

■ 論 文 ■

Is Port Authority the Best Choice of Korean Port Reform?*

Il-Soo JUN** and Anatoly Hochstein***

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Key Words : Port authority, managerial inefficiency, privatization, competition regulation

ABSTRACT

In response to insurmountable pressure for a broad distribution of political power between the central government and local governments, the Korean Government pushes for the establishment of the local port authority as the optimum choice to achieve its goal. Starting with the Pusan and Incheon ports, the local port authority system is expected to set out the dramatic change in port management system throughout the Korean ports. However, this paper points out that the port reform choice should take into account the specific features of the society and country and some basic questions should be clearly answered beforehand. The fundamental questions are: whether institutional reform will markedly improve the ports managerial and operational efficiencies? and what will be the benefits and costs, compared to those of not changing? Without rigorous and comprehensive analysis on these issues in the institution transition, haphazard port reform will have the possibility to increase port users costs and disrupt the efficient port services. Experiences around the world clearly show that the indiscriminate copy of port reform found in other countries may be neither feasible nor practical presently in Korea. They also indicate that the port reform should be made on a gradual basis with full control of the pace.

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** Professor and Director, Center for Global Logistics Studies, The University of Incheon, Korea

*** Distinguished Chair Professor and Director, National Ports and Waterways Institute, Louisiana State U.S.A.

I. Introduction

Korea is the 13th largest trading country in the world as of 2001. Since more than ninety nine percent of Korea's trade volume depends on maritime transport, the Korean Government has placed a priority on the development of an efficient maritime transport system to sustain its competitiveness in international markets. However, rapid growth of port traffic in Korea has led most major ports in the country to the necessity of a substantial increase in handling capacity. Rapid increase in demand resulted in serious congestion problems in spite of the port's continuous expansion. The congestion problems have arisen due to a lack of adequate investment. Investments required to keep abreast with the present pace of growth in cargo demand, however, has been beyond government control or ability. Consequently, aside from new investment in port infrastructure, efficient utilization of existing port capacity should be given high priority for reducing congestion in Korean ports. In this respect, the efficiency of port management and operation is a fundamental element to cope with ongoing economic growth in Korea.

In Korea, port services are regarded as public goods, although they fail to meet two criteria of public goods: non-rivalry and non-excludability in consumption. As a consequence of viewing port services as public goods, ports are planned, developed, managed and operated by the government in most cases.¹⁾ This government ownership and management is inherent of the unclear organizational objectives, rigid regulation, rigid management structure, and lack of managerial expertise. All of these factors have contributed to the poor performance in Korean ports both for financing of facility development and for managerial efficiency. That is, inefficient administration and rigid government control of port operation contribute to delays in cargo clearance in most of the ports. This fact requires the shift of port policy from increasing new construction of ports

1) The Ministry of Maritime Affairs and Fisheries (MOMAF) is responsible for national port policy, port planning and development, facilitation of port operations through the Shipping and Logistics Bureau and Ports and Harbors Bureau. The major functions of the former are: to oversee policies on improving port logistics system; to supervise operation of port facilities; to coordinate vessel entry and departure; and to maintain order in open ports. The functions of the latter are: to develop, coordinate, and supervise basic plan on port policies and port construction; to estimate port traffic and port facilities demand; to oversee and supervise port construction projects; and to encourage research and development of port construction technology. Actual supervision and management of local ports are carried out through the eleven Regional Maritime Affairs and Fisheries Offices (RMAFO).

to efficient management of existing port inventory.

In addition, the Korean port sector is also under pressure for closer coordination with the local authorities, which calls for the transfer of port management to the municipalities. Municipal governments of Pusan and Incheon have argued that they have better insight in the local needs and, consequently, can be better adapted to local circumstance than the central government, which may serve better coordination in port planning, development, management and operation.

In response to the above circumstances, the Korean Government requested the Korea Maritime Institute (KMI) and Korea Institute of Public Administration (KIPA) jointly undertook a study to evaluate the feasibilities of creation of new management. The purpose of this paper is to review their study and make evaluations on the methodology, reform process and policy proposal. The paper then provides two basic mechanisms to assure an effective port reform, based on the analysis of the progress made to date for ports around the world.

II . MAJOR ISSUES IN PORT REFORM

The port sector in Korea is under pressure, as in many other countries, to change management structure and institutional reform to improve the operational efficiency. The changes take a variety of forms such as liberalization, commercialization, corporatization, and privatization. The implementation of reform programs made to date at ports around the world has concentrated on changing the institutional framework for the provision of port services and the employment practices of dockworkers.

In restructuring port management and operation in Korea, some real, potentially critical, problems support assumptions that 'change' itself is the best choice to cope with the trend for social reform. However, prior to making any changes, we have to ask ourselves some vitally important questions. The most fundamental questions are:

- If port reform takes place, will port users notice the difference?
- If port users notice the change, what might they think? Will their perceptions of the service level change significantly?

Major changes in port ownership, management and operation may exert disruption to both service providers and users. Accordingly, the changes should be proposed carefully

and identify the risks and opportunities associated with change by questioning:

- Can the port reform maintain or improve the service level required by users and achieve the national goal while becoming more efficient?

The success in undertaking important initiatives for change relates to more than just how well we define the changes we need to make, or how well we plan the transition from the existing to the new. We have to ask ourselves some difficult questions such as:

- How ready is the existing port organization for change?
- Is the society willing to try new ways and committed to support the changes?

In assessing answers to these difficult questions, we might find that we have much work to do preparing port organization for the coming dramatic changes. First of all, we should define the mission of port management. It should be to meet the needs of the users.

To avoid making changes that could damage or negatively impact the port mission, ports have to focus change efforts on activities that will improve customer service or their competitive position. Making such improvements starts by examining the strengths and weaknesses in the current port management. Prior to undertaking port reform endeavor, however, which may upset the port service providers and port users, we have to make sure that we have a clear answer to both of these decisive questions:

- What is the cost of changing? and
- What is the cost of not changing?

In this part of the paper, we will review and make comments on the process, methodology and difference of policy proposal between government and the study by KMI and KIPA, while answering questions raised above.

2.1 Basic Institutional Issues

In "*A Comparative Study of Seaport Management and Administration*," (1979), Prof. Goss draws conclusion to the note that there are many efficient ports in the world, which have very different administrative systems as we observe in Singapore and Hong Kong. Therefore, the administration and organization of the ports should be appropriate to the general system of government and the beliefs of the people in their own country, even if the latter are expressed as over-simplified slogans. That is, there is no single 'best' solution for the management and administration of ports but they must always seek ways of improving their efficiency from lessons elsewhere. Conceptual clarification in basic

institutional issues may be useful before going to discuss the reform approach to improving port services and financial viability.

1) Port Reform Approaches

To resolve the inefficiencies of port services due to a government's extensive involvement in ports, generally three approaches have been undertaken such as liberalization, commercialization and privatization (Kent and Hochstein, 1998).

(1) Liberalization

Liberalization is an approach to introduce competition in certain port activities, by permitting the private sector to provide port services to common users in parallel to government run ports. Sometimes the private sector may compete against existing public entity providing the same services.

(2) Commercialization

Commercialization is an approach to provide management of a public port the same autonomy characteristic of management of a private entity, while at the same time holding management responsible for its decisions and performance to the government.²⁾

That is, management has flexibility, free from bureaucratic constraints to a certain extent, in its ability to develop market strategies, to make changes in operational practices and organizational structure, to hire and fire employees, and to lease terminals, remaining in the public sector.

(3) Privatization

Privatization intends to allow port management to be in private hands for a long period of time. Accordingly, terminal operators have the full commercial freedom without government control in responding to market forces as in the private sector. This freedom of management includes the freedom to make budgets, investments, tariffs, and employment. Privatization covers extensive spectrum of management mode, from the simple lease of

2) Conceptual clarification may be useful between commercialization and corporatization. By corporatization, an entity converts to Shareholding Company, which can result in either commercialization or privatization, depending on whether the majority shareholder is the government or the private sector.

terminal to the outright sale of facilities. However, privatization of port assets may lead to monopolies. In such a case, the public sector should exert some level of control, which depends on how extensive competition is in the national and regional port systems.

2) Institutional Structure

According to the scope of port ownership and activities performed by the port authority, port institutions can be classified under six broad categories:

- i) Central government ownership and operations (managed by government department, in general);
- ii) Central government ownership with public operation of commercial practice (a form of public corporation);
- iii) Regional (state and municipal) ownership and operations (managed by local government body);
- iv) Regional ownership with commercial practice operation;
- v) Public ownership with operations contracted to the private sector; and
- vi) Private ownership and operations.

The fifth category is the most common trend in port reform. There are practically an infinite number of options on how to implement operation by the private sector, retaining ultimate ownership by the public sector. In general the usual options are:

- Vessel services by private stevedoring companies with yard operation by public port.
- All terminal operation by private operator under short-term management contract and regulation by public port.
- All terminal operation by private operator under long-term lease with investment obligation.
- Preferable option depends on a variety of factors, central of which is the extent of completion.

(1) Central Government Ownership and Operations

In this approach, the central government owns the port land and port facilities, and the port authority is constitutionally created as political subdivision of the central government. This institutional type can be found in most developing countries. This type is generally blamed to be bureaucratic and lacking flexibility, and likely to rely on large government

subsidies to cover operating expenses.

(2) Central Government Ownership and Operations with Commercial Orientation

This is another alternative of nationalized organization, where the port authority is responsible for infrastructure investment, and all operations are integrated and conducted by the port authority itself. This is the typical model of the Port of Singapore, until it transformed itself into a corporative entity in 1997.

(3) Regional Ownership and Operations

This approach has been used extensively in many of ports in northwestern Europe. The structure of regional ownership is varied depending on ownership arrangement of state and municipality. In municipal ownership, ports are owned and managed (or operated) by local port authorities as a part of the general transport infrastructure rather than an independent entity. The major advantage of this model can be found in complete cooperation on all local needs of the port, but it has a natural tendency of unwillingness to cooperate in any national plan.

(4) Regional Ownership with Commercial Practice Operation

This typical European approach is an alternative to the previous type of regional ownership and operations, in which the port authority is created.

(5) Public Ownership with Operations Contracted to the Private Sector

This type is most extensively in the world, in which the port authority limits its role to building and owning infrastructure, leaving superstructure and most port activities to be conducted by the private sector, usually in competition. This is the typical model in the United States and continental Europe. It is noteworthy that comparisons of operational performance on the basis of cargo handling rates, work schedules, size and composition of gangs, showed that the performance of service ports by the public sector was, with few exceptions, poorer than that of landlord ports where independent third parties provided port services (World Bank, 1996).

(6) Private Ownership and Operations

In this approach, a private company owns and controls ports, either as an operating body or as a major shareholder of terminal operator. Hong Kong and ABP ports and Felixstowe

in the U.K. represent a typical model of this approach.

In many ports around the world, such a classification as outlined above might not represent real characteristics of ports, since a number of variations exist along this institutional choice spectrum.

2.2 Analysis of Structural Reform in Korean Ports

1) Government's Plan

The Korean Government has undertaken an institutional restructuring effort to create a new local port authority, which will replace the existing RMAFO, local port management body of MOMAF. Starting with the busiest Pusan and Incheon ports, the local port authority is expected to set out the dramatic change in port management system throughout the Korean ports. Municipal governments of Pusan and Incheon strongly support the creation of the Municipal Port Authority. The Government's decision to shift the management structure from central government to local port authority is based on the "Government Organization Management Survey Report," which was completed in February 1999 by a special task force for overall administrative reforms.

According to the report, the Pusan and Incheon ports might be financially viable to be autonomous in management from the second half of 2000 by recording net margin of 13 percent and 26 percent respectively. The report recommended establishing respective Municipal Port Authority at Pusan and Incheon ports by 2001. The task force report stressed that establishing municipal port authorities would be in accord with the spirit of decentralization, which would replace the organization of the existing port management with that of the community, while guaranteeing independence from rigid government constraint.

2) The Proposal by KMI and KIPA

Decentralization is unlikely to be avoidable, because nearly insurmountable pressure for a broad distribution of political power is imposed as reality in Korean society as a whole. However, an analysis by KMI and KIPA for financial sustainability at Pusan and Incheon ports shows drastically different results, compared to that of a special task force. Since the financial autonomy cannot be achieved by 2006 or 2007, as seen in Table 1, the

government has to provide significant debt relief to municipal governments: 565 billion Won and 71 billion Won for Pusan and Incheon ports, respectively. Since the Ministry of Planning and Budget gives a clear notice that there would be no financial support under this system, it might be inevitable that port users' costs skyrocket to be financially self-sufficient.

〈Table 1〉 Analysis of Financial Sustainability in Pusan and Incheon Ports
Unit: percent

Ports	2001	2003	2005	2006	2007
Pusan	63.1	90.9	95.2	96.6	<u>106.7</u>
Incheon	85.8	81.6	86.7	<u>111.5</u>	192.7

Source: KMI

According to the study, the following problems are also expected. First, creation of municipal port authority requires securing substantial port expertise, both in numbers and skills, in local government, which currently has no experience in port operation and management. Second, swift transition in political consideration will threaten the organizational stability and disrupt the delivery of port services. Consequently, making transition to Municipal Port Authority a success requires resolving problems such as:

- Create new regulatory relationships between central and municipal governments;
- Divide functional responsibilities in management and investment, transfer assets and appropriate staff; and
- Replace annual budgetary transfers from central to municipal government.

To overcome these constraints and meet the future investment needs of ports in Korea, the study by KMI and KIPA proposes to take gradual steps under short-, medium-, and long-term goals.

(1) The short-term goal

The short-term goal is to strengthening the current structure of port management by providing the same autonomy characteristics of management of a private entity, while at the same time holding management responsible for its decisions and performance. The study characterizes this reform as introducing elements of 'executive agency.' However, it is the very nature of commercialization, where management has flexibility, free from bureaucratic

constraints to a certain extent, in its ability to develop market strategies, to make changes in operational practices and organizational structure, to hire and fire employees, and to allow limited financial autonomy.

The study makes it clear that the parent body of local port management should be the current RMAFO, and MOMAF maintains a power to appoint managers of local ports, though the port managers should be recruited from open and free competition under a management contract. This approach may be the easiest, least burdensome, and most effective, and may be implemented immediately without any amendment in Government Organization Law.

(2) Medium-term goal

After achieving the short-term goal by 2005, if it successfully establishes the main elements of an effective port management framework, the medium-term goal is to create local port authority under the MOMAF in all ports throughout the country. This process will pave the way to achieve the long-term goal by securing sufficient time to gradually implement necessary, but complicated legal, institutional, technical and financial procedures. Although some municipal governments request the creation of a municipal port authority, this study rejects this alternative for the following disadvantages, which are frequently mentioned in northern European countries (Suykens, 1991):

- Municipal administration can also be subject to bureaucracy and red tape, like all public services;
- Politics can also play a more significant role on the local level than on the national level;
- Municipal administration has some difficulties in port financing to keep abreast of the increasing demand for new investment requirements;
- Municipal boundaries can create a problem for the further expansion of the port in the region, which requires the port to be situated within the municipal territory; and
- Some municipalities with financial difficulties require the port to contribute to the deficit of the municipal budget. In this case, they tend to increase port revenue from the existing facilities by raising fees, and hardly consider making capital investments.

(3) Long-term goal

Guided by successful experiments in commercialization and creation of local port authority under the control of the central government, the study proposes to create

independent port authority in all ports throughout the country, which is independent from the central government in terms of decision-making and financial autonomy. Therefore, the major difference between medium-term goal and long-term goal is to implement complete autonomy for port authorities. Although politics may prevent major changes in the tariff structure, this port authority is able to adapt its pricing structure to achieve the management goal. In this port management, the port authority is supposed to limit its function to just performing essential regulatory functions.³⁾ This is a typical type of 'landlord port,' which is a participatory institution, with a managing board that includes representatives of government agencies and private interests related to the port sector.

2.3 Suggestions on Port Reform Scheme

1) Objectives of Port Reform

Before evaluating two proposals presented by the Korean Government and the study by KMI and KIPA respectively, it may be appropriate to consider what the objectives of port reform are. Typically they should be to:

- Make port services more efficient;
- Help port institutions gain more autonomy from central government;
- Increase port investment and allow better maintenance of facilities; and
- Improve the financial position of port institutions

Port reform experiences around the world clearly indicate that to achieve these objectives may call for different approaches used in different countries. Port reform has to be initiated only under institutional schemes that are likely to succeed within the country's culture, institutional and legal systems. Particularly, recent history of decentralization in the process of port reform clearly illustrates the danger of not sequencing appropriately. Therefore, decentralization should occur in a less drastic context. The Korean Government should learn lessons from countries that have already experienced a similar process.

Although the Korean Government has advocated the combination of decentralization and commercialization as a solution to tackle multidimensional problems, world's experience has

3) That is, it just controls the ship traffic and light-buoys, marks, lighthouses, and facilities for disposal of the ship's oil and waste, while leaving all commercial port activities to be carried out by the private sector.

shown that this institutional structure ends up becoming the very creature it was designed to replace. China and South Africa offer examples of pursuing this model. In these countries, port management and operation was transferred to municipal government. But their experiments failed to result in tangible improvement in port management efficiency (Kent and Hochstein, 1998). The intended objective of freedom from bureaucratic constraints has not been achieved. Politicization of port administration, ineffective management and lack of responsiveness to user concerns have also served as significant obstacles to attaining the level of performance expected prior to reform.

In addition, a recent publication of the World Bank provides another possible failure brought by decentralization. Experiences in Central America, Latin America and Russia showed that decentralization of management responsibilities from the central government had little effect or lowered the level of the public service quality (World Bank, 2000). Decentralization may affect the equity between local regions by blocking the chance of revenue redistribution among regions. If government's port resources are transferred to local governments, they are able to increase their revenue base and improve income distribution within their administrative borders. Meanwhile, in this system, the regions which lack port facilities would never have a chance to build new ports, and accordingly, to have revenue from port operations.

2) Approaches to Institutional Reform

Experiences around the world have shown that basic institutional choices to achieve the above mentioned port objectives should be made on a gradual basis. In this respect, the proposal by KMA and KIPA seems to define a right path for institutional improvement, which requires substantial time for preparation to remove cultural, legal and institutional barriers impairing the transition process. However, the three phases they propose that need to be shortened into two phases, skipping the second phase. Virtually, the 1st phase and the 2nd phase are the same in terms of function, responsibility, and financial arrangement. Five years may be sufficient time to enable the transition of port management in Korea, since nowadays the port administration does less and less and lets the private sector play an increasing role in port activities.

In Korean ports, most port activities, which have commercial characteristics, are performed by the private sector. In addition, the private sectors have become more

responsible for providing new port facilities and taking the risk of carrying out the necessary investments. In this circumstance of virtual privatization, some basic institutional questions should be clearly answered, which lacks in the study:

- Whether institutional reform will markedly improve the port's managerial and operational efficiencies? and
- What will be the benefits and costs, compared to those of not changing?

In analyzing these issues and for elaboration of institutional reforms, port users and existing port service providers need to be closely contacted and consulted. From the above pivotal questions stems another question:

- What will be the easiest, least burdensome and most effective approach to adopt with no significant disruptions to the existing organization, port service providers and port users?

Rather than taking swift transition by political consideration, we suggest that it would be better to further privatization of all port activities, in terms of economic and operational considerations. At present, the Korean Government has not revealed any plan of full-fledged privatization of port facilities. The government's reform plan does not consider the change of ownership into private hands. That is, privatization of existing government-owned ports is not on the agenda. Therefore, if the government intends to maintain ownership of the port facilities, leases of public facilities and management contracts may be used as initial steps towards fuller privatization of port operations and physical assets, existing and planned. But in sales of operation rights at terminal, the government should promote competition by lowering barriers through encouraging not only existing stevedoring firms but also private firms of any line of trade.

Further mention should be made regarding the ports showing a large operational deficit, which is not considered to be a target of reform. Even in this case, the private sector may be contracted to undertake the management and operation of port facilities, on the bidding basis of minimum subsidy from government. For these ports, having a single operator may be preferable from an efficiency standpoint, because volume is not sufficient for multiple operators. However, that will give an operator a monopolistic position, which should be monitored and controlled by a public organization.

The investment demand for port facilities is extremely high, but the financing capacity of the Korean Government has almost reached its limit. To overcome the limit, two kinds of reforms are required: increasing efficiency in providing port services and securing more

funds for investment. The privatization of operation of port facilities and other activities, whichever can be commercial, in any ports throughout the country can be an important tool for port financing. Generating revenues by leasing assets, sale of cargo handling equipment, and management contracts will not only generate revenue for new investment but also reduce replacement investment for renewing or maintaining aging and deteriorating facilities. The latter can release funds for the government to invest in new facilities, in turn. These facts provide a clear picture of the benefits achieved under active private participation in port service activities. However, in becoming landlord ports with operations contracted to the private sector, a critical institutional issue should be addressed. That is, some degree of regulation is needed to preserve the public interest without impairing the performance of the private sector.

Finally, the most compelling lesson of recent port reform around the world is that all elements of reform must be synchronized. That is, port reform and labor reform are inextricably linked. According to government's plan and the study by KMI and KIPA, there is no clear indication how to reform a powerful port labor union, which has been given the exclusive right to supply labor at ports. However, without change in the existing inflexible labor practices, high costs due to over-manning and unreasonable demand for compensation will increase the risk of losing the competitiveness of Korean ports, which results in losing the competitiveness of Korean industries. The changes in shipping environments and technology call for drastic changes in ports, not only in port management but also in the port labor system. Permanently employed specialized operators of sophisticated mechanical equipment should replace casual, non-specialized port labor. Without restructuring port labor system, the port reform cannot have its full effect. It is a well-known fact throughout the world that labor reform is central to port privatization. To achieve labor reform in the port sector, however, a strong political will and carefully thought out plan are required.

2.4 Additional Issues in Port Reform

The main recommendation in the port administration reform is that it should be accompanied by privatization of actual port operation. The latter is at least as much important as the former. The decentralization of public administration should be advised to take a slow pace to avoid possible political and financial mistakes. It appears, however,

that there is a great deal of pressure in Korea to proceed with expanded privatization without delay. This necessity is dictated by both investments and efficiency needs. Currently, most of the vessel services already are privatized. The next step is to offer long term leases to operators of the entire terminal(s) with a commitment for large-scale investments.

In port administration there are basically three possible forms of organizations: at the level of the Central (Federal) Government; at the level of a State (Province); or at the Municipal level. There is the possibility of a combination of these forms of administration. For instance, national significance ports relate to the central governments and local ports in the same country relate to the states or municipalities. The major institutional problems with provincial/municipal control are first, the lack of national planning and, second the possibility of conflicts between a port, serving the entire nation, and local priorities.

In the United States on the Atlantic and Gulf coasts, ports belong to the states and on the West Coast to the municipalities. In both cases, these administration forms have resulted in the over capacity of the port system. In the environment of strong inter port competition the states or municipalities provide a variety of financial assistance. The ports are not able to charge compensatory prices and again the local governments have to assist them for expense of general public. These situations have been created not only in established port systems such as the United States, but also in newly privatized ports such as in Argentina. The Government in Argentina presently is concerned that too much of the national resources begin to flow to ports to assure the competitive position of one province versus another. The even field principle is broken as one province provides more assistance to ports than the next. As a result, some private operators are forced to abandon leased facilities.

The opposite is also true, when there are conflicts between local government priorities and interests of a port serving the nation. First of all, there is a conflict in land use. Valuable waterfront land is most attractive for a city residential or industrial development, which may restrict land availability for port expansion.⁴⁾ One more conflicting situation is the usage of land approaches to the ports. To ease traffic congestion many municipalities impose very strict limitations on cargo movement to/from ports.⁵⁾

4) Shanghai in China, Rio de Janeiro in Brazil, and many other ports located in congested cities in the United States and Western Europe experience these types of conflicts.

5) In Istanbul, Turkey, the local government is pressuring for full closer of the main national port Hydorpasa, which jeopardizes the overall national ability to accommodate foreign trade.

On the other hand, the major problem with a centralized port administration is the actual or perceived remoteness from local interests. Validity of this claim, at least in part, depends on the size of the port system. In a country such as the United States a centralized port administration, obviously, will not be possible. In a small country such as Costa Rica, this system is quite feasible. Korea is somewhat in the middle between the above two extremes. In terms of the size of a national port system, Korea can be compared with Colombia. Colombia is considered to be a successful example of recent privatization, where the port administration is centralized.

To deal with the ability to reflect local interests it is common to combine a centralized port administration with the local maritime districts. This system is adopted in Colombia. This system, as we understand it, currently also exists in Korea, and is represented by MOMAF in combination with RMAFO.

Therefore, the existing system of port administration in Korea appears to be among the common and successful experiences around the world. Accordingly, any changes of the system must be made most carefully and gradually. Specifically, this careful approach should be applied to ports of national significance. It is also our understanding that currently MOMAF has the concentration of expertise. Creation of local port authorities will apparently lead to the dissolution of the maritime function at MOMAF. Accordingly, the transition period, especially if in a relatively short time, might be most difficult. The question, of course, is what this transition will achieve and to what extent it may affect port efficiency and productivity. The answer to this question is that judging by international experience the difference might not be significant. Once again, our conclusion is that for a landlord port system one or another form of public port administration has relatively limited impact on actual port performance.

In the process of privatization, the main issue is the relationship between private operator and public port authority, whether it is centralized or local authority. In turn, this relationship depends on the level of competition. The higher level of competition the less government involvement is used and vice-versa. It should be noted that depending on the actual situation, three types of port competition could be observed.

First is intra-port competition. That is when a port commands a captive traffic. In this case it must be more than one operator in a port and more than one terminal available. If not, then one operator is still an option but with strict tariff control. Second is inter-port competition between national ports. If it is extensive, then fewer operators per port are

advisable. Finally, there is regional competition for transshipment activity, e.g. between ports in Korea and Japan. This type of competition does not have to be regulated except to make sure that a port operator does not subsidize transshipment services at the expense of local cargos. This is not an uncommon practice in some of the worlds ports competing for a role as a hub.

III. BASIC MECHANISMS FOR EFFICIENT PORT MANAGEMENT

There are two basic mechanisms to assure an effective relationship between public port authority and private operator, which provide an even level field for privatization and at the same time protects public interests. These mechanisms are composition of a port authority board of directors and monitoring of monopolistic behavior. Basic principles of both of these mechanisms are presented below.

3.1 The Board of Directors

For the Board to fulfill its obligations, whatever they may be, it is necessary to include members that are skilled in areas over which the Board will have responsibility. This is not to say that a port or civil engineer is required since the organization is involved in port operations. Rather, board members need to be prepared to address issues typical of commercial enterprises in line with the direction established in the organization's mission. The ports future status as a landlord will have implications based on the general knowledge required satisfying these responsibilities. Assuring that board members have this knowledge is the obligation of the appointing authority. However, some organizations have sought to assure this knowledge by prescribing board member qualifications in their enabling legislation. This approach also tends to reduce the level of politicization, although some members may still be appointed as a result of substantive contributions to the organization.

The board's role can also have an impact on its size. Some organizations are successful in acquiring members each having a multiplicity of skills and knowledge, thereby negating the need for additional members. For this reason, some laws and corporate charters will specify board membership within a range, say 5-9 members. In this way, board member qualification can be assessed and additional members can cover any gaps in requisite skills.

An examination of the range and variety of boards leads to the conclusion that no exact figure can have universal relevance.⁶⁾ The majority of organizations surveyed by the national Ports and Waterways Institute (1993) have board sizes in the 5-9 ranges. Further review tends to show no relationship between the organization types, although there is a tendency for organizations having a state- or nation-wide, or bilateral scope tend to be larger than those that have a more local character. This can be attributed to the fact that the larger jurisdictions believe they need to represent a greater number of interests. It should be emphasized, however, that board effectiveness decreases as board size increases.

The representation on the board depends on the strategic objective in governing the port industry. For ports serving the entire nation government representation may prevail. For local ports municipality and/or provincial representative might have the decisive vote. Representation of business and labor interests must be also provided. In Korea there is a tradition of strong central control of the port industry. This control can and in our opinion, should continue for the time being. This can be achieved by proportional representation on the board from the central government and from local public and private interests.

Board member tenure ranges from 2 years to the possibility of 10 years.⁷⁾ In the latter case, board members have the possibility of serving 10 years, although the appointing authority has the right to determine the length of the term at the time of appointment up to 10 years. The North Carolina State Port Authority represents an unusual tenure arrangement in which member terms are equivalent to the tenure of the appointing authority. Appointments by the legislative assembly are for two years, while executive appointments are for 6 years. The most common tenure period would fall between 3-7 years.

Board member tenure has two principal approaches to tenure, including fixed terms and fixed staggered terms. The length of term should normally be determined by the extent of continuity desired, the need for new ideas, leadership, and wisdom as changing events affect the port organization, and made an effective contribution to the organization.

These considerations notwithstanding, there are also political considerations. The fixed-term approach is designed for facilitating strong executive control, unless the consent

6) For those organizations having governing boards, there is a wide range of board sizes, ranging from 3 members for Canadas St. Lawrence Seaway Authority to 26 for the Port Autonome du Havre in France.

7) The former is the case of the Bombay Port Trust of India and the latter case is the St. Lawrence Seaway Authority in Canada.

of a legislative body is required for the appointments. The interest in providing continuity irrespective of a change in governments may suggest, as some organizations have done, that the board members term exceeds that of the appointing authority. However, this leaves the possibility for a former president or his political party unduly influencing a board's deliberations.

The staggered fixed term approach, if properly formulated, can be an effective means for isolating the organization from extreme political influences. If not appropriately conceived, the approach can have the opposite effect, providing the opportunity for former presidents to influence future boards.

It is important to note that the political influences of either approach can be neutralized through means not associated with tenure, including the appointment process and board member qualifications.

There can be identified five forms of qualification requirements for board member qualifications. The five forms include:

- Geographic, where some board members are required to represent specific geographic jurisdictions;
- Technical, in which board members are required to demonstrate certain knowledge or experience in specified disciplines;
- Government agency, in which board members must be appointed from government organizations;
- Non-government groups, where board members must be appointed from business, commercial, trade and union organizations; and
- Political affiliations, in which board members must be appointed on the basis of the political party with which they are associated.

One of the most important considerations in a board's deliberations is the selection of the board chairman⁸⁾. This task should not be taken lightly, as it is the chairman who has the greatest influence over the boards dynamics. This underscores the importance of the position being apolitical. The chairmans primary task is to create and maintain a spirit of unity among a normally diverse membership and to ensure that it works appropriately with

8) If there is a desire for strong executive control, then appointment by the elected officials is most appropriated. However, such status may cause other members to refrain from expressing their views because of the status of chairman. On the other hand, a chairman who is elected by his peers is more likely to create an atmosphere of openness and willingness to express one's candid views.

the executive and staff in exercising power effectively and ethically. The chairman must take the initiative, either or by involving others, to apply the correctives required when the behavior of certain members of the board becomes a deterrent to progress or to a smooth operation. Finally, the chairman manages the board (as opposed to the organization). The chairman thus requires special skills and abilities, which are usually more recognized by his peers as opposed to outside appointing authorities.

3.2 Competition Regulation

Where effective competition can be established and maintained in the relevant markets and activities, privatization has proven to have great potential to reduce costs and improve service quality; without competition, privatization can still bring some improvements, but the gains are more limited and require government regulation. The extent of these regulations depends on the level of competition.

Competition also helps insure that the private sector passes savings on to users and reduces perceptions of monopolistic abuses. A private terminal operator can be presumed to be more tempted than a public port authority to exploit any market power that it may have. As long as a market is competitive, private operators cannot price much above their long-run marginal costs; but only for as long as it takes to provide additional capacity. If the market is not competitive, however, a port operator may be able to sustain prices well in excess of marginal costs, if politically or institutionally permitted to do so. The history of government regulation attests to the difficulties of denying that permission.

Tariff regulation, either with price caps or in the form of rate-to-return regulation is highly problematic. Determining what is the right tariff level is subject to various interpretations, negotiations with the regulated party, and dependence on data for verification purposes that many companies are not readily willing to relinquish. Port operator control over information required for tariff regulation affords it the opportunity to manipulate the information it makes available to the regulatory body. The port operator's information monopoly increases the risk of regulatory capture. The outcome is an "imperfect" price cap that as intended to reflect the prices if the markets were perfectly competitive. As a result, if the price cap is too high, the port operators will earn excess profits; if too low, under investment is the result.

The task of the port regulating authority is to evaluate the level of competition and

establish their control accordingly. This control at its extremes:

- Does not interfere with private operators activities unless a specific complaint is received; then, an investigation should be conducted to establish the validity of a complaint, and if proven the operator can be obligated to compensate unfair charges or pay a punitive fee or even lose its operating lease; and
- Establish and maintain strict price control. It is possible that in time one form of control can be substituted by another, e.g. with the development of more terminal capacity and the appearance of more operator price control can be softer or even eliminated.

Accordingly, it is important for the regulating authority to exercise tests to determine the extent of competition.⁹⁾ The presumption is that in a highly concentrated situation, close monitoring would be needed and proposed mergers between top four firms, or even between one of the top four and another one outside of this range, would likely be opposed. This test, however, is too general, specifically if applied to the port industry. For small and medium size port systems, even in such a well-developed export economy as in Korea, ports nearly always would have a high level of concentration according to this test. For example, with only three major national significant ports in Korea this test always would lead to the necessity of price regulation. In fact, with the extensive intra-port competition (several competing operators in the same port) and some degree of inter-port competition, price control might not be needed.

To address this common port industry problem more detailed methodology has been developed by the National Ports and Waterways Institute. This methodology considers a number of factors that jointly provide a regulatory agency with the ability to monitor anti-competitive behavior in the port sector and based on this monitoring make the determination regarding the level of control over the port's performance. The following factors are considered:

1) Transport Options

Obviously, the most important indicator is the degree to which a shipper has transport

9) Most common is the so-called "concentration" tests. For example, one simplified concentration test (referred to as CR4) is the summation of the relative market shares of each of the four largest firms. The market is determined "highly concentrated" if the CR-4 is 75 percent or more and "less highly concentrated" if a CR-4 is less than 75 percent.

options. A monitoring system should measure the competitiveness of a country's system of inland transport and ports in terms of choices or options available for a shipper or consignee who faces a decision on cargo routing. Examining options should apply to a specific cargo flow as defined by cargo type, inland point, and direction (import or export).

2) Operational Performance

Operational performance indicators can be used to assess the relationship between supply and demand for port services in a particular country. Presumably, shortage in supply indicates a possible tendency towards monopolistic practices by a port or terminal operator. Using the supply/demand relationship itself as an indicator may be inadequate because of difficulties in direct estimation of demand and supply. Instead of the throughput/capacity (supply and demand) ratio, two indicators that relate directly to a potential shortage in supply of port services can be used: berth utilization and ship waiting for berth.

3) Tariff Comparisons

The objective for examining tariffs is to determine if the tariff level of a port is within a "reasonable" range. Presumably, an abnormally high tariff level of a port indicates a trend to exert market power and employ unfair trade practices. This relates to the port cost, which includes charges to shipping lines and cargo. The calculation of the port cost should be based on a representative basket of "basic services" and their respective charges.

The judgment whether a tariff level is within a reasonable range can be based on three indicators. The current rates of the port under consideration are compared with: historical rates of the same port; rates (tariff differentials) at other ports in the same country; and theoretical rates based on a "model cost" model.

4) Financial Performance

This is the typical measure that countries examine to determine if a port has been earning abnormal profits. The assumption here is that abnormal profits may indicate a non-competitive market setting and a possible tendency for ports to be engaged in anti-competitive behavior, taking advantage of their monopolistic market power. Economic

theory maintains that suppliers possessing monopoly power tend to charge prices that exceed marginal and average costs.

The data requirements to support the above conceptual framework are typically readily available and are such that ports would normally be willing to provide them, getting around the information monopoly issue associated with pricing or rate-of-return regulation. This in turn minimizes the costs to both the regulator and the regulated.

IV. CONCLUSION

It is observed that the poor performance and managerial inefficiency in port sector in Korea are from the inherent problems of public control in port sector. Therefore, the core issue of improving managerial efficiency and enhancing port handling capacity seems to be how to reform government control of management and operation at port sector to be open and flexible.

On the central issue of a form of port administration and a choice between centralized and local administration the following points, in our opinion, should be emphasized.

- With successful terminal privatization the role of the public port administration will be limited to mostly regulatory, financial, and planning functions.
- Either form of administration central or local can successfully conduct those functions. International experience has shown that both forms have their advantages and limitations.
- For the Korean situation it appears that the existing centralized administration complemented by local districts is efficient. Therefore, modification of such an efficient system should be conducted at a slower pace and with utmost care.
- The combination of central and local government objectives can be balanced by the structure of the boards of directors and by continuous monitoring of possible monopolistic abuses among private operators.

Although restructuring of current framework is often considered to be the instrument or precondition for the achievement of efficient and reliable port services, haphazard port reform, which does not fully control the pace of the reform process, will threaten the organizational stability and disrupts the delivery of public services. Port reform choices should take into account the specific features of the society and country. In the absence of

rigorous and comprehensive analysis on the benefits and costs of the transition of institution, indiscriminate copy of port reform found in other countries may be neither feasible nor practical at present in Korea.

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