

THE CONDITION, DEVELOPMENT AND SUGGESTIONS OF POLICY OF THE HIGHWAY EXPRESS FREIGHT TRANSPORTATION SYSTEM IN CHINA

HE Jie
Associate Professor
Transportation College
Southeast University
Si Pai Lou 2, Nanjing,
210096 China
Fax: +86-25-83795384
hejie@seu.edu.cn

LI Xu-hong
Professor
Transportation College
Southeast University
Si Pai Lou 2, Nanjing,
210096 China
Fax: +86-25-83793685
E-mail: lixuhong@seu.edu.cn

BAO Xiang-tai
Doctor of Philosophy
Transportation College
Southeast University
Si Pai Lou 2, Nanjing,
210096 China
Fax: +86-25-83795384
E-mail: baoxiangtai@seu.edu.cn

HANG Wen
Doctor of Philosophy
Transportation College
Southeast University
Si Pai Lou 2, Nanjing,
210096 China
Fax: +86-25-83795384
E-mail: zeal-hw@sohu.com

Abstract: The highway express freight transportation (HEFT) is a new transportation organization form separated from the common freight transportation with economic development and incessant adjustment of highway transportation structure in China.

At present, the phenomenon of inadaptability still exists in the HEFT system of China, from foundation structure like highways, parking lots and stations to transportation equipments and transportation organizing. In order to develop the HEFT system more rationally and effectively, we should start with the structure of the system, conform the resources existing, and consummate the freight transport system. In due course, relevant policies and measures to supervise, lead and support are necessary and important. This paper analyzes the existing problems of HEFT system in our country, based on its characteristics, development situation and adaptability, and presents the policy and measures of promoting and leading the development of the HEFT system.

Key Words: System of highway express freight transport, The developing condition, The existing problems, Suggestions of policy.

1. INTRODUCTION

Along with the development of our country society economy, extensive application of high new technologies and the change of production, circulation and consuming fashion of goods, the proportion of some goods for highway transportation which have the characters of small batches, more varieties, high additional value and high time-limited has continuously

increased, the goods needed to be provided fast freight transportation service have been more and more. But the common highway freight transportation can't satisfy the demand of the freight transportation market. The highway express freight transportation is the best transportation organization mode which carries out fast, safe, accurate and door-to-door transportation services. However, current highway express freight transportation lags behind the development of the express passenger transportation, still have some certain gap from organization format to the management level compared with developed countries even with other transportation modes in China. Thus Ministry of Communications of China looks on "The highway express freight transportation system research" as the important scientific research of traffic development in Eleventh-Five-year period. This paper belongs to a part of the results of that research topic. This paper analyzes the development situation and existing problems of express freight transportation system in our country, based on system composition, and present policy suggestion.

2. HEFT SYSTEM

2.1 The Concept and the Characteristic of HEFT System

The highway express freight transportation system is one of the highway freight transportation systems, which carries out safe, accurate, express flow of goods and information, based on high-grade highway, depended on multilayer and netlike station system, using advanced-technique and reasonable-configuration vehicles to transport goods, utilizing high-efficient information technique as management means, by means of scientific and efficient transportation organization^[1].

Highway express freight transportation system is made up of seven parts according to the concept: express transportation goods, highways, stations, transportation equipments, communication information, facilities for loading, unloading and sorting, facilities for transportation organizing and administration. It is also a complicated, bulky system involving many aspects, and its operate manner is simply illustrated in Figure 1. So the realization of goods express transportation needs the coordination and cooperation of system inside and outside.

2.2 System Architecture of HEFT System

A whole highway express freight transportation system will include three layer network systems based on its concept. The system architecture is illustrated in Figure 2.

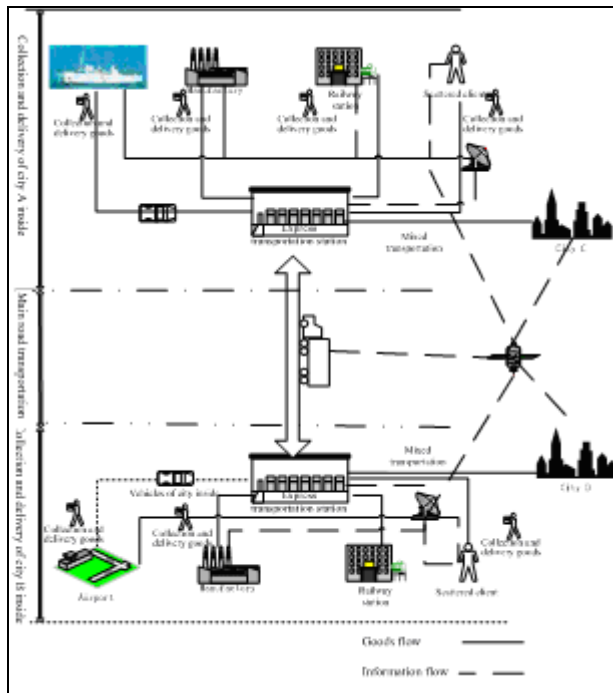


Figure 1 Operation Process of HEFT System

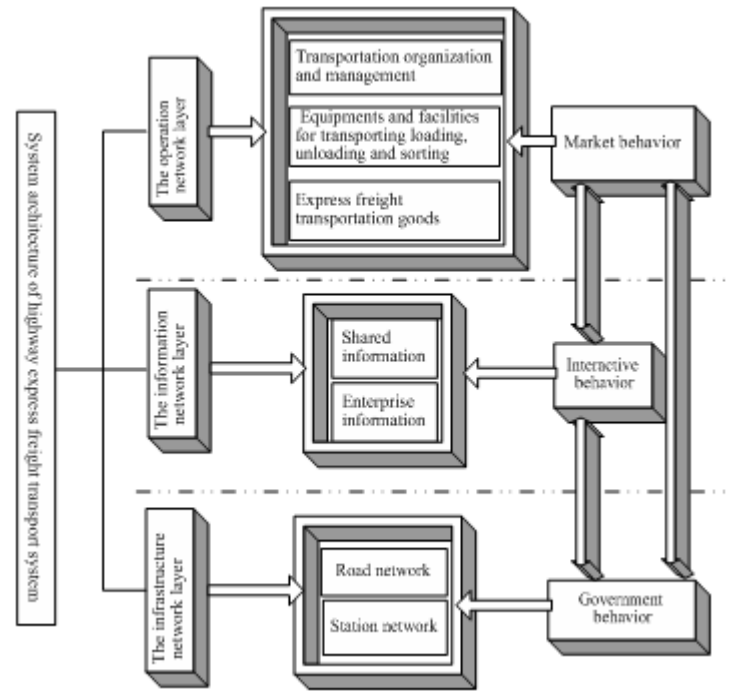


Figure 2 System Architecture of HEFT System

- ✧ The bottom infrastructure network layer: includes the highway network and station network. The main body of this layer construction, operation modes management is nation closely related with national policy laws, industry plan etc., which embodies government behavior.
- ✧ The topmost operation network layer: includes the transportation organization and management, transportation equipments and facilities for loading, unloading and sorting, express freight transportation goods. The main body of this layer construction, operation modes management is both sides of supply and demand closely related with the supply and demand balance, enterprise operation, cooperation and competition within enterprises etc., which embodies market behavior.
- ✧ The medial information network layer: includes the shared information and enterprise information. The mesosphere is a communicating bridge between the infrastructure network layer and the operation network layer which becomes bridge of information exchanges among governments, enterprises, demanders etc., which embodies interactive behavior between government and market.

3. THE CURRENT CONDITION ANALYSIS OF THE HEFT SYSTEM

3.1 The current Condition of the HEFT System and its Problems

Along with the fast development of the highway transportations facilities construction, it appears a passel of express freight transportation enterprise that has the certain scale and strength and causes an industrial revolution of the traditional highway transportation. Moreover, the change of the industrial structure arouses the transportation demanding change,

then push to continuously adjust the express transportation structure. But spontaneous and blindness adjustment and adjustment with aims have entirely different results. Therefore, we have the necessity to understand system present condition and discover the existing problem, and lead, adjust express freight transportation market by establishing transport the policies.

(1)Express Freight Transportation Goods

Currently, the source of express freight transportation goods in our country mainly is divided into four types:

- ✧ High-technology and high additional value merchandise, such as the electronics accessories, home appliances, communication products, clothing, instruments etc.
- ✧ All kinds of professional goods, such as the fresh and easily-decayed goods (fruits, vegetables, meats, seafood etc.), dangerous goods etc.
- ✧ Reses of individual, come-and-go package, amanuensis and fresh flowers of enterprises.
- ✧ Special service objects, such as exhibition reses etc. The Chinese Transportation Group develops the highway express freight transportation business of exhibition reses. It has provided this kind of service for gardening exposition in Kunming in 1999 and college student gymkhana in 2001.

Currently, the main service customer types of highway express freight transportation enterprises in our country are also divided into four types:

- ✧ High-technical enterprises large supermarket etc, such as the Panasonic, Haier logistics, WuLiangYe, Caroford supermarket etc.
- ✧ All kinds of markets and stations, such as small merchandise business center of Yiwu city in Zhejiang province, the district wholesales market in Zhengzhou etc.
- ✧ The enterprises of else transportation modes, such as the aviation enterprises, railway transportation enterprises.
- ✧ Else demand group, such as government departments, personals, the business units etc.

In 2000, volume of freight handled in the highway less-than-truckload stations in our country had reached 37,716,000 tons, about was 0.4% of the total highway transportation volume. The rate is very low because the highway transportation market opens, the individual transportation and the united transportation is quick rising which are mainly engaged in the less-than-truckload transportation, but this volume of freight handled in them isn't inside. Meanwhile the batch-goods transportation develops quickly and profession transportation volumes, such as container transportation etc have been improved greatly. In 2001, highway container transportation had reached 11,156,000 standard-containers and their weight was 123,564,000 tons, separately adding 19.7% and 19.9% than last year. In general, express transportation volume is quick rising in our country.

(2)Highway Facilities

The highway infrastructure construction has showed great achievement in the past 20 years. Length of highway routes was 888,000 km in 1980, and was 1,765,000 km at the 2002 year-end, increasing 100%. The service scope and whole technique levels have exalted significantly, national routes system that main body is Freeway has been built quickly, especially in East of China. But the problem that highway network structure isn't reasonable has been given prominence to:

- ✧ Main highway routes network hasn't been completed, matching degree of highway

network structure isn't reasonable, the percentage of above second class highway is low which length of high-grade and next-high-grade pavement is only 40.9% of total length, and the reaching depth of above second class highway isn't enough which affects the exertion of whole benefit of highway network.

- ✧ The district development is unbalance, the eastern region develops quickly, but western region develops slowly (see Table 1).

(3)Station Facilities

The percentage of stations (container transferring first-class stations, less-than-truckload transportation first class stations) suit for highway express freight transportation was only 8.8% (the number was 139), the percentage of first class stations 14.5%(the number was 228), the percentage of non-grade stations 43%(the number was 670) according to statistics datum of Ministry of Communications of China. Moreover, operation management of the stations is disordered. Many stations have been built and put to use, but the vehicles and goods entering stations haven't reached their design capacity, even some stations haven't been used. However the trade goes well in some places outside the stations, appearing the phenomenon "having enough demand but having not enough fields". This will result in many problems, such as market scatter,management confusion, the national revenue run-off etc, not help that highway express freight transportation develops toward the direction of networked, scaled and specialization.

Table 1 Main Ntional Highway Index at 2002 Year-end Unit: 10000 km

	Total length	Express-way		Above second class highway		Highway network
		Length	As percentage of highways(%)	Length	As percentage of highways(%)	Density(km/100 km ²)
National	176.53	25130	1.42	24.9 7	14.2	18.40
Eastern region	56.12	13456	2.40	12.2 0	21.7	43.22
Middle region	60.73	6995	1.15	8.35	13.8	21.12
Western region	59.68	4679	0.78	4.42	7.4	11.00
American	634.80	89000	1.40	60.9	9.60	65.00

Note:Materials from traffic statistics datum of Ministry of Communications of China, American datum from American statistics materials in 1999

(4)Transportation Equipments

Currently, the vehicles engaged in the freight transportation is mainly medium-sized common truck of no-roof, and the percentage of high-efficient and low-consumed heavy truck, van, container trailers and all kinds of special vehicles is lower. The vehicles engaged in the freight transportation in China are 5,368,000 units, small common vehicles are 3,533,000 units as 65.8% percentage of total vehicles, the big common vehicles are 1,835,000 units as 34.2% percentage of total vehicles, special vehicles are 165,000 units as 3.1% percentage of total vehicles, container vehicles are 33,000 units as only 0.7% percentage of total vehicles

according to statistics datum of Ministry of Communications of China. The non-reasonable traffic capacity structure affects the development of highway express freight transportation. But in the American 70 percent of highway transportation goods is transported by expert vehicles. Foreign development proves that the extensive application of expert vehicles can promote the development of transportation network and multimodal transport, amelioration of transportation technics and improvement of transportation standardization degree.

(5) High new Technologies and Communication Information

It resulted in not enough linkage between the enterprises and markets because of many reasons such as our country transportations system, blockage among regions, the ownership and usage of stations etc. It causes information system completed into "isolated island" because of separate communication investment, limited information not being shared, low level repeat development. Not enough information relation directly affects operation efficiency and economic performance of the enterprise. The most outstanding exhibition is that the percentage of vehicles not loaded is high to decrease the production efficiency.

(6)Transportation Organization and Management

Now, there are many departments managing highway transportation, such as "traffic management bureau" in public security officials, "highway transportation management bureau" in communication officials, "traffic section" in economic and trade officials. The enterprises engaged in highway dangerous cargo transportation need to do the relevant procedure in these sections, such as transportation officials, public security officials and fire protection officials, the enterprises engaged in multimodal transport need to do the relevant procedure in economic and trade official, the management of stations belongs to communication officials, public security officials, city-built officials and tour officials. The management of same work belongs to different officials, which affects integration and oneness of transportation market, results in adding difficulty of transportation market macro control, makes that the transportation enterprises can't do the right election, adds unnecessary and unreasonable economy burden of transportation enterprises, and brings on lower efficiency of the whole highway freight transportation industry.

3.2 The Adaptability Analysis of Highway Freight Transportation Demand and Supply Status

The consumption modes of the consumers have taken place great change along with our country economy structure adjustment. Transportation requirements of shippers are gradually improved:

- ✧ Under the accepted transportation price, they pay more attention to the transporting speed, safety, convenience, goods lost,
- ✧ The goods structure gradually changes, and the goods varieties turn to the direction of small batch quantity, many species, high time-limited and high additional value, which adds quickly in the short distance and middle distance transportation demand.

The supply of highway express freight transportation changes with the highway freight transportation demand structure, and the target is that transportation supply and transportation's demand carry out the dynamic equilibrium.

According to the statistics datum of 2002, volume of the highway freight transportation that

whole society completed was 11,160 million tons, container transportation volume was 149.6 million tons as only 1.34% percentage of the highway freight transportation. The expert freight transportation vehicles were as 3.1% of the freight transportation vehicles. The specific gravity of high-efficient and low-consumed heavy truck, van, container trailers and all kinds of special vehicles was lower in highway freight transportation, and mostly enterprises adopted medium-sized common trucks. Analyze its reasons:

- ✧ Because of unreasonable supply structure and low-level techniques and equipments, the extensive network can't be realized to provide high-level services so that the latent express freight transportation demand isn't transformed into real transportation volume and specific gravity of express transportation is lower,
- ✧ Because passenger transportation is paid more attention to than freight transportation, container transportation, truckload transportation special transportation develop slowly,
- ✧ The freight transportation information isn't smooth so that empty vehicle runs. The percent of transportation and the related cost in developed countries is lower as 10% percentage in GDP, but about 20% in our country.

According to the analysis of the above highway freight transportation market, the government supervisor departments should stipulate feasible industry systems and statutes, guide, encourage and help the enterprise to improve management and operation level with the policy, based on theory research and the highway express freight transportation system plan.

4. THE DEVELOPING MODES OF HEFT SYSTEM

4.1 The Development of the HEFT System in the World

The developing modes of highway express freight transportation system present some system commonness at corresponding development stage because the characteristics of the highway express freight transportation system and its position in the national economy in developed countries is close in developed countries, which reflects general rules of the highway freight transportation development. According to main service form, foreign highway express freight transportation system developing modes are classified as four types: parcel transportation system (such as UPS Company), less-than-truckload transportation system (such as Highway Company), truckload transportation system (such as Hunt Company) and special transportation system (such as Fulton Company).

Due to different developing conditions and non-balanceable social economy, it decides that all kinds of relations and operation mechanism in the course of forming, developing and reconstructing of highway express freight transportation system present some modalities with different characteristics. Here some referenced developing modes are illustrated which represents developing trends:

- ✧ Professional transportation system (such as the highway freight transportation system of Canada),
- ✧ The scaled-and-intensivism system (such as OVERNIGHT Company of America),
- ✧ The system relying on high-quality service as main competition ability (such as 'Zhaipeibian' of Japan),
- ✧ The system relying on enterprise body collaboration mode of contract-operation (such as most transportation enterprises of Holland),
- ✧ The system relying on international transportation network (such as TNT Company of Holland),

◇ The system relying on comprehensive transportation (such as UPS).

4.2 Study on Modes of HEFT Systems Develop in our Country

As the population and natural resources distribute unbalance in our country, the economy development presents obvious region difference, main highway routes network, the freight transportation station infrastructure and the consumption level etc are different in every place. Therefore, the highway express freight transportation system of our country also exists various developing modes, and the thesis put forward some possible developing modes respectively according to the system service forms, providing for study.

4.2.1 The Development of Parcel Transportation System

The parcel(package) highway express transportation service system(Illustrated in Figure 3) takes the aviation harbor and the freight transportation hub stations of center city in every area as the nodes, its long-distance transportation(more than 500,000 meter) is undertaken by aviation and high-speed railway, and its highway short-distance and medium-distance transportation are undertaken by highway. The highway transportation distance of each harbor node is about 300,000 meters and the highway transportation distance of each freight transportation hub station is about 200,000 meters.

Transportation organization mode: the consignor sends goods to the accepted spot or contact express transportation enterprise by telephone fax, the enterprise sends person to take the goods and to send to the freight transportation pick station or the airport pick station, then main highway route vehicles of the enterprise or else consignor (transportation company or airline company) undertake main highway route transportation, lastly the express transportation filiale of destination or vicegerent enterprise takes goods on schedule and delivers then to the consignee in request of time.

The main highway route transportation mode: comprehensively consider all kinks of factors by combining transportation speed, transportation cost and goods safety. For example, the main highway route transportation can reply on the aviation or high-speed railway in city group circling Bohai Sea, city group of Southeast littoral and city group of long-triangle region, and the main highway route transportation can reply on region highway network in city group of else economy areas.

The development of the system (Figure 4): add the quantity of the harbor nodes and regional transportation stations and consummate the spoke network of each node. It should consider the region influence of each node city, spoke scope and traffic condition of each node and spoke toward the inland region for setting of nodes.

4.2.2 The Development of the Less-than-truckload HEFT System

Based on current highway less-than-truckload express transportation system, it should develop toward hub-and-spoke leaded by large transportation enterprise groups, provides more services by enormous pick-and-delivery and transfer network, improves load factor of vehicles, forms the phase that several large less-than-truckload transportation enterprises occupy the main share of transportation market, and many regional less-than-truckload transportation enterprises with centralized service network, big service route density and high service quality are as complement. The service network form of less-than-truckload highway

express transportation system should be regional spoke type, which the distance between transfer stations of main service network is more than 100,000 meter and the spoke distance of main service network is more than 500,000 meters outward.

The development of the system: based on the existing less-than-truckload transportation network (Figure 5), the mode 1 relies on local national, province route to add the quantity of nodes(country and city) inside main route network and route density, meanwhile relies on freight transportation stations of national hub cities and extend toward neighbor cities along national main route(Figure 6);the mode 2 adds inside route density of main route network, simultaneity extend toward economic regions center of other province along zone of dense goods flow, merges center cities via transportation corridor of national main route into main less-than-truckload transportation network, develops linear dot-axis system into tree structure even net structure(Figure 7).

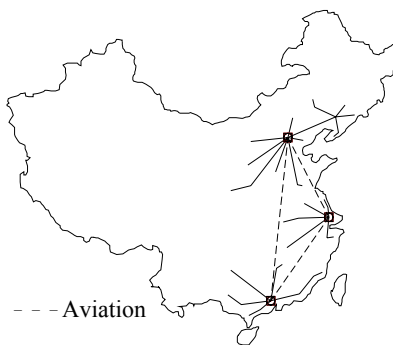


Figure 3 Parcel Transportation System Network

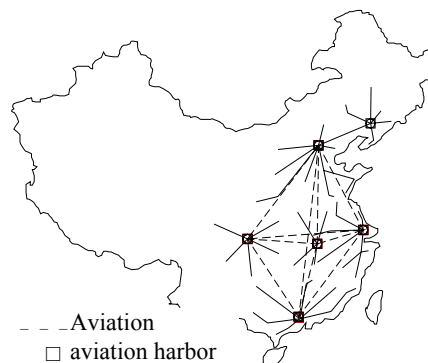


Figure 4 Parcel Transportation System Development

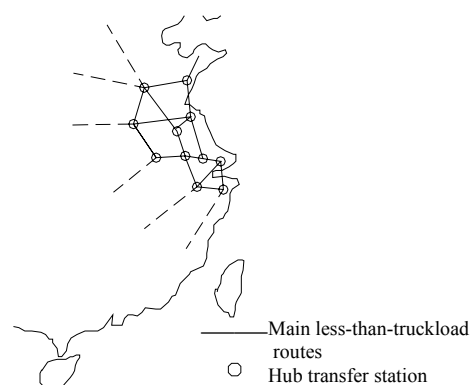


Figure 5 Less-than-truckload Highway Express Transportation Network

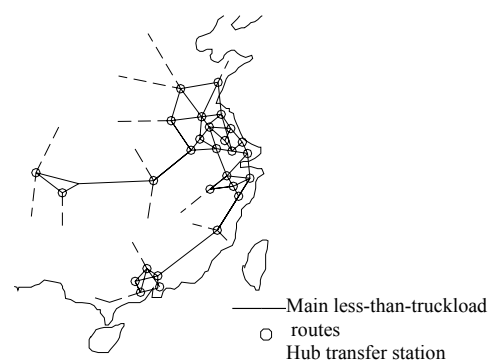
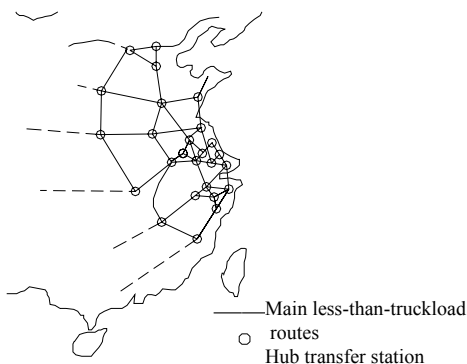


Figure 6 Less-than-truckload Highway Express
Transportation Network Development A

Figure 7 Less-than-truckload Highway Express
Transportation Network Development B

4.2.3 The Development of the Truckload HEFT System

The network form of the highway truckload express freight transportation system is center-city-spoke type (Figure 8), and its spoke distance is more than 500-2,500,000 meters. The highway truckload express freight transportation system adopts the development mode of specialization and systematization. Based on the network of freight transportation surrogate, relaying on main body of lots of medium, small truckload freight transportation enterprises and individuals, this system exerts the characteristics of flexible operation and lower cost, criterion service and raises its ability resisting risks.

The development of the system: have relations with network and information of freight transportation surrogates, use the information service of freight surrogate organizations and regional freight surrogate information network with one-way loading transport destination in order to get information of returned freight source, exert traffic capacity of truckload and raise the load factor of vehicles and utilization rate vehicle equipments (Figure 9).

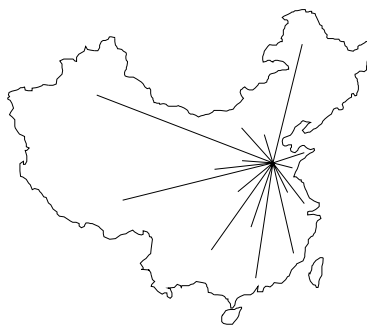


Figure 8 Truckload Express Freight Transportation
System Network

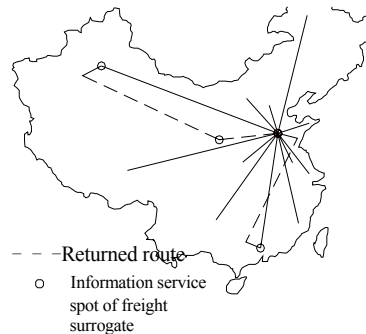


Figure 9 Truckload Express Freight Transportation
System Network Development

5. THE POLICY SUGGESTIONS DEVELOPING THE HEFT SYSTEM

5.1 The Policy Suggestions Perfecting the HEFT System Architecture

(1) Go on enlarging the investment of the high-grade highway construction to improve operation management level of highway

Highway express freight transportation is closely relation with plan, construction of highway network and operation management after built. Therefore, it should not establish the policies according to transportation economy and technique policies of the single transportation mode or exceptional transportation problem but comprehensive matched transportation policies.

When programming highway network, it should not only need to pay attention to the function of one corridor or a few big corridors, but also pay attention to the function of the high-grade highway network.

Enlarge the investment of high-grade highway construction and speed its development, improve the highway network density, and add the mileage of the high-grade highway

network.

Strengthen the operation management of high-grade highway, improve the traffic capacity and safety of vehicles, and make full use of the existing highway resources.

(2) The construction and management of freight transportation stations needs to have the support and pilot of the policies.

The station facility belongs to one of the transportation infrastructure. The government needs to firstly consider grounds of the stations in order to assure station scale synchronously matching total layout programming of the city. Station plans of some cities are reasonable, but the plans can't be brought into effect. This will bring the long-term disadvantageous influence for the development of the transportation industry for the future.

Push the policy of the separation of station and transportation, and separate the operation management of station from transportation enterprise. The transportation vehicles can use stations by paying the station usage fee. So the station management units may add the equipments using the station usage fee and manage the stations. The government can encourage the social group even personals to build and manage the station, and advocate the policy 'who invests, who has the benefit' especially for medium, small scaled freight transportation stations. For large freight transportation stations, the government should mobilize the social public power to adopt the joint-stock management system. The government, transportation enterprise, social group and individual can build and manage freight transportation stations with the joint-stock manner. The construction and operation management of main highway hub stations should be lead toward the comprehensive logistics center, and third part logistics service should be advocated.

Strictly carry out the approval system of stations, completely eradicate the phenomenon of resource waste "have the station, but have no demand" or the bad phenomenon that the stations are as other usage. Meanwhile strictly manage freight transportation market to avoid the phenomenon "have the demand, but have no station" and national loss and affect healthy development of the freight transportation industry.

(3) The development of express and efficient transportation vehicles must have the support of policy

Standardize the transportation behaviors of transportation vehicles ^[4]. On the one hand, it should strength the work that establish and consummate the management of highway axis load; on the other hand, it should synthetically use the norm function of the law and policy and the leading function of the economic lever, and speed the steps of vehicle type benefit for pavement (many axis). The production of freight vehicles and highway transportation bring into normative, scientific legal system management to reduce the exterior transportation cost and to lead transportation enterprises to use the high-efficient and low-consumed transportation vehicle with good technique performance.

Implement the policy of preferential charge, and encourage express freight transportation development. When charging road fee and bridge fee of high-grade highways, the fee of the heavy trucks should be preferential. Median, long distance transportation encourages adopting heavy, big-capacity, express, high-efficient container vehicles. For example, when expressway has dredged from 1995 in Zhejiang province, container vehicles running the

expressways in whole province which pass in and out three toll stations (Dazhujia, Beilun and East Ningbo) are charged with 70% of total fee. Lately the container vehicles running Beilun-Ningbo have the preferential policy of free-passing prescribed by Zhejiang province.

Practice the fuel tax policy. Under the condition of vehicle norm operation, use heavy vehicles with low-consumed oil and advanced functions decreases oil consumption to save cost and improve operation benefit.

(4) The government guides express freight transportation enterprise to improve information and brainpower level of operation activities

Build national highway transportation information management center. The information among freight transportation enterprise, shipper, freight transportation station, the logistics center etc realizes share and data exchange, realizes freight booking and vehicle stowage to improve speed and efficiency of vehicles.

Guide each enterprise engaged in highway express freight transportation to realize the information. For example, combine bar code technique, GIS-T, GPS, wireless correspondence network and the computer information system supervising the vehicles to realize the scouting of vehicles and goods and to provide the services such as running route programming, information enquiry, navigation, voice command, urgent help etc.

5.2 The Policy Suggestions Perfecting Market Management of HEFT System ^[2]

(1) Perfect the mechanism of market enter-and-exit, promote excellent-win inferior-discard

Perfect the management system of business transportation and the bidding system of transportation service quantity, encourage developing main bodies of market and corporation operation, and clean up and ban hanging-operation of transportation vehicles; Strengthen the annually censoring-system of highway transportation, decrease the rank of operation for the enterprises that happen graveness traffic accident, exist the serious hidden trouble or seriously harm rights and interests of consumers, if specially serious, cancel operation qualifications of then and order them to withdraw the market.

(2) Transfer management of many sections into industry management

Reform the function setting of organizations; adjust the rights of government sections and divide the work for the sections according to the unification of rights and duties; Transfer management of many sections into one industry management; establish the organization of policy surveillance and supervise the circs executing policies to promote healthy development of our country highway transportation market.

For example, the transportation policy of Canada is established by the Canadian National Transportation Department. The organization is responsible for the management of highway, railway, aviation, waterway and pipeline. Therefore, when establishing policies, it can synthetically consider the characteristics of five kinds of transportation modes and look for the paths of their balance and harmony development to carry out the healthy development of whole transportation system. After coming on policies, expert personals track and supervise the executing of policies, discover the problem in time, and reflect the problem in order to

prepare the further emendation.

(3) Speed the steps of highway transportation lawmaking, perfect management system of the highway transportation market.

“Highway transportation law” is the basic law that standardizes the national highway transportation, which should come on as soon as possible. Moreover, some transportation byelaws about highway express transportation, such as the regulation of goods transported by passenger vehicle and their species, the policy loosening transportation price etc, should be given explicit policies in “Highway transportation regulation” being coming on. The government should give guidance principles and obligation methods including the principles making a price, the rival principles, the laws of anti-maleficance rivalry and anti-monopoly. It not only protects the benefit of transportation enterprises, but also the benefit of consumers to assure healthy development of highway express freight transportation market. For example, the highway express passenger transportation develops rapidly, express passenger transportation vehicles have good performances, high speed, biggish riding-space and biggish baggage bottom cabins, so express passenger transportation vehicles may be allowed to carry goods with the bottom cabins to make full use of existing resources. For example, Shenyang Huyue Company makes full use of baggage cabins of express passenger transportation vehicles to load goods, and achieves good society benefit and economy benefit.

5.3 Emphasize the Function of the Industry Association of Freight Transportation, the Research of Transportation Theories and the Programming of Freight Transportation Systems^[3]

(1) Encourage Establishing Industry Associations of Highway Freight Transportation

Encourage every area to establish industry association of highway freight transportation, which is voluntarily constituted by highway freight transportation enterprises, the transportation management organizations, related units, congener social groups, and else the experts, scholars and managers enthusiasm for the highway freight transportation business.

Establishing industry association of highway freight transportation can strengthen the close relations of governments, transportation enterprises and operators, and guide and help the business enterprises to improve technique level and the business management level. Developing the actions such as technique cooperation and intercourse, information consultation can resolve the problems of enterprises. In addition, it is emphasized the function of transportation management section in industry association of freight transportation. Usually opening the transportation economic analytical activities can promote technique and manage level of freight transportation industry.

(2) Emphasize the Research of HEFT Theories and the Programming of HEFT Systems

The highway express freight transportation system is a new transportation mode changing our country traditional highway transportation. Its theory system still needs to be further perfected. The government section in charge should organize the research powers, such as research units, enterprises, universities etc, to build up the highway freight transportation theories system suitable for our country economy development using for reference of transportation experiences of foreign developed countries

The government should emphasize the programming research of the highway express freight transportation system, according to the development demand of highway freight transportation, put forward the constitutes of highway express freight transportation network system, operation modes, operation mechanism, matching policies and measures, provide the rules establishing transportation economic policy for transportation management sections, provide beneficial reference for the practice of highway express freight transportation, sequentially push healthy development of our country freight transportation.

REFERENCE

- a) Shen Zhi-yun. (1999) Traffic and transportation engineering. People traffic publishing company, Bei Jing.
- b) Rong Zhao-he.(2002) West transportation economics. Economic publishing company, Bei Jing.
- c) Kennth Button(writer). West transportation economics. Feng Zong-xian etc (translator). Publishing company of Commercial Press, Bei Jing.
- d) Huang Wen-Yuan, Wang Xu-dong etc. (2003) Overloaded Trucking in China and Countermeasures. **Journal of highway and transportation research and development**, Vol. 20, No. 2, 152-156.
- e) Huang Jing-lan. (2002) Current condition analysis and adjustment suggestion of highway transportation structure. **Journal of highway and transportation research and development**, Vol. 19, No. 5, 156-158.
- f) Wang Lian, Chen Yin-san. (2002) Study on the problems of express freight transportation industry. **Journal of Chang-an university (natural science version)**, Vol. 22, No. 1, 53-54.