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Analysis for Circumstance of Maritime Transport in the Chinese northeastern three provinces towards Sustainable New Northern Policy

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[Abstract]

The Chinese three northeastern three provinces - Heilongjiang, Liaoning, and Jilin - hold significant geographical, geopolitical, and commercial importance due to their location allowing for cross-border trade and transportation with North Korea. These provinces are crucial for establishing a complex Eurasian logistics network in line with South Korea's new northern policy. The Chinese three northeastern three provinces, as this region is known, boasts excellent maritime transportation links between South Korea, China, and North Korea, making it an logistics hub for transporting goods to Eurasia and Europe through multimodal transport. This study highlights the importance of securing a logistics hub area by fostering cooperation and friendly relations with China's three northeastern three provinces, which are crucial to the success of the New Northern Policy. In particular, the study aims to analyze current status of trade with these region and freight volume transported by ships and recommend political advice for securing logistics hub and revitalizing maritime transport. As the policy suggestion, this study is to establish a logistics hub by implementing joint port operations, constructing port infrastructure jointly, and operating shipping companies together. Additionally, we propose ways to revitalize the maritime passenger transport business between Korea and China, which involves expanding cultural exchanges and developing content.

▸ **Key words**: China, Northeastern three Provinces, Shipping Freight Volume, New Northern Policy, Maritime Silk Road, Logistics Hub

[요 약]

중국의 동북3성(헤이룽장성, 요녕성, 지린성)은 우리나라 신북방정책의 유라시아 복합 물류망 구축을 위한 횡단열차 건설 및 북한과의 무역이 가능한 지역으로, 지리적, 지정학적 및 지경학적 중요성이 크다. 운송학적 관점에서 동북3성은 황해권 국가인 한국-중국-북한 간 해상운송이 가능한 지역이며, 복합운송의 형태로 동북3성을 거쳐 유라시아 및 유럽까지 물품 운송이 가능하다. 본 연구는 신북방정책 연계 중국 동북3성과의 협력 및 우호관계 증진을 통한 물류 거점 지역 확보 필요성을 언급하고자 한다. 특히, 본 연구는 중국 동북3성과의 교역 현황 및 해상물동량을 분석하고, 해상운송 활성화 및 물류거점 확보를 위한 정책적 제언을 하고자 한다. 정책적 제언으로 물류 허브 구축을 위한 항만 공동운영, 항만 인프라 공동건설, 해운사 공동운영을 제안하고자 하며, 문화적 협력 및 콘텐츠 개발을 통한 인적교류 확대로 한국-중국 간의 해상운송여객사업 활성화 방안을 제시하고자 한다.

▸ **주제어**: 중국, 동북3성, 해상물동량, 신북방정책, 해상실크로드, 물류 거점화

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I. Introduction

Despite its aging infrastructure, the transportation network in the Chinese northeastern three provinces remains a critical hub in Northeast Asia. Although these areas make up only 8% of the country's land area, their railway and road infrastructure accounts for 13% and 8% of the country's total, respectively.[1] However, while the railway infrastructure extension in the region represented 18% of the national total in 2003, it has since decreased to 13% due to the focus of transportation infrastructure investment in the Midwest.[2] Although roads, railways, and shipping have been the major modes of cargo transportation, sea transport has overtaken railways since 2010 and has been steadily increasing since the 2000s. Liaoning Province, in particular, has two major ports - Dalian and Yingkou - which are suitable for logistics transportation through shipping.[2] Moreover, the Chinese northeastern three provinces are strategically located for multilateral exchange and cooperation with South Korea, North Korea and China. As they are situated at the intersection of South Korean government's new northern policy and the Chinese government's One Belt & One Road initiative, and adjacent to Russia, North Korea, and Inner Mongolia, the region has the potential to play a crucial role in facilitating multilateral exchange and cooperation in the future.

It is imperative to reinforce the exchange and collaboration between China's three northeastern three provinces and South Korea in geographical, geopolitical, and cultural aspects. The foremost requirement for establishing a logistics hub in China's three northeastern provinces is to acknowledge the significance of international cooperation in these provinces. It is crucial to recognize the advantages of joint development projects of international logistics infrastructure in this region and devise a viable business model for the same. Moreover, expanding cultural cooperation and developing content can enhance human exchanges and significantly contribute to the revitalization of the maritime transport passenger business between Korea and China. In the future, economic cooperation with the three northeastern provinces will be pivotal in establishing a multilateral economic cooperation system between South Korea and North Korea.

II. General Characteristics of Chinese Northeastern three Provinces

1. Geographical Features

The northeastern three provinces of China are Liaoning, Jilin, and Heilongjiang, encompassing a total land area of 78.7 million square kilometers, which corresponds to 8.2% of China's total land area of 959.7 million square kilometers.[3] The combined land area of the three northeastern three provinces in China is 3.5 times larger than that of the Korean Peninsula (22.2 million square kilometers) and eight times larger than that of South Korea (9.9 square kilometers).[4]

Among he three northeastern three provinces of China, Liaoning Province has the smallest land area, covering 150,000 square kilometers. However, it has a comparatively larger population of 42.71 million and a gross regional product of 2.48 trillion yuan.[5] Liaoning Province has a GDP per capita of 56,507 yuan and a fixed asset investment of 2.1836 billion yuan.[5] In contrast, Jilin Province and Heilongjiang Province are both landlocked areas adjacent to North Korea and Russia, which do not have seaports, leading to significant challenges in foreign trade. In contrast, Liaoning Province boasts the ports of Dalian, Dandong, and Yingkou, contributing to a more substantial volume of trade. As for Heilongjiang and Jilin provinces, their lack of external export ports is a notable limitation.[6] As a result of the absence of external export ports, Heilongjiang and Jilin provinces have substantially lower trade volumes than the Chinese average (4.3%) when accounting for their population and land area.

Fig. 1. Map of Chinese northeastern three provinces

2. Economic index of Chinese northeastern three provinces

Jilin Province has various major industries, such as the automobile, petrochemical, agricultural processing, medicine, metallurgy, textile, and electronics sectors.**[4]** Notably, Jilin Province has a thriving agricultural sector, with a total output of 38.78 million tons (a 6.7% increase), contributing to 41.2% of the country's overall output.**[4]** Jilin Province is renowned for its "Golden Corn Zone" and has the highest per capita aquaculture reserves in China. The province primarily cultivates corn (with the highest yield in the country), soybeans, rice, barley, sugar cane, and leaf tobacco. Heilongjiang Province's primary industries are agriculture and forestry. The province has been China's leading aquaculture producer for nine consecutive years, with a production of 75.03 million tons. Additionally, it holds the top spot for green food production in the country.**[7]** Liaoning is a vital industrial hub in the Northeast Area of China and the first coastal region in the country to open up to the world. The region's primary industries consist of heavy equipment products such as raw materials, metallurgical mines, petrochemicals, and metal shelves.**[7]**

3. Trade of Chinese northeastern three provinces with South Korea

Northeast China's geographic location has resulted in closer economic ties with Northeast Asian nations than the rest of China. Based on Table 1, The Northeast region of China has closer ties with Northeast Asian countries compared to the rest of China, owing to its unique geography. According to the table, the trade ratio between China and Northeast Asian countries is 12%, with Korea and Japan having a comparable trade volume at 5%. Among the Northeastern three provinces, Liaoning Province has the highest trade ratio at 77%, while Heilongjiang Province and Jilin Province have relatively lower ratios at 11% and 10% respectively. Notably, Heilongjiang Province has a trade structure that is highly concentrated, with 49% of its trade being with neighboring Russia. As for trade with Korea, Liaoning Province accounts for approximately 83% of the total trade, indicating its significant role in trade with Korea.

Table 1. Status of Chinese northeastern three provinces's Trade with Foreign Countries (Year: 2021, Unit:Million, %)

	Total	North eastern	Liaoning	Jilin	Heilongjiang
China Total	3,604,498	69,524 (2%)	53,837 (77%)	7,544 (10%)	8,143 (11%)
USA	581,565 (16%)	6,150 (1%)	5,254 (85%)	385 (0.6%)	511 (0.8%)
Japan	173,096 (5%)	9,587 (6%)	8,962 (93%)	387 (0.4%)	238 (0.2%)
South Korea	164,078 (5%)	5,909 (4)	4,942 (83%)	495 (0.8%)	472 (0.7%)
Russia	76,265 (2%)	5,190 (7%)	1,659 (31%)	969 (1.8%)	2562 (49%)

Source: KITA statistics

4. Major Items of Trade with South Korea

South Korean major imports from China's three northeastern three provinces are steel, clothing, and grains, which constitute approximately 33%, 47%, and 7% of Korea's total imports, respectively. Clothing and related products are usually imported through Vietnam and China, with Shandong and Liaoning provinces being popular sources. Liaoning Province has a significant number of Korean clothing companies that offer competitively priced, high-quality products.

Table 2. Status of Trade by Major Items in Chinese northeastern three provinces (Year: 2021, Unit:Thousands, %)

	Items					
	Steel Products		Articles Of Apparel And Clothing Accessories		Grain	
Imported Total	18,944,000		7,203,000		5,023,000	
Exported Total	6,383,113 (33%)		3,433,064 (47%)		190,502 (3.7%)	
1	Jiangsu	1,195,524 (18%)	Shandong	2,027,430 (59%)	Beijing	167,580 (87.9%)
2	Liaoning	671,443 (10.5%)	Liaoning	381,997 (11.1%)	Heilongjing	14,224 (7.4%)
3	Shandong	667,715 (10.4%)	Jiangsu	236,040 (6.8%)	Liaoning	3,247 (1.8%)

Source: KITA statistics

In 2019, Korea imported a total of 21.04 million tons of grains, with approximately 77% of its grain supply being reliant on imports. The four primary grains imported are rice, wheat, beans, and corn. Rice accounts for 17.7% of the total imports, with the majority of it being traded with China. Specifically, 62.9% of Heilongjiang Province's rice is imported by Korea from the Northeast Three provinces. South Korea implements a public stock holding program under the Grain Management Act to ensure stable supply and demand of grains, and the volume of imports is adjusted accordingly.**[8]** South Korea's grain imports are primarily sourced from China, with the three northeastern three provinces being the main production and export regions, as shown in Table 3. It is noteworthy that South Korea is the world's seventh-largest grain importer and heavily relies on grain imports, with a dependence rate as high as 77%.

Table 3. Major Exported Countries By Chinese northeastern three provinces (Year: 2021, Unit: Thousands, %)

	Liaoning		Jilin		Heilongjiang	
	Country	Exported Sum	Country	Exported Sum	Country	Exported Sum
1	South Korea	4,152 (27.4%)	Russia	1,477 (73%)	South Korea	14,224 (62.9%)
2	Papua New Guinea	4,066	Japan	461	Russia	7,637 (33%)
3	Japan	1,110	Austraila	30	Austraila	202
Total			15,144(7.9%)			
Imported Total by South Korea			1070255(17.7%)			
Exported Total by China			190,501(17.7%)			

Source: KITA statistics

III. Analysis of Maritime Transport in Chinese northeastern three provinces

1. Port of Chinese northeastern three provinces

The northeastern three provinces of China serve as a vital transportation hub in Northeast Asia, despite their land area representing only 8% of the country's total. These provinces have a significant extension of transportation infrastructure, accounting for 13% of the country's railways and 8% of its roads. The expansion of railway infrastructure in China's northeastern three provinces has decreased from 18% in 2003 to 13% in 2019. This is due to recent investments in transportation infrastructure in the Midwest, shifting the focus away from the northeast.**[2]** Since 2010, sea transport has exceeded railways in terms of its share in cargo transportation in China's northeastern three provinces, marking a shift from the previous dominance of road and railway transport. This trend has been increasing steadily since the 2000s.**[2]** Currently, the Northeast region aims to establish external transportation routes through the Tumen River Development Plan, which involves the construction of transportation routes covering North Korea, Russia, Mongolia, Japan, and South Korea.**[2]**

There are a total of 18 ports located in the northeastern region of China. Of these, 12 are river ports, 5 are sea ports, and 1 is an estuary port.**[9]** The 18 ports in Northeast China are divided into two categories: river ports and sea ports. The 12 river ports, namely Jilin Port, Ningjiang Port, Daan Port, Fuyuan Port, TungjiangPort, Fujin Port, Luobei Port, Jiamusi Port, Fangzheng Port, Heihe Port, Harbin Port, and Zhaoyuan Port, are located in inland areas without direct access to the sea. On the other hand, the 5 sea ports, including Dalian Port, Yinkou Port, Panjin Port, Jinzhou Port, and Furudao Port, are concentrated in Liaoning Province, which is situated along the coast. Dandong Port, located at the mouth of the Yalu River, is classified as an estuary port.**[10]** Liaoning Province, in particular, has two major ports, Dalian

Port, the largest port in the three northeastern three provinces leading to Bohai Bay, and Yinkou Port, which has experienced rapid growth recently, making it suitable for logistics transportation via shipping.[11] Cargo transported through ports in Liaoning Province are either exported overseas or distributed to the eastern coastal region of China via Shanghai Port or Shenzhen Port, passing through the Yellow Sea. However, Jilin Province and Heilongjiang Province encounter difficulties in attracting foreign investment and stimulating their local economies due to their limited domestic markets and costly overland transportation.

3.2 Status of South Korea-Chinese Northeastern Maritime Transport

3.2.1 Port of Incheon

In 2021, the Port of Incheon handled a total of 157,798,000 tons, accounting for approximately 10% of Korea's total marine traffic. The combined handling capacity of marine cargo at the Port of Incheon and the Port of Pyeongtaek is close to 20% of South Korea's total cargo volume. Incheon Port is considered the second largest port in Korea for marine cargo handling, following Busan Port, Gwangyang Port, and Ulsan Port. Established in 2015, the port boasts state-of-the-art facilities, including automated unloading equipment, as well as an international passenger terminal and a cruise terminal. Incheon Port is also designed to become a major global hub for marine tourism. In 2021, the total container volume of Incheon Port was 3,354 tons, with about 60% of the trade made with China, owing to Incheon Port's geographic location. The table 4 below illustrates the distribution of maritime traffic for goods with high trade volume with China's three northeastern three provinces. Textile fibers and their products constitute around 12% of the volume, steel products account for 4%, and grains account for about 3% of the marine volume. The data shows that the three northeastern three provinces are the main shipping destination, with the majority of goods being transported to Incheon Port.

Table 4. Major Items of Fright Volume transported by Ship between Chinese northeastern three provinces and Port of Incheon (Unit: Thousand R/T, %)

Total		2019		2020		2021	
		Freight Volume	Proportion	Freight Volume	Proportion	Freight Volume	Proportion
		157,446	100	151,880	100	157,798	100
2	Textile fibers and their products	20,669	13.1	18,059	11.9	19,087	12.1
9	Steel Products	6,827	4.3	5,707	3.8	6,378	4
12	Grain	4,127	2.6	3,942	2.6	4,436	2.8

Source: KITA statistics

As demonstrated in the table 5, In contrast to Dalian Port, which has experienced a decline in container shipment volumes year after year, ports such as Qingdao, Weihai, and Yantai in Shandong Province have shown a consistent increase in their volumes compared to other major ports in China and Incheon Port.

Table 5. Container Port throughput from Chinese port to Port of Incheon (Unit: Thousand TEU, %)

Rank		2017	2018	2019	2020	2021
1	Shanghai	347	364	362	375	346
2	Qingdao	327	296	303	299	321
3	Weihai	158	156	155	164	174
4	Shekou	153	159	171	211	171
5	Ningbao	153	167	160	166	144
6	Yantai	85	95	94	109	139
7	Tianjin	100	85	96	88	122
8	Sekdao	75	70	66	75	93
9	Dalian	100	101	103	107	92
10	Xiamen	73	74	67	67	76
11	Lianyungang	47	54	52	64	76
12	Qinhuangdao	37	40	40	43	47
13	Dandong	38	36	39	33	37
14	Yingkou	26	27	29	28	35
15	Xingang	13	15	22	30	25
Others		103	124	123	114	121
Total		1,836	1,862	1,880	1,974	2,018

Source: Incheon Port Authority

3.2.2 Marine Passenger Transporation

Incheon Port maintains 10 passenger routes for maritime transport with China, including three that connect with the three northeastern three provinces: Yingkou, Dalian, and Dandong. These major ports in China's northeast serve as vital

logistics hubs for transporting cargo from the northeast and the Far East, and are part of the maritime silk road. However, according to Table 6, the volume of South Korea-China ferry traffic based on the three northeastern three provinces has been declining annually, with Dalian and Dandong experiencing significant declines, and only a slight increase observed in Yingkou. Meanwhile, the volume of ferry traffic based on Qingdao, Weihai, and Yantai is continuously increasing. Despite their geographical advantages, it is evident that the volume of ferry traffic based on the three northeastern three provinces is not keeping up with other ports in China.

Table 6. Freight Volume transported by Carferry from Chinese Port to Port of Incheon (Unit: TEU)

Port	2018	2019	2020	2021
Dalian	20,800	20,011	19,368	19,796
Dandong	23,294	24,649	20,262	21,941
Yantai	38,517	39,595	43,801	60,796
Shidao	70,438	65,745	75,261	92,699
Yingkou	26,800	28,291	28,334	35,009
Qinhuangdao	38,999	20,851	33,749	45,090
Weihai	69,916	66,188	70,919	72,015
Shanghai	58,978	59,807	66,577	80,121
Tianjin	32,385	36,401	3,700	-
Lianyungang	51,549	44,893	54,797	67,199
Total	431,676	406,431	416,768	494,666

Source: Incheon Port Authority

Due to COVID-19, marine passenger tourism between South Korea and China has yet to resume. However, there has been a significant increase in the number of marine passenger tourists in Dalian, Dandong, and Yinkou, which have a clear advantage in terms of the number of marine passenger tourists among the 10 routes between Korea and China. It can be assumed that the higher number of marine passenger tourists in the three northeastern three provinces compared to Shandong Province is influenced by Chinese bundle merchants who are based in the region, despite the lack of active maritime tourism and human exchanges.

Table 7. The number of marine passenger from Chinese port to Port of Incheon (Unit : Person)

Port	2017	2018	2019	2020
Dalian	40,750	38,034	75,665	3,200
Dandong	89,517	104,062	119,617	8,222
Yantai	48,550	70,053	85,851	3,343
Sekdao	143,747	172,123	200,728	9,012
Yingkou	13,496	9,332	47,883	2,574
Qinhuangdao	16,459	25,101	11,907	-
Weihai	136,605	126,127	140,089	6,191
Shanghai	41,197	76,251	94,855	3,926
Tianjin	26,576	74,204	101,953	1,375
Lianyungang	43,468	113,769	148,471	10,780
Total	600,365	809,056	1,027,019	48,623

Source: Incheon Port Authority

3.2.2 Port of Pyeongtaek

Pyeongtaek Port is recognized as an internationally optimized logistics port with geographic benefits for the swift inland transportation of parts located in the heart of Northeast Asia, such as Seoul and Gyeonggi Province, which encompass China, Korea, Japan, and Russia.[12] Pyeongtaek Port's container volume is primarily driven by China, accounting for about 85% of the total volume. As a result, Pyeongtaek Port plays a crucial role as a central player in trade with China.

Table 8. Major trade countries of Container port throughput in Port of Pyeongtaek (Unit: TEU)

Rank	Countries	2019	2020	2021
1	China	614,618	666,578	777,984
2	Vietnam	40,176	50,362	46,398
3	Philippine	29,851	27,754	37,787
4	Tailland	12,551	15,653	16,455
5	Hong Kong	57,000	3864	3,461
Total		725,047	732,643	910,941

Source: Pyeongtaek Port Authority

Like at Incheon Port, textile and textile articles, as well as steel products, are the primary items making up 10% each of the trade volume between China's three northeastern three provinces and Korea. Moreover, grains account for approximately 2.4%.

Table 9. Major Items of Fright Volume transported by Ship between Chinese northeastern three provinces and Port of Pyeongtaek (Unit: Thousand R/T, %)

Items		2019	2020	2021	
		Freight Volume	Freight Volume	Freight Volume	%
Total		113,201,331	106,847,350	116,298,923	100
4	Textile fibers and their products	8,807,821	9,186,872	10,777,921	9.3
5	Steel Products	12,264,178	11,087,136	10,764,444	9.3
9	Grain	2,412,413	2460781	2,733,441	2.4

Source: Pyeongtaek Port Authority

Qingdao and Weihai show high container shipment volumes, while Dalian Port accounts for approximately 8% of the overall container handling performance. However, the container handling volume of the three northeastern three provinces is lower than that of Incheon Port.

Table 10. Container Port throughput from Foreign port to Port of Pyeongtaek (Unit: Thought TEU)

Rank	Foreign Port	2019	2020	2021
1	Qingdao	105,020	115,046	114,247
2	Shanghai	59,861	97,196	130,080
3	Weihai	72,985	77,425	80,528
4	Rizhao	79,405	74,100	96,121
5	Dalian	69,920	66,708	65,032
6	Yantai	65,737	60,951	65,269
	Total	725,047	792,643	910,941

Source: Pyeongtaek Port Authority

3.2.4 Container Route of National Shipping Companies based on Chinese northeastern three provinces

There are a total of five ships from Incheon Port, two from Pyeongtaek Port, and one from Gunsan Port that are designated as national shipping routes for China's three northeastern three provinces. Among them, Pyeongtaek is operating the sole main route.

Table 11. Container Route of National Shipping Companies

Port	Service	Company	Ship	Route
Incheon	KI2	KMTC, Sinokor, HMM	3	Southeast Asia
	NCX	KMTC	1	Southeast Asia
	CK (KJP)	Dongyoung	2	Japan
Pyeongtaek	PDX4	Sinokor	1	China
	DWS	Doowoo	1	China
Gunsan		Dongyoung	1	China/Japan

Source: Incheon and Pyeongtaek Port Authority

4. Remarks

Incheon Port and Pyeongtaek Port are two major ports situated on the west coast of Korea that serve as vital international trade bases. While the sea volume of Qingdao, Weihai, and Yantai located in Shandong Province is increasing every year, Dalian, the center of maritime logistics in the three northeastern three provinces, is experiencing a gradual decline. When examining the primary cargo items at Incheon and Pyeongtaek Port, it becomes evident that textile fibers, steel products, and grains exported from the three northeastern three provinces are not being transported through Dalian Port. Even though Dalian Port has a geographical advantage, Qingdao, Weihai, and Yantai Port are being used to transport the primary items from China's three northeastern three provinces, even if it requires paying for land transportation costs. This is due to favorable logistics, flight schedules, port policies, deregulation, and incentives. To strengthen the competitiveness of maritime transportation in the three northeastern three provinces, which are currently facing challenges in terms of physical and human infrastructure, effective policies are necessary to establish a logistics hub in Korea.

IV. Revitalization of Maritime Transport between South Korea and Chinese northeastern three provinces and its collaborative efforts

1. The need for Revitalization of Maritime Transport

4.1.1. Geopolitical Perspectives

The three northeastern three provinces of China hold a significant geopolitical importance for Korea as they serve as a crucial juncture for Korea's new northern policy and China's One Belt One Road initiative. These provinces have a vital role in easing tensions and improving economic relations between Northeast Asian countries. Owing to their geographical location, the provinces share borders with Russia and North Korea, and cooperation with

them is crucial for bilateral or multilateral collaboration between South and North Korea, China, and Russia.[13] In addition, the three northeastern three provinces of China are crucial agricultural and industrial regions and hold strategic importance for defense, food security, ecological sustainability, energy security, and industrial development. As such, cooperation and engagement with these provinces are critical not only for economic reasons but also for political, diplomatic, and cultural considerations. The Moon Jae-in administration's Presidential Northern Economic Cooperation Committee has been actively supporting China's One Belt, One Road initiatives with the three northeastern three provinces to establish political trust and promote peace and prosperity in Northeast Asia.[13]

4.1.2. Economic Perspectives

From an economic perspective, the three northeastern three provinces in China play a crucial role as transportation centers that share borders with Russia, Mongolia, and the Korean Peninsula. Substantial investments in infrastructure, including railways and ports, are currently underway, enhancing the strategic importance of these provinces and positioning them as a central hub for broader economic cooperation in Northeast Asia.[14] These provinces play a crucial role in Korea's investments in China, accounting for approximately a quarter of the country's total investments in China. The development outcomes of the three northeastern three provinces have significant implications for the Korean economy. The renewed growth of these provinces has also spurred multilateral cooperation initiatives, including economic cooperation with North Korea. In 2017, North Korea relied on China for nearly 95% of its trade, mainly through logistics channels in the three northeastern three provinces.[15] Therefore, it will be crucial to establish a multilateral economic cooperation system among South Korea, North Korea, and China by cooperating economically with these provinces, if and when southern economic cooperation becomes possible.

4.1.3. Cultural Perspectives

From a cultural perspective, the Chinese three northeastern three provinces have served as a critical diplomatic and cultural mediator for over three decades of diplomatic and cultural relations between Korea and China.[16] The high level of linguistic and cultural similarity in the three northeastern three provinces has been instrumental in promoting sustainable cooperation and resolving cultural and historical conflicts between Korea and China. Cultural exchange and collaboration with these provinces have been vital in building stronger cultural ties between the two nations. Hence, it is crucial to leverage the cultural affinity between these provinces and establish a sustainable cooperation system that can further strengthen the cultural bonds between Korea and China.

2. Cooperative project of Logistic´s Revitalization

The Northeast region, which includes China's three northeastern three provinces and the Primorsky province, serves as the center of the East Sea Economic Zone. This region provides a new market for expanding cargo volume with Korea and holds enormous potential.[2] To fully utilize this potential, it is crucial to have international logistics cooperation. With North Korea's trade channels shifting towards China's northeastern and coastal provinces, these regions will become major hubs for inter-Korean cooperation in the future. Therefore, trust-based joint logistics projects between Korea, China, Russia, and Japan need to be expanded to revitalize the East Sea economic zone. This can be achieved through the establishment of an International Freight Area, which is a customs-free zone that facilitates free logistics, distribution, and trade activities. The Chinese government is implementing policies to reduce logistics costs and establish a logistics hub in the region. Joint port operations, port infrastructure construction, and shipping company operations can revitalize the Northeast Asian logistics industry. To manage risks, appropriate options include Korea-China, South Korea-China-Russia joint ventures, and joint ventures.

Moreover, it is essential to prioritize the development of the logistics-related industry.[11] To leverage South Korea's comparative advantage and strategic investment in the region, it is important to explore the potential for agricultural and fishery food processing, automobile parts, and e-commerce. To achieve this, comprehensive research on Chinese consumers' preferences, purchasing power, region, age, and income level is necessary, particularly in the area of food processing cooperation between Korea and China.

Since the goal is to export products produced in the three northeastern three provinces to Korea, logistics efficiency is critical. One potential solution is to establish joint logistics centers with nearby companies. Careful consideration should be given to the selection of logistics partners to ensure optimal transport routes and streamlined distribution networks.

3. Initiatives aimed at rebuilding trust between South Korea and China

Developing logistics infrastructure is essential for transforming the three northeastern three provinces into an international logistics hub in Northeast Asia. However, it is also crucial to rebuild trust among the parties to restore international cooperation mechanisms.[2],[4],[9] Companies interested in entering the three northeastern three provinces of China may perceive political risks as a major obstacle, emphasizing the importance of restoring trust between the Korean and Chinese governments. The government should promote ongoing cooperation with North Korea, China, and Russia and seek assistance from the international community. Efforts to ease sanctions on North Korea should continue while managing tensions on the Korean Peninsula. Recognizing the significance of international cooperation and joint development projects in logistics infrastructure is critical to promoting international cooperation in the region and realizing its potential benefits.

4. Enhancing and Strengthening Human and Cultural interchange

Incheon Port operates 10 maritime passenger routes to China, encompassing three specific routes (Yingkou, Dalian, and Dandong) that link to the three northeastern three provinces. These provinces hold immense historical and cultural significance, boasting a wealth of tangible and intangible cultural treasures dating back to the ancient Korean Peninsula regime and the modern anti-Japanese independence movement that occurred during the Japanese colonial period. To safeguard our cultural legacy, it is imperative to foster cultural exchanges and collaborations with the three northeastern three provinces. These provinces' key ports serve as vital logistics hubs for transporting inland cargo from the northeast and the Far East, bearing significant cultural value. By expanding cultural cooperation and content development and promoting human exchanges, we can effectively revitalize the maritime transport passenger business between Korea and China.

V. Conclusions

The Chinese government has been actively promoting the establishment of an amphibious logistics infrastructure to bolster port accessibility in the three northeastern three provinces. This undertaking seeks to overcome geographical impediments, enhance the foreign trade and investment environment, and promote the emergence of the three provinces as new economic centers. Since 2003, the government has been pursuing the "Northeast Promotion Strategy," which seeks to achieve balanced national development, with the three provinces being key contributors to the new northern economic cooperation.

The three northeastern three provinces of China play a pivotal role as crucial transportation hubs for maritime trade with several ports in Korea, including Incheon Port, Pyeongtaek Port, and West Coast Port. Among the various goods being transported, textile

fibers, steel products, and grains are some of the notable examples. Moreover, three passenger maritime transport routes linking Incheon Port and the Chinese three northeastern three provinces promote human interaction. Nonetheless, there has been a recent decrease in maritime traffic from the three northeastern three provinces. Despite the drawbacks of inland transportation, traffic coming in through the ports of Qingdao, Weihai, and Yantai in Shandong Province has witnessed a substantial upsurge, considering the time and cost involved.

Dalian Port, a significant port in China's three northeastern three provinces, has weaker human and material infrastructure than Qingdao, Weihai, and Yantai Port, making it an unattractive shipping option due to issues such as inadequate institutional support, procedural unfairness, and unreasonable customs clearance. Despite a recent decrease in maritime traffic, the three northeastern provinces of China have the potential to assume a crucial role in trade with North Korea and the Eurasian continent. However, establishing logistics bases is imperative to guarantee a sustained flow of maritime traffic.

Ensuring a consistent traffic flow between Korea and China's three northeastern three provinces necessitates investing in physical and human infrastructure, transportation collaboration, logistics company support, and financial incentives. In addition, it is essential to promote human, cultural, and material exchanges with the three provinces to facilitate connectivity and sustainability of the new northern policy in the future. Sustainable cooperation will be indispensable in maximizing the three provinces' potential in Korea's trade with China, establishing a logistics hub in the Far East, and fostering peaceful collaboration with North Korea.

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