

# Indonesian Port Re-Service as the Main Support of the Supply Chain

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**Abstract-** Ports as key of transportation network, the gate of economy activities, transportational mode transition center, site of distribution, production, and consolidation of goods and services, and a place that highly related with routine industrial, agricultural, tourism, and commercial activities. Its important roles in commercial field are as chain of transportation (transportation system) which is a series of goods movement from sender to the receiver or customer that involves various of transportational mode transitions. Are the activities conducted related with supply and chain in ports are already in harmony from the perspective of regulations? Should these ports be re-serviced to improve its performance as a part of supply and chain management? The utilized method in this research is a normative method, with a descriptive analysis by utilizing secondary and primary data. The result of this research reveals that the implemented policy is not in harmony with the available resource in the field, and caused unoptimum output. Because of that, a cooperation between the available human resources in the policy implementation is vital to improve the sector's contribution towards the national economy, where ports are placed as an accelerator of physical and economical development. Port reservice is a requirement to improve the inconducive and unprofessional Indonesian ports that contribute on ineffective and inefficient service performance. Indonesian ports should organize its performance by improving their tools as supporting facilities and infrastructures. If the available funding is insufficient, port management is recommended to invite both domestic or foreign investors to provide capital investments.

## 1. Introduction

As an archipelago country that consists of 17,258 islands, Indonesia that possess waters as one third of its territorial, should responded to the situation by building transportational infrastructure especially sea transportation facility, such as ports, as a mean to connect one island with another, so it can be an important driving facility for social and economy activities in an area both export and import or other activities. Ports is a place consist of land and water area with certain boundaries intended as governmental and economy activities centers, and a place for boats to rest, anchored, load passengers and/or goods, which is equipped with shipping safety facility and

supports as a center of transportational mode transition [29].

Every ship that carries out its loading activities both goods and passengers does need ports. As we know, the place is used by ships to anchor, both domestic or foreign ships. Besides that, the place is also used by passengers to get on and off these boats and as a place to load goods [30]. With that functions, we can clearly imagine the hustle and bustle of ports activities. The long dwelling time, will certainly lower the ports workers and will ultimately leads to late receiving on the customer end and create congestion. Because of that both ships and ports are involved in the main chain of sea transportation industry. That is why an economic sea transportation requires operational planning and management without putting aside its other parts. When the efficiency of these two elements are achieved, sea transportation costs can be decreased at the lowest level in the implemented trading system [17].

Ports play an important role as a goods and services transportation movement chain from the producer to the customer, which also determine the cost of these goods and services by the logistic cost it produces. Table 1 shows a comparison of logistic costs in several countries such as United States of America, Japan, South Korea, and Indonesia (as the country with the highest amount of logistic cost).

**Table 1.** Logistic Cost in Indonesia Compared with Developed Countries [35]

Counties	% of Gross Domestic Product (GDP) Logistic Cost	% of Logistic Cost on Selling Cost
The United States	9,9%	9,4%
Japan	10,6%	5,9%
South Korea	16,3%	12,5%
Indonesia	27%	

Source: ITP Center of Logistic Study and Supply Chain

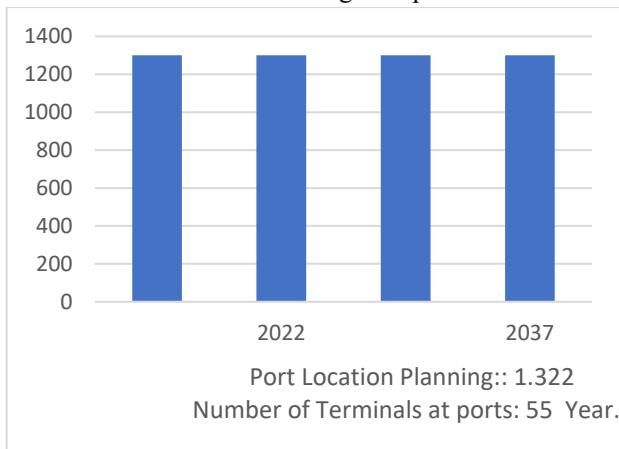
By realizing that ports are one of sea transportational smoothness factors, Indonesian government regulates ports by issuing Law Number 17 Year 2008 on Shipping,

Government Regulation Number 69 Year 2009 on Ports, and other laws and regulations issued by Minister of Transportation and Directorate General of Indonesian Republic Sea Transportation [1].

Direktorat of ports assigned to conduct ports policy formulation and implementation, norm, standard, procedure and criteria setting, provide technical guidance and supervision, while also evaluate and report the development of the ports, designing and programming ports facilities development, dredging and reclamation, ship guides and delays, also provides port service and business (Sea Transportation department, 2017).

The following table shows the recapitulation of port locations planning from 2022 until 2037. Based on this recapitulation, 1322 ports will be built, fitted with 55 terminals as parts of the ports itself (Sea Transportation department, 2017)

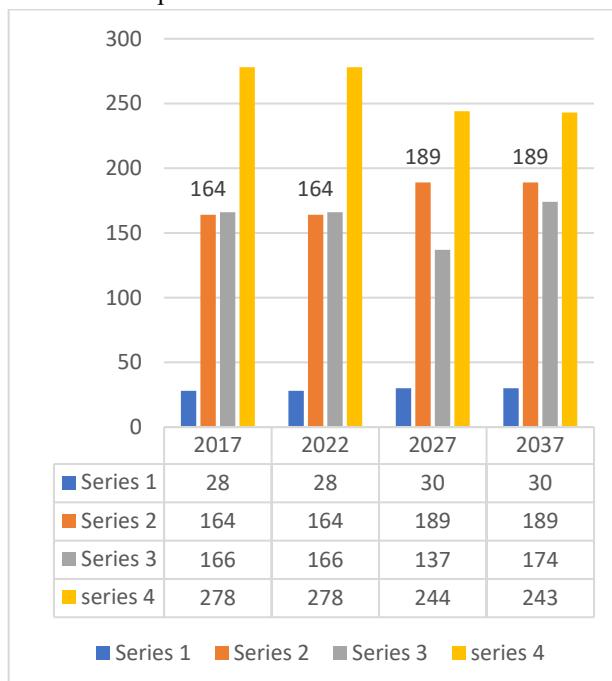
**Table 2.** Port Location Planning Recapitulation



To effectively and consistently perform its roles in national economy, maritime sector should be fitted with a vast, hierarchical, which planned by the port itself, a vast sector should be developed and operative in a conducive way. [32] One thing that should be considered to support sea transportation frequency in a port is by showing its ability to fulfill its function as the weakest and the final chain of all supply chain. The strength of this chain is determined by the ability of the weakness chain activity to consistently move in a decent pace. Weakness in a chain will cause a chain reaction. When the weakness of transportation system is located in ports, the chain reaction will be the queueing ships waiting to be serviced in ports [27].

Because of that, various types of efforts have been conducted by Sea Transportation Department, one of which is shown on the following Table 2 (Sea Transportation department, 2017).

**Table 3.** Recapitulation of Sea Port Number Used to Serve Sea Transportation Needs



#### Information:

- Series 1 Main ports
- Series 2 Collecting ports
- Series 3 Regional feeder ports
- Series 4 Local ports

By providing supports on the activities related with the implementation of ports functions as means to promote ships traffic fluency, safety, and orderliness, and transportation mode transition site can be coordinated in ports, the government executive of ports should include the practice of shipping safety; Customs and Excise, Immigration; Animal and Plant Quarantines; Safety and Order by Port Administrators. Meanwhile port service is conducted by PT (Persero) Pelabuhan Indonesia which divided into four management area namely, area I to IV which consist of Medan, Tanjung Priok, Tanjung Perak, and Makassar as stated in Chapter 33 Verse (1) and (2) Government Regulation Number 69 Year 2009, meanwhile the service activities in ports area under Port Business entity that is Government Regulation Number 69 Year 2009 [38].

There are many complaints from the customer due to unprofessional and not optimum service quality provided by the crew. For example, in Priok Harbor, ships that would load their goods should wait for at least 2 days to make sure to prepare technical and administrative activities, [33]. Even in other ports such as Belawan, a port located in West Borneo, often receives complaints from shipping companies due to long dwelling time that causes loss on their business, while also the existence of ineffective crane utilization due to the equipment's old age [16].

The late operators in port terminals are always detrimental to shipping companies by the uncertainty of available ships anchored in ports. They often require to wait for days and spend more costs in the ports that leads to high logistic cost in Indonesia. the efficiency of port management in Indonesia is relatively at an indecent level. Besides that, the low quality of port performance can be seen by the long dwelling time, service time, and guiding time. The effectiveness of ships is very low, similar as loading frequency. Moreover, Indonesian ports are known as highly bureaucratic ports because of long queuing ships in Tanjung Priok Port every day [28].

The feared consequence is that Indonesian port experience congestion as happened in the past. Congestion is a bad conduit level of a port because of its vast negative impact, either on national and international shipping and commercial traffics or the economy of the related nation. Dwelling time or port delays is a very concerning thing for ship owners [34]. The main causes of congestion or delays in ports are [9]:

1. The low level of productivity on the related port;
2. Lack of planning and facility;
3. Low worker performance that slows down the work;
4. The inexistence of two port activities implementing and organizing elements such as shipping department that regulates loading activities;
5. The winding procedure of required document finalization.

Indonesian ports are also unable to compete with ports in Singapore, which are still act as transshipment ports. That is why, Singapore ports are focusing themselves to provide facilities for sea transportation companies. Indonesia experience financial waste of USD 850 million per year due to transshipment cost to Singapore ports. That is why, Indonesian ports and its national shipping companies are still acting as feeder ports and feeder vessels [13].

One of the driving factors of a country to be categorized as developed country is its world class national logistic system seen from its logistic performance index. A world class national logistic system will never be achieved if ports are unable to start managing its service capability in providing an effective and efficient service.

Every activity conducted in ports should become a massive foreign exchange centers and should be able to transform itself to assist national requirement and to achieve prosperity. However, as publish by Indonesian Central Bank, incomes earned from services performed in ports are only able to contribute as much as 5% of total national income. These are the common problems faced by Indonesian ports.

Based on the explanation above, we are driven to elaborate the importance of reservice activity on Indonesian ports to improve supply chain performance

and create a better working result, so that the goods and services can reach customers effectively and efficiently.

## 2. Literature Review

1. Retno Muninggar in her writing mentioned that "Supply Chain Analysis in Distribution Activities at the Nusantara Fisheries Port, Pelabuhan Ratu (PPNP) states that supply chain analysis is one of the analytical frameworks used in the industrial world to increase added value and competitiveness. Retno revealed that in the supply chain concept, in fishing ports, the fisheries supply chain system unit consists of fishermen, local wholesalers, processing industries, exporters to consumers, and the conduct of this research is to determine the supply chain flow at the Pelabuhan Ratu Islands Fishing Port (PPNP), especially around distribution activities. The result is the need for improvements in the transportation and information system, policies, quality and technological improvements [19].

2. Andrian Ardhitia in his research entitled, "The Effect of Supply Chain Security Management on Safety Performance and Customs Clearance Performance at Tanjung Priok Port, stated that logistics is an art and science, goods, energy, information, and other resources, such as products, services, and human beings, from the source of production to the market with the aim of optimizing the use of capital. Based on this, logistics services continue to aim to provide a balance which at the time of implementation is very difficult because of increasing quality accompanied by price suppression which aims to maintain customer satisfaction. Ports are very important in terms of logistics because ports are places for logistics services that move out to sea to carry out loading and unloading of goods to be sent from one place to another. Tanjung Priok Port is one of the ports that provides services or a place to carry out government and economic activities. This study emphasizes the relationship between supply chain security management and customs clearance performance [19].

3. Cahya Purnomo and Suyanti, in their research entitled "The Creation of Port Logistics Value in Indonesia", stated that this paper discusses the creation of logistical value in Indonesian ports, through discussion of various journal writings that discuss logistics value creation. The finding is that port logistics in Indonesia face problems in the form of policies, transportation infrastructure, availability of goods, logistics provider resources. There are 3 (three) logistical values at the port, namely serial, first collected and reciprocal. The activities of each actor at the port are more integrated, the better, and other results obtained from the discussion are the unsynchronized flow of goods into and out of the port [25].

4. Elisa Kusrini and Anggita NP, in their article entitled Productivity Improvement for Unit Terminal

Container using Lean Supply Chain Management and Single Minute Exchange of Dies (SMED): A Case Study at Semarang Port in Indonesia, stated that the collection of containers from inland areas or other ports for transportation to the destination, the port is required to increase its activities, optimal productivity and performance. This study aims to increase productivity by using the concept of sloping supply chain management by analyzing using water value mapping and improvement and value exchange [15].

### 3. Discussion

#### The Objectives and Functions of Ports

The strategic port function plays a very important role in supporting and strengthening the development currently being carried out by the Indonesian government. A sea port is one of the links in the seaport sub-sector that has played a role not only as infrastructure and means to smooth the flow of ship, goods, animals and passenger traffic between islands and abroad but also plays a role in advancing Indonesia's economic growth (Gate way Port). As confirmed in the Law on Shipping; A port is a work environment equipped with berth and berth of ships for the implementation of loading or unloading of goods as well as boarding and disembarking passengers from one mode of sea transportation to another mode of transportation or vice versa [21].

So far, the interest in Indonesian ports, and as has been confirmed in the research report that shows the quality of services provided by Indonesian ports, is ineffective and inefficient, causing a high cost economy. Current thinking, how to find solutions to improve port services so that they can compete with the performance of foreign ports, because currently it has entered globalization, where competitiveness, efficiency and effectiveness are the main points that must be pursued. Refunctionalization of ports is a necessity for Indonesian ports to improve their performance to be effective and efficient, because it will improve the national economy [11].

The very important task of a port is to provide services to ships that will lean on to carry out activities such as loading and unloading, loading and unloading passengers and others. The services of Indonesian ports seem slow, chaotic and the level of congestion is severe, causing a high cost economy. Port performance has never progressed because its services are not optimal, and is influenced by the performance of the government that is too bureaucratic, and the interests of certain parties, and currently 50% of the approximately 150 international ports in Indonesia are inefficient and not profitable for the interests of the national economy [23].

The function of a port is not only as a gateway (gateway) for trade with the outside world, a link in the flow of goods and services, but also as a means of connecting (interface) for trade and regional economic

development as well as national and even international economies. Therefore, all ports in Indonesia, in anticipation of future economic growth, are expected to be able to seize all the opportunities that exist, by preparing all port facilities and equipment according to market demand.

The ease of international trade in the era of globalization will provide conditions for increasingly fierce competition in entering the business world, including for the management of Indonesian ports. The strategy adopted by the port is efficiency in all aspects of service and providing satisfying services to service users, so that they will always use the services offered. Of course, the tight competition must be anticipated immediately by preparing all the infrastructure and equipment needed to develop an effective and efficient port so that competitiveness can be achieved as well as possible. This anticipation needs to be seen from the growth in economic, industrial and trade conditions which will also be followed by the growth of ship visits and the flow of goods through Indonesian ports.

Port management in Indonesia is very unprofessional, referring to the UNCTAD service indicator, based on research by the University of North Sumatra (USU) LP, it turns out that the effective time for ships in ports is only around 40 - 60%. This is measured based on the level of satisfaction of port users, which is to calculate the time from the time the ship arrives until the ship leaves the port.

There are several classification of customer satisfaction levels namely: [6, 22]:

1. Very satisfied (excellent service), that is, if the effective working time reaches 90% and the use of work time is 12 hours with a 3 hours meal break. In this condition, port services are provided according to schedule so that the ship is not burdened with additional costs and the route schedule can be fulfilled.

2. Satisfied (good service), which is when the effective working time reaches 80% with the use of 18 hours of productive work time and meal breaks and 6 hours shift changes. This condition does not really affect the extra cost (extra cost).

3. Not Satisfied (bad service), that is, if the effective working time reaches 70%, the use of productive work time is only 14 hours. In this condition there are additional costs and the schedule of ships to other ports is disrupted.

4. Very dissatisfied (poor service), that is, if the effective working time is only 60% and the use of productive work time is only 10-13 hours. This results in large additional costs and disruption of subsequent routes, ultimately a high cost economy cannot be avoided.

When we relate the classification of customer satisfaction levels with data on the effective time of Indonesian ports, it turns out that the level of port services in Indonesia is very low [12]. As a result, the cost of

transporting goods (freight) by ship from or to Indonesia becomes expensive. Another factor is the loading and unloading equipment that often jams, the results of field work, namely TKBM and low port management elements, damage to goods resulting in claims from goods owners.

Therefore, the factors inhibiting the function of Indonesian ports in services are analyzed in order to obtain solutions or solutions for developing the functions of Indonesian ports to be more advanced and support national economic growth.

### **Port Logistic**

According to legal terminology, port affairs are something related to the implementation of port functions to support the smooth, safe and orderly flow of ship, passenger and / or goods traffic, safety and security in sailing, places of intra and / or intermodal transfer and to encourage the national and regional economy with due observance of regional spatial planning, meanwhile the definition of a port is a place consisting of land and / or waters with certain boundaries as a place for government activities and business activities that are used as a place for ships to dock, boarding and descending passengers, and / or loading and unloading of goods, in the form of terminals and berths of ships equipped with safety and security facilities for shipping and port support activities as well as places for intra and intermodal transportation [2].

Based on different points of view, ports have different roles and functions, including as a node in the transportation network, as a gateway for economic activity, a place for transfer of transportation modes, supporting industrial activities and consolidation of cargo or goods, as well as a role in realizing insight into the archipelago and state sovereignty when viewed politically.

The role of ports in terms of transportation is a part of the total transportation chain or transportation system, as a series of transport transfer processes from the sender to the recipient of goods involving various processes of transfer and modes of transportation [2].

In carrying out its port affairs function, a port is a complex system covering various things, such as port authority, warehousing facilities; mooring officers, tugboats, pilots, customs, storage, distribution, cargo handling, container terminals, and police officers at ports.

Law No. 17 of 2008 concerning Shipping, states about legal service businesses that can be carried out to support the smooth running of port affairs activities which include several types of business, namely loading and unloading of goods; transportation management services; port water transportation; leasing marine transportation equipment or service equipment related to sea transportation; independent tally; container depot; ship management; intermediary for sale and purchase and / or ship charter

(ship broker); ship manning agency; ship agency; care and repair of ships (ship repairing and maintenance).

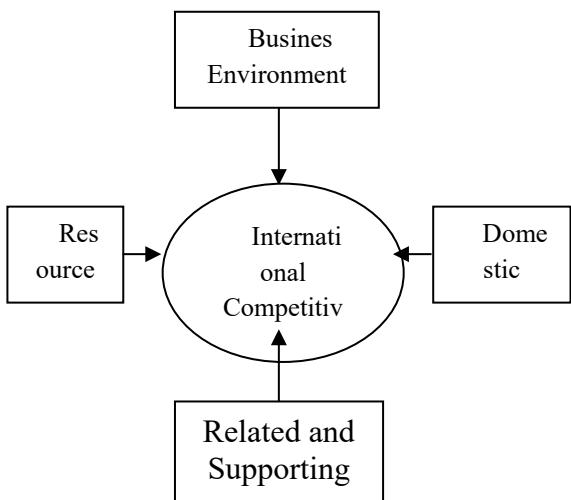
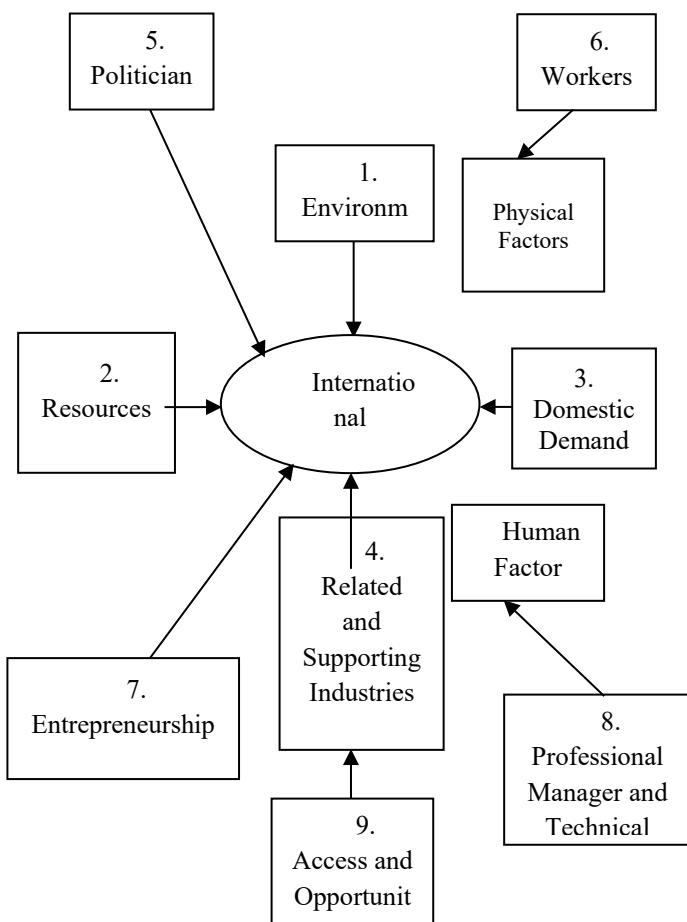
### **Metode Peningkatan Daya Saing**

In global competition, Michael E Porter in his book The Competitive Advantage of Nation, 1990 states that there is no direct correlation between the two factors of production, namely abundant natural resources and cheap human resources owned by a country to be utilized as competitive advantages in international trade [10]. Many countries in the world have a very large number of workers who are proportional to the size of their country, but are lagging behind in the competitiveness of international trade. Likewise, the level of wages, which is relatively cheap compared to other countries, is in fact closely correlated with low motivation to work hard and achieve. The countries of Mexico, Bangladesh, Pakistan, and India, including Indonesia, are countries with a large number of workers and low wages, but they cannot be a separate competitive advantage when compared to Japan, Germany, Sweden and Switzerland. Porter concludes that the role of government is very supportive in increasing competitiveness in addition to the available production factors. [10].

Porter stated that there are four main attributes (called the Diamond model) that determine why certain industries in a country can achieve international success, namely [10]:

- a. The state of production factors, such as skilled labor or infrastructure; The state of demand and quality demands in the country for certain industrial products;
- b. The existence of related industries and supporters that are competitive internationally;
- c. The company strategy itself, and the structure and system of competition between companies.

Therefore, based on this, and the results of research that have shown the condition of ports in Indonesia, an attempt will be made to analyze the factors that hinder port productivity and seek solutions. International Competitiveness Theory is based on the 9-factor model from Dong-Sung Cho, which complements Porter's theory, namely [10] through the development of Porter's diamond model called the 9 Factors theory which can be compared through the following figure;

**Figure 1.** Diamond Model**Figure 2.** Nine Factors Model

Some of the differences between the Diamond Model developed by Porter compared to the 9-factor Model from Dong-Sung-Cho are the factors that lie outside the Diamond box, namely the existence of four factors, which include labor, bureaucracy and politicians (politician and workers), bureaucrats, entrepreneurs, and managers, technicians and professional designers (professional, managers, designers and engineers). Also factors of access and opportunity (chance events) in doing something for

the community, which are outside the rectangular box. Where access and opportunities are no less important factors in sharpening international competitiveness. [10]

Thus, from a series of quality manpower, reliable bureaucracy (government apparatus) and professional politicians who are able to create policies that are conducive to the development of a country's competitiveness. Especially for the ranks of politicians and the bureaucracy, integrity and honesty factors are needed, which are the main prerequisites for developing competitiveness. All of the above factors are interrelated simultaneously to determine the level of competition in a country.

In providing services to the community who use port affairs services, they are faced with several obstacles that have a very large effect on the smoothness of their services. The problems faced include [32, 37];

a. Low productivity and competitiveness level caused by:

1). Facility availability to conduct activities in ports;

2). The limited facilities of loading tools and other supporting activities in ports;

3). Low human resource quality;

(a) Loading and unloading workforce and companies are unready to utilize loading tools;

(b) Port management performance on the perspectives of government institution and Pelindo;

b. Regulations to support port activities are not conducive;

c. Port Functions executing parties;

d. Culture or habits of bad behavior carried out by the party organizing port function activities.

### Provision of Supporting Tools Facilities

Based on the results of field research, visits of ships coming to Indonesian ports to carry out loading and unloading activities, loading and unloading passengers, etc. where the average growth increases each year, so it is not comparable with the facilities available as port facilities and infrastructure. -Ports in Indonesia to carry out their activities serve port services because they are very minimal and most of them do not meet the modern standards required to serve the arrival of modern generation ships to carry out their activities such as; loading and unloading activities, boarding and disembarking passengers and so on. Most of the tools used are inherited from the Dutch era, and need repairs here and there. The increase in port activities is not balanced with the addition or construction of ports, only repairs or renovations of equipment [12].

Peter Drucker, one of the writers in the field of management, argues that there are two important concepts so that a company can advance and be favored by its

customers in providing services, namely efficiency and effectiveness. Efficiency means doing something right, and effectiveness means doing something right. Efficiency is an input-output concept. An efficient manager is someone who achieves output, or results that are measured by the inputs (labor, material, and time) used. Managers who act efficiently are able to minimize the cost of the required resources. Effectiveness, on the other hand, is choosing the right target (IPC Learning and Consulting, Accessed 1, 2020). A manager who chooses an inaccurate or ineffective target, for example, produces a large car when at that time small cars are in vogue. No amount of efficiency can make up for a lack of effectiveness. Drukker actually said that effectiveness is the key to the success of an organization. Before carrying out an activity efficiently, you must first be sure you have found the right thing to do [24].

Indonesian ports must also make improvement efforts so that their performance is optimal, through efforts [3, 31];

a. Motivate all officials and service users to understand the use of time as efficiently as possible;

b. Addition and improvement of port facilities either by the company itself or in partnership with the private sector;

c. Efforts to increase the value of the company for major parts and dominant businesses, it is necessary to organize and develop ports that include infrastructure development, for example the port of Belawan which still requires development in the form of tools to support container services, such as; construction of dry bulk terminals and construction of new wharves, crane containers, expansion of containers so that the performance of the container terminal unit at the port of Belawan is more optimal;

d. Many Indonesian ports have deep ponds that do not meet the requirements to accommodate large ships (mother vessels), most of which come from abroad. The average depth of the pool for Indonesian ports is a maximum of 13 M. This is a big obstacle, because thus large ships that cannot enter transshipment at the ports of Singapore or Malaysia, then only small ships come to Indonesia. The dredging of Indonesian seas needs to be considered and carried out on an ongoing basis to keep its depth at an ideal capacity so that it can accommodate the arrival of large ships, and of course this is very costly;

e. Procurement of facilities and infrastructure that are no longer able to work optimally, if there is no cost to replace, maybe it can be obtained by renting, leasing, some of which must be purchased from other organizations that act as suppliers. The available facilities and infrastructure, for whatever their use should always be maintained and maintained.

### **Increasing Productivity through Human Resources**

The economic progress of a country cannot be separated from the work productivity of its population. The productivity itself must be supported by an adequate level of investment and human resources. In addition to high productivity, in order for a country's economy to grow rapidly, it must be supported by efficiency in its production process so that it allows the economy to produce more optimally. [18] HR practice plays an important role in changing the behavior of old managers to be consistent with the form of the organization and new expectations. Compensation, training, and development as well as a performance management system must all be combined to convey clear and consistent messages so as to stimulate and support behavior in achieving business goals [36] [4].

Improving customer satisfaction is an important tool in which HR management practices can demonstrate success (Trans News, 2020). Reducing costs and improving product quality are two ways commonly used to meet customer satisfaction [36]. Human Resources are a very important part in increasing work productivity, as well as waste and efficiency in various forms, because it gives attention to the human element is one of the demands in the overall effort to increase work productivity. One of the hopes for improving the Indonesian economy is to improve performance services for parties related to port activities, namely government functions and business functions. In connection with this, the business function is handed over to State Owned Enterprises (BUMN), in this case PT Pelindo which is engaged in port affairs [4].

### **Port as Main Support for Supply Chain**

Ports have great potential in supporting supply chain activities and functioning as connectivity, this is due to the geographic condition of Indonesia which consists of thousands of islands and most of them are waters. One of the ways of connectivity between islands in Indonesia is supported by the availability of ports. The function and role of Indonesian ports are very important in line with the development of an export-oriented industry, because ports are one of the determining elements in trading activities [20].

In essence, the function of a port is to facilitate the movement of goods and services between land transportation (inland transport) and sea transportation (maritime transport) and to distribute goods into and out of the customs area as quickly, effectively and efficiently as possible.

Ports have a strategic position for the economic growth of a country, because seaports can provide a direct access to the world market which is a good opportunity for developing countries to trade with many countries without any intermediary fees; sea ports can also be a source of obtaining foreign currency or foreign exchange through

exported goods or commodities; A large seaport can also guarantee economic or political independence from other countries and a sea port has activities to import consumer goods, raw materials, and capital from industrialized or developed countries (Center for Domestic Trade Policy, 2015).

However, it has been emphasized above, that there are many problems that occur in a port when carrying out these activities, including the things discussed above are human resources, facilities and infrastructure, the process of loading goods and services, intermediary transportation out. entry to port and other matters relating to the relationship between ships, cargo, and port services.

Ships require a berth at the dock and require a variety of services while in port. Cargo requires terminal services at the port during the transition from ship to land transport. The port provides services for ships and cargo so that there are no obstacles in the shipping of ships and the flow of goods and the flow of passengers.

These are the things that are the thoughts of the implementers of activities at the port, including the Port Authority, policy makers and implementers in the field, why because all are an inseparable link for the smooth transfer of goods and services within the port. going in and out of the port without a hitch, because automatically the smooth operation of activities in a port will certainly reduce costs, so that the smooth movement of goods and services from a port can determine the cost of a product or service.

#### 4. Conclusion

This research confirms that there is a huge potential of port if its functions are regulated and used in an optimum way through a well-organized arrangement. Ports will be able to provide a high contribution on the national economy. According to its purpose, the activities of a port can be linked to economic interests and other government interests, where a port is significantly positioned as a spur (accelerator) of development and economic growth. Therefore, a port with all its activities has a very close relationship with the industrial, agriculture, tourism and trade sectors. The port is also the node of the transportation system chain and is the gateway (gate way) especially for sea transportation in the context of goods traffic, containers, passenger and animal movements, thus ports have an important role and function in supporting economic growth.

The important role of ports in trade, among others, is as a total transportation chain (transportation system) which is a series of processes for the movement of goods transport from the sender to the consignee or consumer which involves various points of the transfer process and modes of transportation. The policies governing the implementation of activities at the port are harmonious and good between the fields in port affairs, but the

implementers in the field, namely human resources, are still disharmonious when carrying out activities. This is evidenced by the smooth entry and exit of goods at the port, too long time, ineffective and efficient, even though the arrangements are well organized and correct.

Through harmonious regulations supported by good human resources, it can make a big contribution to improving the country's economy, where ports are significantly positioned as spurs (accelerators) of development and economic growth. Port re-service is a necessity to improve the condition of Indonesia's ports which is not conducive and professional which results in ineffective and inefficient performance in serving its customers. Indonesian ports must organize their performance through the development of means and infrastructure to support port activities, if limited funds can invite domestic and foreign investors through investment.

#### References

- [1] L. Adam, and I. Dwiaستuti, “*Building maritim axis through ports,*” Jurnal Ilmu-Ilmu Sosial Indonesia (Masyarakat Indonesia), pp. 163-176, 2015.
- [2] Admin, “*Port affairs logistic, accessed on 1 august 2020,*” 2014. Retrieved from Supply Chain Indonesia: <http://supplychainindonesia.com>
- [3] Admin, “*Support mp3ei, pelindo iii banjarmasin improves port facilities and infrastructures*” Accessed on 17 July 2020, 2014. Retrieved from Maritimedia.com: <http://maritimedia.com>
- [4] R. Anggraeni, “*Improve human resource quality in ports, pelindo iv cooperates with ministry of transportation*” 2014. Retrieved from Sindonews: <http://sindonews.com>
- [5] A. Ardhitia, “*Analysis of the effect of supply chain security management on safety performance and customs clearance performance at tanjung priok port,*” 2014. Accessed August 13, 2020. Retrieved from Universitas Multimedia Nusantara: <http://kc.umn.ac.id/id/eprint/10525>
- [6] T. Aulia, The *effect of service quality on service user satisfaction at PT. Pelabuhan Indonesia IV (Persero) Container Terminal Branch in Makassar,* Makassar: Universitas Hassanuddin, 2011.
- [7] T. Berita, “*Improving the quality of human resources, Heads of ports and airports participating in training,*” Accessed September 10, 2020. Retrieved from Beritatrans.com: <http://beritatrans.com>
- [8] Departemen Perhubungan Laut. *Port information system,* 2017. Retrieved from Simpel.dephub.go.id: <http://dephub.go.id>
- [9] T. S. Desfika and N. Lumanauw, *18 ministries/agencies cause of old dwelling time,* 2015.

- Accessed July 16, 2020. Retrieved from Investor Daily: <http://investor.id>
- [10] R. H. Halwani, *International economics and economic globalization*. Jakarta: Ghalia Indonesia, 2002.
- [11] T. Herdian, *The development of seven indonesian ports as international hubs*, 2013. Accessed July 13, 2020. Retrieved from Supply Chain Indonesia: <http://supplychainindonesia.com>
- [12] T. Herdian, *Problems in port activities in indonesia, accessed august 19, 2020. retrieved from supply chain Indonesia*, 2017. <http://supplychainindonesia.com>
- [13] M. Idris, "This is the reason giant ships choose the port of Singapore instead of Indonesia" 2017. Retrieved from detikfinance: <http://detikfinance.com>
- [14] Learning, IPC and Consulting, "Port management in indonesia-pt pendidikan maritim, Accessed on 21 August 2020," 2020. Retrieved from PMLI: <Http://pmli.co.id>
- [15] E. Kusrini and A. N. Parmanasari, "Productivity improvement for unit terminal container using lean supply chain management and single minute exchange of dies (SMED): A Case Study at Semarang Port in Indonesia," International Journal of Integrated Engineering(IJIE), Vol. 12 No.1, pp. 122-131, 2019.
- [16] H. Lubis, M. A. Nasution, and Andri, "Analysis of waiting time for container ships at inter-island jetty with crane loading and unloading facilities (case study)," Progress in Civil Engineering Journal, pp. 13-20, 2020.
- [17] Z. Miftach and P. Pasek, "Analysis of port costs and loading and unloading costs of PT. Abdi Nusantara Indonesia Line Gresik Branch," Jurnal Aplikasi Pelayaran dan Urusan pelabuhan, Vol. 9, No. 1, pp. 53-62, 2018.
- [18] K. Mudrajad, *Development economics: Theory, problems and policy*. Yogyakarta: UPP AMP YKPN, 2013.
- [19] R. Muninggar, "Supply chain analysis in distribution activities at the nusantara pelabuhanratu fishery port (PPNP), Accessed on 23 August 2020," Journal IPB, Vol. 17, No. 3. pp. 350-355, 2008.
- [20] A. P. Nasution, *Supply chain management and indonesia's readiness in global trade*, Accessed 6 September 2020, 2017. Retrieved from Ekonomi Manajemen: <http://adenasution.com>
- [21] Nirmala, *Strengthening the Role and Function of Ports*, 2017. Accessed on 15 July 2020. Retrieved from BusinessLaw: <http://business-law.binus.ac.id>
- [22] T. Nugroho, *Analysis of customer satisfaction levels of PT Berlian Jasa terminal Indonesia (BJTI) container terminal services*, Prosiding Seminar Nasional Manajemen Teknologi VVIV (pp. B-3-1-B-3-9). Surabaya: Program Studi M, MT-ITS, Surabaya, 2016.
- [23] Otoritas Pelabuhan Tanjung Priok, *Job description of the port authority office*, Accessed July 18, 2020. Retrieved from Otoritas Pelabuhan Tanjung Priok, n.d. <http://otoritaspelabuhantanjungpriok.files.wordpress>
- [24] III. Pelindo, "Pelindo III improves port facilities and infrastructure, Accessed June 12, 2020. Retrieved from Pelindo III," 2016. <http://wartaeconomia.co.id>
- [25] C. Purnomo and Suyanti, "Creation of port logistics value in Indonesia," Majalah Ilmiah Bahari Jogja (MIBJ), 20-36. Retrieved from Majalah, 2016.
- [26] Pusat Kebijakan Perdagangan Dalam Negeri, *Final report on the fulfillment of staple goods in border areas*, Accessed on 1 August 2020. Indonesia: Pusat Kebijakan Perdagangan Dalam Negeri, 2015.
- [27] A. Putra and S. Djalante, "Infrastructure development," Jurnal Ilmiah Media Engineering ([ejournal.unsrat.ac.id](http://ejournal.unsrat.ac.id)) Vol. 6, No. 1, pp. 433-443, 2016.
- [28] A. W. Putri, *Poor performance of indonesian ports*. Retrieved from GresNews.com, 2016. <http://gresnews.com>
- [29] A. Radhika, "The new role of seaport as integral parts of global supply chains," Excel International Journal of Multidisciplinary Management Studies, Vol. 42 No. 4, pp. 131-144, 2012.
- [30] N. M. Sari, *17 types of ships in the world, get to know their functions*, Accessed July 14, 2020. Retrieved from Liputan 6: <http://liputan6.com>
- [31] D. Setiawan, *Pelindo III Boosts Port Facilities and Infrastructure*, Retrieved from Kontan 2020, <http://kontan.co.id>
- [32] B. Setiono, "Analysis of factors affecting port performance," Jurnal Aplikasi Pelayaran dan Urusan pelabuhan, pp. 39-60. 2020.
- [33] S. Sumardi, "Analysis of sea transportation service quality (Survey of Shipping Companies at Tanjung Priok Port, 2015)," Majalah Ilmiah Bahari Jogja (MIBJ) Vol. 18 , No. 1, pp. 37-56, 2020.
- [34] Supply Chain Indonesia, *Threat of port congestion: when truck drivers are no longer anxious about Priok*, 2016 Retrieved from: <http://Supplychainindonesia.com>
- [35] Supply Chain Indonesia, *National logistics development and problems*, Accessed September 10, 2020. In S. C. Indonesia, Secara Umum Sistem Logistik Indonesia Saat Ini (pp. 11-38). Indonesia: Supply Chain, 2020. Retrieved from <http://supplychainindonesia.com>
- [36] C. Tan, *The ministry of transportation will improve the quality of human resources services at ports and*

- airports*, Accessed August 8, 2020, 2020. Retrieved from Portonews: <http://portonews.com>
- [37] I. Yamanie, and Y. Syaharuddin, “*The influence of job performance assessment, organizational commitment and work discipline on employee performance at PT. Pelabuhan Indonesia IV Samarinda Branch,*” Jurnal Manajemen, Vol. 8, No. 1, pp. 55-65, 2016.
- [38] S. Yossa and Z. Zunaidah, “*analysis of the influence of employee ability, job distribution, and motivation on employee performance at PT. Pelabuhan Indonesia II (Persero) Palembang Branch,*” Jurnal Manajemen dan Bisnis Sriwijaya Vol. 11, No. 4, pp. 263-286, 2013.