

# The logistics as a driving force of trade between Latin America and Asia. Case study on the ports of Callao, Valparaíso, Busan and Shenzhen<sup>1</sup>

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William Muñoz-Murillo

Pontificia Universidad Javeriana Cali

[wmunoz@javerianacali.edu.co](mailto:wmunoz@javerianacali.edu.co)

Edy Lorena Burbano-Vallejo

Universidad de San Buenaventura Cali

[elburban@usbcali.edu.co](mailto:elburban@usbcali.edu.co)

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## Abstract

Within the dynamics of a global economy with efficient markets in constant transformation, commercial initiatives are a fundamental component for the socioeconomic development of countries. On this basis, this study analyzes management of the port environment and its impact on regional and national development for the cases of the ports of Callao, Valparaíso, Busan and Shenzhen; In so doing, the study focuses on best practices geared towards strengthening trade relations and how these facilities drive trade, resulting in an increase in the trade flow between countries.

Methodologically, this is a descriptive-documentary study with a non-experimental design. The main results of logistics best practices are presented: they include the creation of a single window for port procedures, the strengthening of relations between actors related to trade and port operation, and the establishment of the port authority as the highest body for management and integration with the cities and the areas of influence.

KEYWORDS: port management, economic and social development, commercial relations.



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# La logística como motor del comercio entre América Latina y Asia. Estudio de caso sobre los puertos de Callao, Valparaíso, Busan y Shenzhen

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William Muñoz-Murillo

Pontificia Universidad Javeriana Cali

[wmunoz@javerianacali.edu.co](mailto:wmunoz@javerianacali.edu.co)

Edy Lorena Burbano-Vallejo

Universidad de San Buenaventura Cali

[elburban@usbcali.edu.co](mailto:elburban@usbcali.edu.co)

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## Resumen

Dentro de la dinámica de una economía global con mercados eficientes y en constante transformación, las iniciativas comerciales son un componente fundamental para el desarrollo socioeconómico de los países. Sobre esta base, el presente estudio analiza la gestión ambiental portuaria y su impacto en el desarrollo regional y nacional para los casos de los puertos de Callao, Valparaíso, Busan y Shenzhen; con un enfoque en las buenas prácticas equipadas para el fortalecimiento de las relaciones comerciales y cómo estas instalaciones conducen el comercio, lo que resulta en un incremento del flujo comercial entre países.

En cuanto a metodología, el estudio es una descripción documental con un diseño no experimental. Se presenta los principales resultados de las buenas prácticas logísticas, que incluyen la creación de una única ventana para los procedimientos portuarios, el fortalecimiento de las relaciones entre actores partícipes en el comercio y la operación portuaria, y el establecimiento de una autoridad portuaria como la más alta entidad en términos de gestión e integración con las ciudades y áreas de influencia.

## Introduction

In a global economy with efficient markets under constant transformation, trade initiatives are a fundamental component for the socioeconomic development of countries. On this basis, the present study analyzes the management of the Callao, Valparaíso, Busan, and Shenzhen port environments.

According to a study conducted by Banco Interamericano de Desarrollo (BID) (2019) ports have ceased to be mere infrastructure, in that their development aligns with the socioeconomic characteristics of the regions in which they are located. This poses a challenge for the port sector.

Aldoney (2019) has noted that port activity constitutes a self-contained world within the city, with a life of its own and rules that differ from other economic activities.

Thus, each port plays an important role in its region, serving the foreign-trade and cabotage needs of a range of cargo owners. According to Yang and Chen (2016), port activity must be carried out in conjunction with the city. This should take into account the following considerations:

- Infrastructure, composed of piers, esplanades, common areas, roads, and supported areas
- Technology, including related equipment and information and control systems
- Business management, comprising the ability to sustain good labor relations, an efficient operating system, a suitable environment, flawless security provisions, and robust commercial management (Aldoney, n.d., p. 116).

In this context, the Economic Commission for Latin America and the Caribbean (CEPAL, in spanish) have argued that, with the rise in global trade and container throughput, there is a need to strengthen port development with improved container handling capacity, and thus reduce costs. Likewise, one of the greatest challenges the sector faces concerns modernization, as well as improving port--city relations.

In this context, it is worth exploring the good practices of the ports of Busan (South Korea), Shenzhen (China), Valparaíso (Chile), and Callao (Peru) in order to discover how port development has become a driving force for trade, as well as the economic and social development of its area of influence.

## Method

This study employs a descriptive and explanatory method to examine how logistics acts as the driving force of trade between Latin America and Asia through the ports of Callao, Valparaíso, Busan, and Shenzhen. The method entails an overview of the main features and qualities of the ports based on a documentary review of the categories of analysis. This enables identification of the logistics best practices applied at each port. The methodological design and its stages are presented in more detail below:

**Table 1 - Categories of analysis**

<b>Methodological stage</b>	<b>Description</b>
Stage 1	Review of the literature focusing on the areas of study: good practices and port development.
Stage 2	Collection and analysis of information to enable the identification of good practices at the ports.
Stage 3	Characterization of ports.
Stage 4	Determination of good practices at the ports.

**Source: compiled by author**

## Results:

The study entailed a comparative analysis of the following ports: Valparaíso (Chile); Callao (Peru); Busan (South Korea), and Shenzhen (China). In Table 2.

**Table 2 - Overview of ports studied**

<b>Busan, South Korea</b>	Location	South of the Korean peninsula some 330 kilometers from Seoul.
	Population	4 million inhabitants, making it the second-biggest city in South Korea.
	Expanse	763.30 square kilometers, encompassing around 0.77 % of the nation's territory.
	Port	North Port, South Port, Gamcheon Port, and Dadaepo Port. There is one international passenger terminal and six container terminals.
<b>Shenzhen, China</b>	Location	Guangdong province, in the Pearl River Delta. Bordered by Hong Kong to the south, Huizhou to the northeast, and Dongguan to the northwest.
	Population	13.2 million
	Expanse	2,000 square kilometers
	Port	The port's development is associated with public policies oriented towards port modernization and development through technology and innovation, with a view to improving processes and efficiency. With the arrival of foreign-owned companies, the port terminal improves its infrastructure and invests in technology in order to strengthen multi-modal transportation.
<b>Valparaíso, Chile</b>	Location	Central Chile, 110 kilometers to the northwest of the capital.
	Population	More than 1.8 million inhabitants (Censo, 2017).
	Expanse	16,000 square kilometers.
	Port	The port is operated in the city by Empresa Portuaria Valparaíso. According to the <i>Análisis Razonado del Puerto de Valparaíso para el año 2017</i> (Puerto de Valparaíso, 2017) the port has five concessions, responsible for the operation and administration of certain terminals, waterfront regeneration, and equipment and infrastructure provisioning in the Logistics Support Extension Zone (ZEAL).
<b>Callao, Peru</b>	Location	The central coast, bordering the capital city of Lima.
	Population	994,494 inhabitants.
	Expanse	147 square kilometers.
	Port	The port of Callao has three concessions: the South Pier container port; the multipurpose North Terminal, and a mineral concentrate loading terminal. The former two have received investment from port operators within the global top five (DP World and APM Terminals, respectively).

**Source: compiled by author**

**Best practices for efficient management:**

The best practices at each of the ports are outlined in a series of tables below, starting with Table 3.

**Table 3 – Best practices at Busan Port**

Port	Good practices
<b>Busan</b>	<ul style="list-style-type: none"> <li>✓ Implementation and consolidation of the Busan Port Authority (BPA), whose activities have facilitated port development.</li> <li>✓ Assignment of a free trade zone.</li> <li>✓ Development of territorial marketing (for port and city), promoting a brand effect.</li> <li>✓ Port call optimization: Port digitalization and strengthening of collaboration.</li> </ul>

**Source: compiled by author**

According to Yang and Chen (2016), the state has a responsibility to leverage competitive advantages; this has enabled the development of financial and other services such as transshipment, allowing the port to offer incentives for shipping lines and to simplify procedures and various value-added activities such as freight transfer, the use of freight abroad, and distribution activities.

**Table 4 – Best practices at Shenzhen Port**

Port	Best practices
<b>Shenzhen</b>	<ul style="list-style-type: none"> <li>✓ Partnership between the state and private firms.</li> <li>✓ Application of governance models to port principles Specific case of Shenzhen, which has a governance model.</li> <li>✓ Special economic zone.</li> <li>✓ Integration of all foreign trade process and operating processes (digitalization).</li> </ul>

**Source: compiled by author**

Shenzhen Port, in its drive to become the biggest container port in the world, incorporated companies and maritime authorities in two overarching strategies: i) foreign trade processes; and ii) infrastructure development and innovation, in order to reduce the times involved in customs dispatch, port documentary requirements, and port management. Finally, the port has created an environment of collaboration with other ports around the world.

**Table 5 – Best practices at Valparaíso Port**

Port	Best practices
<b>Valparaíso</b>	<ul style="list-style-type: none"> <li>✓ Strengthening of the port's logistics community.</li> <li>✓ Port-to-port connectivity.</li> <li>✓ The Single Port Window (VUP); connection with the Sole Foreign Trade Window (VUCE).</li> <li>✓ Logistics Support Extension Zone (ZEAL).</li> </ul>

**Source: compiled by author**

The Peruvian government devised a best practice guide for the port logistics area (in relation to logistics communities). The main aim is to generate synergies between the different actors in the logistics chain in pursuit of innovative solutions for better international competitiveness. As Salgado and Cea (2012) noted, specialization aids in sustaining and developing port dynamics, and, therefore, promotes economic growth.

**Table 6 – Best practices at Callao Port**

Port	Best practices
Callao	<ul style="list-style-type: none"> <li>✓ Port regulations, which permitted the formation of the port community.</li> <li>✓ Study of the “collaborative port” concept.</li> <li>✓ Port-level planning (Port Authority).</li> <li>✓ Strengthening port and logistics integration.</li> </ul>

**Source: compiled by author**

The port has recently taken a series of actions, such as the implementation of a port lighting and beaconing service to mark out the access channel and delimit certain work areas. In addition, a 16-meter dredge was recently carried out. Another relevant aspect concerns the collaboration between actors related to port development and services, which is essential to the efficiency and competitiveness of the entire chain. Thus, the port seeks to promote actions that have a positive impact on interactions between private and public agents, in order to improve efficiency through projects focused on investment in infrastructure.

## Conclusions

The implementation of best practices at ports helps to strengthen foreign trade, which manifests itself in economic and social development.

Notable in this process is the integration between the VUP and the VUCE at Valparaíso, which enables advance customs and customs-service processing and fosters synchronization between transport, logistics, inspection, and control systems.

The formation of logistics clusters enables integration between the different actors involved in the port operation and their interaction in the area of influence.

Finally, the consolidation of port communities creates synergies between different ports around the world in pursuit of connectivity and the learning of success stories from different ports.

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