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World Maritime University

Malmö, Sweden

**Research on Multimodal transport documents under
One Belt One Road**
——Take China Railway Express as an example

Dissertation

By

CUI Wenshuo

W2005319

Supervisor: Dr. Wang Xuefeng

A dissertation submitted to the World Maritime University in partial
Fulfilment of the requirements for the award of the degree of

MASTER OF SCIENCE

In

INTERNATIONAL TRANSPORTATION AND LOGISTICS

2021

DECLARATION

I certify that all the material in this dissertation that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the University.

Signature: CUI Wenshuo

Date: 2021.06.23

Supervised by: Professor WANG Xuefeng

Supervisor's affiliation: Shanghai Maritime University

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Time flies, the graduate study is close to the end. When I finished writing this thesis, I felt a lot of emotions.

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ABSTRACT

Title of Dissertation: Research on Multimodal transport documents under One Belt One Road

Degree: Master of Science

The Belt and Road has assumed an irreplaceable role in the trade exchange between China and Europe. As a typical representative, especially in the light of the severe blow received by the global trade of the COVID-19, the China Railway Express is playing an increasingly important role and it has played a positive role in economic growth and cultural exchanges all along the route.

However, as it is still in the early stage of development, the operation of the China Railway Express still suffers from a large stock of goods, unbalanced development of the inbound and outbound journeys, and low efficiency in the flow of documents.

Unlike sea bills of lading, railway documents are not documents of title, leading to different degrees of risk for all operators of multimodal transport. In order to optimize the flow procedure of railway documents, reduce the risk of settlement and improve the efficiency of document flow, Chongqing first proposed the experiment of railway bill of lading.

This paper starts from the development and influence of China Railway Express, and finds the feasibility of the railway bill of lading applied to the transportation of China Railway Express by comparing the railway bill of lading and the sea bill of lading. By analyzing the case of CIFA bill of lading in Chongqing, the shortcomings of the railway bill of lading mode are found and reasonable suggestions are made to optimize the railway bill of lading mode, so that the railway bill of lading mode can better solve the problems such as many stock cargoes, unbalanced development of going and returning journeys and low efficiency of document flow of the China Railway Express.

KEY WORDS: China Railway Express, railway, documents, Bill of Lading

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1.The current situation of China Railway Express under multimodal transportation and Belt and Road

1.1 Belt and Road and the development of multimodal transport

1.1.1 The Proposal of Belt and Road

The "One Belt, One Road" is the abbreviation of "Silk Road Economic Belt" and "21st Century Maritime Silk Road", which was proposed by Chinese President Xi Jinping in 2013 as a cooperative initiative to build the "One Belt, One Road".

China has made tremendous achievements since its reform and opening up. Over the past 30 years, China has changed its old stagnant development model and become an important economic force closely linked to the world economy and an indispensable voice in the international community.

Economically speaking, in today's world, the international community is changing and developing rapidly. Since the international financial crisis, the world economy is still in a slow recovery phase, the deep-rooted effects of the financial crisis continue to emerge, the international trade pattern and multilateral trade rules are gradually adjusting, and all countries in the world are groping their way forward, and the economic development problems they face are still severe. After the financial crisis, China is actively looking for ways to recover from the trough, and in order to comply with the development of economic globalization, achieve win-win cooperation with other countries in the world, maintain the global free trade system and open world economy, promote the orderly and free flow of economy among countries, realize the efficient allocation of resources and mutual integration of markets, promote the coordination of economic policies among countries along the route, and carry out a larger scope, higher level and deeper regional cooperation. China has proposed the

"One Belt, One Road" cooperation initiative to promote economic exchanges among countries along the route, explore the potential of regional markets, stimulate investment and consumption, and create demand and employment.

Politically speaking, the world situation is in a situation where peace and turbulence coexist. China attaches importance to friendly exchanges with other countries in the world and is committed to building a friendly environment for peaceful development in the international community. In order to meet the fundamental interests of the international community, manifest the common ideals and good pursuits of human society, contribute to the peaceful development of the world, actively explore new models of international cooperation and global governance, establish and strengthen partnerships for interconnection among countries along the routes, build an all-round, multi-level and complex interconnection network, and achieve diversified, autonomous, balanced and sustainable development of countries along the routes. China proposes to build "One Belt, One Road" with all countries in the world to achieve diversified, autonomous, balanced and sustainable development of countries along the route.

Culturally speaking, the cultures of the world are not only developing towards diversity, but are also integrating with each other. In order to promote cultural exchanges among countries, enhance cultural exchanges and mutual appreciation of civilizations among people along the route, and let people of all countries share a harmonious, peaceful and affluent life, China tries to promote cultural exchanges among countries through a model of interconnection, so that the economies of all countries can develop together while promoting cultural exchanges among them. The "One Belt, One Road" policy has led to the free circulation of more and more cultural products along the route in the world market, and the cultures of different countries have collided and merged with each other in the process, making the world culture more tolerant. At the same time, it has driven the development of related

cultural industries, and cultural services around the world have become more and more diversified.

From the environmental point of view, the international community is paying more and more attention to environmental protection, and economic development is bound to bring certain sacrifices to the environment. More and more countries are trying to find an energy-saving and low-carbon transportation method to promote the construction of an environmentally friendly society, reduce carbon emissions, contribute to global environmental protection, and make all countries in the world become beneficiaries.

1.1.2 The emergence and development of multimodal transport and container

Multimodal transport refers to the transportation of goods from the place of taking over in one country to the place designated for delivery in another country by multimodal transport operators in at least two different modes of transport. In the process of world economic development, a single mode of transportation can no longer meet the needs of social development, and economic and cultural exchanges between different regions require a wider range of transportation means to reach longer transport distances and more trade volume, and multimodal transportation comes into being. The combination of multiple modes of transportation not only makes the scope of trade expand, but also makes the way of trade more flexible, and the trade subject has more choices.

The biggest feature of multimodal transport is the use of containers for transportation, 1956 container was born, due to its convenient stacking, transport characteristics, in the transport of goods by the great welcome. In the process of global economic integration, the development of the container on the international multimodal transport has made a great contribution, with the type and number of containers

more and more, the international multimodal transport efficiency is constantly improving.

In the process of "One Belt, One Road" construction, multimodal transport plays an important connecting role. The combination of land and sea multimodal transport makes the "One Belt, One Road" cooperation initiative more widely spread and recognized among countries.

Thus, the emergence and development of container and multimodal transport have played an irreplaceable role in the development of the world economy and laid a solid foundation for the development of China Railway Express.

1.2 Proposal, Development and Transport Organization Mode of China Railway Express

1.2.1 The development of container transportation

With the continuous development of international trade, more and more goods in the international scope of transport, the increasing demand for maritime transport, the demand for containers also emerged. Before the emergence of the container, cargo transportation loading and unloading efficiency is low, cargo damage situation is serious, international transport cargo backlog, serious claims phenomenon. It can be said that the emergence of the container for the transport of goods to provide a more secure and fast way.

Lai K.K, Lam K and Chan W K. (1995) wrote in "*Shipping container logistics and allocation.*" that since 1958, the American Standards Union to participate in the development of container standards, making the container type, size more standardized, so that the container transport, stacking more convenient, also makes the crane lifting containers more convenient, improve the efficiency of multimodal

transport. In the transportation of China Railway Express, due to the different gauge between countries, need to change in each country ports, the standardization of the container makes the change efficiency is improved. The advantage of container in multimodal transport is that the goods can be transported from door to door, making multimodal transport business not only limited to ports and yard stations, but gradually develop to the mainland.

It can be seen that the container generation and development of the international cargo transportation market transport capacity, ports and yards throughput capacity, operational capacity have made a great contribution to the improvement.

1.2.2 Proposal of China Railway Express

China Railway Express refers to the container international railroad intermodal transport train that runs according to the fixed number of trains and lines and other conditions, and travels between China and countries along the Belt and Road in Europe. The China Railway Express has three lines, namely Western Line, Central Line and Eastern Line, and the network almost covers most of the regions in China. The western route of China Railway Express departs from Alashankou or Horgos, the central route departs from north China via Erenhot, and the eastern route departs from the southeastern coast of China via Manzhouli (Suifenhe). Since its operation in 2011, China Railway Express has maintained a safe, smooth and stable operation, and the number of departures has gradually increased. 2020, the COVID-19 epidemic has brought a huge impact on international trade and logistics, and in the global trade downturn, China Railway Express has not only resisted the blow of the COVID-19, but also achieved a counter-trend increase in the number of departures, and the transportation of epidemic prevention materials has made a strong contribution to international epidemic prevention work. In 2020, the number of China

Railway Express operating reached 12,400, sending 1,135,000 TEU, an increase of 50% and 56% respectively.

China Railway Express is gradually becoming the backbone of international logistics land transport, which plays a facilitating role for railroads to become the backbone of international transport, and also plays a driving role for transnational trade.



Figure 1.Route Map of China Railway Express

1.2.3 Advantages and Problems of China Railway Express

The biggest advantage of China Railway Express is its time efficiency and cost. In terms of time efficiency, the time cost of China Railway Express is only one-third of that of sea transportation. In terms of cost, the transportation cost of China Railway Express is only one of sixth to one of eighth of that of air transportation. Using railroad transportation makes the cargo delivery time shorter than traditional sea transportation and the cargo loss smaller than sea transportation, which greatly improves the customer satisfaction. At the same time, China Railway Express Transportation by rail is less restricted by weather and traffic conditions than sea transportation, which reduces the resting time and cost of customers' products,

eases the pressure of factories' inventory, and also allows products to correspond to market demand more quickly.

However, there are some problems in the operation of China Railway Express. First of all, at the early stage of the operation of China Railway Express, in order to compete for cargo sources, in the dilemma of almost total loss, government subsidies were used as a sharp weapon to compete for the market, and low prices were used to gain advantages in competition. For local governments, the opening of the China Railway Express is conducive to close ties with the international market and drive immediate economic development. However, the excessive participation and subsidies of local governments will inevitably disturb the self-regulating ability of the market and hinder the healthy development of China Railway Express. Secondly, China Railway Express documents are not uniform and inconvenient for claim litigation. Two kinds of international intermodal transport regulations mainly apply in the region where China Railway Express operate: "International Agreement on Intermodal Transport of Goods by Rail" and "International Convention on the Carriage of Goods by Rail", and the two rule systems adopt different international railroad intermodal transport documents, which causes the problem of complicated claims of ownership of transport documents. Thirdly, the high return empty rate of China Railway Express leads to high operating cost of Liner. Due to the current trade structure between China and Europe, the import volume of China's trade with Europe is only equivalent to 60% of the export volume, and the import source is less than the export source, which causes the return train to be empty. Finally, because of the railroad waybill mode, there is no document similar to the ocean bill of lading to guarantee the cargo transaction, which makes most of the China Railway Express trains are stock cargo, and it is difficult for carriers and freight forwarders to develop new customers, which has certain limitations.

2.Recent research on Multimodal transport documents

Some scholars have already made their own research and published their own opinions on the multimodal transport documents in the China Railway Express. 19 March 2011, the departure of the "Chongqing-Xinjiang-Europe" container freight train from Chongqing, China to Duisburg, Germany, marked the new mode of railroad freight transport between China and Europe: "China Railway Express" officially opened. In 2020, the number of China Railway Express ran smoothly and steadily, with a counter-trend growth of 12,400 trains and 1,135,000 TEUs, up 50% and 56% respectively year-on-year, with a comprehensive re-export rate of 98.4%. The annual number of trains exceeded 10,000 for the first time, and the number of trains in a single month was stable above 1,000. The opening of the China Railway Express train has played an important role in strengthening the economic and cultural exchanges between the international.

Yang Yinguan, Zhang Xiaofeng (2021) writes in "The Role, Problems and Responses of China Railway Express ": Relying on the construction of "One Belt and One Road", China Railway Express has developed rapidly, driving the industrial clustering of cities along the route and promoting the external circulation of the economy. However, due to the short time of birth, the overall planning and infrastructure construction are not perfect, and the subsidies and disorderly competition from local governments at all levels make the development of China Railway Express trains more restricted. To promote the smooth operation of China Railway Express, it is necessary to provide relevant policy support from the national level for unified planning, local governments to establish coordination mechanisms to bring into play the scale effect, and the Liner itself to play a reasonable division of

labor with comparative advantages, so as to achieve the goal of improving the effectiveness of China Railway Express.

2.1 Multimodal transport documents and maritime bills of lading analysis

Wang Jingxin (2016) writes in "An Analysis of the Difference between Multimodal Transport Document and Ocean Bill of Lading" that there are similarities between multimodal transport document and ocean bill of lading, they both have the function of proof of the establishment of the contract of carriage of goods, they both have the function of receipt of goods, and they both can play the function of settlement of foreign exchange under documentary credit. But at the same time there are differences, such as different applicable international conventions, different forms of issuance, different periods of responsibility.

Xuanjun (2006) in "the international multimodal transport documents and traditional maritime bill of lading link and difference research" wrote: because of the international multimodal transport of goods with containerization and transport diversification characteristics, in order to meet its practical needs, multimodal transport documents in essence has become a unique nature of transport documents, but, in view of the pivotal position of shipping in the transport, it should also absorb and develop Marine bill of lading unique features, and will be integrated with its own characteristics, so that the flourishing international trade transport has a strong vitality.

Liu Yugang, Wang Timbi, Wang Haiyue, Mo Wen (2018) wrote in 《Research on Multimodal Electronic bill of Lading Based on Block Chain Technology》 that with the implementation and promotion of "The Belt and Road" initiative, the development of multimodal transport in China will enter a new stage. Bill of lading, as an important part of freight transport, will inevitably affect the operation efficiency and service

quality of multimodal transport. Although the electronic bill of lading not only flows more efficiently, but also prevents the bill of lading from forgery to a certain extent. However, because the electronic bill of lading has the characteristics of paperless and electronic, so that it can not be actually occupied as the traditional paper bill of lading.

Wang Xuefeng, Hu Hao, Chao Yifeng, Gao Jiawei (2020) writes in "Research on the Evolution of the Bill of Lading System of China Railway Express under the Policy Network" that the China Railway Express under the "Belt and Road" initiative have further opened up the land trade transport channels between Asian and European countries, but failed to achieve the expected trade increment. The study shows that innovative CEBS bill of lading can solve the problem of trade increment. At this stage, except for the tight structure of policy communities, other types of networks are loosely structured, and the continuous high-frequency interaction among members will effectively promote the formation of the CEB Bill of Lading system.

2.2 The use of multimodal transport documents analysis

Ma He (2014) writes in "the study of rail-water intermodal container documents that the main problem of domestic rail-water intermodal transport documents" is that too many paper documents affect the efficiency of intermodal transport, and simplifying paper documents and building a unified information system platform can solve this problem. However, due to the legislative issues of electronic documents, as well as computer failure leading to the loss of document information tampering and other aspects of the problem, in the future a long period of time is not possible to completely eliminate paper documents.

Xueting Li ; Ke Cao ; and He Ma (2013) writes in "Discussion of Container Rail-Water Intermodal Transport Documents Process": As one of the important multimodal

transport, rail-water intermodal transport has the characteristics of "only declaration, one inspection, one release " characteristics, and the combination of transport documents is the main carrier of information transfer operations, is the basis for the delivery of goods and payment of goods. But at present, the content of transport services in different sectors in China, there is no effective combined transport documents in the transition process, and also need to repeat some processes, which reduces the speed of processing documents and increases the cost of operational barriers.

Lin Bizhan (2019) writes in "Promoting the materialization of China-Europe railroad multimodal transport bill": In order to improve transport efficiency and service quality, multimodal transport should reflect the characteristics of one consignment, one billing, one document and one insurance, while most of China's "multimodal transport" has not yet realized the "one bill system" despite the fact that it has used two and two More than two modes of transport, but has not yet achieved "a single system". In order to better serve the buyer's market, there is an urgent need to establish a multimodal transport bill of lading operation mechanism to adapt to the requirements of the development of railroad international logistics, to add vitality to trade facilitation, prosperity in Central Europe and Central Asia land corridor, so as to truly realize the "Belt and Road" trade flow.

2.3 Legal issues related to multimodal transport documents analysis

Huang Lihua, Shuai Xin (2018) writes in "Analysis of the legal defects of multimodal transport bills of lading issued by China Railway Express"that there are obvious legal defects in China Railway Express adopting multimodal transport bills of lading and pledging letters of credit for settlement of foreign exchange with its crop rights. The bill of lading does not belong to the transport documents stipulated in the CIM and

cannot reflect the real transport relationship, therefore, there are legal defects in the validity of the bill of lading issued by multimodal transport in rem in practice.

Deng Yiping (2018) mentions in "Thinking about the issuance of railroad bill of lading with the attributes of property rights" that: because the railroad bill of lading does not have the attributes of property rights, the banks have low acceptance of the documents accompanying the railroad bill of lading as the credit whole settlement method. With the rapid development of China Railway Express, the demand of market players for railroad waybill pledge financing is increasing. Therefore, it is necessary to issue bill of lading with the attributes of property rights.

Fang Youxi (2014) in "on the effect of the international multimodal transport bill of lading arbitration clause" wrote: International multimodal transport bill of lading on the arbitration clause is different from the general transport bill of lading arbitration clause, it is issued by the multimodal transport operators and section carriers, with unilateral and section. As there is no unified mandatory multimodal transport legal rules, countries on the bill of lading arbitration clause effect of different understanding.

Wang Jin (2011) in the "freight forwarder bill of lading non-physical evidence function of thinking" wrote that with the development of international freight forwarding business, international freight forwarding companies began to issue their own freight forwarder bill of lading, and the shipper to form a contract of carriage; at the same time, it is looking for the actual carrier to carry the goods, their own as the shipper, by the shipowner to issue their own shipowner bill of lading. When the freight forwarder engaged in traditional business does not have the right to issue bills of lading, engaged in container consolidation, international multimodal transport or NVOCC business is entitled to issue their own bills of lading. When the freight forwarder to the identity of the carrier to issue multimodal bills of lading or NVOCC bill of lading, it

becomes an international multimodal operator or NVOCC, shall bear the legal responsibility of the carrier, responsible for the whole transport.

2.4 Multimodal bill of lading application analysis

Sun Bin (2016) writes in "Research on the countermeasures of adopting multimodal bill of lading for international railroad intermodal transport of China Railway Express " that the existing multimodal waybill has problems such as non-uniform format, low degree of informationization, complicated ownership and inconvenient claims, cannot be used as evidence of property rights, and cannot be used for letter of credit settlement. Research multimodal transport bill of lading and international railroad waybill docking mode, mostly purgatory bill of lading operation mechanism, proposed multimodal transport bill of lading and international railroad intermodal waybill docking mode, one as soon as possible to achieve international railroad intermodal transport and international multimodal transport document convergence.

Song Anqi (2020) in the "CIFA bill of lading to crack the integration of multimodal transport problems" wrote: in order to promote the sustainable development of China Railway Express, enhance the level of trade facilitation, to solve the current railroad waybill because it does not have the "proof of right" effect in the letter of credit application function is limited and other issues, at present, a number of freight forwarding association members have The bill of lading is applied to different scenarios such as public-rail intermodal transport, iron-sea intermodal transport and public-rail-sea intermodal transport, which truly realizes the door-to-door transport "a single end".

Yang Kaili, Wang Zhifang, Huang Li, Lang Maoxiang, Yu Xueqing (2017) in "Study on Risk Evaluation and Control of Railway Inter-model Transportation BL" wrote: In order to better meet the demand of international railroad freight market settlement,

try to introduce multimodal bill of lading into the railroad documentary system, and the railroad multimodal bill of lading In the international trade, the feasibility of the railway multimodal bill of lading is analyzed. By identifying the risks faced by the main parties involved after the introduction of railway multimodal bill of lading, a risk evaluation index system is established and corresponding risk control measures are proposed so as to avoid the risks more effectively.

Cui Zhongliang (2015) in the "international transport of goods in the practical application of the bill of lading" mentioned: the use of freight forwarders bill of lading is becoming more and more widespread, greatly facilitate the international trade, international logistics parties, about 80% of the international maritime cargo transportation with the participation of international freight forwarding enterprises. But because of the international freight forwarding enterprises in the business can be expressed as a party to the contract of carriage, some cargo owners of the nature of the bill of lading and the use of misunderstanding, and then into the misunderstanding of the bill of lading freight forwarding, resulting in trade suffered losses.

2.5 The Impact of Multimodal Transport Documents on Trade analysis

Li Guangqin (2021) wrote in "Analysis of the Impact of Trade Facilitation on China's Exports and Trade Potential" that: the level of trade facilitation in countries along the China Railway Express has been improving year by year, but the current overall level is still not very high; the improvement of trade facilitation in countries along the route can significantly promote the growth impetus of China's exports to that country; most of the countries belong to the market with great potential, and the room for expansion of China's exports to them in the future Most of the countries are potential markets, and the room for future expansion of China's exports to them is still large.

Linli Dai (2017) writes in "Research on Enhancing the Competitiveness of Foreign Trade with Europe - Based on the Perspective of China Railway Express Bill of Lading" that because the railroad waybill does not have no full attributes like the maritime bill of lading, the lack of functions of railroad intermodal waybill flow, financing and cashing has slowed down the development of China Railway Express to a certain extent. Therefore, how to improve the railroad waybill of CEB, enhance its financing, transfer and other bill of lading functions, become a powerful measure to further promote the efficient and rapid development of CEB and enhance the competitiveness of foreign trade with Europe.

2.6 Government multimodal transport documents analysis

Documents	Main content
Transportation "12th Five-Year Plan" Development Plan (2011)	Establish an integrated documentary system and information service system for multiple modes of transportation to achieve information sharing and customs clearance integration services.
Notification of the Implementation Opinions on Integrating into the National "Belt and Road" Development Strategy and Constructing the "Liaoman-Europe" Comprehensive Transportation Corridor (2015)	To achieve seamless integration of public, railway and water vehicles and equipment, zero unpacking and interchange, promote standard model contracts and unify multimodal transport documents.
Transportation Standardization Program Revision Project List (2016)	Specify the business processes, information exchange formats and information exchange documents in multimodal transport mode, and apply to the design, development and application of data exchange and information sharing between relevant participants in multimodal transport as well as the relevant systems for data exchange with the public information platform for transportation logistics.
Domestic Containerized	The format, content and issuance process of the

Multimodal Waybill Standard (Draft for Comments) (2017)	multimodal container transport documents.
Notes on the Revision of the Maritime Law of the People's Republic of China (2018)	The current maritime law has been difficult to adapt to the new development of shipping and trade, electronic technology and network information technology applications have brought about profound changes in trade documents and shipping methods.
[Chongqing] water running rail transport only a single Sichuan and Chongqing to open the first domestic "railroad waterway intermodal transport a single system" pilot (2020)	No need to re-commissioning procedures, and no open box inspection, the container will be directly from the waterway to the train, "railroad waterway intermodal transport a single system" pilot not only simplifies the procedures, only one intermodal transport documents, but also saves time, the whole iron river intermodal transport is expected to save more than 3 days.
[Jiangsu] Lianyungang first railroad waterway intermodal transport "a single to the end" to promote the domestic and international double cycle (2020)	Lianyungang Port, under the policy framework of the Pilot Free Trade Zone, jointly launched the first container railroad waterway intermodal transport "a single to the end" mode, to further improve the efficiency of intermodal transport and promote trade facilitation.

Table 1. Government multimodal transport documents analysis

2.7 Existing problems

In the past ten years since the start of the operation of China Railway Express, the scale of the operating trains has been growing and the transport coverage has been expanding, but the development of it has been greatly hindered by the mismatch between sea containers and railroad containers, the change of railroad tracks due to inconsistent standards between countries, and the cumbersome procedures of multimodal transport documents and inconsistent transport documents between countries. With the support of policies, how to coordinate cargo and transportation through the optimization of documents will be the focus of research.

2.8 Research Methods and Purpose

The Belt and Road has had a significant impact on global economy and trade, and the operation of the China Railway Express has strengthened the communication and cooperation between Asia and Europe, but the operation of the China Railway Express has fallen far short of expectations due to the differences between railroad waybills and ocean bills of lading and the complexity of multimodal transport documents. Main purpose of this paper is to find a solution to the problem of unbalanced transportation of China Railway Express through the analysis of multimodal transport documents, and to analyze whether there is a possibility for railroads to develop bill of lading mode and the impact produced through the establishment of a model. This paper will use literature research method and will present useful reference values for the optimization of the China Railway Express model.

- (1) Propose the idea of establishing the railroad bill of lading mode
- (2) Increase the incremental cargo of China Railway Express
- (3) Improve the efficiency of China Railway Express transport

3. Multimodal Transport Documents

3.1 The role of bill of lading in maritime transport

3.1.1 The three major roles of bill of lading

Glass, David A. Marlow, Peter B. Nair, Rawindaran. (2010) wrote in “The use and legal effects of carriage documents in international multimodal transport.” that there major roles of bill of lading. First, the bill of lading has the use of trade. Bill of lading is the carrier or its agent issued to the shipper's Receipt for the goods, confirming that the carrier has been subject to the bill of lading goods and has been loaded, or the carrier has taken over the goods, has been loaded on behalf of the ship, to prove that it has received the goods according to the contents of the bill of lading.

Second, the bill of lading has a financial usefulness. Bill of lading is a certificate of ownership of the goods, the documents of title. The legal holder of the bill of lading with the bill of lading in the port of destination to the shipping company to extract the goods, but also in the cargo ship to the port of destination before, through the transfer of the bill of lading and transfer of ownership of goods, or with to the bank for remittance charges. Who holds the bill of lading, who can open a letter of credit to the bank. Who holds the bill of lading, who has the right to request the carrier to deliver the goods, and enjoy the right to possession and handling of the goods, the bill of lading on behalf of the goods contained therein.

Third, the bill of lading has the use of transportation. The bill of lading is the proof of the contract of carriage between the shipper and the carrier which is the evidence of contract of carrier. Under the conditions of liner transportation, it is the basis for handling disputes between the carrier and the shipper in transportation; under the conditions of chartered ship transportation, the carrier or its agent issued the bill of

lading is also proof of the contract of carriage. The contract of this kind of transportation is the charter party, which is the basis for dealing with the rights and obligations of the carrier (shipowner) and the charterer in the transportation.

3.1.2 The difference between sea waybill and multimodal waybill

First of all, the ocean bill of lading and multimodal bill of lading applicable international conventions are different. Sea way bill of lading is applicable to the Hague Rules, Visby Rules, Hamburg Rules three international conventions. Multimodal transport documents by the United Nations UNCTAD and the International Chamber of Commerce promulgated the "1991 International Chamber of Commerce rules on multimodal transport documents" on the most binding multimodal transport documents, in addition, multimodal transport in the process of each section of transport also subject to various modes of transport regulations and the relevant international conventions. Georgios I. Zekos.(2004) wrote in "The Contractual Role of Documents Issued under the CMI Draft Instrument on Transport Law 2001." that "as for the railroad waybill, it is divided into CIM waybill, SMGS waybill and CIM-SMGS waybill. CIM, that is, the Convention on International Carriage of Goods by Rail, is an international convention on the transport of goods by rail, at present, there are 49 countries using CIM waybill. SMGS, that is, the Agreement on the International Carriage of Goods by Rail, the main member countries of the former Soviet Union countries and Asian countries. In 1953, China joined the Agreement on the International Carriage of Goods by Rail. China joined the "International Agreement on Intermodal Railway Freight", so far there are 28 official member countries. The member countries using CIM-SMGS waybills are located at the intersection of SMGS countries and CIM countries, which serves as the demarcation point for waybill replacement."

Secondly, the sea bill of lading and multimodal transport bill of lading applicable to different modes of transport. Marine bill of lading is applicable to a single mode of sea transport, while multimodal transport documents are applicable to two or more modes of transport, involving multiway transport. The railroad waybill applicable in the China Railway Express is applicable to railroad transportation.

Third, the ocean bill of lading and multimodal bill of lading issued by the issuer, issued in different forms. Marine bill of lading issued by the actual carrier often issued by the shipping company, in the port of loading of goods, generally issued after the actual loading of goods, need to be "loaded" form of issue, banks generally accept only "loaded" bill of lading. Multimodal transport documents issued by the issuer's qualifications are not limited, can make all or part of the transport of the actual provider, can also be freight forwarders, can be issued as an intermodal transport operator intermodal transport document. Generally speaking, in the multimodal transport operator to take over the goods can be issued after the bank does not require multimodal transport documents show that the goods have been loaded on the designated ship. China Railway Express Waybill is a shipping document issued by the station after the departure of the China Railway Express, which proves that the shipper's goods have been transported through the China Railway Express.

Fourth, the form of responsibility, different periods of responsibility. Sea way bill of lading adopts a single liability system, corresponding to the period of responsibility for the "hook to hook", Wrote by Maruri, L. (2003) "Simulation of a container transport system between port and inland terminal depots." Multimodal transport documents use the form of net liability system, that is, multimodal transport operators are responsible for the whole transport, its responsibility according to the law applicable to the section of the goods damage to determine. The multimodal transport document contains a clause that the multimodal transport operator is solely responsible to the cargo owner for the entire carriage of the goods, and the net

liability system is generally used in the liability regime. The corresponding liability period is generally from the time of receipt of goods to the end of the delivery of goods. The same as multimodal transport, China Railway Express adopts the net liability system, which determines different responsibilities according to different stages in the process of transportation.

Finally, the ocean bill of lading and multimodal transport documents of different trade terms. Sea way bill of lading corresponding to the terms of transport is the port-to-port terms, the applicable international trade terms are FOB, CIF, CFR, etc. Multimodal transport documents corresponding to the terms of transport including door-to-door, station to station or station to door, etc., in addition to the application of the trade terms which mentioned above, but also FCA, CPT, CIP and so on.

CIM bill is the waybill used for the circulation of goods between the member countries of the international Convention on International Carriage of Goods by Rail, while SMGS bill is the waybill used for the circulation of goods between the member countries of the International Agreement on Intermodal Transport of Goods by Rail. Each member country complies with the provisions of the relevant agreement to produce the waybill. The railroad waybill can only be circulated between the corresponding railroad organization countries.

Thomas A Grigalunas, Meifeng Luo. (2003) wrote in “A Multimodal Transportation Simulation Model for Us costal Container Ports” that the International Rail Freight Forwarding Agreement stipulates that the railroad waybill is a document for the conclusion of the contract of carriage. SMGS waybill is a set of documents, the original of which is accompanied by the goods to the arrival station and the copy of which is given to the consignor, and the main contents of the SMGS waybill are the consignor, consignee, carrier, cargo information, delivery route, delivery station, means of delivery, freight and other relevant contents. The documents required to perform customs and other administrative procedures are usually required to be

attached to the waybill. It can be said that the SMGS waybill is both a business document proving the contract of railroad transportation and an official document according to which the administrative procedures of railroad cargo transportation are performed.

The Convention on International Carriage of Goods by Rail provides that a railroad order is prima facie evidence of the conclusion of a transport contract. CIM waybill and SMGS waybill is more or less the same, but also non-negotiable document for the transport of goods by rail.

In the current international railroad freight rules, the railroad waybill is an essential freight document. Freight is essentially an international railroad freight form contract, mainly focused on the reasonable allocation of rights and obligations of the parties in the international railroad freight, in order to improve the convenience and efficiency of international railroad freight, to achieve the standardization of railroad freight transactions.

3.2 The reason railroads use waybill and not bill of lading

3.2.1 The advantages and disadvantages of railway waybill

Waybill is an important documentary component of international railroad transport, which records in detail the relevant information about the transported goods. Due to geopolitical influences, the field of international rail freight transport has long been in a state of separation of volume camps and coexistence of two major conventions.

The Agreement on Intermodal International Carriage of Goods by Rail is administered by the Organization for Cooperation of Railways, while the Convention on International Carriage of Goods by Rail is administered by the Intergovernmental Organization for International Carriage by Rail. Railroad waybill is a freight document

issued by the railroad transport carrier, which is a contract of carriage between the consignee and the consignor and the railroad.

Compared with maritime transport, railroad transport is more efficient and safer, which is favored by many cargo owners. For the trade between China and Europe, the distance of railroad transportation is much smaller than that of sea transportation, and cargo owners can save a large amount of time cost. With the deepening of China's opening up to the outside world and the rapid economic development of the neighboring countries, the trade and commerce between China and the neighboring countries are getting closer and closer, and the construction of railroad facilities between China and Europe is getting better and better, and the cargo throughput of China's railroad ports is growing at a high rate of more than 20% per year. In addition, the railway lines of various countries are also connected with road or sea transport through numerous nodes or hubs such as yards and terminals. In the international cargo transportation, the railroad waybill procedures are simple, the railroad waybill applicable to international intermodal transport follows the goods when the goods are shipped together with the truck driver to take away with the goods, like our daily life when sending parcels filled in the same express waybill, ports along the way and official agencies can be countersigned on the waybill, the railroad waybill follows the goods in transit together with the transfer of multiple links, and finally with the goods to arrive at the station. After the arrival station gets the railroad waybill, according to the consignee's information shown on the waybill, the consignee will issue a notice of arrival and remind the consignee to go to the arrival station for customs clearance and pick-up procedures.

At the same time, the disadvantages of the railroad waybill are obvious. Because the railroad waybill does not have the function of evidence of property rights, it cannot be used for circulation of commercial nature like bill of lading, which has caused great inconvenience to all parties involved in railroad transportation. Secondly, because

the railroad waybill is recorded on the goods, the consignee or consignor and other information, need to be consistent with the accompanying documents, the waybill issued after the difficult to modify, so the need for manual verification, labor costs and prone to errors. Once the waybill is issued, the modification process is very tedious and requires telegrams from each station along the way to the terminal station, which is less efficient.

3.2.2 The reason railroads did not use bill of lading

Sun Bin(2016)wrote in “Research on the countermeasures of adopting multimodal bill of lading for international railway intermodal transport of China Railway Express” that with the development of world trade, international maritime trade is developing further away and the world economy is gradually exchanging with each other. But in the international maritime trade, due to the long shipping time, the ship transported many containers, and more loading and unloading ports, to the goods in transit transactions bring inconvenience. In order to solve this problem, the merchants gradually agreed to the sea bill of lading directly on behalf of the goods for documentary trading, the sea bill of lading of the documentary evidence of title function was born. After the emergence of letters of credit, sea bills of lading and letters of credit combined with a good solution to the international trade in the letter of credit crisis problems, sea bills of lading financing role had also been further played. But in the railroad transport, to China Railway Express, for example, a China Railway Express contains a limited number of containers, about 50 containers, and does not require the same as the sea in the port loading and unloading, the transport process is simpler than the sea, and railroad transport compared with the sea shorter, the waybill with the goods transported, so the bill of lading and not in the railroad was developed and applied.

After the opening of China Railway Express, which is the main mode of transportation, the government, in order to encourage and support the development of China Railway Express, has implemented a subsidy system to give preferential treatment to the enterprises that transport goods through China Railway Express, so as to improve the publicity of China Railway Express and promote the implementation of "One Belt, One Road" initiative. In the railroad waybill mode, railroad enterprises as carriers only need to bear the responsibility of transportation and do not want to bear the risk of cargo loss. But in the railroad waybill mode, only the bill of lading without bill of lading is difficult to solve the problem of first release or first payment, for the consignor is risky. If the railroads implement bill of lading system like shipping, although the goods and payment for the consignor are more guaranteed, which can attract more enterprises to take the railroads, but for the railroad company, the risk of goods and payment is transferred to the railroad company here, which causes the process of China Railway Express transport to continue to use the railroad waybill system, and did not develop the railroad bill of lading. It is because of this that the transport by rail is all established customers, the goods are limited, it is difficult to develop and open up new business and markets.

3.3 The issuance, flow and effect of CRE waybill

3.3.1 The flow of China Railway Express waybill

In railroad transportation, taking the export cargoes of China Railway Express as an example, the consignor signs a transport contract with the multimodal transport operator, which completes the transport of the cargoes as the agent of the cargo owner.

First of all, the multimodal transport operator hands over the cargo transportation orders and tickets to the railroad authorities, and then books the cargoes according

to their type, size and other special requirements. In China Railway Express, multimodal transport operators can divide the cargo into LCL cargo and full container cargo according to the different needs of cargo owners and the number and size of cargoes, and book space according to the number of pallets and containers needed. After the booking is completed, the multimodal transport operator makes customs declaration and inspection according to the type of export goods, and hands over the export goods declaration, license, loading list, packing list, inspection notice, yard receipt, etc. to customs and commodity inspection, and the goods can depart from the yard and be transported to the starting station of China Railway Express by truck. Before the departure of the China Railway Express, the railroad agent will issue a draft waybill filled out according to the documents provided by the consignor to the consignor for checking, and will only issue the original waybill after the departure of the railroad train after confirming that it is correct. By the China Railway Express carrying goods exported from the port, China Shenyang, Dalian, Hefei, Suzhou, Wuhan, Changsha and other places of China Railway Express from Manzhouli port, through Russia into Europe; Chongqing, Zhangzhou and other places of China Railway Express from Erlianhot, Inner Mongolia, Yiwu and other places of China Railway Express from Xinjiang Horgos and Alashankou port, multimodal transport documents and railroad waybill in these ports for review. The multimodal transport documents and railway waybills are reviewed and cleared at these ports. In the process of sailing to Europe, SMGS waybill will also be replaced by CIM waybill in Poland and other regions using CIM-SMGS waybill, and then continue to the destination. As the quarantine inspection in Europe is more stringent, so when the export goods are products in contact with the human body, a health and quarantine certificate should be provided. The goods carried by the China Railway Express will be diverted and regrouped in Brest and other places, and then sailed to Duisburg, Hamburg, Madrid and other places respectively. After arriving in Europe, the

multimodal transport operator will clear the goods carried by the China Railway Express, and then the truck will carry the goods to the consignee's designated place of receipt, and the consignee will pick up the goods in the designated warehouse by virtue of the pick-up instruction.

Multimodal transport documents import flow procedures and export flow procedures are roughly the same, except that in the China Railway Express, the amount of imported goods is less compared to the amount of exported goods. The goods carried by China Railway Express from Madrid, Duisburg, Hamburg, etc. are transported by the train to Alashankou port for inspection and testing, etc. After the port is released, the goods continue to be transported to Yiwu, Wuhan, etc. in the mainland, where the customer can carry out customs clearance procedures at the station and the consignee can pick up the goods with the pick-up introduction letter and pick-up instructions. After the arrival of the goods can also be transferred according to the requirements of the consignee, but the cost of the transfer is charged according to the straight-line distance of the goods, without considering the distance of the midway transfer. When the China Railway Express carries cargoes subsequently involved in maritime intermodal transport, the multimodal transport operator also needs to give the bill of lading to the shipping company or shipping agent and make ship booking according to the number and size of cargoes.

3.3.2 The development of China Railway Express waybill

For a long time, the certificate used for railroad transportation is the railway goods ticket, and there is no uniformity in the format and applicable laws of cargo certificates in various countries. The issue was introduced after the establishment of the International Union of Railways, an international railroad organization, and after the coordination of the member countries within their respective organizations, the

implementation rules of international railroad intermodal cargo transportation were introduced, and the format of the goods ticket used for cross-border railroad cargo transportation was unified within the organization, and this kind of railroad ticket used uniformly within the member countries of the organization. This kind of railway ticket used uniformly within the organization member countries is called railroad waybill. The consignor only needs to fill in and submit a complete set of railroad waybill when consigning goods at the departure station, and then it can be recognized by the railroads in the countries along the way, and the goods will be sent to the destination smoothly to complete the delivery.

As the scale of intermodal railroad cargo transportation increases day by day, the defects of the railroad waybill itself also increasingly revealed. As the railroad waybill does not play the function of evidence of property rights, can not be used like a bill of lading for the circulation of commercial nature, to the parties to the railroad multimodal transport caused great inconvenience. And the railroad waybill is issued together with the goods, and the goods are handed over through multiple links, and finally arrive at the station with the goods, then the paper waybill is facing the risk of loss and damage, and the paper waybill is not convenient for storage, while not in line with the construction of an environmentally friendly society. At this time, the emergence of China Railway Express electronic waybill can effectively solve this problem. The China Railway Express establishes an internal sharing platform to realize the comprehensive modernization of various information systems for transportation as well as the sharing of information resources, and the security guarantee system and the standard system of documents will help to become a paperless office.

4.The background of develop railroad bill of lading mode

4.1 Current situation of China Railway Express stock cargo

4.1.1 Stock cargo and incremental cargo

Inventory is the balance of products, goods, reserves, assets and liabilities produced and accumulated in the past at a specified point in time, and is the total identifiable assets or resources owned by a company or society. Incremental volume is the increase of assets or resources now compared to the initial period. Stock cargo means that in the process of China Railway Express operation, most of the cargoes contained in the train are the same as those in the beginning of China Railway Express operation, and there are few new cargo types and quantity growth, which is incremental cargoes.

4.1.2 The reason of stock cargo of China Railway Express

First of all, the geographical analysis of the cargo source of China Railway Express. China is the second largest export market and the first largest source of imports to the EU. China's exports to the EU mainly include electrical and electronic equipment, machinery and other high-tech products, as well as textiles, clothing, hardware products, chemical products and plastic products; China's imports from the EU mainly include machinery and equipment, automobiles and other transportation equipment, metals and metal products, mainly steel, and chemical products. Therefore, the potential cargo sources of China Railway Express mainly include the above capital-intensive commodities with high added value. According to the import and export trade between China and Europe and the operation of the China Railway Express in the early period, its main cargo sources include IT products, automobiles and accessories, and small commodities. Among them, the going cargoes from

China to Europe are mainly machinery and equipment, auto parts, electronic products, small commodities, etc. from the central and eastern regions of China, while the return cargoes from Europe to China are mostly food, garments, building materials, etc. Due to the fixed nature of the regional products, most of the goods transported by the China Railway Express are fixed, therefore, the source of goods of the China Railway Express is limited to a certain extent.

Secondly, it is analyzed from the value characteristics of China Railway Express cargoes. For customers, the value of goods and their transportation time are highly correlated, and the sensitivity of goods with different added values to time varies greatly. The value characteristics of goods refer to the phenomenon that goods depreciate or even fail with the increasing time. Cargo value characteristics are closely related to factors such as product life cycle, alternative product development, season and shelf life. For goods with different degree of time sensitivity, customers have different requirements when choosing transportation methods. For goods with more time sensitivity, customers pay more attention to transportation cost and transportation quality of goods. Therefore, the value characteristics of goods are important factors to be considered when analyzing the target cargo source of China Railway Express. The time limit of China Railway Express is generally 20-30 days, which makes some time-sensitive cargoes can't choose China Railway Express transportation, which is an important reason why it is difficult to develop incremental cargoes in China Railway Express.

Last but not least, which is also the most important point. As an important support to cultivate the market, government subsidies have played an important role in the construction and development of China Railway Express trains. At the early stage of China Railway Express operation, in order to encourage the development of China Railway Express, local governments have adopted subsidy policies. Some regions rely heavily on local financial subsidies for the operation of China Railway Express,

and local subsidies play an important role in fostering the market of China Railway Express, but at the same time, government subsidies also bring vicious competition among train companies. Some cargo owners see the high freight subsidies and move their cargoes from sea to China Railway Express. Although the volume of China Railway Express continues to grow, it is difficult to return the market to rational level due to the uneven transport endowment around the country and the coexistence of vicious subsidies and competition.

According to statistics, several trade terms, EXW, CIF, CFR and FOB, are mainly used in the export cargo of China Railway Express, accounting for 3%, 0.25%, 0.25% and 96.5% respectively. The costs subsidized by the China Railway Express platform are basically used to support the foreign buyer in the sale and purchase contract, and these transportation costs should be borne by the buyer according to the trade contract terminology.

As the China Railway Express is mainly based on railroad transportation, using railroad transport documents, as mentioned before, the railroad waybill is only a transport contract concluded between the actual issuing railroad bureau and the consignor of the intermodal cargo, and cannot be used as a document of property rights, and the consignor needs to use the letter of credit for settlement if he requests to use the international railroad intermodal waybill as a document of settlement.

Railroad waybill is not bill of lading, there is no bank as a guarantee, it is difficult to solve the problem of releasing goods or settling and receiving first, the consignor will bear certain risks under the railroad waybill mode, so most of the cargo owners of China Railway Express are customers who they serve before, it is difficult to attract new sources and customers, so it is important to create railroad bill of lading and reduce the risk of releasing and receiving goods, which is an important way to create incremental cargo of China Railway Express.

In summary, China Railway Express is applicable to the international railroad transport rules, subject to the different scope of application of the Agreement on International Railway Freight Transport and the Convention on the International Carriage of Goods by Rail, CIM, SMGS and CIM-SMGS waybills have the problems of arrival area first, the need for re-ticketing and complex and time-consuming. In addition, China's railroad transport rules have long been contradictory to international trade management, and there are many restrictions on the international trade contracts that rely on China Railway Express travel, such as the lack of rights of the railroad waybill to the function of evidence of mortgage financing, banks can not issue letters of credit for the goods under the Liner trade, which to a certain extent restricts the transformation of the China Railway Express transport channel to the trade channel. Therefore, the development of China Railway Express in terms of railway waybill as long as the mode of transport is only the transfer of transport stock and does not produce the expected trade increment.

4.1.3 The impact of stock cargo

If only stock cargoes are available without attracting new enterprises and customers to use China Railway Express transport, it will cause a great limitation to the kind of cargoes of China Railway Express. And, over time, customers are prone to non-compliance with the rules under the regulated process, and such behavior, as the railway waybill cannot be used directly for settlement of foreign exchange, will increase the risk to be borne by the consignor and pose a greater threat to it. At the same time, due to the nature of the railroad waybill of non-physical evidence, freight forwarders or consignors can not exercise a lien on the goods, so the consignee violates the rules to lift the goods and the consignor can not recover the risk of increased payment.

Secondly, the emergence of incremental cargoes will drive the development of China Railway Express in a positive direction. It will attract more cargoes and customers to participate in the transportation of China Railway Express and develop the "Belt and Road" initiative, which will promote the development of related industries in the countries along the route, as well as the economic and cultural development of each country.

4.2 The solvement of stock cargo and return cargo imbalance

4.2.1 Turning stock cargo into incremental cargo

As mentioned above, if the China Railway Express does not develop incremental cargoes and relies on stock cargoes, it will inevitably have a bad influence on the development of China Railway Express, so how to turn stock cargoes into incremental cargoes and increase the amount of China Railway Express cargoes transported is a problem that the Prime Minister has to solve.

First of all, for the problem of the source of goods. Most of the product goods are selected near the export or import of China Railway Express, if you want to transport long-distance products should use the truck first transport to the truck originating station. The high cost of truck transportation and the long-distance transportation of some cargo source factories make the cost too high, which makes it difficult to participate in some areas that the China Railway Express train does not pass through. To make the stock of China Railway Express train into incremental cargo, we have to solve the problem of cargo sources. To strengthen the construction of highway infrastructure, expand the radiation range of China Railway Express train's cargo sources, so that more regions and enterprises can participate, in order to expand the types of China Railway Express 's cargoes and develop incremental cargoes while maintaining the original stock of cargoes.

Secondly, for the problem of cargo characteristics. China Railway Express Transport can choose different container types according to the different goods, but most of the goods are transported by common container or high container. However, for goods with high requirements of timeliness, such as food, there is a risk of deterioration in the process of transportation, so many customers do not choose China Railway Express. According to the characteristics of the goods, choosing different types of containers, such as refrigerated containers, can make the time limit of the goods longer, so that customers have more choices, and the types of goods that can be transported by China Railway Express will also increase.

Last but not least, the use of railroad bill of lading is the most important point. Due to the characteristics of non-physical evidence of the railroad bill of lading, the consignor bears a great risk, so to a certain extent it restricts some enterprises and customers to choose railroad transport to sea transport without freight subsidy. If the China Railway Express can use the bill of lading like sea transport, the consignor has a letter of credit as a guarantee, which can reduce to a certain extent the risks and losses to be borne. The use of railroad waybill will inevitably make some of the cargo owners who have concerns more favorable to subsidized and shorter than the maritime transport of China Railway Express. Therefore, in order to attract more enterprises and goods, so that the stock of China Railway Express becomes incremental cargo, it is necessary to start the implementation of the railroad bill of lading system.

4.2.2 Solve the return cargo imbalance

Another drawback of China Railway Express is the unbalanced development of going and returning trips. The departure and return trips of China Railway Express are not synchronized. The earliest departing trains have been running for more than

two years before the first return train was ushered in. In recent years, the overall number of return trains has developed rapidly, but there is still a gap between the number of return and departure trains, which has not achieved "one to one". In 2018, the country put forward the strategic requirement of high-quality development of China Railway Express. In this context, the number of China Railway Express is no longer the only target to be pursued, and the rate of heavy containers is also an important evaluation index. In order to improve the quality of China Railway Express operation and ensure the heavy load rate of the liner, the National Railway Group requires the heavy container rate of the outbound liner to reach more than 90% from 2019, otherwise it refuses to transport and ship. However, no requirement has been made for return trains, and the problem of return empty still exists.

The main reasons for the imbalance of going and returning are: firstly, the trade between China and Europe has been unbalanced for a long time, the goods sent from China to Europe are much more than the goods sent from Europe to China, 95% of the direct trade between China and Europe are transported by sea, and the situation of containers going back to empty is also reflected in the sea transport. Secondly, the publicity of China Railway Express in Europe and Central Asia is not enough, and European cargo owners are not yet recognized and accustomed to this mode of transportation. Thirdly, the ability of collecting goods outside China is not enough, Chinese freight forwarding enterprises in overseas network is not sound, lack of cooperation with local influential platform companies. Finally, for a long time before, food from the EU such as pork, beef, poultry and its by-products, sausages, fish and shellfish, dairy products, fruits, nuts, etc. with high added value and high requirements for timeliness were not in the list of return cargoes of China Railway Express trains. The reason for this is that Russia has taken counter-sanctions against countries such as the EU and the US, and since 2014, Russia has issued transit transport prohibition, including agricultural products and foodstuffs originating

from the EU, Norway, the US, Canada and Australia that are not allowed to transit in Russia. Russia is one of the main transit countries for the China Railway Express, and most of the prohibited products can only come to China by expensive air. Until 2020, China Railway Express will be allowed to transport these food products. In addition, the return trip of the China Railway Express passes through Siberia, where the winter temperatures are extremely low, making it impossible to directly transport products such as alcohol, cooking oil and dairy products.

To sum up, the unbalanced development of China Railway Express to and from China is caused by a number of factors. To change the imbalance of the development of China Railway Express, first of all, we need to expand the visibility of China Railway Express abroad, increase the organization of return cargo sources, cooperate with large overseas logistics enterprises, port enterprises and freight forwarding companies, and build large cargo collection centers in cities along the route of China Railway Express. Secondly, to coordinate the hub of China Railway Express, optimize the construction of operation routes, avoid homogeneous competition of return trains between China and Europe, resulting in waste of resources, strengthen top level design and planning, and enhance coordination and integration ability. In view of the current situation that China Railway Express trains mainly enter the EU market through Poland, which leads to route congestion and high transport prices, we can consider the adoption of multimodal transport to improve the overall operation quality of China Railway Express. For example, Poland's neighboring countries by the sea use a combination of rail and sea transport for cargo transportation, thus reducing the dependence on Poland. Third, broaden the product categories of cargo sources and extend diversified value-added services. China Railway Express can cooperate with China's cross-border import e-commerce platform to open special import direct mail and bonded trains, provide

market customization services according to different product characteristics, and adopt differential pricing method, thus turning stock cargo into incremental cargo. At the root of the problem, the adoption of the railroad bill of lading system for China Railway Express can effectively solve the problem of unbalanced development of the going and returning journeys to a certain extent. The function of bill of lading of railroad can make China Railway Express transport more safe and more reliable, which can attract more cargo owners to choose China Railway Express transport for import and thus improve the popularity of China Railway Express. Secondly, the railroad bill of lading system can coordinate the water-rail transport, directly docking with the sea transport, making the flow of documents more efficient.

4.2.3 Optimize the flow of documents

In order to solve the problem of China Railway Express intermodal cargo stock and unbalanced development of going and return trips, and to improve the efficiency of China Railway Express intermodal transport, the most fundamental problem is to optimize the flow of railroad documents.

As mentioned above, CIM waybill and SMGS waybill are not common in international railroad freight practice, which leads to the necessity of re-sending procedures for international railroad intermodal cargo at border stations, re-making SMGS waybill into CIM waybill or re-making CIM waybill into SMGS waybill, which not only reduces transport efficiency but also wastes human and material resources. In order to solve this problem, the Organization for International Cooperation by Rail and the Intergovernmental Organization for International Carriage by Rail set up a joint working group to jointly develop the CIM-SMGS waybill, also known as the unified waybill, with the International Freight Association. Starting from 2017, the container trains running from China to European countries and the return direction via

Alashankou, Manzhouli, Erlian, Suifenhe and Horgos ports can use the unified waybill for the whole transport business.

However, due to the unified waybill need to use Chinese, Russian, English, resulting in the production of documents is quite cumbersome and difficult, there will be errors in the process of translation, the use is not convenient. CIM-SMGS waybill is actually a physical merger of the CIM waybill and SMGS waybill, just the integration of the two together, did not change the two major international railroad freight convention of their respective railroad waybill Rules. In the application of the scope of the CIM-SMGS waybill, CIM-SMGS waybill is treated as CIM waybill and adjusted by the International Freight Association, while in the application of the scope of the International Freight Convention using CIM-SMGS waybill, CIM-SMGS waybill is applied as SMGS waybill, still adjusted by the International Freight Convention. The two major international rail freight conventions are still in a separate and confrontational state.

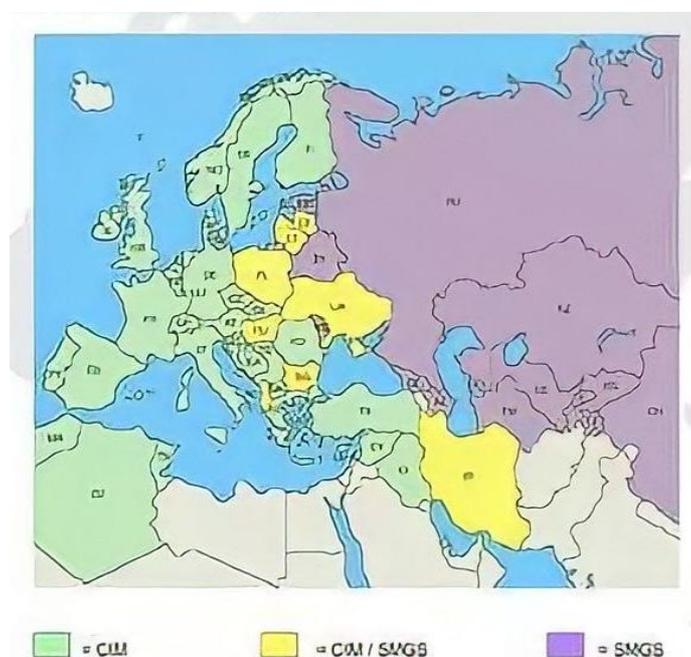


Figure 2. Scope of application of CIM and SMGS from https://www.sohu.com/a/204645476_629144

In the current international railroad freight rules, the railroad waybill is an essential freight document. Railroad waybill is essentially an international railroad freight form contract, mainly focused on the reasonable allocation of rights and obligations of the parties in international railroad freight, in order to improve the convenience and efficiency of international railroad freight, to achieve the standardization and stereotyping of railroad freight transactions. But the railroad waybill can not characterize the cargo rights of the goods under the waybill. Railroad waybill name characteristics make the conduct of holding a single can not produce the legal effect of controlling the goods under the waybill. Moreover, the railroad waybill named consignee is changeable, which causes the actual consignee uncertainty increases. That is, the railroad waybill is only the international railroad freight contract documents, can not be used as a trade title documents, but also can not be used as a trade financing tools. Because of this, the current international land trade is still stuck in the traditional stage of physical transactions, obviously lagging behind the bill of lading transactions as the core of the sea trade, the urgent need for international land trade documentary reform, in order to meet the development needs of international land trade.

5. Vision of railway bill of lading

5.1 The influence to China Railway Express

5.1.1 Strengthening cooperation between international communities

Under the promotion of "One Belt and One Road" initiative, China Railway Express has developed rapidly, and the international railroad freight attribution has been improved. For example, on April 20, 2017, the railroad departments of seven countries, including China, Kazakhstan, Mongolia, Russia, Belarus, Poland and Germany, officially signed the Agreement on Deepening the Cooperation of China Railway Express. International land-based trade has gradually acquired a hardware foundation and institutional environment comparable to that of maritime trade. After centuries of development and improvement, the rules of maritime bills of lading have developed into a set of mature and efficient, internationally accepted trade rules. In the international land trade in the introduction of railroad bill of lading, can be the sea bill of lading as the core of the sea trade attribution transplanted to the international land trade rules. On the one hand, it is conducive to speed up the establishment of a more secure and efficient international land trade rules system, on the other hand, can also realize the sea bill of lading and railroad bill of lading, sea and land documentary rules docking, to promote the "belt" and "all the way" trade rules Interconnection and interoperability.

5.1.2 Meeting Financing Needs

Railroad bill of lading is not only a document of property rights, but also represents a set of safe, efficient and convenient documentary transaction mode. In the railroad bill of lading documentary transaction mode, the matters recorded in the railroad bill

of lading can be regarded as the goods themselves, the carrier must release the goods with a single, the railroad bill of lading as a security can better protect the rights and interests of the buyer, international land trade will be more simple and faster. In the railroad bill of lading documentary transaction mode, with the documentary letter of credit guarantee mechanism and documentary audit mechanism, exporters and importers can each be in the transaction with their own banks to do "one hand to pay money, one hand to pay the certificate". The railroad bill of lading represents the goods, the situation of money and goods clear can be realized, international land trade will be more secure. In the railroad bill of lading documentary transaction mode. On the one hand, the import and export sides can be the subject of the railroad bill of lading as a pledge directly to the bank for pledge financing, in order to ease the pressure of capital turnover, reduce trade financing costs. On the other hand, banks can also be based on the railroad bill of lading to carry out letters of credit, collections, import charges and other financial services, to promote the land cross-border trade financial settlement facilitation, international land trade settlement financing will be more efficient and convenient. It can be seen that the railroad bill of lading on the international land trade promotion role is obvious, the railroad bill of lading system innovation will undoubtedly promote the international land trade transaction mechanism to evolve and upgrade.

5.1.3 Promoting the development of sea-rail multimodal transport

With the deepening of the construction of "One Belt, One Road", the importance of railroad bill of lading will be more prominent. The extension of the China Railway Express train, the increase of transportation volume, will give rise to greater demand for railroad bill of lading transactions and documentary financing needs. At present, the obligation of China Railway Express to Madrid, Spain has reached more than

13,000 kilometers, the transport time of 3 weeks to a month, for the promotion of the application of the railroad bill of lading provides a wide space. At the same time, "land and sea new channel" of sea-rail intermodal transport construction will further expand the scope of application of the railroad bill of lading. Services in the "land and sea new channel" construction of multimodal transport mechanism, the focus of which is the integration of maritime rules and land transport rules, which also need the support of the railroad bill of lading rules. It can be said that the railroad bill of lading innovation involves all aspects of international land trade, can play the effect of "the whole body is affected by one hair", for the world to build "one belt and one road" to provide institutional support. Railroad bill of lading system innovation timely construction of land trade rules of a small step, but also to promote the "Belt and Road" interconnection of a big step.

5.1.4 Data support for China Railway Express

Since 2016, when China Railway officially launched the brand logo of China Railway Express Railway, the rise of railroad transportation has quietly changed the ecological environment of the international logistics system. China's railroad freight volume has been increasing year after year. Especially in 2016, China's railroad freight volume had a significant increase.

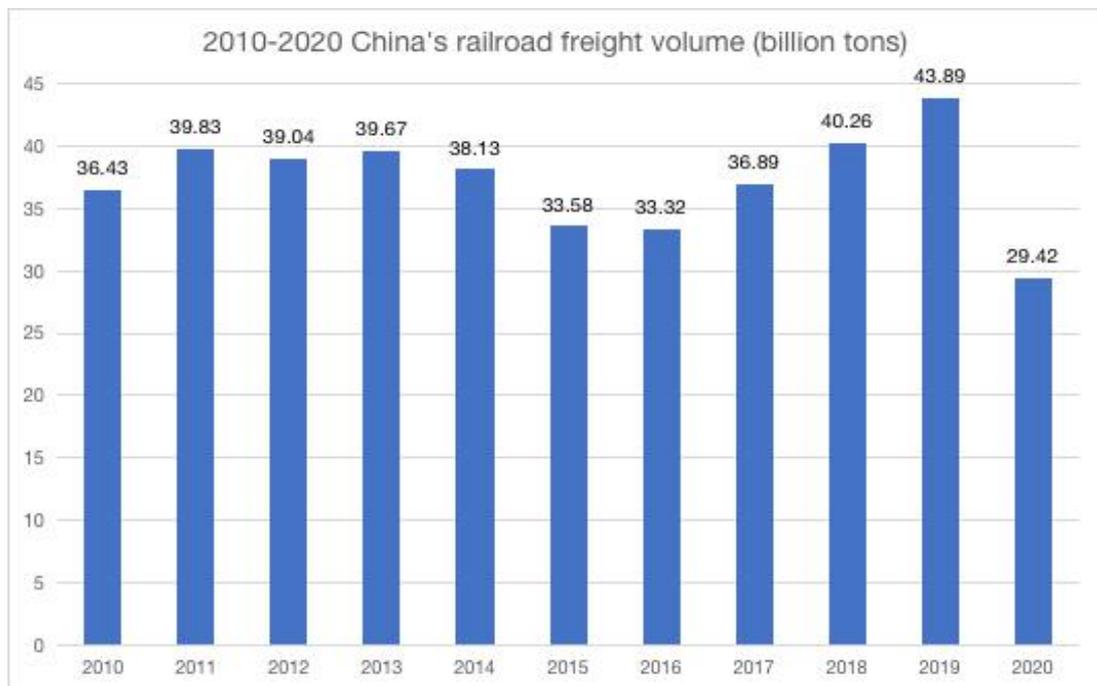


Figure 3.2010-2020(till June) China's railroad freight volume (billion tons)

In July 2017, China Railway Corporation and COSCO Shipping Group, a traditional shipping giant, signed a strategic cooperation agreement, under which the two sides will work together to promote the integrated development of the global logistics system and enhance the level of international multimodal transportation. Since then, COSCO Shipping has its own "China-Mongolia-Russia" liner, and cooperated with Tianjin Port to integrate resources and build a land-sea intermodal transport network. Internationally, COSCO Shipping has joined hands with the world's largest multimodal transport company - Hyundai Merchant Marine Co., Ltd. of Korea and the European logistics giant Hamburg Port Group, basically realizing the interconnection of ports and transport trunk lines and the seamless connection of three modes of transport: water, land and air.

Due to the lack of a proper transportation system before, the foreign exports of products from China's inland cities were not very smooth, and now the China Railway Express provides a linear solution to this status quo, offering inland cities

open conditions similar to those of port cities. For some commodities that were previously difficult and costly to transport, the China Railway Express can quickly and safely reach inland areas that are not accessible by traditional maritime transport, increasing the openness of areas along the route and opening up a wider space for China's economic globalization. Comparison of total import and export growth of major node cities in Central and Western China.

Major Node Cities	Total import/export value at the time of CRE operation (USD billion)	Total import/export value in 2020 (USD billion)	Year-on-year growth
Chongqing	292.18	943.97	223.07%
Zhengzhou	427.49	964.46	125.61%
Chengdu	505.85	1036.84	104.97%
Wuhan	203.53	370.93	81.94%
Xian	179.82	503.46	179.98%

Table 2. Comparison of total import and export growth of major node cities in central and western China after the opening of China Railway Express

The promotion of China Railway Express to the opening level of China's central and western regions is obvious, import and export trade gradually become the main economic growth of these regions, and they are gradually becoming the support of China Railway Express, promoting the deepening of economic exchanges between China Railway Express and Eurasian countries, and further development of foreign trade.

The China Railway Express continues to innovate its operation mode, and the Ministry of Commerce, on the basis of in-depth research on the reform of "one single system" of the main body of the platform of the train, has issued the "Letter on the Establishment of the Working Mechanism on the Issue of Documentary Rights of

Railway International Intermodal Transport" to further promote the resolution of the issue of documentary rights of railroad international intermodal transport at the level of international rules, and enhance the multimodal transport Integrated service level. Chongqing, Chengdu, Jinhua, Harbin and other cities have piloted the use of CIFA bills of lading, Chengdu launched cross-border e-commerce pledge financing, promote the issuance of electronic bills of lading, a total of 3,000 multimodal transport bills of lading issued throughout the year, the financing amount of 189 million yuan. To comprehensively improve the efficiency of cross-border transport and reduce the risk of cargo transportation to provide a pilot sample.

Due to the limited operating capacity of the existing lines of the Polish section of the China Railway Express, coupled with the renovation and upgrading of the Lodz station, which caused cargo congestion, the relevant liner operators chose a new route into Europe. In 2020 saw the regular operation of the China, Lithuania, Europe direct liner, and the multimodal freight volume to and from China through Lithuania reached 20,154 TEU, an increase of 258.4% over 2019, a threefold increase above. In December 2017, Chongqing issued the first international letter of credit based on railroad bill of lading, and data show that as of the end of December 2018, just one year, Chongqing issued a total of 15 railroad bills of lading, mainly for international trade financing and settlement such as railroad bill of lading documentary letter of credit, collection, etc., amounting to more than 4 million euros, equivalent to more than 30 million RMB. As of July 2020, a total of 48 railroad bills of lading have been issued, with a cargo value of more than 400 million yuan, the financing and settlement amount exceeded 100 million yuan, changing the traditional railroad bill of lading must be attached to the identity of the counterparty to the contract of carriage in order to take the goods, resulting in the inconvenience of the goods can not flow, to promote the realization of cross-border railroad bill of lading financing, settlement facilitation, normalization.

5.2 Evolution of China Railway Express bill of lading system with policy support

5.2.1 The preparation of China Railway Express bill of lading

With the continuous development of China Railway Express and the further development of international trade with railroad intermodal transport as the main mode of transport, the limitations of railroad waybill in trade financing gradually appear. Railroad waybill does not have the "right certificate" function, can not represent the possession and disposal of the goods and other rights and interests, can not be transferred and pledged. Therefore, if the importer applies for a letter of credit from a bank with a railroad waybill instead of a sea bill of lading as a transport document, he often faces more stringent credit requirements and higher capital costs. To a certain extent, this restricts banks to provide trade financing services based on railroad waybills, which increases the financial pressure of importers and restricts the further development of international land-based trade.

The 1978 "Hamburg Rules" and China's "Maritime Law" both provide that "the bill of lading is the carrier to ensure that the goods have been delivered according to the document". The 2008 "Rotterdam Rules" did not use the concept of bill of lading, but defined the "transport document", "negotiable transport document" and "non-negotiable transport document", which " The key difference between "negotiable transport document" and "non-negotiable transport document" is that the former is the goods to be delivered to the holder of the document, while the latter is delivered to the consignee shown in the document. It can be seen that the effect of the transport document "document of right" mainly refers to the function of the document of lading, that is, the holder of the document can control the carrier's delivery of the goods by virtue of the possession of the document, the transport

document as a representative of the right to control the goods thus has the value of the transaction, which means transferability.

Review the birth and development process of the bill of lading, it can be seen that its "document of right" effect is in the world of long-term trade and maritime activities gradually formed, and later through the English court precedents and 1855 "Bill of Lading Act" to obtain the private law and legislative confirmation. At the present stage, in order to amend the existing railroad transport documents to make them have the effect of "document of right", it is also necessary to carry out two aspects of work: First, at the commercial level, driven by the needs of trade to carry out commercial innovation, amend the contractual provisions related to railroad transport documents, change the operating habits, to achieve the release of goods on the basis of the document. On the other hand, at the legislative level, we should actively promote the amendment of international conventions and domestic laws to confirm the validity of "document of right" of railroad transport documents.

5.2.2 Efforts made to realize the railway waybill

For the two aforementioned aspects of work, at the legislative level, the Ministry of Commerce of China, the State General Administration of Railways and other relevant departments are actively promoting the United Nations Commission on International Trade Law, the Organization of Railway Cooperation to develop new international conventions or amend the existing conventions. At the commercial level, there are two main paths to modify railroad transport documents to make them "documents of right".

The first and most direct path can become a "single track system", that is, the railroad waybill with the function of "document of right", that is, the creation of a railroad bill of lading, issued by the railroad carrier. Specifically, the program requires

the railroad carrier to amend the relevant terms and conditions of the existing railroad waybill, change the original consignee with the identity of the operating mode, the holder of the bill of lading is permitted to take delivery of the goods against the bill of lading in the event of the issuance of a negotiable railroad bill of lading. At the same time, to comprehensively amend the "International Agreement on Intermodal Transport of Goods by Rail", "International Convention on the Carriage of Goods by Rail" and other international railroad contract conventions and "Rules for the Implementation of the Contract for the Carriage of Goods by Rail" and other domestic laws to confirm the legal effect of the railroad bill of lading, clarify the rules for the issuance, circulation and delivery of the railroad bill of lading, and clarify the rights and obligations of all parties to the railroad transport contract under the bill of lading.

The second path can be called "dual system", by the freight forwarder that the multimodal carrier to the actual consignee or consignor to issue multimodal bill of lading applicable to rail transport, the railroad carrier to the freight forwarder for the consignee or consignor to issue a railroad bill of lading, keeping the contract terms and operating mode of the railroad bill of lading unchanged. As the multimodal bill of lading itself is developed on the basis of the maritime bill of lading, its issuance, circulation and delivery rules are fully consistent with the requirements of the negotiable document, without substantive changes, only in accordance with the possible existence of special needs of railroad transport to make brief changes. China's "maritime law" has been the multimodal transport contract containing maritime transport, in order to further clarify the legal effect of multimodal bill of lading does not include maritime transport, it is necessary to promote the enactment of new international conventions and national laws.

5.2.3 Advantages and disadvantages of the two methods

The advantage of "single track system" is that by creating a railroad bill of lading with the same effect as the sea bill of lading, the use of sea bills of lading, legislation and judicial experience applied to railroad transport, a comprehensive and thorough solution to the limitations of the railroad bill of lading in trade financing. The disadvantage lies in the need for the existing international conventions, domestic regulations, railroad bill of lading provisions and railroad operation mode for comprehensive revision and innovation, and the need and relevant international organizations, domestic authorities, railroad carriers, railroad customers, banks and other railroad transport and trade related parties of the joint efforts and close cooperation, the work is more difficult.

The advantage of "dual-track system" is, first of all, does not need to change the existing mode of operation of railroad transport, contractual agreements and laws and regulations, more easily accepted by the industry. Second, the issuance of multimodal bills of lading, the implementation of the "dual system" in the freight forwarding industry has many years of practical experience, the International Federation of Freight Forwarders Association of multimodal bills of lading issued annually more than 1 million, the main domestic freight forwarding enterprises have been using their own multimodal bill of lading format. And, the United Nations Conference on Trade and Development and the International Chamber of Commerce as early as 1992 to develop the "UNCTAD / ICC multimodal transport documentary rules", the rules are not mandatory, but the multimodal bill of lading delivery rules and the rights and obligations of the parties to make clear provisions for the development of a new international convention or model law laid a solid foundation. However, some countries along the liner for taxation and other reasons, does not yet allow freight forwarders as the consignee on the railroad waybill,

affecting the interface between the two documents under the dual-track system, the issue needs to be coordinated with the competent authorities of the relevant countries.

5.2.4 Innovation and Establishment of Railway Bill of Lading

In order to meet the new requirements of the development of China Railway Express on railroad transport documents and provide freight forwarding enterprises with a unified format of multimodal bill of lading, China International Freight Forwarders Association started to develop the standard CIFA International Multimodal Bill of Lading in early 2020, led by the Legal Working Committee. The revision to China's "Maritime Law" and "UNCTAD / ICC multimodal transport documentary rules" as the main basis, reference FIATA, Sinotrans and other organizations and enterprises of multimodal transport bill of lading format combined with the development of multimodal transport in recent years on the bill of lading content of the new requirements and the special situation of the railroad to form the existing CIFA bill of lading draft, its main innovations are reflected in.

First, expand the scope of application of multimodal bills of lading, CIFA bill of lading is applicable to international single transport or international multimodal transport involving one or more modes of transport

Second, on the bill of lading "document of right" effect or transferability. First of all, CIFA embodies can be issued in a negotiable manner, the bill of lading holder has the right to withdraw or transfer the goods with the bill of lading. Second, the existing bill of lading draft will be further improved, the provisions of the bill of lading under the carrier, cargo or other parties agree and recognize the multimodal bill of lading with the bill of lading in the relevant international conventions and national laws under the same legal effect, shall not be multimodal bill of lading does not include maritime

transport as a reason to deny its "document of right" of Effect. Thirdly, the bill of lading clause clearly stipulates the rules of delivery of goods when issuing bearer bill of lading, instruction bill of lading and registered bill of lading, especially the bearer bill of lading and instruction bill of lading need to be delivered with the bill of lading. Third, the multimodal carrier in the bill of lading under the liability and limitation of liability, CIFA bill of lading on China's "maritime law" and "UNCTAD / ICC multimodal transport documentary rules" provided by the net liability system for further refinement and innovation. For can clearly cause the loss of goods, damage or delay in delivery of the cause occurred in a particular section of multimodal transport, multi-time cloud carrier's liability, compensation limits and the statute of limitations are used the section contained in the country to adjust the corresponding mode of transport of international conventions and domestic law provisions. Unable to determine the cause of loss in which the zone occurred using the presumption principle, that is, including maritime transport, the presumption of loss occurred in the maritime transport zone, the application of China's Maritime Law, not involving maritime transport but rail transport, the presumption of loss occurred in the international rail transport zone, the application of SMGS. Which the first two rules are not applicable, the carrier is responsible for the loss caused by error or fault. Fourth, in response to the new developments in the transport business in recent years and the relevant authorities, the actual carrier's new requirements, the bill of lading also increased the corresponding provisions to clarify the rights and obligations of all parties. For example, for the strengthening of the obligation to declare dangerous goods, CIFA bill of lading details the cargo side of the obligation to declare dangerous goods information, declaration requirements and concealment, omissions, errors in the declaration of responsibility. Also for the return of containers to make detailed provisions.

5.3 Difficulties in the establishment of railway bill of lading

5.3.1 Political difficulties and Technical difficulties

Some countries consider the risk and tax policy, the implementation of the railroad bill of lading skeptical attitude, does not yet allow freight forwarders as the consignee on the railroad bill of lading, which has an impact on the interface of the two documents under the CIFA bill of lading system, the construction of the railroad bill of lading mode. At the same time, there are many countries and regions through which the China Railway Express passes, and the flow of documents between the ports in each country is also affected by political factors.

In terms of technology, due to the differences in the level of economic development of the countries along the China Railway Express, the level of railroad infrastructure construction and port loading and unloading technology between countries are not equal, and the technology of some countries and regions is difficult to support the construction of railroad bill of lading mode, which adds difficulty to the implementation of CIFA bill of lading.

On the institutional side, due to the absence of documentary systems and rules, railway bills of lading are not backed up by strong legal treaties, the existing maritime bill of lading system is not fully applicable to railways, and international legal conventions also lack a system of allocation of responsibility for railway bills of lading.

5.3.2 Risks of railroad bills of lading

First, in the international multimodal transport, the emergence of the railroad bill of lading makes the greatest risk faced by the railroad multimodal transport operators. Buyers and sellers face the next risk. The risks faced by the railroad operator are

mainly bill of lading mis-signed, loss of goods, etc. For the seller, the important factor that the seller can not receive payment for the goods is because the documentary discrepancy will lead to the other party to refuse to pay, the documentary discrepancy is mostly due to fraudulent letter of credit terms. For the buyer, the documentary discrepancy is a means of fraud of the seller, which is likely to make the seller's property and goods empty.

Secondly, in order to control the risk, the issuing bank will actually have the right to control and dispose of the goods as one of the key factors in approving the risk size. At present, through the signing of the tripartite contract to give the railway bill of lading to the property properties, the issuing bank through the railway bill of lading pledge to obtain the right to control the goods, but this right to control the goods can not be supported, the key moment control of the goods and property rights given by the property law against the property rights is still inconclusive, once the dispute arises, the issuing bank will be in a high risk situation of money and goods.

Thirdly, it is difficult for the issuing bank to grasp the cargo transportation status in real time. From loading to unloading, there is generally no stopover in the middle of the sea transport, and the perfect information system can implement to master the cargo transportation status. The China Railway Express involves more countries and regions, and the information system of each country does not realize efficient docking and sharing. Whether the exporter according to the contract requirements of timely delivery, timely shipment and goods in transit transport situation banks are difficult to grasp in real time, so that in the delivery of bill negotiation with the importer can not make accurate judgment, facing certain risks.

Finally, the issuing bank can not quickly realize the sale of goods and bill of lading flow. At present, China Railway Express return goods are complex and cover all kinds of industries, but Chongqing has not yet formed a more complete local market for the flow of imported goods. With the railroad bill of lading, the issuing bank has

not obtained the actual right to dispose of the goods, but because the market is not perfect, how to implement the right to dispose of the goods is more difficult, and to sell the goods in a short period of time to realize or realize the flow of the bill of lading are more difficult, in this case, the issuing bank will face the risk of suffering certain economic losses.

5.4 Suggestions for problem solving

5.4.1 Piloting in some countries to lead other countries

To make the railroad bill of lading develop, it can be piloted in some countries and regions first, such as the pilot of CIFA bill of lading mode in Chongqing, absorbing and using the existing advantages of railroad bill of lading, gradually making up for the shortcomings in practice and promotion, and promoting the railroad bill of lading mode to the whole China Railway Express transport.

The policy can also subsidize and support the countries and regions where the railroad bill of lading mode is implemented, encourage the application of the railroad bill of lading in the countries along the route of China Railway Express, and realize technology sharing in the countries and regions along the route to improve the efficiency of China Railway Express transport, so that the railroad bill of lading mode can be more popularized and applied.

5.4.2 Policy affects China Railway Express Bill of Lading

In order to further explore the transformation of the railroad transport channel to trade channel and promote the mutually beneficial symbiotic development of China Railway Express and trade, Sichuan, Chongqing and other places introduced bill of lading trade function, the application of multimodal bill of lading, railroad bill of lading

to reach transactions. However, the practice of these cases has not formed a wide response, behind which is the lack of the documentary system and rules.

Wang Xuefeng, Hu Hao, Chao Yifeng, Gao Jiawei (2020) wrote in *Research on the evolution of the system of the bill of lading system of China Railway Express under the policy network* that, the various actors involved in the policy formulation process are crucial to the formation and implementation of the policy, including five types of government networks, professional networks, local government networks, producer networks and mass networks. The railway bills of lading that need to be researched, developed and used in the operation of the China Railway Express, or the multimodal bills of lading that include railway as the main mode of transport, gather different types of actors.

Network Type	Actors in the network	The main features of the network	The main functions of the network
Government Networks	Party and state leaders, the State Council and its subordinate agencies	Stable and limited number of participating members, high frequency and permanence of interaction between members, wide influence and strong authority	Setting policy direction, policy development and enactment, policy evaluation
Professional Network	Universities, research institutes, China International Freight Forwarders Association, China Ports Association, China Council for the Promotion of International Trade, etc.	Stable and limited number of participating members, relatively high frequency and persistence of interaction among members, supported by professional knowledge.	Policy initiatives, policy advice and recommendations
Local Government	Local governments (mainly Sichuan	Stable and limited number of participating	Policy response, policy

Networks	Province and Chongqing Municipality), central vertical management departments around the world (customs, etc.)	members, average frequency and persistence of interaction among members, regional influence and authority	implementation and enforcement
Producer Network	Transportation enterprises, logistics enterprises, freight forwarding enterprises, cargo owner enterprises, etc.	Unstable, large number of participating members, high mobility, limited interaction among members, lack of voice for most except for a few companies	Policy initiatives, policy feedback
Mass Networks	News media, the public, experts and scholars, etc.	Unstable, large number of participating members, high mobility, limited interaction among members	Policy initiatives, policy feedback, policy monitoring

Table 3. Characteristics and functions of each policy network actor

First of all, the government network has the policy resources and discourse power to coordinate relevant subjects and time at home and abroad, and should attach great importance to the top-level design work of developing the China Railway Express Bill of Lading system, and focus on the layout of bilateral and multilateral international agreements of the China Railway Express Bill of Lading system. For example, the legal department, as the competent authority in the legal field of foreign trade-related treaties of each country, should play the role of policy resource allocation service management and policy resource linkage and coordination. Secondly, the professional network and the mass network represent the center of knowledge and public opinion respectively in the China Railway Express network system, and play an important function in policy-making. The professional networks, represented by the International Association of Freight Forwarders and the Port Association, etc., should play a coordinating role, gathering actors from other network types through

research, discussions and interviews to come up with ideas together. Thirdly, producer networks are the economic hub of the entire policy network, and their specific function is reflected in the impact of their policy initiatives and policy feedback behaviors on the policy process and its objectives. Local multimodal transport operators, mainly platform companies, need to combine the development of the China Railway Express bill of lading policy and experiment in the process of practice to explore the standards of the China Railway Express bill of lading system in line with the current situation. Finally, the local government network, as the implementation center of the policy network, needs to implement the decisions of the government network.

Based on the practical innovation of China Railway Express bill of lading in Sichuan and Chongqing, local governments should further interact with the maker network to balance the economic interests of enterprises and the public interests of society, and finally formulate policies related to the development and application of China Railway Express bill of lading, so that the policy decisions are favorable to the development of China Railway Express trains.

6. Summary and Future Outlook

With the initiative of Belt and Road, the development of China Railway Express is becoming more and more prosperous, and the implementation of railroad bill of lading system on China Railway Express seems to be an inevitable trend. The implementation of railway multimodal bill of lading will better meet the demand of customers for settlement of documentary letters of credit, which is conducive to the railroad to further promote the expansion of the international market. The issuance of railroad multimodal bill of lading applies to enhance the advantages of the railroad itself, the risk identification and control of railroad multimodal bill of lading also appears to be extremely important. At the same time, China should also pay more attention to the construction work of " China Railway Express ", further participate in the common construction of infrastructure in countries along the route, explore the establishment of a unified " China Railway Express" management and scheduling mechanism, coordinate bilateral trade interests, and accelerate the promotion of China and the countries along the route of economic and trade cooperation with countries along the route.

Chengdu International Land Port Operation Company have successfully piloted CIFA international multimodal bill of lading and applied it to different scenarios such as public-rail intermodal transport, iron-sea intermodal transport and public-rail-sea intermodal transport, truly realizing the door-to-door transport "one single end ". In the next step, the railway bill of lading can summarize the experience and problems in the use of the pilot process, widely consult the industry experts and scholars on the revision of the existing CIFA bill of lading, and complete the revision of the railway bill of lading, so that the railway bill of lading can be better applied to multimodal transport under the Belt and Road.

References

- [1]. Yang Yinguan, Zhang Xiaofeng. (2021) *The role, problems and responses of China Railway Express* [J]. China Economic and Trade Journal (Zhong),2021(02):31-33.
- [2]. Wang Jingxin.(2016) *Analysis of the difference between multimodal transport documents and ocean bills of lading* [J]. Science and Technology Perspectives,2016(25):281.
- [3]. Xuan Jun. (2006) *Research on the connection and difference between international multimodal transport documents and traditional ocean bills of lading* [D]. University of International Business and Economics, 2006.
- [4]. Liu Yugang, Wang Timbi, Wang Haiyue, Mo Wen. (2018) *Research on multimodal transport electronic bill of lading based on blockchain technology*[J]. Transportation System Engineering and Information,2018,18(S1):74-79.
- [5]. Wang Xuefeng, Hu Hao, Chao Yifeng, Gao Jiawei.(2020) *Research on the evolution of the system of the bill of lading system of China Railway Express under the policy network*[J]. Continental Bridge Vision,2020(06):49-51.
- [6]. Ma He.(2014) *Research on Railway-Water Intermodal Container Document* [D]. Southwest Jiaotong University, 2014.
- [7]. Xueting Li ; Ke Cao ; and He Ma(2013) *Discussion of Container Rail-Water Intermodal Transport Documents Process* ICTE 2013 .
- [8]. Lin Bizhan. *Promoting the materialization of China Railway Express Multimodal Transport Waybill* [J]. China Ocean Shipping,2019(07):50-51.
- [9]. Huang Lihua, Shuai Xin (2018) *Analysis of legal defects of multimodal transport bill of lading issued by China Railway Express* [J]. Journal of Southwest Petroleum University (Social Science Edition),2018,20(03):66-71.

- [10]. Deng Yiping.(2018) *Reflections on the issuance of railroad bill of lading with the attributes of property right certificate*[J]. *Financial Theory and Practice*,2018(06):84-87.
- [11]. Fang Youxi. (2014) *On the effect of arbitration clause in international multimodal bill of lading*[J]. *Southeast Academic*,2014(03):171-177.
- [12]. Wang Jin. (2011) *Thinking about the function of non-physical evidence of bill of lading of freight forwarding*[J]. *Foreign Economic and Trade Practice*,2011(08):65-67.
- [13]. Georgios I. Zekos. (2004) “The Contractual Role of Documents Issued under the CMI Draft Instrument on Transport Law 2001.” *Journal of Maritime Law and Commerce*, 35(1)99-120
- [14]. Sun Bin.(2016) *Research on the countermeasures of adopting multimodal bill of lading for international railroad intermodal transport of China Railway Express* [J]. *Railway Transportation and Economy*,2016,38(04):68-72.
- [15]. Song Anqi.(2020) *CIFA bill of lading to crack the problem of multimodal integration*[J]. *China Ocean Shipping*,2020(11):74-76+9.
- [16]. Maruri, L. (2003) “Simulation of a container transport system between port and inland terminal depots.” *Industrial Simulation Conference*, 238-42
- [17]. Yang Kaili, Wang Zhifang, Huang Li, Lang Maoxiang, Yu Xueqing. (2017) *Research on risk evaluation and control of railroad multimodal transport bill of lading*[J]. *Railway Transportation and Economy*,2017,39(10):99-104.
- [18]. Cui Zhongliang.(2015) *Discussion on the practical application of freight forwarder's bill of lading in international cargo transportation* [J]. *Foreign Economic and Trade Practice*,2015(09):60-62.
- [19]. Li Guangqin.(2021) *Analysis of the impact of trade facilitation on China's exports and its trade potential: empirical evidence based on the countries along*

- the "China Railway Express"* [J]. Business Economics Research, 2021(05):155-158.
- [20]. Dai Linli. (2017) *Research on Enhancing the Competitiveness of Foreign Trade with Europe-Based on the Perspective of China Railway Express Bill of Lading*[J]. International Trade, 2017(10):22-25.
- [21]. Ministry of Transport of the People's Republic of China (2011) *Transportation "12th Five-Year Plan" Development Plan*.
- [22]. Ministry of Transport of the People's Republic of China (2015) *Notification of the Implementation Opinions on Integrating into the National "Belt and Road" Development Strategy and Constructing the "Liaoman-Europe" Comprehensive Transportation Corridor*.
- [23]. Glass, David A. Marlow, Peter B. Nair, Rawindaran. (2010) "The use and legal effects of carriage documents in international multimodal transport." *International Journal of Shipping and Transport Logistics*, 2(4)347-363
- [24]. Ministry of Transport of the People's Republic of China (2016) *Transportation Standardization Program Revision Project List*.
- [25]. Ministry of Transport of the People's Republic of China (2017) *Domestic Containerized Multimodal Waybill Standard (Draft for Comments)*
- [26]. Ministry of Transport of the People's Republic of China (2018) *Notes on the Revision of the Maritime Law of the People's Republic of China*
- [27]. Ministry of Transport of the People's Republic of China (2020) *[Chongqing] water running rail transport only a single Sichuan and Chongqing to open the first domestic "railroad waterway intermodal transport a single system" pilot*
- [28]. Ministry of Transport of the People's Republic of China (2020) *[Jiangsu] Lianyungang first railroad waterway intermodal transport "a single to the end" to promote the domestic and international double cycle*

- [29]. Sun Bin.(2016) *Research on the countermeasures of adopting multimodal bill of lading for international railway intermodal transport of China Railway Express* [J]. *Railway Transport and Economy*,2016(04):68-72.
- [30]. Lai K.K, Lam K and Chan W K. (1995) “*Shipping container logistics and allocation.*”
- [31]. Thomas A Grigalunas, Meifeng Luo. (2003) “*A Multimodal Transportation Simulation Model for Us costal Container Ports*” [A]. TRB2003 Annual Meeting, [C] USA: 2003