre in 1985 by the administrative department of Beijing to the establishment of the "Old Motor Vehicle Transaction Management Measures" through the Ministry of Internal Trade (later changed to the Ministry of Commerce) in 1998, it was established as a formal institution. Then in 2005, the Ministry of Commerce promulgated the "Used Vehicle Circulation Management Measures" to break the monopole position of the old motor vehicle trading centre in the used car market. Then, in 2011, the rise of used car e-commerce, and in 2013 the used car restriction policy swept across the country, and finally in 2016 Central Government issued "Several Opinions on the Promotion of the Convenience Transactions of Used Cars", the Chinese used car market has experienced ups and downs in policy changes for more than 30 years.

Along with policy changes, China's used car industry has also experienced the processes of institutionalization, de-institutionalization, and re-institutionalization. In the initial stage of industrial institutionalization, the state played a central role as an organization and power distribution subject. The elite actors under the state structure created the old motor vehicle trading centre under the impetus of value change and functional demand. During this period, China's planned economic system still dominated. The state as an organization deepened in all aspects of social life and industrial activities. The operating entity of the old motor vehicle trading centre was the state's dispatching agency in local government departments. With the implementation of the "Used Vehicle Circulation Management Measures" in 2005, the

^① Jullien B. European automobile distribution: Globalization and incomplete liberalization[M]//Industries and Globalization. Palgrave Macmillan, London, 2008: 29-64.

simultaneous two-way movement is the contraction of the state as an organization in industrial activities, and this is a top-down initiative. The discussion of values preceded policy choices. As the supervisory body of economic activities, the government departments should take the initiative to withdraw from the operation of economic entities. This is the main assertion of the socialist market economy at that time.

As a result, China's used car market has entered a stage dominated by industrial actors. However, due to the existence of institutional inertia and path dependence, the subsequent brand certification of used cars, chain used cars, used car auction business can not compete with the old motor vehicle trading centre. Resources, venues, talent, capital, and policy preferences are still locked in the old motor vehicle trading centre. Until the macro-trend environment changed, the digital economy was widely established in China. The talents, financial capital, and resources accumulated in the digital economy are enough to launch an attempt to change the IO of the used car market. At this time, the policy of limiting the number of new car licenses per year in major cities in 2011 became the clarion call for this alternative attempt. China's used car e-commerce has risen. Used car e-commerce companies that are completely different from the IR of the old motor vehicle trading centre try to replace the former as the dominant system in the used car market, thus changing the IO of the entire used car industry in China.

This process demonstrated the active contraction of the state structure in industrial development, and revealed the tremendous changes that have taken place in China's institutional arrangements and political system during the 40 years of reform and opening up. Although China's central and local governments still have the ability to influence the social and economic structure, the actors in the industry have become stronger under the guidance of the values of the socialist market economy. The synergy of industrial actor strategies has the power to change the IO in the industry. In 2013, the used car restriction policy across the country began with the local governments' rational calculation of economic and environmental indicators, which determined that the

inflow of used cars was “troublesome”. Therefore, the relevant departments of the local governments have established a city wall to prevent "trouble" inflows by changing the technical indicators of used vehicle exhaust emissions. As an institution within the main body of the state, the local government also has its own autonomy. It will act according to the value of society, economy and culture, and then become the main body of will in economic and social activities. However, the rational choices made by most local governments based on their own interests have produced negative externalities. The development of the used car industry in the country has fallen into a predicament, which in turn has affected the pace of renewal of the entire automobile industry. In the industrial supervision, the central government must not only create uniform industrial regulations and production standards, but also face the externalities spilled by local governments' local regulations, and timely adjust and reset the entire industry.

The contradiction between structure and actor has always been the focus of institutionalism discussions. Practice in industry can help us objectively recognize the relationship between the two. The old motor vehicle trading centre, which has transformed from the planned economy, has gathered fragmented independent used car dealers. With the addition of brand-certified used actors such as used cars, chain used car companies and used car auction companies, the entire used car industry has become more complicated. Until the arrival of second-hand car e-commerce, the process of subverting the IO in the industry was slowly unfolding. We can find industrial actors behind several key policy changes. Before the release of the "Used Car Circulation Management Measures" in 2005, many auto manufacturers participated in the industrial dialogue held by the Ministry of Commerce and directly stated to the national ministry that they had different views on the monopoly of the old motor vehicle trading centre in the used car market. In the past few years before the State Council issued the "Several Opinions on Promoting Convenience of Used Cars", various media, scholars, conferences have conveyed the appeals for the cancellation of the used car restriction policies across the nation. The automotive dealer associations, used car e-commerce are

the source of these sounds.

Since the attempt to establish an old motor vehicle trading centre in 1985, China's used car market has entered an institutionalization process. In 1998, the "Old Motor Vehicle Transaction Management Measures" confirmed this institutionalization process and formed formal regulations, which declared the completion of the first institutionalization process in this field. With the development of China's new car market, car ownership was gradually rising, and car manufacturers and their authorized dealers 4S stores were increasingly facing the trade-in business. They realized that the "Old Motor Vehicle Transaction Management Measures" was unfavorable to them, especially in which it was stipulated that old motor vehicle transactions could only be carried out in the old motor vehicle trading centre. This institutionalized rule has greatly damaged the interests of automakers and their authorized dealers. They indirectly or directly appealed to the Ministry of Commerce through various channels. The promulgation of the "Used Vehicle Circulation Management Measures" was an important node in this field and represented the process of de-institutionalization. Then in 2011, the used car e-commerce rose, and in 2013, the local government's regulations of the used car restrictions swept across the country. This is the process of re-institutionalization of the used car market. The methodology orientation chosen by this research determines that the research object is not the institution itself, but the continuous cycle of institutionalization, de-institutionalization and re-institutionalization. It is a feature of regulation and everyday life in any industry, and although this provision may be more or less "stable," it will not be fully stable at any time. On the contrary, unresolved goals and strategic conflicts, as well as asymmetry between actors, mean that institutions continue to shift from one form of imbalance to another. Another reason to move from focusing on 'institutions' to 'institutionalization' is that it makes the frontier of analysis a matter of legitimation. As Jacques Lagroye emphasized:

'Institutions are not just practical organs or the objective products of power

relations. They are the legitimated elements of a political order and their ‘efficiency’ is largely based on a widespread belief in their utility and, more fundamentally, in their dignity^①.

The study of industry provides a means to link the process of regulation, industrial structure, and legitimation. The key to the study of the institutionalization process is to explore what we call "political work". Institutionalization in industry develops, maintains, or loses faith in the usefulness and “dignity” of the system through political work. This kind of political work does not only refer to the occasional lobbying and appealing process, but more often it is the daily activity in the industry. It is also a place that historical institutionalism often overlooks, that is, the “public problem” on which the targeted policy instruments are generated in collective action, that is, its own definition. Another aspect is the process of politicization of the “public problem”, the process of legitimation, and the policy instruments it generates^②. Regardless of whether the local governments borrowed the concept of environmental protection when introducing the used car restriction policy in 2013, or the stakeholders of the used car industry between 2013 and 2016 appealed for the cancellation of the used car restriction policy borrowed the values of industrial health development, these political work is a shaping of the definition of this "public problem" itself.

As Lascoumes and Le Galès underline, public action instruments are not neutral. Rather they each institutionalize values that have been shaped by interpretations of the social world and how it should best be regulated^③. Indeed, as evolutionist economists have shown^④, industries are structured around ‘technological paradigms’ which include

^① Lagroye J, François B, Sawicki F. *Sociologie politique*[M]. Presses de la Fondation nationale des sciences politiques: Dalloz, 1993.

^② Jullien B, Smith A. Conceptualizing the role of politics in the economy: industries and their institutionalizations[J]. *Review of International Political Economy*, 2011, 18(3): 358-383.

^③ Lascoumes P, Gales P L. Introduction: Understanding Public Policy through Its Instruments—From the Nature of Instruments to the Sociology of Public Policy Instrumentation[J]. *Governance*, 2010, 20(1):1-21.

^④ Dosi G. Technological paradigms and technological trajectories: a suggested interpretation of the determinants and directions of technical change[J]. *Research policy*, 1982, 11(3): 147-162.

‘their own definition of progress’ and are linked therefore to specific public action instruments. The used car exhaust emission standard adopted by the used car restriction policy as the policy instrument is also the product of this problem. It was established in Beijing in 2008, and was later replicated in more than 300 prefecture-level cities across the country, and was later called for cancellation. This series of 'problematization' is behind the asymmetric mobilization of values. Indeed, both the co-ordination between different stakeholders that gives rise to formal regulation. This approach considers that such decisions are the cumulative product of compromises on the definitions of social issues held by the practitioners concerned. In other words, the starting point for analysis is that collective and public ‘problems’ are constructed through negotiation, compromise and, more often than not, conflict^①. Building upon these points of general theory, our research on industry is centered upon the political work that takes place within the multitude of arenas and processes which together contribute to the definition of collective, public and political problems.

By examining the process of each political work, we explore the ups and downs of institutionalization, and at the same time include the impact object of the political work —the IO of the industry, into the scope of discussion. This can help researchers and industry practitioners break an existing "common sense", that is, the stability rules in the industry seem to be the true face of economic activities, or natural attributes. In fact, this is a stable state formed by an industry after a long period of institutionalization. Only when certain players in an industry find a reason to challenge the core of their IO, will people examine their “naturalness” and reveal its falsity. The structure of the industry, such as product differentiation, barriers to entry, and negotiating power of suppliers, are determined by political work. Indeed, it is important to underline that such orders are neither purely cognitive paradigms, nor are they simply metaphors of

^① Rochefort D A, Cobb R W. The politics of problem definition: Shaping the policy agenda[M]. Univ Pr of Kansas, 1994: 1-39.

‘institutional complementarity’^①.

Instead, an industry’s IOs is a set of rules, norms and actors which, through its institutions, place limits upon the behaviour considered ‘appropriate’ therein. The establishment of the old motor vehicle trading centre is based on the requirements of the city authority to regulate the road market. The early participants were the used car dealers in the original road market, but they reached a compromise with the rules set by the city authority, thus forming a unique old motor vehicle trading centre institution. Used car dealers in the old motor vehicle trading centre prefer cash transactions and a hammer sale, self-employment, on-site trading of vehicles, all of which are continuations of the trading order in the road market, however, the difference is that they have entered the field of the fixed location of the old motor vehicle trading centre. The IO established by this has the characteristics of some lemon markets. However, the spatially defined market of the city authority has restricted the actions of used car dealers. The physical space in which the dealers entered the old motor vehicle trading centre has in fact also entered the institutional space defined by the city authority. The single game has become a multiple game to overcome the problem of the lemon market proposed by Akerlof^②.

^① Hall P A, Soskice D. Varieties of capitalism: The institutional foundations of comparative advantage[M]. OUP Oxford, 2001.

^② Akerlof G A. The market for lemons: Quality and the market mechanism. Quarterly[J]. Journal Economics, 1970, 84: 488-500.

Chapter 7 Local Protectionism: The game between the central government and the local governments

7.1 Policy opinions of the State Council in March 2016

On March 14, 2016, the General Office of the State Council issued the <Several Opinions on Promoting Convenience Transactions of Used Cars> (hereinafter referred to as "National Eight Articles"), requiring all local governments to cancel the existing restrictions on the used cars. However, it is difficult for many people to expect the landing of the "National Eight Articles", which has high hopes in the industry. Since March 2016, some local car dealers have reported to industry associations and the media that the local governments has obstructed the implementation of this policy. For example, some local environmental protection bureaus postpone or hinder the removal of restrictions based on previously issued environmental documents; some local people's congresses have previously passed regulations that have certain legal effects, and local governments refuse to remove restrictions; some local government believes that the "national eight articles" are issued by the General Office of the State Council and have no legal effect.

We can firstly look at the contents of this original policy opinion: *"The people's government of the provinces, autonomous regions, municipalities directly under the Central Government, the ministries and commissions of the State Council, and the directly affiliated institutions: the automobile industry is an important strategic and pillar industry of the national economy. It is a critical domain for stable growth and expansion of consumption."* The first sentence at the beginning is to write out the object of this policy opinion, which is put forward by the State Council of China for its provincial governments and the State Council's own ministries. Readers familiar with China's political structure will be more clear that the highest level of China's

administrative system is the State Council. The State Council is responsible to the people's congresses. The provincial people's governments and the ministries under the State Council are responsible to the State Council, and the municipal governments at all levels are responsible for the provincial governments. After emphasizing the importance of the automobile industry in these subordinate government institutions of the State Council, the "Opinions" continue to elaborate: "At present, China's car ownership exceeds 170 million, and the used car market has great potential. However, used car transactions are not convenient, and the information is opaque, which is the problem restricts the consumption of used cars. In order to facilitate the trading of used cars, expand the used car market, create more market space for new car consumption, and at the same time drive the development of auto spare parts, maintenance, insurance and other related service industries, with the approval of the State Council, the following opinions are proposed", this paragraph expresses the original problem and the original intention of the policy opinions. Then there are eight policy recommendations, which are:

- (1) Create a market environment for the free circulation of used cars (The people's governments of all regions are responsible);
- (2) Further improve the registration management of used car transactions (The Ministry of Commerce in accordance with the Ministry of Public Security, the State Administration of Taxation and the China Insurance Regulatory Commission are responsible for the division of duties);
- (3) Accelerate the improvement of the used car circulation information platform (Ministry of Commerce in accordance with the Ministry of Industry and Information Technology, Ministry of Public Security, Ministry of Environmental Protection, Ministry of Transport, and the China Insurance Regulatory Commission are responsible for the division of duties);
- (4) Strengthen the credit system construction of used car market entities (Ministry of Commerce, National Development and Reform Commission, Ministry of

Environmental Protection, Ministry of Transport, State Administration of Taxation, General Administration of Industry and Commerce, and China Insurance Regulatory Commission are responsible for the division of duties);

(5) Optimize the tax policy for used car transactions (The Ministry of Finance and the State Administration of Taxation are responsible for the division of duties);

(6) Increase financial service support (The China Banking Regulatory Commission and the China Insurance Regulatory Commission are responsible for the division of duties);

(7) Actively promote the innovation of used car circulation model (Ministry of Commerce and Ministry of Transport are responsible for the division of duties);

(8) Improve the construction of the used car circulation system (headed by the Ministry of Commerce).

Each policy proposal has a specific responsibility for the corresponding ministries of the State Council. The most important and most effective of these eight articles is the first one: “Create a market environment for the free circulation of used cars (The people's governments of all regions are responsible). Local people’s governments must strictly implement <The State Council about the Regulations on Prohibiting the Implementation of Regional Blockades in Market Economy Activities> (Order No. 303 of the State Council), and shall not enact and implement the policy of restricting the circulation of used vehicles. In accordance with the national emission standards for motor vehicles in use, the used cars that are valid during the period of validity of the environmental protection periodic inspection and the annual inspection period can be relocated. Except for the relevant vehicles that are encouraged to be phased out and required to be phased out, and the key areas for air pollution prevention and control identified by the state. (Beijing-Tianjin-Hebei; Yangtze River Delta: Shanghai, Jiangsu, Zhejiang; Pearl River Delta 9 cities: Guangzhou, Shenzhen, Zhuhai, Foshan, Jiangmen, Zhaoqing, Huizhou, Dongguan, Zhongshan). The place where the policy of restricting of the immigration of used cars has been implemented should be cancelled before the end of May 2016. In this first policy article, the specific criteria for canceling the

restrictions on the used cars are proposed, which means that the emission standards for the immigration of external used cars are unified with the annual inspection standards for motor vehicles in use. This article also stipulates that the specific implementation period is the end of May 2016, which is two months and half after the release of this policy opinion. It also cites the State Council's previous policy decree, the State Council's Regulations on Prohibiting Regional Blockades in Market Economy Activities. This Order is more powerful than policy opinion and opposed to local protectionism. At the same time, this policy opinion also outlines the exempted targets, namely Beijing-Tianjing-Hebei, the Yangtze River Delta region represented by Shanghai, and the Pearl River Delta region represented by Guangzhou and Shenzhen. These areas are the location of the four first-tier cities in China, and the most economically developed areas. They are also the most densely areas of production base in the automotive industry, and also are the main source of used car sources. After years of appeals from industry associations, media, and industry scholars, the central government issued this policy opinion. The four first-tier cities and the economically developed areas around them are exempted, so we can guess the motivation behind the introduction of this policy opinion, that this policy is the result of the mobilization of the stakeholders in these first-tier cities.

Since the release of the “National Eight Articles” in March 2016, the industry has predicted that the Chinese used car industry will usher in an outbreak. Obviously, the results are far from the original expectations. According to the statistics of the CADA, in the five months of the release of the “National Eight Articles”, only 10 provinces and 133 cities in the country have lifted the policy of restricting the used cars. Some provinces and cities are still waiting to see the state, and other contents are yet to be further implemented. For the used car industry, the full implementation of the “National Eight Articles” is a relatively long-term process. In July 2016, Beijing's used cars out-migrated to the eight major provinces in Inner Mongolia, Shanxi, Liaoning, Jilin, Heilongjiang, Shandong, Henan, and Hebei. Among them, Inner Mongolia, Shanxi,

Liaoning, and Gansu, which have lifted the policy of restriction, have increased significantly compared with the same period of 2015. The total amount accounts for more than 60% of the out-migrated used cars in Beijing. In the areas where the restrictions have been lifted, the growth rate of used vehicles has increased significantly.

Due to the failure to implement the “National Eight Articles”, the State Council requested the Ministry of Commerce to conduct a market survey in August 2016 to take the lead in formulating feasible supporting implementation rules. At the China Car Dealer Development Forum used car industry policy seminar held in Hangzhou on May 14th, 2016, the used car dealers from all over the country actively offered advice and suggestions, hoping to lift all the restrictions or reduce the threshold of the restrictions on used cars. The organizers of the conference said that after the seminar, the actual problems faced by the used car market in various places will be accurately reflected in the Ministry of Commerce, so as to promote the rapid implementation of the “National Eight Articles” detailed rules and promote the orderly development of the industry. At the seminar, many representatives of the used car industry organization said that after the introduction of the “National Eight Articles”, they organized local used car dealers and related service organizations to reflect their demands and suggestions, and submitted the materials to the provincial traffic bureaus, environmental protection bureaus and governors, but obviously the effect is not ideal.

In order to further clarify the policy, on December 29, 2016, the General Office of the Ministry of Environmental Protection and the General Office of the Ministry of Commerce jointly issued the Notice on “Strengthening the Supervision of Environmental Quality of Used Vehicles”. The notice clearly explained the criteria for breaking the restrictions on the “National Eight Articles”: For vehicles that are in the valid period of environmental protection periodic inspection and safety inspection of motor vehicles, and have been transferred to the local environmental protection inspection, and meet the requirements of the emission standards of the vehicles in use, no other restrictions may be set (In addition to the national key areas for air pollution

control and the vehicles that are required by national laws to be eliminated). On January 22, 2017, the Ministry of Commerce published on the website “The Ministry of Commerce’s Market Construction Department on the issue of canceling the policy on the restrictions of used cars”, once again clearly stated that except for the Beijing-Tianjin-Hebei, Yangtze River Delta and Pearl River Delta cities, as long as used vehicles meet the vehicle emission standards for driving on the local road, used vehicles must be allowed to move in, and no other restrictions should be set.

The difficulty in speeding up the implementation of the lifting of restrictions on used cars in various provinces have confirmed the concerns of many insiders after the introduction of “National Eight Articles”: Behind the interests of all parties, the fierceness of the game can be imagined. It is precisely because of this that in the interpretation sounds of the “National Eight Articles”, “the implementation of the lifting of restrictions is likely to be a policy, there are countermeasures” is quite concentrated.

One senior expert of used cars bluntly said: *“Tax and environmental protection are the two main indicators of the performance of local governments. The tax on the contribution of used cars is not much, but the environmental pressure brought by old cars is not small. Selling new cars is more important than second-hand cars from environmental protection, energy conservation, job solving, and taxation. In addition, although used cars are more cost-effective, it is very likely to affect the promotion of new energy vehicles”*^①.

All along, the used car industry is small, scattered and chaotic. The overall integrity of the industry is not high, and used car dealers have a very small voice, often become the victims of interest groups. This is why the General Office of the State Council has listed “the market environment for the free circulation of used cars” as the first of the “National Eight Articles”.

At the used car industry policy seminar, the chief secretary of a local automobile

^① From interview 12.

circulation association complained:

"Our local environmental protection bureau is very strong. Officials of the Environmental Protection Bureau believe that the city's air pollution control regulations are local regulations, and the "national eight articles" are only the opinions of the State Council's General Office. The former is more effective than the latter and they refuse to cancel the "restriction" regulations."^①

7.2 Resistance from Local Governments

Mr. Lu of Weihai, Shandong Province, sued the Shandong Weihai Traffic Police Detachment, pointing directly at the restrictions on used cars in Shandong. Mr. Lu purchased a Shanghai-licensed Honda Accord sedan from Shanghai on May 16, 2016. At the same time, he completed the vehicle transfer formalities at the Shanghai Vehicle Administration. Later, he went to the Vehicle Management Office of the Traffic Police Detachment of Weihai Public Security Bureau (hereinafter referred to as Weihai Vehicle Administration Office) to apply for vehicle change of residence, but the staff of Weihai Vehicle Administration Office refused to handle it on the ground that his vehicle did not meet the national IV emission standards. After repeated negotiations, Mr. Lu sued the traffic police detachment of the Weihai Public Security Bureau to court. And on March 21, 2017-the day the three ministries issued the "Letter on the Implementation of the Removal of Used Car Restriction Policy", the Weihai Huancui District People's Court officially opened the case. "My car was purchased while traveling with my family in Shanghai last May, and it's been almost a year now. At that time, I considered various policies when buying a car, and I did a serious research on the Internet. In January, the General Office of the State Council issued 'Several Opinions on Promoting Convenience Transactions of Used Cars' (referred to as 'Opinions'). The Opinions clearly require that all places not implement restrictions on the relocation of second-

^① From interview 11.

hand vehicles that comply with the National Emission and Safety Standards for Motor Vehicles in Use. Places that have implemented restrictions on used vehicles must be cancelled by May last year. That's why I bought the car."

Mr. Lu said, "However, Weihai Vehicle Administration has not settled my car. They said that they are based on the relevant regulations of the Shandong Provincial Environmental Protection Department and the Shandong Public Security Department on strengthening the prevention and control of exhaust pollution from motor vehicles transferred outside the province. Used vehicles that are lower than the national IV emission standard will not be subject to registration procedures, but this is inconsistent with relevant national regulations and there are obvious violations. The state has issued a document requesting the cancellation of the used vehicle relocation policy. Someone said they were not notified.^①"

In October 2017, the author called eight local vehicle management offices on the question of "Whether your city is still restricting relocation of used cars outside the province below the national IV emission standards". The author opened a total of 8 prefecture-level cities' vehicle management offices, and the answers are exactly the same: there is no change in the restriction policy. Some also said that the standard for transferred used vehicles would be raised to the national V emission standards. This method is used for empirical research because it is also the method most commonly used by buyers of used cars and is the most accurate method. If buyers only refer to the content of the policy in their province, buyers may be caught in problems like Mr. Lu in Shandong. After buying a used car in a big city, buyers cannot transfer it to another city and get their local license plate.

The provinces of eight vehicle management offices are: Shandong, Jiangsu, Shanxi, Anhui, Henan, Yunnan, Sichuan, and Jiangxi. Among them, the most stringent standard is Xuzhou, Jiangsu: National V emission standards! In the answer, it is planned that Bengbu in Anhui and Nanchang in Jiangxi will raise the 2018 emission standards

^① Wan Jing. Difficult situation of second-hand car circulation [J]. Legal Person, 2017 (10): 22-26.

to the fifth level.

Author: What is the minimum entry standard?

Zibo (Shandong Province) Vehicle Administration: National Fourth.

Author: Are there any other requirements?

Zibo Vehicle Administration: No other requirements.

Author: Didn't you hear that the restriction policy will be cancelled?

Zibo Vehicle Administration: We have not been notified here.

Kunming (Yunnan Province) Vehicle Administration: Must be National Fourth emission standards.

Author: Are there any other requirements? Years, local account, etc.

Kunming Vehicle Administration: It only requires the national fourth emission standards.

Author: Hasn't the policy been lifted?

Kunming Vehicle Administration: No relevant notice has been received here.

Chengdu (Sichuan province) Vehicle Management Office: Must be National Fourth emission standards.

Author: Are there any age requirements?

Chengdu Vehicle Administration: No, but you must have a residence permit or residence in Chengdu.

Author: Isn't the Ministry of Public Security, the Ministry of Commerce and the Ministry of Environmental Protection jointly issued a document to cancel the restriction?

Chengdu Vehicle Administration: It is now still a National Fourth emission standards.

Author: You haven't received the notice yet, have you?

Chengdu Vehicle Administration: Our latest regulation in 2017 is still the National Fourth emission standards.

Luohe (Henan Province) Vehicle Management Office: National Three is impossible.

Author: What is the minimum standard?

Luohe Vehicle Administration: National Fourth.

Author: Didn't you say that there is a policy to remove restrictions on relocation?

Luohe Vehicle Administration: We haven't received it yet.

Author: Can the national fourth emission standard used cars be moved in?

Xuzhou (Jiangsu) Vehicle Administration: No, it must be National V.

Author: Didn't you say to cancel this policy?

Xuzhou Vehicle Administration: At present Xuzhou has not.

Bengbu (Anhui) Vehicle Management Office: National Standard IV, minimum National Standard IV.

Author: Are there any requirements for the age of the car?

Bengbu Vehicle Administration: Are you talking about the National Fourth Standard?

Author: Yes.

Bengbu Vehicle Administration: This is not necessary, as long as there is a Bengbu Hukou^①, which meets the standards of the fourth country. It is not necessarily until next year, next year may be National Five.

Author: Haven't heard of the removal of the restriction policy?

Bengbu Vehicle Administration: Where did you learn?

Author: Aren't the Ministry of Commerce, the Ministry of Environmental Protection and the Ministry of Public Security all jointly issuing policies?

Bengbu: No, we have not been notified.

Author: Or according to the previous policy?

Bengbu Vehicle Administration: Yes.

Nanchang (Jiangxi): National Fourth, the lowest is National Four.

^① Hukou means a household registration system, and each city has its own Hukou system. A city's hukou means corresponding medical insurance, educational resources, etc. China's urban authorities will also manage the city through the hukou system. For example, the policy change of Beijing's Vehicle registration lottery is based on the hukou system.

Author: Are there any age requirements?

Nanchang Vehicle Administration: There is no requirement for the age of the car. As long as you have a Nanchang household registration or residence permit, and you have reached the national fourth standard, the used car can move in.

Author: Isn't the Ministry of Commerce, the Ministry of Environmental Protection, and the Ministry of Public Security jointly issued a document to cancel the restriction policy?

Nanchang: Nanchang is about to implement National Five, and it is currently in a transitional period. I can only tell you that it is the standard of National Fourth.

So what exactly makes local governments so passive about the removal of restrictions on used cars? Luo Lei, deputy secretary-general of the China Automobile Dealers Association, believed that the removal of restrictions on used cars will affect local new car sales and indirectly affect the taxes paid on new cars; local governments will also calculate such tax losses, because it is difficult to collect taxes from the national tax department during the consumption of used cars. At least there is a purchase tax on new cars. However, whether it is the purchase tax or other taxes, it is entered into the national tax, and the local area does not have much benefit from the car consumption taxation.

Secondly, the environmental protection assessment is intensive, and there is concern that the exhaust of used cars will affect local air quality. The used car restriction policy first began in Beijing in 2008. In order to organize the Olympics and solve environmental pollution problems, Beijing set strict environmental protection standards for used cars which plan to move into Beijing this year. Due to geography, Hebei has always been the destination of used cars in Beijing. Soon, Hebei also set a threshold for entry of used cars. In December 2011, due to factors such as air pollution, traffic safety, and vehicle purchase tax, relevant departments of Hebei Province introduced an entry restriction policy to prohibit outer used cars below the national third emission standard and over 6 years of age from entering the local market. Subsequently, Shanghai, Tianjin,

Shandong, Guangdong and other provinces and cities have also issued policies on the restriction of used cars. As for the reasons for the introduction, there are also such cities as Hebei, Tianjin, Guangzhou and other key cities for air pollution prevention. However, for Jiangxi, it is not included in the list of key areas for air pollution prevention, and many cities in Jiangxi have also introduced related policies restricting the relocation of used cars. The reason is very simple. "You limited, and me too." Barriers are not just unilateral actions. Out of the "self-protection" mentality, barriers to used car circulation have been formed.

Unfair policies are also one of the reasons why regions are reluctant to implement State Council policy. In the policy opinions of the State Council, there is a sentence "except for the cities in the three major regions of Beijing, Tianjin, Hebei, Yangtze River Delta and Pearl River Delta", which means that the State Council has certain reservations on the removal of restrictions on used cars. An exemption was granted to allow these areas to continue to implement the policy on restrictions.

Regarding the standards of "allowing the implementation of restriction" vehicles, there are still different perceptions in various places. The local government's understanding is inconsistent with the document requirements of the three ministries. There is no difference in understanding the prohibition of "yellow-label vehicles"; however, local policies and the requirements of the three ministries and commissions differ greatly on whether "old vehicles" should be restricted from moving in. The documents of the three ministries and commissions require that no restrictions be placed on old cars, but the local government believes that state council documents allow restrictions on old cars.

In March 2016, the General Office of the State Council issued "Several Opinions on Promoting Convenience Transactions of Used Cars" (commonly known as "National Eight Articles"). There are two types of vehicles permitted to be restricted of moving in the "National Eight Articles": one is the vehicle encouraged to be eliminated by the state; the other is the vehicle that the state requires to be eliminated. All localities have

clearly stated in the documents for the implementation of National Eight Article of the State Council that the vehicles encouraged to be eliminated and required to be eliminated refer to old vehicles and yellow-label vehicles. The reason is: The Ministry of Environmental Protection's "Notice on Clarifying the State's Standards for Encouraging Elimination and Requesting Elimination of Vehicles to Promote the Circulation of Used Cars" clearly states that the vehicles the state encouraged to be eliminated and required to be eliminated are old and yellow-label vehicles. The Ministry of Environmental Protection and other five ministries and commissions stipulated in the "Notice on the Implementation Plan for the Elimination of Yellow Label Vehicles and Old Vehicles in 2014" that yellow label vehicles refer to diesel vehicles below national I emission standards and gasoline vehicles below national III emission standards. In principle, "used vehicles" refer to vehicles that do not meet the national IV emission standards.

However, documents from relevant ministries and commissions require no restrictions on the entry of "old cars". On December 29, 2016, the General Office of the Ministry of Environmental Protection and the General Office of the Ministry of Commerce jointly issued the "Notice on Strengthening the Supervision and Control of Environmental Protection for Used Cars", which requires that "no other restriction measures shall be set in various places." Restriction policy only include "vehicles that the state requires to be eliminated", compared with "National Eight Article", there are no "vehicles that the state encourages to be eliminated". Later, in March 2017, a letter issued by the Ministry of Commerce, the Ministry of Public Security, the Ministry of Environmental Protection on "Letter on the Implementation of the Removal of Used Car Restriction Policy" further clarified the "exception" clause only includes "vehicles that the state requires to be eliminated". "Vehicles state encouraged to be eliminated", that is, "old cars" are not in the scope of "exceptions".

During the implementation, in accordance with the principle of "enforcing the higher law when the lower law conflicts with the higher law", many local governments

have implemented the “National Eight Articles” standard, and “old cars” that do not meet the National fourth emission standards are prohibited from moving in.

Regarding the disagreement of the exception vehicle standards for the used vehicle restriction policy, the person in charge of the Market Construction Department of the Ministry of Commerce stated that the standard for removing the used vehicle restriction policy is clear. For vehicles within the validity period of regular environmental protection inspections and safety inspections of motor vehicles, and after passing through environmental protection inspections, and meeting the requirements of emission standards for in-use vehicles in transit areas, other restrictive measures must not be set up (except for the nationally designated key areas for air pollution control and vehicles required to be eliminated by the state). In other words, all vehicles allowed on the road must be allowed to move in.

The person in charge emphasized that the scope of the exception area for the removal of the restriction policy was limited to the country's clear priority areas for air pollution control. The national key areas for air pollution prevention are: Beijing, Tianjin and Hebei, Yangtze River Delta (Shanghai, Jiangsu, Zhejiang), Pearl River Delta (Guangzhou, Shenzhen, Zhuhai, Foshan, Jiangmen, Zhaoqing, Huizhou, Dongguan, Zhongshan). The meaning of these areas is clear and must not be interpreted by themselves and expanded at will^①.

7.3 Local State Corporatism

Why are the policies of the General Office of the State Council inferior to local regulations and policies? This is a basic problem in China's national governance system, that is, the relationship between the central government and local governments. The relationship between the central government and local governments is a fundamental issue in understanding China's national system and integrates a framework role in the

^① Wan Jing. Difficult situation of second-hand car circulation [J]. Legal Person, 2017 (10): 22-26.

development of economic and political relations^{①②}.

The institutional roots of the central and local contradictions, most studies attribute it to the previous decentralization^③ by the central government to the local authorities, and the performance evaluation system with GDP as the core^④, which also derived the behavioral logic of local government corporatism^⑤. If we review the practice of decentralization by the central government to local authorities, it is not difficult to find that each decentralization is highly related to the macro background of China's cyclical economic crisis. The first decentralization took place between 1958 and 1960. Due to the Soviet Union's investment in China, the financial funds fell sharply and the fiscal deficit continued to increase^⑥. The deficits in 1959 and 1960 reached more than 10% of fiscal revenue, which immediately led to a sharp fall in the national economy—GDP fell in 1960 and fell by 27.3% in 1961! The second decentralization took place from the late 1960s to the early 1970s. At a time when geopolitical tensions around China were tightening, the huge investment demand for "third-line construction" directly led to endogenous fiscal deficits. The fiscal deficit in 1967 was 2.048 billion yuan, and fiscal revenues fell sharply, leading to another economic recession. From 1980 to 1993, it experienced three decentralizations in the

^① Liu Chengli. Understanding the Central and Local Relations in Contemporary China [J]. Contemporary Economic Sciences, 2008 (05): 32-42.

^② Liu Hua. The Rational Return of the Functions of China's Local Government—From the Perspective of the Relationship Between the Central and Local Interests [J]. Wuhan University Journal (Philosophy and Social Sciences Edition), 2009 (4).

^③ The authority delegated by the central government to the localities during the period of the traditional planned economy was mainly manifested in the management rights of planning, finance, enterprises, undertakings, materials, and personnel; after the reform and opening up, it was mainly expressed in the areas of planning, infrastructure, finance, materials, and foreign trade.

^④ Pang Mingchuan. The Formation Mechanism and Evolution of the Game between Central and Local Governments [J]. Research on Financial and Economic Issues, 2004 (12): 54-60.

^⑤ Oi J C. The Role of the Local State in China's Transitional Economy[J]. The China Quarterly, 1995, 144(144):1132-1149.

^⑥ The fiscal deficit in 1958 was 2.074 billion yuan, the fiscal deficit in 1959 was 5.605 billion yuan, and the fiscal deficit in 1960 was 7.139 billion yuan. Unless otherwise specified, the fiscal deficit data listed are derived from China Fiscal Yearbook 2013.

name of fiscal system reform, which are characterized by "division of food" and "financial contract". Among them, the fiscal reform crisis of 1980 was also caused by the increase in investment in industrialization construction and the increase in expenditure to improve people's living standards: the fiscal deficit in 1979 was 13.541 billion rmb, accounting for 11.8% of fiscal revenue. The 1988 reform was the first stagflation crisis^① since the founding of the People's Republic of China. The fiscal deficit calculated on a full caliber basis during the same period was also very serious. The deficit in 1988 was equivalent to 14.8% of fiscal revenue, in 1989 this proportion reached 25.1%.

On the other hand, since the reform and opening up, relying on the financial power and autonomy granted by the central government, local governments have undergone changes in nature, have gradually formed relatively independent interests, and have adopted a corporatized operation method—by drawing local resources, especially land resources^②, to achieve an increase in "turnover" (GDP) and "profit" (fiscal revenue)^③. Local government leaders play the roles of chairman and general manager. In this process, local governments also face horizontal competition, that is, economic competition for scarce capital, and political competition for "the championship of promotion"^{④⑤}. For example, in the 1980s, through the grading contracting and "division of food" at all levels of finance, the local governments in the southern coastal areas with stronger income-generating capacity and export ability developed faster. This has

^① On the one hand, the economic growth rate continued to decline from 11.6% in 1987 to 3.8% in 1990; on the other hand, severe inflation broke out from 1988 to 1989, and the annual consumer price index and the month-on-month retail price index of goods increase was as high as 18%.

^② Wu Qun, Li Yongle. Fiscal Decentralization, Local Government Competition and Land Finance [J]. Finance and Economics, 2010 (07): 55-63.

^③ Zhang Zhanbin. Reflections on the "Corporation of Local Governments" [J]. Decision, 2006 (11): 34-35.

^④ Zhou Li'an. Incentives and Cooperation of Government Officials in the Game of Promotion—Also on the Long-standing Causes of Local Protectionism and Repeated Construction Problems in China [J]. Economic Research, 2004 (6): 33-40.

^⑤ Zhou Li'an. Research on the Promotion Model of Local Officials in China [J]. Economic Research, 2007 (07): 37-51.

spurred local governments to compete with each other for developing special zones and development zones to share the power of foreign investment, foreign trade, and foreign exchange delegated by the central government.

7.4 Administrative Subcontract

A more recent theory focused on the characteristics of the Chinese government's "administrative subcontract"^①. The central government "leas contracting" policy objectives to direct subordinates or local governments. This theoretical approach further inspired the theory of control rights in the discussion of the system of national governance, and further summarized the main parties in the administrative subcontract system as the entrusting party (central government, provincial government), and contractor (prefecture-level municipal government), agents (county-level municipal governments), among which provincial-level governments can also be regarded as contractors of the central government, and in some cases, prefecture-level municipal governments can also be entrusted by county-level municipal governments^②. The key point in the process of matching the logic of real political operation in this model is to explain that the administrative subcontract system is to give incentives and control of the specific implementation process to the intermediate government as the management party (contractor). Among them, prefecture-level municipal governments play an important role as the most frequent intermediate government for implementing policy objectives and coordinating county-level governments, as shown in the situation in the used car restriction problem explored in this paper.

If we look at the relationship between the central and local governments from the perspective of the operation of state power, we will find that there is a clear difference between central supervision and local development. Taking the implementation of

^① Li-An Z. Administrative Subcontract[J]. Chinese Journal of Sociology, 2014.

^② Zhou Xuguang. The Institutional Logic of Governance in China: An Organizational Approach [M]. Beijing: SDX & Harvard-Yenching Academic Library. 2017, PP.96.

environmental protection policies as an example, the Ministry of Environmental Protection of the State Council and the Provincial Department of Environmental Protection can be regarded as the contractors of the project. The Ministry of Environmental Protection and the Department of Environmental Protection will formulate a five-year environmental protection plan for each year and a longer term, which will focus on sewage emission reduction indicators and sulfur dioxide emission reduction indicators. The prefecture-level environmental protection bureaus and county environmental protection bureaus seem to have no say in formulating these emission reduction plans. However, the annual emission reduction indicators must be verified through annual inspection. For each item during the annual inspection, the degree of confirmation of the indicators determines the performance of the prefecture-level environmental protection bureau and county environmental protection bureau in the final year. In the process of annual inspection, superior departments and subordinate departments are in a bargaining mechanism. In many cases, there is no high correlation between the reporting emission reduction results created by this mechanism and the actual local emission reduction actions. In fact, this process is a complex interactive process, and can not be viewed as a top-down implementation process, but more like a negotiation and interaction process between the contractor, and agent like companies^①.

7.5 Campaign-style Governance and "Problematization" Mobilization

The salient feature of Campaign-style Governance is that it temporarily interrupts and stops the bureaucratic system from being in place and step by step in the routine operation process. It is intended to replace, break through or rectify the original bureaucratic system and its conventional mechanism, and replace itself with A top-

^① Zhou Xuguang. *The Institutional Logic of Governance in China: An Organizational Approach* [M]. Beijing: SDX & Harvard-Yenching Academic Library. 2017, PP.116.

down, political mobilization approach to mobilize resources, concentrate all forces and attention to complete a specific task^①.

Unlike many scholars who study Campaign-style Governance, Zhou Xueguang understands the source power behind sports governance from the perspective of the relationship between conventional governance and Campaign-style Governance. That is to say, the failure of conventional governance in responding to the scale of the country and local diversity calls out the soul of Campaign-style Governance, and then conventional governance and Campaign-style Governance are a dual process, and they replace each other.

The whole process of the used car market governance corresponds to this dual process. The conventional mechanism is built on an organizational structure with clear division of labor and individual duties. It is reflected in the stable and repeated bureaucratic system process and various examples of routine procedures and activity. The policy of restricting the used cars originates from the technical governance means of local governments, and behind this technical governance means is this conventional governance logic. Environmental protection emission reduction indicators are embedded in the five-year plan of governments at all levels in accordance with conventional governance logic. Restriction of used cars in the field is only a small technical innovation in this plan. It is a rare measure that does not conflict with environmental protection and the local economy. The negative impact caused by the economic externality is explained by the reduction of the circulation of the external national used car market and the reduction of the frequency of new car updates in the field.

It wasn't until the State Council started from the top to the bottom that the country's de facto used car restrictions have been exercised in a Campaign-style. However, the

^① Zhou Xuguang. *The Institutional Logic of Governance in China: An Organizational Approach* [M]. Beijing: SDX & Harvard-Yenching Academic Library. 2017, PP.125.

effect of Campaign-style governance is not satisfactory. The reason is that the strengthening of conventional mechanisms leads to organizations tending to be structurally rigid and high-boundary, thereby inhibiting Campaign-style mechanisms. At the same time, the conventional bureaucratic governance system will also be based on complex legal logic to prevent Campaign-style governance from interfering with its daily work. We have seen many local officials based on the used car restriction regulations passed by the local people's congress to resist the current Campaign-style governance policy.

From the perspective of the entire history of the used car market development, it has always been in the dual movement of conventional governance and Campaign-style governance. At the same time, there is a phenomenon that has not been focused by other scholars, that is, the bottom-up mobilization process. We call this political work in industry. The old motor vehicle trading market, which started in Beijing in 1985, was the earliest institution created by the political work of bottom-up mobilization. The mobilization of political work was initiated in the process of "problematization", in which the individual's problems became collective problems and then the public problems, and finally the politicization of the public problems became policies, regulations and industrial actions that changed the pattern of industry and market. If conventional governance is a static process, then Campaign-style governance is a dynamic top-down process, and problematization is a bottom-up process. The used car market started with the problematicization of used car transactions, and then the establishment of the old motor vehicle trading market became a conventional governance system; then, after several rounds of mobilization of industry stakeholders, the establishment or modification of several regulations realized in the dual movement; and then in their conventional governance, especially in environmental governance, local governments issued policies to restrict the used cars, which changed the industrial pattern. Finally, after the mobilization of various stakeholders in the industry, the State Council carried out a campaign to cancel the restriction policies for used cars across the

country. In the final process, the bottom-up mobilization arrived at the State Council and issued a top-down campaign-style governance. The combination of the upper and lower layers is to change the middle-level conventional governance rules, which is a very interesting phenomenon.

7.6 Conclusion: Alliance between the central government and the metropolises

As discussed above, the central government has now evolved into an interest entity with the financial sector as its main focus, while local governments in various places are focusing on industries, especially large taxpayers and employment in manufacturing, and a long-standing division between central and local was formed. However, among them, the central government's control and sources of power in the financial sector still need specific operating space. The organizational structure is represented by the financial system management system of the Central Bank, the China Banking Regulatory Commission, the Securities Regulatory Commission, and the Insurance Regulatory Commission. On the spatial scale, it represents the financial and economic development poles with Beijing-Tianjin-Hebei, Yangtze River Delta, and Pearl River Delta as the core. These regions are now China's most prosperous economy, highest population density, and most important financial centers. Beijing-Tianjin-Hebei, with Beijing at its core, is the center of power, where the heads of financial institutions such as the Central Bank, the China Banking Regulatory Commission, the China Securities Regulatory Commission, and the China Insurance Regulatory Commission gathered; the Yangtze River Delta, centered on Shanghai, is home to the Shanghai Stock Exchange, and home to many futures trading, oil futures, and foreign exchange trading centers. Shanghai has been China's financial and economic center since the beginning of the last century; the Pearl River Delta region with Hong Kong, Shenzhen, and Guangzhou as its core is the center of outward-oriented finance, and Hong Kong has a unique position as a channel of communication between the Chinese financial sector

and the world, while the Shenzhen securities market is also one of the only two securities markets in China.

From the abolition of the used car restriction policy, we can not only see the central government's choice between capital and labor, but also the priority and inferiority of its national governance system on the spatial scale. In the abolition of the used car restriction policy, Beijing-Tianjin-Hebei, Yangtze River Delta, and Pearl River Delta regions were exempted, and this exemption was questioned by other local governments. The so-called air pollution prevention zones are actually priority areas for economic development. It is precisely because of the central government's high dependence and frequent interaction on the financial sector that these areas have been given priority as financial management and control centers. This is an alliance between the central government and the financial sector, and it is also an alliance between the central government and the three financial development poles!

The structure of the used car market in China is composed of thousands of used car market entities in large and small cities across the country. These trading markets are then aggregated by used car dealers, and the structure is very scattered. As a new market force, used car e-commerce is different from these individual used car dealers. They are targeting the national market circulation. The business of individual used car dealers is often a partial and regional single mode. Therefore, used car e-commerce began to pay attention early and began to call for changes in the policy of used car restrictions. The target they are calling is also aimed at the national market, so the target of the appeal is the relevant ministries and commissions of the central government. From their discourses, we can sum up the values they mobilized. One is the mobilization of the fair competition value of the market, and the second is the re-definition of the value of environmental protection (the used cars in big cities can not be moved outside and not conducive to air protection in big cities). The third is the mobilization of the value of industrial development (the use of used cars in large cities will slow down the local sales of new cars). If we classify it again, the first value

mobilization is mainly to resonate with the value of the public, because the unfair market competition under local protectionism will directly lead to the loss of interests of consumers and used car sellers. The restriction has led to a sharp drop in prices. The second and third value mobilizations are said to the officials of the central government ministries. The environmental protection of big cities, the development of automobile industry in big cities, and the sales of new cars are more concerned topics for these officials.

From the case of used car restrictions, it can be found that the level of prefecture-level city is the key to the policy landing, which is where we call the "Arena"^①! Beijing, Shanghai, Tianjin, and Chongqing are the four municipalities directly under the Central Government of China. The territorial jurisdiction of municipalities directly under the Central Government is not much different from that of prefecture-level cities. However, at the administrative level, it is the same as that of the provincial level, reporting directly to the central government. In addition to the four municipalities, Beijing, Shanghai, Guangzhou and Shenzhen are known as first-tier cities in China. Among the national strategies for regional development announced in 2018, the Beijing-Tianjin-Hebei region, the Yangtze River Delta, Guangdong, Hong Kong and Macao were identified by the central government as the core region of national economic development. These three regions are also the areas exempted from the above-mentioned policy of comprehensively eliminating the restrictions on used vehicles. Beijing is the core city of Beijing-Tianjin-Hebei. Shanghai is the core city of the Yangtze River Delta. Shenzhen and Guangzhou are the core cities of Guangdong, Hong Kong and Macao. These cities constitute the heart of China's economic development. We can call them metropolises. The prefecture-level cities and the municipalities directly under the Central Government are important stakeholders in the used vehicle industry. Their focus is mainly on two aspects: one is taxation and the other is employment. In the

^① Jullien B, Smith A. Conceptualizing the role of politics in the economy: industries and their institutionalizations[J]. *Review of International Political Economy*, 2011, 18(3):358-383.

taxation of the transaction link, the local government has no interest. The 10% new car purchase tax is directly paid to the national treasury. The 2% value-added tax of the used car is only levied on the main body of the company. Most of the used car dealers in the actual operation also will hide the company's transactions under the employee's personal name to avoid tax. In 2012, the revenue from new car purchase tax was 222.9 billion RMB, while the income from used car transaction tax in 2015 was only 150 million RMB. The only way for local governments to get tax revenue is through the tax revenue of automakers, and the production of vehicles can also create jobs. On the other hand, the increase in car ownership has brought more and more air pollution pressure and traffic congestion pressure to city authorities. The above is the logic of the relevant interests of local governments in the automotive industry. China's automobile manufacturing distribution has natural fragmentation characteristics. In the economic reforms of the 1980s and 1990s, Beijing delegated the power of economic policy to the provinces. As the provinces established their own automobile manufacturing industry chains, the fragmentation characteristics of the automotive industry became more apparent. The spare parts supply chain for the automotive industry was rarely allowed to cross provincial boundaries. Among the 31 provinces, 25 provinces have announced that the automobile industry is a local pillar industry, which has largely prevented the rationalization and scale of the automobile industry, and intensified the competition for economic control in the institutionalization of policy instruments.

In fact, from the rise of individual or corporate interest issues to collective issues, to public issues, and then to politicization issues, the “problem” of used car restrictions is continually mobilizing more and more stakeholders with alliances. In the end, in two reports of government work in 2016 and 2018, Premier Li Keqiang mentioned the problem of used car circulation and comprehensively abolished the policy of used car restrictions. The central government turned down the alliance formed by the metropolitan interest groups. In fact, the process of legitimizing policy instruments requires the integration of an argumentation process with an alliance of stakeholder

groups. Legitimization is the most useful concept for achieving this goal, as it encourages simultaneous attention to arguments and alliances^①.

The stakeholders in the automobile industry in China's coastal areas, especially first-tier cities, including automobile manufacturers, authorized dealers, used car e-commerce, and local governments, are compared to local governments and car dealers in low-tier cities have relatively more power to influence policy and the ability to mobilize values. First of all, it was the Beijing Environmental Protection Bureau that conceived the policy of restricting used cars. They created this policy because of the demand for environmental protection in Beijing and the environmental pressure of the Olympic Games. After that, the Beijing Municipal Transportation Commission launched a policy of Beijing's Vehicle registration lottery for the control of urban congestion, which drastically reduced the number of new vehicles on the road every year. The above two measures are policies proposed by local governments for their own governance needs, but these policies have great spillover effects. After the Beijing's Vehicle registration lottery in 2011, there was a large number of used cars moving out, which was the first to flow out to Hebei, Shanxi, Shandong and other places around Beijing. These areas have found two negative effects after receiving a large number of used cars. On the one hand, they have increased local environmental protection pressure, and on the other hand, they have suppressed the sales of new cars from local car dealers. Based on these two points, the local governments immediately learned from Beijing to set the high threshold for the immigration and registration of used cars from extraneous cities. The auto industry stakeholders in the first-tier cities discovered that their interests were damaged. Due to the rapid spread of the restriction policy, the original local entry barriers became a national market entry barrier, which greatly damaged the interests of stakeholders in the automotive industry from first-tier cities. Because used cars can not move out, the transaction volume of used car e-commerce is greatly reduced, and then the sales of new cars, the interests of authorized dealers were damaged, and the auto

^① Lagroye J. La légitimation[M]. *Traité de science politique*, 1985, 1: 395-467.

manufacturers were also suffering from the loss of profits. As a result, these stakeholders began to mobilize other value concepts to try to exempt this industry from the trans-industry regulatory pressure of environmental protection. They expressed their opinions through the media and caused consumers to resonate. They appealed to the relevant ministries and commissions of the central government through industry associations, especially the Ministry of Commerce. What is interesting is that the release of the restriction policy is led by the local government's environmental protection department. The implementation of the restriction removal policy are all led by the Ministry of Commerce. This shows the interaction between the two concepts of value of environmental protection and fair market competition. After the release of the restriction removal policy, we found that this policy retains the right of restriction on used cars to local governments in the three regions of Beijing-Tianjin-Hebei, Yangtze River Delta and Pearl River Delta. The reason cited is that these three regions belong to the national air pollution prevention and control areas. Coincidentally, these three regions are also the regions with the most developed economies and the most densely populated automobile production bases in China. It can be seen that the central government actually represents the interests of these regions, or say that the interest groups and stakeholders in these regions have stronger policy influence.

The metropolitan areas represented by first-tier cities, such as Beijing, Shanghai, Guangzhou, and Shenzhen, represent the forefront of China's economic growth and are the areas that the central government needs to focus on and govern. On the other side, the remote provinces of Xinjiang, Inner Mongolia, Gansu and Qinghai, as well as a large number of third- and fourth-tier cities, are areas in the central government's governance system that can slightly delay attention and slightly sacrifice. From the cancellation of the restriction policy, it can be seen that the Beijing-Tianjin-Hebei, Yangtze River Delta, and Pearl River Delta are the most important economic development zones in the first-tier coastal areas, which are exempted from this policy. That is, they can still continue to implement the most stringent used car immigration

standard. This shows that the central government represents the interest groups in these areas to a greater extent, or conversely, the interest groups of these areas have stronger value mobilization ability and policy influence ability. They can not only mobilize the value concept of environmental protection to protect their own interests, but also mobilize other value concept such as market access equity when their own interests are damaged by environmental trans-industry regulations.

From the delays and boycotts of the low-tier cities and local governments in the process of implementation of the cancellation policy, we can see that they are neither willing nor agree with this new policy requirement. They become victims, but their voices cannot be heard. They can only take a procrastination strategy. In this sense, China's developed first- and second-tier cities are opposite to less developed third- and fourth-tier cities! In this case, the used cars are troubles in the eyes of the city authorities. Used cars can't bring taxes, but they also cause air pollution, and they will also inhibit new car sales. Such "troubles" are dumped from first-tier cities, come out and flow to the low-tier cities. Of course, you need to build a dam to block. However, in the eyes of the low-tier cities authorities, the central government does not stand with them. The central government itself is in Beijing, and it also represents the interests of first-tier cities to a greater extent. Of course, the low-tier cities are unwilling to accept them. They adopt a procrastination strategy. When the Ministry of Commerce, the Ministry of Public Security, and the Ministry of Environmental Protection go to various places to supervise the implementation of the cancellation policy on the removal of the restrictions on used cars, the status of this opposition is established.

Chapter 8 General Conclusion: Institutionalized relationships and political work

The market obviously occupies a very important place in modern society. The vast majority of the population in the world today (if not all) have been involved in economic activities organized through markets to varying degrees, and have actively or passively participated in various types of markets in the role of buyers or sellers. The market not only directly connects people's daily life and the operation of economic systems, but also has a profound impact on the political and cultural systems of the entire society. It is not enough to rely on economics to explain the complicated market phenomena. This is because many important issues in the market have deep social and cultural origins, which require the entry of sociologists, and because the theoretical perspective of economics has its own limitations, it is rare to consider and analyze the social and institutional aspects of the market. In this context, as an emerging research field of market sociology, the problems it faces and deals with are very important—if the basic research topic of sociology is a question of how social order is possible, how market order is possible constitutes the central issue of market sociology research. In other words, market sociology is mainly devoted to exploring the formation and changes of market structure and order, and the problems of social construction approaches and dynamic mechanisms in the smooth operation of market processes. From a sociological perspective, a stable and smooth-running market is not necessarily the same as the most economically efficient market in economics, and the dynamic mechanism does not necessarily belong to the optimal allocation of resources through the use of instrumental rationality. Economic rationality is widely regarded by social scholars as a product based on historical evolution and social construction, rather than a natural tendency of human beings. Because economics cannot provide satisfactory knowledge in the face of many market phenomena, sociology can not only make up for the lack of economic

interpretation in model analysis, but also provide unique insights that are completely different from economics. Therefore, it is necessary to improve the theory and method system of market sociology, promote specific empirical research, and develop it into an emerging discipline.

Since classical sociology, sociologists who have studied economic issues have been devoted to describing and explaining what specific non-economic schemes or social systems contain the structure, operation, and order of markets. Weber and Marx's classic study of the origin, operation and significance of the modern capitalist market opened a gorgeous chapter in the sociological market. The sociologists of the classical era focused on studying the institutional conditions for the emergence, operation, and development of markets on a macro scale. On the basis of rejecting self-equilibrium market theory, current scholars are committed to breakthroughs at the micro-levels, and more specifically explore specific social mechanisms on how markets are constructed by society. Although market sociology has appeared since the classical era of sociology, few scholars directly studied market issues before the 1970s. Some academic masters only publish theoretical views and opinions on related market phenomena in their research on other issues. And for a longer period of time, market sociology fell into a silent stage due to various reasons. Therefore, what we call market sociology now appears as one of the most important branches of research in the new economic sociology. It can be said that it started in the 1970s by M. Granovetter on the matching problem in the labor market and V. Zelizer's research on the American life insurance market. Although the problems of new economic sociology research are not limited to the field of market, one obvious fact is that almost all of the most influential research in new economic sociology belongs to the field of market sociology.

The issues specifically discussed in market sociology are extensive, involving the formation and change of various markets, competition and cooperation models in the market, pricing, entrepreneurship and market culture, commodification and decommodification, economic rationality and efficiency, corporate governance and

property rights arrangements, etc. These issues are obviously the key issues in China's market economy. Nevertheless, market sociology as an emerging research field is still less understood by domestic academics. At the same time, how does market sociology cut into the market research? Its logical starting point is still vague, and the ideal research path has not yet reached consensus.

8.1 State building and market building complete each other and are mutually prerequisites

Economics generally believes that the market exists alone, but its normal operation may be affected by other factors (see above, p.48). Therefore, economic sociology emphasizes that state building and market building are complementary processes, and the two are mutually premised^①.

The research object of this dissertation is the economic behavior of the used car market in China from 1985 to 2016 and the process of institutional changes. Compared with Europe, America, Japan, and other countries, China's used car market started late. The United States first formed the used car market in the 1920s. France, Germany, and Japan basically formed a large-scale used car market and used car trading after World War II. China's used car market started after the reform and opening up. In 1985, the "Beijing Old Motor Vehicle Trading Market" was established at the customs gate outside Zuo'anmen, Beijing. At that time, many newspapers in Beijing and even national newspapers reported on the front page of the official opening of the old motor vehicle trading market because it was a major event during the transition from a planned economy to a market economy.

After the reform and opening up, the market economy gradually expanded its share of economic activities, and the Beijing Municipal Administration for Industry and

^① Fligstein N. The architecture of markets: An economic sociology of twenty-first-century capitalist societies[M]. Princeton University Press, 2002: 36-41.

Commerce restored the rural market and urban market in Beijing. Private partnerships, traders, and traffickers in these bazaars need motor vehicles to transport them, but motor vehicles still belong to the unified management and distribution of government material management departments. As a result, there are many old motor vehicle transactions among individuals in the society, parking vehicles on the side of the road. The Beijing Municipal Administration for Industry and Commerce has discovered these new trends, and found that the prices are chaotic, procedures are incomplete, and the problems affecting the traffic order, especially the huge hidden dangers in the transaction of scrapped vehicles. The Beijing Municipal Administration for Industry and Commerce believes that the solution is to establish a fixed trading market to place used motor vehicle transactions under the supervision of government departments. Therefore, on April 12, 1985, the Beijing Municipal Administration for Industry and Commerce, together with the Beijing Public Security Bureau, The Beijing Municipal Bureau of Materials jointly submitted a report on the establishment of a Beijing old motor vehicle trading market to the municipal government^①. It is stipulated that after the establishment of the used motor vehicle trading market, regardless of the individual or unit's old motor vehicle, all old vehicles will be traded in the old motor vehicle trading market. Otherwise, the vehicle management office of the Public Security Bureau will not handle the transfer procedures, and the industrial and commercial administrative department will also impose punishment.

After the report was approved by the Beijing Municipal Government, the Beijing Old Motor Vehicle Trading Market was officially opened on July 1, 1985. The address of Beijing's old motor vehicle trading market, which was originally set up, is at the gate outside Zuo'anmen, Beijing, covering an area of about 15,000 square meters, sharing a piece of land with the market for the means of production at the time^②. In order to

^① Liu Guoqi. The Establishment and Development of Beijing Used Motor Vehicle Trading Market [J]. Beijing Party History, 2002 (005): 48-50.

^② Liu Guoqi. The Establishment and Development of Beijing Used Motor Vehicle Trading Market [J]. Beijing Party History, 2002 (005): 48-50.

manage this market, the Beijing Municipal Administration for Industry and Commerce has established a old motor vehicle market management office, and dispatched cadres who are familiar with market transactions to the on-site management office. The semi-monthly Journal of Industrial and Commercial Administration on May 15, 1986 published an article "Beijing's old motor vehicle trading market is active in trading", which has greatly affected the industrial and commercial administrations in various provinces and cities across the country. Relevant departments in many provinces specially sent people to visit. After returning to the country, many old motor vehicle trading markets have been established successively.

By 1998, the Ministry of Internal Trade (later changed to the Ministry of Commerce) promulgated the “Old Motor Vehicle Transactions Management Measures”, which established that used vehicle transactions in each region must be conducted at a fixed place called “old motor vehicle trading center”. The “Old Motor Vehicle Trading Center” institution has established a dominant position in the used car market. driven by car manufacturers, authorized dealers, and other stakeholders, the Ministry of Commerce revised and issued the "Used Vehicle Circulation Management Measures" in 2005, abolishing the regulations that used vehicle transactions must be conducted at old motor vehicle trading centers, thus the used car market included new stakeholders. In 2011, Beijing's limit on new car license plates led to the rise of used car e-commerce. A large number of used cars from Beijing went out to other provinces for transfer transactions. The structure of the used car market shifted from pure local transactions to the mix of local and off-site transfer transactions. In 2013, local governments around the country adopted restrictions on the relocation of used cars, and local governments became important policy makers in the used car market. In 2016, the State Council issued an opinion on removing restrictions on relocation of used cars. The used car market has been ups and downs from 1985 to 2016 under the influence of policy changes, and stakeholders have continued to expand.

The above concerns the relationship between the state and the market. Institutional

change has its specific evolutionary path. Due to the influence of institutionalized relationships, government scale and other factors, the process of institutional change can be embodied through the deduction of institutionalized relationships. Based on the study of the relationship between the state and the market, this dissertation attempts to analyze the evolving path of the "old motor vehicle trading center" institution in the used car market in China, revealing the logical clue between political work and institutional change. In order to avoid the normative-empirical analysis mode, this study introduced an institutionalized relationship variable between institutional change and political work, and discussed the relationship between the three variables of institutional change, institutionalized relationship, and political work in order to make the analysis more reasonable. The problem can be decomposed into two aspects: first, how the institutionalized relationships in the used car market are changed and formed; and second, how the automotive industry changes due to this.

8.1.1 The “problematization” process promotes industrial supervision

The above question is a question of the relationship between the country and the market, and it is also a question of the relationship between structure (institution) and action. These two issues are isomorphic in this study, because the unfolding process of state-market relations is also the operating process of institutions and behaviors. This dissertation focused not only on the restraining effect of the institution on behavior, but also on the constructive effect of the behavior on the institution. This is the core idea of this dissertation.

In the 1980s, the change from the spontaneous formation of "road markets" for old motor vehicles to "old motor vehicle trading market" for fixed locations was also a process of institutional formation. The process of the formation of this institution can be called the institutionalization process, which completes its shaping process through four stages: 1) Company status or problem. The operators of the individual bazaars have the legitimacy of buying used cars as a means of transportation. This demand cannot be

met in a planned economy system, and second-hand car transactions between individuals occur. 2) Collective problem. When many operators and traffickers respond to the same demand, the demand for motor vehicles by goods operators in the bazaar market becomes a "collective problem." The spontaneous "road market" was created at this stage. 3) Public problem. The Administration for Industry and Commerce intervened in this process and pointed out the hidden dangers of scrapped cars, traffic jams, and price confusion in the "road market", and jointly submitted a report to the Beijing Municipal Government with the Public Security Bureau and the Material Bureau to initiate the establishment of an old motor vehicle trading market. 4) Politicized problem^①. The Beijing Municipal Government approved the establishment of a old motor vehicle trading market, and local and national media reported one after another. The used motor vehicle trading centers have been imitated and established throughout the country. It can be said that this is a typical industrial institutionalization process, and the relationship between the state and the market is restructured during the institutionalization process. An industrial institution that originated in a market economy has undergone a transition from company status or problem to collective problem, public problem, and politicized problem. The state has withdrawn from in-depth control of industrial activities and has become a participant and supervisor of the institutionalization process. This is a brand-new form of state-market relations. It is built on the continuous promotion of political work, and has formed a new type of interaction between market building and state building. It is the transformation of the original "overall society".

Starting from the "Old Motor Vehicle Transactions Management Measures" issued by the Ministry of Internal Trade (later changed to the Ministry of Commerce) in 1998, local policies and regulations have risen to industrial regulations issued throughout the country. Then in 2005, the Ministry of Commerce revised it to the "Used Car

^① Jullien B, Smith A. Conceptualizing the role of politics in the economy: industries and their institutionalizations[J]. *Review of International Political Economy*, 2011, 18(3): 358-383.

Circulation Management Measures", and the "problem" of used cars rose to the level of national supervision. The state transformed from the "overall society" has undergone a "problematization" process for specific industrial supervision, that is, the structural problem in the industry go from the company problem stage to the collective problem, and then to the public problem, finally became a politicized problem. Local governments generally intervene at the stage of public problems, and then form local regulations and regulatory policies, and then enter the politicized problem stage. This stage often involves media reporting and analysis. In the face of politicized industrial problems, the central government will eventually issue national regulations and policies to establish or adjust industrial supervision. In the "overall society", there is also a direct connection between the state and the lowest levels of industrial practice. After market-oriented reforms, the state cannot directly intervene in the most basic level of industrial practice. Local governments, especially municipal governments, have the power to directly regulate industrial supervision. This established a new type of industrial relationship, and the triple relationship between state-local government-industry actors was established, breaking the duality of the state-industry actor relationship. In fact, since the reform of the fiscal and taxation system in 1994, the state's control over industries has actually been delegated to local governments^①. In addition, there is an intermediate layer in the relationship between the state and the market (composed of different industries), that is, local government. The state coordinates industrial supervision across the country, especially when trans-industry regulation (environmental protection, foreign trade) is needed. The state's coordination role is particularly urgent. On the basis of the above research, the author believes that in the relationship between the state and the market, the state is an institutional and structural variable, but it does not mean that this variable is immutable, nor does it mean that industrial actors are not active as variables. On the contrary, what the author tries to

^① Wen Tiejun, Ji Yan, Zhang Junna. Central Risks and Local Competition [J]. Journal of National Administration Institute (4): 25-33.

demonstrate in the article is how the industrial actors as the subject of action have promoted the changes in industrial supervision through a series of action strategies. It is the political work of these industrial actors that constantly promote the adjustment of industrial supervision, and then change the institutionalized relationship in the industry, so that industrial practice is always in the eternal movement of institutionalization-de-institutionalization-re-institutionalization. Here, I adopted the concepts of institutionalized relationship from Bernard Jullian and Andy Smith.

Julien and Smith criticized previous theories for their lack of operability in the definition of politics, their over-generalization, their formality, or their lack of analytical tools. Historical institutionalism defines an institution as a stabilized system of rules, norms and expectations, thereby constructing the prime features of contemporary economic models (see above, p.34). Although institutionalists found a lot of new information about the operation of industrial institutions when they put forward the above assumptions, as the object of empirical research, the above definitions of the political role in industrial institutions cannot accurately conceptualize politics. Such a situation makes the ongoing activities of changing or copying their respective institutions in the development of industrial institutions and the participants either ignored or described as a vague image, which leads to the political influence on the economy still cannot be explored.

Different from related research, we have introduced an intermediary concept, namely "political work", to explain that the continuous cycle of institutionalization, de-institutionalization and re-institutionalization in industry is the normal state of industrial institution development. The asymmetric relationship between different stakeholders in the automotive industry, the unsuccessful goals of the industry, and strategic conflicts will lead to the instability of these institutions, such as industrial supervision and economic structure. The industrial institution is constantly changing from one imbalanced form to another. The shift to research of institutionalization reflects the focus on legalization in the study of industrial institutions (see above, p.249).

By studying the so-called "political work" in the theory of industrial institutionalization, through this political work to develop, maintain, or lose faith in the usefulness and dignity of the institution, the study of the industrial institution provides a means for itself to link supervision, legalization, and industrial structure analysis. Political work contains two basic concepts: the process of occurrence, change, and disappearance of "public problems" on which policy tools for public action in industry are based; and the other is the political work that can legitimize policy instruments, that is, the process of politicization.

This research always focused on the analysis of the political work of industrial actors, and puts this analysis in the interaction with the behavior of state and local government, and analyzes the change of the institutionalized relationship of industry. This is an indispensable link between the analysis of political work and institutionalized relationship in this dissertation.

8.1.2 State building anchor market institutional order

Institutions that appear around the production and sale of goods and services always focus on four types of constraints and opportunities-employment, finance, purchase, and commercial-through the stabilization of these factors to establish their corresponding institutionalized relationships. There are four institutionalized relationships in an industry. They are the employment relationship, the purchase relationship, the financial relationship, and the commercial relationship. These institutionalized relationships link public policy and collective action through commercial activities, and reduce uncertainty through the gradual stabilization of their own relationships, so that economic activities can be predictable for the various actors involved. In this regard, the institutionalized relationship not only constrains but also initiates the actions of individual producers and merchants, so that it gradually rises to the corresponding institution.

Through the four institutionalized relationships, we can continuously explore the

economic and political integration process (see above, p.99). For example, the institutionalized relationship of employment will limit the working hours, training or salary conditions of employees; the institutionalized relationship of purchase establishes regulations for clinical testing of pharmaceutical ingredients in the pharmaceutical industry. These institutionalized relationships are not only a political result in a specific structure, but also a dynamic process of continuous revision. Actors' proposals, criticisms, or amendments to topics related to public or collective interests are constantly forming new institutions or dissolving them^①. Changing or reproducing its system through "good" and "bad" value judgments is the way an industry is constantly being influenced by politicized actions^②. The concept of "environmental protection" is a cross-industry value that is often mentioned.

On the other hand, the inherent consistency of institutionalized relationships reflects the political dimension of "market transactions". Only those political work that establish and reproduce institutionalized structures can explain "market construction"^③ and "their institutional life and death"^④. Another important concept related to this is where exactly is the "arena" for the competition among actors? In other words, in which region does the market transaction shaped by institutionalized relationships become more important, and whether it takes effect in a regional or national, European or global context. To know that the four institutionalized relationships do not correspond to a fixed geographical scope, this requires careful treatment of the scope of the topic under discussion, that is, scale of government. The institutional changes of the used car market in China discussed in this paper show the most interesting aspect in this dimension.

^① Jullien B, Smith A. Conceptualizing the role of politics in the economy: industries and their institutionalizations[J]. *Review of International Political Economy*, 2011, 18(3): 358-383.

^② Muller P. Les politiques publiques comme construction d'un rapport au monde[J]. *La construction du sens dans les politiques publiques: Débats autour de la notion de référentiel*. Paris: L'Harmattan, 1995: 153-79.

^③ Fligstein N. *The architecture of markets: An economic sociology of twenty-first-century capitalist societies*[M]. Princeton University Press, 2002: 36-47.

^④ François P. *Vie et mort des institutions marchandes*[M]. Paris: Presses de Sciences Po, 2011.

China's local government, as a crucial policy maker in the used car market, is playing an important role in shaping the industrial structure. There are misalignments or conflicts in industrial supervision between different scales of government. In the process of conflict, the political work performed by actors in the industry has also played an important role.

Most industries have been institutionalized for decades (such as automobiles), even hundreds of years, so it is easy for people to ignore or not realize that their existence as a unique industry is based on the institutional order composed of four IRs (see above, p.12). In short, analysis based on institutionalized relationships provides a way to explore the "consistency" within the industry, a concept that can always be controversial and thus a way to reveal their respective dynamics.

8.2 The subaltern system is difficult to challenge the dominant regime of the "Old Motor Vehicle Trading Center"

The development of the market does not necessarily follow the path of optimal economic performance, and its dynamic mechanism does not necessarily belong to the optimal allocation mode of resources generated by means of instrumental rationality. In fact, the "rationality" in China's used car market is more a product of historical evolution and social construction, which is far from the "economic rationality" fascinated by economists, and the latter is not a natural tendency of human beings. This dissertation summarized the historical dimensions of China's used car market and the development path, and found that the "old motor vehicle trading center" system had the strongest path-dependent effect as the earliest established market-oriented regime, and many subaltern systems that have since emerged are difficult to challenge its dominance. This finding is corroborated by the socio-technical paradigm transformation theory.

The social-technical paradigm concept from the technical paradigm was first used to explain that engineers tend to be specific to certain directions or technological paths

during product efficiency improvements (see above, p.54). How to understand and describe the role of the 'lock-in' of the dominant social-technical system against the substitution of alternative technologies? Geels and Schot propose two criteria for distinguishing the dynamics of the transition path (see above, p.56).

Combining the framework of institutionalized relationships and institutional order with the dominant adaptation and niche replacement of the socio-technical research paradigm, the outline of the socio-technical transformation map becomes visible. The institutional order consisting of four institutionalized relationships forms a primary institutional attribute within an industry. In the process of transformation, it is possible to judge whether there is a fundamental change in the institutional order within the industry by observing changes in the four institutionalized relationships. According to the analysis tools of socio-technical research, transformation can be divided into two different paths: dominant adaptation and niche replacement. At the beginning of the transformation, there is a dominant socio-technical system in the industry, and its relative counterpart is related to the existence of a socio-technical niche system. In addition to these systems, there are subaltern systems in the industrial activities, and they all have corresponding support coalitions.

8.2.1 The possibility of dominant adaptation in the used car market is higher

The transformation path that dominant adaptation in the socio-technical transformation is the transition path with a higher incidence rate, because resources, institutions, technologies, talents, funds, etc. are locked in the dominant system. At the same time, its supporting coalition will try their best to maintain their dominant position, so they will encourage the development of the technology path and social path along the original, and absorb other subaltern systems in the field to further consolidate the dominant position. In this process, the range of competence of the dominant system may expand.

From the "Old Motor Vehicle Transactions Management Measures" in 1998 to the

"Second hand Vehicles Circulation Management Measures" in 2005, although the regulatory rules for monopolized used car transactions in the old motor vehicle trading market have been cancelled, and brand certified used cars, chain used car dealers and used car auction emerged in the market, but the old motor vehicle trading market, the institutional order of this dominant system still continued down to today. In other words, the process of de-institutionalization has not changed the original institutional order, but only opened up the windows for the birth of the subaltern systems. Brand-certified used cars, used car auction companies, and chain used car dealers are symbiotic with the old motor vehicle trading market system. The first three act as subaltern systems with the dominant system.

Localized trading is a distinctive feature of the old motor vehicle trading market model. The old motor vehicle trading market originating in the road market in Beijing was initially satisfied with the demand for localized used car transactions, with the continuous growth of car ownership in Beijing. The Beijing used car market gradually developed into an important source of used cars nationwide. Brand-certified used car business is also mainly for localized transactions. Under the efforts of automakers to internalize the used car business into a sub-function of its brand sales system, the first thing to satisfy is the replacement of local consumers and the demand for used car purchases. The rise in the average transfer rate of used car transactions nationwide has followed the new car purchase restriction policies of many first-tier cities, and this trend has directly led to the rise of the Internet used car auction company represented by Youxin and Che Yipai. Why did the original traditional used car auction company not become a direct beneficiary of this trend change, but instead gave birth to new competitors? This is related to the online and offline company strategy. The online used car auction company of Internet Gene is good at building a high-quality trading platform and convenient transaction process, and with the abundant financing of the development of the Internet industry, it has implemented a flow-oriented development model, thus it is possible to quickly establish a nationwide used car trading network

platform. The traditional used car auction company, adhering to the concept of service car dealers, is gradual and does not tend to expand rapidly, especially for models and regions where returns are not clear.

The symbiotic relationship between the subordinate system and the dominant system corresponds to the adaptation process in the concept of social-technical research. In short, the dynamic changes of the social-technical system can be seen as two categories: The dominant social-technical system adapts to external trends or the social-technical niche takes over the dominant position. The adaptation process can be conceptualized as a process of maintaining stability, with institutional setting, markets and technologies fine-tuned and absorbed along established transition paths. This adaptation is supported by an alliance of actors within the dominant system and is committed to its own sustainability and survival. In the Chinese used car market, the alliance is dominated by stakeholders in the old motor vehicle trading market. They include fragmented used car dealers, used car trading market management entities, and provincial and municipal used car trading associations. In the process of adapting to policy changes, this alliance of operations is housed in chain used car companies, used car auction companies and brand-certified used car operators.

As the interests of the used car market become more diversified, the institutional rules on the used car market are gradually openly discussed. The entry of automakers has led to important changes in this discussion. A monopoly system design in the old motor vehicle trading market was abolished and replaced by diversified business entities and diversified business spaces. However, because resources, talents, habits, and government services (the used car transfer halls in each city are in the old motor vehicle trading market) are still tied to the old motor vehicle trading market, the policy changes have not led the change of the status of the system. On the contrary, emerging stakeholders and business models are increasingly absorbed and integrated into the old motor vehicle trading market, forming a symbiotic relationship. That is, the old motor vehicle trading market adapts to new trends, and the subaltern systems continue to

cluster toward the dominant system.

8.2.2 Difficulties in niche replacement in the used car market

The rise of used car e-commerce after 2011 represents another path of transformation – the niche alternative transformation. Used car e-commerce started from the cross-regional used car e-auction. The used car e-commerce represented by Che Yi Pai and You Xin Pai built a virtual market and transparent detection standard for convenient transactions from its own Internet digital platform. Subsequent B2B used car auctions quickly expanded. Subsequently, Internet start-ups such as Renren used cars and Guazi used cars extended the business model of used car e-commerce from B2B to C2B, B2C, C2C, and extended from online digital platforms to offline stores, which really challenged the dominant position of the old motor vehicle trading market. The full-time hiring team of inspectors, the 20,000-kilometre or one year used car warranty, the used car financial loan, and the natural trading convenience and complete categories of the used car e-commerce, which are the different aspects of the institutionalized relationships, are all inherent models that subvert the old motor vehicle trading market.

In the transition path of niche replacement, the traditional offline second-hand car auction company disappeared and replaced by the B2B mode actors in the used car e-commerce system. Chain used car dealers have also disappeared, replaced by B2C and C2C actors in used car e-commerce. What we found in the empirical investigation is that before the rise of used car e-commerce, chain used car dealers and used car auction companies have experienced large-scale shrinkage and withdrawal. They were defeated by the dominant system of the old motor vehicle trading market. The remaining chain used car dealers and used car auction companies gathered around the old motor vehicle trading market, becoming the extension of this system, and with the rise of used car e-commerce, they were first replaced.

Is there a phenomenon of transformation and reconfiguration in the old motor

vehicle trading market? The first thing that happened was the reconfiguration of talent, and a large number of used car practitioners were absorbed into the full-time employee program of used car e-commerce. They were originally small-scale second-hand car dealers, independent and fragmented individual used car dealers, and even the owner of used car trading companies. Now they are absorbed into the undercarriage of used car e-commerce giants, adopting a flexible income distribution method and enjoying an organized and secure team work environment.

Structurally, second-hand car e-commerce is still only a small part of the used car market, that is, low-age used cars that are similar to new cars. On the one hand, this kind of screening shows that the second-hand car e-commerce hopes to establish a brand image and product quality assurance different from the offline entity trading market, but it also reflects the defects in the evaluation and quality control ability of the used car e-commerce. In terms of the four institutionalized relationships, used car e-commerce can be said to be different from the fragmented used car dealers in the old motor vehicle trading market. Most of the offline used car dealers are self-employed or small groups, while used car e-commerce is a large-scale hired car inspector team and sales team; offline used car dealers choose more cash transactions, while used car e-commerce provide financial loans to consumers as much as possible to increase their profit margins; offline used car transactions are generally sold in a single hammer, regardless of whether the quality is good or bad after the transfer, and used car e-commerce currently provides a 20,000-kilometer or one year warranty; for the procurement process, offline used car dealers are self-employed because of their labor organization model, so they accumulate with personal experience when collecting cars, while the used car e-commerce stipulates a set of vehicle inspection system, which is completed by the hired vehicle examiner and evaluated by the system algorithm, and the core is information transparency.

The rise of used car e-commerce itself reflects an effort to break or surpass the old motor vehicle trading market system, because the earliest mode of the rise of used car

e-commerce is the cross-regional circulation of used cars. The original old motor vehicle trading market system is not conducive to the cross-regional circulation of used cars. Through the participation of e-commerce and the establishment of used car evaluation standards, the efficiency of cross-regional circulation of used cars has been greatly improved. It should be said that the old motor vehicle trading markets in large and small cities of China as a whole is an institution itself, and the formation is not a one-step process. It also includes the process of forming a specific policy tool and the political actions behind it. The old motor vehicle trading market in China is a field with a unique institutional order, which is very different from the new car market in all aspects of purchase relationship, financial relationship, employment relationship, and commercial relationship. With the addition of new entrants represented by used car e-commerce, the used car market in China is gradually changing the main structure of the institutional order, which will have a profound impact on the entire automotive industry.

8.3 Extensive Existence of "technicization" in the industrial governance

It is found in the research carding that there is a widespread "technicization" process in China's industrial governance, that is, the use of "scientific indicators" and "efficiency indicators" as policy tools for industrial supervision and regulation. As evolutionary economists have shown^①, industries are structured around a "technical paradigm" that includes "their own definition of progress." Therefore, the policy tools in public action are not neutral. Instead, everyone will institutionalize the values formed by the interpretation of the social world and how best to regulate the social world. Policy instruments cannot therefore be analyzed in purely functionalist terms that conceptualize industrial regulation in terms of reducing transaction costs and seeking efficiency. These policy tools are not just means; they are exactly the same as the

^① Dosi G. Technological paradigms and technological trajectories[J]. Research policy, 1982, 2(3): 147-62.

purpose achieved.

In other words, the starting point for analysis is that collective and public ‘problems’ are constructed through negotiation, compromise and, more often than not, conflict (see above, p.17). Building upon these points of general theory, our research on industry is centred upon the political work that takes place within the multitude of arenas and processes which together contribute to the definition of collective, public and political *problems*. As a means of introducing this approach to the *problematization* of industry^①, two sets of definitions need to be made.

The first distinguishes the terms *conditions*, *issues* and *problems*. In their daily work, industrial actors are confronted with a range of *conditions* such as transport costs, salary levels and tax rates. So long as no action is taken to change these conditions they remain flat, unproblematized realities^②. However, as soon as an actor seeks to modify them, they then become an *issue* which takes the form of a claim advocating new collective, public or political action. It is only once the definition of an issue has become shared by a range of actors who render themselves capable of collectively making a case for change that it becomes a *problem*.

Problems nevertheless differ considerably depending upon whether they are *collective*, *public* or *politicized*. According to this second set of definitions, a *collective problem* is constituted whenever a representative group of non-public actors agree upon its content and to pool their resources in order to tackle it^③. A collective problem becomes a *public* one when its definition becomes shared by actors from public administrations who – ostensibly at least – are responsible for protecting the general interest. As Padioleau^④ puts it, public problems ‘involve public debate and, in most cases, the intervention of legitimate public authorities’.

^① Callon M. Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay[J]. The sociological review, 1984, 32(1_suppl): 196-233.

^② Kingdon J W, Stano E. Agendas, alternatives, and public policies[M]. Boston: Little, Brown, 1984.

^③ Friedberg E. Le pouvoir et la règle. Dynamiques de l'action organisée[M]. Paris: Le Seuil, 2015.

^④ Padioleau J G. L'Etat au concret[M]. Presses universitaires de France, 1982.

The concept of "problematization" can be used in the automotive retail and service industry to resolve disputes in its laws and operating practices. The EU Competition Commission gave legal recognition to the "natural connection" between car sales and after-sales service, but the political work carried out by independent auto repair retailers made the Commission recognize that more fundamental competition issues lie in authorized distribution Dealers and independent auto repair retailers. The legal discourse of automobile sales and after-sales service, which was originally considered to be a "natural connection", was challenged, which led to problems in this area being dealt with by new specific rules. This process of re-institutionalizing the industrial order not only involves the official designers of the government and the system, but also includes the process of redefining their ideas and preferences by stakeholders in the industry.

Politicization is an alliance-building strategy but also features a certain type of substance^①. As a strategy, politicization aims to mobilize and build support for a course of action through publicly proclaiming its justness and (likely) effectiveness. The media are obviously a vital vector for this strategy - which explains the attention to 'communication' given by both industrial and public actors. Indeed, in many industries, financial analysts have become crucial actors in this activity^②. Mediatization is often also a method of 'desectorizing' one's support base in order to enhance prospects for alliance building, eg. enlisting the support of parliamentarians. In terms of substance, values such as 'the freedom of the entrepreneur', 'flexibility' or 'social justice' are appealed to and symbols, such as 'regional identities', are invoked in the form of first principles upon which arguments either for change or the status quo are made.

Notwithstanding this type of politicized problematization, the empowering of the European Commission in many other industries has also been encouraged by a second

^① Lagroye J. Les processus de politisation[J]. La politisation, Paris, Belin, 2003: 359-372.

^② Montalban M. Financiarisation, dynamiques des industries et modèles productifs: une analyse institutionnaliste du cas de l'industrie pharmaceutique[D]. Bordeaux 4, 2007.

type of legitimization: the ‘technicization’ of public problems^①(see above, p.19).

In the case of the automobile services industry, the political work of technicization has taken a specific form. As we saw above, for decades the legitimate way of examining these activities was as a problem for manufacturers. This way of thinking was generally accepted and rarely contested. In order to change this problematization, politicization was undertaken with one of its principal vectors being the Monti report of 2000 which was significantly entitled ‘Putting the Consumer in the Driving Seat’. Politicization could have led to a questioning as to which consumer was to be defended given that the industry’s Institutional Order has favoured manufacturers and new car buyers at the expense of second-hand buyers who have higher servicing costs. Instead, by technicising the problem and making it one of competition doctrine centred on ‘the consumer’, a debate between experts ensued within which carmakers managed to get the rules reinterpreted in such a way that made them compatible with the reproduction of the Institutional Order.

In summary, this example and many other cases of technicized legitimization serve to underline the heuristic value of distinguishing between *private, collective, public* and *politicized problems* (see table 1.1). In so doing, we see first that problems of types 2 to 4 are all the object and result of political work. We also see more clearly that problems of types 2 and 3 are confined to the Institutional Order of the industry concerned, whereas problems of type 4 will also implicate Trans-industry networks and the actors they encompass.

More generally, this section has endeavoured to show how the role of politics within the constant process of institutionalization experienced by any industry can be investigated using a conceptualization of political work which combines the intermediary concepts of problematization and politicization. As Figure 1.2 illustrates, this political causality can and must be rigorously process traced. Through providing the basis for research design, this framework provides an analytically powerful

^① Dubois V, Dulong D. La question technocratique[M]. Presses universitaires de Strasbourg, 1999.

alternative to more abstract or formalistic approaches to the role of politics in industry and, more generally, to their theorization of capitalist variety. In particular, it encourages a focus upon how actors seek to become omnipresent within an industry's Institutional Order through developing their multi-positionality within its component parts and, where possible, in networks which extend beyond the industry itself.

8.3.1 The tools of technicization are "scientific indicators" and "efficiency indicators"

Looking back at the process of changing the policy of used car restrictions, the most impressive thing is that the daily operational indicators of the traffic vehicle management bureau in a city will evolve into a policy that affects the country and inspires huge controversy. This contingency beyond people's understanding precisely reflects an important feature of industrial politics, namely the "technicisation" of public issues^①. Local city governments hide their values in the daily operational indicators of the traffic management department. Such a "technical" approach can avoid mentioning the values of public issues, although their values can be seen after careful inspection. One of the characteristics of the political environment in China is that local authorities like to imitate each other's policies, especially after the introduction of policies in first-tier cities. This phenomenon of policy diffusion or policy imitation is determined by the common interests of local governments. In many public issues, local governments will form "alliance". Through the process of demonstration based on "efficiency" and "scientific" expertise^②, the "technicisation" process of public issues is completed. The values formed by local governments based on taxation, management costs, and new car replacements are hidden behind the curtain of "environmental protection". It should be said that the formulation of such public policies is limited to the boundaries of very few

^① Dubois V, Dulong D. La question technocratique: de l'invention d'une figure aux transformations de l'action publique[M]. Presses universitaires de Strasbourg, 1999.

^② Radaelli C M. Technocracy in the European Union[M]. Routledge, 2017.

policy makers and professional committees, and the reference to and discussion of values is avoided by supporting the expert reports and legal policy provisions^①.

On the contrary, as the term “restricted move” of used cars was invented and created, the interest groups damaged by “restricted move” launched the politicization process of this public issue. As long as a representative non-public actor group agrees on its content and pools resources to solve this problem, it will create a collective problem^②. When actors in the public administration (at least - have the responsibility to protect the public interest) share their definitions, the collective problem becomes a public issue. As Padioleau said, public issues “are related to public debate and, in most cases, involve the intervention of legitimate public authorities”^③. The purpose of politicization is to mobilize and build support for action programmes by publicly announcing their impartiality and (possibly) effectiveness. The media is clearly an important way to achieve this strategy - this explains the concern of industry and public actors for "communication." Mediatization is also often a way to “disarm” a person’s position to enhance the prospects for alliance building.

8.3.2 The lack of public discussion of values

In fact, from the use of the name, we can see the willingness expressed by the various stakeholders. From the earliest Beijing restrictions on the used cars, there is no specific title and name to refer to this policy change. The means of operation can be summarized as "technical governance". "Technical governance" is to complicate a policy and hide it in many numerical indicators to minimize its unpredictable negative impact. Beijing's used car restriction policy is one of the most unpopular policies in the 2008 environmental policy reforms, or this change cannot be called a policy in the

^① Robert C. Doing politics and pretending not to: the commission’s role in distributing aid to Eastern Europe[M]//Politics and the European Commission. Routledge, 2004: 33-45.

^② Friedberg E. Le pouvoir et la règle. Dynamiques de l'action organisée[M]. Le Seuil, 2015.

^③ Padioleau J G. L'Etat au concret[M]. Presses universitaires de France, 1982.

various departments of the city authorities, but only a very small change in technical indicators in the daily work of the vehicle management office. When reviewing the media reports at the time, it can be found that not only did Beijing's implementation of the policy not cause any waves, but also more than 200 cities across the country imitating this policy in just a few months didn't arouse the attention of all sectors of society. It was not until 2012 that the used car companies and CADA began to appeal. At this time, the concept of "restriction" was widely been used to describe this policy. From the small technical changes in the local vehicle management office to the "restricted" policy that has a huge market impact, the same thing has changed from a no-name to an apparently valued judgment, which is the way of interaction in value mobilization. Finding a suitable name has become an important way for relevant stakeholders to express their appeals. Through the use of the concept of "restriction", the power and resonance of various groups in society are most widely mobilized, thus forming a joint effort to call for changes to policy makers.

In the "communication" with the media, the stakeholders in the industry invented the term "restricted move", and the corresponding definition is naturally opposed to the free competition values advocated by neoliberalism, and then called with the role of the alliance. In the process of rising from a collective problem to a public issue to a politicization issue, the role of the media cannot be ignored, because it is through the media that the stakeholder groups of the used car industry form alliances with the vast majority of car consumers. The definition of "restricted move" is linked to the opposite of the principle of free competition such as "regional blockade" to complete the process of argumentation of public issues, while at the same time building a broad alliance force by economic calculations that inform consumers of their loss of interest. This can be done by comparing examples of the meaning of the European automotive retail and service industries. In Europe for decades, companies and regulators – in this case the DG Competition - believes that automotive-related service issues should be based on "automobile distribution", that is, in terms of the challenges manufacturers face in

managing their products. Until recently, these issues were truly seen as competition between automakers, distribution networks, and others to capture the value associated with the expenditure linked to a car's utilization^①. For example, as mentioned earlier, the structure of the European automotive distribution industry is largely shaped by competition between automakers' franchisees and independent garages. However, even when public policy actors seek to change industry rules, they ignore this issue and still focus on the relationship between automakers and their dealers.

It can be seen that the value connotation itself is an important step in value mobilization, or the beginning of all mobilization. Historical institutionalism introduced actors into the central position of discussion because the "key nodes" of institutional changes and the "downstream"^② of institutional development always reflect the important role that actors play in promoting and influencing institutional changes.

8.4 Scales of government determine the different policy instruments

However, the topic of institutional change raises another question: what exactly does "scale" mean in political economy? The scales of government and its impact on economic behavior must be considered. Political work involved in the creation, maintenance or interruption of institutions must deal with different scales of governments on a daily basis.

- The scale is made up of a collection of institutions, some of which ostensibly apply to only one industry, while others apply horizontally to several or all industries (such as employment or bank law). Therefore, the scale of the government is a "jurisdiction" and usually applies to part of the IR in an industry;
- However, these scales are not exogenous to production and trading activities. On the

^① Jullien B. European automobile distribution: Globalization and incomplete liberalization[M]//Industries and Globalization. Palgrave Macmillan, London, 2008: 29-64.

^② Hall P A, Thelen K. Institutional change in varieties of capitalism[J]. Socio-economic review, 2009, 7(1): 7-34.

contrary, because their institutions render possible the durable production and commercialization of goods and services, they are an intrinsic component of both. Therefore, we assume that scale of government is both a space for commercial computing and political legitimation.

- Firms hesitate about jurisdictions where they should operate and manage politically, and the degree of hesitation varies over time and with different IRs. The representatives of Volkswagen and Renault, of course, see the EU as a jurisdiction that limits their liberty for competition and the sale of products (commercialization IR). At the same time, they constantly count how they can use economically and support politically institutions at national and regional scales related to employment and sourcing. The coexistence of scales of government may result in a certain strategic "slack" within an industry, thus encouraging internal actors in the enterprise to construct their own calculations of the strategic of a business.

But the arguments used to define the company's strategy are inseparable from those arguments that are put forward to support the social and political legitimation of the jurisdiction in question. In fact, these arguments are not purely cognitive. On the contrary, they always mobilize some symbols and attract more target audiences by attracting their emotions. For example, car manufacturers often state "industrial heritage" in their country or region when they call for public intervention to save production sites. Of course, some of these discourses are pure rhetoric. Nevertheless, its political influence really needs to be studied as an important dimension of institutional creation, maintenance or destruction in political work.

8.4.1 Local governments use "technical governance" to supervise the industry

For a long time, it has been almost impossible for local governments to implement central macro-control, or there is no superior targets set by the central government have been carefully implemented. Just as Fang Weizhong, the former deputy director of the State Planning Commission, analyzed the government plan, "the relationship between

the central government's macro-control power and the local plan's autonomy has not been handled properly ... Each region implements a regional plan rather than a national plan, so national plans are often suspended; macro-control measures adopted by the central government are difficult to prohibit because of conflicts with local interests.^①” Moreover, in recent years, the conflicts of interest and policy between the central and local governments have become increasingly fierce, and even on a series of major issues related to national security, such as protecting cultivated land, adjusting the real estate market, and regulating investment promotion, due to the resistance of local governments, the central government’s macro-control policies Fall into an awkward situation of "failure". This "central failure" not only damages the central authority of China as a unitary country, but also causes the central policy to deviate from the principle of inclusiveness because it is combined with the departments^②, and more importantly, the elite^③ in the implementation process, and it is difficult to truly serve vulnerable groups eventually make it difficult for the "goodwill" of the central authorities to turn into "good action".

Contrary to legitimization by politicization, technicization shirks publicity, sectorizes public problems and constantly seeks to bury the question of values. As a strategy of coalition-building, what is sought is the enrolment of ‘insider’ actors and political elites (see above, p.20). In the review of the changes in the used car restrictions policy in China, we found that the technicization legalization path adopted by local

^① Fang Weizhong. Keeping track of historical experience and advancing steadily [J]. Studies in Contemporary Chinese History, 2006 (05): 11-14.

^② In the process of issuing central policies, it is necessary to go through various departments from the central to the local. On the one hand, because of the existence of departmental interests, strengthening the interests of its own departments naturally becomes the behavioral preference of each department, thereby dividing up the resources contained in the central policy and Excluding relevant responsibilities becomes a "rational" choice; on the other hand, these departments objectively constitute the transaction subject of policy implementation, inevitably incurring transaction costs and even rent-seeking space, which further reduces the effect of policy implementation.

^③ When the central policy reaches the grassroots level, in order to save transaction costs, large-scale entities will be selected for transactions. In an atomized society, the elites usually become agents of policy resources, so they can occupy most of the resources and benefits. This is called the "elite capture" mechanism.

governments is mainly aimed at market access issues in the institutionalized relationship of the used car market. That is, the market entry standards for the local used car market are set through the setting of used vehicle exhaust emission indicators, thus in fact blocking most outer used cars from entering the local market. The issues of local protectionism that we often quote in our discussions also occur mainly in the institutionalized relationship of market access. The State Council's Article 8 issued in 2016 is to regulate the market access of used car markets in various places, but with little effect, it is precisely because in China, the central government has actually transferred power in this area to local governments. The central government can only rely on cross-industry regulations (environmental protection, labor law, finance, market access, foreign trade policies) to carry out specific industrial regulation and control, and the effectiveness of these cross-industry regulations can vary. The effectiveness of cross-industry rules such as market access is greatly reduced. In contrast, the central government does not discount the regulation of cross-industry rules on financial relations.

Local governments have widely adopted the "technicization" legalization approach to industry supervision, which mainly targets the commercial institutionalized relationship in the industry, and regulates the financial relations in the manufacturing industry through the level of land rents. The case of Tesla building a factory in Shanghai is an embodiment of its method. The Shanghai municipal provided land to Tesla for free in exchange for its investment and employment.

8.4.2 The central government relies on cross-industry regulations to regulate the market

Governing economic activity is both "vertical" and "horizontal". It is vertical because many of its institutions are industry-specific (such as automotive industry sourcing rules). However, the governing of economic practices is also horizontal as it is an institution that spans a range of industries (such as competition policy). In fact,

stakeholders within an industry often try to escape from the TIR and seek derogation or exemption, either ally themselves with the TIR and its implications.

For example, we know that in the automotive industry foreign trade policies have been deeply linked with industrial governance. Another example is the value of environmental protection as a trans-industry regulation that has been deeply linked to governance and innovation in the automotive industry. In particular, the governance of air pollution in China has formed a new institutional model in many different industries. As an important source of the "problem" of air pollution, automobile exhaust also render possible the institutionalization and deinstitutionalization of the automobile industry, so that the TIR of environmental protection internalize into a deep integrated institution in the automotive industry.

In fact, the evolution of China's used car restriction policy is a case where cross-industry regulation affect rules within a particular industry. Environmental protection, as a cross-industry regulation that has been continuously deepening its influence in China in recent years, has gone deep into the governance of the automotive industry. Each upgrade of automobile exhaust emission standards will bring about a major adjustment of the automobile market and a major adjustment of automobile production standards. The restriction of used cars was initiated by the adjustment of local governments' access standards for the local used car market. Behind it is the pressure of interest calculation and environmental protection, and it is also the mobilization of the value of environmental protection. The distinction between the central and local governments is very clear. The economic foundation of local governments is still the real economy dominated by industrial capital, and the economic foundation of the central government has evolved into a financial economy dominated by financial capital.

If we divide the stage of economic development since the founding of the People's Republic of China by the general experience of industrialization, then before 1980, it was mainly the stage of primitive accumulation of industrialization; after 1980, the stage of industrial capital structure adjustment and expansion formed by

industrialization; China at the turn of the century Entered the stage of excess industrial capital.

As mentioned in the analysis above, after entering the second stage of industrialization, the local government's corporatization competition in the real economy began to manifest. Due to the tendency of limited liability, the risk was pushed up to the central government. The central government, which bears the ultimate risk, has to rely on issuing currency and government bonds to deal with the crisis. With the accumulation of local government risks, the central government can only rely on a series of fiscal, tax, and financial reforms in the 1990s to continuously strengthen its fiscal and financial power, coupled with foreign exchange controls to respond to foreign debt repayments. Finally, at the beginning of the new century, it has mainly entered the stage of operating monopoly financial income. At the same time, China joined the WTO in 2001, and the central government's financial sector—as China 's tool to resist imported risks and participate in global competition—has continued to expand.

The central government monopolized the financial and economic fields such as currency, government bonds, and foreign exchange, and handed over a large amount of the real economy, except for a few strategic industries related to national economy and people's livelihood, to the corporatized local government for operation and management. This objectively exacerbates horizontal competition among local governments.

A brief summary shows that with more than 30 years of rapid development, China's central and local governments have fallen into a cycle of mutually reinforcing local industrial competition and central financial monopolies at the economic foundation level: Local governments dominate industrial capital competition, leading to The central government strengthened the monopoly of financial power, which further intensified local industrial capital competition ... In this cycle, the Chinese economy has formed an increasingly solid hierarchy between the central and local governments:

the economic foundation of local governments is still the real economy dominated by industrial capital, and the economic foundation of the central government has evolved into a financial economy dominated by financial capital.

Because the economic foundation determines the superstructure, this economic stratification also confirms from the side the conclusion that the local government assumes limited responsibilities and the central government assumes unlimited responsibilities as analyzed above: Industrial capital as a factor of production seeks to maximize productive investment returns. This determines that in the process of organizing other factors to put into production, industrial capital, especially under conditions of scarce capital, will inevitably drive down the price of other factors and raise the price of capital factors because it has the pricing power of the factors. This process is inherently irresponsible to workers, landowners, and even the ecological environment. Therefore, it is not difficult to understand that local governments at the stage of industrial capital have only limited liability! For the central government at the stage of financial capital, although the capital attributes of financial capital in pursuit of investment returns have not changed, the expansion of financial capital or the increase of financial credit in a country—especially under conditions of global competition—depend on the national economy Sovereignty and political power. From this perspective, the central government's unlimited liability is inherently compatible with the strengthening of nationalism required by financial capital.

Under the condition of economic stratification, the central government and local governments each follow different "government rationality" and corresponding behavior logic, and the imbalance in the structure of interests between the two is inevitable. Moreover, as economic stratification is increasingly solidified and the central government's regulation is difficult to implement under normal economic operating conditions, the pattern of central-local interest imbalances may remain for a long time.

8.5 Insufficiencies and Prospects of the research

In the last part of this dissertation, I also want to reflect on some of the shortcomings of this dissertation, and look forward to some research points that are not covered in this dissertation and have considerable academic value, and this is the direction of subsequent research in this dissertation.

8.5.1 Insufficiencies of the research

First, at the methodological level, the value neutrality that this article has been emphasizing may be difficult to achieve, and may even lead to a deviation from the grasp of the Chinese used car market. In Weber's opinion, in the development of a study, researchers must always maintain an objective attitude and conduct it with a methodological criterion that is impartial and does not carry good or bad evaluation. However, after all, human choices are diverse and influenced by the subject's worldview, outlook on life, and values. Researchers have already been influenced by personal factors and made value judgments in the process of selecting research topics. And because human subjective initiative is also exerted from time to time, this value judgment may inevitably run through the entire process of a study and affect the conclusion of the study, which is value correlation. Therefore, the academic community has doubts about the possibility of value neutrality. As can be seen from the previous article, this article has been trying to strip a social researcher's "natural perception" of the market and industry, investing in research with calmness instead of enthusiasm, trying to replace taking granted with reason, using reflection instead of understanding, and strive to avoid the inertia cognition of industrial issues in the industry and academia. The institutionalization and structuring of the automobile industry has gone through decades of development, and automobile manufacturers have shaped a set of perceptions and values. One of them is the "natural connection" between automobile

sales and after-sales service. The automobile industry's economic activities around automobile sales and automobile manufacturers are also widely accepted concepts, but is this really natural? This article is built on the reflection of these preconceived concepts, and always looks at every possible constructed "rationality" with vigilant and scrutiny. However, this position of trying to maintain value neutrality and reflection must also be reconsidered from time to time to avoid falling into a state of nihilism that opposes everything in order to resist.

Secondly, although this article uses a variety of research methods, including qualitative interviews, participatory observations, etc. However, in essence, there is still a lack of a large amount of first-hand information, and many cases and dialogues are still reported by the news media, which faces the problem of deviations that may arise from secondary processing. Among them, it is very likely that the individual problems faced in the study of the media and others will rise to the group and even the overall deviation. For the case studies of social sciences, the ultimate goal is to get out of the case and seek general principles or general conclusions beyond the case. The representativeness of such cases has also been debated and questioned by scholars. Cases are different from samples in the sense of probability and cannot be inferred as a whole. The behavioral logic of the stakeholders in the industrial activities deduced from the individual cases cannot be exactly equal to the behavioral logic of all the stakeholders in the whole. How to rise from a case to a more precise whole is a question that this research still needs to face carefully and keep thinking.

Thirdly, there are some shortcomings in this paper when it comes to specific research methods: First, the representativeness of individual interviewees. Due to limited conditions, the subject of this article's investigation is still limited to the limited objects that the author himself can access. Many actors who have played the important role in the change of the Chinese used car market institution cannot be the subject of investigation. Due to the huge regional disparity in China, the situation in many regions may be different, so when applying the research conclusions of this article to the whole

country, we should still be cautious about its applicability. The second is the combing of the literature. From the current research, domestic social science research on the automobile industry and the automobile market has just started. Most of the existing results have stayed at the macro narrative level of the society as a whole. The macro-control of social change, and the lack of special attention to specific groups, there are very few existing studies that can be used for reference in this article. Based on this inadequate research status, the overly large thesis framework constructed in this article may face the problem of unclear subject expression and relatively loose structure. Finally, the timeliness of the research. From the perspective of empirical time, the investigation of this article focuses on the period from 2016 to 2018. This is still a certain time span from the final writing of this article, so there are also certain timeliness shortages problem.

8.5.2 Prospects of the research

In view of the shortcomings pointed out in this article, the author hopes to solve these problems in subsequent research. In the follow-up research, the author will try to achieve the ultimate goal of the case study through case expansion method based on the institutional changes of the second-hand car market based on this article-to get out of the case and seek some general principles or general conclusions that go beyond the case. That is, through the research strategy of case expansion method, the applicability of textual conclusions in comparative research is discussed. First, with the reconstruction of the relationship between the state and the market, is it possible that China's used car market may soon enter an era of comprehensive and independent development. Second, is it possible that the theoretical concepts of political work are applicable to an increasingly wide range of industrial political activities. Third, will the institutionalized relationship become an important intermediary concept for studying the changes of industrial institutions?

On more micro-topics, this paper finds some shortcomings of the existing research,

but limited to the focus of the space and the topic, this article fails to cover. This is also the research area that the subsequent attempts to explore. For example: First, the existing research still lacks a systematic overview of the convention research in the Chinese market order, and it is impossible to link market activities as a certain cross-section of the industry with the entire industry. A market exists as a cross-section of an industry. Among the factors that constitute the market operating mechanism are not only trading conditions, upstream and downstream relationships, but also labor relationships, financial relationships, purchasing relationships, and commercial relationships. The relationship structure together shapes the order of the market and the entire industry. Therefore, subsequent research will attempt to study the relationship between a certain cross-section of the market and the vertical industry, and interpret the connection and separation between the market and the industry from the perspective of institutionalized relationships. Second, the existing market sociology research still has a considerable overall narrative tendency. Admittedly, this tendency has a strong explanatory power when dealing with macro issues brought about by the state-market research framework, and it is also helpful for research expansion. However, when we study the tentacles of research further into the operation of market order, we can find that even within the operation of different markets, there are considerable differences. Although this article discusses this difference, it is still not enough due to limited capabilities. How to further refine the market and industry research so as to comprehensively grasp the authenticity of its operating mechanism is also one of the topics that must be paid attention to in the future.

All in all, expanding the academic perspective of economical sociology research to invest in the underlying mechanism of market and industrial activities, which itself reflects the new efforts of the academic community to rethink the transformation of China's social, economic and political patterns. Emphasizing the middle-level logic of research and the tools of the intermediary are not only the inspiration of the deepening of the evolution of theoretical research, but also help to understand the logic of the

political operation of markets and industries. Returning the perspective of economic sociology to the meso level of industry and market operation, through revealing the profound institutional changes brought about by the background of the overall transformation of market economic life, it also reflects the academic world's attention to the times. Therefore, the research on the meso level of industry and market and the research of intermediary tools has a very important value of the times.

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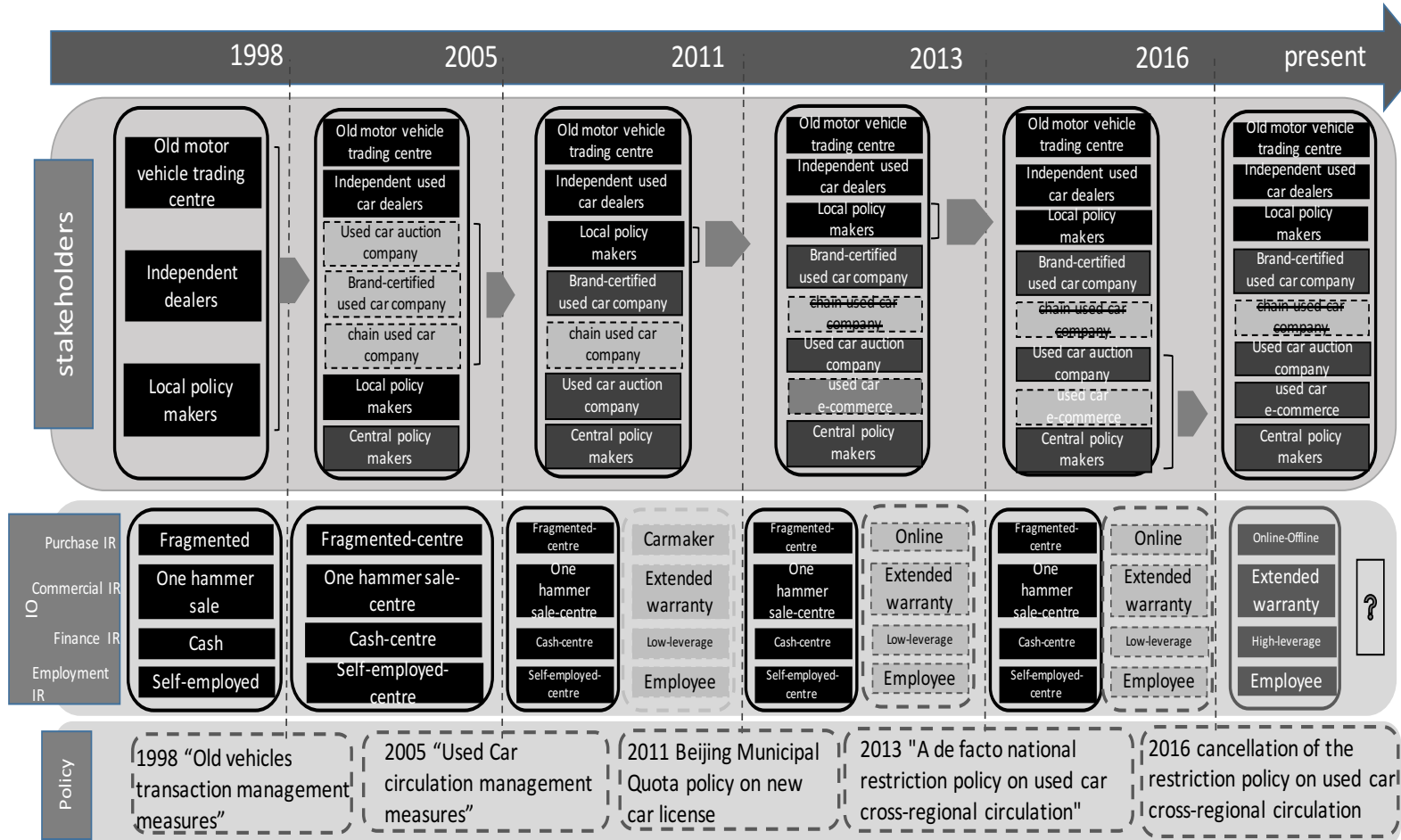
Appendix 1. Overview of Interviews

Number	Sex	Post	First interview date	Second interview date
Interview 1	M	A used car dealer in Suzhou	4/08/2018	
Interview 2	M	A used car dealer in Suzhou	4/08/2018	
Interview 3	M	A used car dealer from city A	6/08/2018	
Interview 4	M	Deputy secretary-general of dealer association	8/08/2018	24/08/2018
Interview 5	M	A used car dealer from Shijiazhuang	14/08/2018	
Interview 6	M	A used car dealer from Shijiazhuang	14/08/2018	
Interview 7	F	chef secretary of a local car dealer association	6/09/2018	
Interview 8	M	A used car dealer from city A	6/09/2018	
Interview 9	M	CEO of Car Win company for used car customer relationship management and used car auction systems for car dealers	8/09/2018	6/01/2019
Interview 10	M	Deputy General Manager of a dealer group	30/09/2018	
Interview 11	M	chef secretary of a local car dealer association	10/10/2018	
Interview 12	M	Auto industry expert	18/12/2018	

Interview 13	M	A car dealer in Beijing	18/12/2018	
Interview 14	M	Deputy general manager of Auto Trading Market	18/12/2018	14/01/2019
Interview 15	M	Auto industry analyst	18/12/2018	
Interview 16	M	A manager of used car e-commerce	24/12/2018	
Interview 17	M	A staff of used car e-commerce	24/12/2018	
Interview 18	F	A HR of used car e-commerce	24/12/2018	
Interview 19	M	Chairman of a used cars e-commerce company	19/01/2019	
Interview 20	M	A official of the Vehicle Administration Bureau	20/01/2019	
Interview 21	M	Captain of the Vehicle Administration Bureau	21/01/2019	
Interview 22	M	A used car dealer	22/01/2019	
Interview 23	M	A used car dealer	22/01/2019	
Interview 24	M	A big used car dealer	22/01/2019	
Interview 25	M	A used car dealer	22/01/2019	
Interview 26	M	A used car dealer	22/01/2019	
Interview 27	M	A used car buyer	24/01/2019	
Interview 28	M	A used car buyer	24/01/2019	
Interview 29	M	A used car buyer	24/01/2019	

Appendix 2. Key Milestones of China's Used Car Market

legislations



Since 1998, China's second-hand car market has been subject to ups and downs due to policy influences, and its stakeholders have continued to increase, and it has become a promoter behind the introduction of policies.

The arrow in the stakeholder evolution bar in the figure and the stakeholders behind it promote the next policy change. The darker the color, the more dominant it is. Some stakeholders have disappeared during the evolution, and some are new.

Appendix 3. Policy opinions of the State Council in March 2016

<Several Opinions on Promoting Convenience Transactions of Used Cars>

The people's government of the provinces, autonomous regions, municipalities directly under the Central Government, the ministries and commissions of the State Council, and the directly affiliated institutions:

The automobile industry is an important strategic and pillar industry of the national economy. It is a critical domain for stable growth and expansion of consumption.

At present, China's car ownership exceeds 170 million, and the used car market has great potential. However, used car transactions are not convenient, and the information is opaque, which is the problem restricts the consumption of used cars. In order to facilitate the trading of used cars, expand the used car market, create more market space for new car consumption, and at the same time drive the development of auto spare parts, maintenance, insurance and other related service industries, with the approval of the State Council, the following opinions are proposed:

Article 1 Create a market environment for the free circulation of used cars (The people's governments of all regions are responsible);

Article 2 Further improve the registration management of used car transactions (The Ministry of Commerce in accordance with the Ministry of Public Security, the State Administration of Taxation and the China Insurance Regulatory Commission are responsible for the division of duties);

Article 3 Accelerate the improvement of the used car circulation information platform (Ministry of Commerce in accordance with the Ministry of Industry and Information Technology, Ministry of Public Security, Ministry of Environmental Protection, Ministry of Transport, and the China Insurance Regulatory Commission are responsible for the division of duties);

Article 4 Strengthen the credit system construction of used car market entities (Ministry of Commerce, National Development and Reform Commission, Ministry of Environmental Protection, Ministry of Transport, State Administration of Taxation, General Administration of Industry and Commerce, and China Insurance Regulatory

Commission are responsible for the division of duties);

Article 5 Optimize the tax policy for used car transactions (The Ministry of Finance and the State Administration of Taxation are responsible for the division of duties);

Article 6 Increase financial service support (The China Banking Regulatory Commission and the China Insurance Regulatory Commission are responsible for the division of duties);

Article 7 Actively promote the innovation of used car circulation model (Ministry of Commerce and Ministry of Transport are responsible for the division of duties);

Article 8 Improve the construction of the used car circulation system (headed by the Ministry of Commerce).

Titre : 1985-2016: Le travail politique et les relations institutionnalisées—Recherche sur les changements institutionnels sur le marché chinois des voitures d'occasion.

Mots clés : Relations institutionnalisées, Ordre institutionnel, Échelle gouvernementale, Travail politique, Changement institutionnel

Résumé : À partir des "Mesures de gestion des transactions concernant les véhicules automobiles anciens" émises par le Ministère du commerce intérieur (devenu plus tard le Ministère du commerce) en 1998, les politiques et réglementations locales se sont transformées en réglementations industrielles publiées dans tout le pays. Puis, en 2005, le Ministère du commerce l'a révisé en "Mesures de gestion de la circulation des voitures d'occasion", et le "problème" des voitures d'occasion est passé au niveau de la surveillance nationale. L'État transformé de la « société totale » a subi un processus de « problématisation » pour une supervision industrielle spécifique, c'est-à-dire que le problème structurel dans l'industrie va du stade du problème de l'entreprise au problème collectif, puis au problème public, est finalement devenu un problème politisé. Les gouvernements locaux interviennent généralement au stade des problèmes publics, puis élaborent des réglementations et des politiques réglementaires locales, puis entrent dans le stade du problème politisé. Cette étape implique souvent des reportages et des analyses des médias. Face aux problèmes industriels politisés, le gouvernement central finira par publier des réglementations et des politiques nationales pour établir ou ajuster la supervision industrielle.

Dans la "société totale", il existe également un lien direct entre l'État et les niveaux les plus bas de la pratique industrielle. Après des réformes orientées vers le marché, l'État ne peut pas intervenir directement au niveau le plus élémentaire de la pratique industrielle. Les gouvernements locaux, en particulier les gouvernements municipaux, ont le pouvoir de réglementer directement la supervision industrielle. Cela a établi un nouveau type de relation industrielle, et la triple relation entre l'État, les gouvernements locaux et les acteurs industriels a été établie, brisant la dualité de la relation entre l'État et les acteurs industriels.

En fait, depuis la réforme du système fiscal et fiscal en 1994, le contrôle de l'État sur les industries a en fait été délégué aux gouvernements locaux. En outre, il existe une couche intermédiaire dans la relation entre l'État et le marché (composé de différentes industries), c'est-à-dire le gouvernement local. L'État coordonne la supervision industrielle à travers le pays, en particulier lorsqu'une réglementation trans-industrielle (protection de l'environnement, commerce extérieur) est nécessaire. Le rôle de coordination de l'État est particulièrement urgent. Sur la base des recherches ci-dessus, l'auteur estime que dans la relation entre l'État et le marché, l'État est un facteur institutionnel et structurel, mais cela ne signifie que ce facteur est immuable, ni que les acteurs industriels sont non actifs. Au contraire, ce que l'auteur essaie de démontrer dans l'article, c'est comment les acteurs industriels ont favorisé les changements de la supervision industrielle à travers une série de stratégies d'action. C'est le travail politique de ces acteurs industriels qui promeut constamment l'ajustement de la tutelle industrielle, puis modifie la relation institutionnalisée dans l'industrie, de sorte que la pratique industrielle est toujours dans le mouvement éternel de l'institutionnalisation, de l'institutionnalisation et de réinstitutionnalisation.

Title : 1985-2016: The political work and the institutionalized relationships——Research on Institutional Changes in China's Used Car Market

Keywords : Institutionalized Relationships, Institutional Order, Government Scale, Political Work, Institutional Change

Abstract : Starting from the "Old Motor Vehicle Transactions Management Measures" issued by the Ministry of Internal Trade (later changed to the Ministry of Commerce) in 1998, local policies and regulations have risen to industrial regulations issued throughout the country. Then in 2005, the Ministry of Commerce revised it to the "Used Car Circulation Management Measures", and the "problem" of used cars rose to the level of national supervision. The state transformed from the "overall society" has undergone a "problematization" process for specific industrial supervision, that is, the structural problem in the industry go from the company problem stage to the collective problem, and then to the public problem, finally became a politicized problem. Local governments generally intervene at the stage of public problems, and then form local regulations and regulatory policies, and then enter the politicized problem stage. This stage often involves media reporting and analysis. In the face of politicized industrial problems, the central government will eventually issue national regulations and policies to establish or adjust industrial supervision.

In the "overall society", there is a direct connection between the state and the lowest levels of industrial practice. After market-oriented reforms, the state cannot directly intervene in the most basic level of industrial practice. Local governments, especially municipal governments, have the power to regulate industrial supervision directly. It established a new type of industrial relations, and the triple relationship between state-local government-industry actors was established, breaking the duality of the state-industry actor relationship.

In fact, since the reform of the fiscal and taxation system in 1994, the state's control over industries has been delegated to local governments. Also, there is an intermediate layer in the relationship between the state and the market (composed of different industries), that is, local government. The state coordinates industrial supervision across the country, especially when trans-industry regulation (environmental protection, foreign trade) is needed. The state's coordination role is particularly urgent. Based on the above research, the author believes that in the relationship between the state and the market, the state is an institutional and structural factor, but it does not mean that this factor is immutable, nor does it mean that industrial actors are not active. On the contrary, what the author tries to demonstrate in the article is how the industrial actors have promoted the changes in industrial supervision through a series of action strategies. It is the political work of these industrial actors that constantly promote the adjustment of industrial supervision, and then change the institutionalized relationship in the industry so that industrial practice is always in the eternal movement of institutionalization, de-institutionalization, re-institutionalization.