

# Current Situation, Problems and Improvement of Cross-Border Railway Transport Rules for the New International Land-Sea Trade Corridor in Western China

Yuqing Nie\*

Chongqing Industry Polytechnic University, Chongqing, China

*\*Author to whom correspondence should be addressed.*

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**Abstract:** In recent years, with the proposal and steady advancement of the “Belt and Road” Initiative, the New International Land-Sea Trade Corridor in Western China (NILSTC) has emerged as a crucial cross-border logistics channel. Ensuring its orderly and efficient operation is of great significance for enhancing trade facilitation and promoting regional economic cooperation. As an important foundation for the smooth development of cross-border railway transport along the NILSTC, the improvement of transport rules directly affects the effectiveness of cross-border railway transport. It can effectively improve transport efficiency, optimize the transport environment, and thus safeguard the high-quality development of cross-border railway transport along the NILSTC. Therefore, this paper first elaborates on the current situation of cross-border railway transport rules for the NILSTC, then analyzes the existing problems, and finally proposes a series of effective improvement strategies, aiming to provide certain reference for relevant researchers.

**Keywords:** New International Land-Sea Trade Corridor in Western China; Cross-border railway transport; Rules; Current situation; Problems; Improvement

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## 1. Introduction

Under the background of economic globalization, cross-border railway transport is playing an increasingly important role. As a key link connecting western China with ASEAN and other regions, the New International Land-Sea Trade Corridor in Western China actively promotes regional cooperation and local economic development, among which transport rules play a vital role as the key to realizing the sustainable development of cross-border railway transport. However, there are still some urgent problems in the cross-border railway transport rules for the NILSTC. These problems affect service quality and transport efficiency, and restrict the

development of cross-border railway transport. Therefore, in-depth exploration of the current situation, problems and improvement of cross-border railway transport rules for the NILSTC is of great significance.

## **2. Current Situation of Cross-Border Railway Transport Rules for the New International Land-Sea Trade Corridor in Western China**

### **2.1. Innovative Practices in Digital Rules**

In terms of innovative practices in digital rules, cross-border railway transport along the NILSTC has carried out multi-dimensional explorations. On the one hand, it actively promotes the application of blockchain technology in the transport process. Utilizing the tamper-proof and traceable characteristics of blockchain, it records and shares information such as the transport trajectory and status changes of goods. This enables shippers, freight forwarders, carriers and other parties to grasp the dynamics of goods in real time, improving the transparency and safety of transport<sup>[1]</sup>. On the other hand, big data technology is also widely used in the optimization of transport rules. By collecting and analyzing a large amount of transport data, such as cargo flow, transport time, and transport costs, bottlenecks and problems in the transport process can be accurately identified. Based on these data analysis results, relevant departments can adjust transport plans and optimize route arrangements in a targeted manner to improve transport efficiency. At the same time, big data can provide market prediction and decision support for enterprises, helping them better plan transport business<sup>[2]</sup>.

### **2.2. Initial Construction of the Rule System**

First, at the domestic level, provinces along the cross-border railway transport of the NILSTC have formulated a series of rules in combination with national policies and regulations based on their own conditions, such as rules on customs clearance procedures, cargo supervision, and railway transport organization. For example, in terms of railway transport organization, the processes of transport plan declaration, approval, and execution are clarified to continuously improve the rationality of resource allocation and transport efficiency. Second, at the international cooperation level, China has jointly promoted the alignment of cross-border railway transport rules with countries along the NILSTC. For instance, bilateral or multilateral cooperation agreements have been signed to reach a consensus on transport documents, quarantine and epidemic prevention, and customs supervision. Some countries have implemented online verification and customs information sharing, which has significantly shortened cargo clearance time and reduced enterprise transport costs<sup>[3]</sup>.

### **2.3. Accelerated Improvement of Infrastructure Network**

In recent years, remarkable progress has been made in the construction of the infrastructure network for cross-border railway transport along the NILSTC. Railway lines have been continuously expanded, with new trunk lines and branch lines put into operation, enriching the transport network layout and expanding the scope of cargo transport. Areas that were previously inaccessible have been incorporated into the transport system. At the same time, the construction of railway stations has been strengthened. Many stations have been upgraded and renovated to improve loading, unloading and turnover efficiency. Newly built stations are equipped with advanced equipment and facilities, and supporting facilities around them are improved to realize seamless connection between railway and other transport methods, enhancing comprehensive transport efficiency. Significant progress has also been made in information infrastructure. The railway transport management system has been upgraded to realize real-time information monitoring and intelligent dispatching. The application of electronic data interchange systems

reduces information communication costs and delays, and the expansion of communication network coverage ensures smooth communication.

### **3. Problems Faced by Cross-Border Railway Transport Rules for the New International Land-Sea Trade Corridor in Western China**

#### **3.1. Restrictions by Infrastructure Bottlenecks**

Nowadays, some railways of the NILSTC are aging and have poor track quality, which affects the speed and stability of train transport and reduces transport timeliness. The loading and unloading equipment at some stations has a low degree of automation, resulting in low loading and unloading efficiency and prolonged cargo in-transit time<sup>[4]</sup>. At the same time, the supporting service facilities along the NILSTC are not perfect enough to fully meet transport needs. In addition, individual routes of the NILSTC have insufficient transport capacity, making it difficult to adapt to the continuously increasing cargo volume. Trains often have to queue up and wait. Moreover, the connection between railway lines in different regions is not smooth, which seriously affects the efficiency of cargo multimodal transport and hinders the sustainable development of cross-border railway transport<sup>[5]</sup>.

#### **3.2. Non-Unified Rule Standards**

Different countries and regions have their own rules and standards for cross-border railway transport. There are differences in cargo packaging, measurement, inspection and quarantine, etc., which requires goods to be adjusted and re-inspected multiple times during cross-border transport, increasing transport costs and time. The formats and requirements of transport documents also vary. Enterprises need to spend a lot of energy preparing and processing documents of different standards, reducing work efficiency. Furthermore, there is a lack of unified regulations on the division of transport responsibilities and compensation standards. In the event of transport accidents or disputes, it is difficult to quickly clarify responsibilities and make compensation, which affects enterprises' confidence in transport. This non-unification of rule standards hinders the smooth progress of cross-border railway transport along the NILSTC<sup>[6]</sup>.

#### **3.3. Lagging Development of Digital Rules**

With the advent of the digital era, the efficient operation of cross-border railway transport is closely related to digital rules, but the existing digital rules for cross-border railway transport along the NILSTC are lagging behind. Currently, countries along the corridor are insufficient in digital information sharing, mainly because their data systems are relatively independent, with inconsistent standards and interfaces, making it impossible to share cross-border railway transport information accurately and in real time. In addition, there are shortcomings in electronic documents and electronic payments. Due to differences between regions and countries, there are significant differences in payment systems and financial regulatory policies, which not only increases the difficulty of electronic payments but also raises payment risks and costs. At the same time, the mutual recognition of electronic documents is not high enough. Some enterprises still use paper documents, which are not only inefficient but also prone to problems such as document damage<sup>[7]</sup>.

## **4. Improvement Paths of Cross-Border Railway Transport Rules for the New International Land-Sea Trade Corridor in Western China**

### **4.1. Strengthen Infrastructure Interconnection**

Currently, effectively addressing the bottlenecks of cross-border railway transport infrastructure along the NILSTC can be achieved by strengthening infrastructure interconnection, as follows: First, vigorously renovate aging railway lines. Establish a professional team to conduct a comprehensive assessment of existing lines, scientifically formulate railway renovation and upgrading plans, actively introduce cutting-edge materials and track technologies to further improve track quality, ensure the stable, fast and safe operation of trains, and continuously improve transport timeliness<sup>[8]</sup>.

Second, update station loading and unloading equipment in a timely manner. Introduce automated loading and unloading equipment such as automatic sorting systems and intelligent cranes along the cross-border railways of the NILSTC to effectively improve cargo loading and unloading efficiency and reduce in-transit time. In addition, rationally plan supporting service facilities. For example, optimize the distribution of maintenance stations to ensure that trains receive timely maintenance during cross-border railway transport along the NILSTC and fully meet transport needs; build large-scale modern warehousing centers in combination with the transport needs of various countries and regions to further expand warehousing space<sup>[9]</sup>.

Third, expand and renovate sections with saturated transport capacity. To improve the cross-border railway transport capacity of the NILSTC, it is necessary to optimize route design, increase the number of railway tracks, effectively improve route operation capacity, and ensure the reduction of train waiting time. At the same time, effectively connect railways in different regions, eliminate route breakpoints, realize seamless connection of railway transport, and improve the efficiency of cargo multimodal transport<sup>[10]</sup>.

### **4.2. Promote Hard and Soft Connection of the Rule System**

First, hard connection. In addition to renovating and upgrading railway lines and stations, we should also strengthen the connection with surrounding transport methods. Build a multimodal transport system integrating railway, highway, waterway and air transport, and construct comprehensive transportation hubs to realize convenient transfer between different transport methods and efficient transshipment of goods<sup>[11]</sup>. For example, plan and construct highway freight stations and port terminals near railway stations to enable rapid conversion of goods between different transport methods and improve overall logistics efficiency. At the same time, pay attention to the intelligence and greenization of infrastructure construction. Introduce intelligent transportation systems to realize real-time monitoring and intelligent dispatching of railway transport, further improving transport safety and efficiency. Promote the use of environmentally friendly materials and energy-saving technologies to reduce the environmental impact of railway transport and realize sustainable development<sup>[12]</sup>.

Second, soft connection. Coordinate and unify the cross-border railway transport rule standards of the NILSTC, and actively participate in the revision and formulation of cross-border transport rules to ensure that the formulated transport rule system is universal. For example, build internationally recognized inspection and testing standards to avoid repeated inspection of goods during cross-border transport and reduce transport costs; conduct in-depth research and consultation on differences in transport documents, inspection and quarantine, measurement, and cargo packaging, and formulate unified standards and norms. In addition, conduct active communication with countries along the NILSTC on compensation standards and the division of transport responsibilities, clarify the rights and obligations of all parties, and thus effectively maintain the stability of cross-border railway transport



along the NILSTC <sup>[13]</sup>.

### 4.3. Accelerate the Integration of Digital Rules

First, build a digital information sharing platform. Unite countries along the cross-border railway transport of the NILSTC, introduce professional technical forces to integrate various data systems, unify data standards and interfaces; introduce advanced technologies such as big data and artificial intelligence to ensure the accurate and real-time flow of cargo transport information <sup>[14]</sup>.

Second, strengthen international financial cooperation. Financial regulatory authorities of countries along the cross-border railway transport of the NILSTC conduct in-depth communication, coordinate and unify financial regulatory policies, and build an electronic payment system with unified standards. At the same time, invite third-party institutions to participate, making cross-border payment services more convenient and safe, thereby reducing payment risks and costs. In addition, use blockchain technology to innovate payment models, realize safe traceability and rapid settlement, and improve the reliability of the payment process <sup>[15]</sup>.

Third, improve the mutual recognition of electronic documents. Jointly formulate unified formats and standards for electronic documents, establish an international mutual recognition mechanism for electronic documents, continuously improve the legal effect of digital transport documents, and minimize the use of paper documents. In addition, to avoid document damage and loss and improve document processing efficiency, build a unified electronic document management system to realize online issuance, inspection and circulation of electronic documents <sup>[16]</sup>.

## 5. Conclusion

In summary, the improvement of cross-border railway transport rules for the New International Land-Sea Trade Corridor in Western China is crucial for promoting regional economic cooperation and enhancing trade facilitation. Although certain progress has been made in the construction of the rule system and the innovation of digital rules, there are still many problems such as restrictions by infrastructure bottlenecks, non-unified rule standards, and lagging development of digital rules. Through improvement paths such as strengthening infrastructure interconnection, promoting hard and soft connection of the rule system, and accelerating the integration of digital rules, the existing problems can be gradually solved, laying a solid foundation for the high-quality development of cross-border railway transport along the NILSTC. In the future, with the continuous advancement of the “Belt and Road” Initiative, cross-border railway transport along the NILSTC will play a more important role in international trade. It is necessary to closely monitor international situations and industry trends, and adjust strategies in a timely manner to adapt to the ever-changing market needs.

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