

High-Quality Development of China Railway Express Based on Win-Win Co-construction

Chen Yun¹, Lu Chunfang², Sheng Liming¹, Liu Yanhong¹

1. Engineering Management Center, China State Railway Group Co., Ltd., Beijing 100844, China

2. China Railway Society, Beijing 100844, China

Abstract: This study examines the economic function of China Railway Express in the new era and summarizes its current operating situation, major risks, and challenges. The main factors influencing high-quality development of China Railway Express are analyzed. These factors include trade environment and infrastructure construction along the line, international multilateral communication and cooperation, goods supply support and logistics service level, as well as market-oriented operation. The practice of moving China Railway Express toward high-quality development is deeply explored based on a win-win co-construction, and three development paths are presented: to promote both the quantity and operational quality of China Railway Express; to implement the comprehensive development strategy of “train transportation + logistics hub construction + supporting service capacity”; and to build a multi-value chain of international trade, industrial upgrading, and financial services. Finally, this paper proposes four safeguard measures namely, strengthening coordination and cooperation and actively promoting customs clearance convenience; optimizing transportation organization and providing whole-process logistics services; improving the price mechanism to attract multichannel capital investment; promoting platform construction and strengthening of talents, as well as scientific and technological innovation, to provide support for boosting the high-quality development of China Railway Express.

Keywords: win-win co-construction; China Railway Express; strategy of high-quality development

1 Introduction

As an important part of the Belt and Road Initiative, an important carrier and backbone of international logistics overland transportation, China Railway Express (including China Railway Express to Asia) has been favored by domestic and foreign customers since its launch in 2011. Its development momentum is rapid, and its scale and quantity have shown explosive growth. The large-scaled normalized operation of China Railway Express has connected the active East Asia economic circle with the developed European trade circle, and it has added value by providing a new choice for goods producers and traders. Thus, it strongly promotes the opening of China to the outside world and the economic and trade exchanges in the states along the line, thus obtaining widespread attention and high praise of the international community. However, at present, there are risks and challenges such as long customs clearance time, slow development of supporting infrastructure, and many development restricting factors. In this context, it is of great theoretical value and practical significance to study how to improve the overall market competitiveness and realize high-quality sustainable development of China Railway Express.

2 Current situation and main challenges of China Railway Express

China Railway Express is an international container railway between China and Europe, and the countries along the Belt and Road. It is an important carrier for deepening economic and trade cooperation between China and the countries along the Belt and Road Initiative, and a major driver for the Belt and Road construction. The successful

Received date: March 29, 2020; **Revised date:** May 02, 2020

Corresponding author: Chen Yun, senior engineer of Engineering Management Center of China State Railway Group Co., Ltd. Major research field is railway science and technology management and engineering construction informatization. E-mail: ch.yun@163.com

Funding program: CAE Advisory Project “Strategic Research on Transport Infrastructure Development under the Belt and Road Initiative” (2018-XZ-11)

Chinese version: Strategic Study of CAE 2020, 22 (3): 125–131

Cited item: Chen Yun et al. High-Quality Development of China Railway Express Based on Win-Win Co-construction. *Strategic Study of CAE*,

<https://doi.org/10.15302/J-SSCAE-2020.03.019>

opening of China Railway Express has provided alternatives to sea and air transportation for international trade between China and Europe, which has brought a strong demand for cargo transportation to increase economic growth between Asia and Europe [1]. At the same time, China is the EU's second largest trading partner. It is expected that by 2025, China's total trade volume with the Belt and Road Initiative countries and bilateral trade volume with Europe will have new breakthroughs. Therefore, improving maritime transport and speeding up the construction of land transport corridors are urgent concerns.

2.1 Economic positioning and analysis of China Railway Express in the new era

2.1.1 Booster to promote and consolidate the economic and trade development of countries along Belt and Road

Since its launch, China Railway Express has become a useful supplement to the mode of transport for trade between countries along the routes. In 2019, import and export trade between China and countries in which China Railway Express operates totaled nearly 800 billion USD. In the future, China Railway Express is expected to play a greater role in promoting the steady growth of international trade, driven by the expansion of its coverage, improved service capacity, and the development of value-added logistics, commerce, and finance.

2.1.2 Top runner in building an all-round opening up pattern

Through global integration, the system of international trade rules and financing mechanisms tend to be reconstructed, and countries along the Belt and Road need to realize diversified exploration in the field of international economic and trade cooperation. Under the framework of coordinated regional development, the central and western regions of China are also making efforts to opening up the inland, so as to better integrate into the new pattern of all-round opening up and enhance their proactive response capacity.

2.1.3 A steppingstone to explore deepening international cooperation on superior production capacity

As China's Belt and Road Initiative further develops, traffic connectivity provides a good condition for China's industry to "Go Global" in the capacity of international cooperation. At present, China Railway Express is present in many European cities, while many enterprises including large domestic logistics enterprises, the auto industry, the metallurgy, steel, and nonferrous metal manufacturing industry, begins to assess the cooperation potential in the manufacturing center, logistics service platform, network architecture, and the infrastructure construction [2].

2.1.4 Fresh troops to push forward the deepening reform of railway supply-side structure

With the deepening of supply-side structural reform, the adjustment of the supply and demand structure in the railway freight industry is also occurring. The railway transport operation and management organization mode are innovated to improve the efficiency of the transport chain, and the product development mode is organized so as to continuously improve its market competitiveness.

2.1.5 Setting a good example of connectivity among countries

To build the Silk Road Economic Belt, China need to innovate cooperation models and strengthen the "Five Connectivity," namely, policy coordination, infrastructure connectivity, unimpeded trade, financial integration, and closer people-to-people ties. The Belt and Road Initiative is supported by the "Five Connectivity," which is based on infrastructure connectivity. China Railway Express has connected countries that did not have connectivity before, enhanced exchanges and cooperation, and has become a model for the other "Four Connectivity," thereby boosting development.

2.2 Current situation of China Railway Express

2.2.1 The number of China Railway Express trains

Since its launch, China Railway Express has grown rapidly from nothing, with 17, 42, 80, 308, 815, 1702, 3673, 6300 and 8225, respectively, from 2011 to 2019. Among them, the number of trains running in 2018 was close to that in the previous seven years, and the ratio of return trains to inbound trains in 2019 was 82% (Fig. 1). By the end of February 2020, 24 Chinese cities increased their train operation by more than 100 China Railway Express trains, and China Railway Express has been running in nearly 60 cities in China and 57 cities in 18 European countries. Thereby, it plays an important role in promoting the growth of trade between China and countries along the Asia-Europe line.

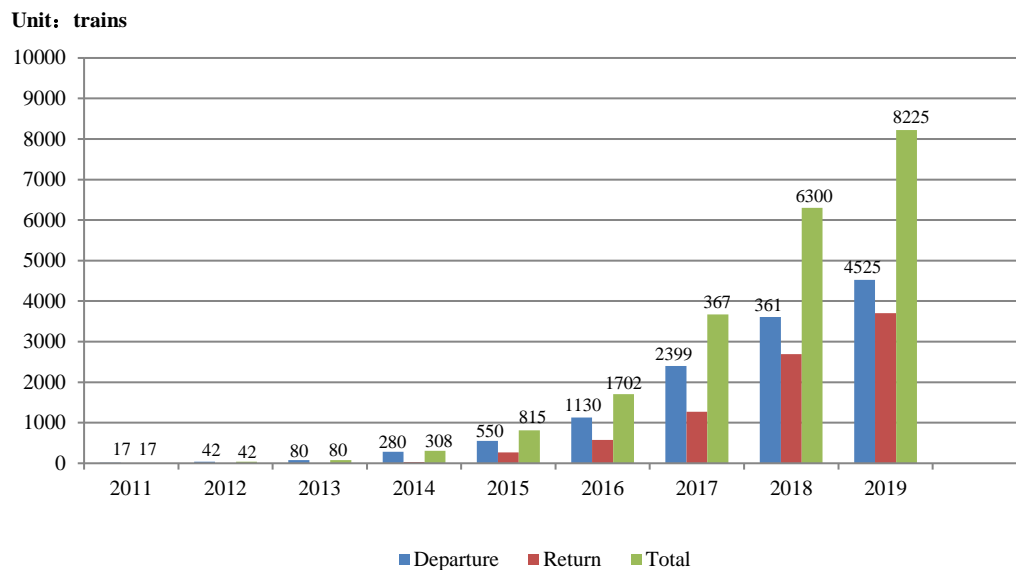


Fig. 1. The number of China Railway Express trains operating from 2011 to 2019.

2.2.2 Opening channels and ports of China Railway Express

According to the different exit ports, there are three international routes, namely, west, middle, and east, which depart from Alashankou (Horgos) port, Erenhot port, and Manzhouli port, respectively. The western passage through Alashankou is divided into three channels according to the direction of the transportation route: North (Russia, Northwest Europe), Middle (Caucasian, Caspian, Central European), and South (Iran, Turkey, southern Europe). There are four main ports of departure: Manzhouli, Erenhot, Alashankou, and Horgos.

2.2.3 Standard container of goods transported by China Railway Express

Up to December 2019, China Railway Express has delivered 1.835 million TEU since its launch, among them, 1.111 million TEU of departure and 0.724 million TEU of return.

2.3 Main challenges of China Railway Express

2.3.1 Business risks

(1) High operating costs and disordered competition. Many enterprises traditionally prefer ocean transportation in transnational transportation projects. When competing with ocean transportation for resources, the operation cost of China Railway Express is relatively high. Additionally, serious disordered competition causes high operating costs. Many inland cities have launched “X New Europe”, resulting in a scramble for goods and a waste of transport capacity.

(2) The customs procedures are complicated, and the customs clearance efficiency is low. Customs clearance is an important part of the operation when China Railway Express passes through the port station. The basic process of goods passing through customs includes declaration, document examination, inspection, and release. Due to differences in the degree of customs automation, the operation of staff and the efficiency of document examination in different countries, it is quite difficult to integrate customs clearance. The efficiency of customs clearance directly affects the operation efficiency and status of China Railway Express.

(3) It is difficult to organize the supply for the return journey. The shortage and instability of the supply of goods for the return journey brings operation and trading risks. The reason is that high logistics cost and the limitations of transportation range make it difficult to organize sources in the fiercely competitive market. In addition, compared to the traditional mode of transport by sea or air, China Railway Express will need to gradually open up the market in the countries along the China Railway Express route.

2.3.2 Time Risk

(1) The running speed of some sections is slow. At present, the facilities in the middle part of most train lines are relatively backward, and there are a large number of single lines. “Fast at both ends, slow in the middle” has become the norm, which has seriously reduced the average speed of train operations. For example, one train

slowed down rapidly after passing through the Alashan checkpoints and then accelerated only until it entered Poland.

(2) Long rail change time. China's railways have different standards than foreign railways in terms of gauge, vehicle specification, load system, transport code, etc. The trains need to change tracks when passing through the border ports in the process of running. In addition, the short loading, overloading and dumping of goods in the process of loading all seriously affect the operation time and efficiency, leading to delays in transportation.

(3) Long customs clearance time. Owing to different national operating mechanisms, different countries have different requirements on inspection and quarantine, customs, etc., and there are many documents involved in the customs clearance of China Railway Express, thus leading to low information input efficiency. If the relevant documents cannot be submitted accurately, completely, and in a timely manner in accordance with the port requirements of various countries, the goods may be delayed, and the customs clearance time will be extended [3].

2.3.3 Security risks

(1) Long-distance transportation has a hidden danger to the safety of goods. The freight trains have different types of goods in each container and each train. Owing to the long running distance of China Railway Express, and the many countries it passes through, the freight trains need to transfer customs and change rails many times in the process of transportation, which may easily cause damage, such as bumping, tilting, or collapsing, and endanger the safety of the goods when opening the container for inspection and loading and unloading operations. For example, not having waterproof safety measures in place for electronic equipment can directly lead to the loss of the value of goods.

(2) Natural climatic conditions. Compared with sea transport, air transport and other modes of transport, railway transport may impact on the safety of goods in the event of extreme natural disasters, such as mud-rock flows, landslides, floods, strong storms, and snow, although it is less affected by the weather.

2.3.4 Other risks

The countries and regions along the route of China Railway Express have different systems, cultures, and economic environments. In addition, the political environment of some countries can be unstable for long periods of time, which is inevitably affected by the game played by the great powers, thereby bringing other potential risks to geopolitics.

3 Analysis of important factors affecting the high-quality development of China Railway Express

The China Railway Express's expansion in scale, quality and business scope has continued since its launch. The quality and efficiency of China Railway Express should be promoted by focusing on the creation of a "convenient, fast, safe, efficient, and green" international transportation channel. Consequently, the factors influencing sustainable operation and high-quality development of China Railway Express should be analyzed.

3.1 Trade environment and infrastructure construction along the route

The Eurasian continent is home to 75% of the world's population and accounts for about 60% of the world's gross domestic product. To its east lies the vibrant East Asian economic circle, and to its west lies the developed European economic circle. The vast hinterland is filled with economic potential. The huge demand for international logistics has provided a broad market space for the development of international combined railway transportation. Infrastructure connectivity enhanced economic and trade cooperation, stable operation, improved cooperation, and interest coordination among countries along the Belt and Road will generate strong demand for international cargo transportation on the Eurasian continent and further promote the rapid development of China Railway Express.

3.2 International multilateral communication and cooperation

In April 2017, China, Germany, Poland, Mongolia, Russia, Belarus, and Kazakhstan signed the *Agreement on deepening Cooperation of China Railway Express*, which is the first international railway cooperation mechanism dominated by China Railway Organization and is of great significance for better service and support for the Belt and Road construction. At the same time, international organizations should strengthen coordination and communication with China Railway Express organizations to promote the development of an international

transport standards system.

3.3 Supply support and the overall level of logistics services

The increase in the number and operating density of China Railway Express, the abundance of goods categories and the expansion of the transportation scale have all actively promoted foreign trade development of China's "Go Global" enterprises. Cooperation with the governments of countries along the related aspects should be strengthened continuously to promote the extension of China Railway Express to the foreign economic and trade cooperation zones, industrial parks, and free ports, attract more sources, further strengthen supply support, and raise the overall level of freight and logistics services. Accelerating the construction of cargo distribution points along the Belt and Road, vigorously developing the supply of goods for the return journey, and constantly improving the innovative operation mode and supporting facilities are key priorities [4].

3.4 Market operation

To promote China Railway Express's marketing operation, the market should play a crucial role in development. Market operations should improve the efficiency of central change trains' speed, speed up customs clearance facilitation and promote normalized operation stability. Simultaneously, it is important to build a reasonable price mechanism, perfect supporting facilities and operation mode innovation, including appropriate subsidies from government, enthusiastic participation from enterprises, expanding the channels of international cooperation, setting up industry collaborative linkage space, and extending the range of trains operating radiation and driving effects, etc.

4 Exploration on the path of realizing high-quality development of China Railway Express against the background of the Belt and Road Initiative

At present, China Railway Express has become the landmark of the Belt and Road Initiative. Its main achievements lie in rapidly growing operation quantity, an increasingly rich category of goods, successful creation of an international railway cooperation mechanism, smooth establishment of the domestic enterprise cooperation platform, steady building of a transportation security system framework, and establishment of the whole logistics service system to increase brand effect and ensure operation safety. Under the background of the Belt and Road Initiative and to explore how to implement high-quality development of China Railway Express, the following aspects should be considered.

4.1 To promote both the quantity and operational quality of China Railway Express

Continuously promoting the coordinated development of eastern, central, and western core hubs, according to their own characteristics, to form goods collection centers and highlight complementary advantages will strengthen the cooperation of cross-border economic cooperation zones, frontier economic cooperation zones, and industrial clusters. The result will be a modern logistics hub with strong international influence, such as China-Belarus Industrial Park, China-Kazakhstan Horgos Frontier International Cooperation Center, etc., to speed up the formation of a "combination of main line and sub-line, hub and distributing" train organization and promote the train operations from "point to point" to "hub to hub." In September 2019, 23 national logistics hubs were established in China's central, eastern, northwest, and northeast regions, covering six types of land, air, port, production and service, trade service, and land border ports, which have provided a solid guarantee for trade business in China's Belt and Road Initiative.

The promotion of the simultaneous improvement of both operation quantity and quality of China Railway Express should be followed. According to the lines' situation, the overseas supply hubs, and railway infrastructure quality, overseas network efficiency and operation quality can be gradually increased. China Railway Express should take into consideration international multimodal transport, freight train line structure, and layout optimization, based on time limits, good transport ownership standards, train classification, and provide different classes to meet the needs of goods.

4.2 To implement the comprehensive development strategy of "train transportation + logistics hub construction + supporting service capacity"

Taking the international capacity cooperation and equipment manufacturing as an opportunity, China Railway

Express should be extended to the foreign economic and trade cooperation zone, the relevant national industrial park, and the free port area, thereby attracting more goods sources to build a healthy and orderly development mode, which will demonstrate the achievement of the community of shared interests of international logistics transport through China Railway Express.

The development of China Railway Express should be combined with the construction of a modern logistics center to maximize its logistics hub effect. Encouraging domestic enterprises abroad to work in close cooperation with important node cities through acquisitions, joint ventures, cooperation and other methods, will support the logistics base and distribution hub by strengthening the hub node with logistics infrastructure and supporting facilities construction, building a batch of large integrated logistics bases with multimodal transport, perfecting the cold chain logistics base and city distribution center layout, and supporting the construction of a logistics base with port customs, inspection and quarantine, and other functions. Building an overseas logistics warehouse with foreign enterprises to take advantage of local enterprises' "localization," optimize the logistics process, reduce logistics cost of international combined transportation, and to improve the overall strength and market competitiveness of China Railway Express should also be explored [5].

4.3 To build a multi-value chain of international trade, industrial upgrading, and financial services

4.3.1 Expand value-added business functions

As a new round of technological and industrial revolution penetrated into all aspects of global trade, transport logistics chains became an indispensable part of the production and trade system. The operation of China Railway Express has driven the active development of state economic and trade exchanges, boosted cross-border regional trade and consumption, and promoted regional production and trade. The depth of fusion with Eurasian trade pattern changes in the reconstruction of production, global production, and supply chain trade provides a strong signal of the impact of China Railway Express. With China Railway Express's transport efficiency improving, focus should be on mining business value-added functions and logistics value-added services. To create economic spillover effects, we will accelerate the integration of trade import and export logistics between freight lines in China and Europe, expand value-added services such as international agency procurement, international insurance claims, and pledge goods, and support cross-border goods processing and transit trade.

4.3.2 Drive the industrial upgrading and economic development in the countries along Belt and Road

The cooperation between China and the countries along the route through China Railway Express should be promoted to develop and utilize the multimodal transport business with railway transportation as the link to transport by sea, road or railway, making full use of their respective advantages to realize the benefit of joint transportation and effective connection with other modes of transportation in order to build an international transport corridor for the exchange of logistics information and the flow of economic factors. We will strengthen the radiation clustering effect of the cities along the China Railway Express lines to help converge information, logistics, capital, talent, and many other resources. We will also explore deep organic integration with local industries to achieve the multiplier effect, promote the upgrading of local urban industries, promote the economic development of countries along the route, and effectively improve people's livelihood so those countries can gain tangible benefits from cross-border transportation.

4.3.3 Build a cross-border pan-financial ecosystem

The operation of China Railway Express and the development of the relevant international logistics and transportation platform need to be matched by the financial service system [1], including financial rules, method of capital settlement, form of delivery, claim settlement, and insurance business. Due to the fact that the railway waybill does not have the property right document attribute, there are certain trade barriers. Although the offline mode of One Document of Settlement System ensures the whole cargo transportation is under control, it is faced with a series of problems, such as numerous participants spanning different jurisdiction areas, scattered and disordered data, high communication cost, and inefficient process coordination. Recently, the cross-border block chain platform of One Document of Settlement System for China Railway Express multimodal transport has launched in Sichuan Free Trade Zone. The platform combines the blockchain terminal technology with the business segments of the One Document of Settlement System of China Railway Express multimodal transport, endowing the One Document of Settlement System with the property through data connectivity, mutual verification, process reengineering and system innovation, so as to gradually solve problems such as the inability of international railway combined transport, the difficulty in organizing multiple transport modes, and the

difficulty in financing for small- and medium-sized foreign trade enterprises. Ultimately, it has realized cross-border settlement, financing, customs clearance, and financial convenience.

Looking forward, the platform is expected to introduce port regulation, import, and export trade business, and foreign financial institutions. All participants, including logistics services, consulting, certification, insurance, and law of China Railway Express, will form a coalition to build a common and operating platform, explore new land international trade rules, build trust and security, and efficient, convenient, open sharing of a cross-border financial ecosystem.

5 Safeguard measures of promoting high-quality development of China Railway Express

It is important to comply with market demand by providing a scientific evaluation benchmark for the high-quality development and operation management of China Railway Express [6]; the *Evaluation Index of High-quality Development of China Railway Express* was issued in 2018 and is based on quality and safety. Weight ratio return railway rate, volume of goods, planned realizing rate and transportation safety are the five index parameters used to evaluate the operation quality and benefit of China Railway Express. To promote the high-quality development of China Railway Express, safeguard measures should be implemented from the following aspects discussed below.

5.1 Strengthen coordination and cooperation to facilitate customs clearance

China should strengthen communication and coordination between government departments and local governments, give full access to the role of governments, markets, and enterprises, and create a favorable operating environment and development conditions for China Railway Express. To deepen the development of the China Railway Express trade corridor, countries along the routes should work together, and regional cooperation organizations should coordinate with each other. China should propose a customs clearance coordination mechanism, improve the transport capacity of bottleneck sections, and ensure transport time and efficiency in terms of customs clearance efficiency and simplified documents. By establishing an international customs cooperation mechanism with countries along the China Railway Express line, signing customs cooperation agreements, and promoting mutual trust in customs declaration, mutual recognition of supervision and mutual assistance in law enforcement, China will support the inclusion of more China Railway Express projects in the “Secure and Smart Trade Line Pilot Program” [4].

5.2 Optimize transportation organization and provide whole-process logistics services

China should accelerate the construction of overseas business networks, strengthen cooperation with foreign railways, formulate the railway operating plan jointly, establish trains’ running information exchange mechanism, increase the intensity of the trains’ organization, perfect the process of organization, guarantee supply support, monitor the transport process, strengthen the emergency response, improve the trains’ punctuality rate, stabilize the no-midway-stopping trains, and develop transfer trains. This should be organized to enact the operating and optimized adjustment plan of China Railway Express according to its practical transport capacity

It is also key to promote the integration of resources and constantly innovate the mode of transportation service. To do this, China must focus on the whole logistics chain process, strengthen the efficient connection of transportation, warehousing, distribution, inspection and quarantine, customs clearance, settlement, and other links, and provide one-stop comprehensive services. China should encourage effective connectivity between road, water, air, and other modes of transport and China Railway Express and build a whole-process logistics service chain. China should also establish a customer service center for China Railway Express to provide customers with business acceptance, document making and reporting, customs declaration, cargo tracking, emergency treatment and other services.

5.3 Improve the pricing mechanism and attract investment from multiple channels

A complete pricing mechanism should be established. Domestically, China should follow the market rules and establish a flexible national pricing mechanism according to traffic volume. Overseas, enterprises are encouraged to investigate and explore overseas markets, improve the supply of goods for return, and carry out unified overseas price negotiation through effective centralized goods supply from various regions and normalized large-scale operation capacity, to master the right of discourse and improve overall price dominance.

Following international multilateral procedures and market rules should depend on the financial investments by the Asian Infrastructure Investment Bank and the Silk Road Fund. We will give full play to the role of investment and financing funds to support the links and joint construction of China Railway Express. China should encourage domestic fund institutions to “Go Global” in supporting the construction of China Railway Express by means of equity investment and debt financing. Social capital should be actively attracted to invest in China Railway Express operations and to share investment earnings.

5.4 Promote platform construction, strengthen personnel training and scientific and technological innovation

China should actively promote the establishment of a logistics public information service platform. An information service platform for China Railway Express should be established by setting up coordination service agencies at national level involving all departments [5], through marketization and negotiation, and in joint effort with administrative organizations and enterprises in related countries. This will strengthen the informative and intelligent e-commerce platform construction, optimize international logistics information acquisition and processing methods, and conduct data exchange and information sharing with the railway, customs, and inspection and quarantine departments from various countries along the line, thereby realizing electronic forecast customs, documents pre-examination, and in transit tracking of train transportation and freight information. Electronic documents should be adopted, and the logistics information chain should be connected thereby realizing intelligent logistics and gradually digitalizing China Railway Express.

To achieve this, it is essential to cultivate an excellent logistics operation backbone with professional talent; to cultivate versatile talents with international trade practices and rules as well as international business knowledge; and to cultivate expert technical talents with multiple knowledge structures. The national science and technology innovation platform can be used to carry out railway logistics technology outfit preparation and cold chain key technology research and development work. Artificial intelligence technology applications, through big data cloud computing processing, will be widely used in the logistics industry and directly participate in the logistics link, combining seasons, weather, traffic, and other factors. It will also be used to predict and analyze logistics costs accurately, and to set up or adjust the logistics scheme in a timely manner so that each link would be efficiently connected. This will greatly enhance the timeliness and flexibility of China Railway Express and contribute to its sustainable high-quality quantitative development.

6 Conclusion

China Railway Express is expanding from quantity to high-quality sustainable development; its development goal has also changed from the initial seeking of export channels for local goods, to absorbing foreign goods sources for logistics hub development, finally to upgrading, transforming, and driving trade through the corridor by gathering industries through trade and creating value through industries [7]. Connectivity is the key to co-build the Belt and Road. To take economic corridors such as the New Eurasian Land Bridge (NELB) as the lead, focus should be on the construction of major routes, an information highway such as China Railway Express, and new land and sea routes for the national strategic deployment, which relies on the connectivity network construction of railway, port, and pipe network, to provide new opportunities and broad development space for common prosperity and mutually beneficial partnership. China Railway Express is an important platform for the Belt and Road Initiative to build a world-famous logistics brand with international competition and a good reputation, achieving high-quality sustainable development. It is of far-reaching significance for China’s industries to “Go Global” at the international market, referring to width, density, breadth and depth, the ultimate vision is an international logistical transport community of shared interests achieved through China Railway Express.

References

- [1] Gao B, Zhen Z H. The China-Europe Freight Train: State building and market building [M]. Beijing: Social Sciences Academic Press (China), 2017. Chinese.
- [2] Wu G, Chen L F, Guo Q, et al. A study on the sustainable development of China Railway Express in the strategy of “The Belt and Road” [J]. Journal of Transportation Engineering and Information, 2017, 15 (4): 1–10, 43. Chinese.
- [3] Xu Y M, Xing L Z, Dong X L. Research on the trade routes of China Railway Express under the Belt and Road Initiative [J].

- Intertrade, 2019 (2): 80–86. Chinese.
- [4] Wang Y B. Discussion on construction and development planning of China Railway Express [J]. *Railway Transport and Economy*, 2017 (1): 41–45. Chinese.
 - [5] Cui Y P, Wu J Y. Study on increasing operation quality of China Railway Express by using Asia-Europe Railway transport corridor [J]. *Railway Transport and Economy*, 2017 (5): 68–72. Chinese.
 - [6] Zhang W, Peng S, Qin Q, et al. A reflection on the establishment of the quality evaluation index system of China Railway Express [J]. *Railway Transport and Economy*, 2019 (3): 85–89. Chinese.
 - [7] Chinese Academy of International Trade and Economic Cooperation of Ministry of Commerce. Development report of the trade routes of China Railway Express [R]. Beijing: Chinese Academy of International Trade and Economic Cooperation of Ministry of Commerce, 2019. Chinese.