

**Strategic Policy For The Development of International Hub Ports
A Case Study Comparing Bitung (Indonesia) and Antwerp (Belgium)**

THESIS

A thesis submitted in partial fulfillment of the requirements for the Master Degree
From Bandung Institute of Technology and the Master Degree from University of
Groningen

By:
RAYANI SITUMORANG
S2495082

Supervisors:
Drs. HOTZE HOFSTRA (RUG)
DR. Ir. HERU PURBOYO HIDAYAT, DEA (ITB)



DOUBLE MASTER DEGREE PROGRAMME
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INSTITUTE TECHNOLOGY BANDUNG
AND
ENVIRONMENTAL AND INFRASTRUCTURE PLANNING
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Approved
Supervisors
Date: August 2014

Supervisor I

(Drs. Hotze Hofstra)

Supervisor II

(DR. Ir. Heru Purboyo Hidayat, DEA)

Abstract

Infrastructure plays a key role in port development to increasing economic growth. Port of Bitung based on policy directive has been chosen as international hub port. Due to the strategic location and increasing economic growth scale, National Government want to develop port of Bitung as IHP in Eastern Indonesia. Traditionally, National Government focused on infrastructure development in establish an IHP. It needs strategic policy and learning from port of Antwerp as best practice to port of Bitung. This is leads to the typical of strategic policy plays in establish an IHP. An IHP derives from hub and spoke concept. Networking plays an important role in establish IHP. This research used document review, compare to port of Antwerp and lesson learned to port of Bitung as the methods. Data collection derives from annual report, strategic plan and books. This research argued that partnership plays a key role in establish IHP.

Keywords: *Port of Bitung, an International hub port concept, Lessons Learned, Strategic Policy and Port of Antwerp.*

GUIDELINE FOR USING THESIS

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Groningen, Netherlands
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Rayani Situmorang.

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Abbreviations:

No	Abbreviation	Explanation
1	IHP	International Hub Port
2	MP3EI	Masterplan Acceleration and Expansion of Indonesia Economic Development
3	ICT	Information Communication Technology
4	Berth	“The water area alongside a wharf to loading and unloading goods from the vessels” (Vier, 2010)
5	Harbour	“A shelter with equipment supported for ships” (Vier, 2010)

CHAPTER I INTRODUCTION

“Every country has problems, and each thinks that its problems are unique”
Dolowitz and Marsh, 1996

Introduction

Since the last decade, globalization has been a drive to increase port development, specifically in Asia. According to Vier (2010), it is found the movement of container traffic which flow to Asia will increase rapidly from 55 % of the world total in 2002 to 64 % in 2015. This movement has an impact of container traffic from Asia to Europe at average rate of 5,6 % per year until 2015. The traffic flows of container movement will change the liner shipping route and development port. Traditionally, government started to develop infrastructure at first to support demand of containerization in the port. However, this is not sufficient because the world is dynamic. The implementation of new technologies and increasing accessibility of transport system are example of infrastructure development to supported.

Furthermore, transport infrastructure plays an important role in improving regional economic growth, which leads to a higher productivity of private production sectors. For example, the increase of transport infrastructure can bring to the reduction of transportation cost and travel time (Rietveld, 1989). Infrastructure development such as port will have an impact to economic growth as nationally, regionally and locally. For example, the development of a port will increase economic scale growth. The evidence of these impact such as the port of Rotterdam which contributes about 24 billion guilders to the gross value of the Dutch economy. It was about 24 billion to the other countries such as Belgium, Luxemburg, Germany and United Kingdom (Wolters-Noordhoff, 1997, pp. 18-19).

International hub port (IHP) is one example of port development and integrated transport system. IHP can stimulate economies scale of hinterland area (Vier, 2010). Also, it can reduce complexity of shipping route (Rodrigue, 2013, p. 48). IHP derives from hub and spoke concept as a networking. This is leads to the typical of strategic policy plays in establish an IHP. In term of port, hinterland area as the networking. Partnership as one typical of strategic policy in establish an IHP due to the hub and spoke concept. Nowadays, this concept can be found in each transportation system such as airport, railways and roadway. Integrated system is needed to make more efficient and effective in spatial plan due to the limited of space. This concept has been implemented into several ports which characteristics as IHP in the world. Each countries has different strategic policies and typical policy as the main role in establishing IHP.

For example, port of Singapore as a global hub has successfully implemented new technologies. The government of Singapore plays a key role to implemented the

technology as nation wide. The implementation of the technology incorporated into three nation IT (Information Technology) plans (Wolters-Noordhoff, 1997, pp. 17-18). Beside that, (Wolters-Noordhoff, 1997, pp. 64-67) port of Rotterdam begins with reinforcing the position in the next century. They started to establish the port as main port with some strategy policies such as deregulation, individualization of demand, location of integrated between production and transport system, information technology, relevant to main ports which supported with increasing value on quality of the living and environment. The integration of transport between main port and airport and the balance of development towards to sustainable development beside to increasing the economic growth are the main strategies in the port of Rotterdam. The kind of strategic policy plays a key role in the port of Rotterdam lies to optimal accessibility such as connections with the hinterland and a linkup with the Trans European Network; involves direct and fast access to the port; and the last is use of telematics (information technology) (Wolters-Noordhoff, 1997, pp. 40-41). On the other hand, port of Antwerp has been existing as IHP since 12th century and continue to grow until now.

According to Wolters-Noordhoff (1997;pp. 14-21), many of strategic policies can be classified into several point such as financial, adequate physical infrastructure, labour conditions in human resources, minimize the external effects of environmental and partnership. These strategic policy leads to effective and efficient of transport infrastructure development. According to Flyvbjerg (2003) the rising cost needed to build the transport infrastructure became a phenomenon because of costs becomes excessive for transport infrastructure such as roads, rail, fixed links¹. It needs strategic policies to manage, set up the vision to establish efficiency and effectiveness between demand and capacity of port. According to the Oxford Dictionary², “*Effective* means that something which successfully produces an intended result, without reference to morality, economy of effort, or efficient use of resources”. On the other hand, “*Efficient* applies to someone or something able to produce results with the minimum expense or effort, as a result of good organization or good design and making the best use of available resources”.

A hub port is not just a network between hub and spoke or center and nodes, but also equality and integration between connected links. Therefore, many factors influences it to become a hub port; internal and external factors. Potential strategic location, environmental and deep water are the example of internal factors. In the other hands, infrastructure, support from hinterland area and potential cargo growth are the example

¹ Flyvbjerg, 2003 founds 9 of 10 transport infrastructure projects have become cost overruns and tend to be more for developing countries.

² www.oxfordonline.com

of external factors. These two main factors³ affected the port into a hub port besides the others factors.

This research is addressing issues related to the kind of strategic policy plays in establishing an IHP due to the port of Bitung want to develop as IHP. This is becoming a gap related many strategic policy leads to IHP. Generally, infrastructure development plays an important role in the development of port. On the other hand, networking plays an important role in establish an IHP based on hub and spoke concept. There is no hub without networking. Partnership as strategic policy as the main role to develop networking (Wolters-Noordhoff, 1997, pp. 67-68). Therefore, this research want to obtain regarding the typical of strategic policy plays in establish an IHP.

This research selecting port of Bitung as a case study and learning from port of Antwerp as best practice. Based on policy directive in Government plan⁴, port of Bitung has been chosen as IHP⁵. Port of Bitung is located in Indonesia as an archipelago. One of the goals is to strengthen the connectivity of transport system specific on inter-islands. Nowadays, port of Antwerp has become an IHP and second largest port in the Europe after port of Rotterdam. Port of Antwerp has a unique historical background in establish an IHP. Therefore, this research selecting port of Antwerp as best practice due to the unique of historical background.

RESEARCH OBJECTIVES

In accordance to the background, the research objective in this research is to identify what kind of policies plays a key role to develop an international hub port in port of Antwerp. After identifying, learning from the port of Antwerp as the best practice is part of this research to obtain potential strategic policies. This research focused on institutional factors such as port authority.

RESEARCH QUESTIONS

Based on the problem statement and aims, there is a main research question related to this research such as: “*What are the typical of policies plays a key role in establish an international hub port?*”. In accordance to the main research question, several sub question which support will be answered in each chapter of the research such as:

1. What are an International Hub Port concept and the characteristics of IHP?

³ Two main factors are internal and external factor.

⁴ The policy directive based on MP3EI

⁵ According to Subagiyo (2001) argue that port of Bitung has been chosen as international hub port based on several component such as potential growth of cargo, strategic location.

2. What the definition and the function of strategic policy are in establishing an IHP?
3. What are the existing strategic policies and typical strategic policy in port of Antwerp as best practices in establish an IHP?
4. What are the existing strategic policies and the typical strategic policy in the port of Bitung compares to port of Antwerp?
5. What are lesson learn from the port of Antwerp to port of Bitung related to the potential strategic plays in establish an IHP?

Two of sub questions will be answered in chapter 2, which are directly concern to literature review regarding a hub port concept. The third and fourth sub questions will be answered in chapter 4. The lessons learnt will be described in chapter 5 as an analysis of potential strategic policy between the port of Antwerp and the port of Bitung. Due to the lesson learnt from port of Antwerp to port of Bitung, research methodology is important to conduct the way to this research.

RESEARCH METHODOLOGY

This research uses a qualitative approach because it focuses on a case study with different perspective related to strategic policies and historical background to develop an international hub port. Therefore, secondary data required to conduct the research. The method is discussed in chapter three as “research methodology”. In accordance to the analysis above, this research methodology relates to institutional, criteria of International Hub Port and strategic policy with using the literature review. Identification the characteristics of international hub port from literature review and compare to port of Antwerp as best practice. This study is a lesson learned from port of Antwerp with focused on strategic policy. What steps are taken to be IHP, what first made whether infrastructure or strategic policies. Who is involved and how long it took (time frame). After that, conceptual framework is described on the next section to understanding the topics and related to the theory.

CONCEPTUAL FRAMEWORK

Conceptual framework is important to relate into a guiding model and figure out the suitable approach with the theory. In this conceptual framework will described about how all the research is related to the theory and methodology. Based on the background of this research, globalization as a drive to increasing port development. IHP is one example of port development. Many factors can influence to become IHP such as internal factor (location, environmental, deep water) and external factor (Infrastructure, support from hinterland, potential cargo growth and costs). The advantage of IHP is stimulate

economies scale. IHP concept derives from hub and spoke concept which networking as the main role in establish an a hub. Document policies review as the tools to identifying the typical of strategic policy in the port of Antwerp and port of Bitung. After that, it needs to compare between both of the ports. Due to the port of Bitung as a port that want to become IHP, it learning from port of Antwerp as best practice with considering of planning context between two ports. The last is the outcome is potential strategic policy to port of Bitung.

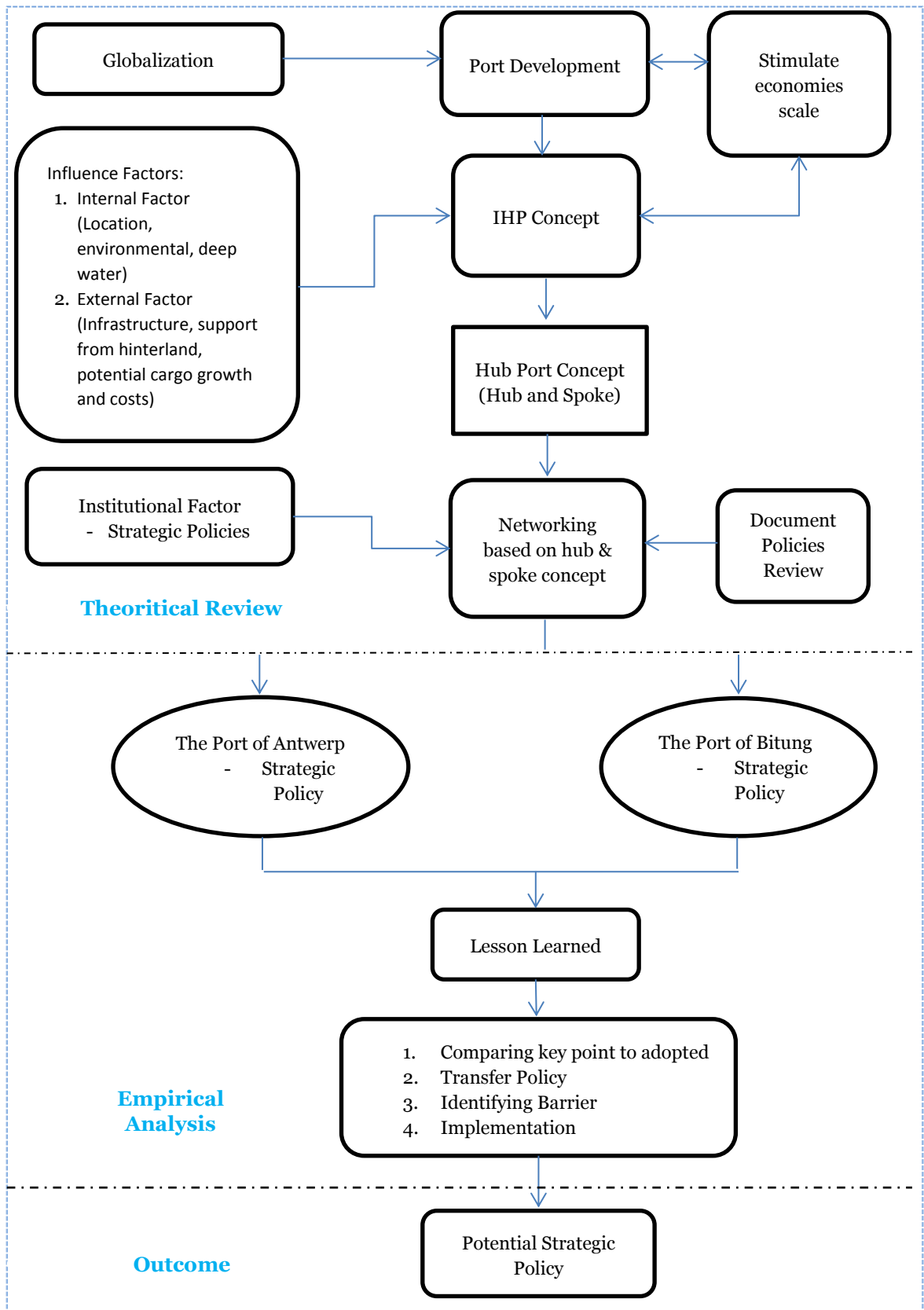


Figure 1 Conceptual Model
Source: Author

Structure of Thesis

This research is divided into six chapters which are related to the research questions above. The short explanation about all of the chapters can be described as the following:

Chapter 1 : Introduction

This chapter contains the importance of research related to figure out the problem statement, research objectives, research questions and structure of thesis.

Chapter 2 : Theoretical framework

This chapter describes about terms of international hub port, what is the definition of international hub port, the characteristics and main factors in establish IHP. After that, hub port concept will described in this chapter and the typical strategic policy plays in establish an IHP.

Chapter 3 : Research methodology

This chapter consist about the research methodology and data collection by document review. This research uses annual report, strategic plan, some books and international journal related port of Antwerp and port of Bitung.

Chapter 4 : Findings

This chapter contains the existing strategic policies in the port of Antwerp and in the port of Bitung. The existing strategic policies leads to the typical of strategic policy plays in the ports.

Chapter 5 : Analysis of Potential Policy Strategic

This chapter contains the analysis of potential strategic policies related to international hub port, which is possible to be transferred and adapted from the port of Antwerp context to the port of Bitung, and also identifying the barriers. But, it is important to understand about context of lesson learned. Planning cultures is a vital part before transfer policy conducted.

Chapter 6 : Conclusion and Recommendation

The final parts, includes conclusion summarising the results of this thesis, recommendation and reflection.

CHAPTER II LITERATURE REVIEW

Introduction

This chapter will be described regarding the definition of international hub port, the characteristics, influence factors of international hub port, institutional factors and the typical of strategic policy plays in establish an IHP. This is important because many research using different terms regarding international hub port concept. The difference term would provide different perspectives and understanding. After that, port development is a vital part to start describes hub port concept and international hub port. Identification the characteristics of hub port, which are involved and strategic policies of institutional factors are necessary part of theory in this chapter. Before the definition of international hub port, it is better to have same knowledge about the typology of ports.

What is a port?

It is necessary to have the definition about a port and the types of port. There are many definitions about a port. They have same characteristic of port, therefore this research provide one definition. For example, according to Alderton (2008) in Vier, (2010) argued ports can be defined as a town with harbor and facilities supported to shipping activities such as logistic distribution from vessel or shore. Based on the definitions above, some characteristic of port can be mentioned such as: it needs a place and the territorial of area, it needs an authorities to covered the area and manage the operational behind, it needs link with the other ports, it needs equipment to support the operational activity and it needs the ship as the main activity in a port. A port plays a key role to stimulate the economic growth in that area and the other area. Furthermore, the types of port will explained in the next section to have understanding about the evolution in ports.

Types of ports

Types of port are a part of port because the development can be determined with the position of port. There are various types of ports, which can be categorized into several parts as follows, (Vier, 2010):

1. Product handled: cargo and passenger

For examples: container cargo, break-bulk cargo⁶, neo bulk cargo⁷ and bulk (dry and liquid)⁸.

⁶ Break bulk cargo: general cargo which packaged on pallets or in wire or rope slings.

⁷ Neo bulk cargo: miscellaneous goods and commodities shipped packaged and transferred as units.

⁸ Bulk (dry and Liquid): examples are coal, grains, crude oil and refined petroleum

2. By ownership (Public and commercial)

3. By function

3.1. Cargo interface (Hub port and feeder port)

In cargo interface, the link between two nodes is a part of port which called it hub port as the Centre port and feeder port as distribute the cargo.

3.2. MIDAS (Maritime Industrial Development Area)

This is like an industrial area near the port, which the facilities supported such as large industrial zone, customs free port and oil port.

3.3. Specific Ship/Shore Interface

For example such as naval port, fishing port and specific commodity export port like coal, iron ore etc.

After all, it is necessary to have understanding of port development related the port evolved. An international hub port is one of the example from the port development.

Port Development

Port development is one of important thing in this research because port of Bitung has to expansion as international hub port related to inequality economic growth. In a port development, a port can be evolve or drown depends on several factors according to Alderton (2008) in Vier (2010) as follows:

1. Transformation in the inland transport infrastructure for example, the presence of railways can change the people to switch from using the roadway into railways in transport.
2. Transformation in trade patterns such as the effect of co-operation and agreement between countries or regions
3. Transformation in financial and logistic demand/supply
4. The life period of ports in a long time or even in centuries

The port can decrease or increase in size because of the transition effect. According to Alderton (2008) in Vier (2010) it shows the factors in the figure below related to some factor constraining port development. International hub port is one of port development and it needs factor constraining to become a big port such as international hub port.

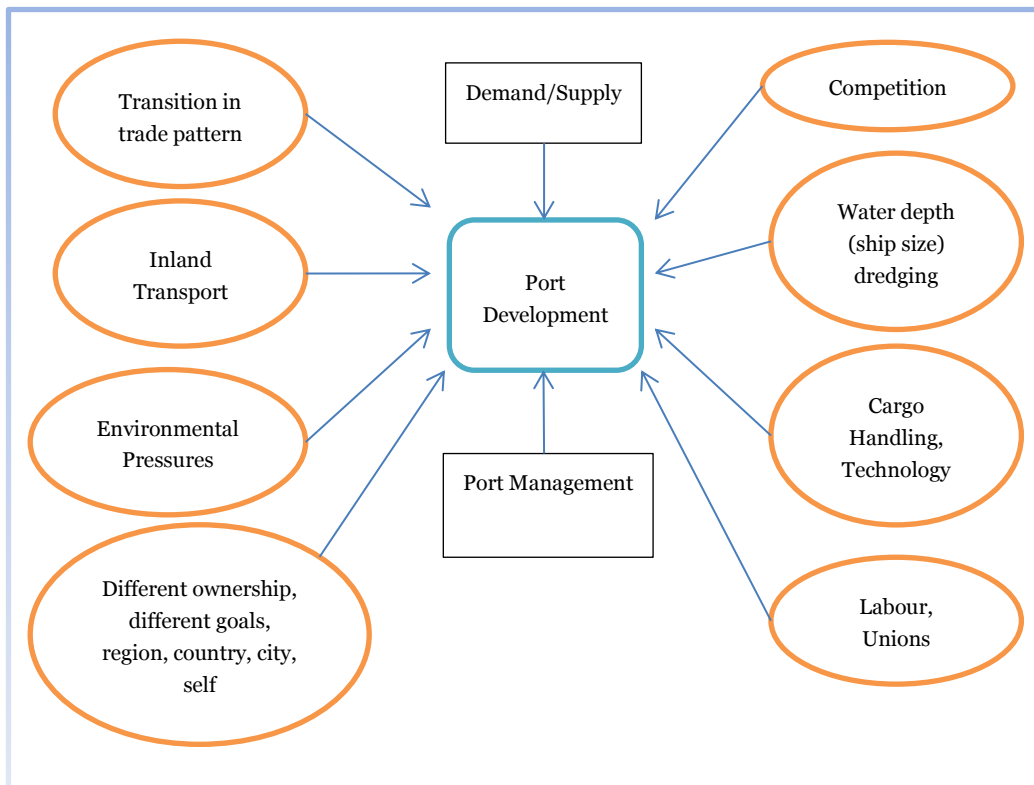


Figure 2 Factor constraining of port development

Source: Alderton, 2008 in Vier, 2010.

Due to the factor constraining port development, the port can be evolve that shows in the figure 3 about different scale of port development.

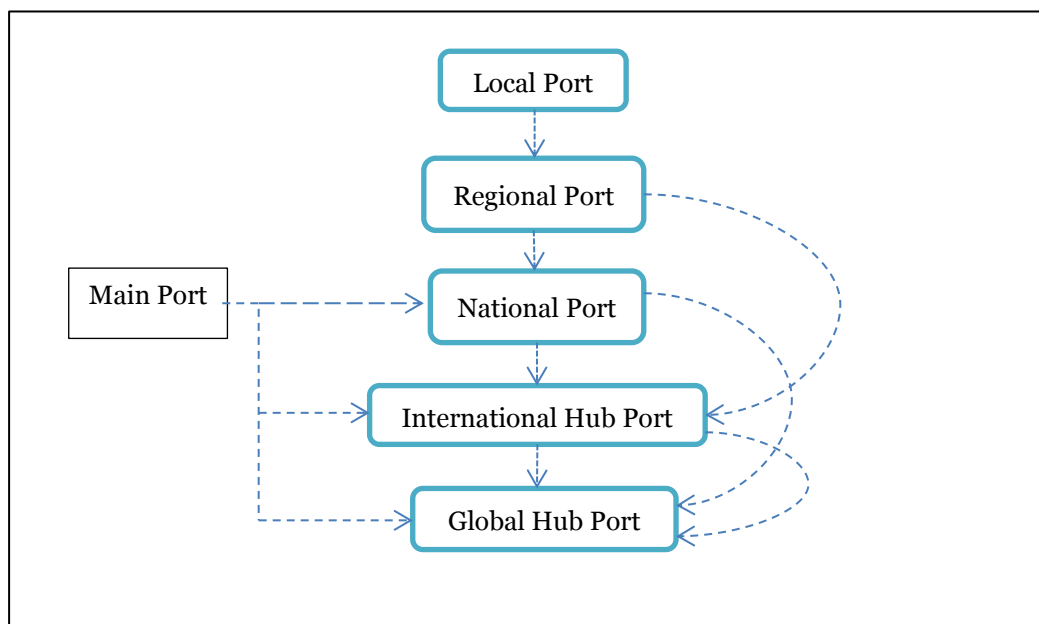


Figure 3 Different Scale of Port Development

Modified from: Subagiyo, 1999.

The picture above shows the levels change of the port viewed from the scope of the voyage.

1. Local port as the feeder local in small scales
2. Regional port as the feeder in regional area in medium scales
3. National port as the collector from regional port in the big scales such as port of Tanjung Priok, Indonesia.
4. International hub port as the hub port between more than two countries in the scope of voyage. As a regional port can be as international hub port or from national can be as international hub port such as port of Amsterdam and port of Antwerp.
5. Global hub port as the biggest scale in voyage of shipping such as port of Rotterdam, port of Shanghai, port of Bussan etc. These ports have wider networks throughout the world.

On the other hands, the port can change or transform due to the function of port. The functions can be classified into four groups such as; primary or transport functions, commercial, industrial and residential function (Loyen, 2002, p. 31). Primarily it can be categorized as the basic needs of port such as life cycle of ports. Furthermore, port as a place to loading and unloading goods/commodities. The commercial function focuses on the equals of commodities due to the strategic location as the most favorable point of transshipment between maritime and continental transport. Therefore, many industries company are built in the port area and this is called the industrial functions. The last is residential function emphasized composite of that three functions (primary, commercial and industrial) and attracts the port as hubs (redistributing traffic to hierarchically into the local port).

International hub port concept

Many terms are used to refer to a hub port. A hub port in term of seaports related to several different term such as in Western European countries such as the port of Rotterdam call it as “main port”, and port of Singapore call it as “global hub port” (Vier, 2010). USA call it as a hub port. Based on the different terms in each country, it is important to have understanding about terms of IHP, influence factors in establish an IHP and definition of IHP.

The term of main port related to big port and has characteristics as a global hub port. According to Wolters-Noordhoff (1997, p. 87), found the people in USA more accustomed to using hub port than main port because of similarities concept owned both as location, volume, distribution reach (both local and hinterland), intermodal connections, cost competitiveness, frequency of service and optimum use of technology.

IHP concept requires the influence factors of port development that must be fulfilled to become a center port. In establishing an IHP; it needs hinterland area as the spoke. Therefore, IHP based on networking as an integrated of entity. Besides that, Lee Y.-T. C.-Y.-G (2002) argued that the trade and investment in the future will be highly affected by the evolution of the pattern of trade specialization.

International hub port and global hub port are terms regarding to the relationship between hub and spoke or hinterland. An International hub port can be as a global hub port and vice versa. International hub port is the port which has more than 60 percent of current loading and unloading of goods that are served in the export/import (Subagiyo, 2001). International hub port is closely associated with location of the port, potential of cargo growth, stakeholders involved, hinterland, infrastructure and environment that available in the port. On the other hand, the meaning of a hub as Oxford Dictionaries is the central part of a wheel, rotating on or with the axle, and from which the spokes radiate. It is a central part of strategically located at an airport utilized as a collection–distribution center for passengers serviced generally by a single carrier (Woo Lee, 2008, p. 272). Generally, the notion of hub has the same understanding as a collection–distribution center for passengers.

Characteristics of International Hub Port

Based on the definition, characteristics of IHP can be classified into size and service (Wolters-Noordhoff, 1997, p. 35). Generally, IHP has the big size in terms of freight and numbers of passengers. In terms of service, in particularly it needs a high quality, professional package of logistical and support transportation services. In more specific, it needs five points according to Wolters-Noordhoff (1997, p. 36) such as:

1. Transportation sector in and around the port should be organized well into efficient ways.
2. Accessibility in and to the ports should be integrated in a high quality of connections to the hinterland.
3. The availability of more space and infrastructure supported to have distribution and production activities as effectively.
4. A high information technology, which integrated to the needs of ports.
5. An integrated of availability of support system such as banking and insurance.

These points are described in establishing a main port. However, the definition of international hub port, main port and international hub port are within the same concept. After identifying the characteristics of international hub port, it is important to understand about the factors of international hub port because one of the factor will become a vital part of this research.

Main Factors of International Hub Port

Influence factors are needed to build a hub port. Influence factor are the basic that possessed a port in support of process operations such as the infrastructure, accessibility, and the management system that regulates and supervises the operations of the port. The several studies revealed about the basic factors which should be possessed to an international such as Lee Y.-T. C.-Y.-G (2002) found that to be a hub port there are some factor plays in a port selection by trade route which affecting liners, such as:

1. Port should be managed and maintain their cargo volumes either handling export/import cargo of transshipment cargo to be competitive.
2. Cargo expense is a vital factor to be a hub port, which effect the liner decision in port selection.
3. Ports that plan to be a hub should accommodate and guarantee better comprehensive services such as efficient inland connections, reliable services, enough water draft, cargo safety and profitability. Information technology and a good relationship between management and the workers is important thing.
4. Port that has the aim to become a feeder port should focus on berth availability and not focus too much on them on extending working hours regarding to overtime work.

Lee Y.-T. C.-Y.-G (2002) has argue the several factors and strategies who made the port of Singapore become a global hub port such as the port of Singapore needs a balance number of berths and other required port facilities. One of the goals of this factor is to deal with significant of cargo traffic problem, high frequencies of ship even for the larger ships. All needs skilled, cooperative and well-motivated to manage the port. The port of Singapore has implemented a system to improve the productivity of their employees in creating conflict. It makes a harmonious relationship and increase employee productivity.

On the other hand, many factors which selected on the basis of literature review as well as discussions with experts in shipping industry, which are classified into following three categories (Huang Tai, 2005):

1. Category A: internal factors of port, including efficiency of handling facilities, area of marshalling yard, total no. of berth, draft of harbor, level of port charge, type of port authority, and quality of customer service.
2. Category B: external factors of port, including cargo source of hinterland, efficiency of clearance, location of port, convenience of inland transportation, and frequency of trunk and feeder routes.
3. Category C: operational factors of shipping lines, including saving in operating cost, preference of mother port, political considerations, capability of branch/agent, coordination of shipping alliance, and investment of dedicated terminals.

According to Prasetyadi and Widiyanto (2004), argue related to several influence factors to be considered towards as international hub port:

a. Geographical position and location

Taking the strategic position into consideration that will be prepared to become an hub port handling local cargo transportation, and a transshipment port, supported also by the potential of hinterland and surrounding ports.

b. Cargo potential surrounding Port

The cargo flow through other ports around should show an increase in growth of cargo loading and unloading of each year.

c. Hinterland (island potentials and growth of areas)

The potentials hinterland & hinter island of the port related to the growth of areas that supported such as the crop products according to GDP⁹ data of agriculture, fishery, forestry, mining, processing, water supply products, hotel and tourism as well as transportation and communication infrastructure.

d. Supports from other ports in Indonesia and other countries

Developing the Port also relies on the contributions given by the surrounding ports. So it is expected that the whole cargo, exported or imported to/from countries to be distributed according to the destinations.

Also Vier (2010) classified the factor that influences of IHP into two main factors such as:

1. Natural factors: The natural factors of a port such as location and deep water
2. Strategic Factors: This factor can be made according to the needs of each port as infrastructure, service provided, costs and connectivity.

Based on the several studies related influence factors, this research classified several factors due to the basic needs to develop an IHP into two main factors such as:

1. Internal factor

Internal factors are factors that come from within the port, which prepared from the port including strategic location, environmental and deep water.

2. External Factor

External factors are factors that come from outside the port to support the working system of port such as infrastructure, support from hinterland area, accessibility, potential of cargo growth and costs.

⁹ GDP refers to Gross Domestic Product

These influence factors are essential in develop IHP. For example location, it affects a person's decision to consider the distance and costs more accessible. Therefore, strategic location is one factor to build a hub port but not as the main one. International hub port derives to hub and spoke concept. It needs to understand about hub and spoke concept.

The hub port concept

IHP derives from hub and spoke concept. It needs networking to develop a hub. In a hub port, integration between networks is a vital part. Generally, the transportation systems such as airport and seaport are reflected using networks as an analogy for their network (Rodrigue, 2013, pp. 47-49). Geographically, a hub port is one example of intermodal integrated network. A hub can be identified as a network structure, through focused on the flows. Networking as one of influence factor that can be classified into hinterland area. Without hinterland area as the networking, there is no hub. IHP is not only networking but have advantage and disadvantage.

For example, there are two terms of hub port such as a main port and global hub port. In Europe, the term of main port is a central node in a transport network which their position in intercontinental transport chains (Berg, et all., in (Wolters-Noordhoff, 1997, p. 63)) such as the port of Rotterdam, Netherlands. On the other hand, a global hub port is relating to the mega port, a trans-shipment, mega hub, super hub (Vier, 2010) such as the port of Singapore. A main port does not purely have a transport function because the port can be a global hub port and vice versa. Nevertheless, international hub port can be a main port or global hub port. Both of main port and global hub port have same characteristic such as a chain networks between a hub and some nodes.

According to the Vier (2010) argue that *“hub port is an area serving as a trans-shipment center and a gateway for the larger hinterlands by connecting mainline services with various feeder networks and the feeder port is known as a smaller ports which feed and distribute cargo for hub or center hub”*. Since decade's years ago, the concept of hub ports has been present related to the efficiency and economies scale on connections.

Due to the efficiency and economies of scale on connections as advantages of hub port. Generally, the two types of connection in the transportation are as follows; point to point (figure 5) and hub-spoke structure (figure 6) (Rodrigue, 2013, p. 48). Each of this types has advantages and disadvantages.

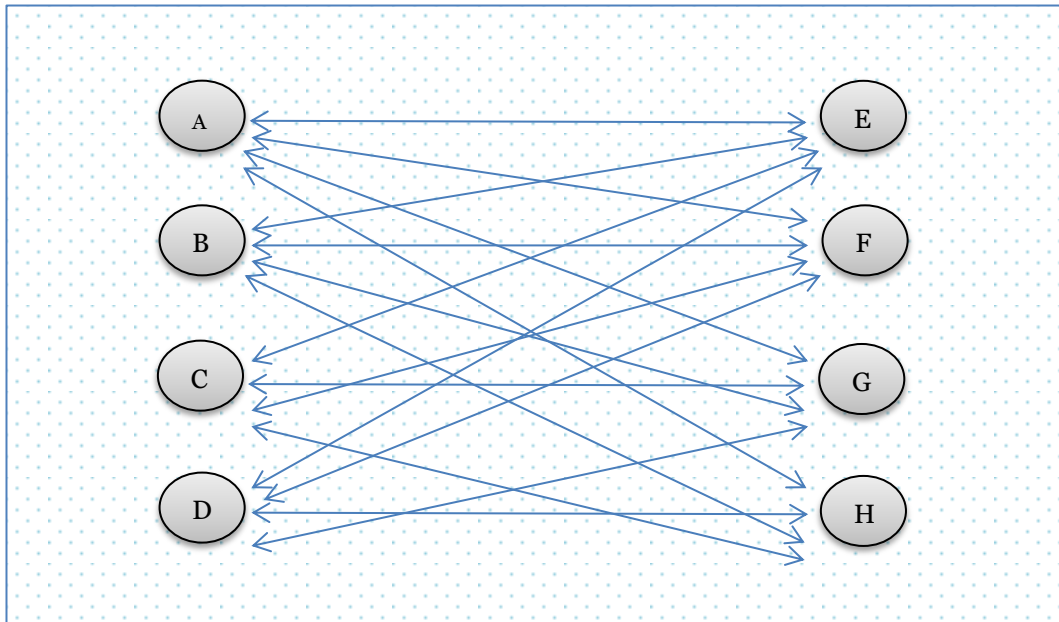


Figure 4 Point to point structure from the transport networks
Source: Rodrigue, et al., 2013.

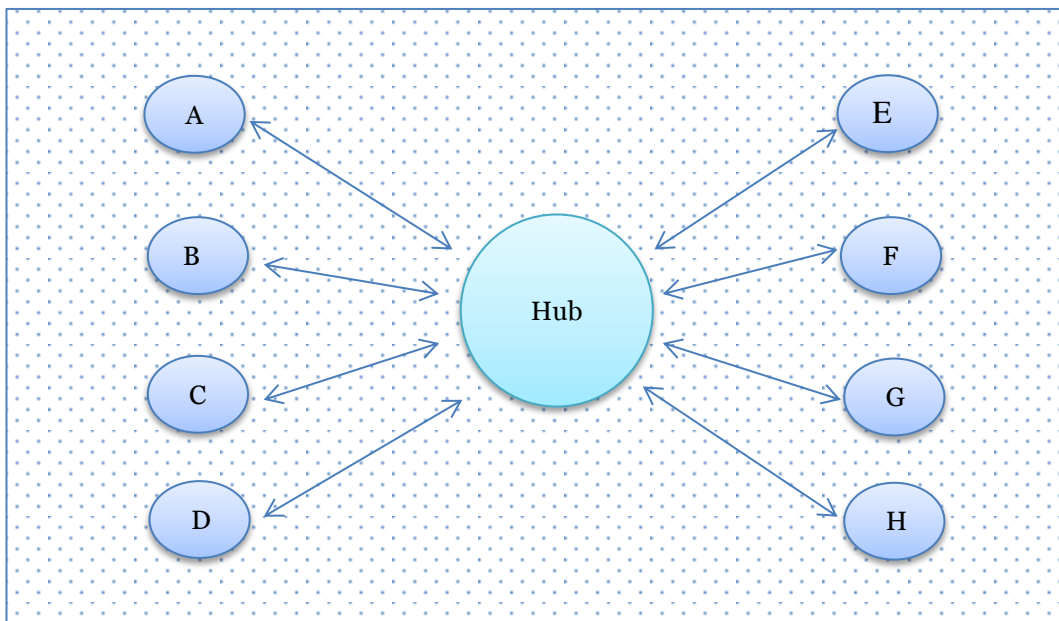


Figure 5 Hub and spoke structure from the transport networks
Source: Rodrigue, et al., 2013.

The table above shows that hub and spoke structure is better than point to point structure because it can reduce the complexity of shipping service as point to point structure. With hub and spoke structure, it can be reduced to 8 connections are required and it can make one integration modes (Rodrigue, 2013, hal. 48).

Furthermore, according to Goh et al (2003, p. 56) in Vier (2010) said the benefits of good hub ports such as:

1. Hub ports reduce the complexity of shipping services as the figure 5 about the structure of transport network
2. Enables of economies scale on connections, it able in reduction the travel cost.
3. Hub ports provide a wider shipping selection with the facilities supported such as fast transit time and high shipping frequency.

In additions, here the additional advantages of using a hub port such as (Rodrigue, 2013, pp. 48-49):

1. Economies of scale on connections with provide a high frequency of services; can increasing the number of connections.
2. Economies of scale at the hubs, hub port can stimulate the economic growth in the area and the hinterlands area of hubs.
3. Economies of scope to share the transshipment facilities

On the other hand, this concept has disadvantages such as it can make an additional transshipment (hub port) because of some connections may involve delays and potential congestion as the hub.

Based on the more advantages than disadvantage of hub port, this hub port concept plays a key role to develop an international hub port due to the networking between hubs and spoke. A hub port is not only a network between hub and spoke or center and nodes, but also integration between connected links.

Network Perspective

Network is related to framework of routes within a system of locations identified as nodes. A route refers to a single link between two nodes, which become a part of a network that related to tangible routes such as roads and rails or less tangible routes such as air and sea corridors (Rodrigue, 2013, pp. 47-51). Each of transport networks has specific types of networks. It can be classified into specific categories depends on topological such as geographical setting, its modal¹⁰ and structural¹¹ characteristics. The main fundamental parts in a structure are the network geometry and the level of connectivity. The number of nodes and edges illustrated the complexity and structure of transportation networks. For example of edges are roads, rail links and maritime routes. The examples of nodes are ports and rail yards.

In additions, the characteristics of transportation system in network evaluations such as (1) structure and connectivity, (2) costs and distances, (3) accessibility and circuit and (4) flows (Black, 2003, p. 72). Flows and infrastructure have linear connection that

¹⁰ Modal refers to the transport connection such as railways, roadway.

¹¹ Structural refers to structure networks.

link between two points. Regarding to spatial continuity in a transport network, three conditions are important such as (Rodrigue, 2013, p. 52):

1. Ubiquity

It means that the possibility to reach any location from any other location on the network connections.

2. Fractionalization

It means that the possibility to transport a unit of freight without depending on a group.

3. Instantaneity

It means that the possibility to have transportation at the most desired moment.

These three of conditions are not better one than the others but it can be complementary each others of conditions.

Furthermore, a hub port concept is an important part in establish an international hub port. Institutional factors plays a key role to implemented this hub port concept with strategic policies and decide who has the right of way by implementing traffic rules and so forth (Bert Van Wee, 2013, pp. 283-285). Besides that, institutional factor is needed to manage the effectiveness and efficiency.

Institutional Factors

This research has focused on institutional factors to set a guidelines in establish an international hub port. The government is one example of institutional factors that plays a key role to set some strategic policies. The strategic policy is one example of the guidelines of implementing organizations vision of hub port concept. As Lee (2002) argue that the government of Singapore plays a key role to support the port of Singapore as international hub port as follows, strategic location, strongly efficient infrastructure, high connectivity, internationalization¹² and language skills, strong government support with transparent policies, availability of logistics professionals and harmonious management labor government relations.

The role of government as policy makers can be changed due to the circumstances and dynamics system. This forces the government to have consideration about the choice related to the decision making of implementation a hub port. Strategic policy is vital part of government role.

Strategic Policy

Strategic policies is about align the organizations vision and goal (Martin, 2010). It set the direction and drives the way to do the vision of organizations such as a compass, which give a direction to the north or the south and so do the strategic policies will lead

¹² Internationalization refers to the port of Singapore as a global port with has a worldwide connections.

the way to navigate the interest and the goal. Linking them with stakeholders and reduce the uncertainty in strategic formulation. The government, customers, investors, employees, partners and community are important to be involved in this strategic policy. Strategic policies should be linked with equitable, accountable, transparency and effective governance.

The strategic policy to become an international hub port is not same in each country because different perspective of actors and planning culture. However, they have the same concept of IHP policies. This research focus on strategic policies in networking towards development an IHP. Due to a balance of development, more space needed to a maximum variety of service and abstain from sub optimum choices. In order to address this space, a main port can provide the radius with start to build a partnership with link to the networks. For example partnership permits to setting each activity at a maximum place in terms of locational conditions, accessibility and living climate. After that, selectiveness and function specialization in each nodes of network. Non-core activities can be placed on the outside of the main port. Also, provide the strong competition, the power of shippers and service companies are should be a market oriented. And the behavior of shippers and carriers can be count in the division of tasks between nodes and regions.

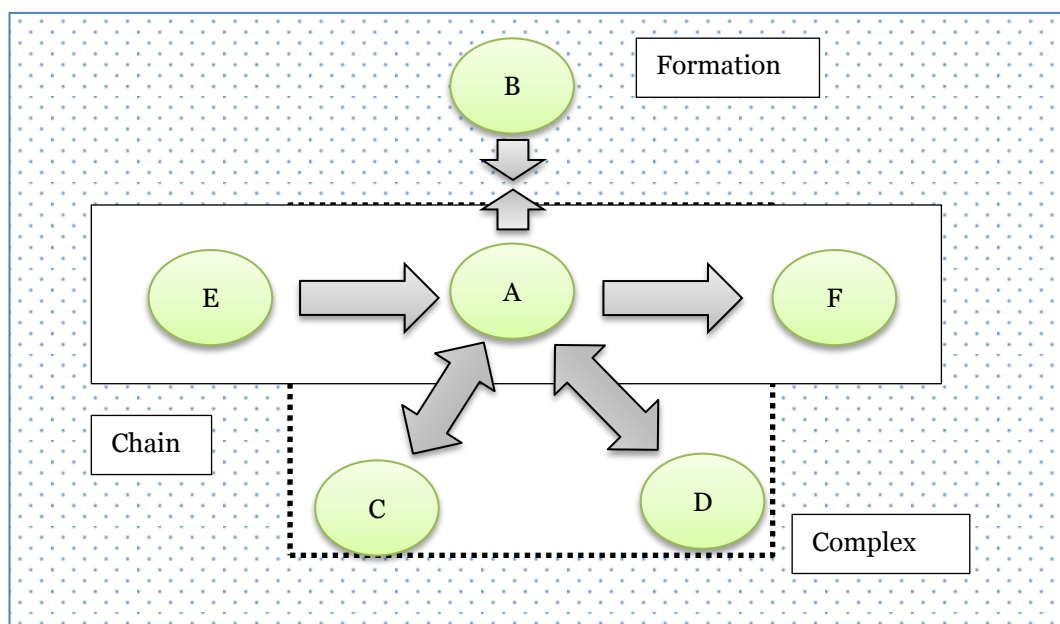


Figure 6 The Typology of Mainport-Networks

Source: (Wolters-Noordhoff, 1997, p. 69)

In the figure above shows network that related to each other such as “A” as a main port and have interdependence to the nodes of port “C and D” and supported to the other nodes as a factory in “D”.

In summary, the strategy towards a new main port according to (Wolters-Noordhoff, 1997, p. 67) is partnership with surrounding nodes and regions. Here some strategic policies of main port as follows (Wolters-Noordhoff, 1997, pp. 14-21):

1. Financial restrictions such as concerning budget deficits and tax ceilings,
2. Establishment of partnership in networks, alliances and participations,
3. The implementation of new technologies,
4. Adequate physical infrastructure to become more competitiveness such as integrated of transport system,
5. Labor conditions as human resources,
6. Minimize the external effect of mobility that causes environmental damage,
7. Development of multiple scenario and identification of certain signpost indicators to predict uncertainties and minimize the risk,
8. Perceptions of the outside world such in establish of good image and perceptions,
9. The role of government to become more flexibility to make some provision of infrastructure for lower public funding costs, more market oriented investments etc.

These all related to strategic policies in establish an international hub port. It is not easy way to develop an international hub port due to several issue faced in this 21st century to the future such as the availability of space makes some policy makers thinks about specializations of port to maximize the space. Besides that, occasionally the conflict happens between local community and the port authority related to NIMBY (not in my backyard) due to externalities effect such as noise, air pollution. It leads to the policy makers should have clearly in communicating the strategic policies in creating consensus between stakeholders involved. In additions, it needs to balance between ecology and economy, competition and cooperation of ports, between private ownership and government intervention and between anticipating upon future developments and reacting on them towards sustainable development due to uncertain world (Wolters-Noordhoff, 1997, p. 21).

The Typical Policies in Establish an IHP

Based on the topic of this research is about hub port concept, the typical policies plays a key role in establish an IHP is partnership in networking. For example are cooperation, collaboration and agreement. Port is not only for logistic distribution function, but it refers to specialization of ports. A port depends on the other port to evolve and survive. There are two kinds of partnership: public private partnership and partnership between two or more ports. Due to the networking as the main role in to develop a hub, this research focused on partnership of multiport.

For example; partnership permits lying of different activity at an optimum place regarding to the location condition, accessibility and climate conditions. This strategy can be used in the strategic policies towards a hub port. The impact of this strategy is specialization in individual nodes. Regarding to the hub port concept, the strategic policies is to entering the partnership due to allowing for optimization variety of service and integration based on market oriented of among nodes and regions towards a hub port.

A port is a place, which various interests and many stakeholders involved. The port Authority should be more active to bridge the various interests towards a hub port. After all, the theory related this research described on a theoretical framework as follows:

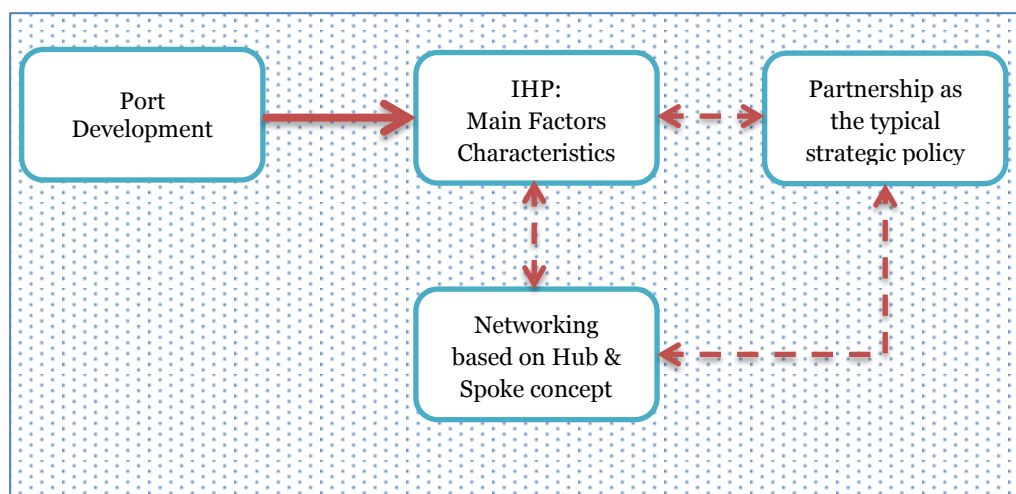


Figure 7 Conceptual Framework
Source: Author

The figure 7 shows about the conceptual framework with port development as a prelude to the start of the IHP. IHP has main factors as the influence factors to develop an IHP. Size and service as the characteristics of IHP. A hub needs networking and partnership as the typical of strategic policy in establish an IHP.

Concluding Remarks

An IHP derives from hub and spoke concept which networking as an important role to develop an hub. It is impossible to have a hub without hinterland area as the networking. Due to the definition of strategic policy refers to direction, vision and goal of organization, partnership is the typical of strategic policy plays a key role in establish an IHP.

CHAPTER III METHODOLOGY

Introduction

This chapter will describe the methodology of research. Generally, there are two approaches in the research such as qualitative and quantitative approach. Quantitative research has an objective to quantify data and predict the outcome as patterns in data. In the other hands, qualitative research has an objective to obtain a detailed understanding the key, reasons, beliefs and motivations (Hennink, 2010, p. 16). Therefore, this research uses a qualitative research due to the main research question is to have understanding related the typical of strategic policy plays a key role in establish an IHP.

Qualitative research use words as textual data. This research will use literature review, comparative analysis and lesson learned as data collection method with analysis is interpretive due to the outcome is to obtain and identify the potential strategic policy from port of Antwerp to port of Bitung. The existing strategic policy and typical of strategic policy plays a key role in the port of Antwerp and port of Bitung are the aspect to identifying of document review.

After that, planning culture will describe in this research to have the outcome as lesson learned to port of Bitung. However, as a qualitative research has the risk and weakness based on subjective analysis, this research will using literature review such as several books, international journal and annual report to minimize the subjectivity of researcher.

Methodology of Research

This research will conducted into three categories of method such as literature review, learning from the port of Antwerp as successful international hub port and comparative analysis.

1. Literature review

IHP is one example of port development to stimulate economies scale. IHP concept derives from hub and spoke concept with networking as the main role. This is leads to partnership as the typical of strategic policy plays in establish an IHP. This research is influenced to several theories towards a hub port such as port development, International Hub Port; networking based on hub and spoke concept, strategic policy and lesson learned. This theory has been described in the literature review to answer first and second research question. The first question and the second question has been answered and explained in chapter 2 on the literature review such as:

- 1.1. What are an international hub port concept and the characteristics of IHP?

Based on literature review, IHP concept is one of port development as a collection distribution center and requires the main factors that must be fulfilled to become a center port with has networking as an integrated. Also the characteristics of IHP are size and service.

1.2. What the definition and the function of strategic policy are in establishing an IHP?

Strategic policies refers to the directions that align the organizations vision and goal. Strategic policy drives the way to do the vision of organizations (Martin, 2010). Institutional factors has a set of strategic policy to align the organizations vision and goal.

Based on the questions, the literature review is important to situate and give some condition about the topic. The focus of this research is to figure out the potential strategic policies as learning to the port of Bitung. Therefore, strategic policies are important to set up the ports towards a hub port. After that, comparative analysis is the next step to identifying the existing strategic policy in the port of Antwerp and port of Bitung.

2. Comparative analysis

Comparative analysis is the first step before get a lesson learned. This research uses port of Antwerp as lesson learned to port of Bitung. Port of Antwerp has been existing as IHP since 12th century compared with port of Rotterdam as the biggest port in Europe. Beside that, port of Antwerp has a unique historical in compare with the others port especially in the Western Europe. After port of Antwerp has become IHP since 12th century, colonialism brings port of Antwerp as an inland port with blockade the Scheldt water as the sole access. This has made port of Antwerp trying to struggle back as IHP. It still continuous and bring port of Antwerp as the second largest port after port of Rotterdam¹³.

Port of Bitung has been chosen to become IHP due to the policy directive of National Plan in MP3EI and Strategic Plan of the Ministry of Transportation to strengthen the transport connectivity In Indonesia. Besides that, port of Bitung has a natural port and located in potential strategic location as a gateway to Eastern Indonesia. An international hub port concept can increases economies scale in Eastern Indonesia. This comparative analysis will look at the similarities and differences between the port of Antwerp and the port of Bitung based on several question below:

2.1. What are existing strategic policies and typical strategic policy in port of Antwerp as best practices in establish an IHP?

¹³ Based on port of Antwerp website, 2014 (www.portofantwerp.com).

2.2. What are existing strategic policies and typical strategic policy in the port of Bitung compares to port of Antwerp?

3. Lessons Learned

Learning from the port of Antwerp as a successful international hub port can be set guidelines to develop the port of Bitung towards a hub port. But, the policies that existing in the port of Antwerp cannot be transferred entirely related with the context. This research will focus on strategic policies plays a key role in establish IHP. This question will answer on the fifth chapter.

3.1. What are lesson learn from the port of Antwerp to port of Bitung related to the potential strategic policy that plays in establish an IHP?

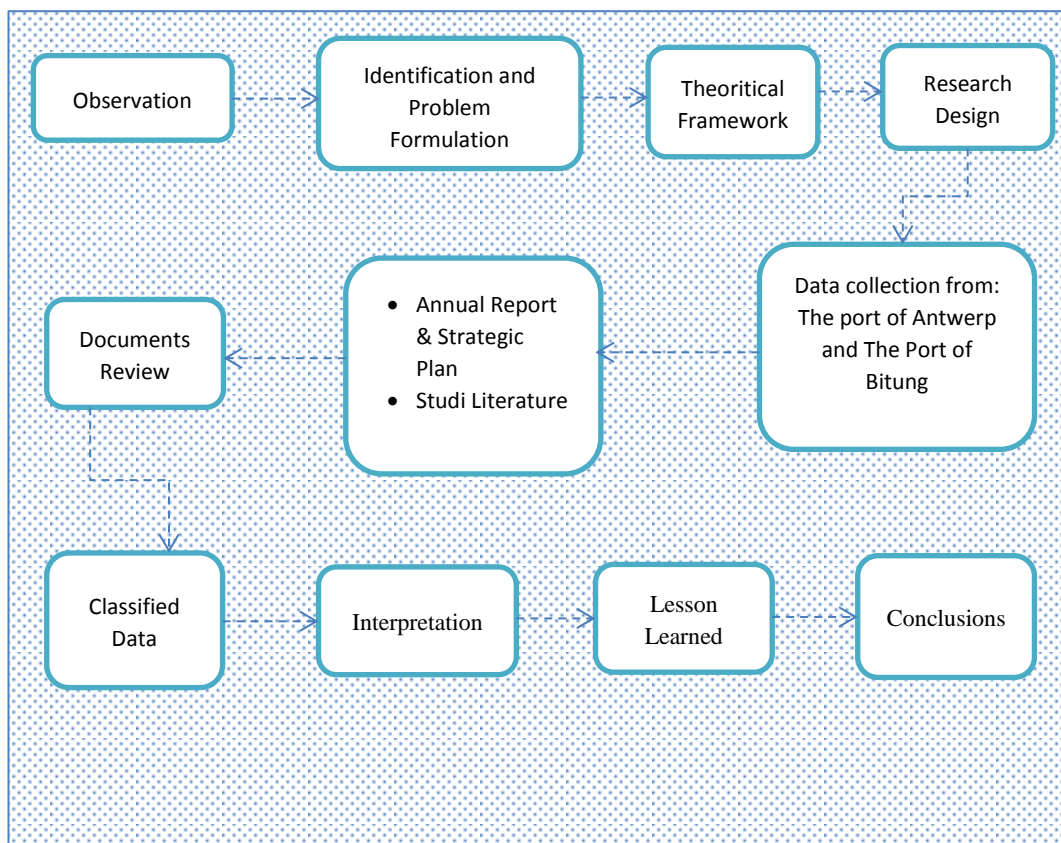


Figure 8 Research Design
Source: Author

The picture above shows the flowchart of research design. This research starts from observations and make some identification and problem formulation to support the observation. Theoretical framework and research design are important to support with the theory. Data collection will be from literature, annual report and books.

Data Collection

This research will use the annual report, strategic plans, books¹⁴ and journal which provide the information related to the research questions. The annual report describes a summary of the progress and achievements, which has been done during the year. The performance of port described in the annual report. Therefore, these research using annual reports as document review beside the others documents.

The annual reports will be used as document review in port of Antwerp. In addition, two books will be used in this research related historical background of port of Antwerp due to unavailability of historical background in the annual report. Historical background is a vital part to get lesson learned in this research. The availability of data of port of Antwerp can be accessed on website anytime¹⁵. The data available as annual report from 2001 until 2013.

On the other hand, the availability of data of port of Bitung can be accessed on website¹⁶. The data related strategic policies of port of Bitung. Port of Bitung has not become an IHP, therefore this research focused on strategic policies in the Ministry Transportation specific in Directorate General of Sea Transportation. In this research, port of Bitung will use a set of strategic plans from 2010-2014. In the table below will describe regarding data required and linked it with the methods.

Steps	Research Objectives	Case Studies	Methods for collecting data	Source of data	Operationalization
1	The typical of strategic policies	The port of Antwerp	Document review of the Annual Report and Literature Review	<ol style="list-style-type: none"> 1. Annual Reports 2. International Journal Articles 3. Document on the port of Antwerp website. 	The data is reviewed to collect information related several question such as: <ol style="list-style-type: none"> 1. What are the existing strategic policies in establish IHP? 2. What are the typical of
		The Port of	Document	1. Strategic plans	

¹⁴ (de Goey, 2004) and (Loyen, 2002)

These books provide some information related historical background of port of Antwerp in establish an IHP.

¹⁵ www.portofantwerp.com

¹⁶ www.dephub.go.id in Indonesian Language

		Bitung	review of the Annual Report, Strategic Plan and Literature Review	2. International Journal Articles 3. Regulations	policies to develop an IHP?
2	similarities and the differences of Policies	The Port of Antwerp The port of Bitung	Comparing the analysis and lesson learned	The existing strategic policy and the typical of strategic policy	Analysis the potential strategic policy, identifying the barriers and conclusions.

Table 1 Data Required and Method

Source: Author

Annual report provides some important information related strategic policies such as vision of port, existing strategic policy, strategic planning process and outcomes of the port activities. International journal and books related the topic will be used in this research due to the information needed about kinds of strategic policies in establish IHP. The time of data collection in this research from May to June 2014 with downloaded on website both of the ports.

Concluding Remarks

Due to the research objective is to identifying typical of strategic policy, this research using documents review in annual report, strategic plan, books and international journal; compare between port of Antwerp and port of Bitung; and lesson learned to port of Bitung based on planning culture.

CHAPTER IV RESEARCH FINDINGS

Introduction

Based on the research methodology, this chapter will describe the findings related to strategic policies in port of Antwerp and port of Bitung. This research will focused on two aspects based on research sub questions such as:

1. The existing of strategic policies in the port of Antwerp and port of Bitung.
2. The typical of strategic policy in the port of Antwerp and port of Bitung.

After that, comparison will be conducted to obtain the similarities and differences between port of Antwerp and port of Bitung.

Strategic Policy in Port of Antwerp

Current Condition

Port of Antwerp is a municipal port (Loyen, 2002, p. 201). Most handled product of port of Antwerp are container cargo (2001-2013)¹⁷. As historically, port of Antwerp has become an international hub port since 12th century because of hinterland area and strategic location. From port of river to international hub port.



Figure 9 Position of Port of Antwerp in the World

Sources: www.the-world-map-image.blogspot.nl & www.portofantwerp.com

¹⁷ Based on annual report (2001-2013).

Port of Antwerp located in Belgium country that borders with Netherlands, Germany, Luxemburg and France. Brussels is a capital city of Belgium and became a member of European Union since 1952. The total area of Belgium 30.528 km² with 10.7 million population (Union). A federal state is one of Belgium characteristics, which have 67 km of seacoast and flat coastal plains along the North Sea and forests in the southeast. Spatial context in Belgium are dispersed development and fragmented open space (Faludi, 2005).

Hinterland Area

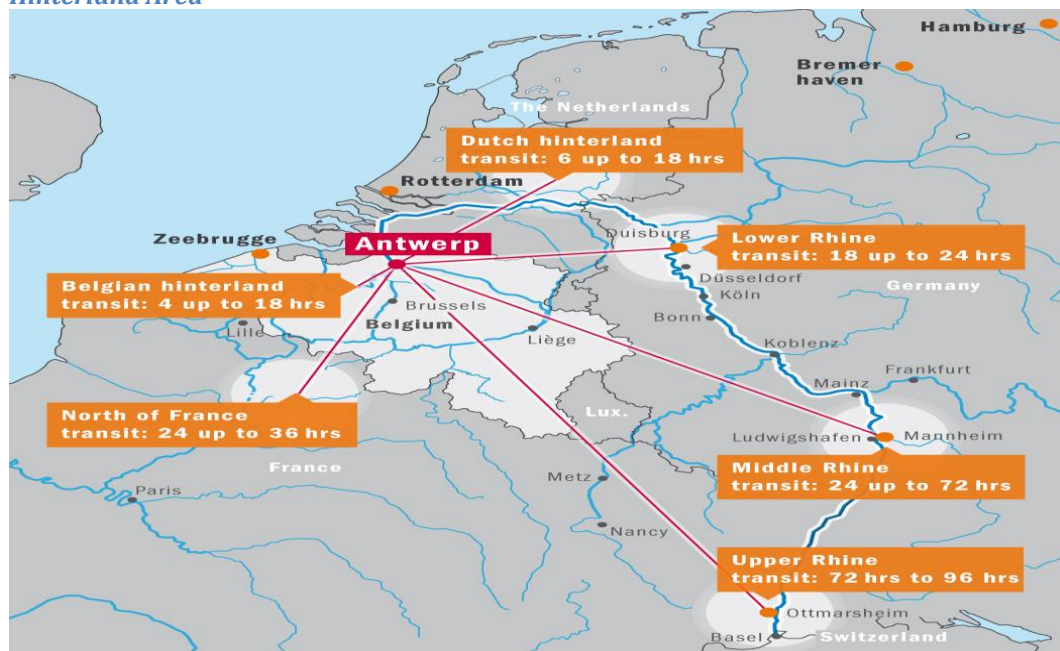


Figure 10 Port of Antwerp Hinterland
Source: Port of Antwerp, 2014.

In the picture above illustrated hinterland of port of Antwerp. Port of Antwerp has many hinterland areas such as Belgian, Belgium, North of France, Lower Rhine, Middle Rhine and Upper Rhine. Port of Antwerp strategically located in the area of Western European. Based on the spatial continuity in a transport network, port of Antwerp can be classified into Ubiquity due to the strategic location and can be reach from any other location on the network connections. Therefore, port of Antwerp has a set of policy vision as IHP.

Policy Vision

A set of strategic policies has a function as a driver to port of Antwerp development. According to Martin (2010) argue that strategic policies set the direction and drive the way to do the vision of organization. The strategic policies of port of Antwerp are in the annual report. Therefore, the annual report of port of Antwerp from 2001-2013 emphasize of strategic policies related to economic growth and ecological sustainability

towards sustainable development. Port of Antwerp has a set of goals to become an IHP and explicitly can be seen in the annual report 2001-2013. For example, port of Antwerp want to added value for the city and region. Also, the goals are to strengthen the position of port competitiveness with high quality service and optimized infrastructure development (Annual Report, 2001-2010¹⁸).

Based on the goals and policy vision, it can be seen that port of Antwerp has desire in establish IHP with efficient and effective of port. Besides that, it is important to understand the stage of development to identifying time frame in establish an IHP.

Stages in the development of seaports

	Stage 1 (1870-1940)	Stage 2 (1946-1970)	Stage 3 (1970-1995)	Stage 4 (1987-1999)
Fundamental development	Rise of trade	Industrialization	Globalization	Informatization
Main functions of the port	Cargo handling storage	Cargo handling storage	Cargo handling storage	Cargo handling storage
	Trade	Trade	Trade	Trade
		Industrial manufacturing	Industrial manufacturing	Industrial manufacturing
			Container distribution	Container distribution Logistic control
Dominant cargo flow	General cargo	Bulk cargo	Containers	Containers+data
Spatial scale	Port city	Port area	Port region	Port network
Role of port authority	Nautical services	Nautical services	Nautical services	Nautical services
		Land and infrastructure	Land and infrastructure	Land and infrastructure
			Port Marketing	Port Marketing Network management

Table 2 Stages in the development of seaports

Source: (Loyen, 2002, p. 145)

In the table above shows about the time of stage in establish an IHP since 18th century to 19th century. In the stage 1, port of Antwerp has not become an IHP. But, in the stage 2, port of Antwerp has struggling towards an IHP with industrial revolution. After that in the stage 3, port of Antwerp has become an IHP. It needs around one century to become an IHP from 1870-1970. Port of Antwerp has several successful factor in towards an IHP and passed through each stage.

¹⁸ Based on Authors analysis and compiled the annual report from 2001-2010.

Successful Factors

Port of Antwerp has several factors, which play a key role in establish an international hub port can be classified into several point such as¹⁹:

1. Strategic location

Port of Antwerp has been existed as IHP since 12th century because of strategic location of this port located in the heart of Europe. Many big companies have chosen port of Antwerp as central location in the industrial heartland of Western Europe. Petrochemical industries are the example of big companies. This makes stable of condition and growing cargo offer.

2. Connections

Port of Antwerp has a good links connection with hinterland area in the worldwide. It is more than 500 direct destinations in the world. Furthermore, port of Antwerp has many connections to many companies not only in Europe but also in the world.

3. Accessibility

Good hinterland connections available in the port of Antwerp such as railways, roadway, barges and pipes.

4. Facilities

Port of Antwerp provides high technologies to support port activity to become efficient and effective such as all-weather terminal to loading and unloading of goods in all weather conditions and plenty of handling capacity.

5. Human resources

Port of Antwerp has many experienced and knowledge of human resource as a high productivity.

6. Partnership

Port of Antwerp has provided the opportunity to private companies. This leads to efficient and effective of discharge and load of goods in the port.

7. Services

Services in this case are refers to the high quality of service to hinterland area. Therefore, port of Antwerp as the multifunctional port related to the services of the different companies as to support each other. Port of Antwerp as interplay of transshipment companies, industry and logistic companies.

8. A value added

This refers to environmental value, which balances with infrastructure development towards sustainable development.

Generally, port of Antwerp focused on vision to added value for city and region. Also, to strenghten the ports competitiveness with quality services and optimised

¹⁹ Look at www.portofantwerp.com

development of infrastructure. It can be seen from the existing of strategic policies as the way to implementation of vision.

The Existing of Strategic Policy

Port of Antwerp has a set of strategic policies to conduct the vision. The existing of strategic policy leads to the typical of strategic policy in establish an IHP based on the annual report. Here the summary of the existing of strategic policies in port of Antwerp.

Strategic policies based on annual report 2001

- Port of Antwerp focused on infrastructure development such as develop a cruise terminal.
- In term of hinterland, port of Antwerp has added a new traffic route to Australia in export sector.
- Port of Antwerp trying to strenghten the position specific in European countries.
- Expansion investment with developing joint system for future oriented
- Modal split of transport system are a pivotal part to support port activities.
- Port package

Port package refers to European Commision has issued a draft directive regarding liberalisation of port service to address monopoly issued. Port of Antwerp has guarantee the right of enterprise in the field of port of service such as pilot age, tonage, handling of goods, mooring and unmooring as also passenger services.

Strategic policies based on annual report 2002

When the economic crisis hit European countries, port of Antwerp survive and struggle through the crisis. The summary of strategic policies has similarity with previous year such as:

1. Added value
2. Deregulation of port services
3. Industrial relations
4. Collaborations with private sector
5. Accessibility and the port
6. Hinterland connections
7. Environment
8. Infrastructure development

Strategic plan and a land use plan for each port area lies in the Flemish government within a period of two years. The strategic plan have several goals such as maximum protection of the surrounding residential areas and must maintain and reinforce the ecology infrastructure inside and outside the port area (Annual report, 2002. Pp.47).

Strategic policies based on annual report 2003

Port of Antwerp has similarity vision with previous years. But port of Antwerp has focused on full support and cooperation of the employees.

Strategic policies based on annual report 2004

Port of Antwerp has similarity vision with previous year. However, in this year port of Antwerp has made the concession policy on the left and right bank, renovation of the Delwaide dock and windfarm expansion. Beside that, port of Antwerp has support for the sister port of Matadi in Kongo (pp. 23-24). Port of Antwerp made an agreement to repair and reorganisations the port of Matadi.

Strategic policies based on annual report 2005

Port of Antwerp has similarity vision with previous year. Therefore, port of Antwerp has become the third largest port in European after port of Rotterdam, Netherlands and port of Hamburg, Germany.

Strategic policies based on annual report 2006-2010

Port of Antwerp has similarity vision with previous year.

Strategic policies based on annual report 2011-2013

Although port of Antwerp has similarity vision with previous years, port of Antwerp focus on people and social towards sustainable development.

Based on organizations structure of port of Antwerp, the strategic policies can be classified into several points such as²⁰:

No	Classified	Strategic Policies
1	Economy	- added value with provides employees
2	Environmental	- collaborations with environmental organisations - windfarm expansion - air quality management - energy policy
3	Transport Connection	- modal split (railways, barge, pipelines, roadway) - increasing accessibility such as deepening and dredging on Scheldt water ²¹
4	Infrastructure development	- concession policy - involve private sector

²⁰ Annual reports from 2001-2013

²¹ Scheldt water is the only access to the port of Antwerp. The position of Scheldt water is in Netherlands country, therefore port of Antwerp made an agreement of MoU of Scheldt water.

		- construction of left and right bank of port
5	Hinterland	- support the other port - increasing collaborations and make an agreement with the other ports in the world
6	Internal Port	- Deregulation of port services ²² - Well supported personel policy (reliability, transparancy, respect, innovation, customers orientation, and collaboration)

Table 3 the Existing Strategic Policies of Port of Antwerp

Source: Compiled from Annual Report (2001-2013)

As historically, port of Antwerp has become as IHP since 12th century. Port of Antwerp was a river port to IHP. But, it was no longer as IHP after Spanish blockades the Scheldt water as the sole to port of Antwerp. Port of Antwerp returned into inland port. After World War II, port of Antwerp returned becomes as IHP due to the Marshall plan²³. Petroleum and Chemical industries has chosen port of Antwerp as a good investment area. These industries were not come automatically (Loyen, 2002, pp. 51-52). There are two reasons of these industries to invest in port of Antwerp as follows: interfering of Benelux²⁴ and EC (European Economic Community). The establishment of Benelux and EC has brings many advantages to market access such as the deletion of tariffs and propose new trading possibilities.

Regarding to establishment of EC due to strategic location, a good social climate and low wages from Flanders to multinationals. In additions, expansionist legislature of the late 1950s brings the foreign investments to new growth sectors. Belgian economy policy has been created a mixed economy. This leads to the government to establish some policy such as: Industrial renewal; social; fiscal policy refers to new taxes and cuts in public expenditure to balance the budget and the last is modernization of infrastructure such as expansion of port. Parliament agreed to develop infrastructure development in the port of Antwerp on 1956. (Loyen, 2002, pp. 51-54).

Besides that, hinterland areas of port of Antwerp are international trade. Port of Antwerp depends on the national hinterland for economic reason. There are growth of intra-industry trade as the simultaneous export and import of products. This brings to specialization of industry and increasing international trade of port of Antwerp hinterland. These industries located on Western European countries. In order to support the international trade, port of Antwerp has started to provide some infrastructure in

²² Towards effective and efficient.

²³ Marshal Plan refers to a program to rebuild Europe due to the postwar II From United State (Hogan, 1989, hal. 18).

²⁴ Benelux refers to Belgium, Netherlands and Luxemburg.

terms of accessibility such as modal split (truck and pipelines) (Loyen, 2002, pp. 55-56). This leads to partnership as the strategic policy plays in establishing networking.

Partnership as the Strategic Policy

The network of port of Antwerp plays an important role in establishing an IHP. Port of Antwerp uses partnership to develop networking. For example, in the table below shows about cooperation between stakeholder which used in the mainport such as port of Antwerp and port of Rotterdam. Cooperation is one example of partnership. Port of Antwerp emphasizes the importance of cooperation with all segments of the market especially to improve the infrastructure facilities in the port. The level of cooperation are negotiation, agreement and collaboration with stakeholder involved.

For example, port of Antwerp has some collaboration with private sector were present at the intermodal trade fair in Sao Paulo as Transport Munchen, Germany (Antwerp, Annual Report , 2001, p. 27). Furthermore, port of Antwerp also provided collaboration with hinterland port clients such as the Belgian Office for foreign Trade. Also, port of Antwerp participated in a trade mission to Japan and South East Asia. All of them organized to discussing projects and various forms related collaboration with ports of other countries.

Furthermore, port of Authority assisted the President of the Federal Republic of Nigeria, Olusegun Obasanjo in July 2001 in welcoming prominent visitors. In additions, port of Antwerp always increases hinterland area beside in collaboration agreement with: APEC and AMARIS. APEC is Flanders Port Training Center refers to seminars, tailor-made and study visit. On the other hands, Amaris is related to Antwerp information technology to developing and implementing specialized shipping application related to supported port activities.

Port of Antwerp has increasing of hinterland area with participated in economic mission to Libya, the UAE, Oman and Congo (Antwerp, Annual Report, 2002, pp. 22-24). In addition, port of Antwerp has been successful in royal mission to China in November 2002. Also the collaboration has been reached to Canada with export Flanders and Alfa port Antwerp. This collaboration visited Montreal and to New York where the port Authority along with port of New York/New Jersey has been built a friendship award from the Belgian American Chamber of Commerce.

Furthermore, port of Antwerp has existed in the trade fairs on all continents such as Logistic Forum in Duisburg, SITL in Paris, RoRo in Goteborg, Intermodal South America fair in Sao Paulo, the FIATA world congress in Sun City, South Africa, the Transport & Logistics forum in Venlo, the Trans Libya exhibition and the Break-bulk conference in New Orleans. Also port of Antwerp participated in the initiative to sound out a number of new markets and exhibitions, including among others the Trans Russia transport and

logistics exhibition and the first Transport Logistic China exhibition in China. Finally, Port Days were organized in Basel, Duisburg and Vienna in collaboration with Alfa port Antwerp.

In addition, port of Antwerp is not active joined with seminars, trade union, and organizations but have a collaboration agreement to port of Matadi (Kongo) in November 2003. Port of Antwerp undertook to help the Congolese government in repair and reorganization the port. The importance of cooperating with the government and other ports are to improve the provision of maximum capacity at the port. Port of Antwerp has maintain to become an integrated network with modal split. Furthermore, security, safety, reliable and transparant are important part that should be have as an international hub port.

Nowadays, port of Antwerp focuses on multifunctional port that means everything is possible in port of Antwerp. The possibility of port of Antwerp to cope with increased demand but still maintain the environment. In the table below, it show the partnership between port of Antwerp and port of Rotterdam.

Market Players	Shipping Companies	Stevedores	Hinterland Transport	Port Authorities
Shipping Companies	<ul style="list-style-type: none"> - Vessel sharing agreements - Joint venture - Conferences - Consortia - Strategic (global) alliances (e.g. grand alliance, new world alliance) - Cartel agreements - Mergers 			
Stevedores	<ul style="list-style-type: none"> - Financial stake of 	<ul style="list-style-type: none"> - Participation in capital 		

	shipping company in stevedore			
	- Joint ventures (e.g. Hessenatie in Antwerp)			
Hinterland transport modes	- Block trains and capacity sharing	-Joint ventures (e.g. in Antwerp between NMBS and Noordnatie for operating of a terminal)	- Takeover strategy of railway companies (e.g. cargo companies)	
Port authorities	- Dedicated terminals (land use and concession policy)	- Financial stakes port authorities (e.g. 30% ECT by Rotterdam, ECT in Trieste, Searo in Zeebruges)	- Antwerp in Rijn shipping terminal of Germersheim	- Alliances (e.g. Rotterdam and Vissingen, Antwerp & Zee bruges)

Table 4 Cooperation between Various Markets

Source: de Goey, 2004, pp. 105

After identifying the existing strategic policies, it is important to identifying institutional factor as the actor in establish an IHP. Institutional factor plays a key role as an actor to implement the strategic policy.

Institutional Factor

As institutional model, port of Antwerp is the municipal port, which administered by a private company with public participation under the supervision of the Flemish Community. Port of Antwerp consists of the municipal authorities that run the port and the municipal council elects a Port Director (Chlomoudis, 2002, p. 30).

Beside that for the financial resources, the state is responsible for decisions and investment related to the infrastructure and shipping support facilities outside the port, including port access facilities and the use in in the municipal authorities or port authority. Port authority plays an important role in the port of Antwerp due to the responsible of using the facilities, investment inside the port and with regional participation as high as 60-80 % (Chlomoudis, 2002, p. 33). Related to the fiscal

arrangement, port of Antwerp has the main revenue from port dues, which calculated as a function of tonnage on the basis of the international standards of tonnage measurement. It is applicable to the payment of ships to moor, use of any locks and undertake commercial operations. In advance of the dues, an extra charge is formed for specific services of for the use of land areas in the port (Chlomoudis, 2002, p. 35).

Port activities involved various stakeholders from port to port. The state provides the pilotage service at sea and in the estuaries. Also the port authority provides other services such as ship handling with significant exceptions involving the private sector. On the other hand, private sector as administer the provision of services to moored ship and related to cargo activities (Chlomoudis, 2002, p. 37). It is about 900 private enterprises involved in superstructure and terminals for instance include chemical industry complexes until small scale ships agencies.

Related to dock working, it is included in the category of human resources with qualified Dockers. It is arranged by the law especially for suitable workers and employers delays with issues come in the port. The Dockers are employed by the port undertakings by the day and work under a special benefit system in the port.

The Antwerp Port Authority plays an important role in the day-to-day operation of the port. Its 1,650 employees ensure the port functions and is able to grow. The Port Authority manages and maintains the docks, the bridges, locks, quay walls and grounds. It is also responsible for the safety of shipping in the docks, bridges and locks. The Port Authority provides tugs and cranes, carries out dredging work and promotes the port in Belgium and abroad. With a view to the future the Port Authority is working on the sustainable development and innovation of the port. The key actors of authority port are following (Antwerp, p. 2014):

- The Flemish department Maritime Access
- The Flemish Agency for Maritime Services and the Coast
- The federal Customs and Excise Administration
- The Federal Agency for the Safety of the Food Chain
- The International Scheldt commission with members from the Netherlands, Belgium and France
- The federal Shipping police

Besides that, EU (European Union) policy has a big influence in establish port of Antwerp as IHP. For example, cooperation between ports due to the TENS (Trans European Networks). Port of Antwerp can be classified into four groups such as staff services (secretarial, personnel, legal affairs, finances, management port dues, concession management, promotion and canvassing, communication, research and statistic); Operational Organizations, maintenance and services; infrastructure; harbor masters

services with police powers. The actors have responsibility to make sure all goes well include accessibility, safety and ecological sustainability of the port of Antwerp.

Strategic Policy in Port of Bitung, Indonesia

Port of Bitung located in Indonesia as an archipelago. This section will explain about background, position, current condition, stakeholder and strategic policy of port of Bitung. However, it has been providing of service for foreign ships to transit the port (KP3EI, 2014). Port of Bitung can be classified into ubiquity because located in a strategic position, which any other location on the network connections can be reach to the port.

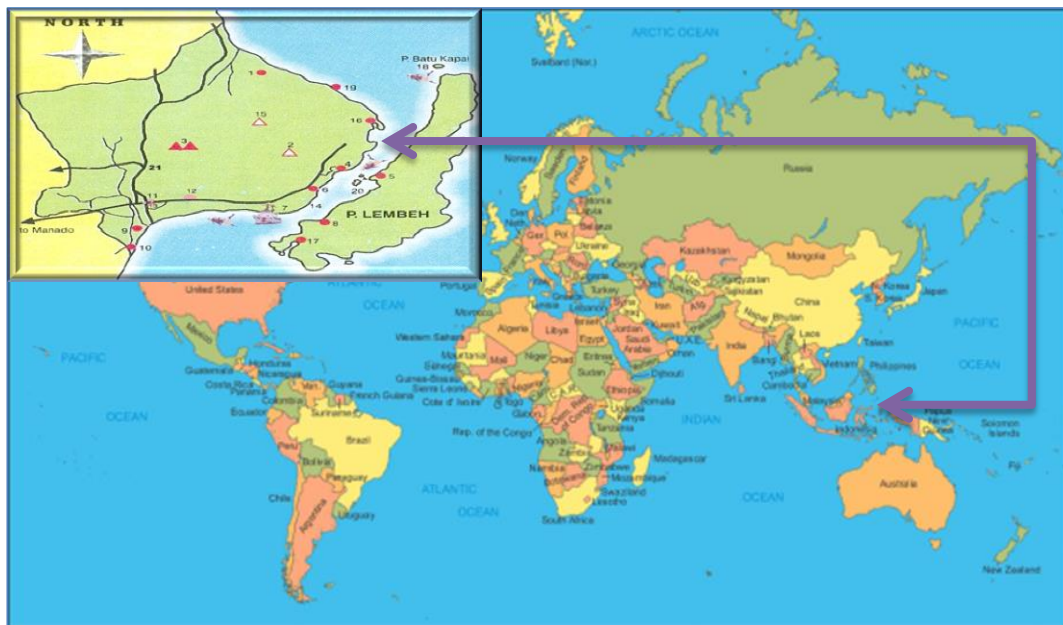


Figure 11 Position of port of Bitung in the World
(Source: www.flickr.com; www.geology.com)



Figure 12 Port of Bitung as a Harbor City

Source: The Ministry of Transportation²⁵

Port of Bitung has supportive of cruise activities both domestically and abroad that consists of passenger and container ports. This port is a big port in North Sulawesi that stop off and landed by passenger vessels between major cities in Indonesia. The port of Bitung has a travel time about 45 km from Manado (North Sulawesi Capital) and a toll road is currently being rebuilt between Bitung and Manado.

Background of The Issue about Hub Port in Indonesia

According to Vier (2010) the movement of container traffic which flow to Asia will increase rapidly from 55 % of the world total in 2002 to 64 % in 2015. Indonesia is one of Asian countries which are affected to the movement of container traffic. Indonesia is an archipelago that consists of five large islands and thousands of small islands which are connected each other through the ship as the main transportation. Indonesia is located in strategic position between the Pacific Ocean and the Indian Ocean. Currently, Indonesia has a national port which is connected to the port of Singapore as a global hub port. Generally, the shipping lines of abroad route are through port of Tanjung Priok where located on the Java island. It causes the development and economic system centered on the Java Island, western Indonesia.

Therefore, the economic gap happened between some of the islands in Indonesia because of the centralizations of transportation development on the Java Island in

²⁵ Look at www.dephub.go.id accessed on 7 August 2014.

western Indonesia. This centralization causes lack of logistic distribution especially in Papua, eastern Indonesia. Indonesia already has 25 major ports as described in the table below (Susantono, 2010), but none of them has the ability as a hub port due to the lack of supporting infrastructure and facilities.

No	Major Ports	No	Major Ports
1	Lhoukseumawe Port	14	Tanjung Perak Port
2	Belawan Port	15	Banjarmasin Port
3	Dumai Port	16	Kupang Port
4	Tanjung Pinang Port	17	Beno Port
5	Pekanbaru Port	18	Samarinda Port
6	Batam Port	19	Makassar Port
7	Teluk Bayur Port	20	Balikpapan Port
8	Panjang Port	21	Bitung Port
9	Palembang Port	22	Biak Port
10	Banten Port	23	Jayapura Port
11	Tanjung Priok Port	24	Ambon Port
12	Pontianak Port	25	Sorong Port
13	Tanjung Emas Port		

Table 5 Major Ports in Indonesia

Source: Susantono, 2011.

Port of Tanjung Priok is the biggest port of size and service in terms of IHP as national port in Indonesia. It is located in western Indonesia. It causes an unbalance of economic growth between eastern and western Indonesia. To address this issue, The Ministry of Transportation as National Government made cooperation to the other Government Ministry level. They made a master plan to strengthen the connectivity of transport system in Indonesia. One of the master plan is a much needed hub port to increase economies scale of eastern Indonesia. Despite of that, a hub port is required to connect the eastern and western Indonesia. Also as a gateway port to eastern Indonesia is needed (KP3EI, 2013). Indonesia is the world largest country of archipelago. As an archipelago, sea transport plays a key role for inter-island connection and distribution of commodity. Indonesian has established economic master plan MP3EI to increase the community welfare in the eastern Indonesia due to the lack of national distribution logistics system development which is concentrated in western Indonesia. In addition, the sea transportation also can also equalize and stimulate the economic growth not only in Indonesia but also in the other country. Regarding to the weakness national logistics

system, Indonesian government has decided to build a hub port based on the following reasons, (KP3EI, 2013):

1. Port of Batam is not functioning optimally due to the location is close to the port of Singapore.
2. None of the existing 25 major ports is sufficient for being a global hub port due to the lack of infrastructure and facilities supporting locations.
3. The port of Tanjung Priok and the port of Tanjung Perak as the main ports in Indonesia are experiencing over-capacity.

The port of Bitung as one of the gates in North Sulawesi province and the center of economic activity that serves as service providers has an important role in the development of Eastern Indonesia. Furthermore, the port of Bitung has been chosen as International Hub Port in eastern Indonesia because of a variety of considerations as follows (KP3EI, 2013):

- Much of integrity of the carrying capacity of the social, economic and ecological recorded of satellites in eastern Indonesia, it means that the potential for developing more towards to eastern Indonesia.
- From the satellite record it is well known that the attention of the world leads to a resource in eastern Indonesia has rich untapped resources because the development is centered in western Indonesia.
- Economic growth in eastern Indonesia tend to grow far higher than in western Indonesia because in the Java ecological carrying capacity limit economic dynamics;
- The dynamics of logistics in eastern Indonesia is expected to grow exponentially.

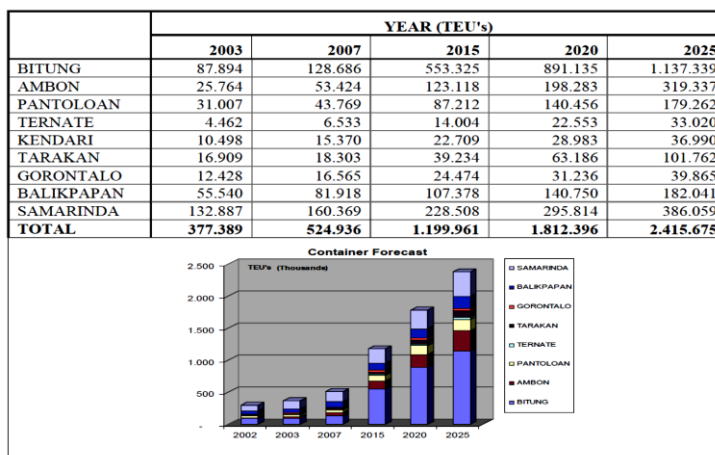


Figure 13 Container Forecast at Bitung, Balikpapan, Samarinda, Ambon, Pantoloan, Ternate, Kendari, Tarakan, Gorontalo

Source: (Prasetyadi and Widiyanto, 2004)

Regarding to Sugimoto (Sep 2007- Mar 2008), port of Bitung is considered potential to become an international hub port due to the several factors such as the geographical location positions, hinterland and demand. However, it is not easy to build the port of Bitung as an international port due to various factors such as the readiness of the region, infrastructure and port management system. Therefore, it is indispensable to establish strategic policy to raise the port of Bitung as a hub port.

The port of Bitung also has a favorable geographical location, as a natural harbor sheltered by the island and the Lembeh has a length of 9 flow miles, 600 meters wide with a depth of 16 meters and a vast pool of 4.32 hectare. It allows large ships to safely berthing. In addition, the port of Bitung is located between two continents (Asia and Australia continents) and two oceans (the Pacific Ocean and the Indian Ocean). This strategic location makes it close to a major port in Asia Pacific region on the trade route especially international sea transportation network from the world such as Singapore, Manila, Kaohsiung, Pusan, Kobe, and Honolulu as well as other big cities (MP3EI, 2013). The strenght of port of Bitung such as, located directly alongside the Pacific Ocean, natural port, suitable infrastructure and superstructure available and also located in Indonesian Navigation channel (Tongzon, 2009).

Current Condition

National plan such as MP3EI and a Ministerial decree which the formation of Bitung port that will be used as a hub port. The following are the conditions that exist in the port of Bitung:

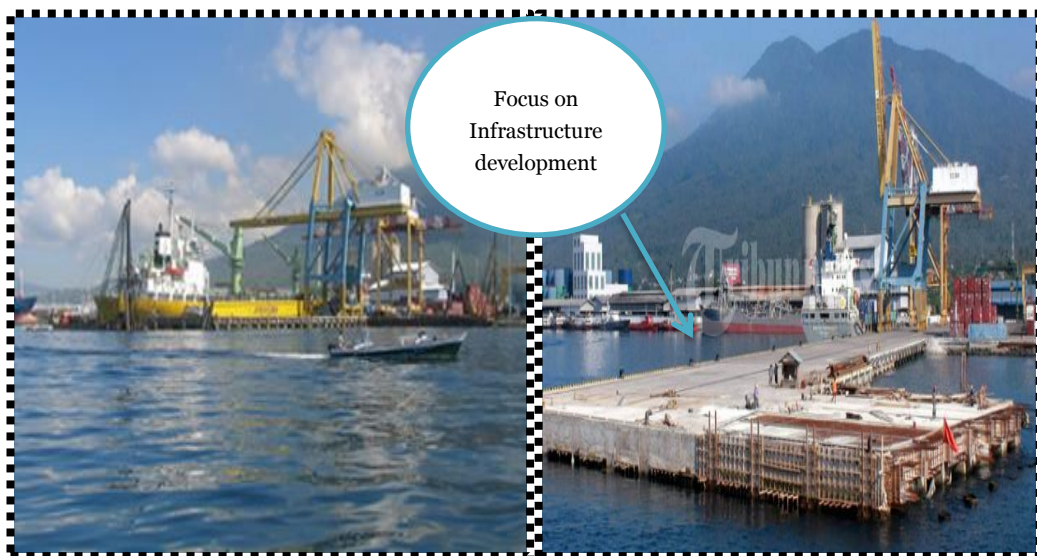


Figure 14 The Existing of Infrastructure

source: www.nakedeyeview.com.my; www.tribunnews.com



Figure 15 Passenger Terminal of Port of Bitung
 Source: www.bacatransportasi.com



Figure 16 Port of Bitung as a Natural Port
 Source: www.diverslodgelembek.com

The Existing of strategic policies

Due to the planning tradition in the port of Bitung which has comprehensive planning, national plan such as the Ministry of Transportation plays a key role of strategic policies towards a hub port. MP3EI is a product of National plan to promote port of Bitung as international hub port. The strategies policies of MP3EI are (Susantono, 2010):

1. Develop Indonesia economic corridors
 Based on the background of IHP in Indonesia, to stimulate economic growth of Eastern Indonesia and integration of transportation multimoda. A hub is needed in Eastern Indonesia and port of Bitung has chosen as a hub in Eastern Indonesia.

2. Strengthen national connectivity
The presence of hub port will able to strengthen national connectivity of Indonesia. Based on hub concept, hub port is one of integrated system.
3. Accelerate ICT (Infrastructure Communication Technology)
Information technology is one of important to promote port of Bitung as international hub port because ICT can accelerate the process of hub development. It makes a hub to be efficient in the process of information exchange.

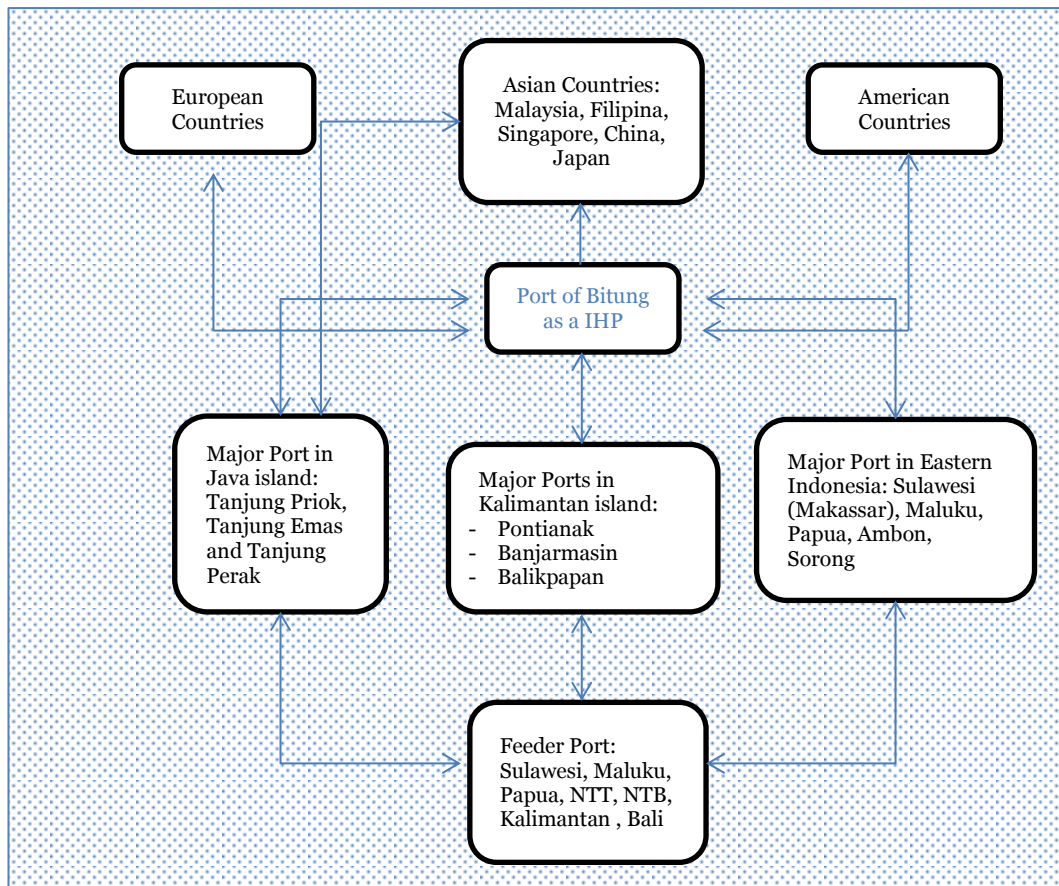


Figure 17 A Structure Network of National Port in Indonesia
Adapted: Susantono, 2011

In the figure above, it is described about structure network of national port with the presence of international hub port. The structure will function as an integrated transport between hub and spoke which port of Bitung as a hub and the other major port as the spoke. Masterplan of National Government such as the layout to develop port of Bitung as international hub port is a part of this structure network to supported of potential cargo growth from the spoke.

Institutional Factor

Stakeholders play an important role in strategic policy. The following are the stakeholders who play a role in development as an international hub port of Bitung:

1. The Ministry of Transportation as National Government who issuing regulations and policies such as the master plan for the development of IHP.
2. Indonesian Port IV as operator in the port
3. Port of Authority as regulator in the port
4. Customs
5. Police

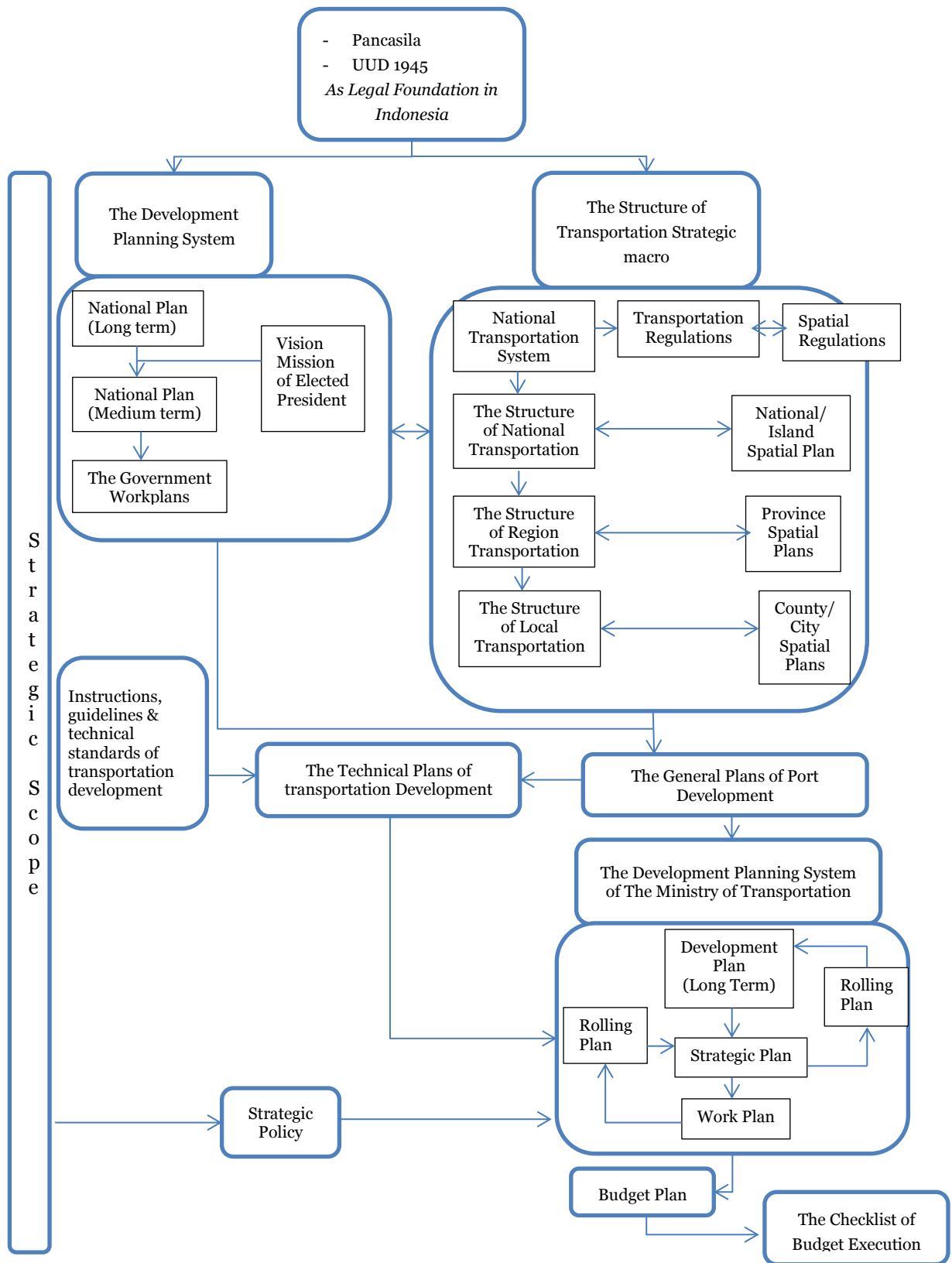


Figure 18 the Position of Strategic Policy in Indonesia Government Plan
Source: The Ministry of Transportation²⁶

The strategic policies lies in work plan in the Ministry of Transportation to port of Bitung Authority as illustrated on figure 20. The strategic policies are the outcomes of strategic plan. Therefore, this research focused on the strategic plan and annual report from port of Bitung. Based on annual report of port Authority and strategic plan of the Ministry Transportation from 2010-2014, the summary of vision and mission as follows:

"Realization of Reliable Transportation Services, and Highly Competitive in Provide Added Value. (strategic plan 2010-2014;pp. III.1)"

In the table below shows port of Bitung focused on infrastructure development due to the need of infrastructure as a developing country. Here the summary of the existing of strategic policy in the port of Bitung.

No	Classification	Strategic Policies
1	<i>Safety</i>	<ul style="list-style-type: none"> - <i>Increasing safety with provide a good facilities in the ships</i> - <i>Routine examination of certified vessel in the port</i>
2	<i>Infrastructure Development</i>	<ul style="list-style-type: none"> - <i>Masterplan of implementation of a high technology (ICT) in the port</i> - <i>Expansion of quays</i>
3	<i>Accessibility</i>	<ul style="list-style-type: none"> - <i>Increasing of insfrastructure (construction of highways from and to the port e.g. highway from and to manado city)</i>
4	<i>Human resources and institutional reform</i>	<ul style="list-style-type: none"> - <i>Improvement of human resources with training and knowledge</i> - <i>Institutional reform with provide a high quality service 24 hours/7 days</i>
5	<i>Environmental</i>	<ul style="list-style-type: none"> - <i>Implementation of environmental friendly transportation</i>
6	<i>Hinterland area</i>	<ul style="list-style-type: none"> - <i>Masterplan of economic eksklusif zone</i>

Table 6 The Existing of Strategic Policies of Port of Bitung
Source: Compiled from Strategic Plan (2010-2014)

²⁶ Translated from Strategic Plan of The Ministry of Transportation Indonesia

Concluding Remarks

In conclusion, both of the ports has similarities and differences. The similarities between ports is located in the strategic location and natural port. On the other hands, the differences are port of Antwerp has become international hub port with partnership and good in accessibility, infrastructure and support from the hinterland both locally, regional and international. On the other hands, the port of Bitung still on going process towards a hub port and still focused on infrastructure development. To sum up, the comparison between port of Antwerp and port of Bitung based on four aspects such as:

No.	Aspect	Port of Antwerp	Port of Bitung
1	The Existing of Strategic Policies	<ol style="list-style-type: none"> 1. Economy 2. Environmental 3. Transport Connection 4. Infrastructure Development 5. Hinterland area 6. Internal Port 	<ol style="list-style-type: none"> 1. Safety 2. Infrasructure Development 3. Accessibility 4. Human Resources and Institutional reform 5. Environmental 6. Hinterland area
2	The Typical of Strategic Policies	<ul style="list-style-type: none"> - Partnership with collaboration, agreement and cooperation - Integrated of Transport Connections 	<ul style="list-style-type: none"> - Focus on Infrastructure Development - Focus on Institutional Reform
3	Institutional Factor	<ul style="list-style-type: none"> - Port of Antwerp as Port Authority - EU Policy - Private Sector as Port Operator 	<ul style="list-style-type: none"> - The Ministry of Transportation as Regulator - Indonesian Port IV as Port Operator
4	Stakeholders	<ul style="list-style-type: none"> - Industrial Bussiness of Petrochemical - Shipping Liner - Bussiness Owner - Workers - Local Community 	<ul style="list-style-type: none"> - Industrial Bussiness - Shipping Liner - Local Community - Tourist - Resort Bussiness

- Tourist	- Nature
- Nature Conservation	Conservation of Diving Club
	- Fisherman

Table 7 Comparing of Strategic Policies between Port of Antwerp and Port of Bitung
Source: Author Analysis

Based on the comparison specific of the existing of strategic policies between port of Antwerp and port of Bitung founds that they was not same in the scale and the availability of strategic policies due to the port of Antwerp has been existing as IHP. In the other hands, port of Bitung needs a guideline in establish an IHP. Learning from port of Antwerp to port of Bitung. It is not easy to copy or adopt the policy due to the planning context, which describe in the next chapter.

CHAPTER V ANALYSIS OF POTENTIAL POLICY STRATEGIES

Introduction

This chapter contains the analysis of potential policy strategies on International Hub Port, which is possible to be transferred and adapted from port of Antwerp context to the port of Bitung and identifying the challenge. It is not easy to transferring the policy instrument due to planning culture context. Planning culture context will described in terms of lesson learned.

Lesson Learned

Lessons can be used in a number of ways and for a variety of reasons which supporters and opponents of various policies use lessons selectively to gain advantage in the struggle to get their ideas accepted (Dolowitz, 1996). Rose argues in (Dolowitz, 1996) that, “Every country has problems, and each think that its problems are unique”. We can learn not only from the successful but from the failed to have the lesson learned why its become failed. What is policy transfer? Who transfer policy? Why it is important and what is transferred?

1. What is policy transfer?

(Dolowitz, 1996) says that “Policy transfer is the process in which knowledge about policies, administrative arrangements, institutions etc in one time and/or place is used in the development of policies, administrative arrangements and institutions in another time and or place”.

2. Who transfer policy?

As (Dolowitz, 1996) points out that there is six main categories of actor involved in policy transfer although in any specific case of transfer more than one category such as elected officials, political parties, bureaucrats/civil servants, pressure groups, policy entrepreneurs/experts and supra-national institutions.

3. Why it is important to do transfer policy?

There are 3 reason why its become important such as (Dolowitz, 1996):

1. Voluntary transfer

Its means that the primary of catalyst of voluntary transfer is some form of dissatisfaction or problem with the status quo. Supporters of the dissatisfaction model presume that when governmental policies are functioning properly there is no need to search for lessons; everything can operate through establish routines. Only when routines stop providing solutions is it necessary to search for lessons.

2. Direct coercive transfer

The most direct method of coercive policy transfer is when one government forces another to adopt a policy. The direct imposition of policy transfer on one country by another is rare.

3. Indirect coercive transfer

This transfer emphasizes the potential role of the externalities, or functional interdependence, in indirect coercive transfer.

4. What is transferred?

The knowledge can be transferred such as, goals, content, instruments, institutions, ideology, ideas and concepts (Dolowitz, 1996).

According to transfer policy, it cannot be transferred as a whole depends of degrees level of transfer such as, (Dolowitz, 1996):

1. Copying : none or less contact
2. Adaptation : adjusting for contextual differences
3. Hybridization : combining recognizable elements from different policies
4. Synthesis : combines elements into a distinctive new whole
5. Inspiration: a new approach, not a single transfer (often uncritical).

The lesson learned context is not an easy task to do due to the planning context between two countries can be different. It needs analysis of planning context before transfer policy.

Analysis

Based on the strategic policy in the chapter four as the findings, this research will answer the questions whether the strategic policies can be transferred or not. As the research objective refers to strategic policy as an instrument to port of Bitung learning from port of Antwerp. Port of Antwerp and port of Bitung in the local level. On the other hand, strategic planning of port of Antwerp lies to Flemish Government as national government. Also, the Ministry of Transportation as national government in the port of Bitung. This transfer can be categorized as direct transfer due to port of Bitung been chosen based on policy directive from National Government. In addition, the policy transfer can be categorized as hybridation and synthesis in terms of degrees level of transfer due to the different planning culture.

Planning System in the Western European

Western European has similarity in each country, which has become as a member of European Union. It is necessary to look at the history of transport planning in Western European who has similarity with the port of Antwerp as the basic knowledge.

Policy to 1995

Western European has a transport policy as a guideline to their members. The transport Policy (CTP) statement of 1992 (CEC, 1992b), one of the main themes was Trans-European Networks (TENS). The several problems regarding the incompatibilities between national transport systems are including inadequate interconnections, missing links and bottlenecks, and obstacles to interoperations. Based on these problems, EU played a limited policy role mainly through the Committee on Transport Infrastructure (set up 1978). The role was limited to financing feasibility studies, loan guarantees and interest rate subsidies. Furthermore, the EU had a main dilemma such as under investment in transport infrastructure but in the other side arguing for sustainable mobility and protection of the environment and this is need a focus of the transport policy. After that, the CTP become increasingly important due to the several “package deals” (Hey, 1996 in (Banister, 2002)) and focused on three element such as; efficiency of subsidies in the operations of transport system, stimulate the economic development specific in the peripheral regions and increasing of cohesion within Europe, and the last is about reduce the external impacts of environmental towards sustainable development. At that time from 1992-1995, the transport policy have a transition phase that bring an important changes in regulations especially in safety and environmental (CEC, 1995 in (Banister, 2002)).

Policy since 1995

The presence of a set of action plan from the Commission for 1995-2000 regarding to the three element of CTP, there was a significant transition in the focus of transport policy in the EU such as:

1. Improving efficiency and competitiveness of the transport system was focused to the liberalizing market access, integrated transport system across Europe, ensuring fair and efficient in price specific in marginal social cost pricing and add to the balanced and sustainable of social dimension in all of EU.
2. Improving quality in response to the needs of EU citizens which focused on three areas such as; safety in all sector of transportation, increase of sustainable forms of transport to limit the impact of climate change, and keep the high quality of transport services with participation of stakeholder involved.
3. Improving external effectiveness with agreement of negotiation with some accession countries.

After all, EU Draft Transport Policy document (CEC, 2001 in Banister, 2002) that focus on sustainable development, which switches to decoupling transport growth from economic growth. Regarding to a balanced between transport modes and the pressure to the environment.

In summary, transport is seen as part of a wider social policy where focus on allocate efficiency than cost efficiency such as in Netherlands, Germany and France. The planning traditions in the Western European plays key role to decide the transport policy, which focus on sustainable development.

History of Port of Antwerp (Port of Antwerp, 2014) “From River Port to International Seaport”

The port of Antwerp has become an international port since the 12th century. The 16th century was height of glory for the port of Antwerp since it managed to become an international hub with has many hinterlands such as the England, Germany, Spain, Portugal and Morocco. When the Spanish took over and block the Scheldt as the only access to the port of Antwerp, the port no longer functioned as a hub. “1800-1930”, the industrial revolution under the leadership of French and reactivate the Scheldt became heart of England. “1930-1970”, the Second World War affects all activities in Antwerp and marshal plan brought the port became port of Antwerp Europe’s biggest chemical cluster up to now. “1970-2000”, port of Antwerp started to expansion begins to the left bank of the Kallo lock and the canal that connects the Wasasland Vrasene dock and Venebroek. “2000-2010”, the port of Antwerp concerned to economic and ecological towards sustainable development. 2010-future, the port of Antwerp continues to develop on the left bank to anticipate in increase of traffic and ships.

Planning System in Indonesia

Indonesia as a developing country has a system of planning influenced by neoliberalism (Hudalah, 2007). Indonesia as a unitary form of government has a central government from national to local level, making laws and setting policies. In 2001, there is a shift from a centralized to decentralize structure. The central government has shared the power into the local level. Furthermore, Indonesia has adopted the integrated comprehensive approach. A central government has the main role to decide the rules into local area. The characteristics of planning system in Indonesia Planning can be describe as follows; a systematic and formal hierarchy of plans from national to local level (centralization); there is a coordination between local to the national level as decentralization system; Indonesia as a pluralistic culture along the islands has unclear role and rules for example in public investment and the implementation of the rules; and inequality of the economic growth.

In the planning transport, national level plays a main role to decide the vision and mission of infrastructure development. The central government in Indonesia has created Mp3EI to have connectivity of transportation in Indonesia. The goal of MP3EI is about have one connectivity to stimulate the economic growth in Indonesia with increasing infrastructure development and optimalization the existing of infrastructure.

Concluding Remarks

No	Context	Port of Antwerp	Port of Bitung
1	Potential strategic location	- Located in a Strategic position	- Located in a Strategic position
2	Historical Background as IHP	- From river port to IHP due to the rise of international trade	- Based on policy directive as IHP
3	Planning Cultures	- Top Down planning Approach (from National Government level to local level)	- Comprehensive integrated planning approach (Top down approach and bottom-up approach)
4	Institutional factors plays a key role in strategic planning	- Flemish Government (National Government) - Port of Antwerp	- National Government (The Ministry of Transportation) - Port of Bitung
5	Implementation of policy instrument	- Port of Antwerp	- Port of Bitung and Indonesian Port IV
6	The Dominant Strategic Policies	- Focus on partnership such as collaboration with hinterland area	- Focused on infrastructure development such as port facilities (e.g. crane, expansion of port)

Table 8 the Differences and Similarities between Port of Antwerp and Port of Bitung
Source: Based on Author analysis

IHP derives of hub and spoke concept. It is about how to manage the networking. Based on theory Wolters-Noordhoff (1997, hal. 67-68) argued partnership plays a key role in establish an IHP. Regarding to become an IHP, it needs an hinterland area to support the hub. Port of Antwerp as a guideline in establish an IHP. Port of Antwerp has more than 500 direct destinations in the world as hinterland. It proves that port of Antwerp can be as a guideline to port of Bitung. Furthermore, partnership plays a key role to set port of Antwerp as IHP.

Based on lesson learned context, planning culture is important to identify the level degree of transfer policy. Planning context in port of Antwerp has a different culture than port of Bitung. Port of Antwerp has a top down approach in institutional government. It means that central government plays a key role to transfer the policy. On the other hand, port of Bitung has a comprehensive planning culture (mix of top down approach and bottom-up approach). However, strategic policies lies on central government level. To sum up, partnership can be transfered to port of Bitung due to the similarity of institutional government to implement the strategic policies. It is possible to transfer the policy to the level of hybridization and synthesis which involve combining elements of policies and modify according to the conditions of port of Bitung.

Planning context in Indonesia based on cultural diversity (Javanese-outer islands) which have some characteristics such as patriarchal politic structures, overcoming colonialism and underdevelopment (lack of infrastructure) and from unitary state to decentralized structure. On the other hand, modernization in planning practice against a legacy of comprehensive planning due to the lack of legal force and also local land use management. While planning context in Belgium is a comprehensive structure plan with characteristics of politicized planning culture, individualism and ribbon development.

The factors constraining policy transfer is a long bureaucratic system specifely in permit system from local to national level. The occurrence of overlaps government regulations of fellow bureaucracy. This inhibits partnerships business climate. This is becoming a barrier to implement the policies. On the other hand, lack of human resources and technology can impede the transfer policies. It needs to “*break through administrative borders to successful of transfer policy*” (Wolters-Noordhoff, 1997).

The last question of transfer policy according to Dolowitz (1996) is about the gap between literature and practice. According to Rietveld (1989) said that infrastructure plays an important role in improving regional economic growth which leads to a higher productivity of private production factors. On the other hand, partnership as one of strategic policy plays an important role in establishes an IHP.

CHAPTER VI CONCLUSION & RECOMMENDATION

“Increased accessibility does not automatically lead to economic growth (for example, Vickerman et al., 1999) however it is not known under which conditions an increase of accessibility leads to positive impacts and which conditions may cause negative impacts” (Van Geenhuizen, 2012).

Introduction

This chapter consists three sub chapter such as conclusion, recommendation and reflection. This research underlined five important point as follows: firstly, the background of the typical of strategic policy in establish an IHP; secondly, literature review to identifying the basic theory of IHP concept; thirdly, the methods of this research; fourthly, the existing of strategic policy as the research findings and the lastly is potential of strategic policy as the lesson learned. The first, second and third point will described in conclusion. Recommendation will described related fourth point and identifying the barriers. Recommendation for next future will described in reflections.

Conclusion

Infrastructure development plays a key role to increasing economic growth. IHP is one of port development to make more integrated in transport system and increasing economic growth. IHP can leads to the efective and efficient in the structure networks. Traditionally, Government begin to increasing infrastructure to develop IHP. It is not sufficient and needs strategic policy. This leads to the typical of strategic policy in establish IHP is partnership between port due to the concept of hub and spoke. Related the typical of strategic policy, it needs guidelines as best practice. This research used port of Antwerp as best practice due to the unique of historical background.

IHP is one example of port development which have advantage to stimulate economies scale. IHP refers to a distribution center and requires the main factors that must be fulfilled to become a center port with has networking as an integrated. The characteristics of IHP are size and services. Size refers to freight and numbers of passengers in term of size. On the other hand, it needs a high quality to support transportation services in term of service. Many influence factors that must fulfilled to become successful factor in establish IHP such as external factor and internal factor. Otherwise, IHP derives from hub and spoke concept which focused on networking. A hub needs networking. This leads to strategic policy as the direction and drives the way to do the vision of organizations. Partnership as the typical of strategic policy in establish networking of IHP. Furthermore, institutional factor as the actors who set and implement

the strategic policy. This research emphasizes port of Antwerp and port of Bitung as the institutional factor plays a key role to set the direction.

This research uses literature review, comparative analysis and lesson learned due to the outcome refers to identifying the potential of strategic policy. First, literature review as the basic step to explore regarding the typical of strategic policy plays in establish an IHP. The existing strategic policy will leads to the typical of strategic policy. Second, this research compared between port of Antwerp and port of Bitung to identify the existing strategic policy and typical of strategic policy. The last is lesson learned due to the port of Bitung needs guideline in establish an IHP. Planning context is a vital part in the process of transfer policy.

Port of Antwerp “from river port to IHP” since 12th century. This port has a unique of historical background. Port of Antwerp located in a strategic location. This leads to port of Antwerp as IHP. Hinterland area can be classified as the spoke of hub. Hinterland area plays a key role in establish port of Antwerp due to rise of international trade in the stage 1 (1870-1940)²⁷. Colonialism brings port of Antwerp as inland port since Spanish blockade the Scheldt water as the sole of access to the port. After that, port of Antwerp try to returned back into IHP. Through passed stage 2²⁸, port of Antwerp has returned back as IHP due to Marshall plan. After that, the big industrial of petroleum and chemical invested in the port of Antwerp. The investment of big company was not come automatically due to the interfering of Benelux and EC (European Economic Community).

The interfering of Benelux and EC brings advantages to market access such as deletion of tariffs and propose new trading possibilities. On the other hand, strategic location, a good social climate and low wages are the existing strategic policies from Flanders to multinationals. This leads to government in establish a set of policy of a good climate bussiness such as industrial renewal and fiscal policy (new taxes and cuts in public expenditure to balance the budget). After that, infrastructure development such as expansion port performed on 1956 such as expansion port of Antwerp.

Based on the data analysis of historical background, it shown that infrastructure development is not as the only one in establish IHP. It can be seen from the existing of strategic policies from 2001-2013 such as focused on increasing accessibility such as deepening and dredging on Scheldt water as the sole access to port of Antwerp; added value with provides employees; using of renew energy; increasing transport connection with provides modal split (railways, barge, pipelines, roadway); concession policy of land use; involve private sector in infrastructure development; construction of left and bank righ of port; support to the other port; increasing collaborations and make agreement

²⁷ Look at the stages of port development in the port of Antwerp.

²⁸ Look at the stages of port development in the port of Antwerp.

with the other ports in the world; deregulation of port services and well supported personnel policy.

This brings to the typical of strategic policy in establish an IHP. Port of Antwerp decided to have partnership with hinterland area. Industrial of petroleum and chemical as one example of partnership. The typical of strategic policy in the port of Antwerp leads to build up networking and partnership as the main role to develop networking. Collaborations, agreement and cooperation are the example of partnership. Based on data analysis of the existing strategic policies, port of Antwerp always increase the hinterland area. For example, port of Antwerp build cooperation with port of Rotterdam regarding Scheldt water located in Netherlands area as the sole access to port of Antwerp. Port of Antwerp make an agreement regarding Scheldt water.

In addition, port of Antwerp has some collaboration with private sector at the intermodal trade fair. Also it participated in a trade mission to Japan and South East Asia. Port of Antwerp has been reached to China, Canada, New York/New Jersey, Libya, the UAE, Oman and Congo to have collaboration in a trade mission. Port of Antwerp undertook to help port of Matadi (Congo) in repair and reorganization the port. These kinds of example leads to partnership as the typical of strategic policy in establish an IHP in the port of Antwerp. Based on literature review argued IHP derives from hub and spoke concept. Networking as the main role to develop a hub and partnership as the main role in strategic policy.

On the other hand, port of Bitung has been chosen as IHP based on policy directive of national plan. Port of Bitung located in a strategic position as a natural port. Port of Bitung has selected as a gateway and to stimulate economic growth in Eastern Indonesia. Due to the policy directive, port of Bitung focused on infrastructure development in establish an IHP. It can be seen from the existing strategic policies in strategic plan 2010-2014. For example, increasing safety with provide a good facilities in the ships; masterplan of implementation of ICT; expansion of quays; increasing of transport connections which focused on development of highway; improvement of human resources, institutional reform, implementation of environmental policy in transportation and masterplan of economic eksklusif zone as hinterland area.

Based on the research findings, partnership become the potential strategic policy to port of Bitung as lesson learned. However, this strategic policy can not easy to copied or adopted directly due to the planning culture context. Port of Antwerp has different planning culture with port of Bitung. Port of Antwerp has a top down planning approach (from national government level to local level) and a comprehensive integrated planning approach (mix between top down and bottom up). Otherwise, institutional factors plays a key role in strategic planning process lies on national government. It shown that partnership can be transferred to port of Bitung.

Recommendation

This research argue that partnership plays a key role in establish an IHP based on the literature review and in a case of port of Antwerp. Partnership as the potential strategic policy that can be transfered to port of Bitung which combines to the other strategic policies such as the role of government in fiscal policy and deregulation service. Also infrastructure development as the strategic policy to supported the port as IHP.

Based on literature review and in a case of port of Antwerp founds partnership as the typical of strategic policy in establish an IHP. Partnership can be classified as policy instrument. This policy instrument can be transferring from port of Antwep to port of Bitung as port authority. This is become important to have transfer policy due to many kinds of strategic policy. It needs the typical of strategic policy to make more efficient and effective in establish an IHP. The level of transfer policy can be classified into hybridization and synthesis which combines partnership as the main role in establish IHP, the role of government and infrastructure development.

Based on the potential strategic policy, there are some recomendations to port of Bitung as learning from port of Antwerp. First recomendation is port of Bitung should have implement partnership such as cooperation, collaboration and make an agreement with hinterland areas and private sector. Second, the role of government is important to set up strategic policies such as in fiscal policy, deregulation service, labor condition and environmental policy. Third, port of Bitung should have an integrated of transport connection as infrastructure development to supported as IHP. Also, implementation of ICT to provides fast service. Fourth, port of Bitung should has a transparancy of data information.

Identifications of barrier become important before implementation the strategic policy. There are some barriers due to the implementation of strategic research. First, port of Bitung has a long bureaucratic system for permits system from local to national level. Second, port of Bitung has lack of human resources. The last is the occurrence of overlaps government regulations of fellow bureaucracy.

Reflection

This research has provided the typical of strategic policies plays in establish an IHP such as partnership. However, this research has several barriers. Firstly, due to the method of this research, it would be better if the next research can use an interview as another method to have detailed information related the strategic policies. Secondly, different perspective brings different understanding related the typical strategic policy plays in establish an IHP. It is not easy to develop an IHP due to the lack of infrastructure, weakness of the role of government and the existing regulation in the port of Bitung. Recommendation for next future can be focused on the extent of partnership can run well

in establish an IHP. It would be interesting to find out the other strategic policies that plays in establish IHP from different perspective.

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