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PORTS AS POWER: AN ANALYSIS OF MAJOR PORTS AND TERMINALS OPERATION COUNTRIES

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Abstract

Ports and terminals are vital nodes in the global trade network and economy, serving as the main gateways for the movement of goods and people around the world. The last few years they were transformed from critical hubs for global trade to strategic assets that can shape geopolitical dynamics. This thesis aims to answer the research question of how China, Singapore and UAE utilize their major state-owned ports and terminals operators to gain geopolitical leverage. The entities included in the study are COSCO Group, China Merchants Ports Group for China, PSA Group for Singapore, DP World Group and Abu Dhabi Ports Group for the United Arab Emirates. Through a detailed analysis of the geopolitical leverage theory and of the state-owned enterprises, this study objects to demonstrate that the global presence of these enterprises is not just a commercial venture but a deliberate strategy to enhance their nations power worldwide.

Keywords: Geopolitical Leverage, State-Owned Enterprises (SOEs), Foreign Direct Investment (FDI), Entry Modes, China, Singapore, the U.A.E., COSCO Shipping Ports, China Merchant Ports, DP World, Abu Dhabi Ports, PSA International, Integrated Business Clusters, Control of Trade Routes, Economic Influence, business clusters, Political and Diplomatic Influence, Security and Military Presence, Technological and Logistical Advantage.

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List of Abbreviations

COSCO China Ocean Shipping

CMP China Merchant Port

PSA Port of Singapore Authority

DPW Dubai Ports World

ADP Abu Dhabi Ports

UAE United Arab Emirates

SOEs State owned enterprises

FDI Foreign direct investment

M&A Mergers and Acquisitions

JV Join Ventures

PPP Public-Private Partnerships

BOT Build-Operate-Transfer

BLO Build-Lease-Operate

ROT Rehabiliate-Operate-Transfer

BROT Build-Rehabiliate-Operate-Transfer

BOST Build-Operate-Share-Transfer

PPA Piraeus Port Authority

OOIL Orient Overseas International Limited

OOCL Orient Overseas Container Line

CT Container Terminal

GDP Gross domestic product

Chapter 1: Introduction

1.1 Research background and significance

1.1.1 Research background

Ports and terminals have always been integral to the global economy, acting as critical nodes for international trade. With the rise of globalization, nowadays, their role has transformed from primarily economic hubs to critical instruments of geopolitical leverage. Nations such as China, Singapore, and the United Arab Emirates consistently leverage their major state-owned enterprise's activities to expand their influence abroad. This research demonstrates a structural framework on how these nations utilize their SOEs foreign direct investments to gain geopolitical leverage.

1.1.2 Research Significance

Understanding the strategic role of ports and terminals in a broader geopolitical framework is essential nowadays. The foreign direct investments of the major state-owned enterprises of China, Singapore, and the United Arab Emirates have implications that directly affect components such as global trade, the economic stability of nations, and, generally, international relations. This research aims to impact this field of studies by creating a theoretical structured framework for identifying the geopolitical leverage that a nation can create through the foreign direct investments of their state-owned enterprises. By analyzing the SOEs activities within their business clusters and breaking down the concept of geopolitical leverage into distinct components, this approach will be able also to identify the ways and the areas in which such foreign investments can enhance a nation's geopolitical influence abroad.

1.2 Methodology

The methodological approach of this thesis is to follow a qualitative method. The study combines case studies analysis of the nations and their state-owned enterprises with a review of secondary data such as media documents, annual reports, and academic journals. The method of this paper is first to give a comprehensive analysis of what is geopolitical leverage through foreign direct investments in ports, breaking it down into specific components. Subsequently, this paper will provide an in-depth analysis of the main entry modes and the nature of state-owned enterprises among their business clusters. Also, the study will be focusing on case studies of the mentioned above nations and their state-owned operators such as COSCO Shipping Ports, China Merchant Ports, DP World, Abu Dhabi Ports and PSA International comparing how each country strategically utilizes them to influence global trade and geopolitical dynamics.

Chapter 2: Geopolitical Leverage

2.1. Defining Geopolitical Leverage

In this study, the aim is to define and detect geopolitical leverage through direct foreign investments and, generally, the operations of the major ports and terminals operators in host countries. Geopolitical leverage can be defined as, generally, the ability of a nation to exert influence globally using its various resources. Mainly by gaining geopolitical leverage, a nation can engage more efficiently in international prospects and expand its influence. Specifically, in this thesis, in order to simplify the term and get more accurate findings, geopolitical leverage will be divided among five components. The first component will be the control of trade routes. By controlling key maritime hubs in strategic locations, a nation can apply strong influence by regulating the flow of goods and supplies, affecting the global supply chains and influencing other nations economically.

The second component will be economic influence. Managing and operating major ports and terminals in foreign countries can allow a home nation to influence the global trade flows as well as the previous component, affecting tariffs and shipping costs. They can also prioritize restrict access to certain trade routes, impacting in that way their economic stability and the host nations as well.

The third component is political and diplomatic influence. This component can provide a nation political influence over other nations. For example, countries with extensive port networks can use their infrastructure as bargain chips in international negotiations for trade agreements and diplomatic support. The fourth component will be the security and military presence. As we have seen on multiple occasions, ports can also serve as strategic military outposts, allowing countries to project their power and secure naval logistics in key regions. This presence can potentially deter adversaries, protect vital sea lanes, and support military operations.

Moreover, nations can use foreign ports as bases for intelligence operations or as logistical hubs for military allies. The fifth and last component is the technological and logistical advantage or in other words, the access to foreign data. Control over ports and terminals operations can provide significant technological advantage, particularly through access to vast amounts of data related to global trade and shipping activities. In conclusion, by dividing the term geopolitical leverage into those five components, the goal is to get more specific and accurate results on how these nations can gain, if possible, geopolitical leverage.

Chapter 3: State-owned enterprises

3.1. Defining State-owned enterprises in the port industry

State-Owned Enterprises (SOEs) are central to understanding how nations can gain geopolitical leverage, particularly in strategic industries like maritime. In this thesis, analyzing SOEs is crucial as they act as extensions of state power, allowing governments indirectly to control their operations. By examining the role of SOEs in ports and terminals operations, we can better measure how they contribute to their nation's geopolitical leverage through their strategic foreign direct investments. First, State-owned Enterprises are companies or entities in which the government holds significant or complete ownership. Typically, these enterprises operate in key sectors considered vital to national interests, which is the maritime port industry. They commonly function in a dual capacity; they are profit-seeking entities, but their broader purpose often includes fulfilling national strategic objectives and interests. In terms of structure, many operate with a degree of autonomy like private companies, under market-driven conditions. However, as previously mentioned, they are often subject to political oversight and strategic direction from government ministries or state bodies. In the particular case of the port industry, these enterprises typically control large-scale port operations, including terminal management, general maritime services, supply chain, and logistics services. Their influence is particularly strong in countries where key maritime infrastructure is considered a strategic asset. It is important to state that in the maritime industry, they are not only economic actors but also serve as instruments for obtaining geopolitical leverage.

3.2. State-owned enterprises integrated business clusters

As previously mentioned, SOEs from key nations that play a dominant role in global ports and terminals operations will be analyzed. Focusing on China, Singapore, and the United Arab Emirates, the entities are COSCO Shipping Ports, China Merchants Ports, PSA International, DP World, and Abu Dhabi Ports, respectively. In order to achieve an in-depth analysis and view of these enterprises, they will be divided across their integrated business clusters while also giving a view of their subsidiaries. A business cluster is a geographic concentration of interconnected companies in a particular field or industry. In the case of this study, the clusters are integrated into the companies under the umbrella of a main group, having several subsidiaries across the clusters. Specifically, the SOEs will be analyzed through their business clusters of maritime-shipping services, port and terminal operations, and logistics and supply chain management. The cluster of ports and terminals operations includes operations such as infrastructure and superstructure development and management, ports management, various types of terminals management like containers, passengers, oil and LNG, and everything that can facilitate maritime trade and transportation. In my opinion, it is the most important business cluster among the others as it can ensure efficient trade, support economic growth, connect sea routes with land-based supply chains, and enhance advanced technologies in the sector. Regarding maritime shipping services, the cluster mainly supports activities like cargo handling, including container, dry bulk, oil tanker, specialized cargo, passenger transportation, ship ownership or management, shipbuilding and repairing, chartering, and port-related maritime operations such as pilotage. The main goal of the enterprises in this cluster is to ensure efficient and smooth flows on the global transportation routes. The logistics and supply chain services cluster typically focuses on enhancing efficiency, reliability, and adaptability. It provides end-to-end logistics and supply chain services in basically deep interaction with the maritime shipping and ports and terminals industry clusters, as operators often expand their influence by integrating logistics and maritime services, offering total solutions that enhance connectivity and control over trade routes. Collectively, through these business clusters, the enterprises can solidify their role in global trade while also serving as tools for their respective nations to extend their geopolitical reach.

Chapter 4: Entry Modes

4.1 Analysis of port investments entry modes

Entry modes in the port industry through foreign direct investments are crucial for measuring the volume of geopolitical leverage that a nation can gain in a host country. The way state-owned enterprises enter foreign port markets directly influences their level of control, impact, and strategic positioning. The differences between entry modes can determine the volume of an enterprise's influence on host countries. The four entry modes analyzed afterward are:

1. mergers and acquisitions (M&A),
2. joint ventures,
3. concession agreements, and
4. Public-Private Partnerships (P.P.P.).

By having a view of each entry mode separately and assessing the advantages and disadvantages, we will be able to better understand the level of influence an investor can exert over host countries.

4.1.1 Mergers and Acquisitions (M&A)

The entry mode of mergers and acquisitions is the first to be analyzed. M&As have been, over the years, one of the most common and successful entry modes used by enterprises looking to expand their presence abroad. This approach comes mainly for the home enterprise by merging or acquiring with already existing enterprises in host countries. This entry mode is considered as a rapid way to enter a foreign market as it allows enterprises to get control of established infrastructure, existing networks, customer bases, and revenue streams. In that concept, home countries can facilitate a smoother integration into the foreign market, bypassing several challenges.

Moreover, mergers and acquisitions allow for the leveraging of local expertise. However, this entry mode does not come without any challenges. Getting hands in foreign assets means the home country enterprise will probably be navigated into complex and unknown regulations. Many host nations may enforce restrictions over foreign ownership of critical assets that are considered vital for national objectives. Foreign takeovers of ports are raising concerns lately regarding sovereignty, as has happened with Chinese companies undergoing several inspections about their activities, particularly in Europe, where their influence is strong.

Additionally, conflicts and inefficiencies can easily happen when two enterprises with different cultural backgrounds, standards, and practices come together. Generally, this entry mode can generate soft dynamics, where the host countries become intertwined with the foreign enterprise home nation. State-owned enterprises, through their overseas mergers and acquisitions, can not only gain benefits for their behalf but also geopolitical influence for their respective nations.

4.1.2 Joint Ventures

Joint ventures are another ideal and similarly common entry mode for enterprises seeking to expand overseas activities. This mode happens when two or more enterprises agree to collaborate and combine their resources to form a completely new enterprise. In this concept, joint enterprises share the risks and benefits of the venture. The new enterprise comes along to develop, manage and operate ports and terminals. One of the most significant advantages of this approach is that the enterprises involved in the venture share their capital, resources, expertise in the field, technologies, and extensive networks. This sharing context makes the entry mode generally attractive for enterprises.

Moreover, the companies can benefit from risk-sharing at the beginning of the venture, as entering foreign markets with totally different environments and regulations can easily present numerous challenges and barriers. JVs also allow the leverage of the complementary strengths between the partners, as the combination of global and local capabilities can improve a port in all its aspects. However, as with every entry mode, joint ventures have some challenges. For instance, one of the main concerns is the potential conflicts that can easily come along between the partners, as their objectives, their management styles, and their cultural differences can turn into inefficiencies. Moreover, the decision-making among the partners can be more complex and time-consuming than having only one player that can do all that more easily in highly competitive and fast-moving markets, which can be a considerable disadvantage. A successful joint venture can allow enterprises to strengthen their position even more and align their interests with broader national strategic goals.

4.1.3 Concession Agreements

The concession agreements are the third entry mode that will be analyzed. In this mode, a concession is mostly a contract between a government authority that grants a private enterprise the right to manage and operate a port or a terminal for a specific period that lasts, on most occasions, 50 years. During the agreed period, the enterprise is responsible for managing the port operations, and it is forced to hand back the assets to the government authority at the end of the contract. This entry mode provides the operator long-term control without requiring full ownership, making it an attractive and successful option. One of its key features is the division of responsibilities. The framework is that the operator manages the day-to-day activities while the authority generally retains ownership over the assets and the land. Also, this structure allows host nations to maintain the sovereignty of their assets while benefiting from the expertise of private enterprises. This entry mode can be described as primarily beneficial for both sides. For instance, a benefit for the home nation enterprise is that the initial capital investment needed is lower than that of other entry modes.

Moreover, while the operators will keep being motivated to develop and improve the port for a long time, as their profitability mainly depends on that, the host nation will benefit from the port’s success and strengthen its position on the global stage. Despite the numerous advantages, concession agreements also face several challenges. In some cases, disputes can arise between the operators and the governments, particularly over issues like revenue-sharing, operational standards, results or even the time length of the agreement. Regulatory constraints may also arise over the time of the concession. Overall, under a concession agreement, the influence that an operator can have over a host country can translate into geopolitical leverage, as their interest will be closely aligned, and the home nation will be able to establish its footholds there for a long time.

4.1.4 Public-Private Partnerships (PPP)

The public-private partnerships (PPP) are the fourth and last entry mode to be analyzed. The general framework of a PPP is when the public sector collaborates with private, mostly state-owned enterprises to provide assets or services through investments. These kinds of partnerships can include the share of responsibilities and the share of the financing capital. Through this entry mode, the strengths of the public and the private sector can be combined and leveraged in several ways.

PPPs are especially important for countries that need investments to develop their ports but lack public resources. In the context of a PPP, there are various forms like Build-Operate-Transfer (BOT), Build-Lease-Operate (BLO), Rehabiliate-Operate-Transfer (ROT), Build-Rehabiliate-Operate-Transfer (BROT), and Build-Operate-Share-Transfer (BOST), which will be analyzed further afterward.

Firstly, in a BOT model, the government or public authority grants a concession to a private enterprise to finance and build a specific port facility from scratch. In a BOL, a government authority leases the construction and operation of the whole port or part of it to a private company through a long-term concession. The port authority controls the rights throughout the concession period and receives an annual lease payment. The framework of ROT is when the government authority grants a concession to a private company to finance and rehabilitate or modernize a specific terminal or an entire port. Then, this company is entitled to operate and obtain revenue from the rehabilitated port for a particular period. The private company takes all commercial risks, and at the end of the concession period, the government retakes ownership of the improved asset. BROT is a combination of the BOT and ROT mechanisms. The government or public authority grants a concession to a private company to finance, build and rehabilitate or modernize a specific terminal or an entire port. The private partner will build, operate, and obtain revenue from the rehabilitated port for a specific period. The private company takes on all commercial risks, and at the end of the concession period, the government retakes ownership of the improved asset.

The last one, the BOST, is similar to the BOT model. A government grants a concession or a franchise to a private company to finance and build or modernize a specific port/terminal for a designated period. The revenue from terminal operations is shared with a designated public authority throughout the concession period. The government or the public authority should ensure a specific quantity of throughput for revenue. The commercial risks are shared between the government and the concessionaire. At the end of the concession period, the government retakes ownership of the assets.

One of the benefits of PPPs is the access to private capital for the public sector, which can develop and enhance the port operations results. Another advantage that makes PPPs attractive is the long-term that they offer. The partnership can generate vast amounts of revenue through the time period more easily**.** In addition, private partners bring operational expertise that can benefit various sectors. By partnering with such operators, governments can ensure that their ports are run more efficiently and will be more competitive in a global stage.

However, PPPs come, of course, with some challenges and disadvantages. The balance of the public and private sectors is difficult to maintain. These partnerships need a clear framework to work in, and poorly designed contracts can lead to disputes over several aspects. Moreover, governments must be assured over time that the private operators meet their standards and fulfill their commitments. Public-Private Partnerships can be a vital tool for developing a port within a partnership of sectors. Summarizing, this entry mode has proven to be an effective way for both governments to attract foreign investment and improve their ports' overall performances. At the same time, the home nation's operators are given the chance to strengthen their nation's geopolitical leverage.

Entry Mode	**Advantages**	**Disadvantages**
Mergers and Acquisitions (M&A)	Efficient utilization of acquired resources to swiftly enter the market. Rapid access to established markets and infrastructure. Save time for construction of fixed assets.	High financial risk. Cultural integration challenges. Difficulties in value evaluation.
Joint Ventures	Shared risks and costs. Access to local expertise. Reduced risks.	Potential conflicts-disagreements. Shared control. Unequal contributions.
Concession Agreements	Lower financial and investment risk. Access to infrastructure. Long-term revenue potential.	Regulatory constraints. Assets need to be handed over after concession period-Time limit.
Public-Private Partnerships (PPP)	Shared Risk and Investment. Access to Private Sector Expertise.	Contractual complexity. Potential for Higher Costs.

Table 1 Advantages and Disadvantages of the four main entry modes.

Source: Author's compilation.

Chapter 5: China

5.1 Background of China's Maritime Port Industry

Over the years, China has positioned itself as a global powerhouse in the maritime industry and is considered the biggest maritime hub worldwide. The nation has a history in the industry that goes back over the decades. China's geographic position, broad coastline, and generally state-driven efforts transformed it into a globally dominant force. The industry there includes a wide range of maritime sectors such as port and terminal operations, shipping general services, and logistics and supply chain management. Moreover, China is home to some of the busiest and most advanced ports in the world, consistently ranked among the best in the world. At the front of the nation's success in the industry are its major state-owned enterprises, COSCO Shipping Group and China Merchants Ports Group, which have grown to meet the nation's domestic and abroad needs and goals. A key feature of the nation's broader strategy is the Belt and Road Initiative (BRI), which will be analyzed later. In general, through the state-owned enterprises and the application of the BRI, China has succeeded massively in expanding its influence worldwide by establishing strong ties with other nations and securing footholds in key hubs. China's way to the top was achieved a long time ago, but the nation's significant strategies show that they are looking to stay there for more and maintain their global dominance.

5.1.1 China's Belt and Road Initiative (BRI)

As previously mentioned, the Belt and Road Initiative has been a fundamental feature of China's way of expanding its influence on the global stage. The BRI, also known as the One Belt One Road and the New Silk Road, is an international infrastructure project launched by the government in 2013. It is considered one of the most ambitious and successful projects by a government in modern history. The initiative is divided into the two proposes of the Silk Road Economic Belt and the 21st century maritime silk road. Since day one, the project aimed to enhance the free flow of economic factors, the efficient allocation of resources, the facilities connectivity and the financial integration. The structure of it composes six urban land corridors linked by roads, rails, energy, and digital infrastructure linked by the development of ports. Those six corridors are the new Eurasia land bridge, the China-Mongolia-Russia, the China-Central Asia-West Asia, the China-Indochina peninsula, the China-Pakistan, and the Bangladesh-China-India-Myanmar. Generally, the BRI aims to connect Asia, Europe, and Africa.

Specifically, the land-based part of the project starts in Xi'an, central China, and extends through Lanzhou in Gansu, Urumqi in Xinjiang, and Khorgas, a city near the Kazakhstan border. From there, the Silk Road proceeds to Duisburg in Germany, passing through countries such as Iraq, Syria, Turkey, Bulgaria, Romania, the Czech Republic, and Germany. From Duisburg, the route connects to major northern European ports like Rotterdam, Antwerp, and Hamburg. The Belt extends south to Venice, Italy, where it links with the Maritime Silk Road. The Maritime Silk Road begins at the port of Quanzhou in Fujian and continues through Guangzhou, Beihai, and Haikou before heading south to the strategic Malacca Strait. It then connects to critical locations like Gwadar port in Pakistan and parts of East Africa before entering the Mediterranean Sea, with notable stops at the Piraeus port in Greece and Venice in Italy. The Chinese state-owned enterprises COSCO and CM ports, have been at the forefront of the BRI's successful journey since its launch by simply being a vital part of it. Since then, these companies have proceeded with foreign direct investments in ports and terminals across the continents, contributing to the nation's global expansion. Within this concept, these investments allow China to control strategic trade routes, influence economies in the host countries, create naval bases abroad, and generally exert further influence. Nevertheless, the expansion of Chinese influence through the BRI has also raised concerns about sovereignty over other nations and potential geopolitical conflicts. Collectively, the Belt and Road Initiative has been undoubtedly transformative for China, helping it to expand its influence and maintain its dominant position on the global stage.

Figure 1 China's Belt and Road Initiative map.

Source: National Maritime Foundation.

5.2 COSCO Shipping Ports (CSP)

5.2.1 Overview

COSCO Shipping Ports is one of the maritime industry's biggest and most successful enterprises. The company's history goes beyond when it was known as COSCO Pacific. Back in the years, the company was a subsidiary of China Ocean Shipping Company, and it is now a part of the successor company, China COSCO Shipping Group. It is important to state that the company is state-owned and has played a critical role in China's maritime objectives over the years.

The company's expansions also align perfectly with the Belt and Road Initiative, which has been a part of these past few years. Moreover, the company nowadays has an extensive portfolio of ports and terminals under its management over the continents. For instance, COSCO has acquired stakes in prominent international ports, such as Piraeus Port in Greece, Khalifa Port in Abu Dhabi, and Zeebrugge Port in Belgium, positioning itself as a key player in global shipping. As previously mentioned, the aim is to measure leverage through specific components such as control of trade routes, economic influence, political and diplomatic influence, security and military presence, and technological and logistical advantage.

A crucial part of the China COSCO Group's way of gaining geopolitical leverage has been the group's subsidiaries. COSCO Shipping Ports is not the only subsidiary of COSCO Shipping Group. The group operates through diverse subsidiaries across its business clusters that significantly enhance its geopolitical leverage in the maritime and logistics sectors. Regarding the group's maritime-shipping activities there are COSCO Shipping Lines Co. Ltd., Orient Overseas International Limited Co. Ltd. (OOIL), COSCO Shipping Energy Transportation Co. Ltd., COSCO Shipping Bulk Co. Ltd., COSCO Shipping Specialized Carriers Co. Ltd., COSCO Shipping Ferry Co. Ltd., COSCO Shipping (Xiamen) Co. Ltd. And Hainan Harbor & Shipping Holding Co. Ltd. These companies are the main arm of COSCO group with their role being central to the group's international shipping and maritime operations. Operating a large fleet of container ships and bulk carriers, handling cargo, mainly containerized, dry bulk shipping, oil tanker shipping and passenger liner transportation between major trade hubs worldwide, focusing also on shipping management and freight forwarding, they play a crucial role in enhancing the efficiency of shipping operations, connecting China with markets around the world and strengthening China's trade relationships and economic ties with various countries. As for their ports and terminal activities, the company that is the topic of the study is COSCO Shipping Ports. As previously mentioned, the company is the largest public port operator in China, managing a vast network of domestic and international terminals, specializing in the management, investment, and operation of terminals globally.

Significant investments in overseas terminals in strategic locations create footholds in key maritime regions and link critical trade corridors that exert considerable pressure and influence over regional economies, making them a pivotal player in global trade dynamics. Moreover, this cluster includes Hainan Harbor & Shipping Co. Ltd., COSCO SHIPPING North America Inc. and Piraeus Port Authority S.A.(PPA). A range of companies also covers the range of the group's logistics and supply chain cluster. COSCO Shipping Logistics is one of them and one of the earliest logistics enterprises in China, holding a leading position in the comprehensive logistics and supply chain field. Additionally, there are more companies in the cluster, each one located in a key strategic hub, such as COSCO Shipping Shanghai Co. Ltd., COSCO Shipping North America Inc., COSCO Shipping Europe Gmbh., COSCO Shipping Southeast Asia Pte. Ltd., COSCO Shipping Oceania Pty. Ltd., COSCO Shipping Japan Co. Ltd., COSCO Shipping Korea Co. Ltd., COSCO Shipping West Asia FZE., COSCO Shipping Africa Pty. Ltd. and COSCO Shipping South America Co. Ltd. These companies are committed to become third-party logistics service providers with various types of services integrated with global "sea, land and air" including warehousing, distribution, supply chain management, transportation, customs clearance and ship freight agency. Generally, through their operations, these subsidiaries are giving a strong competitive edge to the COSCO group that is crucial

, which maintains and expands China's influence in the maritime industry and positions them as a dominant player globally. In conclusion, COSCO Shipping Ports has established itself as a dominant player in the global port industry, with a vast network of port terminals strategically located across significant trade routes. Its investments in major port infrastructure around the world have not only enhanced its commercial success but also bolstered China's geopolitical influence.

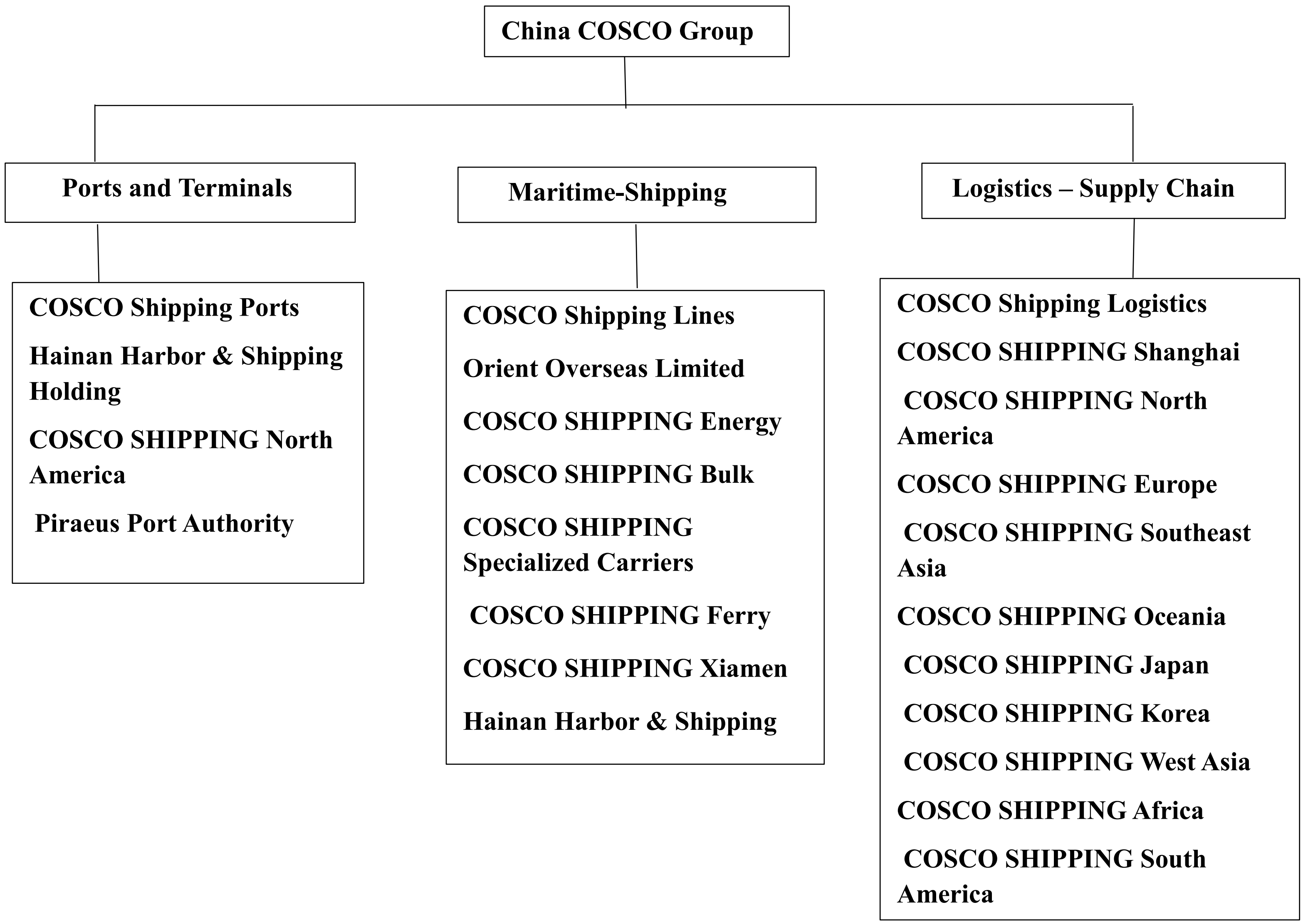

Figure 2 China COSCO group's industrial cluster subsidiaries.

Source: Author's compilation based on China COSCO Shipping Corporation Limited Business Sectors

5.2.2 COSCO Shipping Ports' overseas investments

COSCO Shipping Ports has pursued an aggressive strategy of overseas investment, becoming a dominant player in global port operations. Their overseas investments are spanning across all the businesses clusters, but I will concentrate on COSCO Shipping Ports' investments inside the ports and terminals cluster. Through targeted acquisitions, joint ventures, and concessions, the company has expanded its presence far beyond China's borders, establishing a foothold in key maritime hubs around the world. It is important to be noted that these investments are strategically aligned with China's Belt and Road Initiative (BRI) from its launching and afterwards, enhancing COSCO's ability to control critical shipping routes and logistics networks. COSCO Shipping Ports was one of the first Chinese port companies to begin investing abroad. Its international venture started in the early 2000s when it partnered with Singapore International Port Group, acquiring a 49% stake in Singapore COSCO Newport Terminal Co., Ltd. (CPT). This was followed by investments in Antwerp Port and the Suez Canal Container Terminals in 2004 and 2007, respectively. In 2008, COSCO secured a 35-year concession for Terminals 2 and 3 at Piraeus Port in Greece, marking its first wholly owned port project.

The acquisition of a 67% stake in Piraeus Port Authority in 2016 further strengthened COSCO's role, transforming Piraeus into a key container terminal and a crucial hub for the Eastern Mediterranean region. With the launch of China's Belt and Road Initiative, COSCO Shipping Ports increased its pace of overseas investments. Between 2016 and 2017, COSCO executed nine equity acquisitions. Additionally, the form of acquisition shifted to direct corporate equity purchases, as seen with COSCO's acquisition of Notatum and OOCL (Orient Overseas Container Line), giving it access to nearly 10 more overseas ports. Since then, the company has pursued more foreign direct investments, gaining control of more overseas ports and terminals, increasing its global presence. Notably, COSCO is seeking to expand further as in COSCO Shipping Ports' annual report, the chairman said that the company "will continue to grasp the opportunities to expand its global terminal network and focus on emerging markets such as Southeast Asia, the Middle East and Africa to enhance the regional diversification of its terminal asset portfolio. Table

2 shows the investments of COSCO Shipping Ports in overseas ports and terminals along with the company's shareholdings percentage.

Region/Country	Ports/Terminals	Share Holdings (in percent)
Greece	Piraeus	
Belgium	CSP Zeebrugge Antwerp	90.0 20.0
Singapore	COSCO-PSA terminal	49.0
U.A. E	CSP Abu Dhabi Red Sea Gateway	40.0 20.0
Italy	Vado Reefer Vado Container	40.0 40.0
Turkey	Kumport	26.0
Spain	CSP Bilbao CSP Valencia	39.51 51.0
Egypt	Suez Canal	20.0
Netherlands	Euromax	17.85
U.S. A	Seattle	13.33
Korea	Busan	4.23
Peru	CSP Chancay	60.0

Table 2 COSCO'S overseas investments in ports and terminals.

Source: Cosco Shipping Ports Businesses Portfolio.

5.3 China Merchants Ports Holdings (CMP)

5.3.1 Overview

China Merchants Port Holdings (CMPort) is the second Chinese enterprise to be analyzed. It is also one of the biggest companies in the industry globally. As a subsidiary of China Merchants Group and a state-owned enterprise with a history going beyond these century, CMPort plays a pivotal role in China's maritime industry The enterprise has since evolved into a global powerhouse and has consistently expanded its reach both within China and internationally. The company officially starts to make overseas investments in 2008. As part of China's BRI project, the company has increased its overseas direct investments in recent years. Across the mainland of China, the company controls and operates ports and terminals located in Hong Kong, Taiwan, Shenzhen, Ningbo, Shanghai, Qingdao, Tianjin, Dalian, Zhangzhou, Zhanjiang, Shantou, and other major container ports. As of their overseas operations, the group has a presence in South Asia, Africa, the Americas, Oceania, Europe, and the Mediterranean. Generally, its overseas investments have facilitated greater trade connectivity, allowing China to bolster its trade routes and gain geopolitical influence in emerging markets. Likewise, the COSCO GROUP case, a crucial part of the way for extracting geopolitical leverage, has been the group's subsidiaries across its business clusters. China Merchants Group operates through several subsidiaries, 21 in total, spanning sectors such as transportation & related infrastructure construction, management and service, financial investment& asset management, and property development and management, each playing a vital role in the company's diverse business portfolio. For this thesis purpose, I will concentrate on the clusters of ports and terminal, maritime-shipping and logistics and supply chain, such as in the other cases.

Firstly, China Merchant Ports Co., Ltd (CMPort) is covering the whole group's ports and terminals activities. As mentioned before, CMP is one of the largest public port operators in the country and globally, managing an extensive network of ports and terminals in mainland China, Hong Kong, and other key locations worldwide. Through their foreign direct investments and mainly their operations, they facilitate global trade and secure critical maritime routes, establishing the nation as a globally key force. To be more specific, under the China Merchant Ports Holdings umbrella there are a few more companies handling their overseas ports related activities. Terminal de Conteineres de Paranagua (TCP) of Brazil is one of them. CM Ports entered into a share purchase agreement with TCP in 2017 to acquire a 90% stake. Hambantota International Port Group (Pvt.) Ltd and Colombo International Container Terminals Limited (CICT) of Sri Lanka also became members of the CM Ports. HIPG is a joint venture between China Merchants Port and Sri Lanka Port Authority (SLPA), with a franchise of 99 years, China Merchants Port holds 85% of the equity, and SLPA holds 15%. in the same pattern, CICT is a joint venture between China merchants port and Sri Lanka port authority. Moreover, Lomé Container Terminal S.A. is also a par and has been developed and is operated by a consortium by CMHI, being 50% shareholder.

Overall, CM Ports operates a more extensive portfolio than the mentioned before all over around the world. Regarding the maritime shipping cluster of the group, there is China Merchants Energy Shipping Co., Ltd, SINOTRANS&CSC Shipping, and China Merchants Industry Group Co., Ltd. These companies are mainly engaged in shipping activities and transportation, such operating oil tankers, bulk cargos, LNG transportation, ship repairing, offshore repairing and engineering and construction of specialized ship, vessel time and voyage chartering and freight and container forwarding and container line services as of the logistics and supply management activities, there is China Merchants Logistics Holding Group Co., Ltd, China Merchants Expressway Network & Technology Co., Ltd, China Merchants Chongqing Communication Research and Design Institute Co., Ltd (CMCT) and Sinotrans. The company provides third party integrated logistics and freight forwarding services, including toll road, bridge, tunnel investment and management, survey and design of highway, municipal roads, bridge and tunnel field, product manufacturing and construction of scientific research passenger tests, enhancing supply chain efficiency with the main aim to reinforce economic ties with various countries.

Moreover, a mention must be made to one of the most important subsidiaries of the whole group, the China Merchants Finance Holdings Co., Ltd, and China Merchants Investment Development Co., Ltd. These two companies have been established to provide comprehensive financial services and cover the overseas financing investments and group overseas development focused on areas such as corporate financing, investment banking, insurance brokerage, asset management and fund management. By facilitating financial support for China Merchants Group's diverse operations, including its expansive maritime and logistics ventures, it certainly ensures that the group has the necessary capital to undertake large-scale projects and investments, both domestically and internationally, support infrastructure development, and foster partnerships with foreign entities. Collectively, these subsidiaries help CMG expand its global reach, particularly in maritime logistics and infrastructure, enhancing China's influence in key trade and transport sectors worldwide. To conclude CMPort's strategic focus on international expansion and the development of comprehensive logistics services has solidified its position as a global leader in port operations, contributing significantly to China's growing maritime influence and its role in shaping global trade dynamics.

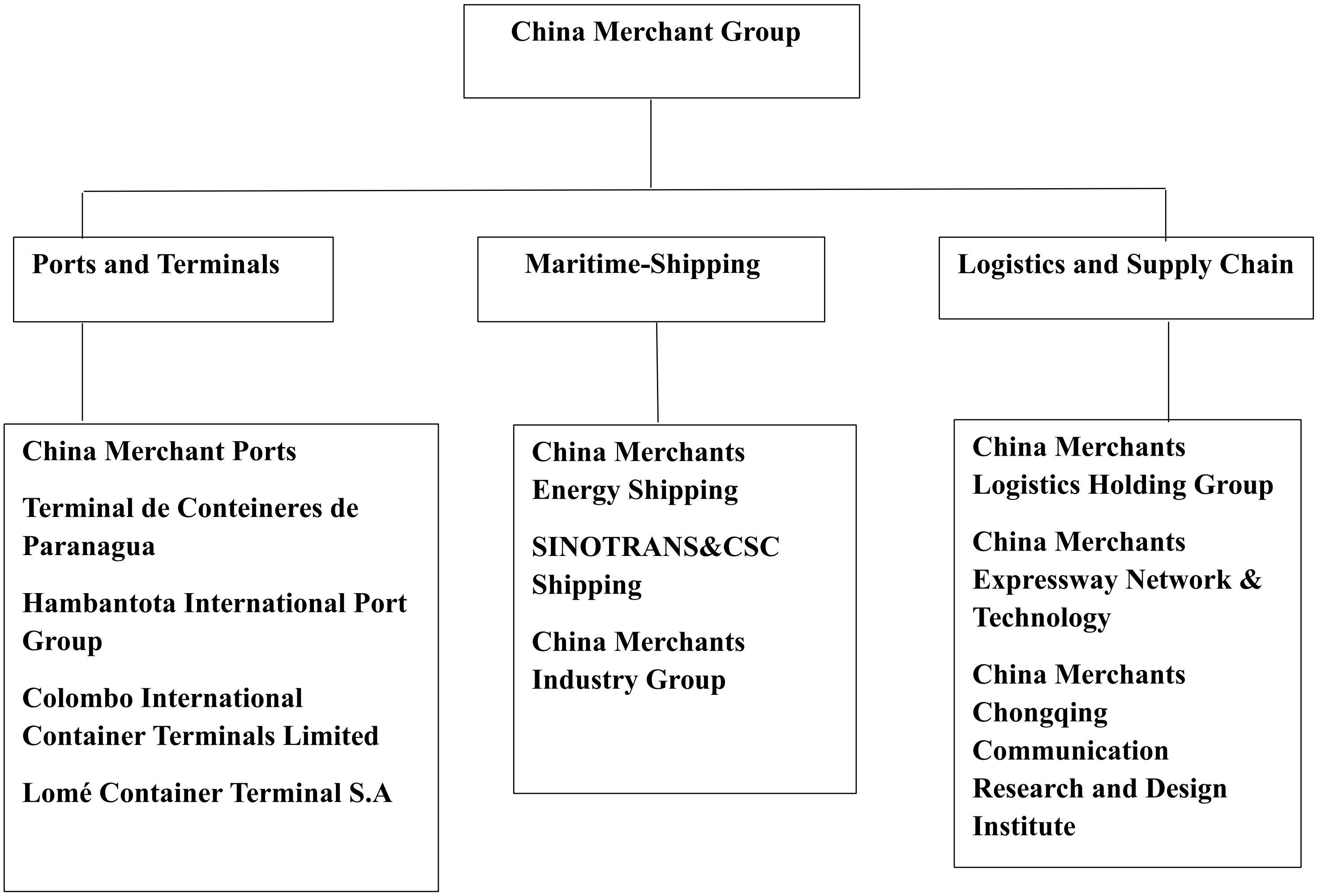

Figure 3 China Merchant Group's industrial cluster subsidiaries.

Source: Author’s compilation based on China Merchants Group company structure.

5.3.2. China Merchants Ports' overseas investments

China Merchants Ports began its overseas investments relatively later compared to COSCO Shipping Ports, but since then the company has rapidly expanded its global presence, positioning itself as a leading player in international ports and terminals operations. Over the past decade, CMPort has focused on building a comprehensive network of ports beyond China, targeting key regions in South Asia, Africa, Europe, and the Americas. These investments have allowed the company to grow beyond its domestic operations, establishing a worldwide presence in some of the most strategic maritime locations. CM Port's first major steps into the global market began in 2008. The company first focused on neighboring regions such as Southeast Asia, and over time, it gradually expanded to other parts of the world.

Specifically, in 2008, CM Ports entered into a joint venture agreement to create a partnership company in Hanoi, Vietnam, marking its first overseas project. In 2010, a joint venture company called Vung Tau International Container Port Corporation was established, marking the beginning of CM Port's overseas investments. CM Port also began acquiring shares in international ports that same year. In 2013, it purchased 49% of the shares in Terminal Link, a French terminal operator CMA CGM Group subsidiary, gaining access to several ports, including Antwerp, Le Havre, Houston, Miami, Foch, and many more. While CM Port entered the international port investment scene later than some competitors, its investment model has proven highly developed. For example, in 2015, CM Port partnered with COSCO Shipping Ports and China Investment Corporation (CIC) to acquire 40%, 40%, and 20% stakes in Kumport Terminal. In the same year, CM Port partnered with China Harbour Engineering Company (CHEC), TEDA Investment Holding, Yunnan Construction Engineering Group, and Thailand's Charoen Pokphand Group to secure a deep-sea port and industrial park project in Kyaukpyu Special Economic Zone, Myanmar, under a 50-year BOT agreement. Moreover, the company also engaged with the Tin-Can Island Container Terminal located in Nigeria, the Multipurpose Port of Doraleh located in Djibouti, Colombo International Container Terminal Limited and the Hambantota Port in Sri Lanka through joint ventures with Sri Lanka port authority, Terminal de Conteineres de Paranagua in Brazil by an acquisition of a 90% stake by TCP and Lomé Container Terminal in Togo.

Lately, CMP signed a cooperation agreement with the Thessaloniki Port Authority in order to develop and modernize the port's facilities. CM Ports has ensured its presence in even more ports and terminals over the years, strengthening even more their global presence. Despite the company's late entry into the global market, CM Port has rapidly become one of China's largest integrated terminal operators, providing the nation control over key hubs globally and enhancing its ability to gain geopolitical leverage. Table 3 shows the investments of China Merchants Ports in overseas ports and terminals along with the company's shareholding percentage.

Region/Country	**Ports/Terminals**	**Share Holdings (in percent)**
Vietnam	Vung Tau Container Terminal	49.0
Nigeria	Tin-Can Island Container Terminal	28.5
Sri Lanka	Colombo international container terminal Hambantota Port	85.0 85.0
Togo	Lome Container Terminal	50.0
U.S. A	Houston Terminal Link South Florida Container Terminal	49.0 49.0
Korea	Busan New Container Terminal	49.0
France	Montoir Terminal du Grand Quest Le Havre Terminal de France and Terminal Nord Dunkirk Terminal des Flandres Eurofos	49.0 49.0 49.0 49.0
Malta	Marsaxlokk Freeport Terminal	49.0
Belgium	Antwerp Gateway Zeebrugge	49.0 49.0
Netherlands	Rotterdam Maasvlakte 2 terminal	30.0
Ivory Coast	Terra Abidjan	49.0
Djibouti	Doraleh Container Terminal	23.5
Australia	Newcastle Port	50.0
Turkey	Kumport Terminal	26.0
Brazil	Terminal de Contêineres de Paranaguá	90.0
Jamaica	Kingston Freeport Terminal Ltd.	100.0

Iraq	CMA CGM Terminal Iraq S.A.S.	100.0
Thailand	Laem Chabang International Terminal	14.5
Morocco	Tangiers Eurogate	49.0
Singapore	CMA CGM-PSA Lion Terminal Pte Ltd	49.0
Ukraine	Odessa Terminal Holdco Ltd	50.0
Greece	Thessaloniki Port Authority	-

Table 3 China Merchants Ports' overseas investments in ports and terminals.

Source: China Merchants Ports' Business Portfolio Overseas Terminals and various literature.

Chapter 6: Singapore

6.1 Background of Singapore's Maritime Port Industry

Singapore's maritime port industry has been a vital pillar for the nation, establishing it as one of the world's prime maritime hubs. Strategically located at the crossroads of major shipping routes, Singapore has become a leading global maritime hub, renowned for its world-class port infrastructure and comprehensive maritime services. The nation has capitalized on its geographic advantage to build a globally significant maritime and port industry. Its maritime prominence dates to the 19th century when the British developed Singapore as a free port, setting the stage for its role in international trade. By the 20th century, Singapore had firmly positioned itself as a mainly key transshipment hub, connecting Asia with Europe and the Americas.

The Port of Singapore's operated by PSA International growth has been fueled by the company's efficient operations, its state-of-the-art infrastructure, and leading-edge technology, making it a top player in global container throughput and vessel traffic. At the same time, it is consistently ranked among the busiest in terms of container throughput and transshipment volumes, serving as a key transshipment hub that connects hundreds of ports across 120 countries. The Singaporean government has significantly contributed to the maritime sector's success through its forward-thinking policies, strategic investments, and collaborations with global shipping firms, which have fostered a highly business-friendly environment coupled with substantial investments in cutting-edge port technologies and automation. Singapore's maritime cluster is highly diversified, encompassing port operators, shipping lines, logistics companies, and a wide range of auxiliary services such as ship financing, insurance, and maritime law. It is important to state that the maritime sector has been a cornerstone of Singapore's economy over the years, contributing around 7% to the nation's GDP and providing employment to thousands of individuals in a variety of maritime-related activities, solidifying Singapore's reputation as an international maritime center. Looking ahead, Singapore continues to innovate by investing in the development of the Tuas port, which is set to become the world's largest fully automated terminal by 2040. The combination of strategic location, innovation, and government support ensures that Singapore remains a leader in the maritime industry, contributing to its continued economic growth and global influence.

6.2 PSA International

6.2.1 Overview

PSA International is one of the world's leading ports and terminal operators and supply chain companies. Established in 1964, PSA has grown to become a global powerhouse. Regarding the concept of PSA's structure, there is a difference between the two cases. PSA International is not a state-owned entity but a government-linked company owned by Temasek Holdings. Temasek is a wealth fund and operates independently from the government but is fully owned by the Singaporean state. PSA International benefits from strong support from the Singaporean government along the way. The company transitioned from a statutory board to a commercial entity and has since expanded its footprint worldwide. PSA International's global portfolio comprises over 60 deep-sea, rail, and inland terminals across more than 170 locations in 45 countries. Among these, its flagship operations are in Singapore and Belgium. As previously mentioned, PSA International has a global portfolio of business clusters spanning across sectors, each one playing a vital role in the company's strategy. The subsidiaries among the clusters are playing a pivotal role, helping Singapore gain geopolitical leverage by extending the nation's influence. By managing major transshipment hubs and terminals strategically located in key maritime regions across continents, there is several subsidiaries strategically located in key maritime regions covering the cluster of ports and terminals for the group.

Specifically, PSA Singapore is managing operations in the port of Singapore, which is one of the world's busiest ports, while having stakes in other key port terminals all over the world. PSA Antwerp (PSA Belgium) is responsible for operations in the terminals of PSA Antwerp, MSC PSA European Terminal, Noordzee Terminal, Europa Terminal, PSA Breakbulk Terminal, and coil Terminal in Belgium, which is a key European hub. PSA Antwerp is one of Europe’s largest container terminals. It allows PSA International to extend its influence on European trade routes and strengthen Singapore’s geopolitical ties with Europe by providing essential infrastructure facilitating trade between Asia and Europe. PSA India is also an important subsidiary of the group, managing terminals in India, including Chennai and Mumbai. In the same pattern, PSA Panama, Halifax, Mexico, are operating evenly at their countries. Regarding the maritime-shipping activities, the group PSA Marine takes the role. The subsidiary’s core business is pilotage and towage in order to ensure the security and efficiency of operations in key waterways. Beyond Singapore, PSA Marine has established a presence in India, China, Peru, and Southeast Asia and performs more than 260,000 jobs annually with some 230 highly experienced harbor pilots and 50 harbor tugs.

Moreover, PSA Marine owns and operates a fleet of over 80 vessels in Singapore, Malaysia, Hong Kong, mainland China, India, Australia, Panama, Peru and Oman. As for the logistics and supply management cluster there are the PSA BDP and CrimsonLogic. PSA BDP is a leading provider of globally integrated, port-centric supply chain, transportation, and logistics solutions. Its comprehensive service offerings include lead logistics and fourth-party logistics (4PL) solutions alongside ocean, air, rail, and road transportation. The company also provides barge services, port-related services, origin management, export freight forwarding, import customs clearance, regulatory compliance, trade compliance, supply chain analytics, and optimization. CrimsonLogic, has been one of the key subsidiaries of the group and a trusted partner to governments and businesses around the world for over 30 years. It specializes in Trade Facilitation, Legal, Digital Government and Cyber Security and logistics. These company operations strengthen PSA's role in global logistics and trade facilitation, helping Singapore expand its influence by offering integrated logistics services. Within the business's clusters and subsidiaries companies, PSA International enhances its global reach, contributing to Singapore's ability to leverage global trade routes, enhance diplomatic ties, and strengthen its position as a key maritime and logistics hub in the global economy. Overall, the company's commitment to innovation, efficiency, sustainability, strategic investments in advanced port infrastructure, and its emphasis on operational excellence has solidified its position as a crucial power on the global stage, strengthening Singapore's geopolitical standing.

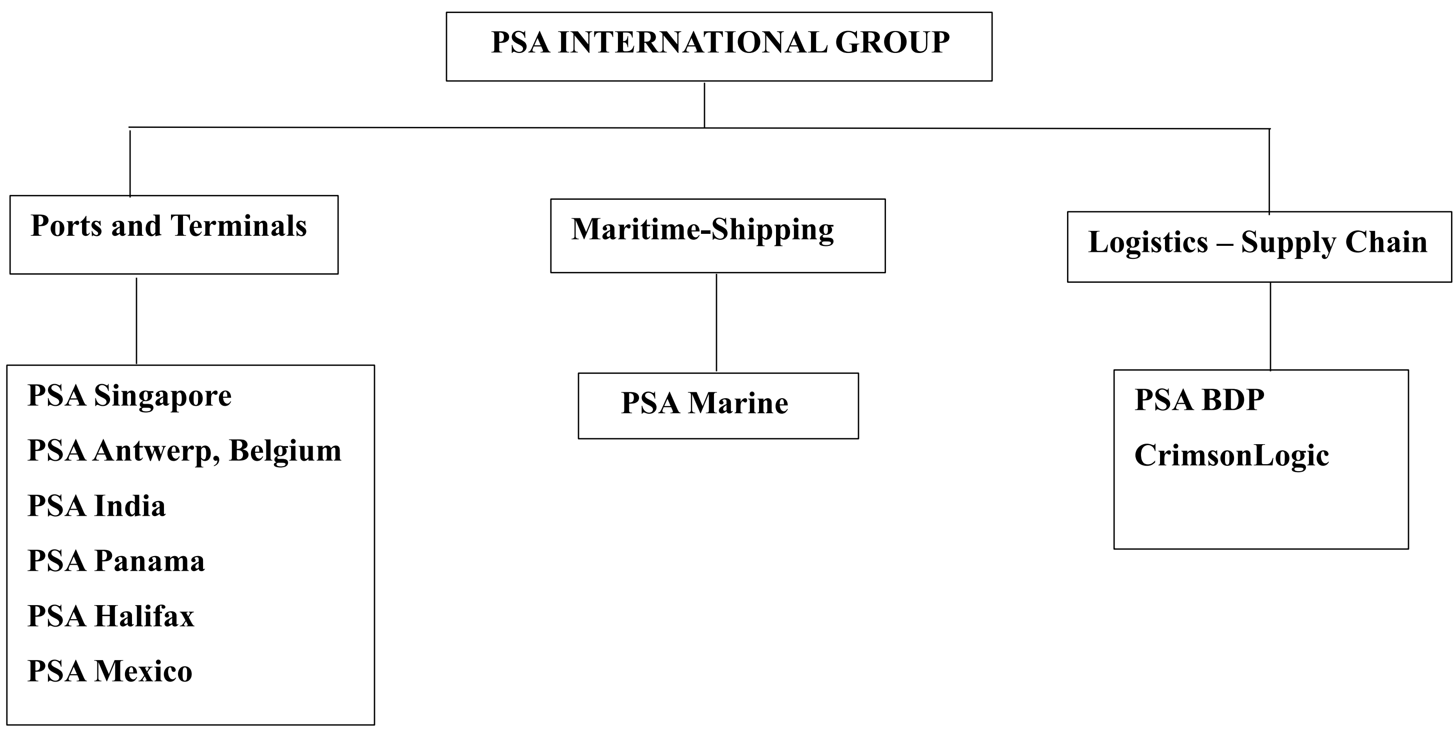

Figure 4 PSA International's industrial cluster subsidiaries.

Source: Author's compilation based on PSA International's Global Network.

6.2.2 PSA International's Overseas Investments

PSA International has strategically expanded its footprint beyond national borders through a series of foreign direct investments. The company's international expansion is guided by a clear strategy to enhance global connectivity and operational efficiency. Notable among its investments is its largest project abroad, the involvement in the Port of Antwerp in Belgium, where PSA has partnered with the Port Authority to develop state-of-the-art facilities, thereby bolstering the port's cargo handling capabilities and operational efficiency. In addition, PSA has solidified its presence in Belgium with its involvement in Zeebrugge. Also, the company has made more investments lately in Europe, specifically in the Port of Genova, Venice and Sech, Genoa in Italy. PSA holds shares in Portugal, Turkey, Poland, and Germany at the ports of Sines, Mersin, Baltic hub, Gdansk, and Hamburg, respectively, reflecting its commitment to strengthening maritime links between Europe and Asia.

In Asia, PSA has significantly enhanced its regional impact with numerous investments. In Southeast Asia, PSA holds significant shares in Vietnam at SP-PSA International Port and Tan Cang Que Vo inland container port. In Thailand and Indonesia, the group is involved in the Eastern Sea Laem Chabang Terminal, the Thai connectivity terminal, and the New Priok container terminal. PSA has a strong presence in Northeast Asia as well with investments in China, Japan and South Korea. In China, they manage 7 terminals: the Dalian C.T., Fuzhou C.T., Guangzhou C.T., Tianjin C.T., LYG-PSA C.T., Beibu-Gulf International C.T., and Cuirc railway C.T. In Japan and South Korea, the terminals are Hibiki C.T., Incheon C.T., and Busan C.T. Investments in India and Saudi Arabia in the Middle East South Asia complete the group's presence in Asia at Sical, Chennai, Kolkata, Mumbai, Ameya, Riyadh and Saudi global Ports Dammam. These ventures capitalize on the region's strategic location and economic growth, facilitating trade between Asia. The Americas also features prominently in PSA's international portfolio, with substantial investments in Exolgan C.T, Buenos Aires, Argentina, Panama, Sociedad Puerto industrial

Aguadulce, Colombia, Halifax, and Ashcroft terminal in Canada, and Penn terminals in the U.S.A. In conclusion, PSA International, through its foreign direct investments, has not only positioned itself among the top players worldwide but has also contributed to Singapore's way of gaining geopolitical influence. Table 4 shows PSA International's investments in overseas ports and terminals.

Region/Country	**Port/Terminal**
Vietnam	SP-PSA International Port Tan Cang Que Vo Inland Container Depot
Thailand	Eastern Sea Laem Chabang Terminal Thai Connectivity Terminal
Indonesia	New Priok Container Terminal One
China	Dalian Container Terminal Fuzhou Container Terminal Guangzhou Container Terminal Tianjin Terminals LYG-PSA Container Terminal Beibu-Gulf International Container Terminal Cuirc Railway Container Terminal
South Korea	Busan Terminals Incheon Container Terminal
Japan	Hibiki Container Terminal
Saudi Arabia	Saudi Global Ports Dammam SGP Riyadh
India	PSA Sical PSA Chennai PSA Mumbai PSA Kolkata PSA Ameya
Belgium	PSA Antwerp PSA Zeebrugge
Italy	PSA Genova PRA PSA Venice PSA Sech Genoa
Germany	Hamburg
Portugal	PSA Sines
Turkey	Mersin International Port

Poland	Baltic Hub Gdansk
Argentina	Exolgan Container Terminal Buenos Aires
Panama	PSA Panama
Colombia	Sociedad Puerto Industrial Aguadulce Buenaventura
Canada	PSA Halifax Ashcroft Terminal
U.S.A.	PSA Penn Terminals Philadelphia

Table 4 PSA International's overseas investments in ports and terminals.

Source: PSA International Global Network.

Chapter 7: United Arab Emirates (UAE)

7.1 Background of UAE Maritime Port Industry

The United Arab Emirates has positioned itself as a key maritime hub. The nation successfully took advantage of its strategic location and turned it as a critical key point for connecting Europe, Asia and Africa. The industry there has experienced significant growth due to its government's advantageous policies, developed infrastructure, and technological expertise. Also, the maritime and ports and terminals industry plays a vital role in the nation's economic development. The cutting-edge infrastructure of the U.A.E.'s ports supports various sectors of maritime activities, bolstering the nation's competitive edge on the global stage. The nation in the past years, has also embraced technological innovations within its ports, investing in automation, smart logistics and digitalization in a way to strengthen even more its competitiveness inside the industry. In line with the nation's latest strategy, they aim to diversify their economy away from oil dependency, and the maritime sector has been a key tool of this effort. U.A.E.'s major state-owned enterprises, like DP World and Abu Dhabi Ports, have been the main arm of the nation's broader strategy, playing a vital role in driving its global maritime objectives. These enterprises, beyond their management of some of the country's biggest and most advanced ports, have built extensive networks through overseas investments in key maritime hubs, enhancing their influence globally. Moreover, the Emirates of Dubai and Abu Dhabi are home to some of the most operational advanced ports in the world, such as the Jebel Ali and the Khalifa ports, respectively. These ports position the nation as one of the busiest maritime centers in the Middle East. Generally, through the successful utilization of the state-owned enterprises from the government authorities and the efficient operation inside the country's borders, the United Arab Emirates secures its position as a critical maritime hub worldwide and bolsters its status as a successfully dominant force in the global stage.

7.2 Dubai Port World (DP)

7.2.1 Overview

DP World is an Emirati enterprise headquartered in Dubai. The company was established in 2005 following the merger of Dubai Ports Authority and Dubai Ports International. Its history dates back to 1972 when Dubai Ports Authority was established to manage the Port of Rashid. DP World is a state-owned enterprise, wholly owned by the government of Dubai through its investment arm, Dubai World. The company nowadays has grown into a multinational with nearly 150 businesses across 6 continents. More specifically, DP World's global portfolio includes ports and terminals in key regions such as Asia, Europe, Africa, the Americas, and the Middle East. The company's strategic investments have allowed it to expand its reach in strategic key maritime locations. DP World has been also a leader in adopting digital solutions, automation, and smart logistics as innovation and technology are at the core of its operations. Moreover, the enterprise places a strong emphasis on its employee development, investing in training programs, and ensuring its workforce remains competitive. As of the company's latest annual report, in terms of its workforce, it employs more than 113,000 people across 75 countries. Its employees span across a wide range of roles, from port operations and logistics and supply chain management and marine services to technology development and corporate services. DP World also operates through a diverse array of business clusters and subsidiaries. Regarding the group's shipping-marine activities, a diverse range of companies provide crucial services. For example, there is Dubai Drydocks World. With more than 40 years of excellence, the company has been a part of the DP World group since 2018. Drydocks World is a leading marine and offshore provider for the shipping, oil and gas, and renewable energy sectors with more than 300 completed marine and offshore projects annually. Moreover, the company's activities span in a further variety range of operations such as ships repairs, maintenance and upgrades, ships conversion refurbishment and life extension, shipbuilding, engineering, procurement and construction and general marine services. Unifeeder is another company that was acquired by DP in 2018. The company provides regional feeder services and operates 101 vessels, 76 in Europe and 25 in the Indian Subcontinent, of which 76 are chartered and 5 owned. Under the umbrella of DP group’s shipping-marine activities is also P&O Maritime Services and P&O Ferries since 2019. These companies operate a fleet of 373 vessels, providing a portfolio of maritime services like port service, towage and pilotage, transportation of cargo, RoRo and RoPax services, and passenger transportation.

As of the group’s ports and terminal operations, there are DP World ports and terminals. As previously mentioned, DP World's ports and terminal operations span a vast global network, positioning the company as a major player in the maritime industry with a presence in over 38 countries and 86 locations worldwide. Its portfolio includes some of the world’s largest and busiest ports around key strategic hubs. In addition, DP World’s terminal operations support a range of cargo types, including breakbulk, project cargo, roll-on/roll0off (RoRo) services and more. The company’s strategic overseas investments, besides the fact that it positioned them at the top of the industry globally over the years, is also reinforcing the geopolitical influence of the nation. Logistics and supply chain management is without a doubt one of the strongest sectors of the group’s capabilities as Dubai’s exceptional multimodal connectivity is playing a crucial role. One of their main aims is to build best-in class logistics hubs with

an ecosystem that allows trade to thrive. DP’s logistics capabilities are freight management, contract logistics, market access and parks and economics zones including inland terminals, road, river and rail transports, warehousing, supply chain control towers and many more. The main subsidiaries handling these activities are Unico Logistics, Imperial Logistics and Syncreon. The effective integration of these subsidiaries into the broader strategy of DP World enables the company to navigate the complexities of the global landscape while securing its strategic interests and expanding its global influence. Overall, DP World mainly as a state-owned enterprise, is a key driver of the UAE’s broader geopolitical and economic ambitions. Its strategic foreign direct investments and its broader operations have enhanced the nation’s influence globally providing it with geopolitical leverage.

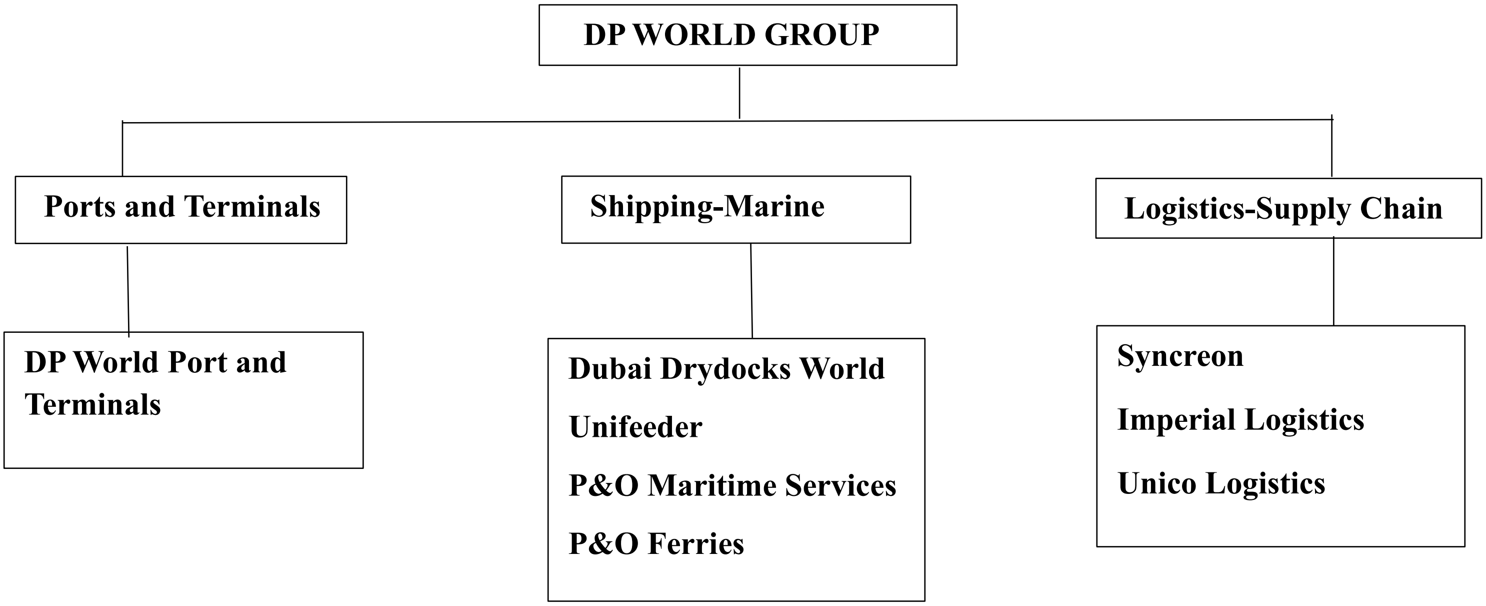

Figure 5 DP World Group's industrial cluster subsidiaries.

Source: Author's compilation based on DP World's investors presentation.

7.2.2. Dubai Ports World's overseas investments

Dubai Ports World has built an extensive portfolio of ports and terminals over the years. Through several foreign direct investments, this portfolio contains ports and terminals across multiple continents, establishing the company as a global leader in the industry. DP World's overseas venture started in the early 2000s when the acquisition of P&O ports marked the official beginning. This acquisition provides DP World with access to key ports and terminals across Europe. The company has strengthened its presence on the European continent with direct investments. Some examples are the company's presence in Belgium at Antwerp Gateway and Liege, in Cyprus at the Limassol port which operates it, in the ports of Eurofos, Mulhouse-Huningue, Mulhouse-Napoloen and Mulhouse-Ottmarsheim in France, and the Netherlands at the port of Rotterdam. DP World's presence in Europe does not end there as the company recently secured its presence in Romania at the ports of Aiud and Constanta, at Novi Sad port in Serbia, and in Switzerland at Basel-Liestal, Basel-

Birfelden. Basel-Frenkendorf, Basel-Kleinhuningen, and Zurich-Niederglatt, in Turkey at Korfez and Yarimca, and in Ukraine at TIS Pivdennyi. Additionally, the company holds significant stakes at the London Gateway and Southampton in the United Kingdom, bolstering its presence in the market.

Regarding the company's venture in Asia and the Americas, their investment strategy shows the inspiration to tap into rapidly growing economies and environments. Specifically, the company is involved in 9 countries in the American continent. The company's portfolio there involves the Buenos Aires port in Argentina, the Santos port in Brazil, the ports of Fraser-Surrey Docks, Nanaimo, Prince Rupert, Saint John and Vancouver in Canada, Lirquen and San Antonio ports of Chile, Caucedo in the Dominican Republic, Posorja of Ecuador, the ports of Callao and Paita in Peru, Paramaribo in Suriname and JAFZA Manga Park in the United States of America. As of the Asian continent, DP World is in 6 countries. For instance, the company's portfolio contains the ports of Brisbane, Fremantle, Melbourne, and Sydney in Australia; CT3, Qingdao, Yantai, and Yiwu in China; the ports of Batangas and Manila in the Philippines; Pusa in South Korea; Leam Chabang in Thailand and Saigon in Vietnam.

Moreover, the management of ports and terminals in Africa and the Middle East shows a strategy from DP World to capitalize on the strategic location of the continent linking Europe, Asia, and the Americas. The company's portfolio in the African continent involves the port of Luanda in Angola, the port of Maputo in Mozambique, Kigali ICD in Rwanda, Dakar of Senegal, Berbera in Somaliland, Komatipoort in South Africa. Also, the ports of Djazair and DjenDjen in Algeria, Sokhna of Egypt, Karachi, Lahore ICD, MTO CFS and NLC Karachi in Pakistan. Notably in India, DP World operates 12 ports and terminals such as Ahmedabad ICD, Chennai, Cochin, Hazira ICD, Hindaun City ICD, Hyderabad ICD, Modinagar ICD, Mudra, Nhava Sheva ICT, Neva Sheva IGT Pali ICD, and Panipat ICD. Overall, this extensive global portfolio and all those strategic foreign direct investments, have not only established DP World as a leading player in the industry, but also extended the Uniter Arab Emirate's global influence. Table 5 shows DP World's investments in overseas ports and terminals.

Region/Country	**Port/Terminal**
Belgium	Antwerp Gateway Liege
Cyprus	Limassol
France	Eurofos Mulhouse-Huningue Mulhouse-Napoleon Mulhouse-Ottmarsheim
Germany	Germersheim Mannheim Stuttgart
Netherlands	Rotterdam
Romania	Aiud Constanta
Serbia	Novi Sad
Switzerland	Basel-Liestal Basel-Birsfelden Basel-Frenkendorf Basel-Kleinhuningen Zurich-Niederglatt
Turkey	Korfez
	Yarimca
Ukraine	TIS Pivdennyi
United Kingdom	London Gateway Southampton
Argentina	Buenos Aires
Brazil	Santos
Canada	Fraser-Surrey Docks Nanaimo Prince Rupert Saint John Vancouver
Chile	Lirquen San Antonio
Dominican Republic	Caucedo
Ecuador	Posorja
Peru	Callao Paita
Suriname	Paramaribo
U.S.A	JAFZA Manga Park

Australia	Brisbane Fremantle Melbourne Sydney	
China	CT3 Qingdao Yantai Yiwu Dubai Straight Through Warehouse	
Philippines	Batangas Manila	
South Korea	Pusa	
Thailand	Leam Chabang	
Vietnam	Saigon	
Angola	Luada	
Mozambique	Maputo	
Rwanda	Kigali ICD	
Senegal	Dakar	
Somaliland	Berbera	
South Africa	Komatipoort	
Algeria	Djazair DjenDjen	
Egypt	Sokhna	
India	Ahmedabad ICD Chennai Cochin Hazira ICD Hindaun City ICD Hyderebad ICD	Modinagar ICD Mundra Nhava Sheva (NSICT) Nhava Sheva (NSIGT) Pali ICD Panipat ICD
Pakistan	Karachi Lahore ICD	MTO CFS NLC Karachi

Table 5 DP World's overseas investments in ports and terminals.

Source: DP World Product Services Map.

7.3 Abu Dhabi Ports Group (ADPG)

7.3.1 Overview

Abu Dhabi Ports (AD Ports), a part of ADP group was established in 2006 by Emiri Decree as a key initiative of the Abu Dhabi government to enhance the emirate's maritime and logistics capabilities. The company is a state-owned enterprise and has been since playing a pivotal role in the nation's economic and global trade strategies. The company's remarkable journey of excellence started in 2006 through an award program for the management of the Khalifa Port and Industrial Zone. The company later went public with Abu Dhabi Developmental Holding Company by a share of 75.42%, one of the largest holding companies in the region as the majority shareholder. Since then, through organic growth and partnerships, AD Ports Group has developed into a globally premier industrial player. The group also plays a significant role in supporting the UAE's economic vision and contributing to the development of the country's trade infrastructure as, according to the latest reports, they generate about a quarter of the Emirate's and 13% of the UAE's non-oil GDP. A part of their success is their people. By the end of 2023, the Group had 6,794 employees from over 100 nationalities, contributing significantly to their purpose. Today, the group is operating by bringing together all its subsidiaries as an integrated business across five clusters of Digital, Economic cities & Free zones, Logistics & Supply chain services, Maritime & shipping and Ports and terminals management. These clusters are active in 46 countries around the world, located primarily in the Middle East, Northern Africa, the Indian Subcontinent, Southeast Asia, Central Asia, and Europe. Through its business cluster, the group aims to build elite trade and logistics propositions while also engaging in strategic partnerships and investments to expand its global presence. In each cluster, under the umbrella of ADP Group, are a couple of subsidiary companies operating significantly for the group.

Starting from their shipping and maritime activities, the companies involved are Abu Dhabi Maritime, OFCO, and Safeen. In fact, the group generates its biggest revenue from this cluster, reportedly at 43% across all the clusters. In 2023, the cluster's revenue almost tripled to reach AED 6.29 billion, up from the year before. It offers a wide array of shipping and marine services, including containerized, bulk, general cargo, ro-ro cruise with a fleet of 260 vessels in total, pilotage, towage, and vessel traffic management.

Moreover, it offers technical Services like vessel maintenance and repair and offshore services of oil and gas operations. Abu Dhabi Ports Group has reached a presence at several countries through its Shipping and Maritime Cluster, including Algeria, Bahrain, Bangladesh, China, Djibouti, Egypt, France, India, Iraq, Jordan, Kazakhstan, Kuwait, Malaysia, Marocco, Oman, Pakistan, Portugal, Qatar, Singapore, Somalia, South Korea, Spain, Sudan, Thailand, Turkey, Vietnam and Yemen. This cluster allows Abu Dhabi Ports to play a critical role in enhancing the UAE's maritime competitiveness and geopolitical leverage, offering key infrastructure and services to drive regional trade and secure global shipping routes. The Ports and Terminals cluster is central to the group's operations, providing a robust framework for managing a wide array of port services such as container, general cargo, ro-ro, bulk terminals, industrial zones and cruise terminals and general port services through the subsidiary companies Abu Dhabi ports, Abu Dhabi cruise terminal, Noatum and Fujairah terminals. From this cluster, the group owns and operates several ports & terminals in key strategic positions worldwide, facilitating trade and building capacity while connecting Abu Dhabi globally. Operationally, the container throughput was 4.91 million Twenty-foot Equivalent Units (TEUs) last year; the general cargo volumes rose by 26 to reach 40.0 million tonnes to grow the group's revenue by 40% year-on-year to AED 1.59 billion. AD Ports Group's Logistics and supply chain cluster is led by Noatum and ADL Unalish. These two companies helped transform AD Ports Group from a regional to a global logistics powerhouse. It offers comprehensive services designed to enhance supply chain efficiency and ensure seamless connectivity across regional and global markets. Some of those services are Warehousing and Distribution, Supply chain management, Freight Forwarding, Multimodal Transport Solutions including the movement of goods across road, rail, air, and sea networks. The Logistics Cluster of Abu Dhabi Ports Group is a key driver of the UAE's global competitiveness, helping the nation enhance its role as a logistics hub and strengthen its geopolitical leverage through control over critical supply chains and trade routes. As previously mentioned, for the sake of this thesis structure, I will stand around the clusters of port and terminal, maritime and shipping and logistics and supply chain. Still, undoubtedly one of the key factors of the group's excellence has been the digital cluster and its subsidiary Maqta Gateway. The groups have invested heavily in the cluster for the past 8 years in order to have advanced, smart, and innovative digital solutions to boost efficiency and transparency across all the business clusters. Overall, Abu Dhabi Ports Group, through its integrated operations, technological advancements, and logistical capabilities, has not only positioned itself as a one of the global leaders in the industry but also strengthened the UAE’s geopolitical influence, position the nation as a global trade hub, increasing its economic and strategic leverage on the world stage.

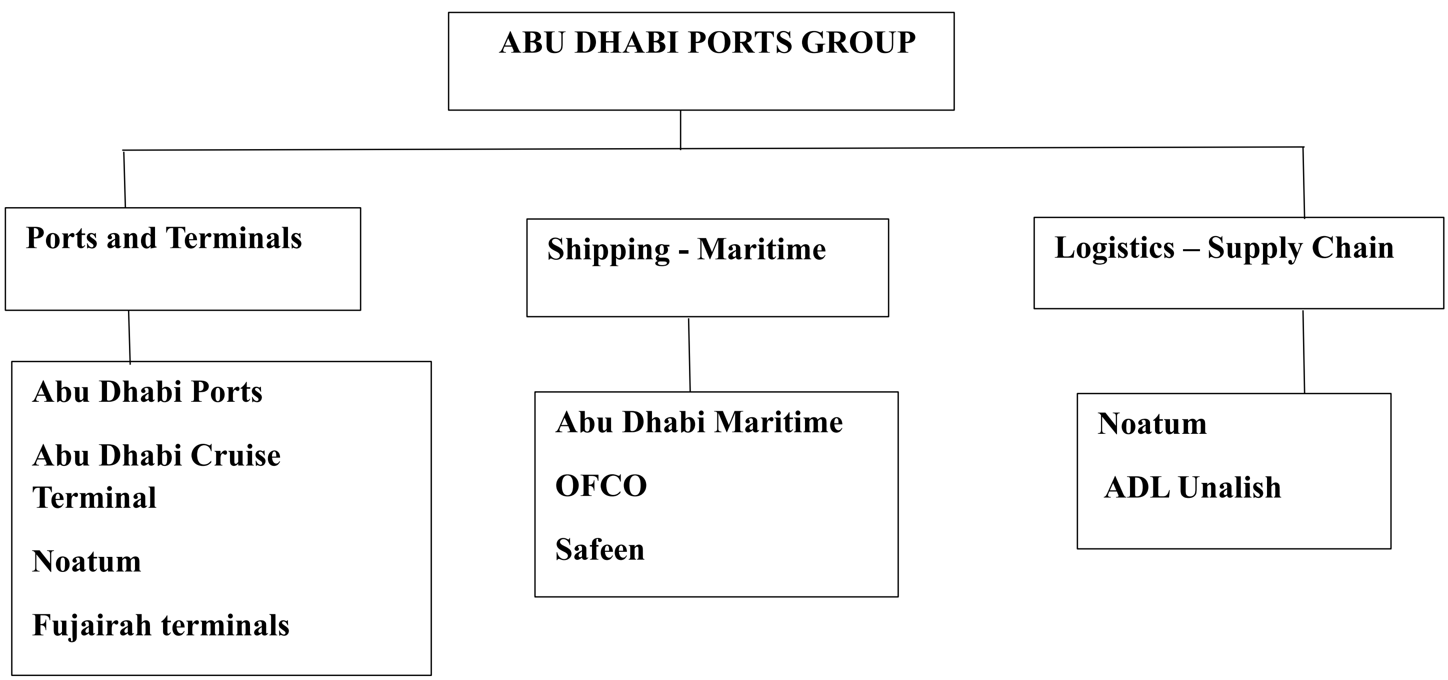

Figure 6 Abu Dhabi Ports Group's industrial cluster subsidiaries.

Source: Author’s compilation based on Abu Dhabi Ports Group Integrated Clusters.

7.3.2 Abu Dhabi Ports Group’s overseas investments

Abu Dhabi Ports Group has strategically positioned itself in a way for global expansion through foreign direct investments. This initiative aligns with the broader vision of the United Arab Emirates to enhance its footprint internationally, particularly through the diversification of revenue sources and the strengthening of trade relationships. By establishing partnerships and investing in key ports and logistics infrastructure globally, Abu Dhabi Ports is not only facilitating trade routes but also enhancing the U.A. E’s geopolitical leverage. This approach allows the nation to strengthen economic ties with various nations, positioning itself as a crucial hub for international trade. It is important to highlight that the core operations of ports and terminals of the group is placed in the broader U.A.E. instead of abroad, in difference from the other cases. Specifically, Abu Dhabi Ports, Abu Dhabi Cruise and Fujairah Terminals have a presence in the ports of Khalifa, Zayed, Musaffah, Sila, Mugharraq, Delma, Shahama at the terminals of Fujairah, Abu Dhabi Terminals, CSP Abu Dhabi Terminal, Autoterminal Khalifa Port, CMA Terminals Khalifa Ports, Abu Dhabi Cruise Terminal and Sir Bani Yas Cruise Beach.

Nevertheless, Abu Dhabi Ports Group has ensured its global presence in the last years with overseas investments and strategic partnerships. Their overseas investments span its industrial clusters and mainly through its subsidiaries in each one, but I will certainly stay along the ports and terminals cluster, which gives the group a presence in Egypt, Jordan, Pakistan, the Republic of Congo, and Spain. For instance, through the acquisition of Noatum, the group has secured a significant presence in Europe, particularly in Spain, in 15 terminals, including Tarragona, Castellon, Cartagena, Sagunto, Malaga, La Coruna, Santander, Bilbao, Gijon, Aviles, Vigo, Huelva, Ferrol and Barcelona. Another important expansion aiming to serve as a key driver of growth, facilitate trade diversification, and help strengthen bilateral relations between Pakistan and the UAE, is the Joint Venture between AD Ports Group and Kaheel Terminals, under the terms of the 50-year concession agreement for the management and development of the Karachi Port’s East Terminal, berths 6-9. Moreover, in March 2023, the group proceeded in a 30-year agreement and two separate 15-year agreements to develop and operate Safaga Port and terminals in Al Arish and West Said Port, respectively, in Egypt. AD Ports Group strengthens its presence in the

African continent with the 30-year extendable concession agreement to develop and operate the multipurpose New East Mole Terminal at Pointe Noire Port at the Republic of Congo. As a part of AD Ports Group's Marsa Zayed project is the Aqaba Cruise Terminal in Jordan. The cruise terminal was inaugurated at the beginning of 2023 with the main purpose to develop Aqaba tourism, logistics and transport from the Red Sea. The group overall has a strong presence in even more countries around the world within its business clusters. Still, as previously mentioned, for this thesis, I will stay across the ports and terminals cluster.

To conclude, these investments are crucial for the group's growth and for reinforcing the UAE's geopolitical influence through increased international partnerships and trade relationships. As the company continues to expand its global footprint, it remains committed to leveraging its investments to foster growth in line with the UAE's vision for the future. Table 6 shows Abu Dhabi Ports Group's investments in overseas ports and terminals.

Region/Country	**Ports/Terminals**
Egypt	Safaga Port Al Arish West Said Port
Pakistan	Karachi Port East Terminal Berths 6-9
Republic of Congo	Pointe Noire Port New East Mole Terminal
Spain	Tarragona Castellon Cartagena Sagunto Malaga Barcelona La Coruna Santander Bilbao Gijon Aviles

	Huelva Ferrol
Jordan	Aqaba Cruise Terminal

Table 6 Abu Dhabi Ports Group's overseas investments in ports and terminals.

Source: Abu Dhabi Ports Group's Ports and Terminals.

Chapter 8: Findings

This chapter explores the findings derived from the analysis of the state-owned enterprises, focusing on their overseas investments and the geopolitical leverage they can gain through their operations for their respective nations. As previously mentioned, a key component in examining and detecting geopolitical leverage is a deep view of the companies' business clusters and subsidiaries. As we saw, they undoubtedly play a crucial role in enhancing their parent companies' global reach, while their performance and integration are also vital for achieving the overarching objectives. Furthermore, the findings will highlight the varying beneficial or negative impacts of these investments on host countries on behalf of each nation. In each nation paragraph in the findings will also include an extensive analysis of the components mentioned above about the enterprises' business clusters of Ports and Terminals, Maritime and Shipping, and Logistics and Supply Chain to be able to detect the areas of successful creation of geopolitical leverage for each nation. As mentioned before, the components are, firstly, the control of the trade routes, which mainly involves the strategic positioning of ports and terminals, allowing the influence in global trade flows. Secondly, economic influence arises from investments in foreign ports. Thirdly, political and diplomatic influence is enhanced through strong ties with host nations, facilitating diplomatic relations.

Additionally, security and military presence can be established via investments in port infrastructure, aiming to support military objectives and project power in critical regions. Finally, the technological and logistical advantage gained through advanced technologies and data access. Together, these components, combined with the home and host countries' implications and the subsidiaries involved, will help to provide a comprehensive framework for understanding how the nations leverage their state-owned enterprise's operations to exert geopolitical influence. Moreover, as previously mentioned in Chapter 4, entry modes also play a crucial role in measuring the volume of geopolitical leverage that a nation can gain over host nations, as they mainly influence their level of control. Each entry mode offers distinct advantages that can boost the strategic power of nations over critical maritime assets. For example, mergers and acquisitions provide rapid access to existing assets and markets, while joint ventures mitigate risks and costs and provide access to local expertise in the host countries.

Moreover, concession agreements give the operator long-term control and lower financial investment risks. Additionally, a public-private partnership offers both sides a beneficial concept, while the public sector can benefit from the expertise of the private sector and vice versa. Overall, by examining all the previous for each nation, this thesis will be concluded with a comparative analysis focusing on the differences and similarities in their strategic approaches to port and terminal operations and foreign investments as well as the varying degrees of successes and challenges faced. By comparing the outcomes of those countries, we can identify patterns in how nations leverage their broader maritime capabilities to gain geopolitical influence.

8.1. China

Without a doubt, China is one of the major players, and it is rightfully considered the biggest power in the maritime industry. China's growing influence, particularly through its state-owned enterprises, has been a cornerstone of its broader geopolitical strategy. To begin with, it is important to state that the Belt and Road Initiative is an undeniable factor in the nation's way of gaining geopolitical leverage. In my opinion, the BRI is one of the things that positions China as a step forward from other nations. Since its launch, it has served as a keystone of its strategy to enhance geopolitical leverage, facilitating a vast network of infrastructure development and mass foreign investments by its local SOEs that integrate across Asia, Europe, and Africa. One of the most significant aspects of the BRI ct that it gives China numerous advantages across all the components and the business clusters of its state-owned enterprises. Firstly, it strongly emphasizes ports and terminals, which are essential for global trade dynamics. The Chinese state-owned enterprises have established a commanding presence in strategically located hubs through investments in key ports.

In addition, the BRI also allows China to extend its political and diplomatic reach. Through establishing trade and investment agreements, China creates alliances and strengthens its ties with countries along the Belt and Road. Furthermore, it also provides China with opportunities to enhance its security and military presence in critical maritime regions. The development of port infrastructure abroad can potentially enhance military logistics and operations, allowing China to project power beyond its borders. Finally, the technological and logistical advantages gained through the BRI cannot be overstated. As China invests in ports and logistics hubs, it also enhances its data access and management capabilities. By integrating advanced technologies and logistical systems into its overseas investments, China is improving its operational efficiency and gathering valuable information that can be leveraged for several strategic purposes. Moreover, in China's way of gaining geopolitical leverage, COSCO Shipping Ports and China Merchants Ports stand out as significant nodes. Both companies are among the largest state-owned enterprises in the world, leveraging their extensive business portfolio to exert China's global influence. Regarding the components that will help detect geopolitical leverage, the control of trade routes is one of the most important among them. By investing in key strategic hubs worldwide, the state-owned enterprises can control maritime trade routes that are pivotal to the broader objectives of the nation.

Some examples of how the companies have gained control over vital trade routes will follow. Firstly, a prime example is COSCO's acquisition of the Piraeus Port in Greece, one of the busiest ports in the Mediterranean. Through significant investments and upgrades to the port's infrastructure, COSCO has transformed Piraeus into a leading transshipment hub, allowing it to handle a substantial volume of traffic. Similarly, direct investments from Chinese enterprises in countries like Belgium, Italy, Spain, Netherlands, and France significantly strengthen the nation's foothold in European markets, allowing for more efficient trade control across the European continent. Moreover, a strong presence in African ports by the companies is essential for connecting trade routes and reinforcing their influence in the region. For instance, China Merchants Ports' strategic acquisition of the Port of Djibouti provides a vital connection point along the Red Sea and Indian Ocean trade routes. The investment from CMP in the Port of Hambantota in Sri Lanka, strategically located along key shipping routes in the Indian Ocean, is also crucial. Those investments offer them direct access to crucial maritime lanes that facilitate trade between the continents and mostly reinforce China's influence in areas of strategic interest, given the increasing competition with other global powers. Overall, it is sure to say that there is strong geopolitical leverage for the nation between the three business clusters that are being examined and the component of control of trade routes. Another component is the economic influence the nation can gain through foreign direct investments. This economic influence can be demonstrated in several ways. The foreign direct investments of COSCO Shipping Ports and China Merchants Ports can lead to deeper economic interdependence with host countries. As host countries become more economically tied to the home enterprises' operations, they align their policies mainly with Chinese interests, granting favorable trade agreements and collaboration on economic prospects in that way. Additionally, investments contribute to local economic growth by creating jobs.

Moreover, the Chinese SOEs can exert significant global and domestic economic influence through their wide network of port and terminal operations. As COSCO and CMP expand their global network, their ability to generate economic benefits in host nations will continue to rise. China gains geopolitical leverage through economic influence among all three clusters. The next component is the political and diplomatic influence. COSCO and CMP have effectively leveraged their global presence to enhance China's political and diplomatic influence in various regions. Investing in key global projects creates dependencies that can facilitate political alliances and foster closer diplomatic ties between China and host countries. For instance, COSCO's presence in the Piraeus Port in Greece has strengthened the ties between China and Greece. As COSCO continues to manage and expand its operations in Greece, it cultivates a favorable diplomatic environment, paving the way for further collaborations and political support. In countries where both enterprises operate, local stakeholders often observe Chinese investment as a pathway to economic growth. This perception can be further solidified through initiatives that promote development, such as infrastructure improvements and job creation, which align local governments' interests with China's strategic goals. Together, COSCO and CMP exemplify how strategic investments in global maritime assets yield economic benefits and powerful tools for fostering political alliances and enhancing China's influence on the world stage. In that component case, the geopolitical leverage can only be detected in the clusters of ports and terminals and logistics and supply chains.

Moreover, both enterprises have strategically positioned themselves to enhance China's geopolitical leverage through their operations by securing security and military presence in key regions worldwide. The companies create potential dual-use facilities supporting military operations and logistics by investing in critical port infrastructure and logistics networks. This capability is increasingly relevant as China seeks to expand its influence in strategically important areas, particularly along maritime routes crucial for national security. Specifically, China's strategy in expanding its military presence outside the mainland goes far beyond the years. According to reports, the system of securing military cooperations was to requests for military logistics and access, a treaty on the basing of military bases, usually in those countries where China has provided economic investments, loans to civilian infrastructure, and especially significant seaports as strategically important locations. One significant example is CM Ports' engagement in developing and managing the Port of Djibouti, which led to the nation's official first foreign military base in Doral, Djibouti, in August 2017. According to the Chinese authorities, the base in Djibouti supports the PLA's opposition to pirates, humanitarian aid, disaster relief, and Peace Operations. Beyond Djibouti, China reportedly has a military facility at Ream Naval Base in Cambodia and Tajikistan, and they are pursuing more military facilities in multiple locations in the future. This presence often has a significant security component, as it can be developed to accommodate military logistics and supply chains. The ability to use commercial ports for military purposes creates a network of strategic strongholds that can be leveraged in times of geopolitical tension. Nevertheless, China's actions through this component have raised the concerns of other global powers such as the U.S.A. Significant geopolitical leverage across this component can be detected only at the clusters of ports and terminals and logistics and supply chains. The last component to be analyzed is one of the most crucial for various reasons nowadays: the technological and logistical advantage or the access to data the enterprises can offer to their nation. Both COSCO and China Merchants Ports are trying to gain significant geopolitical leverage for China through their technological and logistical activities. The SOEs are positioning China at the forefront of global maritime efficiency and data-driven operations by investing in advanced port infrastructure, digital logistics systems, and integrated supply chain technologies. These advancements not only allow China to exert influence over critical data flows, logistics networks, and trade dynamics across the globe.

Additionally, they have developed a vast network of smart ports that utilize automation, artificial intelligence and big data to streamline operations and increase efficiency. By controlling the technology infrastructure that drives modern ports, China's role in the global landscape can be more extensive. Also, as the operators of some of the world's busiest ports, the companies can collect data on shipping patterns, cargo volumes, and supply chain flows. Those data are critical for optimizing logistics but can also provide strategic insights into global trade dynamics and economic activities, giving China a unique geopolitical advantage. Similar to the previous component, concerns have been raised mainly by the European Union, which describes the potential access of Chinese people to sensitive data as a key risk. Overall, this integration of advanced technologies into ports and logistics operations not only ensures the companies' competitive edge but also provides China with geopolitical leverage among all the businesses clusters. Table 7 shows the areas from which China can gain geopolitical leverage, through its SOEs business clusters and operations.

CHINA'S GEOPOLITICAL LEVERAGE OVER HOST COUNTRIES

	Control of trade routes	**Economic influence**	**Political and Diplomatic influence**	**Security and military presence**	**Technological and logistical advantage**
Ports and Terminals	✓	✓	✓	✓	✓
Maritime – Shipping	✓	✓	—	—	✓
Logistics – Supply Chain	✓	✓	✓	✓	✓

Table 7 China's geopolitical leverage over host countries.

Source: Author's compilation.

8.2 Singapore

Singapore stands as a global powerhouse in the maritime industry, commanding immense influence as one of the world's busiest and most efficient nation. Its strategic location at the heart of major shipping routes and its advanced infrastructure has allowed Singapore to become a critical node in global trade. Singapore has expanded its reach far beyond its borders through its state-owned enterprise, PSA International, and its business clusters as it has been analyzed. This global presence has reinforced Singapore's reputation as a leader in the industry, giving it significant leverage. The same pattern as the last case will be followed, connecting the business clusters with the components to detect geopolitical leverage. In the nation's way to gain geopolitical leverage, PSA International has always been the main arm of the cause through its strategic control of key global trade routes and foreign direct investments, strengthening Singapore's position as a pivotal player. By operating a vast network of ports and terminals across Asia, Europe, and the Middle East, PSA is central in facilitating the flow through some of the world's most critical maritime corridors. The Port of Singapore, PSA's flagship port, is one of the busiest transshipment hubs globally, serving as a critical link between shipping routes from East Asia to Europe, Africa, and beyond.

Away from Singapore's borders, PSA's global network of ports and terminals also allows it to assert influence over other important trade routes. For instance, in Europe, PSA operates major ports and terminals. Among those is Antwerp, one of Europe's largest ports and a key entry point for goods entering the continent from Asia and beyond. Similarly, PSA's investments in Middle Eastern ports provide access to the strategic maritime routes through the Gulf and the Red Sea, further extending its control over global shipping lanes. Overall, PSA's global dominance significantly reinforces Singapore's geopolitical leverage among all the business clusters and components. Economic influence is another important component. PSA International gains significant geopolitical leverage for Singapore through its economic influence among its business cluster, primarily by driving economic growth and fostering interdependence with host nations where it operates. PSA's extensive global network enables it to shape the economies of key regions by increasing trade volumes, creating jobs, and developing vital infrastructure. One of the most prominent examples of PSA’s economic influence inside the country is its role in developing the Port of Singapore. As one of the world’s largest and busiest transshipment hubs, the port handles a significant portion of global traffic. This makes Singapore a vital link in global supply chains, contributing substantially to GDP and employment. Singapore's control over such a key economic asset enhances its ability to attract investment, negotiate favorable trade deals, and exert influence. Beyond Singapore, PSA’s operations in major ports worldwide further amplify its economic leverage. For example, PSA’s management of ports and terminals in Belgium, Italy, Germany and Portugal, integrates Singapore into the heart of Europe’s trade routes. By playing such a central role in these economies, PSA fosters a degree of dependence on its operations, giving Singapore greater influence in international economic matters. Additionally, PSA’s investments in emerging markets, such as India and the Middle East, help boost local economies by modernizing port infrastructure and facilitating trade growth. In Saudi Arabia, PSA’s involvement has improved logistics efficiency, contributing to their economic diversification goals. These strategic investments enhance PSA’s commercial success and strengthen Singapore’s economic ties with these nations, providing long-term partnerships. Through these initiatives, PSA’s ability to drive economic growth in markets enhances Singapore’s influence, creating a network of trade relations that give Singapore a competitive edge on the global stage. Leverage can again be detected among all the clusters regarding this component. PSA International also plays a central role in the political and diplomatic influence of Singapore by fostering strong relationships with governments and key stakeholders in the countries where it operates. Through strategic partnerships, PSA builds diplomatic relations and political alliances extending Singapore's global influence. One example of PSA's political and diplomatic influence can be seen in Europe, where its operations in major ports have established deep ties with the European Union. PSA’s role aligns closely with the interests of the European Union. Moreover, by managing these major European gateways, PSA fosters mutually beneficial relationships, giving Singapore a significant diplomatic foothold in the region. As a trusted partner, PSA’s presence in host nations reinforces Singapore’s access to key decision-makers in European trade policy, helping to secure favorable trade agreements and ensure a voice in discussions on global maritime regulations. In addition, PSA's involvement in developing economies like Saudi Arabia’s further illustrates its ability to gain diplomatic influence. PSA strengthens Singapore's relationship with the Saudi government by aiding in the modernization and expansion of Saudi Arabia’s logistics infrastructure. This partnership aligns Singapore with Saudi Arabia’s long-term economic goals, fostering goodwill and strengthening diplomatic ties between the two nations. Such collaboration allows Singapore to expand its influence in the Gulf region, strategically important for global trade and energy supply routes. Through these strategic investments and partnerships, PSA boosts Singapore’s political and diplomatic influence by aligning its interests with those of the host countries. These relationships give Singapore access to key decision-makers and create opportunities for broader diplomatic engagement, enabling the nation to leverage its strength to further its geopolitical goals. Among the clusters and comparisons with this component, only the shipping-maritime activities have no geopolitical leverage. Regarding the component of security and military presence in overseas bases, there is no evidence confirming that the nations gain geopolitical leverage from this component. Of course, by developing and managing critical ports in strategic locations around the world can potentially support both commercial and military purposes. Still, as said there is not enough evidence to justify the component. As the last component of technological and logistical advantage, PSA International gains geopolitical leverage for Singapore primarily through its innovative technologies and data-driven logistics. Investing in cutting-edge technology and integrating digital tools into its operations enhances its efficiency, strengthens its competitive position, and generally solidifies Singapore's status as a leading global maritime hub. One of the key examples of PSA’s technological advancements is its implementation of the Tuas port of the future initiative, which leverages automation and data analytics to optimize port operations. Moreover, PSA’s use of data analytics also plays a crucial role in its logistical capabilities. The company employs advanced data management systems to analyze shipping trends, forecast demands, and optimize resource allocation.

Additionally, PSA's collaboration with technology firms and research institutions further amplifies its technological edge. These collaborations improve the operational efficiency of PSA’s ports and contribute to developing a robust ecosystem for maritime technology innovation in Singapore. By fostering an environment favorable to innovation, PSA positions itself at the forefront of technological advancements in the maritime industry, ensuring Singapore remains a leader in port and logistics solutions. Overall, through these initiatives, PSA International not only enhances its operational efficiency and competitive advantage but also solidifies Singapore's role as a dominant player globally. Geopolitical leverage can be successfully detected across all the examined business clusters for this component. Table 8 shows the areas in which Singapore can gain geopolitical leverage through its SOE business clusters and operations.

SINGAPORE'S GEOPOLITICAL LEVERAGE OVER HOST COUNTRIES

	Control of trade routes	**Economic influence**	**Political and Diplomatic influence**	**Security and military presence**	**Technological and logistical advantage**
Ports and Terminals	✓	✓	✓	—	✓
Maritime – Shipping	✓	✓	—	—	✓
Logistics – Supply Chain	✓	✓	✓	—	✓

Table 8 Singapore's geopolitical leverage over host countries.

Source: Author's compilation.

8.3 U.A.E.

The United Arab Emirates has emerged as a remarkable player in the global maritime industry, showcasing a unique blend of strategic geographic positioning, robust infrastructure, and ambitious economic policies. Located at the crossroads of Europe, Asia, and Africa, the U.A.E has capitalized on its advantageous location to establish itself as a major maritime trade and logistics hub. Over the past few decades, the U.A.E has undertaken substantial efforts to diversify its economy from oil, focusing on other sectors. This shift has promoted significant investment in port operations, with state-owned enterprises like DP World and Abu Dhabi Ports Group at the forefront of this transformation. These enterprises expanded their operations globally over the years, enhancing the country's influence on the world stage. In the same context as the previous nations' case, we will view the components in combination with the SOE business cluster on how they contribute to the United Arab Emirates' geopolitical leverage. Starting with controlling trade routes, DP World and Abu Dhabi Ports are playing a vital role in helping their nation gain geopolitical leverage through their operations effectively. DP World is critical in controlling key maritime trade routes through its extensive ports and terminals operations and global investments. One of the most notable examples of this within the country's boundaries is the Jbel Ali Port in Dubai, which is not only the largest port in the Middle East but also one of the busiest ports in the world .This port serves as a pivotal transshipment hub, connecting shipping lines from Asia, Europe, and Africa. By maintaining operational dominance at Jebel Ali, DP World ensures that it can dictate terms in regional and international shipping, thereby reinforcing the UAE's influence over vital trade corridors. The port's advanced facilities and strategic location enable quick turnaround times for vessels, attracting global shipping companies and further enhancing the UAE's logistical capabilities.

In addition, DP World has made strategic investments in various ports and terminals around the globe. For instance, the acquisition of Limassol port in Cyprus has positioned DP World as a significant player in the Mediterranean trade route. This port serves as a crucial gateway for goods entering Europe from Asia. By managing port of Limassol, DP World improves its control over a critical maritime route, thereby solidifying the UAE's geopolitical presence in Europe. Moreover, investments by DP World in ports and terminals in European countries such as Belgium, France, Netherlands, Germany, and more have strengthened the enterprise's presence in the region, reinforcing UAE's influence. Another example is the Port of Sokhna in Egypt, which provides access to the Suez Canal, a vital artery for global trade. By investing in and managing this port, DP World strengthens its position in the Red Sea region, allowing for the efficient flow of goods between Europe, the Middle East, and Asia. This control over the Suez Canal route reinforces the UAE's strategic importance in global supply chains. Similarly, Abu Dhabi Ports Group exerts significant influence over trade routes through its operational control of Khalifa Port, which has been developed as a state-of-the-art logistics hub. Khalifa Port's strategic location along the Strait of Hormuz, a critical passage for oil and gas shipments, enables Abu Dhabi Ports to control a key maritime route essential for global energy supplies. The port's capabilities allow it to accommodate larger vessels and facilitate efficient cargo handling, making it a preferred port for shipping lines operating in the Gulf region. Moreover, Abu Dhabi Ports has also developed strong partnerships with international shipping companies and logistics firms to enhance its control over regional trade routes. The company's strategic focus on developing free trade zones around its ports further enhances its control over trade routes. By offering motivations for businesses to operate within these zones, the U.A.E attracts international trade and logistics firms, creating a robust network of trade connections that strengthens its geopolitical influence. By managing critical ports, investing in strategic locations, and fostering partnerships with global shipping companies, the U.A.E. enhances its position in global trade networks, solidifying its role as a vital player in shaping maritime logistics and trade flows on the world stage. DP World and Abu Dhabi Ports Group are gaining geopolitical leverage for their nation across all their business clusters through their control of trade routes. Moreover, both enterprises strategically enhance the United Arab Emirates' economic influence through their extensive operations and global investments. This economic leverage manifests in several ways, including the nations' revenues from operations, creation of jobs, the development of infrastructure, and the establishment of deeper economic ties with various countries.

DP World significantly impacts the global economy through its extensive network. For instance, from their operations in some of the largest ports and terminals in the world, by increasing their capacity and efficiency, the company facilitates trade, attracting international shipping lines and logistics companies. This has not only generated substantial revenue for the U.A.E. but has also led to the creation of thousands of jobs, bolstering the local economy. DP World is also making strides in Africa, particularly with its investments in ports and terminals. These investments enable DP World to enhance trade capabilities and logistics infrastructure in the region, promoting economic growth and stability. By facilitating trade and generating local employment, DP World fosters goodwill and strengthens bilateral ties, which leads to further economic collaborations. Additionally, DP World's investment in multiple European ports is a prime example of how the company extends its economic influence. Since acquiring a significant stake in the ports, DP World has transformed them into the busiest ports in Europe, increasing their throughput significantly. This development has increased trade volumes between Asia and Europe, contributing to local economies and DP World’s revenue. Abu Dhabi Ports Group similarly exerts economic influence by managing key ports such as Khalifa Port. This port is designed to support industrial activities and logistics, attracting multinational companies to establish operations in the U.A.E. By creating an attractive environment for businesses in the country, Abu Dhabi Ports Group helps generate significant economic activity, job creation, and increased trade. Also, Abu Dhabi Ports Group's involvement in overseas projects demonstrates its economic influence. By investing in foreign ports and terminals, the company boosts regional trade and logistics capabilities, contributing to economic flows. In conclusion, both DP World and Abu Dhabi Ports Group significantly enhance the U.A.E.'s economic influence through their strategic global investments and operations by facilitating trade, creating jobs, and establishing deeper economic ties with various nations, bolstering the nation’s economic geopolitical position.

Regarding the political and diplomatic influence of the United Arab Emirates, both enterprises are adeptly leveraging their strategic operations and investments to enhance it on the global stage. Through targeted initiatives and partnerships, both entities contribute to the U.A.E.’s soft power, fostering deeper diplomatic ties and creating opportunities for political engagement with various countries. By investing in key maritime hubs, the enterprises secure agreements that promote significant developments in host countries, which local governments view as a pathway to prosperity. This fosters goodwill and strengthens the U.A.E.’s political ties. Furthermore, the U.A.E. has engaged in various diplomatic efforts, such as high-level visits and trade agreements, to further solidify these relationships. By fostering broader interdependencies, the nation can negotiate from a position of strength, promoting political collaboration on various fronts. Additionally, as countries seek to deepen their economic ties with the U.A.E., they often engage in political dialogues, leading to enhanced bilateral relations and collaboration in various areas. A great example is the U.A.E’s role in various international forums, such as the World Economic Forum and the Gulf Cooperation Council meetings. In summary, DP World and Abu Dhabi Ports Group effectively leverage their operations and investments to enhance the U.A. E’s political and diplomatic influence. By fostering strategic partnerships with nations worldwide, they contribute significantly to the nation's status as a crucial player in global diplomacy. Geopolitical leverage regarding this component can be detected at the clusters of ports and terminals and logistics and supply chain. In the same context as the Singapore's case for the component of security and military presence, there is an absent of evidence that can prove that the nation gains geopolitical leverage. No overseas bases can be found, therefore there were several statements over the years stating that bases can be traced across some locations and that this degree of secrecy from UAE is needed to minimize negative political exposure both among local populations, who may oppose the Emirati presence, and for the country's international reputation, especially where outposts have served to support warring parties in conflict-torn countries. Nevertheless, UAE has never confirmed the existence of any bases. Lastly, both DP World and Abu Dhabi Ports Group are leveraging technological advancements and logistical efficiencies to enhance the geopolitical leverage of the United Arab Emirates. By investing in innovative port operations, data analytics, and digital platforms, these entities create significant advantages that bolster their global competitiveness and enhance the UAE's position in the international landscape. DP World has positioned itself over the years at the forefront of technological innovation in port operations, integrating advanced digital solutions to streamline logistics and enhance operational efficiency. One key example is the implementation of the Maqta Gateway, a digital trade platform that utilizes blockchain technology to facilitate smoother customs procedures and improve supply chain transparency. This platform allows stakeholders to access real-time data on shipments, which not only speeds up the clearance process but also enhances the reliability of supply chains. By ensuring that trade flows seamlessly through its ports, DP World strengthens the U.A. E's role as a critical logistics hub between Europe, Asia, and Africa. Furthermore, DP World has invested in automated terminal operations, such as at its flagship Jebel Ali Port, which has embraced technologies like autonomous vehicles and AI-driven cargo management systems. These advancements improve the efficiency of cargo handling, significantly reducing turnaround times and operational costs. By creating a highly efficient logistics environment, DP World attracts more shipping lines and cargo traffic, thereby increasing its global influence and economic footprint. Similarly, Abu Dhabi Ports

Group is focused on technological and logistical advancements too, to enhance its operational capabilities. The company emphasizes partnerships with technology firms to enhance its capabilities. For instance, collaborations with global logistics technology companies facilitate the integration of advanced data analytics into their operations. This enables the ports to leverage predictive analytics for better capacity planning and demand forecasting, leading to more efficient utilization of resources and infrastructure. As a result, the ports not only improve their operational efficiency but also become more attractive to international shipping companies seeking reliable and technologically advanced logistics solutions. In summary, both DP World and Abu Dhabi Ports Group are significantly enhancing the U.A. E's geopolitical leverage through their focus on technological and logistical advantages. This commitment to innovation not only strengthens the nation's position as a pivotal player in the industry but also fosters growth and increases the nation's international standing. As the U.A.E. continues to evolve as a technological and logistics leader, it reinforces its geopolitical influence in an increasingly interconnected world. Table 9 shows the areas in which the U.A.E. can gain geopolitical leverage from, through its SOEs business clusters and operations.

UAE'S GEOPOLITICAL LEVERAGE OVER HOST COUNTRIES

	Control of trade routes	**Economic influence**	**Political and Diplomatic influence**	**Security and military presence**	**Technological and logistical advantage**
Ports and Terminals	✓	✓	✓	—	✓
Maritime – Shipping	✓	✓	—	—	✓
Logistics – Supply Chain	✓	✓	✓	—	✓

Table 9 UAE's geopolitical leverage over host countries.

Source: Author's compilation.

8.4 Comparative Analysis

A comparative analysis of the nations under review, China, Singapore and the U.A.E., reveals distinct strategies for gaining geopolitical leverage through their state-owned enterprises and foreign direct investments. While each nation leverages its unique strengths and geopolitical positioning, there are common patterns in how they use their SOEs as instruments to project international power. For an example, China's approach is deeply embedded in its Belt and Road Initiative, which integrates infrastructure development with strategic foreign investments through its SOEs. The BRI as previously mentioned, gives China the upper hand in comparison with the other nations. China’s focus is on securing long-term control over key maritime and inland trade routes across continents. The control of foreign ports and terminals not only facilitates Chinese trade and economic influence over the cost nations, but also deepens their political and diplomatic engagement. China's SOEs have been pivotal in creating a dual-use infrastructure, allowing the Chinese government to utilize commercial investments for security purposes, including military access in strategic locations, in difference with the other nations. This comprehensive approach helps China secure a strong influence on global trade and supply chains, secure its military and security presence abroad and therefore to reinforce its geopolitical dominance. Singapore in the other hand, presents a different model on its way to gain geopolitical leverage. The nation can see a disadvantage of lack of the vast territorial resources of China and U.A.E. Therefore, Singapore found a way to turn around this disadvantage by utilizing its geographic position as a global transshipment hub. Moreover, Singapore is definitely highly advanced technological, and this is one of its strongest competitive advantages over other nations. The United Arab Emirates through its flagship state-owned enterprises DP World and Abu Dhabi Ports Group, takes a dynamic approach combining the components. Firstly, the nation has an undoubted advantage of a large scale of resources, including territorial resources and economic resources. Moreover, the nation’s cutting-edge digital infrastructure and advanced technologies position them as an even more competitive force. Additionally, the nation has strategically positioned itself in regions critical for several reasons, reinforcing its political influence through diplomatic ties and agreements. Generally, while all three nations leverage their SOEs through FDIs to gain geopolitical leverage, the distinctions in their approaches reflect their differing geopolitical aspirations. China’s strategy is driven by a broader vision of global dominance, with a focus on infrastructure that secures both economic and military objectives across continents. Singapore, on the other hand, plays a critical role as a facilitator of global trade through innovation and efficiency, utilizing its smaller size to exert outsized influence. The U.A.E balances economic interests with a strong component, positioning itself as a critical player in global markets. In conclusion, it is evident from the analysis that nations are increasingly gaining geopolitical leverage through the strategic operations of their state-owned enterprises and foreign direct investments, and it is undeniable that the integration of SOEs and FDIs as tools for geopolitical leverage has become an essential strategy for many nations. As global competition increases, the role of SOEs and FDIs in shaping the geopolitical stage will likely continue to grow and nations will be further seek to maintain and expand their global position.

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