Abstract

The purpose of this study is to elucidate characteristics and factors on hinterland, and relations between hinterland and port space through the process of the formation of a port hinterland. This kind of study is not seen much in geographical research, though ports have been greatly transformed in recent years. This study is chiefly analyzed from the aspect of the transportation network and the industrial structure in the port hinterland. Kushiro port, which is the largest port in the eastern part of Hokkaido, is selected as a study area.

In this study, the following things are clarified.

In the pioneering age, some penetration lines extended from the port and the port came to play the role of the gateway to the interior. One penetration line grew up into a rail trunk line and brought the port a large amount of cargo, and modern quays were constructed instead of the past trading beach.

Before the 1960s, a transportation network dominant in railways was formed. At the beginning of this rail dominance era, the Karikachi Pass, which was a traffic bottleneck, decided the sphere of the hinterland of the Kushiro port. As the Kushiro port was chiefly constructed for mass rail transport and coal export, a vast site for rail transport and a coal yard were prepared in and behind the wharf. This divided the port from the town.

Motorization forms a transportation network dominant in trucks. The area within a radius of about 120 km, which is the distance a truck is able to shuttle in a day trip, determines a port hinterland. But as for the ferry cargo, ferry ports make the whole area of Hokkaido hinterland. And international relations with Russia and the influence of drift ice in the Sea of Okhotsk are other factors in deciding the size of the port hinterland. A new port was constructed to meet the changes of the industrial structure and the development of motorization in the port hinterland. Port space of the old port has been reorganized into amusement space as a result of the construction of the new port.

Keywords: port hinterland, port space, transportation network, gateway, industrial structure, motorization

List of Figures

		Page
Figure 1	Location of Cities in Hokkaido and Towns and Villages in the Eastern Part of Hokkaido	10
Figure 2	Distribution of Major Ports in Hokkaido in 1999	12
Figure 3	Map of the Kushiro Port in 1999	13
Figure 4	Population Change in Shibecha Town (1885-1935)	19
Figure 5	Period of the Opening of Roads in Shibecha Town before World War II	20
Figure 6	Development of Rail Network in the Meiji Era and the Taisho Era	22
Figure 7	Amount of Railway Freight by Stations on Kushiro Line in 1905	28
Figure 8	Amount of Railway Freight by Stations on Senmo Line in 1932	32
Figure 9	Amount and Type of Cargoes by Major Ports in Hokkaido in 1932	35
Figure 10	The Kushiro Port in 1890	37
Figure 11	The Kushiro Port in 1903	39
Figure 12	Rail and Road Networks in the Era of Rail Dominance (1961)	43
Figure 13	Share of Cargo by Commodity Group in Hokkaido and Japan in1966	49
Figure 14	Changes of the Transport Share of Cargoes in the Kushiro Port	51
Figure 15	Outbound Movements by Commodity in the Eastern Part of Hokkaido in Jun. 1966	52
Figure 16	Inbound Movements by Commodity in the Eastern Part of Hokkaido in Jun. 1966	56
Figure 17	The Port of Kushiro in 1968	60
Figure 18	Schematic Diagram of Port Space and Surroundings of East port in Jun. 1968	65
Figure 19	Rail and Road Networks in the Era of Truck Dominance	67
Figure 20	Population Change in Akan Town by Settlement	70
_	Presumed Amount and Type of Ferry Cargo by Major Port in Hokkaido in 1993	74
	Share of Cargo by Commodity Group in Hokkaido and Japan in 1993	75 75

Figure 23	Share and Amount of Total Export Cargo of the Kushiro Port in Oct. 1993	77
Figure 24	Outbound Movement of Wheat in the Eastern Part of Hokkaido in Oct. 1993	79
Figure 25	Outbound Movements of Food Industrial Goods in the Eastern Part of Hokkaido in Oct. 1993	80
Figure 26	Fresh Milk Movements from the Eastern part of Hokkaido to Honshu in 1998	82
Figure 27	Share and Amount of Total Import Cargo of the Kushiro Port in Oct. 1993	85
Figure 28	Inbound Movements of Oil Products in the Eastern Part of Hokkaido in Oct. 1993	87
Figure 29	Inbound Movements of Heavy Oil in the Eastern Part of Hokkaido in Oct. 1993	89
Figure 30	Inbound Movements of Cement in the Eastern Part of Hokkaido in Oct. 1993	90
Figure 31	Inbound Movements of Natural Fertilizer in the Eastern Part of Hokkaido in Oct. 1993	92
Figure 32	Destination of Fodder from Fodder Plant in Kushiro in 1998	94
Figure 33	Outbound and Inbound Movements of Ferry Cargo in the Eastern Part of Hokkaido in Oct,1993	99
Figure 34	East Port of the Kushiro Port in 1998	101
Figure 35	Schematic Diagram of Port Space and Surroundings of East Port in Sep. 1998	104
Figure 36	West Port of the Kushiro Port in 1998	106
Figure 37	Location of Port Facilities in Second Wharf of West Port in Sep.1999	108
Figure 38	Schematic Diagram of Port Space and Surroundings of West Port in Sep. 1998	110
Figure 39	Development Diagram of Transport Network and Hinterland	115
Figure 40	Diagram of Transport Network in the Era of Rail Dominance	118

Figure 41	Diagram of Transport Network in the Era of Truck Dominance	119
Figure 42	Rail and Truck Networks of Hokkaido in 1931	121
Figure 43	Road Network of Hokkaido in 1931	123
Figure 44	Cargo Movements by Traffic Mode in the Eastern Part of Hokkaido in Jun. 1966	124
Figure 45	Diagram of the Progress of Port Hinterland	124
	Diagram of Port Hinterland by Commodity	131
	Amount of Import Oil Products in the Kushiro Port and the Abashiri Port by Month	
	•	134

List of Tables

	Page
Table 1 Amount of Export Cargo of the Major Ports in the E	Eastern Part of
Hokkaido, by Commodity Groups in 1966	46
Table 2 Amount of Import Cargo of the Major Ports in the E Hokkaido, by Commodity Groups in 1966	Sastern Part of 47
Table 3 New Addresses of Pople Separated from Yubetsu Cos (Sep. 1, 1970)	al Min ing Co. 69