Prospects for Full-Fledged Competition in the Coastal Shipping Industry

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Coastal shipping is a vital form of transport that accounts for 41.7 percent of Japan's freight volume (FY 1997). Since the industry consists mainly of small and mid-sized operators, shipping capacity has tended to be excessive relative to transport demand. To curb this tendency, a scrap and build (S&B) scheme was implemented in 1966 which restricts new shipbuilding in many cases to replacing but not expanding existing tonnage capacity.

However, extended use of the S&B scheme also produced negative effects such as restricting the growth of ambitious operators and blocking out new entrants. Moreover, the ship building permits that ship owners obtained by scrapping old capacity acquired value as assets that could be traded or used as collateral for bank loans.

Amid growing demand throughout the economy to reduce distribution costs, calls to deregulate coastal shipping and introduce market principles, in May 1998 the S&B scheme was replaced by a new framework called the coastal shipping provisional measures business. However, barriers to entry remain high and free market principles have yet to take hold.

1. Revision of Coastal Shipping Regulations

(1) Averting Volatility with the Transitional Business Scheme

Until May 1998, the S&B scheme formed the centerpiece of coastal shipping regulation. Under this scheme, new ships could be built only after scrapping a certain percentage of existing ships of the same category.[1] This scheme, which was set up in 1966 and remained in force for over three decades, stipulated in many cases that replacement capacity be less than scrapped capacity.

As a result, the right to build new capacity was treated as a corporate asset on balance sheets and recognized by banks as collateral for bank loans. This proved to be a major hurdle in eliminating the S&B scheme because balance sheets would be adversely affected, making it more difficult for operators to obtain bank financing for working capital. The Transitional Business Scheme was designed to alleviate such disruptions.

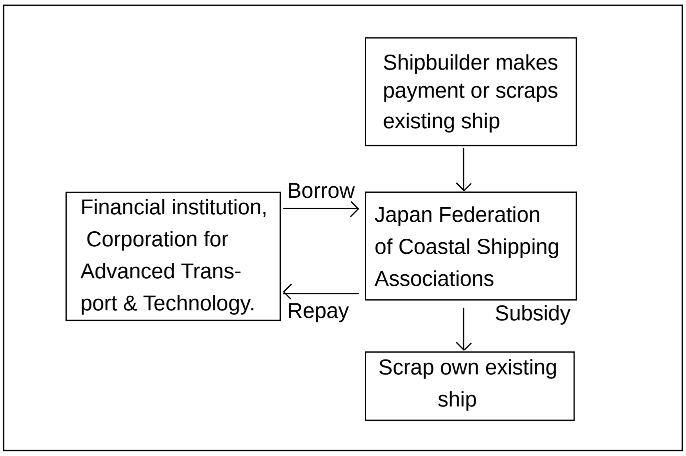
(2) Transitional Business Scheme for Coastal Shipping

Under the Transitional Business Scheme, when an operator scraps existing capacity, the Japan Federation of Coastal Shipping Associations extends a subsidy equivalent to the value of the S&B allotment.[2] The objective is to compensate operators for the loss of the asset value of S&B allotments.

The subsidies are funded by payments shipbuilders must make corresponding to the new capacity (consisting of the subsidy amount, plus administrative fees and estimated interest on loans as explained below). However, if the builder of a new ship also scraps an existing ship of the same type, the payment corresponding to that capacity is waived. Thus if the owner of a ship is replacing existing capacity, conditions are largely unchanged from the S&B scheme.

Since the program is expected to face financial difficulties at first, the Federation has arranged to borrow necessary funds from financial institutions and the Corporation for Advanced Transport & Technology. The program is designed to end when financial balance is achieved (Figure 1).

Figure 1 Transitional Business Scheme for Coastal Shipping



Note: At first, the Japan Federation of Coastal Shipping Associations will pay subsidies by borrowing from financial institutions and the Corporation for Advanced Transport & Technology, and repay the loans with payments from shipbuilders. The program will be continued until it breaks even.
Source: Ministry of Transportation, Marine Transport Bureau, "Status of Japan's Maritime Transport 1998," and other documents.

2. Causes of the S&B Scheme's Longevity

(1) Frailty of Small and Mid-Sized Companies

Several structural factors lie in the backdrop to the S&B scheme. The industry consists of operators, who contract with consignors, and ship owners who (wet) lease the ships to operators. Most ship owners are small or mid-sized companies with weak foundations. In addition, the industry is plagued by a chronic condition of excess capacity. To bring stability to the industry, two coastal shipping laws were enacted in 1964: the Coastal Shipping Law, and the Coastal Shipping Association Law. These laws have regulated coastal shipping for ships 20 gross tons and larger.

(2) Longevity of the S&B Scheme

The two coastal shipping laws addressed three areas: strengthening the business foundation of operators, adjusting shipping capacity, and improving conditions of transactions (Figure 2). The S&B scheme was meant to achieve the second objective by adjusting the capacity of proprietary vessels. Generally, adjustment is called for only when extreme competition creates unstable business conditions.

Had the S&B scheme been temporary, the problem of allotments would not have emerged. In practice, however, as excess capacity was alleviated, concern for transport stability led to permission to construct ships, including those whose freight was guaranteed. This increased excess capacity, triggering the need for further S&B adjustment in a repetitive cycle lasting over the past three decades.

Table 1 Regulations Stipulated by the Two Coastal Shipping Law

	Coastal Shipping Law	Coastal Shipping Association Law
Business Fundamentals	*Entry restrictions* Licensing: for ships with gross tonnage of at least 100t or length of at least 30 meters. Application: for ships with gross tonnage less than 100t or length less than 30 meters. License requirements: Tonnage meets requirement for business. Has appropriate business plan. Has capability to conduct business.	
Appropriate Tonnage	Conforms to demand (does not destabilize market) Does not exceed maximum tonnage limit *Determination & announcement of appropriate tonnage* Performed annually for next five years for tonnage likely to cause gap in supply and demand. Shipbuilding tonnage guidelines,criteria for maximum tonnage. *Setting maximum tonnage* If coastal shipping tonnage greatly exceeds appropriate tonnage,maximum tonnage is set for a 1 year Period.	*Adjustment* If competition among shipping association members exceeds normal levels,hindering activity of coastal shippers and destabilizing business,association can make following adjustments: -Owned tonnage -Assigned tonnage
Improvemant of Transaction Terms	*Standard fees, rates,and lease rates* While rates are basically unregulated, standard fees and rates may be set if deemed necessary to the sound development of coastal shipping. Operators who deviate from standard rates and fees may be subject to appropriate disciplinary action.	Fees,rates,lease rates -Other rates -Cargo volume and undertaking method -Procurement volume and undertaking method -Procurement volume,method and price of fuel and other materials These measures are not subject to the Anti-Monopoly Law.

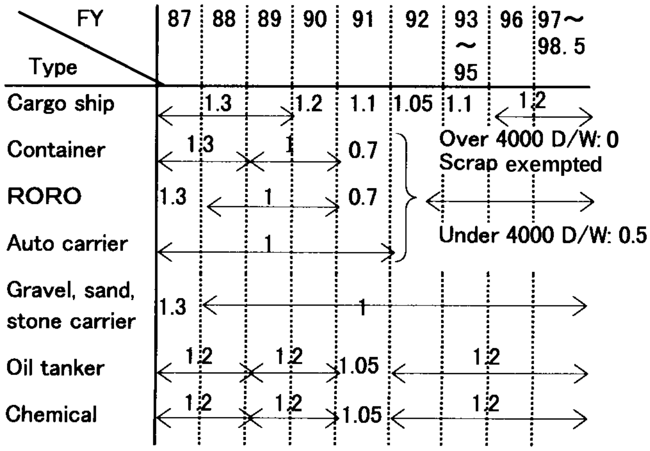
Note: All announcement and establishment of regulations, granting of permission, and call for applications are made by the Minister of Transportation.
Source: NLI Research Institute

(3) The High Scrap-to-Allotment Ratio

In the initial stages, the ratio of scrapped capacity to newly allotted capacity was one to one. In 1978, this ratio was increased to 1.3 to one for freighters. As Figure 3 shows, in recent years the scrap-to-allotment ratio for most ship categories required scrapped capacity to exceed new capacity in varying degrees.

The high scrap-to-allotment ratios, together with the prolonged S&B scheme, encouraged the asset-like treatment of new capacity allotments. At their peak price levels, these allotments reached the equivalent of 1.2 times the construction cost of ships.

Figure 2 S&B Allotment Ratios for Major Ship Categories



Note: Allotment ratio refers to the proportion of shipping capacity that must be scrapped to build new capacity.
Source: Japan Federation of Coastal Shipping Associations, "Regulations for the Adjustment of Owned Shipping Capacity "; Research Group on Coastal Shipping Policies, "Present Status and Issues for Coastal Shipping in Japan."

(4) Revision of the S&B Scheme

Amid the growing economy-wide demand for deregulation in the 1990s, a movement began to scrap the S&B scheme itself, which is nothing but a cartel. Several factors were involved: (1) a growing dependence on allotments primarily among smaller operators; (2) concern that the industry was losing vigor by restricting the growth of ambitious operators and new entrants; and (3) declining ability to address industry issues such as finding good personnel and increasing transport efficiency.

To alleviate these problems, the three-decade old S&B scheme was replaced in May 1998 by the Transitional Business Scheme.

3. Lingering Barriers to Competition

(1) Financial Difficulties of the Transitional Business Scheme

Since its implementation this May, the Transitional Scheme's subsidy outlays have largely exceeded revenue from payments. In the first half of fiscal 1998, subsidy applications were received for 382 ships. On the other hand, due in part to depressed (wet) leasing fees and shipping charges, applications for ship building have slumped, and only 12 approvals have been issued. Moreover, since existing ships aged 15 years or less are eligible for subsidies until September 2014, almost all existing ships will be eligible for subsidies. To fund these subsidies with payments derived from newly built shipping capacity, the new capacity will need to equal existing capacity.

Thus if the present slump in ship building continues, the program could fail due to a lack of funding. Since the program needs to be sustained over a long period, the scheme may have to be extended beyond the subsidy payment period (September 2014.)

(2) Unresolved Problems from the S&B Era

The outlook remains dim regarding the resolution of problems caused by the prolonged use of the S&B scheme. The newly implemented program is expected to last at least until the 16-year subsidy period ends, if not longer.

Conditions of limited competition are expected to remain under the new scheme. The construction of new ships no longer requires that existing ships be scrapped. But due to the required payment equivalent to the value of an S&B allotment, the total cost of building a ship is still 1.4 to 1.6 times greater than otherwise, constituting a formidable barrier to entry. The limited competition stunts efficiency improvement and discourages the introduction of new services.

4. Low Efficiency and Lack of New Services

(1) Low Efficiency

To see how promoting competition can improve operating efficiency, we will draw comparisons with the trucking industry, a recently deregulated industry also comprised of many small and mid-sized companies.

After market adjustment restrictions were abolished in December 1990, the number of truck operators increased from 40,000 in 1990 to 48,000 in fiscal 1996.[4] In addition, rates have declined continuously since fiscal 1992.

One measure of efficiency improvement is total factor productivity (TFP), which expresses changes in production volume not attributable to input changes such as labor and capital. Thus an increase or decrease in TFP can be interpreted as reflecting an improvement or decline in productivity.

The trucking industry's TFP remained unchanged from fiscal 1981 to 1985, and rose a scant 0.3 percent annually from fiscal 1986 to 1990 (Table 2).[5] From fiscal 1992 to 1994, after deregulating, TFP increased by 0.8 percent per year. The only other transport industry to post TFP gains in the same period was air freight, which saw growing competition on international routes. Thus the trucking industry's TFP gains are significant, and can be attributed to efficiency gains spurred by deregulation. On the other hand, the coastal shipping industry saw a decline of 2.6 percent, indicating productivity declines in line with other heavily regulated transport industries.

Table 2 Average Annual Change in TFP (%)

	1981-85	1986-90	1992-94
All industries	-1.1	1.4	-2.3
Transport/communications	-2.5	1.1	-0.4
Trucking	0.0	0.3	0.8
Coastal shipping	-2.0	2.9	-2.6
Air transport	4.4	4.3	1.5
Chartered bus	-3.1	1.1	-4.2
Private passenger bus	-4.4	2.3	-2.1
Taxi & limousine	-1.3	2.3	-3.1
Private railway	-1.1	-1.2	-2.6

Note: Figures show annual change during each period. However, for chartered bus, private passenger bus, and taxi & limousine taxi, fiscal 1986-90 figures actually cover 1987-90.
Source: Tatsuya Kimura, "Impact of Deregulation on Productivity in the Transport Industry–Implications of the Trucking Industry," *Shoho*, NLI Research Institute, Vol.4 (Japanese).

(2) Dearth of New Services

Similarly, regulations have stifled the introduction of new services in the coastal shipping industry. Despite the recent modal shift from automobiles to mass transport, the market share of coastal shipping is slipping. One reason is the lack of new services designed to satisfy customer needs.

However, there are exceptions to this trend. The share of coastal shipping for auto parts rose from 40 percent to 56 percent between Kanto and Kyushu regions. This growth is attributed to improvements that made coastal shipping more convenient by: (1) increasing the number of runs per week from four to six; and (2) setting up centers to handle small lot shipments. This example suggests that improvements can indeed promote the modal shift.

Barriers that hinder the introduction of new services exist not only in the regulations of the Transitional Scheme but in the system itself. To encourage a modal shift and increase the transport volume of miscellaneous items, it is necessary to increase the number of container ships and RORO ships that can load trucks directly. The Transitional Scheme imposes a payment for these types of ships, albeit a reduced one. The required payment for ships over a certain size is 15 percent that of ordinary freighters, rising to 60 percent for smaller sizes, and 100 percent for small container ships. Increasing the number of runs to improve convenience and using smaller ports, achieving a modal shift requires smaller ships, but this is discouraged by the scheme. Thus the failure to stimulate competition among small ships hinders the industry's ability to create solutions that satisfy customer needs, rationalize operations, and adapt flexibly to the changing business environment.

The lack of efficiency improvement and introduction of new services not only hinder the industry's vitalization, but restrict corporate activities that would lead to earnings growth and enhancement of equity and other fundamentals. Moreover, stagnation of the modal shift mentioned above will further complicate matters.

5. Prospects for Full-Fledged Competition

If competition continues to be restricted, not only will coastal shipping suffer, but its repercussions will be felt by the rest of the economy. Among the structural reforms being pursued to stimulate the economy out of recession, one of the main issues is the reduction of high distribution costs. Distribution costs affect all industries. Because coastal shipping has a large market share and relatively low costs, its vitalization is critical to the economy's recovery. Moreover, in view of carbon dioxide emission targets to prevent global warming, coastal shipping presents a viable alternative to reduce the transport sector's high emissions growth rate.

One of the reasons cited for regulating shipping capacity is to prevent cutthroat competition. But the theoretical basis of this rationale is weak, and it is more likely that regulation is preventing normal competition and protecting inefficient operators.

The top priority today is to facilitate entry and encourage competition by eliminating the payments required under the Transitional Scheme. Instead, the government should facilitate competition by funding the subsidies for scrapped ships. Thus instead of regulating capacity, the best approach is to strengthen competitiveness by allowing capacity to conform to market needs. However, from the viewpoint of ensuring fair transactions, special consideration also must be given to the weak bargaining position of the industry's numerous small operators vis a vis consignors.

In addition, even though the S&B scheme has been replaced, the regulatory framework defined by the two coastal shipping laws remains in effect. The long-standing entry condition of "conformance with demand," based on the rationale of ensuring market stability, should not be used to restrict entry.

Notes

1. Excludes ships with gross tonnage less than 20 tons. Scrapping includes demolition, sale to foreign entity, and sinking of ship.

2. Owned ship refers to ships receiving building approval prior to March 31, 1998 from the Japan Federation of Coastal Shipping Associations, and registered on the original ship register by September 30, 1999. However, it excludes cement freighters and special tankers just as the shipbuilding payments do.

3. Depends on the definition in the Coastal Shipping Law. The regulations discussed here are included under this definition. In the Coastal Shipping Association Law and pre-revision Coastal Shipping Law, coastal shipping business includes the coastal transport business, coastal ship leasing business, and coastal transport service business.

4. Under market adjustment regulations, regulators will permit new entrants into an industry if the increased supply of goods or services is determined not to cause a condition of excess supply.

5. TFP is related to added value. Due to data constraints for the trucking industry, TFP calculations are not possible for fiscal 1991 and from fiscal 1995. Thus the fiscal 1992 to 1994 period was used. For each industry, TFP is calculated by adjusting capital input to transport efficiency.