The assessment and management of cruise port for tourism destination development in Bali island

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Abstract. Bali island has several ports, and three of them are used for ships’ layover. Those ports are: Benoa port in the southern of the island, Celukan Bawang port in the northern part, and Padangbai/Tanah Ampo port in the eastern part; with most of tourism activities are concentrated in the southern part. Disadvantageous management and competition between those ports raised the question and challenge for the cruise port and its nearest vicinity. A cooperation is required to enable those ports to compete more effectively, in attracting tourists and supporting the island’s tourism destination development. This study employed a set of semi-structured interviews (SSI) and the spot field observation in assessing the port’s management for tourism destination’s development. The result of this study is expected to contribute in providing useful information for tourism destination development and for the industry itself, which are constantly growing and attractive for international tourists.

1. Introduction
Cruise lines international association (CLIA) has reported the increase of cruise ships’ passengers internationally, from 17.8 million to 25.8 million during 2009 to 2017, or 4.8% in average. Cruise ships’ passengers in Asia have experienced a significant increase of 2.73 million people for the year 2013 – 2017, while the number of cruises rose from 861 in 2013 to 2086 in 2017 [1]. Asia Cruise Trends 2017 has reported the total volume of ports that had been visited by cruise ships in Asia in the year 2017 had reached 7,196. For two consecutive years, this area experienced a significant increase in terms of number of visit, it grew by 30% in the year 2017 linear with its impressive increase of 46% in 2016. Indonesia has ranked 10 with 187 ships visited the country’s ports, where 68 ships or more than 38% had visited Bali’s Benoa and Celukan Bawang port [2]. Indonesia had seen a 9% increase in number of visits during 2016 to 2017, and 89% more in 2018. There are 354 total calls for Indonesia, 293 or around 83% are Transit calls. While Indonesia had ranked 7th in Asia calls, Bali had seen the most traffic of 82 calls in 2018, and there are also Gili Islands and Komodo Islands with 43 and 40 calls respectively [3].The year 2019 was predicted to receive 73 ships which are going to visit Bali’s ports [4]. Cruise ships tourism in Asia were predicted to keep growing substantially, especially due to significant increase from Chinese’s passenger’s volume. To attract more cruise ships’ tourists, Indonesia government invested in high quality infrastructure to bring forth more colossal ships with their thousands passengers. This goal is reflected from the construction of Tanah Ampo cruise port in Karangasem region, eastern of the island; and expansion fo Benoa port in the southern part of Denpasar City, Bali.

This expansion project had a budget of more than 1.6 trillion Indonesia Rupiah (IDR) when this research was being made, and the project was scheduled to be finished this year’s end (end of year 2019).
This port’s expansion is really needed to accommodate bigger ships and passenger groups, with a compatible terminal, tourist facility, infrastructure on port’s surrounding waters such as widening of the port’s groove, also deepening the port’s and dock’s groove and pool. Whereas Tanah Ampo cruise port had had been built during the year 2006 to 2009 using the national (APBN) and regional (APBD) spending budgets as much as 104 billion IDR, however its 154 meters long dock is still not in function until today. The facts have shown that several optimistic evaluations from local decision makers are not entirely accurate, therefore it is important to avoid a not-constructive local optimization on the system as a whole.

Most tourists who visited Bali were concentrated on the southern part of the island, even though there are many competitive tourist destination all over the island. On the other side, Bali have three ports that have frequent visit from cruise ships. These tourism ports should have supported their surrounding area’s tourist destination. However, many ports have made disadvantageous management and competition, especially in terms of tourist destinations’ development. Currently, out of three ports that had frequent visit from cruise ships, since 2017 only two ports were routinely visited, those are Celukan Bawang and Benoa port. While Tanah Ampo tourism port did not have any visit at all. It is interesting to note the cruise ships’ operator request at the destination port, and their threat to erase the destination from its travel plan, which usually leads to disadvantageous result.

The purpose of this research is to identify best practices to assess and manage acceptable change limit for cruise ships’ tourism in the destination. Exploration research had been done to determine the availability, content and relevancy of the data with its main issues that will be discussed. Hence, the use of extensive source of books, journals, magazines, and articles. Furthermore, references were obtained from Benoa port’s & Celukan Bawang port’s authorities were also used to gather the knowledge regarding their operations and relationship between cruise lines and cruise ports. An extensive use of internet sources were to compile information from secondary researches. This research’s result is expected to contribute in formulate, develop, and implement strategies that should ensure sustainability of tourism destinations’ industry in Bali Island.

2. Current direction of port development

In an effort to increase the country’s foreign exchange earnings through foreign tourist visits by driving tourism travel through the sea transportation sector, the government through the Minister of Transportation issued ministerial regulation No.121 of 2015 concerning "Facilitation for tourists using foreign-flagged cruise ships” to enter ports in Indonesia; referring to Law No. 17 of 2008 concerning shipping, Law No.10 of 2009 concerning Tourism, Government Regulation No.20 of 2010 concerning Transportation in the waters and Presidential Regulation No.105 of 2015 concerning visiting tourist vessels (Yachts) are foreign to Indonesia. Legal basis as shown in Figure 1.

UU No. 17 Year 2008 concerning shipping
UU No. 10 Year 2009 concerning tourism
PP No. 20 year 2010 concerning water transport
Presidential Regulation No. 105 year 2015 concerning foreign tourist visit to Indonesia
PM No. 121 Tahun 2015 concerning “Providing facilities for tourists by using foreign-flagged cruises”

Figure 1. Legal basis for providing facilities to foreign-flagged cruise ship tourists
To implement these regulations, a strategy is needed to accelerate the realization of port infrastructure development in tourist destinations such as simplifying the licensing process for cruise ships and yachts. The existence of a port is expected to become a driving infrastructure for tourism, which should be supported by facilities to attract tourists because the attraction is focused in the water area, so that the marina resort is expected to be a suitable project to be developed and a solution to tourism problems.

2.1 The role of tourism ports
Ports have a vital role in the growth of both domestic and international trade, and is one of the fastest growing sectors in the tourism industry. Therefore, tourism ports which support the fastest growing industry in the world, especially cruise ships (cruise port), play an active role in sustainable tourism growth and economic growth of a country. In this technological age of modern world, tourism ports act as an industry not only as passive actors in transportation but also in sustaining tourism development in an area. The planning of a tourism port is not only focused on supply and demand, docks/terminals, infrastructure or an infrastructure complex but more than that; the framework of marketing strategies and analysis of economic impacts to sustain the growth of a region.

Currently, the cruise industry is not considered as a product of the tourism industry. Instead, it is part of the tourism industry such as agents, hotels or airlines. There are two types of ports in the Cruise industry, that is: (i) Home Port / Turnaround Port is a port where a ship gets all its needs, and where most of the passengers from all directions / areas get on board; (ii) Port of Call or a stopover port is a port where a ship stops at a certain time according to its schedule and an attraction is usually held for the cruises’ marketing. However, these two types of ports are not mutually exclusive and complement each other, especially in Asia where a ship can function in all ports as a port of call or home port / turnaround port, while there are different requirements for each port type.

In the Bali-Indonesia area, an expansion of Benoa port is currently under construction, with the purpose of accommodating both large and small cruise ships. Benoa port itself is a port of call that was built specifically for the purpose of the Bali area and can accommodate 15,000 passengers while the arrival area can accommodate 4000 passengers, and it is Indonesia’s largest port of call that was built specifically for the island.

2.2 Management of Cruise Port for Tourism Destination Development
The tourism sector-based port is described as a tourist-oriented recreational port with facilities that are attractive, while at the same time integrate services between land and sea into a unity. The main requirement for water facilities is a sufficient depth of port basin. Other data concerning tides which affect dock facilities and shipping lines are reflected on the security of ship maneuvers as well as transportation networks to tourist destinations; which are equally important are environmental suitability issues, government policies, public rejection and problems with construction costs.

There are high requirements for serving cruise ship tourists who only stop in a short time (short time scale). This is a challenge for Bali’s tourism (local resources) traffic management and supporting infrastructure who need the port development or upgrade with detailed planning and new destinations to face this promising market change. Thus, the cruise ship industry, need to consider matters related to on-board facilities, which are no less important are ports of call along with visits to tourist destinations in the region visited. This requires a particular market, each of which has its regional characteristics, therefore the efforts to make Bali and its tourism ports as the most important destination to visit.

Understanding the impact of cruise ship for tourism development, and which is related to the perceptions and attitudes of the population in the destination area towards tourism, is the basis for the management of cruise port.

3. Managing Cruise Ship Impacts
In essence, efforts to improve the development of the tourism business, are managed by: Maintaining Balinese cultural character, initiating land-based tourism activities, requiring the needs of local residents, fishermen and entrepreneurs. In order for the integrity of Bali tourism destinations to be maintained and sustainable, in the short term, the three priority sectors of Bali development (agriculture,
small craft industries, and cultural tourism) must be developed and maintained as a unified whole. When measuring the progress of tourism, we should no longer just interpret it by prioritizing economic-materialistic progress figures, but we must also look at it from a cultural perspective by putting forward the dimensions of environment, culture, and aesthetic. The process of planning, implementation, and supervision/measurement/evaluation must use an integralistic-holistic approach (philosophical, social-cultural, and economic).

3.1 The attitude of the population towards port expansion
Tourism affects every aspect both socio-cultural and environmental, especially in tourism destination areas that have high sensitivity [5]. Revealed, recently, there was a public perception among Balinese people that tourism activities were considered as destructive. Damaging Balinese culture, its environment, and its people. At this stage the aggravation of the local community began to be expressed publicly through various means such as demonstrations, which could be considered as the means to express their irritation. For example, the refusal of reclamation in Benoa Bay, which until now still leaves conflict and friction in the community. This situation should encourage the need to evaluate the impact of port expansion, especially for sensitive areas which include zoning utilization in determining regions to develop tourism infrastructure, by integrating social cultural and environmental aspects in understanding and assessing the impact of tourism on the community in order to maintain sustainability and long-term success from the tourism industry. The impact of the continuous increase in tourism on the economy, social and culture to Bali’s local residents who are mostly Hindu, with a very strong culture that is well known globally (whether it is beneficial or not) must be understood.

Diedrich and Garcia-Buadas (2009) in [5] also discussed the importance of paying attention to the reactions of local communities as elements in monitoring tourism management programs. Historically, research on population attitudes has taken a quantitative approach with good results to understand the impact of tourism. The quantitative approach allows researchers to reach a larger group of participants, but there is the possibility of not obtaining results on a deep understanding of the meaning of impact. Usually, the scale is used to measure how much or how little the tourism impacts on the population. This approach does not capture the attitude of the population. In a study at the port of Benoa, Bali, we used a qualitative approach to explore a more personal and potentially more fulfilling understanding of how the development of port expansion had an impact on local communities and areas of Bali. Prior research on quantitative aspects of people's attitudes helped frame our interview questions.

3.2 Assets assessment
The presence of specific ports and infrastructure related to the modernization of port infrastructure, the absence of bottlenecks and disruption of processes, to provide efficient and effective port services, is the key to enable port use as part of the travel plan.

The current existing cruise ports in Indonesia are not capable to explicitly accommodate the demand from port’s user. The relationship between tourism port and its related sectors in Indonesia were not fully calculated and understood. The approach has always been “top-down”, meaning that there is no interaction between the planner and user, which indicated by: i) port’s industries no longer able to serve the increasing need, and ii) the port’s capacity in general has been left way behind in terms of tourism cruise growth’s. There is a need for a model to describe the transportation system holistically and integrated, the model would eventually used to measure the performance of every related parties in the value chain, to avoid non-constructive local optimization to the system as a whole [10].

One of the main challenges in a study of port’s impact is to identify the relationship between the port and tourism industry, as well as the port’s dependency rate to the industry. A design for port’s facility should support the increasing tourists’ visit and access for an attractive water front that should have a beauty factor and profitable, financially speaking. This planning approach is needed not only for the beauty, but more importantly is for its economic benefit. Moreover, the impact from a port is not limited to its own industry, its dependency to the whole tourism industry would eventually affect the regional economic growth [10].
This condition has attracted the attention of a large number of provinces and districts in Indonesia, local government officials who are trying to capture a larger portion of this economic activity such as the Karangasem Regency government, Bali, which has completed the construction of the Tanah Ampo Port and is currently in the final completion of development / upgrade Benoa port with international standard to be able to serve turn around cruise ships. Likewise, Buleleng, which was once the capital of the Lesser Sunda Province, is now almost "lost". The city is like "forgotten" (fall into oblivion) from the tourism map of the Island of the Gods. The problem is, most of the dollar from the tourism sector does not go to the people of Buleleng, while the hustle and bustle of tourism is only concentrated in the southern Bali area, especially Badung Regency, Denpasar City and Gianyar Regency. In fact, tourism potential in Buleleng is no less interesting than southern Bali. One reason is the problem of not supportive transportation. To reach Buleleng, for example, from Denpasar, it takes 2 - 3 hours by winding roads. One of the breakthroughs that has been made by the government today is building a short cut to shorten the mileage and travel time. Besides that, Buleleng Regency is trying to make Celukan Bawang port as a tourism port, including to serve cruise ships. As a result, it is realized that there were no competition which occur between these ports, while the beneficiaries are cruise lines (cruise lines) and usually they will continue to demand / ask so ports will provide facilities in accordance with their demands.

High requirements are required to serve cruise tourists who can only stop in a short time (short time scale). It poses as a challenge for local tourism traffic management and supporting infrastructure along with their development; or port development/upgrading with detailed planning and new destinations to face this very promising market change [6]. Here are the expected cruise port facilities and services as assets (Table 1).

### Table 1. Expected cruise port facilities and services.

| Entrance & berth facilities | Cruise ship & services | Passenger services |
|-----------------------------|------------------------|--------------------|
| Manoeuvrability             | Dedicated cruise ship piers | Separation of pier uses in port |
| Draught                     | Berth reservation process | Pedestrian paths |
| Berth dimensions            | Tug boats               | Tourist information |
| Anchorages                  | Pilotage                | Cleanliness |
| Bollards                    | Fuel services           | Immigration quickness |
| Fenders                     | Fresh water services    | Port aesthetics |
|                             | Food and drink/ beverages | Ship to coach quickness |
|                             | Waste reception facilities | Sufficient availability of coaches/ taxis |
|                             | Quality of shipping agents | |
|                             | Speed of ship clearance | |
|                             | Stakeholders cooperation (port and other local stakeholders) | |

| Home-port only |
|----------------|
| Presence of passenger terminal |
| Parking facilities (short & long term) |
| Shops |
| Passenger throughput range |
| Security procedures |
| Availability of baggage storage |

Sources: Vaggelas & Pallis (2010); Policy Research Corporation (2013) in [9]

3.3 Challenges in the construction of cruise ports in Bali

Cruise port requires deeper and longer docks to facilitate a new generation of cruise ships efficiently. The need for an improved infrastructure have posed significant challenges especially for ports that face land scarcity; especially the need for regular dredging such as the current port of Benoa. In the latter case there is a need for expansion through land reclamation which leads to finding the best way to process and use dredging operations products, and until now it is still a prolonged polemic.

The diversity of activities that occur in the Coastal and Shore areas, involves a variety of interests: (1) The interests of local communities (Bali), such as, in a Balinese Hindu cemetery which focuses on
cremation known as Ngaben or Pelebon, will then scatter the ashes of the deceased to the sea and one of the popular place is Tanjung Benoa, (2) increasing the capacity of tourism such as hotels, resorts, restaurants, etc. (3) increasing port activities serving crossings to small islands in Bali (Nusa Penida, Nusa Lembongan) and Gili islands in Lombok. [11]

The development of transportation and tourism capacity are also very important. This concern should be addressed after understanding the exact implications of a continuous increase in the size and capacity of cruise ships and the scale from the operation’s result. Such discussions will help in understanding the operational, social and environmental constraints of economies of scale, and each potential difference which depends on specific variables. While the debate about the best way to apply is in the agenda among key stakeholders, this debate remains in many ways, inconclusive. Besides technical issues, there are also essence problems, such as the needs of all ports included in the travel plan to be synchronized with the system, the different requirements of each shipping line, multiple order maintenance, and cancellation of the shipping place that has been ordered, is very important. With the number of players involved, this discussion is difficult to resolve at the local, or national level.

These recent years growth has led to the evolution of a complex relationship between cruise ports, among Celukan Bawang port and Benoa port, and between the Buleleng and Pelindo district governments. These ports were competing with each other to be included in travel plans organized by several brands who deploy ships in certain cruise ship port areas. The main element is the expansion of this sector, the fact that cruising was developed based on the travel plans and not its destinations. There are interdependent relationships between ports. Competition and cooperation had occurred simultaneously between two or more rival ports in certain markets. As the number of ports entering the market continues to increase, this competition has been intensified.

4. Conclusion

This research reported the details on modern cruise structure and examines the main issues which must be addressed, to improve the continuity and sustainability of assured growth, which should have affected the industry over the past decade. This study was developed to provide background analysis to the public on the best ways of facilitating the continued growth of cruise activities in Bali and throughout Indonesia.

A condition that allows local people to take advantage of the rapid growth of the cruise ship market is defined and ratified as best practices and related policy options. Ports and stakeholders should use cruise ships for revenue collection and sustainable economic development.

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