

THE MEANINGS OF THE NORTHEAST ASIA TRANSPORTATION CORRIDORS: ECONOMIC GROWTH AND TRANSPORTATION INFRASTRUCTURES

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ABSTRACT

The free and efficient movement of people and transportation of goods is the most fundamental requirement for development through mutual cooperation and collaboration. Transportation infrastructure, such as roads, railways, and water transport, is indispensable for development. However, especially in developing countries, such infrastructure is inadequate in quantity as well as quality. Moreover there is a limit to the funding that can be injected into developing it. Furthermore, in developing any international routes, it is indispensable to coordinate the purposes and to unify standards of the participating countries. Considering such conditions, it is necessary to select some trunk routes in this area, and invest financial and human resources to develop those routes intensively.

KEYWORDS

Transportation corridors, discontinuous points, Free Trade Agreement (FTA)

MAIN TEXT

1. Northeast Asia Transportation Corridors

1-1. Northeast Asia Transportation Corridors Vision

Nine Corridors and their Discontinuous Points

The Northeast Asia Economic Conference, which has been held continuously from 1990, established an organizing committee as an executive committee, so that interested parties could be involved in related activities throughout the year. Transportation and a physical distribution subcommittee were established first.

Based on reports from each country at the conferences, and on field surveys carried out by the Economic Research Institute for Northeast Asia (ERINA), the subcommittee has identified nine corridors that can be used by all the countries of the region as major international transportation routes. This network has been named the “Northeast Asian Transport Corridors” (NATC). These corridors vary from fully utilized corridors to those still in the conceptual stage. But, they are expected to become major corridors for international transportation in the region in the future (see Table 1 and Figure1).

The final status of the future NATC, at which we are aiming, is as follows.

- a network in which transportation can take place throughout the whole region as smoothly as it does within a single country
- enhanced and expanded containerization of transportation
- a network that is effectively connected to transportation networks outside the region.

From this point of view, there are still many barriers in the NATC that prevent smooth transportation. We call these barriers discontinuous points (DCPs), and they exist near borders:

- ① DCPs caused by unconnected railways or roads
- ② DCPs caused by differences in railways gauge
- ③ DCPs caused by CIQ inspections at borders
- ④ DCPs caused by limitation of range for truck’s driving in.

Table 1. Outline of the Northeast Asian Transportation Corridors

Name of Corridors	Functions	DCPs
1 . Vanino / Taishet	Alternative route of SLB	①②
2 . Siberian Land Bridge (SLB)	Alternative route of All Water Asia/Europe route.	②③
3 . Suifenhe	Exit to the sea for Heilongjian	②③④

	Province	
4. Tumen River	Exit to the sea for Mongolia and Jilin Province	①②③
5. Dalian	The main artery running through three northeast provinces of China	①
6. Tianjin / Mongolia	Shortest route of Mongolia to seaports	①②③
7. China Land Bridge (CLB)	Connecting from East Asia and Central Asia	②③
8. Korean Peninsula West	Connecting to SLB. Diversification of the routes for East Asia to Europe	①③
9. Korean Peninsula East		①②③

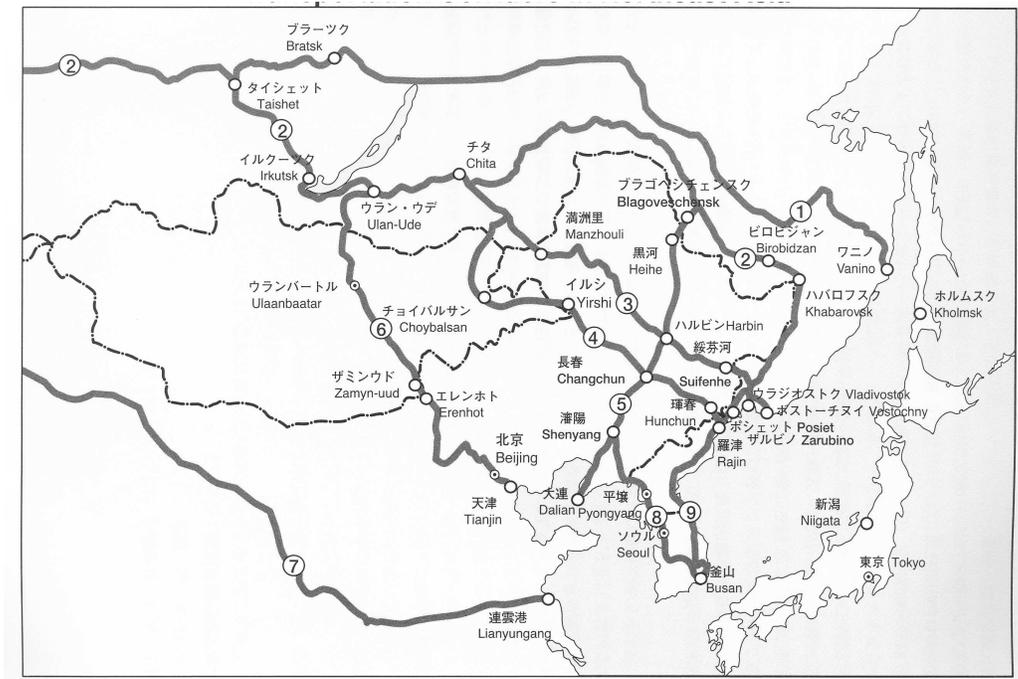


Figure 1. Map of the Northeast Asian Transportation Corridors

Realization of the NATCs

In order to realize the vision, it is indispensable for it to be reflected in the road traffic policy of the government of each country. The organizing committee has worked with the governments of related countries and the United Nations. ESCAP has already expressed its interest in joint research, bearing in mind the expansion design for the Asian Highway Project.

The subcommittee recently has set up a very active working group to realize the Tumen River Corridor. This corridor connects and covers many countries and regions, and also activities of the UNDP, so that its realization will have many effects.

1-2. The Existing Transportation Corridor Visions

The Asian Highway Project, Crete Corridor and Mercosur

The most popular vision in Asia is the Asian Highway Project (AHP). It was suggested by Japan, and the United Nations adopted the AHP in 1959, and the secretariat was founded by ESCAP in 1968. At the beginning, it was aiming to form an integrated road network through specifying the existing roads as a part of AHP and the road policy of each country being communalized. Then, the ESCAP cabinet-members meeting in 2001 decided to conclude an agreement that defines the signs and standards of a road. The contents of the agreement were determined by the meeting of specialists in 2003.

In 2004, an intergovernmental agreement was signed by 23 nations, including Japan and China, at the ESCAP general meeting in Shanghai. The road network, which comprises about 140,000km of roads and connects 32 nations, began to move. As a result, it is expected that the economic integration of Asia will accelerate.

Eastern Europe provides the example of the Crete Corridor Vision, which was determined in the 2nd Pan European Transportation Meeting held in Crete in 1994.

The policy of the EU expanded toward the east from the middle of the 1990s and has placed emphasis on improvement and unification of a standard for trunk roads and rail networks in Central and Eastern Europe. This network is known as the European Corridors. In 1994, as part of these efforts, the Pan Europe Transportation Meeting determined to expand the European Corridors toward Eastern Europe, to put the international shipment of this area into a view, and selected nine corridors.

South America provides the example of the Mercosur vision. Mercosur is the customs union formed in 1995 by four nations in South America: of Brazil, Argentina, Uruguay, and Paraguay. Later Chile and Bolivia joined it through a Free Trade Agreement (FTA).

Mercosur is an agreement on a common market in South America. In order to realize a common market, they share a trunk road network vision for the region.

Meaning of a transportation corridor vision

The free and efficient movement of people and transportation of goods is the most fundamental requirement for development through mutual cooperation and collaboration. Transportation infrastructure, such as roads, railways, and water transport, is indispensable for development. However, especially in developing countries, such infrastructure is inadequate in quantity as well as quality. Moreover there is a limit to the funding that can be injected into developing it. Furthermore, in developing any international routes, it is indispensable to coordinate the purposes and to unify standards of the participating countries. Considering such conditions, it is necessary to select some trunk routes in this area, and invest financial and human resources to develop those routes intensively.

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2. Economic Growth and Transportation Infrastructure

2-1. Japan's Experience

Transportation and traffic of people and goods are an inevitable phenomenon accompanying any economic activity. Efficient production is unrealizable, if the materials cannot be obtained in the quantity needed and at a suitable cost when they are required. The goods become useless, if a required quantity is not obtainable at a suitable price when a consumer needs them. In the 1950s our country experienced inadequate growth in transportation infrastructure, which did not maintain pace with the growth in traffic. The transportation sector therefore did not function smoothly, and economic growth was adversely affected.

When the Second World War ended in 1945, the transportation infrastructure of our country suited the very inferior situation caused by war damages and lack of maintenance and repairs during wartime. For example, port facilities in 1946 had fallen to one-third of

the level of prewar days. In a postwar revival process, scarce capital was concentrated and invested in production increases of food, coal for solving an energy scarcity, basic materials such as steel, and disaster prevention. Scarce capital was not invested in transportation infrastructure, either to restore old facilities or to develop new ones.

In such a situation, the special procurements of the Korean War which broke out in 1950 pulled the economy of our country into a growth orbit. High economic growth started in the second half of the 1950s. A lot of demurrage phenomena occurred mainly at the six major ports, such as Yokohama and Kobe, and it became a big social problem. Cargo shipments were congested and led to a situation in which the economic growth rate might be reduced.

As Table 2 and Figure 2 show, when the economy grows rapidly, transportation activities exceed the growth of economy. Transportation activities exceeded the growth of economic activity during the “Jinmu Prosperous Days” of the second half of the 1950s and the “Izanagi Prosperous Days” of the second half of the 1960s.

The government’s economic plan, called the “National Income Doubling Plan,” was decided in 1960 “to solve the bottleneck of economic growth” and became the important policy, and designated substantial social capital, including traffic and communication, as problems of the utmost importance. In response, plans such as the Ports and Harbors Five-Year Improvement Plan were to be determined by the government, and the development of a transportation infrastructure was to be advanced purposefully and intensively.

Table 2. Economic Growth and Transportation Activities

Year	Real GNP (2000 prices)		Transportation Activity	
	trillion yen	growth rate (%)	billion ton-km	growth rate (%)
1955	47.2	8.7	52.8	21.0
1960	71.6	9.2	136.9	6.4
1965	111.0	11.1	186.3	13.5
1970	187.9	4.5	350.9	0.6
1975	234.2	4.4	360.8	4.0
1980	290.5	3.4	439.1	-0.2
1985	344.1		434.4	

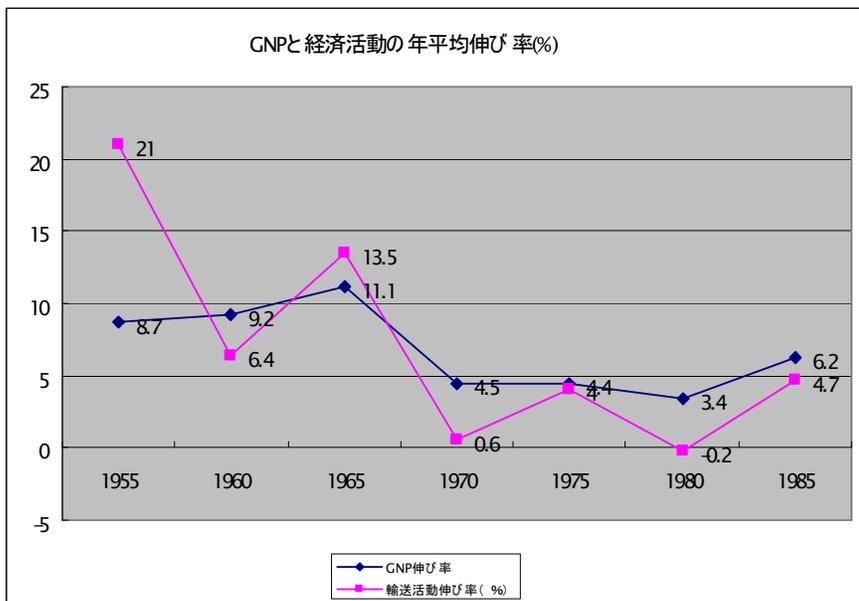


Figure 2.

2-2. Transportation and Logistics

"Kanban System" of Toyota Motors

The "Kanban System" is the typical production process of Toyota Motors. Speaking typically, attaching the tag (*kanban*) to parts (a simple material or lot) required for a manufacturing process, removing the *kanban* in the stage used for manufacture, and returning it to a part supplier. A part supplier sends out the following lot to the manufacturing process when he receives the *kanban*. It is an effective method for keeping stock at a minimum by supplying the required parts in the required quantity and just in time for the production process. The "Kanban system" is a system realized only after efficient and smooth transportation is guaranteed.

Logistics of "value discovery"

Sony, another famous Japanese company, has given much attention to transportation. Mr. Yasumasa Mizushima, a specialist on physical distribution in this company, wrote the

book *Logistics of "Value Discovery"* recently. His main opinions are as follows.

- The essential role of physical distribution is discovering the worth of goods.
- If the customer cannot obtain goods that will fulfill his conditions of time, place and quantity, the goods will be unacceptable regardless of their value.
- The worth of goods is discovered by moving them in time and space, so that the value inherent in the goods can be recognized.
- Six basic operations are involved in the worth of the goods: transportation, storage, cargo work, packing, distributive processing, and information processing.
- "Logistics" involves developing the six basic operations strategically.

CONCLUSION

I heard from Mr. Norio Ooga, the chairman of Sony, several times when I was in the Ministry of Transport, and I learned many things primarily that,

"Managers in the manufacturing industries of Japan have tried hard for a long time to reduce production costs. As a result, the production costs of the manufacturing industry in Japan are among the most competitive in the world. However, there are few at the top who pay attention to transportation. Those at top levels tend to leave transportation to people in charge of manufacturing, and they do not take an interest in transportation. Transportation costs and inventory costs during transportation are reflected in the price, but they do not pay attention to this."

This was an impressive argument. According to research in 2000 by the Japan Logistic System Association, the ratio of the physical distribution cost of all the types of industry in our country accounted for about 6 percent of the sales.

Sales are the countervalues to the value which a customer calculates. If I may borrow and expression from Mr. Mizushima: it will be "a countervalue to the discovered value."

Table 3. Ratio of the physical distribution cost occupied in sales

Type	Ratio
All Type	5.87%
Manufacturing	6.26
Non Manufacturing	4.99

Data: Japan Logistics System Association (2000)

favorable economic development.

In order to simulate demand and to raise the GNP, at a time when it seems that the reductions in manufacturing costs have mostly reached the limit, the reduction in physical distribution cost is a big issue. The existence of a transportation corridor, supporting efficient and smooth physical distribution, is indispensable to

NOTES AND DATA

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