

## CASE STUDY: JAPANESE BUSINESS PRACTISE

*In Japan transport infrastructure has been developed primarily via user payments. Even for services that operate under the budgetary system, the user pay principle is still valid to a certain degree. However, in recent years this principle has been debated in terms of limitations, in particular, how well it reflects the characteristics of externality. If external effects are taken into consideration, this means that then costs of transport infrastructure should be shared by all beneficiaries in a wider sense. In this respect, it is also necessary to increase the public financing when it is justifiable.*

Historically the changes in the size of public investments in infrastructure have been varying in response to the changes in economic planning. There had been changes in the contents of public expenses too. The economic plans before the 1960s show that resources were distributed to maximise the economic growth via concentration of infrastructure investment<sup>1</sup>. The economic plans from late 1960s were aiming to improve the regional disparity and deteriorating living standards. Japanese economists explain this with the fact that the WWII did not cause many damages and the ratio of public spending from GDP varied between 0.02 and 0.14 in the period of 1885-1945 (from Meiji era). In fact, the real GDP was high after the war because of already existed infrastructure<sup>2</sup>.

The objective of this case is to give a perspective of the Japanese practice to finance maritime infrastructure as the focus is on the private investments. The existing business practices will be explored as the public funding will be also discussed when it is entangled with the private financial sources. The case study looks at Japan's big steelmakers and their investments in transportation. It aims to provide policy-makers, policy and financial analysts, consultancies and professional organisations with structured information about the topic.

Recently, coastal services account for about 40% of the domestic cargo transportation, transporting nearly 80% of important industrial materials (steel, cement, petroleum, etc.) to support the Japanese economic growth<sup>3</sup>. Shipping along Japanese coastal line is a 1.5 trillion yen industry (about £6.5 billions)<sup>4</sup>. What makes the shipping prosperous is the long-established business practice in Japan that manufacturers transport their products all the way to the doors of their customers. The transportation costs are calculated in the products' prices, therefore, to minimise production costs manufacturers combine coastal shipping with trucking.

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<sup>1</sup> New Long-Term Economic Plan (1958-62) reinforced public investments in modernisation of transportation capacity

<sup>2</sup> Japan Bank for International Cooperation, Fujimoto K., "Infrastructure for development in the 21st century, JBIC Review No3

<sup>3</sup> Ministry of Land, Infrastructure and Transport, Annual report 2007, Japan

<sup>4</sup> Diamond, "Realignment of the Coastal Shipping Industry", March 2002 Japan

There were 3,700 small companies that competed for a piece of the coastal traffic. To protect small businesses, entry is restricted; shipping fees are regulated and the balance between supply and demand is observed. These usually maintain the coastal fees at a high level. A number of joint management companies have been established to coordinate the management of coastal vessels. Operator – shipowner distinction has been eliminated since 2002. This forced many operators to either shut down or merge with their competitors to reduce costs. In 2006, the coastal entities reached the number 3,183 as 99.6% of them were medium or small-sized enterprises<sup>5</sup>.

Japanese corporations play an essential role in financing the coastal services. Nippon Steel Corp invests billions of yen per year in improving and strengthening its distribution infrastructure – some of them via its daughter company Nippon Steel Engineering Co. Transportation and storage steel products did cost the company 87.5 billion yen in 2007. Delivering steel products from its mills to domestic users costs JFE Holdings, Inc.<sup>6</sup> up to 100 billion yen annually. The big business invests in coastal infrastructure and vessels as there are provided guarantees from the national government too.

The financial schemes with governmental support usually involve private and public bodies – for instance, private financial institutions, Japanese national agencies, Japan federation of shipping associations, and companies. The shipbuilders such as Nippon Steel, Sumitomo Corp, JFE Holdings, Mitsui Engineering and Shipbuilding Co, etc. play a vital role in this process as they contribute to the repayment of the loans, no matter that they do not receive subsidies directly. In 2005, the Coastal Shipping Business Law was partially revised in order to strengthen the organisational control within shipping operators in terms of obligations for safety control procedures. Many small and medium-sized operators applied for these subsidies in 2006 and 2007. The total subsidies granted by the government were 122.7 billion yen, while 52.1 billion yen was contributed to the national government by the owners of 668 vessels<sup>7</sup>.

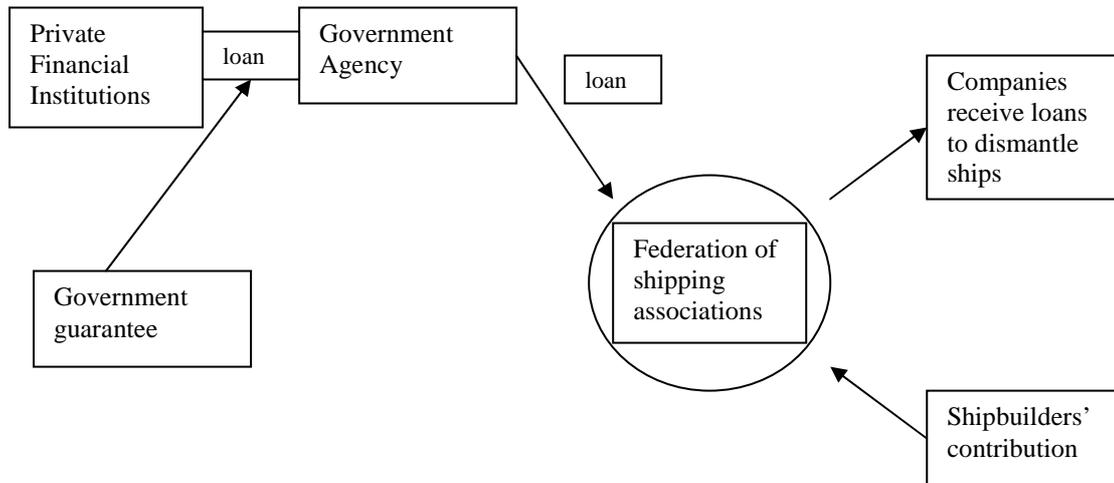
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<sup>5</sup> Ministry of Land, Infrastructure and Transport, Annual report 2006, Japan

<sup>6</sup> JFE Holdings, Inc. is a merger of NKK Corp and Kawasaki Steel Corp

<sup>7</sup> Ministry of Land, Infrastructure, Transport and Tourism 2007

**Fig. 1 Outline of a national financial scheme**



There is limited public funding for maritime infrastructure in Japan. Apart from the government guarantees on loans, another form is the Special Account. This is created as part of the general government budget restricted to a special purpose.

The representative special accounts in Japan are the Special Account for Airport Improvement, the Special Account for Road Improvement and Special Account for Port Improvement. Their budgets are based on the revenue payments by the users of this infrastructure, except in the case of Port Improvement account where the main source of revenues are the receipts from the general budget. Because of this, Japanese economists argue that the principle of funding ports development is not transparent in terms of sharing costs<sup>8</sup>.

The private investment supports the development of maritime infrastructure and vessels significantly. In detail, Nippon Steel Corporation has a total of 86 berths for domestic shipping at its steelworks – Yawata, Hirohata, Muroran, Oita, Kimitsui, Nagoya, Hikari, Sakai, Kamaishi and Tokyo, including six “all-weather” berths. Three more were being under construction. Almost all of the steelworks in Japan are located on the coast, and hence, the coastal shipping plays an important role in transporting steel products to major stocking points where shipments are transferred to trucks for delivery to users. The steel industry transports 61% of their products by ship and rail; and 39% by truck for delivery distance of 500km and over<sup>9</sup>. Nippon Steel Corp uses shipping and railway services for the transportation of 95.6% of their steel products:

<sup>8</sup> Japan Bank for International Cooperation, Hiroataka Yamauchi “Characteristics and cost sharing of transport infrastructure”, *JBIC Review* No 3, 2008

<sup>9</sup> Ministry of Land, Infrastructure, Transport and Tourism

**Table 1: Nippon Steel Products Shipment** (million tonnes)

	1 <sup>st</sup> quarter	1 <sup>st</sup> half	3 <sup>rd</sup> quarter	4 <sup>th</sup> quarter	2 <sup>nd</sup> half	<b>TOTAL</b>
2006	7.59	15.42	7.96	8.13	16.09	<b>31.51</b>
2007	7.89	16.04	8.23	8.63	16.86	<b>32.90</b>
2008	8.08	Approx 16.50	-	-	-	

Source: Nippon Steel Corporation; Consolidated Operating Performance, Financial Results for the First Quarter of 2008FY, July 2008, [www.nsc.co.jp](http://www.nsc.co.jp)

The Corporation utilises the services of its own vessels. In addition, Nippon Steel and China Steel Corp of Taiwan started combined transport in 2007 using vessels owned by Nippon Steel Shipping Co., Ltd. Their agreement is for a cooperation of vessel facility utilisation<sup>10</sup>.

Nippon Steel had invested about 30 billion yen in improving their domestic logistics infrastructure in the 1990s; having included 6.5 billion yen for four all-weather berths, 13.8 billion yen for four automated warehouses. The same tendency toward vertical integration continues even when it invests abroad. USIMINAS in Brazil, an equity-method-applicable company of Nippon Steel announced their investment plans of \$14.1 billion up to 2012 in capacity expansion. This includes an acquisition of 850 thousand square meters in Baia de Sepetiba, a port area in the Rio De Janeiro State for constructing a shipping terminal<sup>11</sup>.

The other steel producer, JFE Steel Corp (JFE Holdings) ships and rails 67% of its products<sup>12</sup>. Its steel factories are located on the coast at Chiba Bay/Tokyo Bay, Mizushima Port, Chita Bay, Keihin (Tokyo Bay) and Fukuyama. Before the merger of NKK Corp and Kawasaki Steel Corp, Kawasaki itself had been investing in equipment and facilities related to transportation and physical distribution at the rate of about 2 billion yen per year until early 90s. Then there had been a shift in company policy under which only investments with the highest effect were followed.

Sumitomo Metal Industries, Inc. focuses on steel sheets, tubes and pipes. Its factories are located on the coast at Wakayama, Osaka, Tokyo. Sea transport accounts for about 90% of all domestic deliveries that Sumitomo offers annually. Internationally, in 2004 it signed an agreement for shared allocation of vessels with the ThyssenKrupp Steel Group to improve distribution efficiency of raw materials on a global scale<sup>13</sup>.

Mitsui Mining Company Ltd. owns six private piers that provide berths for large vessels. Coal and raw materials are unloaded and transported to the industrial zones. Dedicated port facilities to Mitsui are located in Kyushu (Hibikinada district, Wakamatsu). The company invests in transportation, port and cargo handling facilities<sup>14</sup>.

<sup>10</sup> Nippon Steel Corp, Annual Report 2007

<sup>11</sup> Nippon Steel Corp, Newsreleases, [www.nsc.co.jp](http://www.nsc.co.jp)

<sup>12</sup> JFE Group, Business Report 2008

<sup>13</sup> Sumitomo Metals, Annual Report 2007, Environment Volume

<sup>14</sup> [www.mitsui-mining.co.jp](http://www.mitsui-mining.co.jp)

In the end, all Japanese corporations affiliated with hundreds of other companies (*keiretsu* type) have established vertically integrated structures and covered areas such as financial services, electronics, natural resources, chemicals, transportation and logistics, trading, etc. They invest in transport infrastructure/services in order to satisfy their clients with the best customer service. There are well-established traditions in this area. The rationalisation of the distribution systems in Japan began in 1960s and meant to turn the delivery of goods into a highly efficient system. It is also an important area for cost-cutting of production expenses.

Summing up the case study, the primary investments in the sector are private as the public funding is limited to the government guarantees on loans and the special account system. As mentioned earlier, the cost burden of infrastructure should be shared between direct beneficiaries and those who enjoy positive externalities. Internalising the external effects will not only contribute to fair sharing of cost burden but also will increase the efficiency of resource allocation. The effort needs to be directed toward reaching consensus for introducing a desirable mechanism. From this point, since the coastal shipping is an environmentally-friendly mode and provides positive externalities (reduce road congestion and accidents), it may benefit from additional public funding in the future.