TOL LAUT IMPLEMENTATION FOR VESSEL CALLED AT AMBON: A REVIEW

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ABSTRACT

Since its introduction in 2015, *Tol Laut* Programme has increased the intensity of ship service to the Eastern region of Indonesia in order to distribute commodity to the whole parts of the area as in the Western region. Several routes modification and addition have been applied for increasing the level of service. In the middle 2017, Port of Yos Sudarso, Ambon was included in the Programme because it has played an important role as regional hub port for the surrounding area.

This paper will review the *Tol Laut* Programme implementation based on vessel production data. Vessels discussed in the review are those called at Ambon and not only of conventional container type but also a-modified-passenger vessel capable of carrying container.

Keywords: *Tol Laut*, container, modified cargo passenger vessel, Rumah Kita, Eastern Indonesia, slot share

INTRODUCTION

Tol Laut Programme or can be translated as Sea Highway is a national government programme to increase national maritime connectivity by empowering shipping and port services. It is believed that by having adequate connectivity, imbalance development in the country can be overcome, reducing economic disparity. This is the main objective of the Programme, which was effectively launched in May 2015 when a dedicated ro-ro vessel started to operate between Port of Panjang, Lampung to Port of Tanjung Perak, Surabaya (See Figure 1).

Figure 1. The first *Tol Laut* vessel: KM Mutiara Persada III (Majalah Dermaga, 2015)

Geographical condition of Indonesia leads to multi aspects of disparity, such as, wealth, education, economic, and development. This worsens by lack of marine transportation infrastructure which is essentially required, particularly by Eastern region of the country. Types of infrastructure used to promote the program are of container shipping activity, including vessel and its corresponding port.

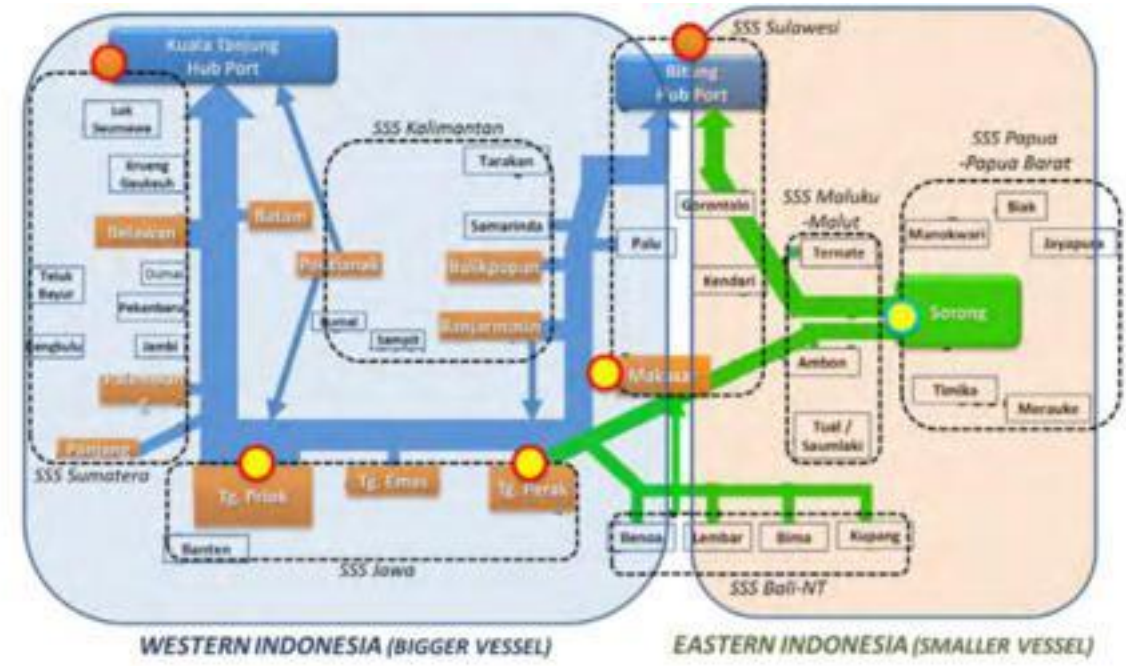

Figure 2. Initial Plan of *Tol Laut*

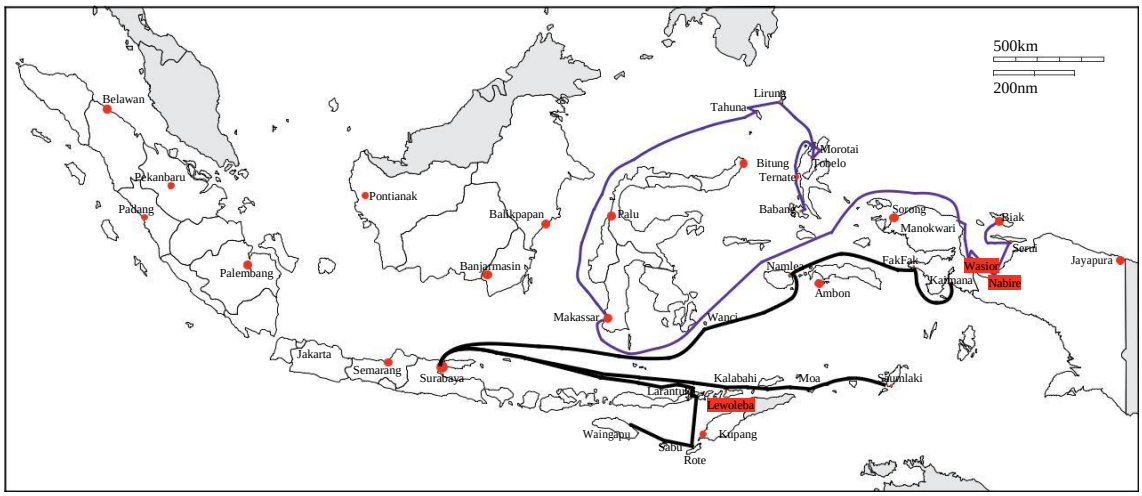

Figure 3. Initial *Tol Laut* route with Tanjung Perak and Makassar as hub ports (modified from (Direktorat Perhubungan Laut, 2016))

In terms of container shipping operations, the Programme consists of several elements, that is, port and vessel, which compose route. There are two types of ports: hub and feeder ports. Likewise, the vessel are of mother and feeder types. Route, composed by several ports served by a particular type of vessel, can be distinguished into two: trunk and feeder routes. Trunk route is served by mother vessel having a capacity about 3,000 TEUs in Western Indonesia and 1,000 TEUs the Eastern. In order to support vessel called at a particular hub port, a feeder service has to be established.

This feeder service may use existing ro-ro vessel, small cargo vessel and pioneer shipping boat. Figure 2 shows the initial plan of *Tol Laut*, while Figure 3 illustrates initial routes served for Eastern region using Surabaya and Makassar as hub ports.

TOL LAUT BASED AT AMBON INITIAL PHASE

After a year, in the middle of 2017, the program was then modified by incorporating Ambon as regional hub. Reason for this is the fact that, for years, Ambon has played an important role as a hub port for its surrounding regions, that is, Province Maluku, North Maluku, Papua Barat and Papua. Most commodity from the surrounding regions is first transshipped at Ambon before shipping to the West, such as, Surabaya and Jakarta. Inversely, cargo from the Western region is unloaded in this city before distributed further to its final destination.

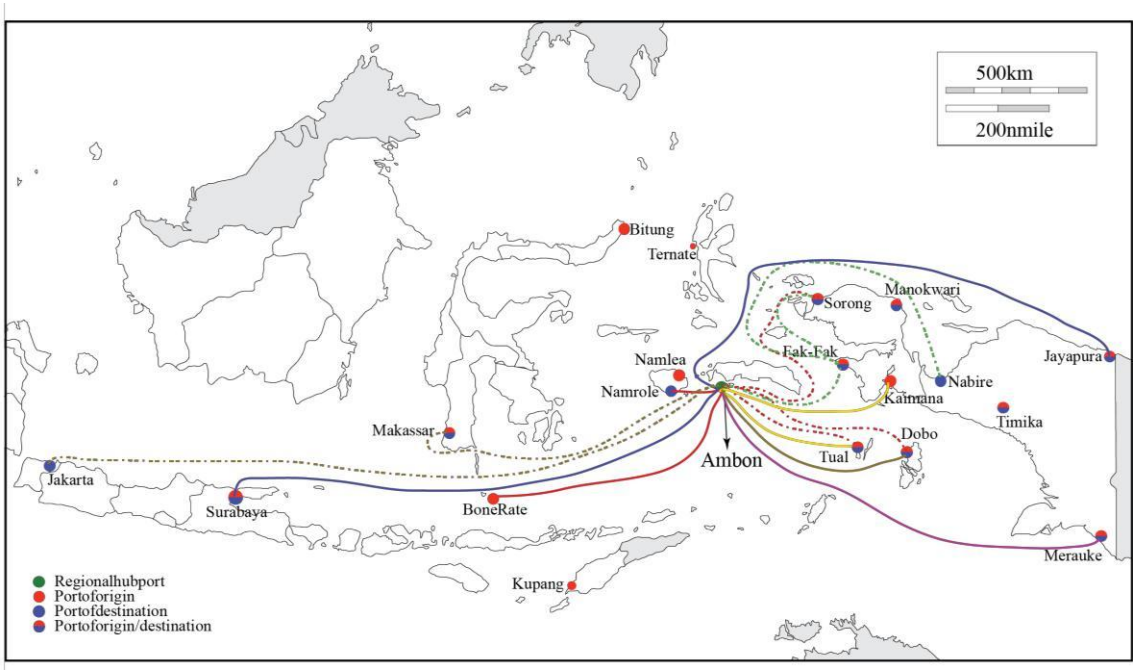

Figure 4. Route of container vessels called at Ambon

Figure 4 shows several observed routes out of 35, through which container vessels called at Port of Yos Sudarso, Ambon. There are two types of vessel operations: (i) inter and (ii) intra regions. The first type connects Jakarta and Surabaya as well as Makassar with Ambon, while the latter links Ambon with its surroundings. Interestingly, there is one direct long route from Surabaya to Jayapura, after calling at Ambon. Within the region, a container vessel usually calls at Ambon by connecting at least one port. This means that a vessel departs from a particular port, leaving for and calling at Ambon. Then, the vessel will return to that port again, such as, vessel from Merauke – Ambon – Merauke. However, mostly, a vessel serves two ports, for example, Tual – Ambon – Dobo.

The number of container unloaded and loaded at Ambon is slightly constant, averaging somewhat above 3,000 TEUs per month. On the other hand, ship call tends to increase significantly, reaching its peak in August 2017 at 25 vessels per month. Likewise, although not as high as ship call, the number of ship put in operation rises, averaging 11 vessels per month. Compared to the total capacity of all vessels, the number of container both unloaded and loaded in 2016 and 2017 has different pattern.

While the 2016 ratio tends to be constant at about 44%, in 2017, it decreases considerably, amounting to almost half of the previous year (25%). These circumstances are recorded for all container vessels called at Port of Yos Sudarso from January to 2016 and from April to August 2017, as shown by Figure 5. Different figures between 2016 and 2017 might be as a result of the introduction of new vessels to support *Tol Laut* Programme.

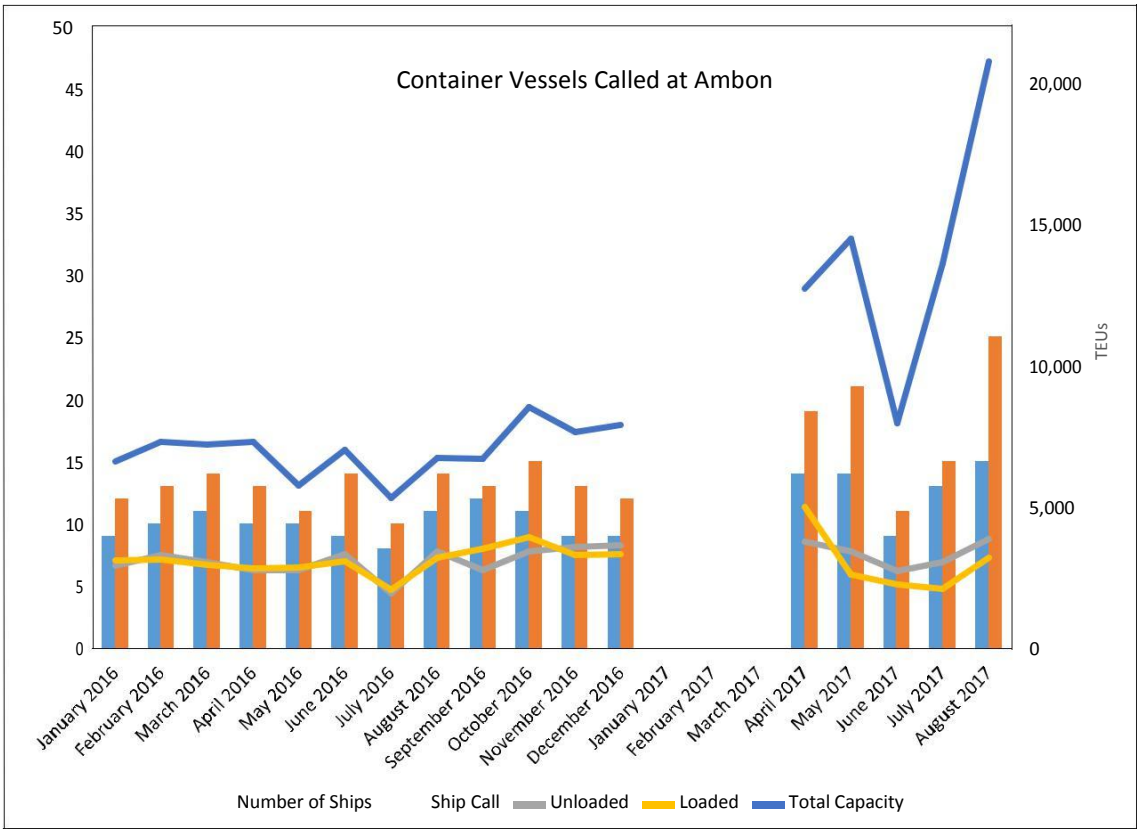

Figure 5. Number of unloaded/loaded container by vessels called at Ambon

CARGO-PASSENGER OPERATION

For many years, marine transportation mode has played very important role mainly in transporting passenger in Eastern Indonesia. However, this changed very much when low cost air carrier began to operate to this region. As a result, a large number of passenger began to use this service. This shifting caused very significant drop of the passenger using marine transportation mode, i.e., passenger ship, causing substantial loss for the vessel operator. A modification then were carried out in order to follow this change, delivering a new mode of transportation: two-in-one and three-in-one vessels. These vessels are capable of carrying cargo stored in 20 foot container, besides general cargo. Figure 6 shows a three-in-one type of cargo passenger, on which several 20 foot containers are stored on the bow of the vessel. This vessel berths at Port of Yos Sudarso, which is located just next to the wharf used by conventional container vessel.

Figure 6. A three-in-one cargo passenger vessel

This modified cargo passenger serves many sea ports in all provinces near Ambon as can be seen in Figure 7. The routes connects several main city ports in the Western region, such as Jakarta and Surabaya, with their counterparts in the East, for example, Sorong and Jayapura. Here, as for cargo shipping operation, Ambon functions as the hub for its surroundings. If compared to that served by container vessel, the routes are partly overlapped.

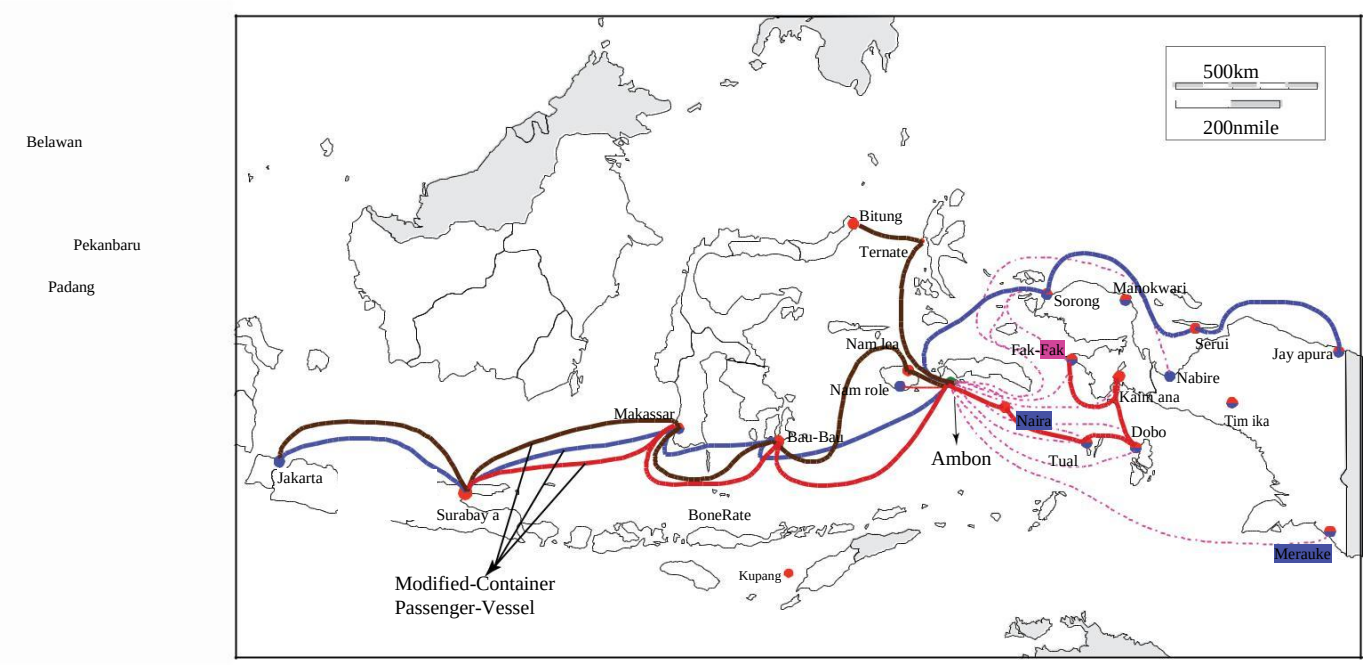

Figure 7. Route of cargo-passenger vessels called at Ambon

Figure 8 shows the number of container unloaded/loaded from/to all cargo passenger vessels called at Ambon. In average, the percentage of unloaded container to the total capacity of all vessel is higher than that of loaded: 37.2% to 26.4%. The trend of loaded container tends to be constant while the discharged one drops slightly. Although constant, the loaded container is much more fluctuated than that of discharged.

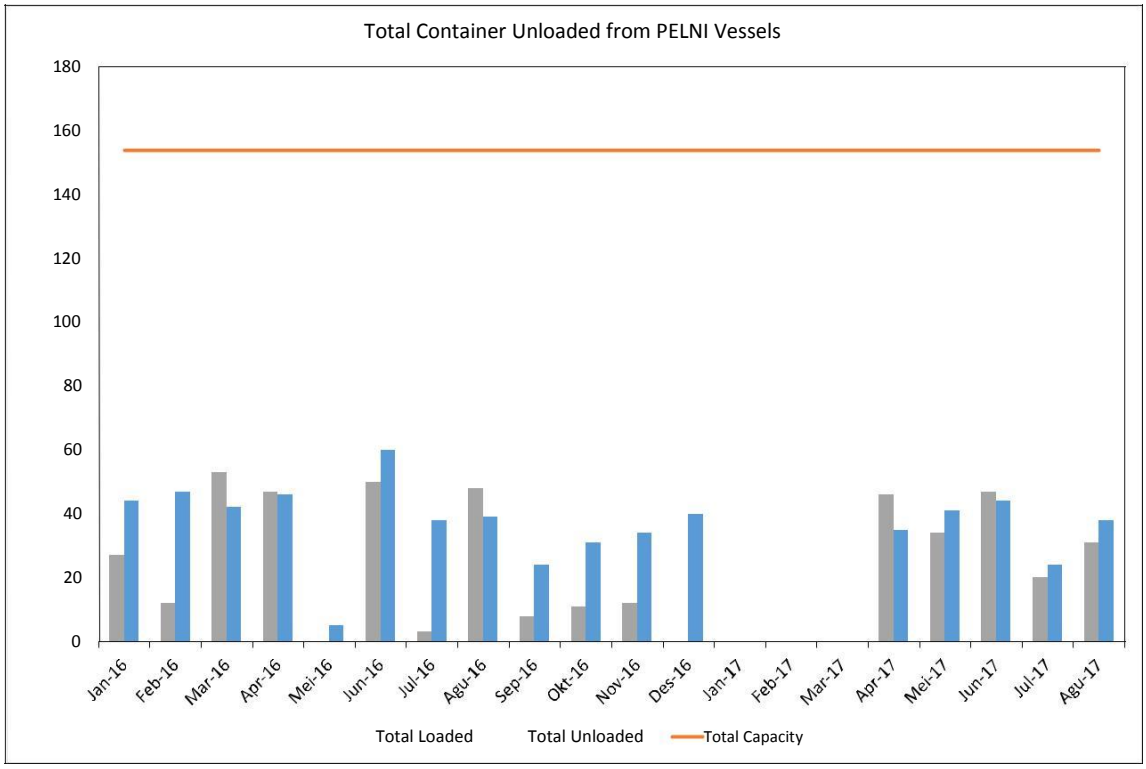

Figure 8. Unloaded/Loaded Container from Cargo Passenger Vessel

INITIAL FINDINGS

After analyzing container cargo unloaded/loaded at Ambon both by conventional container vessel as well as the routes, it is found that most containers are not discharged but directly carried to its last destinations. This is not in line with the initial proposed programme designed to include feeder operation, one of which is that based at Ambon. One possible reason why this occurred would be because Ambon was not designated as hub port for the region. Local feeder shipping operation for distributing inbound and outbound containers is required, particularly when the volume of container is low.

Other crucial finding is about the use of container. Containers owned by cargo-passenger vessel are only served by the owner (see Figure 9). However, those which belong to container shipping companies are jointly served when required. In other words, there is shared operation between shipping companies. It is necessary when a particular container belongs to a particular company has to be transported to a port of discharging, but its quantity is low, e.g., only one box. In this case, the company then asks another shipping company which operates vessel in the same route to carry that container. Both companies or more usually create an agreement for dealing with such circumstances when they operate vessel in the same or intersected route.

The last one is about Port Yos Sudarso itself. As a regional hub port, it should have container depot or container freight station (CFS) for conducting container stuffing or stripping. Existing terminal only has container yard (CY) which also function as container depot. Thus, it is difficult for shipper to do such activities before/after loading particular container to/from a vessel.

(a) (b)

Figure 9. (a) Dedicated *Tol Laut* container (b) PELNI and shipping company containers

PROPOSED SOLUTION

There are two main feasible option to improve maritime service for container shipping based at Ambon, that is, by (i) utilizing existing marine transportation operation and (ii) establishing logistics centre.

Transportation Options and Cooperation

The followings are some of the transportation options that are available and exist in the region:

(i) Modified passenger vessel
(ii) Ro-ro vessel
(iii)Pioneer vessel
(iv) People shipping boat

The first option has been briefly described above. Along with it, there are three other marine transportation options that are usually used for transporting both passenger and cargo as well as vehicle. Ro-ro vessel serves close region and it usually connects two adjacent ports in different islands, for example, Waipirit in Seram with Hunimua, Liang in Ambon. Truck operators mainly use this service to transport cargo from/ Port Yos Sudarso to/from Seram Island.

There are two types of pionner vessel: (i) one that can only carry cargo, and (ii) the other that can transport both passenger and general cargo. Both types usually serve several ports and the operation takes a long period of time before returning to Ambon again. Region in which these vessels operated is located to the South of Ambon, such as, Banda Islands, Aru Islands and Tanimbar Islands, Babar Islands, and Wetar Island.

Although the overall route is long, some of them are intersected, making the sub section route be able to be reached shorter. This is like what takes place between conventional container vessel and modified cargo passenger vessel as shown in Figure 7.

In this figure, a particular modified container vessel calls at Tual and Dobo before going to Kaimana and Fak-Fak. Containers from Tual to Dobo or from Kaimana to Tual are usually transported first to Ambon. Instead of doing this, containers can be carried (partially) by a modified cargo vessel. For this, a joint slot sharing agreement has to be made between operators.

People shipping is a kind of marine transportation service using small traditional wooden boat for transporting cargo from Ambon (or nearby ports in Ambon Island), to several ports in Seram and Buru Island or as long as to the other island if the weather permits. The cargo to be carried is not so much and is of general cargo type. This means that cargo has to be stripped or stuffed from/to a container and this has to be done in a special area, i.e., container freight station, which has not yet been existed.

Logistics Centre

It is inefficient to ship directly container to a particular destination, especially when the number is insignificant. Similarly, this has to be applied for a large number of container that has to be distributed to several destinations or vice versa. The other case is when the containerized cargo has to be decomposed to become general cargo (and vice versa). For both cases, a temporary place to hold the container need to be created. This place is called distribution centre. This facility can perform necessary works such as consolidation, warehousing, packaging, decomposition and other functions linked with further handling of container. The main objective of the works is to provide value-added services to the cargo so that it can be further transported effectively using a particular mode of transportation efficiently. The works in the centre make the cargo has to be stored for relatively shorts periods of time. Location of this centre is usually close to major transport route (Rodrigue, 2017).

In line with *Tol Laut* and in order to create seamless operation of the Programme, a logistics centre, called *Rumah Kita*, will be built. In Maluku, *Rumah Kita* will be placed in Namrole, Namlea and Saumlaki (Koran Jakarta, 2017). However, this plan had been made before Ambon was included as one of the hub port in *Tol Laut*. This means that, the location of the logistics centres has to be reconsidered carefully again.

CONCLUSION

The initial stage of *Tol Laut* Programme based in Port of Yos Sudarso, Ambon shows significant impact on ship call because it increases the call, does not increase the quantity of unloaded/loaded container. Most container goes to the final destination without using feeder operation. In fact, there are several shipping operations exist. These services have to be incorporated to support the main vessel operation in order to make the whole operation effective and efficient. The other most important factor that has to be considered is to establish logistic centre in order to create seamless chain of container shipping operation. The location has to be reconsidered again after the inclusion of Ambon in the Programme.

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