Powerful Leadership of National Government in Port Policy

Koji Takahashi, Yasuo Kasugai and Isao Fukuda

Abstract

Countries worldwide are reforming their port operation systems. For instance, Canada established the "Asia-Pacific Gateway and Corridor Initiative" and is implementing logistics policies, including railway/road modes under the powerful leadership of the national government and through efforts of both the public and private sectors.

In addition, the national governments of Denmark and Sweden established Copenhagen Malmö Port, which integrally manages the formally competing cross-border Port of Copenhagen and Port of Malmö.

By contrast, in Japanese port operation systems, the management and operation of all ports are fully under local public authorities, and the involvement of the national government is limited to allocation of port development budgets. The Great East Japan Earthquake in 2011 paralyzed the functions of local public authorities, and it became apparent that port management/operation by these local authorities was limited.

The authors analyzed the cases of port operation system reform conducted and verified the significance of leadership provided by the national government. As a result, a huge gap of international competitiveness and disaster response capability between ports in Canada and Denmark/Sweden was found, where national government policy affects the operational system significantly, and those in Japan, where all port operation is left to local public authorities and the government only exercises its leadership in the distribution of port development budgets. From the aspects of international competitiveness and enhancement
of the disaster response capability, port operation requires powerful leadership of the national government.

**Keywords:** management/operation, leadership, competitiveness, disaster

1. **Introduction**

The national governments of the world grope for how a port operation system with international competitiveness and strong resistance against large-scale natural disasters can be established. In other words, how should the national government exercise its powerful leadership to implement policies aimed at overall optimization instead of partial optimization?

The authors hypothesized that a method to solve this problem was that the national government should develop and implement a comprehensive policy and participate in the port management/operation. However, few studies have verified the importance of a government’s leadership in port policies. This paper is the first research outcome obtained from an analysis of the significance of a government’s leadership by comparing port operation systems of each country. This is in contrast to the many research outcomes on decentralization of authority or privatization that have been obtained along with the progress of decentralization of authority or privatization of port management/operations worldwide.

Previously, the change of the Canadian port policy is the typical example that the port policy switched by the administration change of the federal government in countries participating in the Group Eight (G8). Canadian port policy was on track to decentralization of authority/privatization, but they changed this approach as they realized the importance of the federal government’s leadership. Therefore, in this study, the transition of Canadian port policy is reviewed first, and the background of the shift made by the federal government and the detailed government’s leadership are then analyzed. Subsequently, port management/operation integration in Denmark, Sweden, and Japan are
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reviewed to verify the effect of the national government’s involvement on international competitiveness.

On the other hand, functions of Japanese ports operated by local public authorities were paralyzed by the Great East Japan Earthquake in Japan in 2011. If an anticipated Nankai Trough Earthquake occurs, port functions may be paralyzed just as in 2011 under the current port operation system conducted by local public authorities. Today, horizontal/vertical division of work has been expanded in the global economy, and thus, paralysis of Japanese port functions may result in severe damage on the global economy. Accordingly, through the case of Japan, it was demonstrated that the national government’s leadership can establish port operations resistant to large-scale natural disasters.

In addition, “reform” is defined in this study as a policy that changes the scope of the government’s leadership. In detail, reform contains decentralization of authority, privatization, and orders from the government.

Furthermore, the Canadian port system was analyzed in accordance with the review conducted by Ircha (2001, 2002, 2008), Sharman, Brooks (2007), Debrie (2010), AAPA (2009), Heaver (2009), and Hall et al. (2011), and the results of a hearing investigation performed by the authors from Ms. Kazuko Komatsu who had been a director of board of both Vancouver Port Authority and Port Metro Vancouver as a representative of the Canadian federal government. The port management/operation integration in Denmark/Sweden was cited from Hirano (2009) who had been the first secretary of Embassy of Japan in Denmark. The analysis of the Japanese port system was conducted based on the achievement of Takahashi et al. (2013a, 2013b, 2014) who were officials of the Japanese Government.
2. Switch of the port policy by the administration change of government: Canadian Case

2.1 Reform of the Canadian Port System

The change of the Canadian port policy is the typical example that port policy switched by administration change of the federal government in countries participating in the Group Eight (G8). Authors focused on the relations of the administration change of government and the port policy and analyzed the influence that the administration change of government gave in the port policy. As a result, the federal government of Canada has executed a large-scale reform of the port policy three times to date.

Figure 1 illustrates the flow of the reform of Canadian port system. Notably, Canadian port reform policy was largely changed because of administration changes.

The first reform, executed before 1983, was transferred all ports under national management/operation to local public authorities, and privatization was conducted by creating public corporations. The management and operation system of the ports was systemized using public corporations; however, there are many limitations in this system.

The second reform set forth national marine policy in 1995, established Canada Marine Act in 1998, and developed port authorities to enable independent management and operations at major ports. However, because this reform imposed various constraints on the port authority while introducing an independent accounting system, significant facility investment became impossible because of funding problems; thus, port call opportunities by maritime companies were lost.

The third reform, which established the “Asia-Pacific Gateway and Corridor Initiative (APGCI)” in 2006 and implemented logistics policies (including railway/road modes with efforts of public and private sectors under governmental leadership), is currently in effect. The federal government altered the policy characteristics of the third reform of promoting decentralized and self-
managed port operations, choosing to integrate three port authorities in the Greater Vancouver area and make major improvements to port/railway/road infrastructure. Regarding the alteration of the federal government’s port policy, there was a serious sense of crisis in the administration arising from the trade competition between Canada and the United States related to the rapid growth of trade between Asian countries. Especially, the change of administration in 2006 became a distinctive watershed point. The Liberal Party of Canada privatized and aimed for a financially independent port operation before 2006; since 2006, the leadership of the Conservative Party of Canada changed this path to enabling the federal government to become powerfully involved with port operations and public works.

**Liberal Party became the governing party**
1963 Change of administration
1964 Establishment of harbor commission
   The harbor commission was established and given management responsibility.
1979 Change of administration

**Liberal Party became the governing party**
1980 Change of administration
1983 Canada Ports Corporation Act
   Past debts were cancelled and privatization was adopted.
1984 Change of administration

**Liberal Party became the governing party**
1993 Change of administration
1995 Declaration of national ocean policy
1998 Establishment of Canada Marine Act
   Defining the port types, the port authority system was applied to major ports.

**Conservative Party became the governing party, up to the present date**
2006 Change of administration Declaration of the Asia-Pacific Gateway and Corridor Policy
   This declaration made priming economic growth through soft/hard improvements in ports that serve as the gateway and railways/roads that serve as the corridor in response to the remarkable expansion of trade between China and the North American continent.

2008 Major amendment of Canada Marine Act
   Incorporating financial improvements of port authorities and provisions of integration, three port authorities in British Columbia were integrated.

Fig. 1: Historical Transition of Administration Change and Port Reform in Canada
2.2 Characteristics of the Canadian federal government's leadership for the port management/operation

A significant change was made by the powerful leadership ability of the federal government after the administration change in 2006. The APGCI announced by the Canadian government in 2006 was well received within the country. In the program’s first 4 years, the government implemented specific policies in order to improve the capacity and efficiency of “Gateways” (i.e., ports) and “Corridors” (i.e., railways/roads). Based on the APGCI, these policies are intended to produce synergistic effects, such as a combination of port/railway/road modes, implementation of public works through efforts of public and private sectors, integration of port authorities, and integration of concerned people in addition to respective independent effects.

Policies implemented in the APGCI ranged widely across port/railway/road modes, and the fact that the prime minister and responsible ministers visited Japan and China for top APGCI sales implies that the government responsibly exercised leadership by placing an exclusive minister for the implementation system. The powerful leadership of the government after the administration change was largely affected.

In addition, concurrently with the development of an integrated environment to streamline the management/operations of the port authority organization through amendments of laws and regulations (e.g., the Canada Marine Act), implementation of large-scale port works by public and private sectors became the driving force to reorganize port authorities into organizations with effective management/operations, because it is conducted on the premise of improvements of the financing capability of port authorities.

Figure 2 illustrates the configuration of Port Metro Vancouver (PMV). The federal government decided to strongly integrate three ports (i.e., the Ports of Vancouver, Fraser River, and North Fraser) on the west coast within the Greater Vancouver area through the federal government representative participating in a board.
The port authority has a board, which is the highest organ of management/operation, and the board provides management/operation instructions to managers in the system. The board consists of 7 to 11 directors, who are appointed by the representative bodies. The federal government does not have a right and a budget on the port management/operation. However, a representative of the federal government is included in the board to reflect the intentions of the federal government.

In summary, the characteristics of Canadian federal government's leadership are the following:

a) Canadian port policy was on track to decentralization of authority/privatization, but they changed this approach as they realized the importance of the federal government's leadership.

b) The federal government does not have a right and a budget on the port management. However, a representative of the federal government is included in the board to reflect the intentions of the federal government.

![Fig. 2: Board of Directors (11 members) of Port Metro Vancouver (PMV)](image)

<table>
<thead>
<tr>
<th>Role</th>
<th>Category and Appointment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canadian federal government</td>
<td>1 member</td>
</tr>
<tr>
<td>Person appointed by province</td>
<td>Province of British Columbia</td>
</tr>
<tr>
<td>Person appointed by local</td>
<td>Governments of western provinces (Alberta, Saskatchewan, and Manitoba)</td>
</tr>
<tr>
<td>Port user</td>
<td>7 members</td>
</tr>
</tbody>
</table>

Based on the recommendation of the minister of Transport Canada, appointment by the chairperson of the council.

After consulting with the industry, recommended by the minister of transportation and appointed by the chairperson of the council.
3. Switch of the port policy by the administration change of government: Japanese Case

3.1 Reform of the Japanese Port System

Figure 3 shows the transition of the Japanese port system. The Japanese government executed significant reform of port policy three times after 1950. The first reform, executed in 1950, left all ports including ports managed/operated by the country to independent management/operation by local public authorities. The second reform established the foreign trade port authority in 1967 and transferred the container terminal operation from local public authorities to foreign trade port authorities; however, the operation was transferred to the public corporation as the foreign trade port authority was dissolved in 1987. In the third reform, the Super-Hub Port Initiative was announced in 2004 and the International Strategic Port Policy was declared in 2011, and the container terminal operation was transferred from public corporations to private companies. The third reform continues to the present date.

By contrast, looking at the transition of port policy caused by administration changes from 1993 to 1994 and from 2009 to 2012, non-Liberal Democratic Party-related regimes affected port policies. First, the relationship between the port policy and the administration after 1950 is reviewed.

The current Port management/operation system is regulated by the Port and Harbor Act established under the instruction of the General Headquarters (GHQ) in 1950. By contrast, logistics activities, which are port activities, involve not only the range of administration of local public authorities of the port but also a wider range operated under internationally agreed rules. Thus, it is of interest to determine how these wide-ranging port activities have been realized while the roles of local public authorities were limited.

In 1967, the country newly established the foreign trade port authority act and setup two public authorities: Keihin and Hanshin. These public authorities solely
undertook port administration of a number of port managers (local public authorities) and conducted construction and operation of a wide range of container terminals required for marine container logistics. However, the national government, which was aimed at a small government, judged that construction by public authorities became unnecessary and thus dissolved the public authorities in 1982 as administration reform. All container terminals constructed and operated by the public authorities were transferred to public corporations owned by local public authorities for operation.

<table>
<thead>
<tr>
<th>Phase</th>
<th>Port Policy</th>
<th>National Movement</th>
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<tr>
<td>1950–1982 (LDP)</td>
<td>Development of basic facilities</td>
<td>a. Port and Harbor Act</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Foreign trade port authority act</td>
</tr>
<tr>
<td></td>
<td>a. Development of facilities other than basic facilities</td>
<td>a. Dissolved foreign trade port authority/foundation of public corporation</td>
</tr>
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<td></td>
<td>b. Creation of comprehensive port space</td>
<td>b. Structural Impediments Initiative</td>
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<tr>
<td></td>
<td></td>
<td>c. Basic Plan for Public Investment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. The Great Hanshin-Awaji Earthquake</td>
</tr>
<tr>
<td>1993–1994 (Non-LDP)</td>
<td>Port to Support the Era of Internationalization (central core port policy)</td>
<td>a. Amount increase for the Basic Plan for the Public Investment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Fundamental Principles of General Logistics</td>
</tr>
<tr>
<td></td>
<td>Port operation by vertical separation</td>
<td>b. Private Finance Initiative law</td>
</tr>
<tr>
<td></td>
<td>Super-hub port policy (privatization of public corporations)</td>
<td>c. Act on Special Zones for Structural Reform</td>
</tr>
<tr>
<td>2009–2012 (Non-LDP)</td>
<td>International Strategic Port Policy (operating company system)</td>
<td>a. The Great East Japan Earthquake</td>
</tr>
<tr>
<td>2012–present (LDP)</td>
<td>Port operation by vertical separation</td>
<td></td>
</tr>
</tbody>
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(Note) LDP: The Liberal Democratic Party-based Administration  
Non-LDP: Non-Liberal Democratic Party-based Administration

Fig. 3: Transition of Japanese Port System

The Ministry of Transport established the first Port and Harbor Act when the public authorities were dissolved. The Port and Harbor Act indicates the
necessity of developing port facilities other than the basic ones. However, the act mainly considered development, and port operation was not mentioned.

The port policy presented by the Non-Liberal Democratic Party regime announced that the Fiscal System Council, the consultative body of the government, concluded that port investments should be inhibited (rank C among ranks A/B/C that imply investment control). Consequently, the budget allocated to port development was less than to public works in other fields. Although ports worldwide were in the course of construction and operation of large-scale container terminals because of predicted size growth of container ships, the Japanese government announced that they would decline this investment.

Realizing the necessity of constructing a large-scale container terminal to accommodate for large container ships, in 2005, the Japanese government introduced the super-hub port system by amending the Port and Harbor Act and by enabling a single private business operator to integrally operate a number of successive container terminals at three ports (Keihin, Hanshin, Ise Bay). Thus, operators could pursue the managerial advantage of scale. This led to the establishment of the current system of wide-area port management/operation by the private sector.

A comprehensive logistics policy that included a combination of roads and other infrastructure was announced.

In 2011, the country amended the Port and Harbor Act to establish a two-tiered (separating infrastructure and operation) system, and while leaving the port/management to the private sector, an environment to enable wide-area management/operations was developed. Sixty years after 1950, the wide-area operation system was realized

### 3.2 Characteristics of Japanese government's leadership

As seen in Figure 4 by the allocation of roles between the country and port managers under the Port and Harbor Act, the country was not directly involved with the operation of ports, and its role was limited to provision of instruction by
basic policies of port construction/management and technical standards for facilities. It abandoned the operation of ports to port managers, who are the local public authorities.

Japanese local public authorities were established under the Local Autonomy Act. As indicated by the roles of local public authorities and country shown in Figure 5, the Local Autonomy Act defines that local public authorities “undertakes the wide range of roles to independently and comprehensively implement the administration for the community on the basis of promoting the welfare of residents” and specifies that the role of the country is to implement measures from a national point of view.

<table>
<thead>
<tr>
<th>National government</th>
<th>Port Management Bodies (Local Governments)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Policy formulation for the development and administration of nationwide ports</td>
<td>a. Formulation of port development/management plan</td>
</tr>
<tr>
<td>b. Establishment of necessary laws and regulations</td>
<td>b. Construction and maintenance of port facilities</td>
</tr>
<tr>
<td>c. Providing advice and guidance on port administration and operation to port management bodies</td>
<td>c. Permission for and restrictions on facility use in port management districts (marine districts, land districts)</td>
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<tr>
<td>d. Financial assistance for port management bodies in relation to port construction projects</td>
<td>d. Leasing and management of port facilities</td>
</tr>
<tr>
<td>e. Implementation of port construction projects (Limited to projects under the direct control of the national government)</td>
<td>e. Setting and collection fees for use of port facilities</td>
</tr>
<tr>
<td>f. Improvement and maintenance of shipping channels outside the port area</td>
<td>f. Marketing and promotion of ports</td>
</tr>
<tr>
<td>g. Establishment of technological standards</td>
<td>g. Establishing conditions for providing port services</td>
</tr>
<tr>
<td>h. Surveys and research concerning port technology</td>
<td></td>
</tr>
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Fig. 4: Allocation of Roles between the Country and Port Managers under the Port and Harbor Act
Since the operation system by local public authorities was introduced in 1950, the Japanese port operation system has been concentrated to constructing port facilities, but there has been no change in the basic system. Because a local public authority must maximize the public welfare of residents in the area under its jurisdiction, it implements the measures optimal to its respective locality, including those against competition between neighboring ports. However, those measures may not be optimal in Japan as a whole.

As a result, port management/operation functions were paralyzed when the functions of local public authorities were affected by the Great East Japan Earthquake in 2011.

Figure 6 shows the focal region of the Nankai Trough Earthquake, whose occurrence in the waters surrounding Japan is anticipated. If the Nankai Trough Earthquake occurs, the damage is expected to be more severe than that in the Great East Japan Earthquake in 2011. Particularly, because the assumed disaster-stricken region includes a number of ports, such as the Ports of Nagoya, Osaka, and Kobe (major ports for international trade), according to Takahashi et al. (2014), ports serving as transportation routes of 7.4 million TEU of marine container cargo, that is, 42% of the entire marine container cargo in Japan (17.51 million TEU; 2011), would be paralyzed. The damage is
expected to expand far beyond the administrative district of each local public authority, and thus, the damage level would be beyond that local public authorities could handle and recover.

In addition, because horizontal/vertical division of work has been advanced, this type of paralysis of Japanese logistics would cause significant damage to the global economy. It is the mission of the national government to prevent such damage from spreading.

In summary, the characteristic of Japanese government's leadership is that the Japanese Government lays emphasis on decentralization/privatization of the port management/operation too much and lowers the leadership of the government. When a large-scale natural disaster occurs, this characteristic becomes remarkable.

Fig. 6: Assumed Seismic center of Nankai Trough Earthquake (Mw 9.1)
4. Management/operation Integration Cases of the Ports of Denmark/Sweden

4.1 Formation of Transnational Economic/Living Area

Öresund Link, the bridge and underwater tunnel used for both road and railway, was opened in 2000. It connects Copenhagen and Malmö and reduces the travel time to approximately 45 minutes by car and 30 minutes by train. There are many people commuting across the border from Malmö and the neighboring area to Denmark, and an economic/living area termed the Öresund Region reaching the outskirts of both cities has been formed.

In the Öresund area, integrated economic growth was achieved regardless of the border: for instance, a major industrial cluster of biological research called Medicon Valley was formed that crosses the border. The Port of Copenhagen and Port of Malmö were located across each other over the border at the Strait of Öresund, but the opening of the Öresund Link led the two countries to agree to integrate the management/operation of ports, and integrated port operations began in 2001.

4.2 Structure of Port Operations

Figure 7 shows the operational structure of the Copenhagen Malmö Port. The cities of Copenhagen and Malmö were originally the managers of the Port of Copenhagen and Port of Malmö, respectively, and the city mayors agreed to integrate the management/operation of those ports in 1998. The Port of Copenhagen was initially owned by the city of Copenhagen, but the ownership was transferred to a port corporation 100% owned by the Danish government in 2000. The port ownership was split among Copenhagen city and the port development company CPH City & Port Development: 45% was owned by the Danish government, and 55% was owned by the city of Copenhagen; furthermore, the Port of Malmö was owned by the city of Malmö.

Copenhagen Malmö Port (CMP) is integrally operating both ports. CMP is 50% owned by Copenhagen city and the port development company and 50%
owned by the Malmö port corporation. Separating the owners and operators of both ports, the owners are participating in port operations via a financing relationship. Currently, the ownership ratio in the port operation is as follows: the Danish government, 22.5%; the city of Copenhagen, 27.5%; the city of Malmö, 27%; and private corporations, 23%. CMP is managing/operating the port while borrowing port assets from CPH City & Port Development and the city of Malmö.

Fig. 7: Owners of Port of Copenhagen and Port of Malmö, and Ownership of CMP (The homepage of CMP, Hirano, 2009)

### 4.3 Involvement of National Government in CMP

Ports in Denmark used to be managed and operated by the country, but operations of all ports were transferred to local public authorities. Furthermore, aiming at management/operation by private companies, the port act was revised in 1999 to systematically enable management/operation by private bodies. This movement adheres to the line of privatization taken by England in the 1980s. However, in 2000, the policy was changed to enable the national government to manage/operate the company, and the government is now
involved by making investment to CMP, the company owning the Port of Copenhagen and operating the Port of Copenhagen and Port of Malmö.

5. **Comparison of the participation of the national government on the port management/operation**

The authors introduced the three forms in this paper which the national government participates in in the port management/operation body. The first is a participation form by the government representative such as the Canadian port authority. The second is a participation form by the capital investment of the government such as CMP. The third is the form the national government does not participate in the port management/operation and entrusts it to the local government or the port management/operation body financed by the local government.

By the comparison of three forms, the difference in participation forms of the national government becomes clear.

The power of the participation in the port management/operation is decided according to the capital investment ratio. Generally, capital investment ratio more than 50% which can hold the right of management/operation completely is the strongest. The power of the participation by the government representative is decided according to the cooperation with other members of board. If other members go along, the government can show powerful leadership, but unless other members go along, intention of the government may not be necessarily reflected.

On the other hand, each port management/operation bodies in Japan completely becomes independent each other, which is under perfect competition in economics. It is the method that is most suitable when it is necessary for this form to raise ability to the uniformity standard that there is in a delayed part. However, when economics surpass a constant standard, and the perfect competition produces the problem of the overinvestment, which is a worldwide economic problem. The port management/operation affects national
interest directly and the government must prevent the mutual destruction by the overinvestment legally, but the system as of one of Japan cannot reflect intention of the government legally.
For reinforcement of the international competitiveness between national nations as well as reinforcement against the large-scale natural disaster, the powerful leadership of the government is important. This problem is common throughout the world.

6. Conclusion

The authors identified the following facts in this paper.
The case of Canada presented an example of a foreign port in which the federal government developed policies to establish the system, realize the integration of three neighboring ports, and engage in realizing integrated, effective port management/operations and enhanced transportation capability of logistics infrastructure as Port Metro Vancouver. Canadian port policy was on track to decentralization of authority/privatization, but they changed this approach as they realized the importance of the federal government’s leadership. This was conducted in the context of an economic mission and powerful leadership exercised by the federal government who chose to spark the domestic economy by focusing on the tremendous trade growth between North America and China. In the case of port management/operation integration at the cross-border CMP, the Danish government became involved with the ownership and operation of port assets because it was a port operation matter concerning two countries.
On the other hand, the Japanese case indicated that port operation has been left to local public authorities since 1950 and that the national government is involved only with budget allocation. As a result, Japanese port policy is capable of providing partial optimization for residents within each administrative district through local public authority operations; however, this is not optimal for Japan as a whole. Furthermore, assuming a large-scale natural disaster, it
became apparent that port operations by local public authorities may have considerable negative effects on the global economy as the functions of local public authorities are paralyzed. Accordingly, the authors conclude that the following three points are important to strengthen the international competitiveness and disaster-handling capabilities in port operation and to implement policies aimed at overall optimization instead of partial optimization.

a. The national government should develop and implement a comprehensive logistics policy of ports, railways, and roads with international competitiveness and strong resistance against large-scale natural disasters.

b. The logistics policy can be established through items such as implementing public works, promoting port integration and so on.

c. The national government should participate in the port management/operation by the capital investment to the port management/operation body.

But there will not be the effect of c. if the government does not perform a. and b. at the same time. The authors appeal to port-related people globally through the case of Japan in that from the aspect of enhancing international competitiveness and disaster-handling capabilities, port operation requires policies developed by the national government, the establishment of an operation system in which the national government is involved, and powerful leadership of the national government.
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Preface

Innovation is increasingly considered as an enabler of business competitive advantage. More and more organizations focus on satisfying their consumer's demand of innovative and qualitative products and services by applying both technology-supported and non technology-supported innovative methods in their supply chain practices.

Due to its very characteristic i.e. novelty, innovation is double-edged sword; capturing value from innovative methods in supply chain practices has been one of the important topics among practitioners as well as researchers of the field. This book contains manuscripts that make excellent contributions to the mentioned fields of research by addressing topics such as innovative and technology-based solutions, supply chain security management, as well as current cooperation and performance practices in supply chain management.

We would like to thank the international group of authors for making this volume possible. Their outstanding work significantly contributes to supply chain management research. This book would not exist without good organization and preparation; we would like to thank, Sara Kheiravar, Tabea Tressin, Matthias Ehni and Niels Hackius for their efforts to prepare, structure, and finalize this book.

Hamburg, August 2014

Prof. Dr. Thorsten Blecker
Prof. Dr. Dr. h. c. Wolfgang Kersten
Prof. Dr. Christian Ringle
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Innovation is increasingly considered as an enabler of business competitive advantage. More and more organizations focus on satisfying their consumer’s demand of innovative and qualitative products and services by applying both technology-supported and non-technology-supported innovative methods in their supply chain practices. Due to its very characteristic i.e. novelty, innovation is double-edged sword; capturing value from innovative methods in supply chain practices has been one of the important topics among practitioners as well as researchers of the field.

About HICL

Since 2006 the annual conference Hamburg International Conference of Logistics (HICL) at Hamburg University of Technology (TUHH) is dedicated to facilitate the exchange of ideas and contribute to the improved understanding and practice of Logistics and SCM. HICL creates a creative environment which attracts researchers, practitioners, and industry thinkers from all around the world.

This volume, edited by Thorsten Blecker, Wolfgang Kersten and Christian Ringle, provides valuable insights into:

- Innovative and technology-based solutions
- Supply chain security management
- Cooperation and performance practices in supply chain management

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