Analysis of Development Causes and Reasons on Logistics Public Information Platform in Road Freight Market of China

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Abstract

This paper is based on the analysis and comparison of two major changes of our road freight market affected by reforming and opening-up, and discusses that the origin, course and motivation of the Logistics Public Information Platform (LPIP). Then it points that the essential reason is the asymmetry of information exchange, course of its development is in order to meet the different needs of different stages of the market continuously adjusted to the function of a process of development, but also development of the market to a specific stage of the inevitable demand.

Keywords: Logistics, information platform, road freight.

1. Introduction

Logistics public information platform (LPIP) has been highly valued by the primary departments of all levels of the transportation industry. As early as the end of last century, various types of market principal parts in the industry have explored the construction and development of LPIP of our country actively, which has made a positive contribution to the healthy and rapid development of the road freight market.

2. Development Causes

Through the development history of the road freight market LPIP in China, we can see clearly that it is related to the development of the road freight market closely. There are two major changes in the road freight market: the first change happened between the founding of the state and the beginning of opening up. At that time it was in there convey stage of development after economic and social depression, of the manufacturing sector. As the major demand side of the transport service, production manufacturing relied on large state-owned enterprises basically and supply information concentrated relatively. While as the transportation service provider, because our country cancelled individual transportation in 1956 when we carried out socialist transformation, the road freight market then mainly relied on the large state-owned enterprises or group transportation companies, the transportation service is highly centralized, systematic and nationalized. Relatively centralized transport demand and capacity resources are highly centralized, which made goods vehicles clogging problem of the road transportation market in our country is not so serious.

The second change took place in the 1980s, the reform and open made our country's economic and social productivity get a great liberation and development, accelerated the pace of economic recovery in China and has produced profound influence on our country's economic system. With the further reform and open, China's manufacturing industry opened to the outside world first, a large number of non-state ownership enterprises emerged and became

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the main market players quickly, which made concentrated source information originally decentralized. At the same time, in order to develop our road transportation further, promote the road transportation service capacity of our country, and satisfy sharply explosive demands of the road freight market, Ministry of Transport of the PRC put forward a concept of "If there is a river we can all sail boats, and if there is a road we can drive all" in 1983, and opened the road freight market.

And in later years, the productivity of our country road transport market has been greatly liberated, a large number of individuals and partnerships integrated into the road freight market and become main market rapidly, which improved the service ability of the road transportation greatly and alleviated the nervous case of transport market capacity at that time. But at the same time, it also made our capacity resources become dispersive, and lead to the adverse situation of "larger number, small scale, dispersed distribution, weak power" of our country road freight market. The phenomenon that this demand and capacity all presented a decentralized state directly caused disconnect between car cargo information transmissions, and increased the difficulty and complexity of the information transmission greatly. The traditional and original information service mode has been difficult to support complicated transportation network requirements.

In this environment, the road freight information service industry aroused at the historic moment, which deals with the car cargo information impeded phenomenon effectively, and plays a great role in promoting the development of the market. To a certain extent the emergence and development of road freight information service industry meet with the market needs which is caused by information asymmetry of car goods, which promoted the development of road freight market effectively. However, with continuous growth of the market and persistent improvement of service quality demands put forward by transport home-textile, the traditional road freight information service industry also become difficult to meet new demands put forward by the market in new situations.

![Figure 1. Complexity level contrast of information transfer before and after road transport market open.](image)

3. Development Process

With the great progress of Chinese information technology and the improvement of economic and social information environment in the 1990s, information technology with its promoting effect on productivity remains highly recognized in our society. The information products and various types of information services have gained generally acceptance. On the external environment, public information platform of logistics transportation industry has become a necessity to following the market development environment and meeting its demands. A large number of LPIP which bases on the industry of truck information matching function are active in the market, and it springs up several information systems with the
characteristics of primary LPIP such as the inferior Bridge National Freight Information Service network, the clever "transport network" China online, traffic, land of wealth "China Peihuo network". The appearance of such information system meets the demand of market in time and fills the gap of freight market information services which alleviate the problem of unbalance market information in a certain extent, promote the development of China's freight market effectively, enhance the level of logistics information and produce a certain social benefits. Strictly, the LPIP can only be called the "prototype" or "primary stage" of logistics public information platform's service functions are centralized in information transaction service which based on information release and query. With the development of market, it makes higher demands for the service capacity, service level and service quality of road transport industry. While, in order to improve their market competitiveness, most of the road transport enterprises depend on information which expand the demands of logistics information services.

The demands have gradually developed from a single information of vehicle sources and goods sources to integrated information service requirements which gathering government information, business information and data exchange. For example, the releasing of industry information, the evaluation of credit query, the enterprise system connection, real-time vehicle monitoring and mobile information services, etc. It is difficult to meet the needs of market for the original LPIP with the appearance of demands which lead to some unadapted conditions in different degree.

To evaluation the progress of these information system objectively, the failure exploration of the road freight LPIP does not mean a total negation or overthrow of the work. The appearance of the information system is an inevitable result of China's road freight market, however, the disappearance of this information system which due to a negative result is composed of internal and external elements. As the intermediary is between the owner of vehicle and the owner of goods, and use market information asymmetry to provide information matching service and get profit from the market, there is a strong conflict between the scope of business and logistics information system. But in the actual activities of the market, the intermediary who masters a large amount of information doesn't share these information in the information system, so the survival and development of the information system is limited. Secondly, the profit pattern is not prominent. The scale of the logistics information system construction in the past has the characteristics of larger scale, wide coverage and various measures, but the profitability is not prominent. Since the situation of our logistics market at that time is "larger number, small scale, dispersed distribution, weak power", there is a big gap between developed countries and regions, it is difficult to draw on the advanced development of information system abroad, such as the use of membership, the business system of charging method.

Therefore, the business model has a lot of problems, the overall income cannot afford the high cost of operations and maintenance. Those situations cause the entire system management loose, cease to exist except in name, and gradually eliminated by market. Finally, the system function is not perfect. The main service of logistics information system function is limited in information matching service and its priority function is to releasing information. The completion of transaction depends on both vehicle and goods out line, this way is a primary service mode. And the relevant services, such as the auxiliary function of market supervision, the construction of data verification, credit inquiries and other services are affected seriously by technical conditions, development environment, and so on, which low quality services and lose the market eventually. From the popularity of the Internet
penetration, at the end of 2010, the number of Internet users in China has reached 450 billion, mobile phone users were 320 billion which occupies first in the world. In 1990s, the number of Internet users all over the country is only about 15,000,000. Therefore, it became a major factor hindering the development of LPIP for the unperfected overall development environment and low social awareness. Secondly, the measures of technology support are not perfect. Technical support of logistics information system mainly have the mobile communication technology, GPS/GIS technology, identity authentication technology, RFID technology, etc., the technology with powerful support to the function of logistics information system service is the guarantee of development of information system.

However, in the 1990s, most of the information technology was in its infancy, mobile communication technology has not been popularized, mobile phone was luxury goods at that time, it is difficult to be popularized application. It can be say that the early public logistics information system was in "domestic trouble and foreign invasion", which has seriously hindered the development of system. Therefore, the logistics information system construction with vigour and vitality has gradually disappeared from the scene and fade out people's field.

4. Developing Reason

The failure of LPIP construction exploring does not mean the disappearance of market demand. On the contrary, along with development of our country the economic and social, the market sets higher standards for road transport industry service capacity service level and the quality of service, put forward higher request. And the road transportation enterprise mostly adopted information means to improve enterprise service level in order to further improve their market competitiveness. As a result the logistics information service needs more types, from the original single traffic information, source information demand gradually and developed to an integrated information service needs include, business information and data exchange. Transportation industry competent departments of all levels will focus on the construction of LPIP again. Some regions, such as Zhejiang, Henan, Hubei, Fujian, Shenzhen took the lead in starting and led to a new boom of transportation industry construction LPIP.

One of the main driving force comes from the part information intermediary, Information intermediary tried to start information transformation of their own business process out of their own needs of business development, and began to build small logistics information system based on the information of the transaction. However due to the limitation of own conditions such as construction of main body size and capacity, if started single point or a very small range network application only in small regional rage, the actual effect suffered is large restriction and the majority of road freight market is still in a type of spontaneous, original, traditional and inefficient of operation.

The concrete manifestation of this service is as follows. Firstly, the electronic commerce function is becoming rich gradually and emerging more expression. Electronic business function is the most close to the market service content in the LPIP, and its expression is “vary follows the mark”. After the development of recent years, the electronic business function of LPIP and now is changing from a single transaction of information, to some value-added services such as general software, park management, vehicle tracking, online trading, real-time settlement, insurance agent and mobile communication service. E-commerce function displays diverse development.

Secondly, the electronic government affairs function first emerges and opens to the market gradually. In order to improve the management level of the industry, the department started the construction of e-government system in the 1990s. The initial e-government system
mainly based on internal system built by industry management department, and no external open. With the development of LPIP, the needs of market for this part of the information is growing, so part of the industries and regions provide data inquires external open system service, And this conduct with pay good effect, especially the resident identity card inquiry system. At present, some regions of transportation industry are carrying out works such as connection of internal system and LPIP and then open service to the market.

Finally, requirements of data exchange service gibbous and turn more and more intense. The requirements for data exchange internal network construction and providing services service mainly manifested in two aspects as follows. On the one hand, out of the regard of the e-government system, need to connect all levels of internal data networking platform to achieve data submitted and transfer, and then supply government affairs information service facing the market through the unified foreign structure access data exchange network. On the other hand, various types of enterprise need to contact their own system with business related business enterprise system or LPIP and then achieve electronic and routing assignments.

![Diagram](image.png)

Figure 2. Developing reasons of LPIP in road transport market.

5. Conclusion

In summary, the emergence and development of LPIP is an information product which was produced in order to meet the specific requirements of market under the general environment of China's road freight market development and in a specific historical period. The fundamental cause of its development is the market characteristics of "larger number, small scale, dispersed distribution, weak power" which lead to the unbalance information. The production and progress of LPIP, which developing from nothing, developing from the traditional single point and artificial information service to the electronic and network information service, developing from an original single service function of vehicle and goods trading to a general information service of gathering three big main functions of e-government, e-commerce and data exchange to one, is an inevitable requirement of market
development to a specific stage and is a development progress of constantly adjusting their functions in order to meet the different demands in different stages after the opening of road freight transport market of our country.

References