

Increasing the Competitiveness of Pelindo IV Port Services in the Makassar Region

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ABSTRACT

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This study aims to examine the increase in competitiveness at Pelindo 4 Regional Makassar City. This study is a case study with a qualitative approach. This study is an exploratory case study type. The primary data source is Indonesian maritime operators, consisting of shipping companies (PP) using Pelindo III services, port operators (OP) in this case Pelindo III, freight forwarders (FF) using Pelindo III services, and academics. The methods for obtaining data are: survey, documentation, archives, interviews, observations. The Delphi method is a process of repeating surveys conducted on selected respondents regarding the competitive advantages of ports, including experts (key persons). Pelindo IV Makassar Regional plays a very important role in the logistics and sea transportation sector in the Eastern Indonesia region. Pelindo IV Makassar Regional manages various strategic ports that connect eastern Indonesia with other regions at home and abroad. The ports managed include Soekarno-Hatta Makassar Port, Makassar New Port, Paotere Port, Garongkong Port, Makassar Container Terminal (TPM). In addition to the ports above, Pelindo IV Regional 4 Makassar also manages other ports such as Ambon Port, Balikpapan Port, Parepare Port, and Ternate Port, all of which play an important role in supporting the flow of logistics and passengers in Eastern Indonesia. Pelindo 4 Regional Makassar has several advantages that make it an important entity in managing ports in Eastern Indonesia. The advantages of Pelindo 4 Regional Makassar are Its strategic position, Modern and Complete Port Facilities Strong Infrastructure Support, Service Diversification, Optimal Natural Resource Management, Guaranteed Security and Safety, Sustainable Development and Social Responsibility, and Quality of Human Resources and Training. Although Pelindo 4 Regional Makassar has many advantages, there are several weaknesses or challenges that may be faced in its operations. The weaknesses that Pelindo 4 Regional Makassar may have are Limited Infrastructure in Several Ports, Congestion and Space Limitations at the Main Port, Dependence on Sea Transportation, Lack of Diversification of Revenue Sources, Limited Human Resources in Several Areas, Environmental and Sustainability Issues, Dependence on Road Infrastructure and Land Transportation, Increased Competition from Other Ports, Impact of Policy and Regulation Changes, and Security and Threats from Terrorism or Crime. Ports in Pelindo 4 Makassar Region generally do not compete closely with each other, because they are managed by one entity, namely PT Pelindo (Persero), which has now been integrated after the merger of Pelindo I-IV in 2021. As part of the subholdings Pelindo Terminal Petikemas (SPTP) and Pelindo Multi Terminal (SPMT), ports in Region 4 are more complementary than competitive. However, in the context of competing for the flow of goods, several ports in this region may experience moderate competition, especially in attracting ships and cargo from goods owners or shipping companies. However, in general, Pelindo 4 is trying to distribute the role of these ports to increase logistics efficiency in the eastern region, not to create unhealthy competition. If what is meant is competition with ports outside Pelindo (for example private ports or international ports), then the challenges can be more complex. In the Pelindo Regional 4 area, there are several Special Terminals (Tersus) and Terminals for Self-Interest (TUKS) managed by private companies and have the potential to become competitors in loading and unloading services, including: PT Vale Indonesia in Malili, South Sulawesi, PT Bosowa Bandar Indonesia in Garongkong, South Sulawesi, PT Letawa Astra Agro Lestari in Pasangkayu, Central Sulawesi, . PT Donggi Senoro LNG in Luwuk, North Sulawesi, PT Panca Amara Utama in Luwuk, North Sulawesi, PT Cargill Indonesia in Amurang, North Sulawesi, and PT Sulawesi Regas Satu in Amurang, North Sulawesi. To improve the competitiveness of Pelindo IV Regional Makassar

City, strategies that need to be implemented include infrastructure and technology development, human resource development, service diversification, and strengthening relationships with stakeholders. In addition, environmentally friendly approaches and green innovations are also becoming increasingly important in today's era. By focusing on improving operational efficiency, capacity development, and maintaining sustainability, Pelindo IV Regional Makassar City can excel in global competition and remain relevant in the growing market.

Keywords: Increasing Competitiveness, Services, Pelindo IV.

INTRODUCTION

Indonesia is geographically considered the largest archipelagic country in the world with a width of 1,870 km, a length of 5,200 km, and a total area of 1,905 million km². This country consists of five large islands such as Papua, Java, Sulawesi, Kalimantan, and Sumatra. Indonesia's maritime network is much more advanced than air transportation, almost 90% of international trade is carried out by sea (Dijk et al., 2015) (Pratama & Iryanti, 2020). Indonesia is a country that is experiencing significant development in the transportation and logistics sector. This sector is considered the backbone of the national, regional, and local economy, both in urban and rural areas (Manueke, Tampi, & Londa in Siti Sahara, 2023; Sahara, 2021). The role of ports in economic development is increasing along with the increasing importance of ports in logistics activities, especially intermodal or multimodal transportation. The role of ports in economic development is increasing along with the increasing importance of ports in logistics activities, especially intermodal or multimodal transportation. (Mandasari et al., 2017).

Ports are usually also the starting point of a city or civilization and there are quite a few cultural heritage buildings and colonial buildings in urban areas. Ports are usually also the starting point of a city or civilization and there are quite a few cultural heritage buildings and colonial buildings in urban areas. (Nurhijrah & Fisur, 2019) (Gultom, 2017). Ports can support tourism activities, be it marine tourism, minatourism, to mangrove tourism (Ahmad et al., 2019). A port is a port equipped with buildings that function as a service for loading and unloading goods and boarding and disembarking passengers such as docks, moorings and other supporting facilities. A port is a harbor area equipped with buildings that function as a place for loading and unloading goods and picking up and dropping off passengers, such as docks, berths, and other supporting facilities (Fisur, 2016) (Arfani & Ambardi, 2024).

Port development requires huge investment. Government policies to encourage private investment participation are considered very appropriate to overcome budget constraints and at the same time encourage business competition through increased efficiency (Hariyadi & Wayan, 2020). The existence of efficient and effective ports can encourage economic growth, increase trade, and strengthen national connectivity (Lantang, 2024). The port functions as a place for government and economic activities which are used as a place for ships to dock, anchor, embark and disembark passengers, and/or load and unload goods (Aslamiah & SAP, n.d.) (Farezan & Gufron, 2023) (Kastanya et al., 2023).

The port as a place for government and business activities, consisting of the Main Port, Collecting Port, and Feeder Port, can stimulate the economic activities of a region because it is part of the chain of the transportation and logistics system (Fitri, 2019). The development of ports in Indonesia in 2024 shows significant progress in various aspects, including increasing capacity, operational efficiency, and contribution to the national economy (Herdian et al., 2023). The main developments recorded include an increase in the flow of goods where PT Pelabuhan Indonesia (Persero) or Pelindo managed to serve 96 million tons of goods in the first semester of 2024, an increase of 17% compared to the same period the previous year which was recorded at 82 million tons. (Zainal et al., 2024a). The Sea Toll Program which connects 115 ports throughout Indonesia and serves 39 routes with 38 ships shows a trend of increasing cargo from year to year. In 2023, the amount of cargo transported through this program increased significantly (Annisa & Izazi, 2024a). Port operations management includes the latest developments in optimization techniques and data-based decision support systems (Laju et al., 2024). Overall, port development in Indonesia in 2024 shows consistent efforts to increase capacity, efficiency, and contribution to the national economy (Utomo, 2023)

PT Indonesian Port Corporation (Pelindo 4) is a State-Owned Enterprise (BUMN) that manages ports in Indonesia. Pelindo is the result of the integration of four state-owned port companies, namely PT Pelindo I, II, III, and IV. Pelindo plays an important role in the country's logistics infrastructure, managing terminals, loading and unloading

goods, and providing sea transportation services. Pelindo is responsible for port operations throughout Indonesia, including large ports that act as the main gateway for goods entering Indonesia and their distribution to all regions (Kuncoro, 2020). Pelindo 4 Makassar Region is part of the Pelindo 4 organizational structure that specifically handles the Makassar area and its surroundings. Pelindo IV Makassar Region plays a very important role in the logistics and sea transportation sector in the Eastern Indonesia region.

Pelindo IV Makassar Region manages various strategic ports that connect the Eastern Indonesia region with other regions at home and abroad. The ports managed include Soekarno-Hatta Makassar Port, Makassar New Port, Paotere Port, Garongkong Port, Makassar Container Terminal (TPM). In addition to the ports above, Pelindo IV Regional 4 Makassar also manages other ports such as Ambon Port, Balikpapan Port, Parepare Port, and Ternate Port, all of which play an important role in supporting the flow of logistics and passengers in the Eastern Indonesia region. Ports in the Pelindo 4 Makassar Region generally do not compete with each other tightly, because they are managed by one entity, namely PT Pelindo (Persero) which is currently integrated after the merger of Pelindo I-IV in 2021. As part of the subholding Pelindo Container Terminal (SPTP) and Pelindo Multi Terminal (SPMT), ports in Region 4 are more complementary than competitive. However, in the context of competition for the flow of goods, several ports in this region can experience quite tight competition, especially in attracting ships and cargo from goods owners or shipping companies.

Factors that influence port competition are related to services, costs and prices, innovation and technology, location and accessibility (Rahayu, 2020). Ports that can offer faster, more efficient, or more complete services, such as more modern terminals or better information systems, can be strong competitors (Putra & Djalante, 2016). Competitors who offer more competitive or lower rates for loading and unloading services, cargo transportation, or other facilities, customers can switch to that port (Asmiati et al., 2023). Ports that adapt more quickly to new or more environmentally friendly technologies can attract more service users (Annisa & Izazi, 2024a). Ports that have a more strategic location or are more easily accessible can attract more customers, especially those oriented towards time and cost efficiency (Aslamiyah & S AP, n.d.) (Putra & Djalante, 2016).

In the Pelindo Regional 4 area, there are several Special Terminals (Tersus) and Terminals for Self-Interest (TUKS) managed by private companies and have the potential to become competitors in loading and unloading services, including: PT Vale Indonesia in Malili, South Sulawesi, PT Bosowa Bandar Indonesia in Garongkong, South Sulawesi, PT Letawa Astra Agro Lestari in Pasangkayu, Central Sulawesi, . PT Donggi Senoro LNG in Luwuk, North Sulawesi, PT Panca Amara Utama in Luwuk, North Sulawesi, PT Cargill Indonesia in Amurang, North Sulawesi, and PT Sulawesi Regas Satu in Amurang, North Sulawesi. With these competitors, Pelindo 4 Regional Makassar must strive to improve the quality of service, introduce innovations in technology or infrastructure, and adjust its prices and tariffs to remain attractive to port users and maintain its competitiveness in the market. Along with the existing competition, Pelindo 4 also needs to adapt to market needs, such as more efficient logistics services or the ability to handle larger volumes of goods, in order to remain competitive. Privately managed ports often have greater flexibility in adapting to technological changes and providing more specific or personalized services to customers. Therefore, Pelindo 4 must pay attention to the development of these private competitors in designing strategies to remain competitive in the market (Purnomo, 2021) (Nasution, 2024).

METHODS

This research is a case study with a qualitative approach. Qualitative research is considered the most effective for obtaining real data as the results of repeated honest interviews. Qualitative research can find the root of contextual problems when validated from other data sources, in this case the data source is from Pelindo IV Regional Makassar City, from shipping companies and from freight forwarders. This research is an exploratory case study type. The rationale is that a case study is the right design in several events. This type of research is analogous to a single experiment, and some of the same conditions are certainly justified, within the scope of Indonesia, so that it meets validity and reliability, considering that the main problem in case studies in general concerns validity and reliability. The primary data source is Indonesian maritime operators, consisting of shipping companies (PP) using Pelindo III services, port operators (OP) in this case Pelindo III, freight forwarders (FF) using Pelindo III services, and academics.

The methods for obtaining data are: surveys, documentation, archives, interviews, observations. The Delphi method is a process of repeating a survey conducted on selected respondents regarding the competitive advantages of ports, including experts (key persons). The survey was repeated twice so that the method is called a two-round Delphi. Respondents and the number of respondents are maritime operators, namely port operators (22 members), shipping companies that are members of the Indonesian National Shipowners Association (INSA) (1,490 members), freight forwarder companies that are members of the Indonesian Logistics and Forwarders Association (ALFI) (176 members), Academics (2 members), Regulators (Director General of Sea Transportation) (1 member).

RESULTS

Delphi Method

The Delphi method is a technique used to collect opinions from experts or specialists through a series of surveys or questionnaires, with the aim of reaching a consensus or more informed decision on a particular problem or topic. This method is very useful in predicting or solving complex problems by involving various experts from various disciplines. The processed results in the Delphi R1 Survey and Analysis can be seen in the following table:

Table 1: Results of Delphi R1 Survey and Analysis

No	Type of Respondent	Average	Standard Deviation
In your opinion, the geographical conditions of Indonesia as an archipelagic country (for example: connectivity between islands, equal distribution of goods, existence of shipping, understanding of ownership of maritime resources, maritime regulations) are important in increasing the competitiveness of companies.			
1	Pelindo IV	5.44	0.527
2	Shipping Company	5.33	0.707
3	Freight forwarder company	5.00	0.707
4	Academic	6.00	0.000
5	Regulator: Directorate General of Sea Transportation	6.00	0.000
Among the elements that form a port's competitive advantage are understanding maritime resources, understanding competitive strengths, forming a value chain.			
1	Pelindo IV	2.11	1.054
2	Shipping Company	2.67	0.707
3	Freight forwarder company	2.44	0.726
4	Academic	2.00	0.000
5	Regulator: Directorate General of Sea Transportation	2.00	0.000

Based on Table 2, it can be seen that the average value of respondents' perceptions is 5.44; 5.33; 5.00; 6.00; and 6.00, respectively. This shows that respondents as port operators, shipping companies, freight forwarders, academics, and regulators have the same perception that the geographical conditions of Indonesia as an archipelagic country have an important role in increasing the competitiveness of companies. As an archipelagic country with thousands of islands spread out, Indonesia faces unique challenges in terms of inter-island connectivity, distribution of goods, and management and utilization of maritime resources. These factors play a major role in determining the efficiency and competitiveness of ports in Indonesia, which in turn affect national logistics performance, trade costs, and market access. The geographical conditions of Indonesia as an archipelagic country are important in increasing the competitiveness of ports. As a country consisting of more than 17,000 islands, Indonesia faces major challenges

related to inter-island connectivity, equitable distribution of goods, the existence of shipping, and understanding and management of maritime resources, all of which play an important role in port management and its competitiveness.

Connectivity between islands, equitable distribution of goods, the existence of shipping, understanding of maritime resources, and maritime regulations have a very important role in increasing operational efficiency and reducing logistics costs, which in turn increases port competitiveness. Ports that can utilize these factors well will have a stronger position in attracting ships and facilitating the distribution of goods, both in domestic and international markets. Shipping companies will tend to choose ports that have adequate infrastructure, good connectivity, and supportive regulations, because it will provide operational efficiency and benefits in terms of time and cost. Indonesia as an archipelagic country in increasing port competitiveness can be known by considering inter-island connectivity, equitable distribution of goods, the existence of shipping, understanding of ownership of maritime resources, and maritime regulations.

The standard deviation is 0.527, 0.707, 0.707. The fairly large standard deviation level indicates a large distribution of respondents' answers. Port operators: Differences in managerial capabilities where the main port and class 1 port managers require more complex and strategic managerial capabilities, given the higher and more diverse operational levels. Meanwhile, class 4 ports require managers who are more focused on efficiency and management of limited resources, with priority on local services and tight budget management. Each port class requires managers with skills that are tailored to the scale and complexity of the port's operations.

Shipping companies: Differences in utilizing Indonesia's geographical characteristics to support their operations. Indonesia, which consists of thousands of islands with complex inter-island connectivity, presents both challenges and opportunities for shipping companies. The superior shipping companies are those that can utilize this potential to create efficiency, reduce costs, and improve customer service. Freight forwarder companies: The factors of Indonesia's geographical conditions as an archipelagic country lie in their operational focus. Companies that serve the domestic market will place more emphasis on the importance of inter-island connectivity, distribution of goods to remote areas, and management of local port infrastructure, while companies that focus on the international market will be more concerned with access to major ports, international regulations, and shipping capacity between countries. By understanding and managing these factors well, freight forwarder companies can increase the competitiveness of ports in Indonesia.

The average values obtained were 2.11; 2.44; 2.00, and 2.00. This means that the perceptions of respondents as port operators, freight forwarder companies, academics, and regulators show that the most important thing is to understand the strength of competition to create competitive advantage. Understanding the competitive forces in Pelindo 4 is an important step in the port development strategy in order to remain competitive efficiently, identify new opportunities, and create competitive advantages in the Indonesian port market. Understanding the competitive forces in order to have a competitive advantage can be seen through the perspective of their role in regulations, policies, and supervision that support the development of the port and logistics sector in Indonesia, especially in the Pelindo 4 region. Understanding the competitive forces in order to have a competitive advantage can be seen through the perspective of their role in regulations, policies, and supervision that support the development of the port and logistics sector in Indonesia, especially in the Pelindo 4 region.

The average value obtained was 2.67. This means that the perception of respondents as shipping companies shows that the most important thing is to form a value chain to create competitive advantage. Forming a value chain in Pelindo 4 is one of the important strategies for building competitive advantage. This value chain involves a series of activities related to port management, logistics, goods distribution, cargo handling, and customer service. Forming an effective value chain will provide a competitive advantage that can help them overcome the competitive challenges that exist in the port and logistics sector. The standard deviation values obtained were 1.054, 0.707, and 0.726, respectively. The standard deviation is quite large due to differences in understanding. Differences in understanding are due to differences in operational strategy aspects, customer needs, level of investment in infrastructure, adaptation to market changes, and the types of services they offer.

Table 2: Results of Delphi R1 Survey and Analysis (Theory RBV)

No	Type of Respondent	Average	Standard Deviation
In your opinion, are Indonesia's maritime resources as an archipelagic country a valuable resource in building the competitive advantage of ports.			
1	Pelindo IV	5.11	0.782
2	Shipping Company	5.00	0.707
3	Freight forwarder company	5.11	0.601
4	Academic	6.00	0.000
5	Regulator: Directorate General of Sea Transportation	6.00	
In your opinion, are Indonesia's maritime resources as an archipelagic country rare resources and difficult to imitate in building competitive port advantages.			
1	Pelindo IV	5.00	0.707
2	Shipping Company	5.33	0.707
3	Freight forwarder company	5.11	0.782
4	Academic	6.00	0.000
5	Regulator: Directorate General of Sea Transportation	6.00	0.000
In your opinion, are Indonesia's maritime resources as an archipelagic country an irreplaceable resource in building the competitive advantage of ports.			
1	Pelindo IV	4.78	0.833
2	Shipping Company	5.00	0.500
3	Freight forwarder company	5.11	0.782
4	Academic	6.00	0.000
5	Regulator: Directorate General of Sea Transportation	6.00	0.000

Based on Table 3, it can be seen that the average value based on the perception of each type of respondent as a port operator, shipping company, and freight forwarder company is 5.11; 5.00; and 5.11, respectively. This means that there is consistency in the view or attitude that Indonesia's maritime resources as an archipelagic country are valuable resources in building port competitiveness at Pelindo 4. The standard deviation value of 0.782; 0.707; 0.601 is a fairly large value, so that respondents gave answers that were not nearly similar. The difference in answers related to Indonesia's maritime resources as an archipelagic country being a valuable resource in building port competitiveness can be reviewed from several aspects, namely: Indonesia's maritime resources as an archipelagic country are very valuable resources for building port competitiveness. By optimizing port infrastructure, utilizing modern technology, maintaining maritime security, and improving the quality of human resources, Indonesia has the potential to become one of the largest logistics centers in the world. Port operators have a strategic role in ensuring that Indonesia's maritime resources are managed efficiently to increase port competitiveness at the global level.

Indonesia's maritime resources as an archipelagic country have great potential to strengthen the competitive advantage of ports. In the view of shipping companies, efficient management of Indonesian ports that have strategic access, good infrastructure, supportive policies, and advanced security and technology systems, can make Indonesia one of the largest and most competitive logistics centers in the world. Indonesia's maritime resources as an archipelagic country are clearly valuable resources that can support the development of port competitive advantages.

Through efficient management, infrastructure improvements, and supportive policies, Indonesian ports can become highly competitive logistics hubs in the global trade network. By utilizing their geographical position, natural resources, and increasingly improved technological and security capabilities, Indonesian ports have great potential to become key players in international trade.

The average value based on the perception of each type of respondent as a port operator, shipping company, and freight forwarder company is 5.00; 5.33; and 5.11 respectively. This means that there is consistency in the view or attitude that Indonesia's maritime resources as an archipelagic country are rare resources and difficult to imitate in building port competitiveness at Pelindo 4. The standard deviation value of 0.707; 0.707; 0.782 is a fairly large value, but not too different. The difference in answers related to Indonesia's maritime resources as an archipelagic country is a rare resource and difficult to imitate in building port competitiveness can be viewed from the strategic geographical position, number and distribution of ports, strong connectivity, and the diversity of Indonesia's natural resources providing a very high and unique competitive advantage. Indonesian ports, with continuously developing management, have great potential to continue to strengthen their competitiveness in the global arena. The average value based on the perception of each type of respondent as a port operator, shipping company, and freight forwarder company is 4.78; 5.00; and 5.11 respectively. This means that there is consistency in the view or attitude that Indonesia's maritime resources as an archipelagic country are irreplaceable resources in building the competitive advantage of ports at Pelindo 4. The standard deviation value of 0.833; 0.500; 0.782 is quite large, but not too different. The difference in answers related to the strategic geographical position, natural straits, diversity of natural resources, and the distribution of ports throughout Indonesia provide advantages that are very difficult to replace or imitate by other countries. These resources remain the main factor that makes Indonesia a strategic point in the global logistics network, providing strong competitiveness for Indonesian ports in the international market.

Table 3: Results of Delphi R1 Survey and Analysis (Five Forces Theory of Port Competition)

No	Type of Respondent	Average	Standard Deviation
In your opinion, the strength and intensity of competition between existing ports at that time showed the level of interest in building competitive advantages in Indonesian ports.			
1	Pelindo IV	4.89	0.601
2	Shipping Company	4.44	0.527
3	Freight forwarder company	3.78	0.441
4	Academic	4.00	0.000
5	Regulator: Directorate General of Sea Transportation	4.00	0.000
In your opinion, the threat of new ports entering (including from foreign ports) is very important in building the competitive advantage of the domestic port industry.			
1	Pelindo IV	5.22	0.667
2	Shipping Company	4.78	0.667
3	Freight forwarder company	4.00	0.707
4	Academic	4.00	0.000
5	Regulator: Directorate General of Sea Transportation	4.00	0.000
In your opinion, bargaining power over port service users is very important in building competitive advantage in the domestic port industry			
1	Pelindo IV	5.22	0.833
2	Shipping Company	4.78	0.667
3	Freight forwarder company	4.44	0.527

4	Academic	4.00	0.000
5	Regulator: Directorate General of Sea Transportation	4.00	0.000

Table 3 shows the average values of 4.89, 4.44, 3.78, 4.00, and 4.00 respectively where respondents generally have the same perception that the strength of the intensity of competition between existing ports at that time is quite important indicating the level of importance in building competitive advantage of Indonesian ports. The intensity of competition between ports in Indonesia is quite important to maintain global competitiveness and support economic growth. Pelindo 4 Regional Makassar must continue to adapt to these changes by improving infrastructure, services, operational efficiency, and HR quality, as well as introducing new innovations to stay ahead of the tight competition in the port sector.

Table 3 shows the average values of 5.22; 4.78; 4.00; 4.00 and 4.00 respectively where respondents generally have the same perception that the threat of new ports (including foreign ports) is quite important in building competitive advantage of the domestic port industry. Existing ports must continue to innovate, improve operational efficiency, update infrastructure, and improve services to face this threat. In this way, domestic ports can maintain their competitive position in the market, both at the national and global levels, even though new ports are emerging in the market.

Table 3 shows the average values of 5.22; 4.78; 4.44; 4.00 and 4.00 respectively where respondents generally have the same perception that bargaining power over port service users is quite important in building the competitive advantage of the domestic port industry. Ports that have strong bargaining power can set more profitable tariffs, develop quality services, maintain customer loyalty, and invest in sustainable development. In the face of increasingly fierce competition, both from other domestic ports and international ports, the ability to maintain and strengthen this bargaining power is crucial to winning the market and optimizing port operational performance.

Table 4: Results of Delphi R1 Survey and Analysis (Five Forces Theory of Port Competition)

No	Type of Respondent	Average	Standard Deviation
In your opinion, the threat of the entry of replacement ports is very important in building the competitive advantage of the domestic port industry.			
1	Pelindo IV	5.11	0.601
2	Shipping Company	5.11	0.601
3	Freight forwarder company	4.33	0.500
4	Academic	4.00	0.000
5	Regulator: Directorate General of Sea Transportation	4.00	0.000
In your opinion, the bargaining power of the shipper can place the company from very low to very high.			
1	Pelindo IV	5.33	0.500
2	Shipping Company	5.11	0.333
3	Freight forwarder company	4.56	0.527
4	Academic	4.00	0.000
5	Regulator: Directorate General of Sea Transportation	4.00	0.000
In your opinion, building a competitive advantage for a port is determined by the effectiveness of the speed of cargo delivery.			
1	Pelindo IV	5.56	0.527

2	Shipping Company	5.44	0.527
3	Freight forwarder company	5.11	0.601
4	Academic	4.00	0.000
5	Regulator: Directorate General of Sea Transportation	4.00	0.000

Table 4 shows the average values of 5.11; 5.11; 4.33; 4.00 and 4.00 respectively where respondents generally have the same perception that the threat of the entry of substitute ports is quite important in building competitive advantage in the domestic port industry. Existing ports must continue to adapt to market changes, develop infrastructure, improve efficiency, and provide value-added services to maintain their competitive position. This threat encourages ports to innovate and maintain their attractiveness in the eyes of customers so as not to lose out to more efficient or more modern substitute ports.

Table 4 shows the average values of 5.33; 5.11; 4.56; 4.00, and 4.00 respectively where respondents generally have the same perception that the bargaining power of shippers is indeed high. A number of factors, such as competition between ports, shipping volume, attachment to certain services, and long-term relationships built between ports and shippers. Ports that are able to develop value-added services, advanced technology, and strong connections with shippers will have higher bargaining power, allowing them to set higher rates and retain customers despite competition. In contrast, ports with many alternatives and standard services may have to lower prices or adjust their services to remain competitive.

Table 4 shows the average values of 5.56; 5.44; 5.11; 4.00 and 4.00 respectively where respondents generally have the same perception that the effectiveness and speed of cargo delivery are indeed important factors in building a port's competitive advantage. Ports that are able to provide fast and efficient services will be more attractive to shippers, have advantages in terms of lower logistics costs, and provide higher customer satisfaction. In addition, shipping speed also has an impact on price competitiveness, operational capacity, and port reputation in both domestic and international markets. Ports that optimize shipping speed through the use of technology and infrastructure improvements will find it easier to develop and maintain a competitive position in the highly dynamic global port industry.

Table 5: Results of Delphi R1 Survey and Analysis (Five Forces Theory of Port Competition)

No	Type of Respondent	Average	Standard Deviation
In your opinion, in building a competitive advantage, a port is determined by the total cost of shipping the cargo.			
1	Pelindo IV	5.22	0.667
2	Shipping Company	5.11	0.601
3	Freight forwarder company	5.11	0.601
4	Academic	4.00	0.000
5	Regulator: Directorate General of Sea Transportation	4.00	0.000
In your opinion, building a competitive advantage for a port is determined by the cash to cash business income cycle			
1	Pelindo IV	5.22	0.667
2	Shipping Company	5.11	0.782
3	Freight forwarder company	5.11	0.333
4	Academic	4.00	0.000

5	Regulator: Directorate General of Sea Transportation	4.00	0.000
In your opinion, building a competitive advantage for a port is determined by flexibility and ease of cargo delivery			
1	Pelindo IV	5.44	0.726
2	Shipping Company	5.33	0.707
3	Freight forwarder company	5.11	0.333
4	Academic	4.00	0.000
5	Regulator: Directorate General of Sea Transportation	4.00	0.000

Table 5 shows the average values of 5.22; 5.11; 5.11; 4.00 and 4.00 respectively where respondents generally have the same perception that the total cost of shipping cargo has an impact on building a port's competitive advantage. Ports that are able to reduce shipping costs through efficient operational processes, reducing hidden costs, and setting competitive rates will have a stronger position in the market, attract more customers, and maintain their competitiveness in the highly competitive port industry. This cost advantage allows ports to attract more cargo, increase operational volumes, and strengthen their reputation as the primary choice for shippers and ship operators.

Table 5 shows the average values of 5.22; 5.11; 5.11; 4.00 and 4.00 respectively where respondents generally have the same perception that the cash to cash revenue cycle plays an important role in building a port's competitive advantage. Ports that can manage this cycle efficiently will have better liquidity, lower operational costs, and greater ability to invest in infrastructure and technology. This improves operational efficiency, customer satisfaction, and port competitiveness in the market. Thus, effective cash to cash cycle management is one of the key components in maintaining and strengthening the competitive advantage of ports.

Table 5 shows the average values of 5.44; 5.33; 5.11; 4.00 and 4.00 respectively where respondents generally have the same perception that flexibility and ease of cargo delivery are important factors in building a port's competitive advantage. Ports that can offer more flexible services, minimize waiting times, reduce costs, and provide ease in managing logistics will have a significant advantage in a highly competitive market. By providing more accessible and more efficient solutions for customers, ports will be able to improve customer satisfaction, accelerate the flow of goods, and ultimately strengthen their market position.

Discussion

Pelindo IV is one of four companies incorporated in the BUMN that manages ports in Indonesia. Pelindo 4 is responsible for managing ports located in the Eastern Indonesia region, such as in Sulawesi, Maluku, Papua, and surrounding areas. Pelindo 4 Makassar Regional is part of the Pelindo 4 organizational structure that specifically handles the Makassar region and its surroundings. Pelindo IV Makassar Regional plays a very important role in the logistics and sea transportation sector in the Eastern Indonesia region. Pelindo IV Makassar Regional manages various strategic ports that connect eastern Indonesia with other regions at home and abroad. The ports managed include Soekarno-Hatta Makassar Port, Makassar New Port, Paotere Port, Garongkong Port, Makassar Container Terminal (TPM).

In addition to the ports above, Pelindo IV Regional 4 Makassar also manages other ports such as Ambon Port, Balikpapan Port, Parepare Port, and Ternate Port, all of which play an important role in supporting the flow of logistics and passengers in Eastern Indonesia. Pelindo 4 Regional Makassar has several advantages that make it an important entity in managing ports in Eastern Indonesia. The advantages of Pelindo 4 Regional Makassar are:

1. Its strategic position.

- a. Soekarno-Hatta Port Makassar as the main port in this region, has a very strategic position as a trade link in Eastern Indonesia. Makassar is the main gateway for the distribution of goods between islands and countries, connecting Sulawesi, Papua, Maluku, and other regions with the western region of Indonesia and Asian countries.
- b. Direct access to international shipping lanes makes it very important in regional and international logistics connectivity.
2. **Modern and Complete Port Facilities.** Pelindo 4 Regional Makassar has complete and modern port facilities to support smooth operations, including docks, cranes, and efficient loading and unloading facilities. Soekarno-Hatta Port is equipped with facilities to serve various types of transportation, both goods, passengers, and containers. In addition, this port continues to experience development and improvement to increase its capacity and effectiveness.
3. **Strong Infrastructure Support.** Supporting infrastructure such as a good land transportation system also strengthens the logistics network that connects the port with the surrounding areas. This helps smooth the distribution process of goods and services. Investments to improve more environmentally friendly and efficient port infrastructure, as well as adopting the latest technology, are continuously being carried out.
4. **Service Diversification.** Pelindo 4 Regional Makassar offers a variety of comprehensive port services, including loading and unloading of goods, container management, ship services, and passenger transportation. These diverse services enable it to meet the various needs of the industrial, trade, and logistics sectors.
5. **Increased Operational Capacity and Efficiency.** Pelindo 4 Regional Makassar continues to innovate to improve port operational efficiency, such as by using a digital system for port activity management and supervision. Facility modernization, use of automation systems, and digitalization are advantages that help accelerate the loading and unloading process, reduce ship waiting times, and increase port productivity.
6. **Optimal Natural Resource Management.** With good port management, Pelindo 4 Regional Makassar supports other important sectors, such as the mining, fisheries, and agriculture sectors, especially in the Sulawesi, Maluku, and Papua regions. Commodities such as mining products, fisheries products, and agricultural products can be distributed more quickly and efficiently.
7. **Guaranteed Security and Safety.** Port operational security and safety are top priorities, with strict supervision and the implementation of international standards in port management. Pelindo 4 Regional Makassar implements strict safety procedures to reduce the risk of accidents and ensure that the port operates safely.
8. **Sustainable Development and Social Responsibility.** Pelindo 4 Regional Makassar is also committed to corporate social responsibility (CSR), with programs that support the welfare of the community around the port, including in the fields of education, health, and the environment. Focus on sustainable development with efficient and environmentally friendly management of natural resources.
9. **Quality of Human Resources and Training.** Pelindo 4 Regional Makassar has a professional and trained team to manage port operations well. With the ongoing training program, the quality of service and staff skills are always updated to maintain a high level of competence.

Although Pelindo 4 Regional Makassar has many advantages, there are several weaknesses or challenges that may be faced in its operations. The weaknesses that Pelindo 4 Regional Makassar may have are:

1. **Limited Infrastructure in Several Ports.** Although Soekarno-Hatta Port Makassar has modern facilities, several other ports managed by Pelindo 4 Regional Makassar, such as Pare-Pare Port and Waisai Port, may have more limited infrastructure. Limited dock capacity, loading and unloading equipment, or other supporting facilities can hinder operational efficiency in several small ports.
2. **Congestion and Space Limitations at the Main Port.** Soekarno-Hatta Port Makassar, which is the main port in this region, often experiences congestion, especially during peak hours or when the volume of incoming and outgoing goods increases rapidly. Limited port capacity, especially when compared to the growing volume of trade, can result in a backlog of goods and increase waiting times for incoming ships.

3. **Dependence on Sea Transportation.** Most of the transportation of goods and logistics in this region is highly dependent on sea transportation. This is at risk if there is a disruption in weather, ship accidents, or other things that affect shipping routes. These disruptions can impact the timeliness of delivery of goods, which can hamper trade and distribution.
4. **Lack of Diversification of Revenue Sources.** Like many other ports, Pelindo 4 Regional Makassar still relies heavily on revenue from loading and unloading activities and sea transportation. This makes the company more vulnerable to fluctuations in trade volume or global economic uncertainty. In the future, diversifying revenue from other sectors, such as tourism, digital-based logistics, or industrial area development, can be a challenge that needs to be managed.
5. **Limited Human Resources in Several Areas.** Although Pelindo 4 has a training and development program for HR, there is still a shortage of skilled workers in several areas or smaller ports. This can affect the quality of service and hinder operational efficiency. Competition for skilled workers in the fields of ports, logistics, and technology can also be a challenge.
6. **Environmental and Sustainability Issues.** Waste management, pollution, and environmental impacts from port activities are still issues that require more attention. Pelindo 4 Regional Makassar must ensure that port operations are environmentally friendly, given the increasing public awareness and regulations related to the environment. Corporate social responsibility (CSR) that focuses on environmental sustainability also requires large investments and clear policies.
7. **Dependence on Road Infrastructure and Land Transportation.** Although the port already has good facilities, often the road infrastructure and land transportation connecting the port to the surrounding area are still inadequate in some areas. Especially in more remote areas, poor road conditions or lack of efficient transportation networks can hinder the distribution of goods.
8. **Increased Competition from Other Ports.** With the development of new ports in Eastern Indonesia or increasing the capacity of other ports, Pelindo 4 Regional Makassar must compete in terms of efficiency, cost, and quality of service. Competition with large ports such as Tanjung Priok Port or other ports that have more sophisticated infrastructure and larger capacities can be a challenge in maintaining market share.
9. **Impact of Policy and Regulation Changes.** Changes in government policies related to port management, tariffs, or trade regulations may affect Pelindo 4 Regional Makassar's operations. Implementation of new policies may require adjustments that affect existing costs or ways of working. Uncertainty in global fiscal or economic policies may also affect the flow of goods and logistics through the port.
10. **Security and Threats from Terrorism or Crime.** Port security is also a concern, given the threat of transnational crime, including drug trafficking, theft of goods, or threats of terrorism. Pelindo 4 Regional Makassar must continue to strengthen its security system and work with authorities to maintain security at the port.

Ports in Pelindo 4 Makassar Region generally do not compete closely with each other, because they are managed by one entity, namely PT Pelindo (Persero), which has now been integrated after the merger of Pelindo I-IV in 2021. As part of the subholdings Pelindo Terminal Petikemas (SPTP) and Pelindo Multi Terminal (SPMT), ports in Region 4 are more complementary than competitive. However, in the context of competing for the flow of goods, several ports in this region may experience moderate competition, especially in attracting ships and cargo from goods owners or shipping companies. For example: (1) Makassar Port vs. Kendari or Parepare Port. Makassar as the main hub in the Eastern Indonesia Region (KTI) has better facilities and greater capacity. Kendari and Parepare Ports can be an alternative for shipping companies or entrepreneurs who want to avoid congestion or seek cheaper logistics costs. (2) Bitung Port vs. Makassar Port. Bitung is increasingly developing as an international trade gateway, especially with the Pacific region. It could be an alternative for exports and imports that previously mostly went through Makassar. However, in general, Pelindo 4 is trying to distribute the role of these ports to increase logistics efficiency in the eastern region, not to create unhealthy competition. If what is meant is competition with ports outside Pelindo (for example private ports or international ports), then the challenges can be more complex.

In the Pelindo Regional 4 area, there are several Special Terminals (Tersus) and Terminals for Self-Interest (TUKS) managed by private companies and have the potential to become competitors in loading and unloading services, including: PT Vale Indonesia in Malili, South Sulawesi, PT Bosowa Bandar Indonesia in Garongkong, South Sulawesi, PT Letawa Astra Agro Lestari in Pasangkayu, Central Sulawesi, . PT Donggi Senoro LNG in Luwuk, North Sulawesi, PT Panca Amara Utama in Luwuk, North Sulawesi, PT Cargill Indonesia in Amurang, North Sulawesi, and PT Sulawesi Regas Satu in Amurang, North Sulawesi.

The theory of competitive forces explains that in order to increase competitiveness, ports need to pay attention to several factors. These factors and efforts made to minimize competitive forces can be explained as follows:

(1) Threat of New Entrants. The threat of new entrants is related to the level of difficulty or ease for new competitors to enter the industry and compete with existing players. The application in Pelindo 4 is: (a) Economies of Scale and Infrastructure: Pelindo 4 already has a large port network in Eastern Indonesia, which requires large investments in infrastructure, equipment, and technology. With strong economies of scale, Pelindo 4 can reduce operational costs and offer more competitive prices, making it difficult for new entrants to compete. (b) Government Regulation: The port industry in Indonesia is highly regulated by the government, with many regulations that must be met to obtain an operating license. Pelindo 4, as a state-owned company, already has a good relationship with the government and meets existing regulatory standards, providing an advantage over new entrants. (c) Investment in Technology: Pelindo 4 continues to invest in new technology to improve operational efficiency and service. This creates high technological barriers for new entrants who want to compete with established companies such as Pelindo 4.

(2) Bargaining Power of Suppliers. Supplier bargaining power indicates the extent to which suppliers have the power to determine the prices, equipment and services they offer. Implementation in Pelindo 4: (a) Supplier Diversification: Pelindo 4 can reduce dependence on one or a few suppliers by diversifying supplier sources. For example, for loading and unloading equipment or ship fuel needs, Pelindo 4 can establish relationships with several suppliers to obtain more competitive prices. (b) Long-Term Partnerships with Key Suppliers: Pelindo 4 can strengthen relationships with major equipment and technology suppliers, establishing long-term contracts to ensure smooth supply at more stable and more competitive prices. (c) Technology and Management Systems: Suppliers who provide technology systems for port management (such as port management systems or cargo tracking) can have higher bargaining power. Therefore, Pelindo 4 needs to ensure that it has various options and continues to innovate in technology management so as not to be too dependent on one supplier.

(3) Bargaining Power of Buyers. The bargaining power of buyers as port users shows the extent to which port users can influence tariffs and service quality. Implementation at Pelindo 4: (a) Diversity of Services and Tariffs: Pelindo 4 can offer varied services for various types of customers, such as logistics companies, shipping companies, and retail customers. By adjusting tariffs and services to customer needs, as port users. Pelindo 4 can reduce the high bargaining power of customers. (b) Value-Added Services: To increase customer loyalty, Pelindo 4 can offer additional services that differentiate it from competitors, such as more efficient logistics management services, real-time cargo tracking systems, and more responsive customer service. This will make customers feel like they are getting more value, reducing the likelihood of them switching to competitors. (c) Dependence on Pelindo 4 Port: Pelindo 4 can create customer dependency by having complete port infrastructure, easy access to various modes of transportation, and consistent service. With these advantages, customer bargaining power becomes lower because they do not have many alternatives.

(4). Threat of Substitutes. The threat of substitution refers to the existence of other products or services that can replace customer needs for the products or services offered by the company. Implementation at Pelindo 4: (a) Transportation Alternatives: One of the substitution threats that can affect Pelindo 4 is the existence of transportation alternatives for distributing goods, such as air routes (cargo airfreight) or land transportation (trains, trucks). Pelindo 4 must ensure that the ports and distribution networks it manages are more efficient, cheaper, and more integrated compared to other alternatives. (b) Use of Technology for Efficiency: By utilizing technology to reduce ship waiting times and speed up the loading and unloading process, Pelindo 4 can minimize the threat of substitution. For example, the use of a port management system that is integrated with a logistics system or automation technology that reduces costs and operational time. (c) Improving Port Services: To reduce the threat of substitution, Pelindo 4

must continue to innovate in providing value-added services, such as multimodal logistics solutions that combine sea, land, and air transportation more efficiently.

(5). Industry Rivalry. Industry rivalry refers to the extent to which companies in the same industry compete with each other for market share. This rivalry can be influenced by the number of competitors, the rate of industry growth, and the degree of product or service differentiation. Implementation in Pelindo 4: (a) Coalition and Partnership: To face intense competition, Pelindo 4 can establish strategic partnerships with logistics companies or other transportation operators. By working together, Pelindo 4 can expand its service reach and increase operational capacity to serve more customers. (b) Service Differentiation: Pelindo 4 can focus on service differentiation, for example by offering fast service for certain cargoes, technology-based cargo tracking systems, or more modern and secure port facilities. In doing so, Pelindo 4 can attract customers who are looking for better service than those offered by competitors. (c) Cost Optimization: Given the many competitors in the port industry, Pelindo 4 can continue to optimize operational processes to reduce costs, such as reducing ship waiting times, improving loading and unloading processes, and implementing technology to minimize errors and increase productivity.

Strategies to improve the competitiveness of service ports in Pelindo 4 Regional Makassar City can be focused on five main aspects:

1. Threat of New Entrants. A strategy that can be used through increasing operational efficiency and innovation of port services to maintain competitive advantage. In its implementation, ports can invest in digitalization of logistics systems, improving port facilities, and collaborating with the government in regulations to limit access to new entrants.
2. Supplier Bargaining Power. A strategy that can be used through supplier diversification and strengthening strategic cooperation relationships. In its implementation, ports establish long-term cooperation with providers of stevedoring services, fuel, and equipment to reduce dependence on one supplier.
3. Buyer Bargaining Power. A strategy that can be used through increasing the added value of services for customers and expanding the market. In its implementation, ports offer faster, more transparent port services that are integrated with the global supply chain. In addition, providing incentives or additional services for loyal customers.
4. Threat of Substitute Products or Services. A strategy that can be used through increasing service differentiation and increasing cost efficiency. The implementation of the port provides integrated logistics services, such as storage and distribution of goods, and accelerates service times to avoid switching to other modes of transportation.
5. Competition Between Competitors. Strategies that can be used through increasing capacity and competitive advantages compared to other ports in Eastern Indonesia. The implementation of the port can develop cooperation with domestic and international ports, increase tariff competitiveness, and accelerate loading and unloading services to be more efficient than competing ports.

The Resource-Based View (RBV) theory explains that a company's competitive advantage depends on its resources and capabilities that meet the VRIN criteria, namely valuable, rare, difficult to imitate, and irreplaceable. Several elements that reflect the VRIN criteria at Pelindo 4 Regional Makassar City, namely:

(a) The company has the ability to manage ports in the Indonesian Region that have the most strategic role. The company has the ability to develop port infrastructure so that it can increase the efficiency of logistics and maritime trade. The company has the ability to use digital services such as Inaportnet which are useful in increasing productivity and transparency. Overall, it can be concluded that the resources and capabilities owned by the company are valuable if the company has the ability to manage ports, develop infrastructure, and use digital services.

(b) Companies that have extensive experience and networks in port operations in eastern Indonesia are still lacking. The company has unique connectivity in national and international maritime trade routes. Overall, it can be concluded that resources and capabilities are scarce if the company has extensive experience and networks in port operations and unique connectivity. (c) Infrastructure and technology development requires large investment and a long time to be replicated by competitors. Establishing strategic relationships with the government and stakeholders is a factor that inhibits competitors from entering. Overall, it can be concluded that resources and capabilities are

difficult to imitate if the company in building and managing the port requires large investment and is able to establish strategic relationships.

(d) Having a strategic geographic location in the national logistics chain. The role of companies on the same scale in the region cannot be replaced. Overall, it can be concluded that resources and capabilities are irreplaceable if the company has a strategic geographic location and there is no change in the company's role.

The strategies that can be used by service ports in Pelindo 4 Regional Makassar City to increase competitiveness can be explained as follows:

1. Identify and Maximize Unique Resources which include: (a) Value: Resources owned by the company, such as port infrastructure, logistics facilities, and shipping technology, must provide high value to customers and business partners. Focus on increasing efficiency and shipping process time, for example by optimizing the use of digital technology and modern port management systems. (b) Scarcity: The company must identify resources that are rare or not easily owned by competitors, such as the strategic location of the port in Makassar that supports access to the Eastern Indonesian market. Take advantage of the advantages of this location by expanding the network of shipping routes or logistics services. (c) Ease of imitation: The company needs to create innovations that are difficult for competitors to imitate, such as building a culture of superior customer service, and creating strong relationships with local and international stakeholders. (d) Organization: Ensure the organization has the ability to manage and utilize these resources optimally. This includes improving employee skills, investing in training, and improving internal processes to maximize operational efficiency.
2. Technological Innovation and Digitalization. Technology and digitalization can be a very valuable resource. Companies can focus on implementing the latest technology in port operations, such as an IoT (Internet of Things)-based port management system, big data for logistics flow analysis, and mobile applications to facilitate customer access to information. This technology can increase efficiency and reduce ship waiting times at the port, increasing Pelindo 4's competitiveness.
3. Human Resource Development. Quality human resources are a very important asset. Companies must invest in employee training and development to improve their technical and managerial skills. Improving service quality and efficient operational management depend heavily on the quality of human resources.
4. Supply Chain Management and Strategic Partnerships. To strengthen competitiveness, companies can focus on managing relationships with suppliers, business partners, and customers. Building strategic partnerships with logistics companies and other service providers can help optimize the supply chain and improve service efficiency. Strong partnerships can also be a rare resource that increases competitiveness.
5. Excellence in Customer Service. Building superior and responsive customer service. By utilizing customer data to provide more personalized and responsive services, companies can strengthen relationships with customers and maintain their loyalty.
6. Sustainability. Natural resources and sustainability are increasingly becoming a concern. Companies can invest in environmentally friendly technologies and sustainable port management, such as the use of renewable energy or efficient waste management systems. This can be a valuable resource, which not only provides a competitive advantage but also contributes to environmental sustainability.
7. Service Diversification. To expand competitive advantage, companies can consider diversifying their services, such as providing additional logistics services, warehouse management, or shipping services for international markets. This diversification can increase the added value offered to customers.

Ports as facilities that connect sea and land transportation, have a series of activities starting from cargo management, ship services, and other logistics services. The Value Chain Theory explains that companies that have the ability to create added value in a series of their activities provide various benefits, namely increasing competitiveness, operational efficiency, and customer experience. By optimizing each stage in the value chain, from inbound logistics to customer service, companies can reduce costs, improve service quality, and create competitive advantages in the increasingly competitive port market. The application of the Value Chain theory at Pelindo 4 in

Makassar City is based on the components of main activities and supporting activities in the value chain, namely: Main activities include inbound logistics activities, operational activities, outbound logistics activities, marketing and sales activities, after-sales service activities which can be explained as follows:

1. Inbound logistics activities where companies must ensure that raw materials and goods to be processed, stored, and shipped out of the port arrive quickly, safely, and efficiently. Activities in the inbound logistics section include managing containers, raw materials, and goods arriving at the port, as well as efficient storage arrangements. Its application to increase the value of inbound logistics activities, companies can do the following: (a) using technology for real-time container tracking so that the port and service users can monitor the status of goods more efficiently, (b) providing a system to automatically manage the receipt of goods, speed up the administration process, and reduce the risk of human error in recording incoming goods.
2. Operational activities which include the loading and unloading process, container management, and processing of goods to be moved to their destination. This is one of the most critical activities in the port value chain. Its application to increase the value of port operational activities, companies can do this by: (a) using loading and unloading automation, such as using robotics or automatic crane systems to speed up container loading and unloading, (b) managing operational processes through the implementation of a port management system integrated with IoT (Internet of Things) technology to monitor the condition of goods in real time, including temperature and humidity for sensitive goods, (c) increasing operational capacity by utilizing big data and predictive analytics to plan more efficient loading and unloading activities, such as estimating ship arrival times and the number of containers to be unloaded.
3. Outbound logistics activities which involve sending goods that have been unloaded and prepared to be sent to their final destination, either in the form of direct distribution to customers or through other distribution systems. Its application to increase the value of outbound logistics activities, companies can do this by: (a) optimizing the distribution route of goods from the port to the logistics center or customer to speed up delivery and reduce transportation costs, (b) using fleet management technology to monitor vehicle positions and manage delivery times more efficiently, and ensure that the distribution of goods is carried out at a lower cost.
4. Marketing and sales activities that involve efforts to attract more customers, such as shipping companies or exporters and importers, by offering faster, more efficient and more valuable services. Its application to increase the value of marketing and sales activities, companies can do this by: (a) digital marketing strategies that use digital platforms to promote port services, including offering application-based services to make it easier for customers to order and track port services, (b) compiling special service offerings, such as faster delivery of goods or temporary storage facilities at competitive prices, to attract more customers from the business and industry sectors, (c) increasing communication with customers to understand their needs, improve customer experience and increase their loyalty.
5. After-sales service activities that include support and maintenance after the goods are released from the port. In this case, services include technical support, troubleshooting, and information related to shipping and distribution. Its application to increase the value of marketing and sales activities, the company can do this by: (a) providing real-time shipping tracking services to provide accurate and transparent information to customers regarding the location and status of goods delivery, (b) providing responsive customer service, including call centers and information services related to the status of goods, problem solving, and returns of goods if problems occur. (c) using a digital platform to provide automatic updates to customers regarding the status of goods or ships being unloaded.

The strategy that can be used by the service port at Pelindo 4 Regional Makassar City to increase competitiveness can be done by optimizing the main and supporting activities in the company's value chain. The strategies that can be applied to the main and supporting activities can be explained as follows:

1. Main Activities. (a) Inbound logistics activities with a strategy to increase efficiency in managing the flow of goods at the port with a digitalization and automation system, Furthermore, a strategy to establish partnerships with land and sea transportation service providers to accelerate distribution. (b) Operational activities with a strategy to implement advanced technologies such as the Internet of Things (IoT) and Big

Data Analytics to increase port operational efficiency. Furthermore, a strategy to increase capacity and modernize loading and unloading equipment to accelerate ship and goods services. (c) Outbound logistics activities with a strategy to optimize the supply chain management system to accelerate the distribution of outgoing goods. Furthermore, with a strategy to increase coordination with related parties, such as Customs and shipping agents. (d) Marketing & sales activities with a strategy to increase the promotion of port services to the national and international scale to attract more service users. Further with the strategy of offering digital-based services such as real-time tracking to increase customer satisfaction. (e) After-sales service activities with the strategy of providing customer service with an automated system and professional workforce. Further with the strategy of providing additional services such as storage warehouses, container maintenance, and integrated logistics facilities.

2. Supporting Activities. (a) Company infrastructure activities with a strategy of developing management policies that support innovation and efficiency. Furthermore, with a strategy of adopting a technology-based management system such as ERP (Enterprise Resource Planning). (b) Human resource management activities with a strategy of improving HR training and development in logistics and digital technology. Furthermore, with a strategy of attracting and retaining quality workers with a competitive incentive system. (c) Technology development activities with a strategy of implementing a digitalization system in port services, such as smart ports and process automation. Furthermore, with a strategy of investing in research and development to continuously improve service competitiveness.

CONCLUSION

1. The geographical conditions of Indonesia as an archipelagic country play an important role in increasing the competitiveness of companies. As an archipelagic country with thousands of islands spread out, Indonesia faces unique challenges in terms of inter-island connectivity, distribution of goods, and management and utilization of maritime resources. These factors play a major role in determining the efficiency and competitiveness of ports in Indonesia, which in turn affects national logistics performance, trade costs, and market access.
2. Understanding the competitive forces in Pelindo 4 is an important step in the port development strategy in order to remain competitive efficiently, identify new opportunities, and create competitive advantages in the Indonesian port market. Understanding the competitive forces in order to have a competitive advantage can be seen through the perspective of their role in regulations, policies, and supervision that support the development of the port and logistics sector in Indonesia, especially in the Pelindo region.
3. Forming a value chain in Pelindo 4 is one of the important strategies for building competitive advantages. This value chain involves a series of activities related to port management, logistics, goods distribution, cargo handling, and customer service. Establishing an effective value chain will provide competitive advantages that can help them overcome the competitive challenges that exist in the port and logistics sector.
4. Indonesia's maritime resources as an archipelagic country are valuable resources in building port competitiveness at Pelindo 4. By optimizing port infrastructure, utilizing modern technology, maintaining maritime security, and improving the quality of human resources, port competitiveness can be increased at the global level.
5. Indonesia's maritime resources as an archipelagic country are rare resources and difficult to imitate in building port competitiveness at Pelindo 4. In building port competitiveness, it can be viewed from its strategic geographical position, number and distribution of ports, strong connectivity, and the diversity of Indonesia's natural resources, providing a very high and unique competitive advantage.
6. Indonesia's maritime resources as an archipelagic country are irreplaceable resources in building port competitiveness at Pelindo 4. The strategic geographical position, natural straits, diversity of natural resources, and distribution of ports throughout Indonesia provide advantages that are very difficult to replace or imitate by other countries. These resources remain the main factors that make Indonesia a strategic point in the global logistics network, providing strong competitiveness for Indonesian ports in the international market.
7. Porter's theory in the context of Pelindo 4 provides a strong basis for making more careful strategic decisions in facing global competition and ensuring the sustainability of its operations in the logistics and port industry.

8. RBV theory is important for Pelindo 4 because it provides a framework for maximizing the potential of the company's internal resources. By assessing and developing unique and valuable resources, Pelindo 4 can achieve sustainable competitive advantage, improve operational efficiency, and create innovations that are relevant to the market and customers. RBV allows Pelindo 4 to focus more on internal strengths in designing successful and sustainable long-term strategies.
9. Value chain theory in Pelindo 4 is very important for improving operational efficiency, reducing costs, and creating sustainable competitive advantage. By analyzing and optimizing each stage in the value chain, Pelindo 4 can provide better, faster, and more efficient services to customers. In addition, by focusing on technological innovation and good human resource management, Pelindo 4 can strengthen its position in the port and logistics market, and face existing challenges more effectively.

Recommendation

To improve the competitiveness of Pelindo IV Regional Makassar City, the strategies that need to be implemented include infrastructure and technology development, human resource development, service diversification, and strengthening relations with stakeholders. In addition, an environmentally friendly approach and green innovation are also becoming increasingly important in today's era. By focusing on improving operational efficiency, capacity development, and maintaining sustainability, Pelindo IV Regional Makassar City can excel in global competition and remain relevant in an increasingly growing market.

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