Economic Impact of Tourism Development in Coastal Area: A Multiplier Effect Analysis Approach

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Abstract—Coastal areas in Kupang is one of the places where economic activities between tourists and business units managed by local communities have taken place since the 1990s. However, research on the economic impact using multiplier effect approach has never been done in coastal areas of Kupang. Objective of this study is understanding the economic impact by measuring the implications of tourist expenditure on the local economy. This research uses a mixed qualitative-quantitative method. Respondents in this study were 170 tourists and 80 managers of tourism business units spread over 3 most visited beaches in Kupang. Data collection techniques are distributing questionnaires to tourists and interviews with business unit managers. The data obtained were processed with Ms. Excel 2016 and Keynesian Multiplier Effect analysis. The results showed the tourism multiplier effect of Keynesian Income Multiplier 1.50, Income Ratio Type (1) 1.48, and Ratio Income Type (2) 2.00. These results indicate that tourism activities in the coastal area of Kupang are able to bring an economic impact on tourism business units, with the results of multiplier effect (≥ 1). Implication of this study is to develop coastal areas more integrated to increase economic impact for local business owners.

Keywords—Coastal Area; Multiplier Effect; Economic Impact; Tourism; Tourist; Tourism Leakage

I. INTRODUCTION

Tourism contributes to regional economic growth, by providing a source of income to local households and businesses. Tourism can have a significant positive effect directly or indirectly at the regional level by generating small businesses, employment, increasing wages for the locals, and regional economic revenues. Some parts of the economic impact also affect the parties of unit processes that are outside the area, known as tourism leakage, which is influenced by the consumption process of the products chosen by tourists.

According to previous research [1], business units that directly impacted from the tourists expenditure are accommodation services, restaurant services, and transportation, , as well as food and beverage products. Further relevant research regarding the impact of tourist expenditures which aims to expand the value obtained by tourism is the interaction that occurs between tourists and local residents in terms of life satisfaction and benefits felt during tourism development. The results show that local residents feel the benefits in economic, social, and cultural aspects of tourism development in life satisfaction. Life satisfaction is the accumulation of an increase in a person's quality of life which indicates that a person experiences positive experiences in his life [6]. The results of this study state that the social and cultural benefits felt by local residents in tourism development have a positive impact on people's life satisfaction which can improve the quality of life emotionally because of the social interactions that occur between tourists and tourists.

The interaction of tourists and local residents in a cultural event has also been carried out [3] to determine the impact of these activities on economic turnover in local communities. This paper uses the Keynesian Income Multiplier approach to determine the multiple impacts that occur after cultural activities are carried out [3]. In this study, the impact of tourist spending is the overall expenditure directly related to cultural activities that have been carried out, namely...
direct expenditures such as tickets, accommodation, restaurants, and others.

In addition, research on the economic impact of tourism is also related to employment. For example, research discussing job creation due to the development of natural forest tourism destinations in China showed that 1 job gain in the tourism industry led to 1.15 other job gains supporting the food, beverage, transportation and other relevant supporting industries. Previous studies have become a reference in research on the economic impact of coastal tourism in Kupang City. Economic activities that have occurred in the coastal area of Kupang City have occurred since the early 1990s. There are at least 3 coastal areas on the coast of Kupang City which are favorite destinations for tourists to enjoy coastal tourism activities. The three beaches are Lasiana Beach, Warna Beach, and Pasir Panjang Beach. Tourism activities in the area are supported by supporting facilities such as parking lots, jogging tracks, and tourism business units that offer products to prolong the visit period of tourists in the coastal area. The local business unit sells products such as traditional food and beverages [10], seafood, bars, cafes, and other supporting services. Although tourism economic activities have been running for quite a long time, literature studies on the economic impact of tourism in the Coastal Area of Kupang have never been found. So this research is needed to fill the research gap to describe the impact of tourists expenditure for local business using analysis of multiplier effect. The results of this study will be useful as basic information related to the new findings of tourist expenditure in coastal areas, as a basic reference for the direction of developing the coastal area of Kupang City, to future government planning to increase labor absorption in the tourism sector.

II. LITERATURE REVIEW

Tourism is defined as the activity of a person traveling to and staying in a location outside his home environment, not more than 1 year for pleasure, business, and other purposes in [5]. Coastal tourism is one of the largest segments in the maritime economic sector, as is the largest component in the tourism industry, which sometimes raises controversy about environmental impacts and human activities. As the second largest country in Asia and seventh in the world, it is also an archipelagic country with 2/3 of its share is the ocean. Indonesia has many coastal areas that have a lot of tourism potential [9]. There are two terms that are close to coastal tourism, namely marine tourism and coastal tourism.

2.1 Maritime Tourism and Coastal Tourism

Although both are different in the form and type of tourism. Both are equally related to water or the sea. Marine tourism is a form of tourism that is connected to the sea and the marine environment. Marine related tourism includes a variety of activities undertaken in the deep high seas, usually related to ocean exploration and sailing. Other activities related to marine tourism are water-based recreation and sports carried out in the ocean such as: scuba diving, underwater fishing, water skiing, surfing, tours to marine parks, observing marine animals and mammals, and so on. Maritime tourism, although the majority of its activities are carried out on the high seas, the equipment and facilities used are usually found on land. These facilities vary, including ports (including cruise ships, yachts, and the like (guides, dive instructors, shipping companies, cruise ships, etc.) [8]

While coastal tourism is also a form of tourism that depends on the elements of water or the sea. In addition, coastal tourism is considered an asset and an advantage by a region. Coastal tourism is very closely related to oceans and marine tourism, considering that both are interconnected and also include activities that occur in waters and beaches. Coastal tourism is related to recreational activities such as swimming, sunbathing, walking on the coast, and others. Experts argue that this type of coastal tourism is a form of tourism related to the sensation of a second home, which is managed as part of city development or in the construction of tourism resorts such as hotels and other facilities. As a form of coastal tourism, relevant facilities and infrastructure such as hotels, resorts, condos, are also easily found commercially on land and are usually close to the shoreline. In contrast to marine tourism activities related to the urban environment, facilities related to coastal tourism are related to natural scenery, wetlands, coral reefs, and ecosystems around the coast [9].

2.2 Tourism Economic Impact

In finding the extent of the impact of tourism on tourist spending on the economy in a destination, multiplier analysis is used. By calculating the expenditure of tourists who estimate the average expenditure of tourists in a destination and using the data as a basis for the impact of tourism activities [7]. Tourism activities support the pro-poor concept of destinations so multiplier analysis can help illustrate the limited benefits generated by current spending patterns but can also help show the effects of changes in spending.

Tourism consumption can affect income in at least three ways, namely: (1) changes in prices, household income, and income for the government.
The calculation of the multiplier value was carried out with the help of the Microsoft Excel 2016 program. In addition, this study also used triangulation data collection techniques, namely observation, in-depth interviews, and documentation. Based on the Keynesian Local Income Multiplier Value, Type I Income Multiplier Ratio and Type II Income Ratio, there are several criteria, namely:

1. If the value of the multiplier effect is less than or equal to zero (\( \leq 0 \)), then the tourist attraction has not been able to provide an economic impact on tourism businesses in the vicinity.
2. If the value of the multiplier effect is between zero and one (\( 0 < x < 1 \)), then the tourist attraction still has a low economic impact, and
3. If the value of the multiplier effect is greater than or equal to one (\( \geq 1 \)), then the tourist attraction has been able to have an economic impact on the surrounding tourism business units.

IV. RESULT AND DISCUSSION

The results of this study are divided into several stages, in the first stage the explanation will describe the characteristics of coastal tourists in Kupang City, then in the second stage will describe the characteristics of tourism business units in the Coastal Area of Kupang City; the third stage will explain the analysis of the direct impact of tourism in coastal areas on tourism business units in the vicinity, the fourth stage will explain the indirect economic impact of tourism in the coastal area of Kupang City on tourism businesses in the vicinity. Furthermore, the fifth stage will describe the continued impact of tourist economic activities in the coastal area on business units around the coastal area. After that, the analysis will continue with a discussion of tourism leakage in the Coastal Area of Kupang City.

4.1. Characteristics of Coastal Tourists in Kupang Kota

Based on the results of distributing questionnaires in three coastal areas of Kupang City, the number of tourists who were successfully asked for data was 170 people spread over three beaches, 50 respondents were obtained from Lasiana Beach, 55 respondents were obtained from Warna Beach, 65 respondents were obtained from Pasir Panjang Beach. As many as 52% of tourists visiting the coastal area of Kupang City are male while the remaining 48% are female. By gender, the number of male and female tourists is almost equal.

Based on the age range, as many as 64 tourists or 38% aged between 21-30 years, followed by the age range 17-20 totaling 47 tourists or equivalent to 28% and aged 31-40 years amounting to 43 people, namely 25%, the rest are over 41 years old as much as 9%. The majority of tourists visiting the
coastal area of Kupang City are between 17 and 40 years old.

Based on the level of education, tourists who carry out coastal tourism activities in Kupang City are undergraduate degree as many as 94 people or 55%, at the diploma level below as much as 14%, high school graduates as much as 24%, and elementary-junior high school levels as much as 5.3%. Three of the 170 tourists who filled out the questionnaire were postgraduate graduates, namely 1.7%. The majority of visitors have completed basic education.

Based on the work of tourists, as many as 65 people or 38% of tourists are those who work as students or have just graduated from college. Civil servant jobs are the second highest profession collected from tourists, as many as 50 people or 29%. The rest of the tourists are entrepreneurs as much as 17% and household assistants as much as 16%. The work of tourists as students is the most commonly found in line with the age range of tourists who are still in the productive age between 17-30 years and the education level is mostly at the diploma and undergraduate level.

Tourist income is divided into four, where the majority of tourists earn less than 500,000 per month as much as 24% in line with the tourist profession, the majority of which are students so they do not get a steady income. As many as 23% of visitors earn more than 3.5 million per month totaling 39 people. Visitors who earn 500 thousand to 1.5 million are 30 people or 18% of the total 170 visitors, and 29 visitors earn 1.5 million – 2.5 million.

Based on the area of origin, it is divided into two, namely as many as 128 visitors to the coastal tourism area of Kupang City and the remaining 43 visitors from outside Kupang City. The types of vehicles used by tourists are 115 people or 68% using motorbikes and the rest using cars 25% and public transportation 7%.

4.2. Characteristics of Coastal Tourism Business Unit

The business units that were interviewed were 80 informants. All of these informants were obtained from 3 different locations, namely business units from Lasiana Beach as many as 23 units, business units from Warna Beach as many as 21 units, and business units from Pasir Panjang Beach totaling 36 units. When divided by gender, 42 business units are managed by women or as much as 54%, while male business unit managers are 46% or 38 people. The business units in Lasiana Beach are predominantly managed by female managers, while the business units at Warna Beach and Pasir Panjang Beach are dominated by men. Business unit managers based on gender are influenced by the products produced by the business units. Managers at Lasiana Beach are mostly women whose background is housewives selling traditional food and beverage products such as grilled bananas, coconuts, lontar fruit, and roasted corn, while in the other two beaches the majority of managers are male because of the type of business unit being managed. is a cafe and grilled fish business unit.

Based on the age range, the majority of business units are managed by those aged between 31-40 years, amounting to 44 people or 55% and 32 people or the remaining 40% are over 40 years old. Only a few under the age of 30 years is equivalent to 4 people or 5%.

Based on martial status, of the 80 business units interviewed, as many as 76 business units or equivalent to 95% are married and have families that must be supported from the results of managing business units in the coastal area of Kupang City. The remaining 4 managers totaling 4 people or as much as 5% are not married. However, the manager of the business unit has a family to finance so that he manages the business unit in the coastal area of Kupang City.

Based on the education level, 58 managers or equal to 72.5% of managers received elementary education at the elementary level, 11 managers received basic education at the junior high school level or 13.75%, as many as 6 managers or 7.5% received education at the high school level, and as many as 5 managers had higher education equivalent to a diploma or bachelor's degree. a total of 6.25%.

4.3. Multiplier Effect Analysis as an Approach of the Economic Impact of Tourism in the Coastal Area of Kupang City

This study aims to describe at the economic impact that is formed and analyzes the multiplier effect of economic activities that occur in the Coastal Area of Kupang City. Based on the results of the data collected in 3 coastal areas in Kupang City, namely: Lasiana Beach, Warna Beach, and Pasir Panjang Beach, some information related to the total average monthly tourist expenditure on each beach tourist attraction was obtained. The average total expenditure of tourists at Lasiana Beach per month is 183,488,125 rupiah. This result is obtained from the total expenditure per tourist per visit multiplied by the average number of visitors during 2019.

Furthermore, the total monthly average tourist expenditure at Warna Beach is 213,034,800 rupiah, different from the calculation method for Lasiana Beach, the number of tourists in the beach. Pantai Warna had not been identified until this research was conducted. The amount is obtained from the daily records of business units that record tourist
expenditures during the business unit run. This bookkeeping is useful for estimating the number of visitors who carry out economic interaction activities at Warna Beach so that they are totaled every month as the average tourist expenditure. The same is the case with visitors at Warna Beach, tourists at Pasir Panjang Beach have not been recorded by the government so that tourists who visit can be known from the bookkeeping records carried out by each business unit. Expenditures and the number of visitors recorded are then averaged per day so that it is found that the number of tourist expenditures per month is 447,452,308 rupiah per month for business units at Pasir Panjang Beach.

4.4. Direct, Indirect and Continuing Impacts of Kupang City Coastal Tourism

The direct economic impact of coastal tourism activities in Kupang City comes from the interaction of economic activities that occur between tourists and local communities managing tourism business units in coastal areas. The average amount of tourist spending in the three locations of the coastal tourism area of Kupang City varies at each location, namely: the average tourist expenditure to Lasiana Beach is 67,880 rupiah, while the average tourist expenditure on the Warna beach is 64,556 rupiah, and the largest is tourist spending on Pasir Panjang Beach which reached 124,292 per tourist once visited. Each of these costs consists of a proportion of tourist spending that is directly spent in tourism destinations and the rest is spending outside of tourism destinations, known as tourism leakage. If accumulated, then the average expenditure of tourists in tourist attractions assuming shopping activities in coastal area business units, the total expenditure per person on average is 85,576 rupiah which is divided into 2, namely 72% or 62,180 which is the direct impact of the tourism economy in the area. coastal areas and the remaining 23% or 23,396 are tourism leaks that have no effect on the economic impact of coastal communities.

Tourist spending during the trip is divided into several posts, namely transportation costs, consumption expenses on the way, consumption expenditures in tourism destinations, spending on entrance tickets to destinations, spending on purchasing souvenirs and other expenses. Based on the results of the study, tourist spending was mostly spent on consumption activities in tourist attractions with a total of 66.11% of total tourist spending. This number shows that tourists spend as much as 66.11% of their money to buy consumption in the form of food and beverages available in the coastal area tourism business unit. Examples of food and beverages available in coastal areas are traditional foods such as grilled bananas, grilled corn, palm fruit, coconut ice, grilled seafood, and others. Furthermore, the second largest tourist expenditure item is on transportation costs. Transportation costs account for 19.55% of total tourist spending. This amount is obtained from the average number of costs to the coastal tourist attraction from tourists’ homes, either by using public transportation or private vehicles. Next is consumption expenditure on travel, which accounts for 7.79% of total tourist spending. This consumption expenditure is carried out before tourists arrive at tourism destinations, for example buying snacks on the way and drinks outside tourist sites. The next post sequentially is ticket and parking post as much as 3.46%, expenditure post for purchasing souvenirs as much as 2.77% and others by 0.33%. When related to the previous discussion, the direct economic impact of 72% is divided into consumption expenditure posts, ticket and parking expenditures, souvenir expenditures, and other purchases, while for tourism leakage as much as 23% occurs in the post of transportation costs and consumption expenses on trips outside the location. tour.

4.5. Indirect Impact of Tourism Economy

The indirect economic impact comes from the expenditure of the manager of the coastal tourism area business unit of Kupang City. Most of the business unit expenditures are used for supporting operational costs such as the financing of labor wages, the cost of renting a place for the business unit, purchasing raw materials, equipment maintenance, local transportation, taxes, electricity and water, and others.

Based on the analysis of 80 informants who manage business units in the coastal area of Kupang City, the largest expenditure item for business continuity is the purchase of raw materials by 38% of all expenditures. Purchase of raw materials depends on the type of business offered. Most of the business unit managers stated that the raw materials sold today are obtained from buying in the market or purchased from raw material collectors. The raw materials that must be purchased are mainly bananas, coconuts, and seafood. In addition, business units must also shop daily to buy coffee sachets, energy drinks, mineral water, and other products to be resold to tourists. The second largest expenditure item is to pay labor wages of 13% of income. This expenditure shows that the tourism sector can create alternative job opportunities for rural communities. All workers absorbed in the coastal tourism business unit are local people who live close to the coastal area. The next item of expenditure that must be met by the business unit is the expense of renting a trading booth by 1%, the cost of maintaining production equipment by 1%, local
transportation costs by 1%, and electricity and water costs by 2%.

4.6 The Induced Impact of the Tourism Economy

Induced economic impact is the economic impact obtained based on the expenditure incurred by local workers residing in the Coastal Area of Kupang City. Types of expenditures incurred by local workers include expenditures for family consumption, expenditures to meet daily support needs, expenditures for education costs, expenditures for local transportation, costs for payments for electricity, water, telecommunications, and other costs consisting of health costs, installment costs, and other costs that have not been identified. Most of the costs spent by the tourism business unit managers in the coastal area of Kupang City are used to re-spend the money to meet an average family consumption of 30%. This consumption is spent by local workers around the location of the coastal tourism area adjacent to the market location. In addition, food consumption is also distributed to food stalls located near the residences of tourism workers. As much as 26% of the total income earned by workers in coastal areas is spent on meeting daily needs consisting of consumption costs other than food needed for daily needs such as buying toilet facilities, recreational needs, worship, and clothing needs. Items of expenditure that are quite high also occur in other items which are a combination of the need for health costs, installment costs, and other costs that have not been identified. This expenditure item takes a portion of 25% of the total labor expenditure. Some workers stated that loans are one way to get easy business capital. So far, the workforce has also stated that loans can be repaid according to maturity.

Furthermore, 10% of local labor expenditure is allocated for education expenditures for children in the family. The average workforce in the tourism business unit has a family so that there are educational costs that must be borne by the family. 8% of the expenditure is for electricity, water, and telecommunications needs of household workers, and 1% for local transportation costs.

4.7 Multiplier Effect Value

The tourism economy multiplier effect is a value that shows the extent to which tourist spending will stimulate further spending, thereby increasing economic activity at the local level. According to terminology, there are three multiplier effects, namely direct effects, indirect effects, and induced effects. These three effects are used to estimate the economic impact at the local level [2].

The economic impact of tourist spending that occurs in the coastal area of Kupang City can be measured using the value of the multiplier effect of the money flow that occurs. The multiplier effect can be seen from the amount of tourist spending during tourism activities in the Coastal Area of Kupang City.

Based on the results of the analysis of the Keynesian Income Multiplier value of 1.50, which means that for every 1 rupiah increase in tourist spending, it will have an impact on increasing the income of workers and business owners in the coastal tourism area of Kupang City as much as 0.50 rupiah. The value of the Type I Income Multiplier Ratio that has been obtained is 1.48, which means that if there is an increase of 1 rupiah to the owner of the business unit, it will have an impact on increasing the income of local workers by 0.48 rupiah (in the form of business unit net income and labor wages). Furthermore, the value obtained from the Type II Income Multiplier Ratio is 2.00, which means that if there is an increase of 1 rupiah to the income of the business unit owner, it will have an impact on increasing the direct, indirect, and continued impacts (in the form of income of the business unit owner, labor, and expenditure for consumption at the local level) which is 1 rupiah.

As expected, the overall average economic multiplier effect is significantly greater than 1. This indicates that the coastal tourism industry provides an economic impact that extends beyond the primary coastal tourism industry. The average multiplier effect of the overall economy is 1.50 which indicates that on average 1 unit of economic activity in the coastal tourism sector generates an additional 0.50 units of indirect economic activity and secondary economic activity. The average multiplier for each industry, industrial development status and economic indicators is greater than 1 [4].

This study complements the study of economic impacts through a multiplier effect approach in the coastal area of Kupang City. The contribution of this research is intended for coastal tourism planners, tourism entrepreneurs, and policy makers by providing descriptive analytical information in the field of multiplier effects, namely the level of economic impact that occurs in the coastal area of Kupang City due to the interaction between tourists and local communities in tourism.

V. CONCLUSION

Tourist spending can bring benefits and affect the economy of a country. First, the expenditure of tourists can have a direct impact on the receipts of airlines, travel agents, hotels, tourism business units, restaurants, and various tourist facilities. This is known as the direct multiplier effect. In smaller application deployments, tourist spending has an economic impact on local communities and regional economies.
Second, the direct recipients of tourist expenditures use money to buy needed goods. For example, a hotel purchases raw food for a restaurant and laundry soap for the room division department. This economic activity is called the indirect economic multiplier effect. Like the coastal area business unit, which re-spend the results of tourist spending to meet the needs of daily life and create jobs for the community in the tourism sector.

The three beneficiaries receive direct and indirect impacts in exchange for spending the income earned on other goods such as housing, transportation, and entertainment services. In this study, the workforce and business units spend the results of tourist spending to buy raw materials and daily needs so that industries outside of tourism also benefit from tourism activities.

The multiplier effect number generated in the coastal tourism business unit is 1.50, which means that for every 1 rupiah increase in tourist spending, it will have an impact on increasing the income of workers and business owners in the coastal tourism area of Kupang City as much as 0.50 rupiah. The value of the Type I Income Multiplier Ratio that has been obtained is 1.48, which means that if there is an increase of 1 rupiah to the owner of the business unit, it will have an impact on increasing the income of local workers by 0.48 rupiah (in the form of business unit net income and labor wages). Furthermore, the value obtained from the Type II Income Multiplier Ratio is 2.00, which means that if there is an increase of 1 rupiah to the income of the business unit owner, it will have an impact on increasing the direct, indirect, and continued impacts (in the form of income of the business unit owner, labor, and expenditure for consumption at the local level) which is 1 rupiah.

The implications of this research are useful for entrepreneurs who want to invest [5] in the coastal area of Kupang City. The economic interaction in the coastal tourism of Kupang City still has room to develop and be profitable. Coastal tourism has a strong correlation with various industries that can be developed such as cultural performance services, food and beverage businesses, and various other business units in coastal areas. This implication is also an opportunity for employment opportunities for local communities in coastal tourism areas.

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