

The Economy of Tourism and Its Impact to Other Sectors in Lampung Province

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Abstract

Tourism sector has been identified contribute to the economy of Lampung Province. The study aims to assess the direct and indirect linkage towards economic sectors, analyze the sensitivity of tourism sector distribution, to assess the multiplier effect of dispersion in the tourism sector, and calculate the final demand of tourism sector in the economy of Lampung Province. The results revealed that the score of the forward linkages from the tourism sector in Lampung is relatively small compared to the backward linkage. Both directly and indirectly, the tourism sector is a 'down stream' sector of Lampung economy, which the output is directly consumed by final consumers. Therefore if tourism sector is developed, it can pull output that is in the upstream sector.

Keywords: development, forward and backward linkages, local economy, multiplier effect, tourism economy.

INTRODUCTION

Tourism is an important sector for many countries, and the rapid grows of tourism has been viewed as one of the challenges for new business. United Nations World Tourism Organization (UNWTO) recorded total international tourist arrivals grew faster during the year 2013 in the amount of 5 percent or 1.8 billion tourist arrivals than in 2012 [1]. In Indonesia, tourism grows significantly. Recent data shows the number of foreign tourist arrivals to Indonesia increased by 8.6 million tourists in 2012, up to 13.6% compared to 2011 [2].

Increasing amount of tourists visit to Indonesia make the tourism sector in Indonesia can play a role in economy through revenues derived from the large tourism consumption during their visit to the area of tourism destination [3]. This can be seen by tourist expenditures during the period which amounted 1,133.81 million US dollars, where the tourists expenditure/spending contributed approximately 9.1 billion US dollars, an increase of 5.8% compared to the year 2011 [4]. Meanwhile, based on Indonesia Central Bureau of Statistics in 2012, the contribution of tourism to the national economy amounted to 13.9% of the total Gross Domestic Product, and it will continues to grow in the next year [5].

The linkage of national tourism to economic activities can create some interests to calculate

contribution of tourism in the economy and dependence on social activities, especially in the visited places. It is because tourism sector is a combination of various industries such as transport, accommodation, food and drink and etc. Therefore it is necessary to make a range of methods to measure the direct economic contribution of tourism consumption to the national economy [5].

The national tourism development is also associated with the development of tourism in the province of Lampung which during the past few years continues to develop. Lampung Province has much diverse kind of attractions. Nature, culture, and artificial tourism are distributed in Lampung Province, with typical local uniqueness that strengthens the competitiveness of tourism [6]. The nature and culture tourism as their uniqueness has become tourism which differ Lampung from other provinces in Indonesia which has a specific travel themes, for example Yogyakarta with cultural tourism, or West Java with its diversity natural attractions to strengthen the competitiveness of tourism products [7].

The tourism sector is able to provide a multiplier effect for other business sectors [8]. Because of various tourism activities, all activities demand and consumption to a tour (goods/services, attractions, and more). It generate revenue for a tourism destination as well as a variety of activities providing tour services (goods/services, infrastructure, facilities, etc) which is an expense for tourism areas. Most of them result from the activities which carried out by other sectors outside the tourism sector [9].

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Same with other sectors, tourism is one sector that is able to contribute to the growth/development of a region/country. In other words, the size of the contribution that given by this sector will determine the size of the economic growth of an area/region/country.

The average contribution of tourism to GDP Lampung province was only 1.3% during 2010-2014, compare to agricultural sector 32% and processing industry 17% [7]. However, this certainly does not mean that these sectors do not need to be considered by the local government. Precisely, the increasing contribution of the tourism sector in Lampung directly or indirectly will push the growth and development in other sectors (considering the sector has significant multiplier effect to the economy [9,10].

The development of tourism in Lampung province illustrated by the development of the number of tourist visits (Table 1). In 2010 the number of tourists by the occupancy rate of hotels and accommodations amounted to 395,961 tourist arrivals and an increase of 39.27% in 2011 which became 551,476. As well as in 2012 rose to 577,893 visits; increase of 4.79% over the previous year. Furthermore, a significant increase occurred in 2013 where the number of visits amounted to 971,400 visits, an increase of 68.1% over 2012, despite a decline of 5.6% in 2014 [7].

Table 1. Number of Tourist Arrivals based on Occupancy Rate Hotels and Accommodation in Lampung Province

Year	Tourist arrivals
2010	395,961
2011	551,476
2012	577,893
2013	971,400
2014	917,230
2015	1,192,399

The development of tourism in Lampung shows that the tourism sector has linkages with other economic sectors as well as the services sector such as entertainment, hotels, restaurants, transport, agriculture, trade and processing sectors. The increasing of numbers of tourist who traveled and spend their money in Lampung are indicators that can be measured from the development of the tourism sector as well as supporting sector.

Input-Output Analysis developed by Leontief in 1930. The tables has grown to become one of the most widely accepted method, not only to describe the industrial structure of the economy but also includes a way to predict the changes of

the structure. The model of Input-Output is based on a general equilibrium model [11].

According to BPS RI [12], the Input-Output (I-O) table presents information about goods and services among the economic sectors with the form of a matrix. Fields along the column of I-O Table shows the structure of the inputs used by each sector in the production process, either in the form of intermediate inputs and primary input. Fields along the lines of Table I-O shows the allocation of the output generated by the sector to meet the demand for inter-mediate and final demand. In addition, value-added contents in row shows the composition of sectoral value added creation. This table provides an overview of: 1) The economic structure of a region that includes the output and value added in each sector, 2) The structure of intermediate inputs, namely the use of goods and services transactions between sectors of production, 3) Structure of the supply of goods and services, either domestically produced or imported goods or originating from outside the region, and 4) The structure of demand for goods and services both in the form of requests by various sectors of production and demand for consumption, investment, and exports.

There are some uses of the I-O analysis [11]: 1) to estimate the impact of final demand on output, value added, imports, tax revenues, and labor absorption in various production sectors, 2) to view the composition of the supply and use of goods and services, especially in the analysis of the needs and possibilities of import substitution, 3) for the analysis of price changes by looking at the effect directly and indirectly from input to output price changes, 4) to determine the sectors most dominant influence on economic growth and sectors that are most sensitive to economic growth, and 5) to describe the economy of a region and identify the structural characteristics of the economy region.

This model uses Input-Output (I-O) in the form of a matrix that presents information about the transactions of goods and services as well as interconnections between units of economic activity in a region and a particular period. The basic framework of Table I-O describe the transactions of goods and services that can be viewed from two sides. The first side (column) shows the input structure of economic sectors, the composition of the produced value added and the structure of final demand for goods and services. The second side (line) shows the distribution (allocation) of output of goods and

services for the production process, final demand and imports. The final demand in this regard include household consumption, government consumption, investment and exports of goods and services.

In the analysis on the role of the tourism sector on economic performance in Lampung province, final demand becomes exogenous factors that encourage the creation of value of production of goods and services. In relation to the contribution of tourism, factors (exogenous variable) are in the form of tourist consumption on goods and services.

Tourism is an activity field that supplies most of the production to final consumption [13]. Tourism functions as an intermediary supplier of goods and services to other sectors that should not be overlooked. Role of tourism as a result of supplying supply mainly to attract the output of hotel sector, restaurants, and sub-sector tourism itself; machinery industry; drugs; detergent; cosmetics and other chemical products; and transportation services for companies. electrical and electronic products. The tourism sector is not only supplying activity travel services but also goods and intermediary services. But in fact the tourism sector is also supplying goods and brokerage services to other branches in size is relatively low and is not a determining factor for triggering economic growth. The tourism sector with its function as a supplier of goods and services, especially in the final consumption of the sectors, is mostly deploy multiple direct and indirect effects throughout the economy, both in real and nominal side.

The factors that influence the number of tourist arrivals in Indonesia indicates that the amount of accommodation and the number of travel agencies is a factor that positively affects the number of tourist arrivals [14]. While a non conducive security situation is a factor that will reduce the number of tourists, instead when a conducive security in Indonesia will increase the number of tourists visiting Indonesia.

Similar study show that the tourism sector has a significant role to the economy in Bandung seen from contributions that are in the top three among the other sectors [15]. The tourism sector in the city of Bandung gives a positive multiplier effect on the economy of Bandung City.

Input-Output Analysis is a quantitative method that systematically measure the inter-relationships among several sectors contained in a complex economic system. The model also considered for general equilibrium theory as

important development model. Input-Output Model is quantitative model that can provide a comprehensive picture of [16]: (1) The structure of the national or regional economy, which includes the structure of output and value added in each sector; (2) The structure of intermediate input, i.e. the use of a variety of goods and services by the production sectors; (3) Structure of the supply of goods and services, either domestic production and imported goods that scale; (4) The structure of demand for goods and services, both between the requests of the sectors of production and consumption of final demand for investment and exports.

This study uses Input-Output analysis and the analysis has several assumptions. Transactions that are used in the preparation of Table I-O is based on following assumptions [17]: (1) Each industry produces only one homogeneous commodity (2); Each industry uses fixed input ratio in producing the output; (3) Production in each the industry is Constant Return to Scale (changes in input will impact change in output).

Based on the explanations above, therefore the objectives of this research are to: 1) calculate how much of direct and indirect linkages, coefficient distribution, power distribution, and labor multiplier; 2) analyses the impact of changes in the tourism sector final demand for the output of the tourism sector and other sectors in Lampung province.

MATERIAL AND METHODS

Data Collection

This study is explanatory research using a quantitative approach. Quantitative data is data that is obtained in the form of numbers and can be measured such as data of Input-Output Lampung Province 2015 [6], the number of tourist visits to Lampung, and tourist spending while in Lampung. This data was obtained from the Central Statistics Agency of Lampung Province and the Provincial Tourism Office of Lampung. Data Input-Output Lampung Tourism 2016 [6] will be used to discuss the problem of linkages between sectors and the multiplier impact of income and output. While tourist expenditure data used for the simulation discuss the impact of tourism on the development of economic output Lampung.

This research conducted in the province of Lampung is based on the consideration that the province of Lampung is one of the provinces in Indonesia as one of mostly visited tourism destination. Therefore, the development of

tourism in the province of Lampung is expected to attract the development of many other sectors beyond tourism sector. From this research, it can be seen how much the relationship of tourism sector to attract other sectors and what sectors are well aligned and have less relevance to the tourism sector, thus, the results of this study can be used as a reference to create a policy for the government local.

The type of data by source in this research is secondary data (Table 3). The data obtained from several references relevant to the problem under study as Input-Output Lampung province in 2015 [6] that had been prepared earlier by the Central Bureau of Statistics Lampung. More specifically, the data is a table of Input-Output 23 x 23 sectors which were taken from the Book of business sector Indonesia [12], while other supporting data are expenditure data rating, the number of tourists and others taken from the Tourism Office of Lampung Province.

Table 3. Code Sector of Business

No	Sector Production	Code
1	Agriculture	TPGN
2	Crops	TKBN
3	Livestock	PTK
4	Forestry	KHTN
5	Fishing	FISH
6	Mining and Quarrying	TBNG
7	Industrial fruit and Vegetables	IBS
8	Food Processing Industry	IKUD
9	Other Food Industry	IMLN
10	Beverage Industry	IMN
11	Other Industries	ILNY
12	Transport	TR
13	Communications	KM
14	Electricity, Gas, and Water	LGA
15	Building/Construction	PHR
16	Trade	PR
17	Hotel	HT
18	Restaurants	RST
19	Entertainment, Recreation, and Culture	HBRK
20	Financial Institutions	LK
21	Rental	PRW
22	General Government	PTUM
23	Other Services	JJLN

Data Analysis

I-O table analysis tool used to study the role of tourism services sector and other support to the economy of the province of Lampung is Input-Output Table. It is used to determine the role of the tourism sector on the economy of Lampung as input providers as well as consumers input. The impact of this sector can be analyzed based on the analysis of multipliers (output, income and employment) and linkages between

sectors [18]. For the analysis of linkages between sectors and the multiplier, the tool used is the Microsoft Excel software. Analysis of linkage (forward and backward linkages) is used to determine the degree of relatedness of a sector or sub-sector to the other sectors in an economy [19,20].

Direct Forward Linkage

Direct forward linkages is an additional increase in the production output of a sector that is caused by an increase in the final demand sector itself.

Direct Backward Linkage

Direct backward linkages is the increased use of production inputs as a sector that is caused by an increase in the final demand sector itself.

Indirect Forward Linkage

The indirect forward linkage show the effects of a certain sector that use the output of the sector indirectly per unit that increase the final demand.

Indirect Backward Linkages

Indirect backward linkage shows the linkage of the upstream sectors that indirectly provide inputs for the sector per unit that can increase the final demand.

Dispersion Index

Analysis on the impact of the development is the development of an direct and indirect linkages index [11]. Thus the existing inter-sectoral indicators can be compared. Pull power is a measure of the spread to look backward and forward linkages of the economic sectors in the region. Analysis on the impact of the spread or dispersion is divided into two types, namely the power of dispersion index and Sensitivity of Dispersion Index.

Power of Dispersion Index (Pull Power)

Power of Dispersion Index or attractive power coefficient is used to determine the benefits distribution of the a sector development to the development of other sectors through the market mechanism input. This means, the sector has the ability to increase production growth to the upstream sector. A sector would be said to have a higher dispersion if the spread coefficient greater than one. Conversely, a sector which is said to have a low dispersion when the spread coefficient is smaller than one.

Sensitivity of Dispersion Index (Push Power)

With the concept of dispersion sensitivity or pushing power, it indicates the ability of a sector to encourage growth in the production of other sectors which use the output of this sector as input. In other words, the dispersion sensitivity is helpful to determine the sensitivity of a sector towards other sectors through market mechanisms output. It means the ability of the sector to boost production growth of downstream sectors. A sector would be said to have higher backward linkages when the value of the dispersion sensitivity is greater than one. Conversely, a sector which is said to have a low sensitivity dispersion if the value is smaller than one.

Labor Multiplier

The employment multiplier rates shows the change in manpower caused by the initial change in the final demand. Labor multiplier is not obtained from the elements in Table I-O, as the multiplier output and income, as in Table I-O does not contain elements that relate to labor.

RESULT

Forward Linkage

The forward linkage is divided into two, namely direct and indirect forward linkages [13]. Value of direct forward linkage shows if there is an increase in final demand, produced output of a sector that will increase directly. On the direct forward linkage, the impact of changes in final demand will directly impact to the concerned sector. Therefore, the output generated in the production process is obtained from the input sector itself. Value of direct forward linkages obtained from the coefficient matrix that shows the number of output units from a sector that is required to produce one unit of output of other sectors [11].

Table 4. Direct Forward Linkage to the Economy Sector in Lampung, 2015

Sub Sector	Direct Forward Linkages
Leisure, recreation and culture	0.1347
Restaurant	0.1192
Transportation	0.0582
Hotel	0.0142

Based on the results of the analysis, a direct forward linkage of the tourism sector in Lampung consists of sub-sectors Leisure, Recreation and culture as a major sub-sectors of tourism, and

followed by restaurants, transportation and hospitality (Table 4). Of the four sub-sectors of tourism, Sub-sector leisure, recreation and culture has the highest direct forward linkage at 0.1347. It means that if there is an increase in the final demand of the sector amounted to 1 million Rupiah, then the output produced by this sub-sector which generated from the sector will increase the input directly by Rp 134.700.

Meanwhile, indirect forward linkage of tourism sectors presented in Table 5. The sub-sectors that have the highest indirect forward linkage is a sub-sector of hotel that is equal to the value 11.422. It means that if there is increased final demand of Rp. 1 million then the output of sub-sectors Hotel allocated indirectly to another sector or downstream sector will increase by Rp 1,142,000.

Table 5. Indirect Forward Linkage of Economy Sector in Lampung, 2015

Sector	Indirect Forward Linkages
Tourism	
Leisure, recreation and culture	10.033
Transportation	11.207
Hotel	11.422
Other	
Financial Institutions	19.625
Beverages Industry	14.155
Agriculture	12.899
Other Food Industries	15.824
Trade	11.561
Rent	11.735
Horticulture	13.102
Other Services	13.078
Electricity, gas, and water	13.025
Livestock	15.468
Construction/building	12.121
Communication	11.468

Backward Linkages

Backward linkages is divided into two types, namely the direct backward linkage and indirect backward linkage [11,20]. The value of direct backward linkage shows that if there is an increase in the final demand, the inputs of the needed sector will increase directly. In direct backward linkages, the impact of changes in final demand will directly affected the concerned sector. Therefore, the inputs needed in the production process is obtained from the output of the sector itself. The direct backward linkages value obtained from the coefficient matrix [11].

Table 6 show that the restaurant is the highest value of direct backward linkage in sub-

sectors of tourism which has amount 0.4558. This can be interpreted in case of increase in the final demand of the sector amounted to Rp 1,000,000, then the sub-sector is increase the demand for the input to the output of its own sector of Rp 455,800.

Meanwhile Table 7 show that the restaurant is the most value of indirect backward linkages of tourism, i.e. 1.4872. It implies that in the case of increase in the final demand of the sector amounted to Rp 1.000.000, then the sub-sector will increase of the input demand to other sectors indirectly Rp 1,487,200.

Table 6. Direct Backward Linkages of Lampung Economy Sectors, 2016

Sub Sector	Direct Backward Linkages
Hotel	0.4558
Leisure, recreation and culture	0.4192
Restaurant	0.3150
Transportation	0.2853

Tabel 7. Indirect Backward Linkages of Lampung Economy Sector, 2015

Sectors	Indirect Backward Linkage
Tourism	
Restaurant	1.4872
Hotel	1.4788
Leisure, recreation, and culture	1.1828
Transportation	1.2795
Other	
Electricity, gas, and water	2.0225
Building/construction	1.9022
Rent	1.7458
Food Processing Industry	1.6650
Other Services	1.5002
Trade	1.4494
Financial Institutions	1.3975
Agriculture	1.9022
Communication	1.2725

Impact of Change in Final Demand to the Direct and Indirect Total Output

The results point out that when the final demand increased, an additional final demand should be produced, and automatically produced an additional output [20]. If the tourism sector (restaurant, recreation and culture, hotel, and transportation) increase 10% then it can affect to the increasing of direct output sector about Rp 74,328 billion or increase of 1.66% from the previous total output. It is because those sectors are the main sectors in tourism (Table 8).

Table 8 also shows that 10% additional final demand in sub sector of tourism (Leisure,

recreation, and culture) will increase the total output on those sectors about Rp 2.87 billion or increase 6.51% from the previous output. If the final demand increase 10%, the tourism sub-sectors such as restaurant, hotel, and transportation are also continues to increase. The table states that the four sectors) has remain growth (as the most developed) which percentage of growth around 8.27% (Rp. 14.90 billion) from the previous total output.

DISCUSSION

Based on the analysis of data, Lampung tourism sector has a greater value of backward linkages compared to the forward linkage. The analysis of dispersion coefficients found that three sub-sectors of tourism (Hotel, restaurant and Leisure, recreation and culture) has a dispersion coefficient > 1. It means that the sector is able to increase the growth of the upstream sector.

Otherwise, the sensitivity dispersion index of the tourism sector (sub-sector of restaurant, hotel, leisure, recreation and culture, and transport) < 1. In other words the tourism sector are less able to encourage the growth of the downstream sector.

We conclude that the Lampung tourism sector is a sector in a downstream position. The sector generates output for direct consumption by the final consumer (tertiary sector). If the Government can develop this sector well and optimally, it can act as magnets on the outputs of the upstream sectors. But to develop the tourism sector in Lampung, there are still such problems in each kind of attraction in Indonesia, e.g. the lack of expansion and promotion of tourism within and outside the country on the attraction of natural and artificial tourism; the lack of safety factor, lack of maintenance, and less adequate infrastructure especially in tourist locations.

Competitive strategy on industry concept can be applied in Lampung Tourism, where the actors - the tourism business and the government, must have competitive strategy to be able to compete with local or other countries tourism such as Bali, Yogyakarta, and West Java. These tourism locations have uniqueness and characteristics for the sustainability of long term tourism development, and competition with other countries such as Singapore, Malaysia, and Thailand [21]. With abundant and diverse potential of nature and culture, Lampung tourism business agent and the government are expected to implement following competitive strategies.

Table 8. Impact of Tourism Final Demand Changes to Direct and Indirect Total Output

Sector	Total Output *	Total Output **	Change in Total Output	Change (%)
Direct				
Restaurant	15,352,125.44	15,287,453.48	64,671.96	0.42
Hotel	3,007,628.74	2,998,165.25	9,463.49	0.32
Leisure, recreation, and culture	5,797,612.86	5,729,708.77	67,904.09	1.19
Transportation	4,545,182.28	4,470,853.63	74,328.65	1.66
Total	28,702,549.32	28,486,181.13	216,368.19	3.59
Indirect				
Restaurant	15,352,125.44	15,287,453.48	64,671.90	0.42
Hotel	3,007,628.74	2,998,165.25	9,403.49	0.32
Leisure, recreation, and culture	5,797,612.80	5,729,709.77	67,904.09	1.19
Transportation	4,545,182.28	4,470,853.03	74,328.05	1.66
Total	28,702,549.32	28,480,181.13	210,368.19	3.59

Note:

* After Tourism sector Final Demand increased in 10%

** Before tourism sector Final Demand increased in 10%

Promote the Unique Characteristic of Lampung tourism

It is useful to minimize the tourism product substitution in Lampung, so travelers will only see the uniqueness in Lampung alone. The concept of competitive strategy in Lampung tourism is expected to be more advanced and survive in the long term development.

Protection and Security

On the cultural and natural attractions, the protection is essential in order to maintain the sustainability and the authenticity of the tourist attraction. The great care costs for the treatment of the attraction became an obstacle for the government. In addition, the safety factor issues should also be considered so that the convenience of both local and foreign tourists remain guaranteed [22].

Vertical Integration

The vertical integration that can be associated with tourism is the cooperation between tourism businesses. It raised their security of supply and reduces transaction costs and uneconomical costs.

Infrastructure

In supporting the growth of the tourism development in Lampung, especially the number of tourists, the government should start thinking about the provision and procurement of adequate infrastructure, particularly for infrastructure related to access to local or tourism area. As for the individual infrastructure that exist, we recommend to do not spoil and changing the original as well as the hallmark of the tourism areas (especially natural tourism

area), because it is the sign of tourism and the sale value of Lampung during this time.

IMPLICATIONS

By the consideration on the contribution of tourism sector to attract input - output of the upstream sectors to Lampung under the terms of the linkages and employment, the development of the tourism sector for the future should be a priority. It is necessary to be creative towards the resources to create attraction and tourism marketing in Lampung. One way is to use creative media such as movies and music which are published to the internet and regularly updated, travel fairs (national and international), festivals, and etc.

The nature is the most popular tourist attraction in Lampung. Aside from the natural attractions, Indonesia has a diverse tourism attractions, such as artificial attractions and cultural attractions. The government is expected to make a policy to develop the Indonesian tourism objects corresponding to each kind of tourist attraction without changing the unique and the characteristics of the tourism area. This is in order to create a tourist attraction in an appropriate manner and in accordance with the type of tourism objects.

The government should start thinking of policies related to the protection and safety, especially with regard to the tourism area. It is to ensure the safety and convenience of tourists when visiting tourism sites in Lampung, due to relatively high crime numbers.

CONCLUSION

Forward linkage of the tourism sector in Lampung is relatively smaller than backward

linkages, either directly or indirectly. This proves that the tourism sector Lampung is located in the downstream sector or the tertiary sector which its direct output is consumed by the final consumer. The results also show that the tourism sector is a sector that is in a position downstream in the economy of Lampung, which if this sector is developed, it can make interesting output in the upstream sector.

Meanwhile, the results of the sensitivity analysis shows that the dispersion of Lampung tourism sector is able to increase the growth of the upstream sector. While tourism sub-sectors (restaurants, leisure, recreation and culture, transportation, and hotel) are less able to drive the growth of the downstream sector. The results of the analysis of the tourism sub-sector have also found their multiplier effects on employment of 32.21% on the employment in 2015 than the previous year.

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