

Connectivity Design of Sea Toll Policy in Promoting Special Economic Zones

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Abstract: The transportation sector has an important role in supporting all mobility activities around the world. From passenger mobility to goods mobility, all of them need this sector. To obtain appropriate mobility; affordable according to distance, time and cost, specifically this sector is also divided into 3 (three) main sectors, namely the sea transportation sector, air transportation, and land transportation. Especially in the marine transportation sector, this has been proven by almost 90% of trade around the world is currently carried out by sea.

The objectives of this study are: (i). To study and analyze and formulate the connectivity design of sea toll policies to be able to provide a strategic contribution to developing the region, especially increasing economic competitiveness between regions and strengthening economic resilience for quality growth; and (ii). To review, analyze, and formulate a sea toll policy connectivity design that can support special economic zones.

This research uses a qualitative approach and uses the NVivo program for policy analysis because it can analyze qualitative data efficiently and effectively (Bandur, 2019). The data is sourced from primary data through *Focus Group Discussion* (FGD) on informants (Regulators, SEZ, Associations, and Operators) and secondary data sources taken from reports of the Ministry of Transportation and Special Economic Zones. The object of this study is 15 Special Economic Zones (SEZ).

Based on the results of the FGD research processed with the NVivo program, it shows that infrastructure problems are the main problem in the design of the connectivity of the Sea Toll Policy. Generally found (in formulating toll connectivity designs that can support SEZ) are the design of sea toll policy connectivity and Sea Toll Problems.

The conclusions of the results of this study are (1) The largest contribution in the entire hierarchy so that sea tolls can provide a strategic contribution in developing the region, especially increasing economic competitiveness between regions, as well as strengthening economic resilience for quality growth is infrastructure. The combination of informants in *the word cloud* process shows that infrastructure is the most frequently emerging word and is the main problem that must be solved to create a connectivity design to be created. (2) To obtain the design of sea toll policy connectivity needed to support special economic zones, it must pay attention to several notes from the results of the discussions, namely Local Government Involvement, Inter-Ministerial, and Institutional Engagement, Stacking Field Rehabilitation, Private Involvement, and Ministry of Trade Regulations.

The implications for these findings are that successively for the connectivity design hierarchy is required; the involvement of Local Governments, involvement between Ministries and Institutions, involvement of the Private Sector, and Regulation of the Ministry of Trade. Meanwhile, the hierarchy of sea toll problems is successively needed: Infrastructure development, solving port problems, accelerating development, rehabilitating stacking fields, reducing the length of loading and unloading activities, and the readiness of the Port Master Plan.

Recommendations of policies that can be taken as a benefit of research on the Design of Sea Toll Policies in Supporting Special Economic Zones, especially with the inequality of the

characteristics of the flow of goods with a small return load occupancy is something that needs attention related to the differences in the characteristics of goods shipped from the western region of Indonesia (finished goods) with from the eastern region of Indonesia (raw goods) which have a small return load. In addition, there is a relationship between "Equitable Development" and "Economic Equality", which is related to the creation of economic equality supported through equitable development, therefore there needs to be further research on the support of land transport infrastructure to the interior (*inland access*) and to the airport and airport infrastructure as a unified connectivity system that supports the sea toll program. In addition, in order for the government, especially the Ministry of Transportation, to carry out several policies, including (1) Sea toll ships stopping at ports around which there are SEZ, (2) Types, sizes of ships, and ship arrival schedules must be regular and regular and can adjust to the type of goods belonging to the SEZ being transported, (3) Increase in the number of routes (in 2021 only 30 route), (4) For sea toll freight transport ships that differ in characteristics from other goods, the route can be changed to a flexible route, it can be from the sending port directly to the destination port (*port to port*) or stopover at the port where there is a SEZ around the port, (5) To take advantage of container space (subsidy from the Rectorate Jenderal Sea Transportation) which is empty can be filled by the SEZ organizer at the port traversed by the sea toll ship, (6) Along with the increase in cargo transported by sea toll ships, it is necessary to increase human resources both in quality and quantity who already have competence in the field of logistics obtained through Education and Training institutions

Keywords: Methode Qualitative, Nvivo, Sea Toll Design, Special Economic Zone

Introduction

The transportation sector has an important role in supporting all mobility activities around the world, from passenger mobility to goods mobility. To obtain affordable mobility according to distance, time, and cost, the transportation sector is specifically divided into 3 (three) main sub-sectors, namely land transportation, sea transport, and air transport, particularly against the sub-sector of marine transport, it has been proven that almost 90 % of trade worldwide is carried out by sea (Kaluza *et al* 2010) The efforts of the Indonesian government to increase competitiveness continue to be rolled out through various strategies, including through the creation of connectivity between regions throughout Indonesia, one activity is needed to keep the state intact united, considering that Indonesia is a Unitary state as stated in the 1945 Constitution of the Republic of Indonesia. In the National Medium-Term Development Plan for 2020-2024, the role of sea transportation is outlined in four agendas, namely: *First*, national connectivity provides a strategic and decisive contribution to developing regions to reduce inequality, especially related to inequality in access and equitable development between western and eastern Indonesia, as well as between sectoral development gaps. *Both* national connectivity can strengthen infrastructure to support economic development and basic services, especially to support government policies to realize the Sea Toll concept, reduce economic disparities, increase economic competitiveness between regions, and equalize access and quality of basic services. *The three* national connectivity can bridge the implementation of government policies to strengthen economic resilience for quality growth, so that the national ideal of making Indonesia a prosperous, just, and sustainable high-middle-income country can be achieved. *Fourth*, through national connectivity, development strategies to improve quality and competitive human resources can be carried out through increasing community access to health service facilities, education services, and centers of productive economic activity in an area.

The determination of priorities for the development of the maritime sector based on maritime resources is an inseparable part of the life of the Indonesian people, especially those related to maritime and marine affairs. Fishermen and coastal communities, for example, have local wisdom in managing and utilizing marine resources, so that the sustainability, of their source of life, remains guaranteed to this day. Likewise, the sea, coast, and rivers are the lifebloods that have been the strength of the Indonesian nation for a long time. The sea toll policy implemented by the Indonesian government, it is expected to be a mainstay to ensure logistics supply to regions in all corners of the country and make breakthroughs to optimize the role as a safety net for logistics to the regions. The presence of sea tolls is expected to be able to encourage regional economic growth such as zones or industrial estates, including Special Economic Zones (SEZ). The sea toll policy is also part of the purpose of maritime axis development, in addition to supporting the business world, also protecting marine resources with law enforcement and affirmation of sovereignty over the sea, the synergy between sea toll policies and regional growth needs to be improved so that it can run well, therefore the participation of ministries and institutions, as well as local governments and the business world is needed in order to ensure the movement of logistics that integrated and smooth including connectivity

between transportation modes and the fulfillment of a good network system such as *the Logistic Communication System* (LCS), so that the logistics distribution process starts from shipping goods to the initial port to exiting the port to the destination port to the final destination of logistics and can connect small and large ports effectively and reduce logistics costs as well as integrate the development of industrial estates with transportation infrastructure, as well as port capacity development so that they can be overegged/stopped by large ships (> 3000 TEUs). Currently, in Indonesia there are 6 major ports that are included in the sea toll network, namely; Belawan / Kuala Tanjung port, Tanjung Priok port Jakarta, Tanjung Perak port Surabaya, Makassar port, Bitung port and Sorong port as Hub port and there are 18 *feeder* ports as sea toll network, namely; Malahayati Nanggro Aceh Darussalam port, Batu Ampar port Batam, Teluk Bayur Padang port, Jambi port, Palembang New Bomb port, Panjang Lampung port, Tanjung Emas port Semarang, Pontianak port West Kalimantan, Sampit port Central Kalimantan, Banjarmasin port South Kalimantan, Balikpapan port East Kalimantan, Palaran Samarinda port, Pantoloan port of Central Sulawesi, Kendari port of Southeast Sulawesi, port of Ternate North Maluku, port of Ambon Maluku and port of Jaya Pura Papua, as well as the port of Tenau Kupang. The sea toll policy is expected to change the paradigm that currently the economic corridor is still based on land to a new paradigm, namely a maritime-based economic corridor, a logistics system that is only to smooth the flow of goods into a logistics system that supports trade strategies, an economic corridor to strengthen the existing economic center and attract the surrounding area into an economic corridor that can encourage the creation of centers new growth and economic equality throughout Indonesia. Therefore, the objectives of this study are 1) to study, analyze, and formulate the connectivity design of the sea toll policy to be able to contribute to the strategy of developing the region, especially increasing economic competitiveness between regions and strengthening economic resilience for quality growth; and 2) To review, analyze and formulated ad essay of sea toll policy connectivity that can support the SEZ. Meanwhile, the benefits of research are 1) To enrich the treasures of the development of science related to the design of the connectivity of the sea toll policy in supporting the development of the SEZ, namely Public Policy Science (Policy Studies), Transportation Science, especially Marine Transportation and Economics and Business Sciences, as well as Management. 2) For policymakers, the results of this study can be used as consideration in the context of policy improvement and program optimization as well as the implementation of the sea toll policies as a driver of SEZ growth. 3) For researchers, the results of this study can be used as a reference for further research on policy improvement and program optimization as well as the implementation of the sea toll policies in order to encourage SEZ growth. The newest features in this study are 1) The role of the sea toll policy connectivity design is not only a *ship promote trade* but also to follow the development of regional economic dynamics, 2) The formation of a sea toll is able to support the SEZ and 3) The sea toll policy which is not solely a policy with the aim of reducing price disparities but rather to the extent to which the development of the SEZ requires the design of connectivity as a logistics system.

Literature Review

The Grand Theory of the Sea Toll cannot be separated from the term Public Policy, Friedrich & Mason (1940) public policy is a series of actions proposed by a person, group, or government in a certain scope with allows the emergence of various obstacles in its implementation in order to achieve certain goals that have been set. Dror (1970), that matter as a normative heuristic instrument for identifying political choices. Dunn (1998) said that public policy is a series of interconnected choices made by government agencies or officials in areas that concern leadership duties, such as defense, security, energy, health, education, public welfare, crime, rape, and others. Furthermore, according to Dye (2013), public policy is the government's decision to do or not to take an action. Public policy is the government's authority in making a policy that is used in the set of legal regulations. The policy aims to absorb social dynamics in society which will be used as a reference for policy formulation in order to create harmonious social relations, while Bridgeman and Davis, (2004) explained that public policy has at least three interrelated dimensions, namely as *objective*, as a choice of legal or legally valid actions (*authoritative choice*), and as a hypothesis (*hypothesis*). The Relation of public policy with economic growth is inseparable from related theories of economic growth, among which were put forward by Adam Smith, David Ricardo, Harrod-Domar, and Robert Solow- Trevor Swan. Adam Smith stated that in his book on *The Wealth of Nations* (Khan, 2014) there are four factors that play a role in economic growth, namely productive labor, availability of capital goods or capital accumulation, availability of land, and application of technology. Of the four factors, Adam Smith focused more on labor and capital with the consideration that skilled and *dexterity* and labor specialization would be able to contribute greatly to economic growth. In addition to labor, there are also other factors, namely the amount of community and industrial savings that are able to contribute to economic growth. Economic growth can be also influenced by many factors including logistics management and supply chain, such as Indonesia's sea toll policy. Martono (2019) said that the Indonesian sea toll road is a concept of increasing the connectivity of Indonesia

through effective sea routes, in the form of ships that sail regularly and scheduled from west to east Indonesia, and back again from East to West Indonesia through the same route. Sea tolls in Indonesia began in 2015 with two main components, namely the provision of subsidized sea transportation for the disparity of staple food prices in remote locations, especially in eastern Indonesia, and the development of a sea transportation backbone network that connects logistics to and from various regions. Sea freight subsidies are a progressive policy since it is assumed that most of the money goes to low-income groups (Borjesson, 2019). Subsidies are the difference between the cost of production of an item and the income from the sale to the end user with the aim of returning profitability in the production of goods, in order to make them available in quantities and qualities that are not provided by the normal functioning of the market. The approach used in this research is a qualitative method and to get information carried out *Focus Group Discussion* (FGD), Creswell (2008) defines a qualitative research method as an approach or tracing to explore and understand a central symptom. Carey (1994) explained the characteristics of implementing the FGD method, namely using semi-structural interviews with an individual group with a moderator who leads discussions in an informal order and aims to collect data or information on certain issue topics. FGDs have certain characteristics where the number of individuals is sufficiently variable for one discussion group. One discussion group can consist of 6 to 10 individuals (Howard et al, 1999). Carey (1994) explained that the information or data obtained through FGDs is richer or more informative than the data obtained by other data collection methods. This is possible because an individual's participation in providing data can increase if they are in a discussion group. However, this method is inseparable from various challenges and difficulties in its implementation.

Research Methods

This research uses a qualitative approach and uses the NVivo program to analyze data, because it can analyze qualitative data efficiently and effectively (Bandur, 2019) the data analyzed are primary and secondary data consisting of 1) Special Economic Zone data from the National Council of SEZ and Special Economic Zones (SEZ) in Indonesia; 2) Sea Toll Policy Data from the Ministry of Transportation; 3) Data from interviews/questionnaires and *focus group discussion* (FGD) results from SEZs and the Ministry of Transportation and related agencies. FGDs and interviews / deliver questionnaires to sea toll actors and SEZ organizers, in the nature of the research carried out, *stakeholders* provide perception on various alternative materials that are possible in the preparation of sea toll policy connectivity designs so that they can support KEK. Connectivity design elements may be influenced by external factors such as service attributes, alternatives, and situation constraints, as well as internal factors such as perceptions and preferences of SEZ organizers. External factors encourage and limit market behavior in this case SEZ organizers, while internal factors reflect the level of understanding of sea toll connectivity design providers towards alternatives of their choice and actions. The research method begins with several stages, namely: 1) Determine the research topic based on literature studies related to research conducted either in the form of research journals or books published related to Transportation Subsidies and Sea Toll Policies, 2) Collect data related to research, some of the researcher's data can be obtained from interviews or questionnaires with speakers and finalization of data obtained through FGDs with speakers representing SEZ, regulators, associations, and ship operators, 3) The selected data are grouped according to the formulation of the problems discussed to facilitate the discussion stage and carried out by analysts is using NVivo 12 Plus. In the Analyst Stages, the data developed in this hierarchical research, *matrix code*, comparative diagrams, *word cloud* to mapping projects to sea toll problems and policy connectivity design. Hierarchical analysis in NVivo aims to see coding patterns after comparing the number of coding activities on each *node*, then a comparison is carried out / comparing between SEZ with Regulators, SEZ with Associations, Associations with regulators, Ship Operators with Associations, Ship Operators with SEZ, and Ship Operators with Regulators. The final stage is to make an overall conclusion from the initial process of collecting, analyzing, and summing up the research results and providing recommendations and theoretical implications, and policy making.

The research was conducted on 15 SEZs spread throughout Indonesia, namely as follows:

1. Tanjung Lesung SEZ, formed based on Government Regulation number 26 of 2012, dated February 23, 2012, concerning the Tanjung Lesung Special Economic Zone, located in the Pandeglang regency, Banten province, has an area of 1,500 ha is a tourism zone SEZ, as the proposer is PT Banten West Java Tourism Development Corporation;
2. Tanjung Kelayang SEZ, formed based on Government Regulation number 6 of 2016, dated March 15, 2016, is located in the Belitung Regency area, Bangka Belitung Province has an area of 324.4 ha is a tourism zone SEZ, as the proposer is the Belitung Regency Regional Government;
3. Sei Mangkei SEZ, formed based on Government Regulation number 29 of 2012, dated February 27, 2012, concerning the Sei Mangkei Special Economic Zone, located in the Simalungun Regency, North Sumatra

- Province has an area of 2,002.77 ha is an industrial zone SEZ, logistics zone and tourism zone, as the proposer is PT Perkebunan Nusantara III;
4. Palu SEZ, formed based on Government Regulation number 31 of 2014, dated May 16, 2014, concerning the Khuauas Palu Economic Zone, located in the Palu city area, Central Sulawesi Province has an area of 1,500 ha is an industrial zone SEZ, logistics zone, and export processing zone, as the proposer is the Palu City Regional Government;
 5. Bitung SEZ, formed based on Government Regulation number 32 of 2014, dated May 16, 2014, concerning the Bitung Special Economic Zone, is located in the Bitung City area, North Sulawesi Province has an area of 534 ha, which is an industrial zone SEZ, logistics zone, and export processing zone, as the proposer is the Regional Government of North Sulawesi Province;
 6. Likupang SEZ, formed based on Government Regulation number 84 of 2019, December 6, 2019, concerning the Likupang Special Economic Zone located in the area of North Minahasa Regency, North Sulawesi Province has an area of 197.4 ha is a tourism zone SEZ, as the proposer is the North Minahasa Regency Government;
 7. Morotai SEZ, formed based on Government Regulation number 50 of 2014, dated June 30, 2014, concerning the Morotai Special Economic Zone, located in the Morotai Island Regency, North Maluku Province has an area of 1,101.76 ha is an export processing zone SEZ, logistics zone, industrial zone, and tourism zone, as the proposer is PT Jababeka Morotai;
 8. Tanjung Api-Api SEZ, formed based on Government Regulation number 51 of 2014 concerning the Tanjung Api-Api Special Economic Zone, located in the Banyuasin Regency, South Sumatra Province has an area of 2,030 ha is an export processing zone SEZ, logistics zone, industrial zone, and energy zone, as the proposer is the Regional Government of South Sumatra Province;
 9. Galang Batang SEZ, formed based on Government Regulation number 42 of 2017, dated October 11, 2017, concerning the Galang Batang Special Economic Zone, located in the Bintan Regency area of Riau Islands Province has an area of 2,333.6 ha is an SEZ, export processing zone, logistics zone, industry zone, and energy zone, as the proposer is the Regional Government of Bintan Regency;
 10. Mandalika SEZ, formed based on Government Regulation number 52 of 2014, dated June 30, 2014, concerning the Mandalika Special Economic Zone, located in the Central Lombok Regency, Nusa Tenggara Province has an area of 1,035.65 ha is a tourism zone SEZ, as the proposer is PT Pengembangan Pariwisata Bali (Persero);
 11. Maloy Batuta Trans Kalimantan SEZ (MBTK), formed based on Government Regulation number 85 of 2014, dated October 17, 2014, concerning the Maloy Batuta Trans Kalimantan Special Economic Zone, located in the East Kutai Kabupatem area, East Kalimantan Province has an area of 557.34 ha is an industrial zone SEZ, logistics zone, and export processing zone, as the proposer is the East Kalimantan Provincial Government;
 12. Arun SEZ, Lhokseumawe, was formed based on Government Regulation number 5 of 2017, dated February 17, 2017, located in the Lhokseumawe City area and the North Aceh Regency area, Nangro Aceh Darussalam Province has an area of 2,622.48 ha, consisting of the Arun refinery area of Lhokseumawe City 1,840.8 ha and the Dewantara Area of North Aceh Regency 582.08 ha and the North Aceh Regency Banquet Area covering an area of 199.6 ha is an export processing zone SEZ, logistics zones, industrial zones, and para-tourism zones, as the proposers are the Regional Government of Nangri Aceh Darussalam Province;
 13. Singasari SEZ, formed based on Government Regulation number 68 of 2019 dated September 27, 2019, concerning the Singhasari Special Economic Zone, located in the area of Malang Regency, East Java Province, has an area of 120.3 ha consisting of a tourism zone and a technology development zone, as the proposer is the Regional Government of Malang Regency;
 14. Kendal SEZ, formed based on Government Regulation number 85 of 2019 dated December 11, 2019, concerning the Kendal Special Economic Zone, located in the Kendal Regency area, Central Java Province has an area of 1000 ha is an export processing zone SEZ, logistics zone, and industrial zone, as the proposer is the Regional Government of Kendal Regency;
 15. Sorong SEZ, formed based on Government Regulation number 31 of 2016, dated August 1, 2016, concerning the Kusus Sorong Economic Zone, located in the Sorong Regency area, West Papua Province has an area of 523.7 ha is a logistics zone SEZ, industrial zone, and export processing zone, as the proposer is the Regional Government of Sorong Regency.

Some of these SEZs are currently operating and some are still in the process of operating, while the SEZs referred to as in the process of operating our Tanjung Apiapi SEZ, Singhasari SEZ, Kendal SEZ, and Likupang SEZ.

Research Results

Focus Group Discussion (FGD)

The FGD on the Connectivity Design of The Sea Toll Policy in Supporting Special Economic Zones (SEZ) was held on July 2, and 3, 2021, which was attended by 9 Speakers/Informants as follows:

1. Regent of Morotai Island

The expectations conveyed in the FGD as the Regent/Regional Head of Morotai Island Regency in whose area there is an SEZ, namely:

- a. The importance of infrastructure development in order to increase the effectiveness of sea tolls is to reduce price disparities, infrastructure acceleration development will be linear with price reductions.
- b. The sea toll route, namely the Logistik Nusantara 5 ship route, has too long a travel time, so the goods transported to and from Morotai experience a decrease in quality
- c. The status of the port needs to be upgraded to a collection port.
- d. It is necessary to revise the Regulation of the Minister of Trade no.38 of 2015 and Government Regulation Number 71 of 2015, namely the imposition of *specialist lex* on all types of goods cargo subject to normal tariffs instead of being subject to a 200% tariff including building materials for infrastructure needs to support SEZ investment.
- e. It is necessary to increase the number of *reefer containers* for fish transportation if fish production increases in the harvest season.

2. Director of Palu Special Economy Zone

The Director of Palu SEZ also mentioned the issue of infrastructure readiness (facilities and infrastructure) as an important aspect in the development of sea tolls, especially in the development of Palu SEZ itself. Andi Mulhanan as Director of Palu SEZ revealed several development plans to increase some of the potential contained in Pantoloan port, especially in terms of *transshipment*. Currently, Palu SEZ has the full support of the Central Government to produce minerals in support of National Growth, and as a new Economic Growth Center, which is supported by the Development of Pantoloan Palu Port.

3. Chief Port Organizer Unit Class III Daruba/Morotai stated that:

- a. The condition of the stacking field and the environmental roads of the Port is inadequate so it has difficulties in the process of loading and unloading goods, especially during rains;
- b. The need to expedite the establishment of the Port Master Plan;
- c. The lighting of the dock was severely damaged by corrosion; and
- d. Access to and out of the port only works at one gate because the other gate is too narrow to be an access for 4-wheeled vehicles or more.
- e. The condition of port facilities and infrastructure must be repaired and improved in order to be able to serve the loading and unloading activities of goods.

In carrying out the duties and functions of Port Organizer Unit Class III Daruba/Morotai in supporting the SEZ, the port has carried out:

- a. Regular supervision with local government officials on the implementation of labor wages, and transportation arrangements in accordance with the Decree of the Regent of Morotai to maintain the stability of the price of goods or the behavior of price speculation by traders
- b. Establishing a Sea Toll Communication Forum in the form of a Whatsapp Group (WA) and *Coffe Morning* with Local Governments, Business Actors, and *Stakeholders*
- c. Conducting regular Coordination Meetings with local governments, industry, trade and cooperatives offices, agriculture and food security offices, transportation offices, fisheries and marine services, business actors, and other *stakeholders*
- d. Empowerment of community empowerment through Bank Umum Desa, in order to collect the results of community commodities and the provision of nine basic needs (Sembilan Bahan Pokok).

4. The Director of the Sea and Coast Guard Unit of the Directorate General of Sea Transportation generally mentioned the effectiveness of the sea toll program in terms of maritime security, safety, and environment, namely the fundamental aspects as a foundation in supporting the fulfillment of shipping security and safety including Dredging shipping channels, Construction of Shipping Navigation Aids, Construction of

Shipping Telecommunications, Ship Construction Navigation and Construction of Sea and Coast Guard Patrol Boats.

5. The Director of Port of the Directorate General of Sea Transportation mentioned the sea toll program, namely facilities and infrastructure, especially at ports and occupancy in special economic zones (SEZ) areas, such as the Sei Mangkei SEZ which has been supported by the Kuala Tanjung port but the occupancy in the SEZ is not optimal, so it suggests the need for the policy synergy in an effort to develop the SEZ itself includes fiscal policy support, electricity, water, trade and so on. Directorate General of Sea Transportation has provided support to regional development throughout Indonesia covering:
 - a. Integration of Regional and Infrastructure Development through *the integrated port network* between ports and industrial estates.
 - b. Support Delectorate General of Sea Transportation to Border Region dan Outer Island.
 - c. Support Delectorate General of Sea Transportation to National Tourism Area Year.
 - d. Support for the SEZ, namely around the SEZ there is a Port, such as around the Arun Lhokseumawe SEZ there is the Lhokseumawe Port, around the Seimangke SEZ there is the Kuala Tanjung Port, around the Tanjung Api-Api SEZ there is the T Port Anjung Api-Api, around Galang Batang SEZ there is Kijang Port, around Tanjung Lesung SEZ there is Banten Port, around Pantoloan SEZ there is Pantoloan Port, around Morotai SEZ there is Morotai Port there is Banten Port, around Pantoloan SEZ there is Pantoloan Port, around Morotai SEZ there is Banten Port, around Pantoloan SEZ there is Pantoloan Port, around Morotai SEZ there is Morotai Port there is Port Daruba, around Bitung SEZ there is Bitung Port, around Sorong SEZ there is Sorong Port.
 - e. Support for National Priority Industrial Estates.
 - f. Support for International Super Hubs such as Maloy Port, Benoa Port, and Likupang Port.
6. The Director of Sea Transportation Traffic Transportation revealed the legal basis of the sea toll program, cargo performance, sea toll flow/process, logistics management, and digitization of sea tolls, as well as toll ship routes sea. It also revealed the relationship between sea toll ships and commercial ships to the principle of *ships promoting trade* where the presence of ships sailing is expected to increase trade activities, especially in areas visited by sea toll ships.
7. The expert staff of the Minister of Transportation for Logistics, Multimodal and Transportation Safety, alluded to the same thing revealed by the Director of Port regarding *ship promoters the trade* but called it by the terms *trade follow the ship* and *ship follow the trade* are business matters, where there is trade then the ship will come to the place of trade. For this, the public policy must change the principle of *ship follow the trade* to *trade follow the ship*, especially at ports where there is an SEZ around the port, in this case, the Government with Its sea toll policy prepares ships that sail at any time according to the schedule to port ports, especially in eastern Indonesia. With the presence of ships that travel to the port periodically and regularly, goods will be built that can be produced by the community around the port which can trade.
8. The Chairman of the Central Leadership Council of the *Indonesian National Shipowner Associations* (INSA), broadly conveyed about the SEZ, that the flow of goods circulation is still Javacentric or still centralized on Java Island, and the occupancy of ship space returning from East to West is low, which is 30% in the form of goods that are still raw, so it is still very unequal. It is also stated that the principle of *ship follows the trade* where the ships that sail will be many or high in frequency when trade increases, which is different from the principle of *ship promotes the trade* which prioritizes from the supply side, namely that there are ships, then there is trade. It was also mentioned the existence of port infrastructure that will have an impact on the development of SEZ, sea toll ship routes that intersect with commercial ship routes. The INSA chairman also stated that the increased value of port integration with industrial estates is:
 - a. Commercial Aspect, the benefits from the commercial side, namely the growth of the industry in industrial estates will encourage the growth of the volume of goods to be distributed through ports, industry will benefit if it is close to the port because it can reduce logistics costs, the port will become a node point of relations between regions that facilitates the distribution of production products.
 - b. Funding and Investment Aspects, namely providing attractiveness for investors both foreign and local, facilitating the international trade process in terms of export-import of industrial products, reducing investment costs from the manufacturing industry due to *the sharing of infrastructure costs*, and encouraging new economic growth centers through the development of Industrial Estates in the regions.

- c. The Licensing Aspect, which is to facilitate licensing because it is in one location so that it is in line with the regional spatial layout, allows for a *Customs One Stop Service* at the port, reducing the security risk for trailer trucks transporting production products because the distance to the port is closed.
 - d. The expectation of the ship entrepreneur is that it is necessary to improve the infrastructure at the receiving port so that the schedule of ships from the feeder port can be in accordance with the schedule of the ship at the collection port. To ensure the availability of stocks of staples and essentials in the necessary areas is to increase the volume of goods transported, and to increase the visits of ships. Problems with sea tolls are related to the competition between privately owned ships and ships carried out by the Government because there is a change in the type of cargo transported by sea toll ships through the Regulation of Menteri Trade Number 53 of 2020, namely the cargo of sea tolls is no longer only basic and important goods, but also grocery / commercial goods. This condition has an impact on the increasing difficulty of pioneer ships and private ships serving remote areas to obtain cargo so it is necessary to return the Peromaterial type of cargo of sea toll ships in accordance with Presidential Regulation Number 106 of 2015
9. The Director of Freight Transportation of PT Pelayaran Nasional Indonesia (PT Pelni) charged the shipping activities of ships operated by PT Pelni as the implementer of the sea toll program, that there is a sea toll program and PT Pelni as one of the implementers of the sea toll program, the performance of freight transportation in 2021, the position of semester 1 of 2021 grew by 175% compared to 2020. This shows that PT Pelni is able to make very good use of the sea toll program. It was also conveyed that the Design of Sea Toll Connectivity is able to support special economic zones by:
 - a. Establish several areas that have SEZ to become hubs or ports of stopover for sea tolls;
 - b. Making the SEZ a center for processing commodities from areas visited by Sea Toll ships;
 - c. Additional types of commodities can be sent by sea toll ships to support the development and needs of the SEZ.

Analysis of Nvivo Results

The process of using NVivo begins with coding, which is divided into four types of categories of *stakeholders* or informants, namely representatives of SEZ, Regulators, Associations, and Ship operators. The SEZ category is represented by three informants, namely: (i) the Regent of Morotai Island Regency, the 1st informant, (ii) the Director of Palu SEZ, the 2nd informant, and (iii) the Head of UPP Port Daruba 3rd informant. The Regulatory Category is represented by four informants, namely (i) the Director of Sea and Coast Guard in the rectorate Jenderal of Sea Transportation, 4th informant, (ii) the Director of Port of the Directorate General Sea transportation, 5th informant, (iii) the Director of Sea Transport Traffic, Directorate General of Sea Transportation, 6th informant, (iv) Expert Staff of the Minister of Transportation for Logistics, Multimodal and Safety Ministry of Transportation, the 7th informant. The Association category is represented by the Chairman of the INSA, the 8th informant, and the ship Operator category, as the 9th informant.

The 1st, 2nd, and 3rd Informants are categorized as SEZ because, in the transcript, the three informants revealed a lot of problems that occurred in the field and the connectivity design of the sea toll program both explicitly and implicitly, the 4th, 5th, 6th, and 7th Informants were categorized as Regulators because alluding to connectivity design problems and sea toll problems explicitly or implicitly, Informant k-8 is categorized as an Association, this is because the type of agency is the Association of Sea Freight ShipOwner Companies, mentioning a lot about the design of connectivity and sea tolls, while informant 9th comes from the Agency PT Pelni is categorized as a ship operator, which serves sea toll ship routes, both explicitly and implicitly.

A result of the mapping of nodes coded in the connectivity design of the sea toll policy as figure 1 as follows:

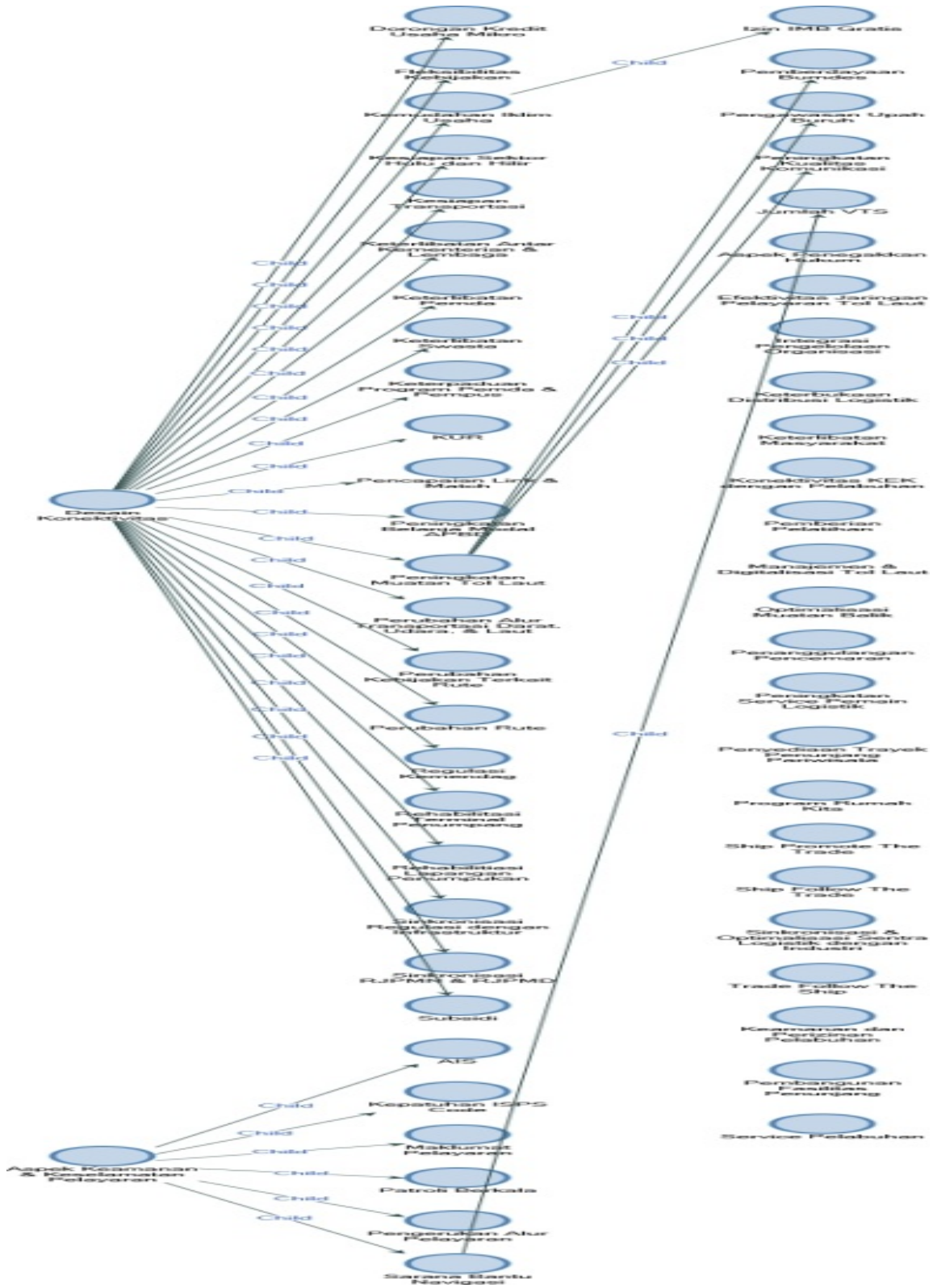


Figure 1: Connectivity Design Project Mapping

Source: processed data (2021)

The results show what are the problems of the sea toll program and it is also seen that there are nodes that do not have connecting lines, this is because these nodes are statements mentioned by informants with different categories of informants, but have a relationship of meaning, both explicitly and implicitly. Here are the 5 (five) largest nodes that have a dominant role in mapping the design of the sea toll, as follows:

Table 2
Five Nodes Dominant "Sea Toll Problem"

No.	Nodes	References
1	Infrastructure Development	60
2	Constraints at the Port	30
3	Accelerated Development	30
4	Duration of Loading and Unloading Activities	14
5	RIP Readiness	8

Source: processed data (2021)

The following is a comparative diagram analysis, which is an output result that illustrates the similarity of things alluded to by each informant, the similarity is displayed on the nodes located in the middle of the *informant's case*. Meanwhile, the nodes on the right and left of the informant are the nodes alluded to by each informant. This can replace the exploration diagram. Meanwhile, the large number of references to each node determines the similarity of nodes between the SEZ and the Regulator, in this nature, the similarity of the nodes indicates, that there is a similarity between what is mentioned on the part of the SEZ and the Regulator, both explicitly and implicitly. The following is a comparative diagram showing the comparison of the SEZ with the Regulator:

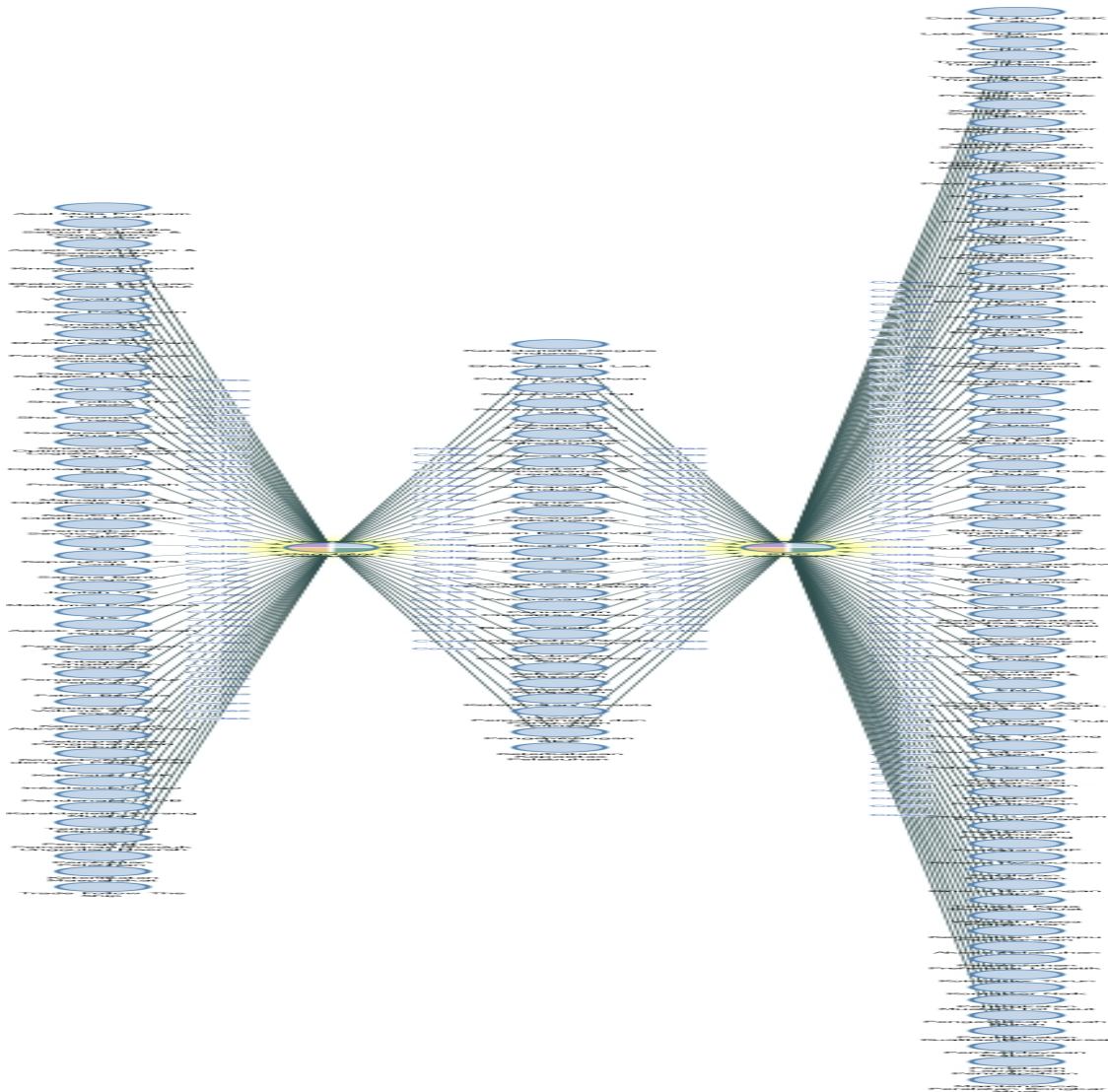


Figure 3: Comparative Diagram of "SEZ With Regulators"

Source: processed data (2021)

There are about 28 similar nodes (Characteristics of the Indonesian State, Effectiveness of Sea Tolls, Potential of Pantoloan Port, Sea Toll Connectivity, Sea Toll Problems, Transportation Readiness, Infrastructure Development, Time Efficiency, Inter-Ministerial, and Institutional Engagement, Industrial Development, Cost Cutting, Acceleration of Development, Connectivity Design, Local Government Involvement, Port Constraints, Large Costs, Disruption of Quality of Products Shipped, Route Changes, Decreased Price Disparities, Port Costs, Improved Macroeconomic Performance, Route-Related Policy Changes, Policy Rigidity, Policy Flexibility, Private Engagement, The Urgency of Extending and Strengthening Docks, SEZ Development, and Port Capacity Limitations) alluded to by both parties, both explicitly and implicitly. The similarity of these things can be considered by researchers so that they can conduct a more in-depth analysis of these similarities.

Furthermore, the results of the analysis of the comparative diagram between the nodes between the SEZ and the Association, in this nature, the similarity of the nodes indicate that there is a similarity between the things mentioned on the part of the SEZ and the parties of the Association; either explicitly or implicitly. The following is a comparison diagram showing the SEZ-Comparison with the Association:

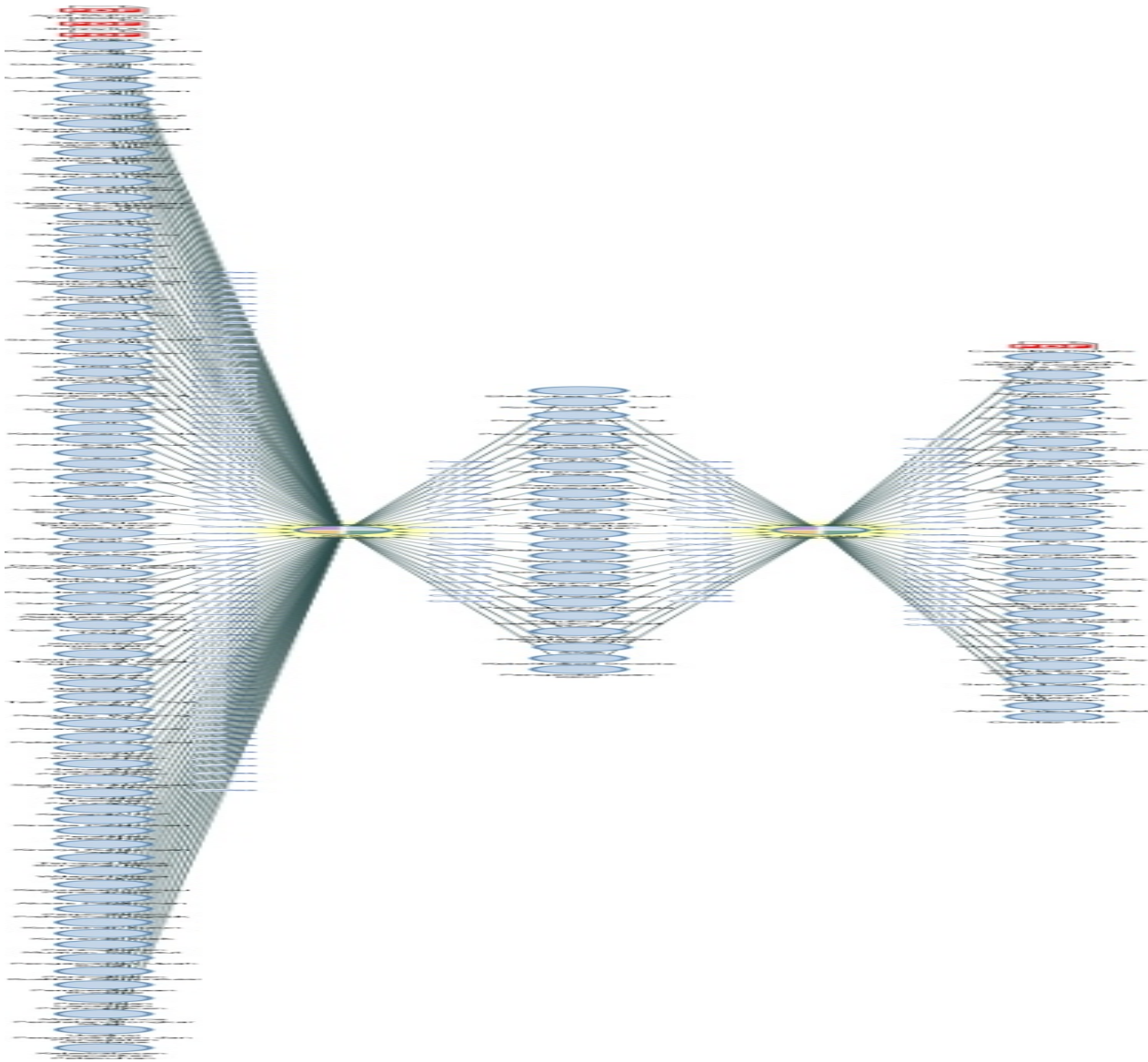


Figure 4: Comparative Diagram "SEZ With Association"

Source: processed data (2021)

In Figure 4, there are about 23 similar nodes (Sea Toll Effectiveness, Sea Toll Connectivity, Sea Toll Problems, Transportation Readiness, Increased Exports, Infrastructure Development, Industrial Development, Cost Cutting, Accelerated Development, Connectivity Design, Increased Purchasing Power, Increased Plantation & Agricultural Production, Domestic investment, Port Constraints, Large Costs, Route Changes, Decreased Price Disparities, Port Costs, Improved Macroeconomic Performance, Policy Changes Related to Routes, Synchronization of Regulations & Infrastructural, Foreign Investment, Private Engagement, and SEZ Development) alluded to by both parties, either explicitly or implicitly. The similarity of these things can be considered by researchers so that they can conduct a more in-depth analysis of these similarities.

Has a result of the analysis of the comparative diagram between the nodes between the Association and the Regulator, this nature of the similarity of the nodes indicates that there is a similarity between the thing mentioned on the part of the Regulator and the Party of the Association both explicitly and implicitly. The following is a comparative diagram showing comparative- Regulators with Associations.

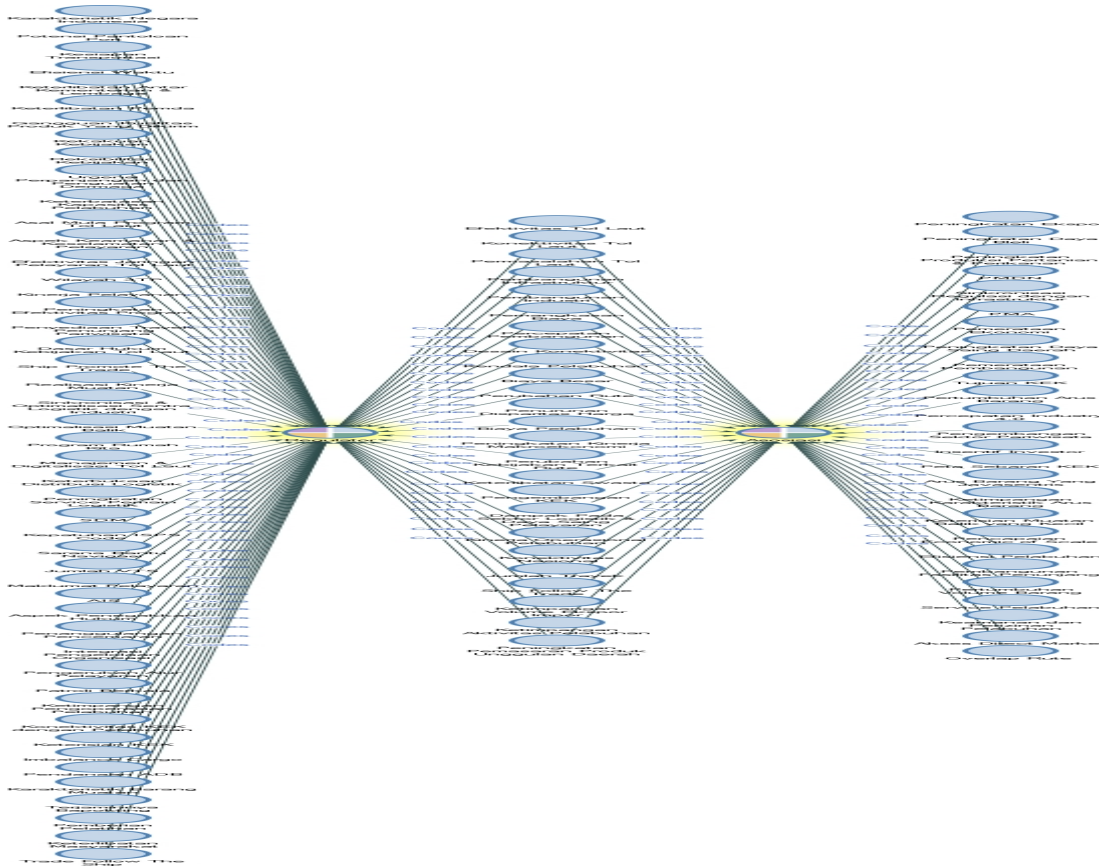
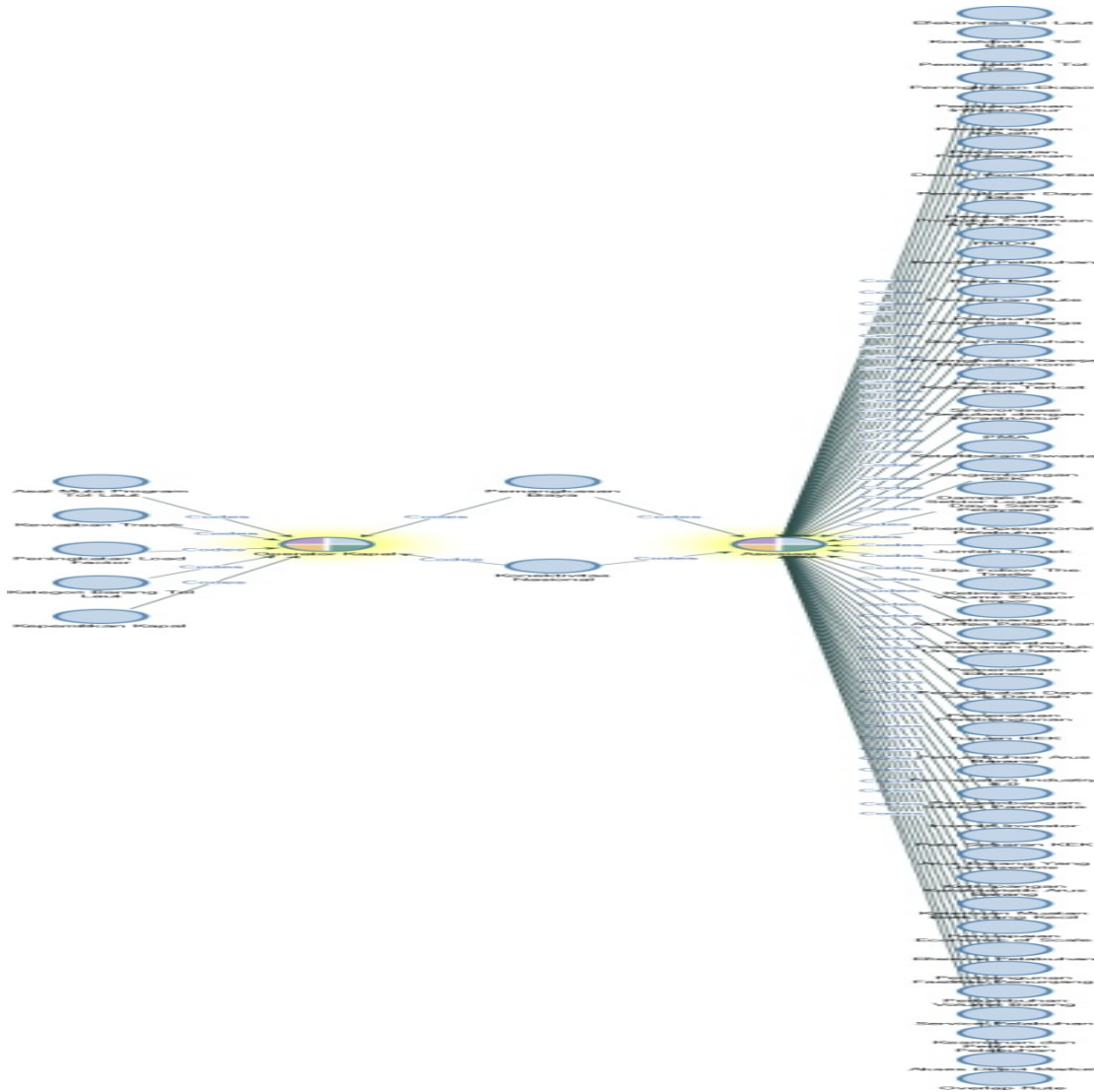


Figure 5: Comparative Diagram of "Associations and Regulators"

Source: data processed (2021)

In Figure 5, there are about 24 similar nodes (Sea Toll Effectiveness, Sea Toll Connectivity, Sea Toll Problems, Transportation Readiness, Infrastructure Development, Industrial Development, Cost Cutting, Development Acceleration, Connectivity Design, Port Constraints, Large Costs, Macroeconomic Performance Improvement, Route-Related Policy Changes, Private Involvement, SEZ Development, Impact on the Logistics Sector & Shipping Competitiveness, Port Operational Performance, National Connectivity, Number of Routes, ShipFollow The Trade, Inequality in Export-Import Volume, Inequality of Port Activities, and Increased Marketing of Regional Superior Products) alluded to by both parties, both explicitly and implicitly. The similarity of these things can be considered by researchers so that they can conduct a more in-depth analysis of these similarities.

Next is the result of the analysis of the comparative diagram between nodes between the Association and the Ship Operator. In this case, the similarity indicates that there is a similarity between the matter alluded to on the part of the Association and the Ship Operator, either explicitly or implicitly. In Figure 6, there are about 2 (two) similarities in nodes (*Cost Cutting and National Connectivity*) alluded to by both parties, both explicitly and implicitly. The similarity of these things can be considered by researchers so that they can conduct a more in-depth analysis of these similarities. Here is Figure 6 which displays the results of a comparative diagram between ship operators and associations:



Draw 6: Comparative Diagram "Ship Operators with Associations"

Source: data processed (2021)

Furthermore, the results of the analysis of the comparative diagram between the nodes between the SEZ and the Ship Operator, in this nature, the similarity of the nodes indicates that there is a similarity between the things mentioned on the SEZ and the Ship Operator, either explicitly or implicitly. Figure 7 shows that there is one commonality of nodes (*Cost Cutting*) alluded to by both parties, both explicitly and implicitly. The similarity of these things can be considered by researchers so that they can conduct a more in-depth analysis of these similarities. Here is Figure 7 which displays the results of the comparative diagram between the Ship Operator and the SEZ:

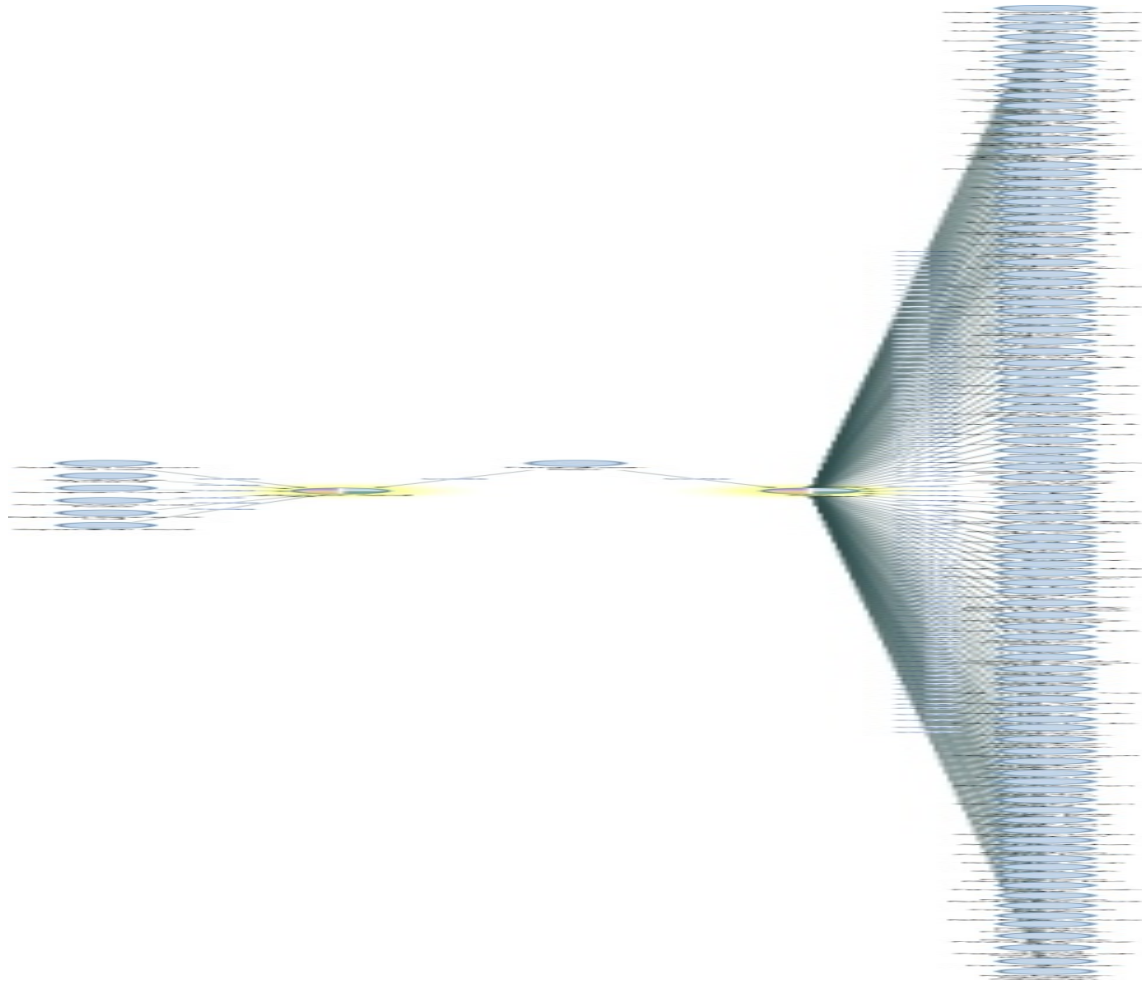


Figure 7: Comparative Diagram "Ship Operators With SEZ"

Source: processed data (2021)

Furthermore, the results of the analysis of the comparative diagram between nodes between regulators and ship operators, in this nature, the similarity of nodes indicates that there are similarities between the things mentioned on the regulator's side and the Ship Operator, either explicitly or implicitly. In Figure 8, there are about 3 similar nodes (*Cost Reduction, the Beginning of the Sea Toll Program, and National Connectivity*) alluded to by both parties, both explicitly and implicitly. The similarity of these things can be considered by researchers so that they can conduct a more in-depth analysis of these similarities. The following is a comparative diagram showing the Comparison of Ship Operators with such Regulators.

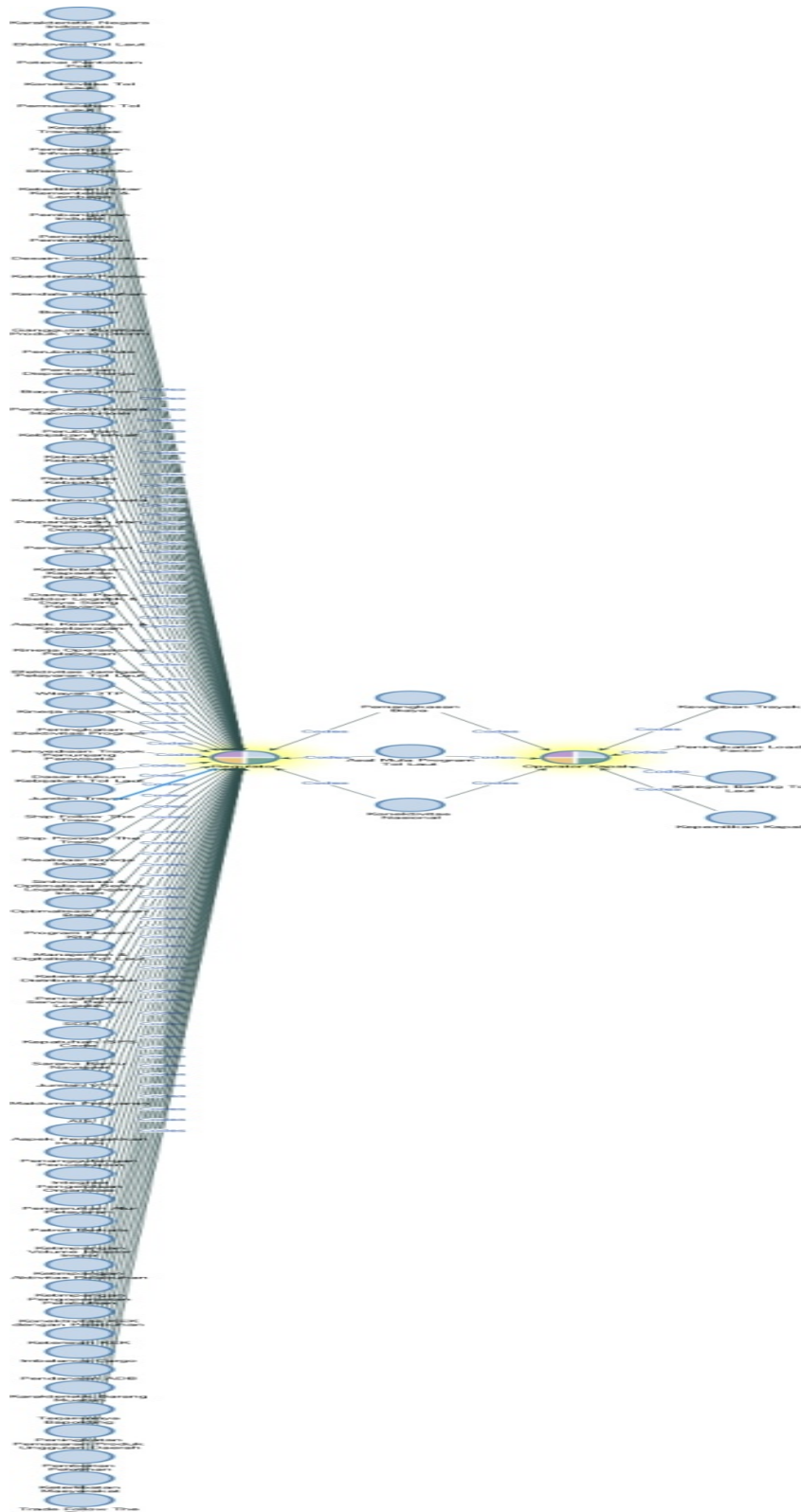


Figure 8: Comparative Diagram of Ship Operators With Regulators
Source: processed data (2021)

Based on the results of *the analysis of the word cloud* also shows the word **Infrastructure** has the largest frequency (68), this indicates that the word **Infrastructure** appears most often in transcripts and is most often coded, both implicitly and explicitly. In other words, there is a congruence between pre-existing outputs. For this reason, researchers can carry out further development or analysis related to this infrastructure problem.

Conclusion

Based on the results of the analysis and discussion in the previous chapter, this study concludes 1) The greatest contribution in the entire hierarchy so that sea tolls can provide a strategic contribution in developing regions, especially increasing economic competitiveness between regions, as well as strengthening economic resilience for quality growth is infrastructure. The combination of informants in the word cloud process also shows that infrastructure is the word that appears most often and is the main problem that must be solved in order to create a connectivity design to be made; 2) To obtain the sea toll policy connectivity design needed to support the Special Economic Zone, it must pay attention to what kind of notes from the results of the discussion, namely the involvement of local governments, involvement between ministries and institution, rehabilitation of stacking fields, involving the private sector and conducting Regulation of the trade sector; 3) Complementing infrastructure requirements, attention is needed to Equitable Development and Economic Equality, Cost Reduction, Policy Flexibility, reducing the impact of Goods Flow Characteristics, Shipping Security, and Safety Aspects.

The implications for these findings are successively for the connectivity design hierarchy; it requires the involvement of Local Governments, involvement between Ministries and Institutions, involvement of the Private Sector, and Regulation of the Ministry of Trade. Meanwhile, the hierarchy of successive Sea Toll Problems is needed: Infrastructure development, solving port problems, accelerating development, rehabilitation of stacking fields, duration of loading and unloading activities, and readiness of the Port Master Plan.

Policy recommendations that can be taken as a benefit of research on the Design of Sea Toll Policies in Supporting Special Economic Zones, especially with the inequality in the characteristics of the flow of goods with a small return load occupancy, it is necessary to get attention related to the differences in the characteristics of goods shipped from the western region of Indonesia (finished goods) with from the eastern region of Indonesia (raw goods) which have a small chargeback. In addition, there is a relationship between Development Equality and Economic Equality, this is related to the creation of economic equality which is supported through equitable development. Therefore, there is a need for further research on the support of land infrastructure transportation to the interior (*inland access*) and to airports and airport infrastructure as a unit of connectivity systems that support the sea toll program. In addition, in order for the government, especially the Ministry of Transportation, to carry out several policies, including (1) Sea toll ships stopping at ports around which there is a SEZ, (2) Type, ship size, and ship arrival schedules must be regular and regular and can adjust to the type of goods belonging to the SEZ being transported, (3) The addition of the number of routes which currently amounts to 30 routes (in 2021), (4) For sea toll freight transport ships that are different in characteristics from other goods, the route can be changed to a flexible route, it can be from the sending port directly to the destination port (*port to port*) or stopover at the port that there is a SEZ around the port, (5) To take advantage of container space (subsidy from the Rectorate Jenderal Sea Transportation) which is empty can be filled by the SEZ organizer at the port passed by the sea toll ship, (6) Along with the increase in cargo transported by sea toll ships, it is necessary to increase human resources both quality and quantity that already have competence in the field of logistics obtained through Education and Training institutions. Other recommendations include; There is no research on 1) The Impact of Sea Toll Multiplier and SEZs on National and Regional Growth, 2) Qualitative research on all SEZs regarding factors which is an obstacle to the development of SEZs in Indonesia, and 3) further research from the current research, namely the Impact of Sea Tolls on Economic Growth with and without connectivity to the SEZ.

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