TOURISM INVESTMENT, SUPPLY AND DEMAND IN INDONESIA:
IMPACT AND FACTOR ANALYSIS

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Abstract

Tourism is one of the most significant contributors to the Indonesia growth of economy, based on data from the Indonesia Central Bureau of Statistics in 2012, the share of national tourism to GDP is 13.9 percent and of course the contribution of the sector to be helpful for the growth of the national economy, through foreign exchange earnings as revenue from tourist consumption. Besides that, it has provided a multiplier effect to other sectors which related to the sectors. Therefore, an improving of the contribution is one of government’s effort to boost economic growth and increasing the welfare, thus the increasing of tourism investment and trade will be focus in the tourism development program. Meanwhile, the Indonesia Coordinating Board (BKPM) stated the average national investment for the tourism sector is Rp. 2.73 billion or 6 percent from total investment during 2006-2012, in other words an investment in tourism sector has not been able to provide optimal contribution to the national economy development considering to its potential.

The purpose of this study was to analyze the determinants of investment, demand and supply of Indonesian tourism sector. Regarding to answer the problems, this research used series data from 1990-2012 periods, by using simultaneous model (2SLS) the model analyzed impact of investment, and international trade of Indonesia tourism sector to the national economic growth. Based on the Two Stages Least Squares method on simultaneous model, the results of the analysis gives some conclusions including: (1) tourism arrivals, tourism expenditure, investment, consumption price index, total consumption, government spending, export and import tourism affected the national tourism demand, (2) Current investment and investment on previous year, total consumption on previous year, and travel warning have positive impact to national tourism supply, (3) GDP was the most influenced variable beside Indonesia tourism price and neighbor countries’ tourism price as competitors of Indonesia tourism. Finally, the simulations showed the fiscal and monetary policy impact to the national economic tourism sector.

Keyword: Impact, investment, international trade, supply and demand tourism, and economic growth

1. INTRODUCTION

Tourism is one sector of the economy that great contributed to the economic development of a country, based on data from the Indonesia Central Bureau of Statistics, in 2012 the share of national tourism around 13.9 percent of the total GDP and of course the contribution of the sector to be useful for the growth of the national economy, through foreign exchange earnings received from the large consumption incurred by the traveler to national goods and services. It is also able to provide a multiplier effect of tourism to other sectors related either directly or indirectly (Reuters, 1999).

Historically, the development of tourism be able to encourage and accelerate national economic growth whereas tourism activities create demand, both consumption and investment, which in turn will lead to the production of goods and services. During the activity in tourism, tourists will be doing his shopping and spend their money to consume for travelling, thereby directly causing demand (tourism final demand) market for goods and services. Furthermore finals tourism demand indirectly raises demand for capital goods and raw materials (derived investment demand) to produce to meet tourist demand for goods and services. Indonesian tourist area of potential improvement in line with the...
The liberalization of trade in services is seen from the increasing tourist demand internationally, it is seemingly in Table 1, where in 2012 there was an increase of 5.8 percent when compared to 2011, with the amount of foreign exchange earned by 8,6 million tourists, an increase of 13.6 percent compared to the previous period.

Table 1: Number of tourism arrival and expenditures in 2005-2012

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<tbody>
<tr>
<td>Tourism Arrival (in thousands arrival)</td>
<td>5002.1</td>
<td>4971.35</td>
<td>5055.76</td>
<td>6234.5</td>
<td>6233.73</td>
<td>7022.94</td>
<td>7245.39</td>
<td>7669.66</td>
</tr>
<tr>
<td>International Tourism Expenditure</td>
<td>904</td>
<td>970.09</td>
<td>970.98</td>
<td>1178.54</td>
<td>995.93</td>
<td>1085.75</td>
<td>1118.26</td>
<td>1133.81</td>
</tr>
<tr>
<td>Tourism sector income</td>
<td>4521.9</td>
<td>4447.98</td>
<td>5345.98</td>
<td>7347.6</td>
<td>6297.99</td>
<td>7603.5</td>
<td>8591.39</td>
<td>9109.45</td>
</tr>
<tr>
<td>Domestic tourists</td>
<td>198.36</td>
<td>204.55</td>
<td>222.39</td>
<td>225.04</td>
<td>222.79</td>
<td>234.38</td>
<td>237.13</td>
<td>245.07</td>
</tr>
<tr>
<td>Domestic Tourism Expenditure</td>
<td>74.72</td>
<td>88.21</td>
<td>108.96</td>
<td>123.17</td>
<td>137.91</td>
<td>150.49</td>
<td>156.98</td>
<td>171.5</td>
</tr>
</tbody>
</table>

Sources: BPS and Indonesia Ministry of Tourism & Creative Economy, 2012

From Table 1 it is clear that an increase in the number of visits is also followed by an increasing as a result of foreign exchange receipts from tourism transactions during some periods. According to the Ministry of Tourism and Creative Economy, said that tourism is able to account for about 8.46 percent of the total employment provided that is equal to 192.210 million in 2012 (Kemenpraf, 2013).

Table 2 shows the extent of the contribution the tourism sector to the national income, which the tourism sector (which are classified in the trade, hotel and restaurant) was third after industri processing and agricultural sectors. The figures show that 13.9 per cent of total GDP in 2012, although slightly lower than in 2009 due to the impact of the economic slowdown faced by some developed countries, especially the United States and most of European Union countries since 2008, according to UNWTO world tourism development due to the economic slowdown in the European Union and the United States amounted to 3 percent that also affect the number of tourist arrivals to Indonesia although the effect is not too significant to national tourism but the conditions need to be addressed by the government in determining future economic development policy.

Table 2: Percentage Distribution of Gross Domestic Product at Current Market Prices by Industrial Origin, 2004-2012

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</tr>
</thead>
<tbody>
<tr>
<td>1. Agriculture, Livestock, Forestry and Fishery</td>
<td>14.30</td>
<td>13.10</td>
<td>13.60</td>
<td>13.70</td>
<td>14.50</td>
<td>15.30</td>
<td>15.29</td>
<td>14.70</td>
<td>14.44</td>
</tr>
<tr>
<td>2. Mining and Quarrying</td>
<td>8.90</td>
<td>11.10</td>
<td>11.00</td>
<td>11.20</td>
<td>10.90</td>
<td>10.60</td>
<td>11.16</td>
<td>11.85</td>
<td>11.78</td>
</tr>
<tr>
<td>3. Manufacturing Industry</td>
<td>28.10</td>
<td>27.40</td>
<td>27.50</td>
<td>27.10</td>
<td>27.80</td>
<td>26.40</td>
<td>24.80</td>
<td>23.30</td>
<td>23.94</td>
</tr>
<tr>
<td>4. Electricity, Gas, and Water Supply</td>
<td>1.00</td>
<td>1.00</td>
<td>0.90</td>
<td>0.90</td>
<td>0.80</td>
<td>0.80</td>
<td>0.76</td>
<td>0.77</td>
<td>0.79</td>
</tr>
<tr>
<td>5. Construction</td>
<td>6.60</td>
<td>7.00</td>
<td>7.50</td>
<td>7.70</td>
<td>8.50</td>
<td>9.90</td>
<td>10.25</td>
<td>10.16</td>
<td>10.45</td>
</tr>
<tr>
<td>6. Trade, Hotel, and Restaurant</td>
<td>16.10</td>
<td>15.60</td>
<td>15.00</td>
<td>14.90</td>
<td>14.00</td>
<td>13.50</td>
<td>13.69</td>
<td>13.80</td>
<td>13.90</td>
</tr>
<tr>
<td>8. Financial, Real Estate, and Business Services</td>
<td>8.50</td>
<td>8.30</td>
<td>8.10</td>
<td>7.70</td>
<td>7.40</td>
<td>7.20</td>
<td>7.24</td>
<td>7.21</td>
<td>7.26</td>
</tr>
<tr>
<td>9. Services</td>
<td>10.3</td>
<td>10.10</td>
<td>10.10</td>
<td>9.70</td>
<td>10.20</td>
<td>10.24</td>
<td>10.56</td>
<td>10.78</td>
<td>10.78</td>
</tr>
<tr>
<td>Gross Domestic Product</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: BPS, 2013

Refer to the government's efforts in improving the contribution of tourism for national economic growth and society welfare therefore the increasing of tourism investment is also the center of attention in the development program, beside that the goal for the investment activities can provide added value as well as lead to increased production because of tourism investment promotion programs, whereas most of tourism investments are oriented labor-intensive investment which is expected to create jobs that are needed by the community so as to improve the welfare and incomes. In table 3 shows that the average investment for the tourism sector is Rp. 2.73 billion during the period 2006-2012 with an average investment made by domestic investment of Rp. 235 Billion and is carried by the Foreign Direct Investment (PMA) average of Rp. 2.45 billion during the period 2006-2012, this figure shows that the contribution of tourism investment to total investment only 6 percent (Kemenpraf, 2012), in other words, an investment in the tourism sector have not been able to contribute optimal for the national economy despite the potential of this sector in contributing to the national economy considering the potential of natural and cultural, as well as the availability of adequate resources to support the growth of tourism).
Table 3: Realization of Tourism Investment, 2006-2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Foreign Direct Investment (billion)</th>
<th>Domestic Direct Investment (Billion)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>1.115</td>
<td>180</td>
<td>1.295</td>
</tr>
<tr>
<td>2007</td>
<td>1.364</td>
<td>127.7</td>
<td>1.492</td>
</tr>
<tr>
<td>2008</td>
<td>1.569</td>
<td>228.6</td>
<td>1.808</td>
</tr>
<tr>
<td>2009</td>
<td>3.065</td>
<td>357</td>
<td>3.422</td>
</tr>
<tr>
<td>2010</td>
<td>3.464</td>
<td>39</td>
<td>3.503</td>
</tr>
<tr>
<td>2011</td>
<td>2.422</td>
<td>394</td>
<td>2.816</td>
</tr>
<tr>
<td>2012</td>
<td>4.187</td>
<td>678</td>
<td>4.865</td>
</tr>
<tr>
<td>Average</td>
<td>2.455</td>
<td>235</td>
<td>2.743</td>
</tr>
</tbody>
</table>

Source: BKPM, 2013

So with tourism growth as a result of the increase in tourism demand will increase the demand for infrastructure and facilities to support tourism activities so that, both consumption and investment tourism are the two activities that are important and should be taken into account in determining a policy relating to tourism itself. Due to the growth in the tourism sector will ultimately trigger economic growth both directly and indirectly, not only in the tourism area itself but also affect other areas, especially the areas around the area of tourism and tourism-supporting areas.

2. RESEARCH PROBLEMS AND OBJECTIVES

Based on the background mentioned above, the problem can be formulated as follows: what are the factors that affect investment and tourism trade in goods and services (trade, hotels and restaurants), and what is the impact of investment, and international trade of Indonesia tourism sector to the national economic growth.

3. THEORY

3.1. Tourism and Economic Impact of Tourism on National Economy

The impact of tourism on the economy emerged as a result of supply and demand relationship in the industry, it is caused by the emergence of tourist spending patterns of visitors, and the investment generated by the transaction is tourism which in turn lead to a change in the economic structure of a country. Tourism has economic impacts, where tourists contribute to sales, profits, jobs, tax revenues, and income in a region regrading on promoting economic growth and social welfare. The most immediate impact of the tourism sector is a major with the increasing number of hotels, restaurants, transportation, entertainment, and retail trade, will cause secondary and multiplier effects for economic and social life. An analysis of economic impacts of tourism activities generally focused on changes in sales, income, and employment areas generated from tourism activities it means that the impact of tourism can be said to be derived from the results of the activity / event or a specific facilities provided for the development of tourism, so as to increase the income of the people either directly or indirectly. When compared to the physical and social impacts of tourism, economic impacts are relatively easy to measure, this is due to the physical and social effects likely to occur, so it is difficult to quantify or analyze numerically (Mathieson and Wall, 1992), one of the major issues that arise when discussing the economic impact of tourism is its scale.

The Impact of Tourism. As with other economic, the tourism sector also have the positive and negative impact on economic growth both macro and micro. The positive impact of tourism is generated: Income from Foreign Exchange Rates, Admission Open, Absorption of Labor, Infrastructure Development, and Economic Empowerment of Local Communities. While the negative impacts of tourism is; 1) Leakage, in tourism development are categorized into two types, namely leakage keboran import export. Import leakage usually occurs when the demand for the equipment of international standard which is used in the tourism industry, food and beverage imports were not able to be provided by the local community or in the country; 2) Conceded (Enclave Tourism), Understanding Enclave tourism is often associated that a tourist destination is considered only as a stopover for example, a tour of the yacht management where they just stop at a destination without skipping a night or stay in hotels that have been provided industry as a result the local cruise ship tourist arrivals benefits are considered very low or even no economic benefits for communities in a destination that is visited; 3) Financing Infrastructure (Infrastructure Cost), without apparently realizing that the development of an international standard tourism sector can become its own costs for the government and the sector as a
result tend to be charged to tax as a means to build the infrastructure, tax revenues must be increased to the community means tax should be raised. Other sectors such as the reduction of the budget for education and health; 4) Increased dramatically prices (Increase in Prices or Inflation), increased demand for goods and services from the tourists will lead to rising prices in a row inflation which will certainly have a negative impact for local communities who in reality does not increase in proportion of income means income if local communities are increasing but not comparable to the increase in prices will cause the purchasing power of local communities to be low; 5) Sectoral dependence (Economic Dependence), the diversity of industries in an economy showing soundness of a country, if there is a country that is only dependent on one sector of the economy such as tourism, for example, makes a country becomes dependent on the tourism sector as a result of economic resilience to be very high risk; 6) Seasonal problems (Seasonal Characteristics), in the tourism industry, recognized the existence of certain seasons, such as the high season " which will have peak tourist arrivals, occupancy rates will be close to the maximum room occupancy rates and conditions will impact business revenue increased tourism. Meanwhile, also low season in which the condition is the average occupancy rate does not match the expectations of the business as a revenue impact tourism industries also declined this is often called a seasonal problem.

Tourism has economic impacts, where tourists contribute to sales, profits, jobs, tax revenues, and pendants and a region in promoting economic growth and social welfare. The most immediate impact of the tourism sector is a major with the increasing number of hotels, restaurants, transportation, entertainment, and retail trade, will cause secondary and multiplier effects for economic and social life of the community. An analysis / biasanyaterfokus economic impact of tourism activities on changes in sales, income, and employment areas generated from tourism activities this means the impact of tourism can be said to be derived from the results of the activity/event or a specific tour the facilities provided for the development of tourism, so able to increase the income of the people either directly or indirectly.

3.2. Concept and Scope of Investment

Typical investment also called by investment or capital formation is a second component that determines the level of aggregate expenditure. Concerning to investment is an activity in the economy could push up the lower level of the country's economy, it is important to do in country because it can increase production and employment. Investment is the government spending and the company as a whole to purchase real capital goods for setting up a new company or to expand an existing business in order to obtain greater benefits than costs incurred capital to invest.

3.3. The Relationship between Investment on Economic Growth

Investment is an important factor in the sustainability of economic development and long-term economic growth. It will create jobs, increase incomes, which will further increase the market demand. The investment activities consist of direct investment (foreign direct investment / FDI) and portfolio investment. The investments are included a portfolio investment in the form of financial assets such as bonds, stocks, and so on are owned by foreign investors and invested into a country. While direct investment is investment made in plant, capital goods, land, and so on, with the exercise control over the investments that are known Foreign Direct Investment (FDI) is the foreign ownership of the assets of a country, so that they can have direct oversight of the use of the asset. FDI recipient country not only receive benefits in the form of capital, but also access to electronic technology, management, market, international network, changes in the structure and export oriented.

3.4. Investment and Tourism Promotion

Investment in tourism is basically the same understanding of the investment in a general sense, the only difference lies in Fixed Capital Information that relate directly to the development of infrastructure and facilities that improve the growth of tourism. On the issue of funding devoted to tourism infrastructure and tourism facilities such as roads, communication networks, utilities, ports, another distinction is generally financed by the government through the state budget or the budget which is also called the Social Investment Tourism. While the infrastructure and facilities such as hotels, theme parks, tourist transport, and others carried out by the private sector tourism - called direct investment (Rusman, 2004).

While promotion is defined as an effort to expand its share of both domestic and international tourism, as well as the efforts of developing countries is generally done by the government, and, if carried out by private parties directly related to the interests of private parties themselves as promotional hotel,
restaurant, and airline. And together with the investment, financing in order to promote tourism financed by the state budget/budget which is government consumption and not investment.

3.5. Tourism Components

Tourism activities include two main components of supply and demand. Components offer a product that can travel offered, which includes tourism, tourism facilities, tourism services, environment and facilities, which include a demand component of tourist activities and aspirations of the community and around the area of tourism. Everything is presented for the benefit of tourists, either in the form of objects, tools (infrastructure), human, technological, activities (events), as well as services, which is summarized bundled into supply and demand of the travelers, it can be said as a tourist product. One of the critical studies in tourism sector development plan is an analysis of supply and demand.

Tourism supply can be interpreted as elements of natural attractions or man-made tourist, goods and services (Yoeti, 1996), where the Component Demand is much desired tourist opportunities total picture of society or community participation in tourism activities in general can be expected when available adequate facilities. According Yoeti (1996) inquiry notice of its kind tourism is divided into two, namely: 1) Potential demand, the number of people who meet the minimum requirements for travel tourism because it has a lot of money, physical state is still strong, just not have any spare time traveling as tourists, 2) Actual demand, that is, people who are traveling on tourism to a certain area. 3) Analysis of demand according to the analysis of meaning is the traditional view, the social characteristics that have been used as a variable to explain market segmentation. Conventionally, the difference in age, affect the expectations and behavior of tourists at a young age market segment, tourists from abroad and so on.

On the other side, demand factors, among others: 1) Length Of Stay, The higher level of long-stay travelers will increase the carrying capacity of tourism. If tourist numbers slightly but high levels of long residence will be better than the number of tourists that much with a low level of long lived; 2) Travelers Activity Type where the travelers with deeper object recognition (convention tourism and cultural tourism) absorbs very little travelers compared to nature, 3) Guest Satisfaction, and 4) Sights utilization by Travelers.

According Ariyanto 2005, the main factors and other factors affecting tourism demand can be explained as follows: a) price, b) income, c) Socio-Cultural, d) Social Politics, e) Intensity family, f) Price of substitutes, in addition the fifth aspect of the above, the price of substitute goods are also included in the aspect of demand, which is assumed replacement goods instead of a tourist destination is used as a backup in traveled as: Bali as the main tourist destination in Indonesia, due to one reason or another Bali can not provide the ability to fulfill the terms of a tourist destination that tourists will indirectly change the goal nearest stricken like Malaysia (Kuala Lumpur and Singapore), and g) complementary goods price, is an item that mutual aid or in other words, complementary goods are other goods that are complementary, which when linked with tourism complementary goods is as a tourist attraction complementary with other tourism object.

4. RESEARCH METHODOLOGY

In general, the methodology used in this study using Simultaneous Approach. With reference to the Keynesian model of aggregate demand, is part of the tourism economy in the short term where the income/output is determined by the Household Expenditure (C), Company (I), government (G), and Foreign Affairs (NX), here in after referred to as Planned Expenditure (PE) (Mankiw, 2000). So that mathematically can be written:

\[ PE = C(Y-T) + I(r^*) + G + NX(e) \]

where the Household Consumption (C) is part of the income (Y) net of taxes (T), Investment (I) is a function of the level of the World Interest Rate (r*) and the Export and Import of Goods and Services (NX) is a function of the exchange rate, as reflected by the Competitiveness (e). Tourism in this model to be a part of the net exports that Planned Expenditure equation can be written as follows:

\[ PE = C(Y-T) + I(r^*) + G + [NX_{NP}(e) + NX_{P}(e)] \]

where NXNP is net exports of goods and services other than tourism and NPP is the net export balance of tourism or tourism balanced.

While the data used in this study used secondary data (1990-2012) from various official sources such as governments, international agencies, and report the results of both studies have been published or not
The type of secondary data time series and cross section data is merged into the panel. As for some of the data required in this study were: 1) Data on the number of foreign tourists visiting Indonesia according to country of residence, the number of Indonesian people who go overseas, the consumer price index, and the total population, 2) Countries GDP data are entered in this study include, 3) consumption, investment, government spending, exports, imports, interest rates and currency exchange rates against the USD, 4) Data rate, exchange rate against foreign currencies and the current account, 5) Data value FDI (outward) Investor countries included in the study (U.S., EU, Japan, Australia, ASEAN, and the Rest of the World) in units of USD, 6) Data about average average expenditure and types of tourism expenditure, information and events, as well as the existing tourism policy in Indonesia, 7) the number of residents of countries included in this study (population series), and 8) Data distance between origin and Indonesian tourists.

As mentioned before, this research will use a simultaneous model, whereas simultaneous equation model is a statistical model that links economic variables of an economic phenomenon that includes stochastic elements that consist of one or more random variables (Intrilligator, 1978). According to Koutsoyiannis (1978), said to be a good model should be able to meet the criteria of economy (theoretically meaningful), dimanastatistic criteria seen from one degree of accuracy (goodness of fit) usually by looking at the R² statistically significant, and the criteria econometrics is a prediction model that has unbiased properties, consistency, adequacy, and efficiency. In addition, the model is a simplification and representation of the real world. Based on the relationship between the variables in the block, then compiled equations consisting of endogenous and exogenous variables. Theoretical framework, previous studies, in field conditions, the availability of the data will determine the decision variables. Models are formulated in the form of the following equation: \[ Y_t = a_0 + a_1 Y^* t + a_2 X_t + a_3 X_t - j + a_4 Z_t + a_5 Z_t - j + a_6 Y_{t-j} + U_t \]

where: \( Y_t \) = endogenous variables in period t (current endogenous variables), \( Y^* t \) = endogenous explanatory variables in period t (current endogenous explanatory variables), \( X_t \) = exogenous variables in period t (current exogenous variables), \( X_t - j \) = exogenous variables in tj lag (lagged exogenous variables), Policy variables \( Z_t \) = (policy variables), \( Z_t - j \) = the lagged policy variables tj (lagged policy variables), \( Y_t - j \) = tj on the lag endogenous variables (lagged endogenous variables), \( U_t \) = Factor error (error terms), \( a_0 \) = constant (intercept), \( a_1 \) ... \( a_6 \) = parameter

To analyze the impact of tourism consumption and investment on the performance of the national economy can be formulated in a simultaneous equation approach is adopted in models Tourism Satellite Account (TSA) and Keynesian by dividing into blocks offers tourism demand and tourism supply following:

1. Block of Tourism Demand, which consists:

**Asean Tourism Arrival:**

\[ T_{Ar.\text{Asean}_t} = a_0 + a_1 Y_{t} + a_2 P_{na.\text{Asean}_t} + a_3 P_{\text{Pop.\text{Asean}_t}} + a_4 D_{t} + a_5 D_{t-1} + a_6 Y_{t-j} + U_{t} \]

Tourism Consumption:

\[ T_{E.\text{Asean}_t} = b_0 + b_1 Y_{C.\text{Asean}_t} + b_2 T_{E.\text{Asean}_t} + b_3 P_{na.\text{Asean}_t} + b_4 D_{1} + b_5 D_{1} + \mu_{t} \]

Tourism Price = Consumer Price Index

\[ CPI_{\text{Asean}_t} = d_0 + d_1 R_{\text{Asean}_t} + d_2 MS_{\text{Asean}_t} + d_3 D_{1} + \mu_{t} \]

Total Consumption:

\[ C_{\text{ASEAN}_t} = c_0 + c_1 Y_{\text{Asean}_t} + c_2 Y_{\text{CPI}_t} + c_3 Y_{\text{Asean}_t} + c_4 D_{1} + \mu_{t} \]

Investment:

\[ I_{\text{ASEAN}_t} = f_0 + f_1 Y_{\text{Asean}_t} + f_2 R_{\text{Asean}_t} + f_3 D_{1} + \mu_{t} \]

Government Spending:

\[ G_{\text{ASEAN}_t} = h_0 + h_1 Y_{\text{Asean}_t} + h_2 D_{1} + \mu_{t} \]

Export:

\[ X_{\text{ASEAN}_t} = i_0 + i_1 Y_{\text{Asean}_t} + i_2 D_{1} + \mu_{t} \]

Import:

\[ M_{\text{ASEAN}_t} = j_0 + j_1 Y_{\text{Asean}_t} + j_2 D_{1} + \mu_{t} \]

III-66
2. Japan:
Tourism Arrival:
\[ T_{AR_{JP}} = ab_1 + ab_2 Y_{JP} + ab_3 P_{lna_{JP}} + ab_4 Pop_{JP} + \mu_{23t} \]
\[ + ab_{11} D1 + ab_{12} D2 + \mu_{24t} \]
Tourism Expenditure
\[ T_{E_{JP}} = bb_0 + bb_1 Y_{JP} + bb_2 T_{E_{JP}(t-1)} + bb_3 P_{lna_{t}} + bb_4 D1 + bb_5 D1 + \mu_{22t} \]
Tourism Investment
\[ I_{lna_{JP}} = cb_0 + cb_1 Y_{JP} + cb_2 I_{lna_{JP}(t-1)} + \mu_{23t} \]
Consumer Price Index
\[ C_{PI_{JP}} = db_0 + db_1 R_{JP} + db_2 MS_{JP} + \mu_{24t} \]
GDP:
\[ Y_{JP} = C_{JP} + I_{JP} + G_{JP} + X_{JP} - I_{lna_{JP}} \]
GDP Per Capita:
\[ YC_{JP} = \frac{Y_{JP}}{Pop_{JP}} \]
Consumption:
\[ C_{JP} = eb_0 + eb_1 Y_{JP} + eb_2 C_{JP(t-1)} + \mu_{25t} \]
Investment:
\[ I_{JP} = fb_0 + fb_1 Y_{JP} + fb_2 I_{JP(t-1)} + \mu_{26t} \]
Government Spending:
\[ G_{JP} = gb_0 + gb_1 Y_{JP} + gb_2 G_{JP(t-1)} + gb_3 D1 + \mu_{27t} \]
Tourism Export:
\[ X_{lna_{JP}} = hb_0 + hb_1 Y_{JP} + hb_2 ER_{JP} + hb_3 X_{lna_{JP}(t-1)} + \mu_{28t} \]
Tourism Import:
\[ M_{lna_{JP}} = ib_0 + ib_1 Y_{JP} + ib_2 M_{lna_{JP}(t-1)} + \mu_{29t} \]
3. The United State
Tourism Arrival:
\[ T_{AR_{USA}} = ac_0 + ac_1 Y_{USA} + ac_2 P_{lna_{USA}} + ac_3 Pop_{USA} + \mu_{30t} \]
\[ + ac_{11} D1 + ac_{12} D2 + \mu_{31t} \]
Tourism Spending
\[ T_{E_{USA}} = bc_0 + bc_1 Y_{USA} + bc_2 T_{E_{USA}(t-1)} + bc_3 P_{lna_{t}} + bc_4 D1 + bc_5 D2 \]
\[ + \mu_{32t} \]
Tourism Investment:
\[ I_{lna_{USA}} = cc_0 + cc_1 Y_{USA} + cc_2 I_{lna_{USA}(t-1)} + \mu_{33t} \]
Consumer Price Index:
\[ CPI_{USA} = dc_0 + dc_1 R_{USA} + dc_2 MS_{USA} + \mu_{34t} \]
GDP:
\[ Y_{USA} = C_{USA} + I_{USA} + G_{USA} + X_{USA} - I_{lna_{USA}} \]
GDP Per Capita:
\[ YC_{USA} = \frac{Y_{USA}}{Pop_{USA}} \]
Consumption:
\[ C_{USA} = ec_0 + ec_1 Y_{USA} + ec_2 C_{USA(t-1)} + \mu_{35t} \]
Investment:
\[ I_{USA} = fc_0 + fc_1 Y_{USA} + fc_2 I_{USA(t-1)} + \mu_{36t} \]
Government Spending:
\[ G_{USA} = gc_0 + gc_1 Y_{USA} + gc_2 G_{USA(t-1)} + gc_3 D1 + \mu_{37t} \]
Tourism Export:
\[ X_{lna_{USA}} = hc_0 + hc_1 Y_{USA} + hc_2 ER_{USA} + hc_3 X_{lna_{USA}(t-1)} + \mu_{38t} \]
Tourism Import:
\[ M_{lna_{USA}} = tc_0 + tc_1 Y_{USA} + tc_2 I_{lna_{USA}(t-1)} + \mu_{39t} \]
4. European
Tourism Arrival:
\[ T_{AR_{EU}} = ad_0 + ad_1 Y_{EU} + ad_2 P_{lna_{EU}} + ad_3 Pop_{EU} + ad_{11} D1 + ad_{12} D2 + \mu_{40t} \]
Tourism Expenditure
\[ T_{E_{EU}} = bd_0 + bd_1 Y_{EU} + bd_2 T_{E_{EU}(t-1)} + bd_3 P_{lna_{t}} + bd_4 D1 + bd_5 D2 + \mu_{41t} \]
Investment Tourism:
\[ I_{lna_{EU}} = cd_0 + cd_1 Y_{EU} + cd_2 I_{lna_{EU}(t-1)} + \mu_{42t} \]
Consumer Price Index:
\[ CPI_{EU} = dd_0 + dd_1 R_{EU} + dd_2 MS_{EU} + \mu_{43t} \]
GDP:
\[ Y_{EU} = C_{EU} + I_{EU} + G_{EU} + X_{EU} - I_{lna_{EU}} \]
GDP Per Capita:
\[ YC_{EU} = \frac{Y_{EU}}{Pop_{EU}} \]
Consumption:
\[ C_{EU} = ed_0 + ed_1 Y_{EU} + ed_2 C_{EU(t-1)} + \mu_{44t} \]
Investment:
\[ I_{EU} = fd_0 + fd_1 Y_{EU} + fd_2 I_{EU(t-1)} + \mu_{45t} \]
Government Spending:  
\[ G_{EU_t} = g_1 + g_2 Y_{EU_t} + g_3 G_{EU_{t-1}} + g_4 D_{1t} + \mu_{47t} \]

Export:  
\[ X_{\text{NA-EU}_t} = h_1 + h_2 Y_{EU_t} + h_3 ER_{EU_t} + h_4 X_{\text{NA-EU}_{t-1}} + \mu_{48t} \]

Import:  
\[ M_{EU_t} = i_0 + i_1 Y_{EU_t} + i_2 S_{US_{A_{t-1}}} + i_4 D_{1t} + \mu_{49t} \]

5. Australia
Tourism Arrival:  
\[ T_{Ar_{-AUS_{t}}} = a_0 + a_1 Y_{AUS_{t}} + a_2 P_{\text{lna}_{AUS_{t}}} + a_3 P_{\text{pop}_{AUS_{t}}} + a_4 D_{1t} + a_5 D_{2t} + \mu_{51t} \]

Tourism Expenditure
\[ T_{E_{AUS_{t}}} = b_0 + b_1 Y_{AUS_{t}} + b_2 T_{AUS_{t-1}} + b_3 I_{\text{na}_{AUS_{t}}} + b_4 D_{1t} + b_5 D_{2t} + \mu_{52t} \]

Investment of Tourism:
\[ I_{\text{lna}_{AUS_{t}}} = c_0 + c_1 Y_{AUS_{t}} + c_2 I_{\text{lna}_{AUS_{t-1}}} + \mu_{53t} \]

Consumer Price Index:
\[ C_{\text{P_{AUS_{t}}} = d_0 + d_1 R_{AUS_{t}} + d_2 M_{S_{AUS_{t}}} + \mu_{54t} \]

GDP:
\[ Y_{AUS_{t}} = C_{AUS_{t}} + I_{AUS_{t}} + G_{AUS_{t}} + X_{AUS_{t}} - I_{\text{na}_{AUS_{t}}} \]

GDP Per Capita:
\[ Y_{C_{AUS_{t}}} = \frac{Y_{AUS_{t}}}{P_{O_{POP_{AUS_{t}}}}} \]

Consumption:
\[ C_{AUS_{t}} = e_0 + e_1 Y_{AUS_{t}} + e_2 C_{AUS_{t-1}} + \mu_{55t} \]

Investment:
\[ I_{AUS_{t}} = f_0 + f_1 Y_{AUS_{t}} + f_2 I_{AUS_{t-1}} + \mu_{56t} \]

Government Spending:
\[ G_{AUS_{t}} = g_0 + g_1 Y_{AUS_{t}} + g_2 G_{AUS_{t-1}} + g_3 D_{1t} + g_4 \mu_{57t} \]

Eksport of Tourism:
\[ X_{\text{lna}_{AUS_{t}}} = h_0 + h_1 Y_{AUS_{t}} + h_2 ER_{AUS_{t}} + h_3 X_{\text{lna}_{AUS_{t-1}}} + \mu_{58t} \]

Import:
\[ M_{AUS_{t}} = i_0 + i_1 Y_{AUS_{t}} + i_2 S_{\text{lna}_{AUS_{t-1}}} + \mu_{59t} \]

6. Rest of The World (ROW)
Tourism Arrival:
\[ T_{Ar_{-ROW_{t}}} = l_0 + l_1 P_{POP_{t}} + l_2 E_{Rlna_t} + l_3 \text{TREND}_{t} + l_4 D_{1t} + l_5 D_{2t} + \mu_{61t} \]

Consumption:
\[ C_{ROW_{t}} = m_0 + m_1 Y_{ROW_{t}} + m_2 C_{ROW_{t-1}} + \mu_{62t} \]

Investment:
\[ I_{ROW_{t}} = n_0 + n_1 Y_{ROW_{t}} + n_2 C_{ROW_{t-1}} + n_3 M_{3D_{2t}} + \mu_{63t} \]

Tourism Expenditure:
\[ T_{E_{ROW_{t}}} = n_4 + n_5 \text{ERlna}_{t} + n_6 T_{E_{ROW_{t-1}}} + n_7 \text{TREND}_{t} + n_8 D_{1t} + \mu_{64t} \]

2. Block of Tourism Supply
Tourism Consumption
\[ C_{T_{lna_{t}}} = p_0 + p_1 Y_{lna_{t}} + p_2 Y_{lna_{t-1}} + p_3 c \text{T}_{lna_{t-1}} + p_4 Y_{lna_{t}} + p_5 P_{lna_{t-1}} + p_6 T_{A_t} + p_7 T_{A_{t-1}} + p_8 T_{E_{t}} + p_9 T_{E_{t-1}} + \mu_{65t} \]

Tourism Investment
\[ I_{T_{lna_{t}}} = q_0 + q_1 Y_{lna_{t}} + q_2 R_{lna_{t}} + q_3 J_{I_{lna_{t-1}}} + q_4 T_{A_{lna_{t}}} + q_5 G_{T_{lna_{t}}} + q_6 D_{1t} + q_7 D_{2t} + \mu_{66t} \]

Government Spending on Tourism
\[ G_{T_{lna_{t}}} = r_0 + r_1 Y_{lna_{t}} + r_2 G_{T_{lna_{t}}} + r_3 T_{A_{lna_{t}}} + r_4 T_{A_{lna_{t-1}}} + r_5 T_{A_{lna_{t-1}}} + r_6 D_{1t} + \mu_{67t} \]
5. RESULTS AND ANALYSIS

5.1. Estimation Results: Block of Indonesia Tourism Supply

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<td>LTA_Ina***</td>
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5.2. Estimation Results: Block of Indonesia Tourism Demand

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</tbody>
</table>

Based on the result of simulations, some indications are showed that:

1. The tourism receipts through the number of foreign tourists from countries Asean5 suggests that economic growth these countries have a positive impact on the number of foreign tourists visiting Indonesia. Increase in GDP also have a positive impact on the amount of spending by foreign tourists to Indonesia per visit with the magnitude of the change is at 6:04 percent. So also with the growth of countries Asean5 on consumption, exports, and imports were also positively impact tourism, with the magnitude of change respectively 1:31 percent, 24.5 percent, and 8:04 percent. From the simulation
results, it is found if there is a Japanese economic growth of 6 percent would lower the foreign tourists visiting Japan to Indonesia at 2.08 percent, government spending 7.08 percent, 3.76 percent tourism consumption and tourism exports of 88.42 percent. In contrast, the Japanese economic growth of 6 percent will increase spending by foreign tourists per visit sebesa 20.3 percent, 143.90 percent tourism investment, tourism and imports of 11.46 per cent. GDP growth of 6 percent in the United States, from the simulation results obtained negative impact on U.S. foreign tourist visits to Indonesia, the magnitude of spending U.S. tourists in Indonesian tourism investment, government spending (in the tourism sector), and the export of tourism, with the magnitude of change in each of 0.0006 percent, 10.64 percent, 42.03 percent, 0.05 percent, and 1:57 percent. While the positive impact of the increase in GDP in the United States for tourism consumption, and the changing imports of tourism respectively by 0.67 percent, and 2:51 percent. The impact of the increase in GDP of European countries by 6 percent were positive for foreign tourists visiting European countries amounted to 0.03 per cent, 4.28 per cent of tourism consumption, government spending in the tourism sector by 5.12 per cent, 11.08 per cent of exports of tourism, and imports of 14:41 percent tourism. While the impact of increase in GDP by 6 percent in European countries was negative, which gained its impact on the amount of expenditures Europe tourist in Indonesia 2.16 percent, 149.01 percent and tourism investment. Impact of the increase in Australia's GDP by 6 percent, from the simulation results obtained positive for foreign tourists visiting Australia to Indonesia amounted to 13.74 percent, 243.49 percent tourism investment, consumption of 7.14 percent, 7.8 planners in government spending, and exports 3.13 tourism percent. In contrast to the amount of expenditures of foreign tourists to Indonesia and Australia imports negatively impact tourism GDP increased 6 percent, with the magnitude of the change 17.94 percent, and 10.81 percent.

2. By the time the interest rate of 5.75 percent, the number of tourists from Asean countries to Indonesia increased by 20.4 per cent on the contrary impact on tourism demand and supply - Asean5 Indonesia had lower inflation rate of 0.56 percent, 163.53 percent of tourism investment, consumption by 1.70 percent and government spending in the tourism sector by 2.65 percent. From the simulation results on block Indonesian tourism demand from Japan suggests that if the current BI rate at 5.75 then the impact on the number of foreign tourists visiting Japan to Indonesia is negative, with the magnitude of the decline was 3 percent. As well as the impact on consumption, inflation, government spending, and exports; with the magnitude of the decline amounted to 6:39 percent, 12:08 percent, 10.74 percent, and 88.36 percent. While the impact of the prevailing interest rate at 5.75 percent in Indonesia to the amount of spending Japanese tourists per day in Indonesia, tourism investment, tourism and import value is positive, which means that if there is an increase sebesa 5.75 percent interest rate would increase spending by foreign tourists, investment and imports respectively amounted to 20.3 percent, 139.52 percent and 10.88 percent. Applicability of interest rate by 5.75 per cent in the country to supply and demand of Indonesian tourism - Americans, based on the results obtained simulsi negative impact on U.S. foreign tourists to visit Indonesia, tourism spending U.S. tourists per visit in Indonesia, tourism investment, consumption, and export value of tourism to the magnitude decreased respectively by 2.15 percent, 10.64 percent, 99.96 percent, 0.82 percent, and 2.52 percent. Instead of simulation results impacts of a 10 percent increase in interest rates have a positive impact to interest rates, government spending, and imports to the value of each individual is 00:28 percent and 12:24 percent. From the simulation results obtained by the impact of an interest rate of 5.75 percent is positive for foreign tourists visiting European countries amounted to 12:03 per cent, 1.61 per cent of tourism consumption, government spending in the tourism sector of 3:17 per cent, 9.45 percent tourism exports, and imports of tourism of 12:54 percent. While the impact of rising interest rates tingkat 10 percent in European countries is negative for European tourists spending in Indonesia per visit of 2:16 percent, 149.55 percent and the investment price level of 0.33 percent, which gained its impact on the amount of European tourist expenditures in Indonesia 2:16 percent, 149.01 percent and tourism investment. The impact of interest rate 5.75 percent, from the simulation results obtained positive for foreign tourists visiting Australia to Indonesia 29.84 percent, 215.67 percent tourism investment, consumption percent 4:06, 5:03 percent of government spending, and exports 1:43 tourism percent. In contrast, the amount of expenditures Australian tourists to Indonesia, level of prices, and the negative impact on tourism imports increased 10 percent interest rate, with the magnitude of the change 17.94 per cent, 1:01 percent and 14:08 percent. In addition, the simulation results obtained on how the impact of interest rates by 5.75 per cent against the visit of tourists from all over the world, the amount of spending per day from tourists all over the world, tourism investment, tourism consumption, tourism exports, and imports of tourism from all over the world, which of the results simulations obtained with the positive impact of each individual 12:50 percent, 2.65 percent, 3.19 percent, 1.4 percent, 3.67 percent, and 3.61 percent. The negative impact
of the increase in worldwide GDP by 6 percent, from the simulation results obtained on the level of prices, the magnitude of the effect of government spending respectively 12.38 percent and 3.65 percent.

3. the simulation results in case of tourism demand block rate hikes prices by 6.8 percent, whereas in the simulation results Indonesian tourism demand equation block of countries Asean5 positive impact occurred on the amount of spending by foreign tourists to Indonesia Asean5 per day at 6:04 percent, the value of imports of tourism Indonesia to Asean5 at 3:46 percent, and the export value of Indonesian tourism Asean5 by 6.9 percent. On tourism demand equation blocks Indonesia to Japan, the simulation results obtained are positive impacts of foreign tourists visiting Japan, the amount of spending by foreign tourists to Indonesia Japan per visit, Japanese investment in Indonesia's tourism sector, the level of prices, and the Japanese import of Indonesian tourism with magnitude respectively is 95.75 percent, 20.30 percent, 137.12 percent, 10 percent, and 10.88 percent. As for the consumption, government spending in the tourism sector, and the value of Japan's exports to Indonesia tourism negatively, with variable coefficients respectively 17.96 percent, 21.53 percent, and 88.36 percent. The positive impact that occurs when inflation of 6.8 percent for Indonesia tourism demand from the USA is happening at the level of prices of goods and imports 10.05 percent at 00:24 percent tourism USA. In contrast to foreign tourists visiting the USA, the amount of spending by foreign tourists to Indonesia, USA, USA to Indonesia tourism investment, tourism sector consumption, government spending tourism sector, tourism and import value respectively obtained for 85.29 percent, 10.64 percent, 47.07 percent, 2:51 percent, 1.87 percent, and 2:52 percent. In the Indonesian tourism demand blocks from the European Union based on the simulation results, the positive impact due to increase by 10 percent effect on the number of foreign tourists visiting the European Union to Indonesia, 9.99 percent of the level of prices of goods, consumption of 1.80 percent against, 3:50 percent of government expenditure, the value of tourism exports for 9:45, and 12.54 to import tourism value, whereas if the negative impact of the increase in the prices of 10 per cent occurred in the magnitude of EU spending foreign tourists to Indonesia per day of 2:16 percent, and investment sector, tourism 146.36 percent. Positive impact if there is an increase in prices by 10 percent pad Indonesian tourism revenue equation from Australia occurred on investment of 217.73 per cent, 9.95 per cent of the level of prices, consumption by 5.98 percent, government spending percent of 8:02, and 1:43 on the value of tourism exports. The negative impact caused when there is an increase in prices by 10 percent occur in foreign tourists visiting Australia to Indonesia 170.74 percent, the amount of Australian tourists spending per visit by 17.94 percent, and imports of 14:08 percent. In Equation worldwide tourism receipts to Indonesia, from the simulation results obtained positive impact if there is an increase in prices by 10 percent against foreign tourists visit, the magnitude of tourism expenditure per day to Indonesia, investment, level of prices of goods, consumption, exports, and imported by the magnitude of the effect of each 0.50 percent, 2.65 percent, 3.18 percent, 10.01 percent, 1.79 percent, 3.67 percent, and 3.61 percent, while the rate of increase in spending of tourists influence the prices of goods by 10 percent will have a negative impact on government spending in the tourism sector of 1:40 percent.

6. CONCLUSION

1. The contribution of Indonesia Tourism sector to national economy has been third rank from nine establishment, after the processing industry sector, fisheries and livestock farming with the contribution of the tourism sector by 13.90 per cent of total gross domestic product (GDP), while the contribution of tourism investment during 2012 was only 6 percent and is still inadequate compared to the capacity tourism sector's contribution to GDP.

2. The tourism supply is offered by tourism providers are included in this tour services, places / tourist atraksi, consumer goods and travel. Investment to tourism offer of a state/regional tourist destination is generally done in order to improve the capacity and competitiveness of tourism itself, so that the available resources in a tourist area has added value, as well as the potential of a tourist area if it is supported by the large quality and quantity of investment made, in this case the role of government, private, and foreign indispensable. Various efforts in exploring the potential of tourism in Indonesia such as infrastructure development, facilities, promotion, and regulation should continue to be made. In addition, the constraints that often occur as extortion, bureaucratic and convoluted administrative, regulatory overlap with each other, security and social factors should begin to be considered in order to improve the investment climate in the country is comfortable and safe. The contribution of tourism investment in Indonesia is empirically known by 96 percent, which means that the influence of tourism investment on a very large amount of tourism offers.

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3. Economic growth occurs when a country (country of origin of tourists) the number of foreign tourists visiting Indonesia tends to increase, while when economic growth occurs in the number of foreign tourists visiting Indonesia tends to decrease, this is because in times of economic growth in Indonesia increased commodity prices, including the price - tourism commodity prices will be more expensive than before. On the other hand economic growth in Indonesia Indonesia which encourage residents to go abroad, and if the country of origin of foreign tourists increased growth along with economic growth in Indonesia, the number of inbound (arrival) and outbound (departure) showed an increase, but the increase was smaller in the inbound compared with the increase in outbound tourism surplus tends to decrease.

4. Domestic exchange rate (Rupiah) against foreign currencies also affect the tourism price changes, so does the Indonesian consumer price index and the consumer price index of tourists origin country also affects the price of tourism in the country. Strengthening of the rupiah against foreign currencies would reduce spending foreign tourists while in Indonesia. At the time of monetary expansion policy which led to a decline in the value of the rupiah against foreign currencies and caused prices to be more competitive tourism in Indonesia, while the price of holidays abroad became more expensive for the people of Indonesia. On the other hand this policy will also trigger the consumer price index resulted in price increases of Indonesian tourism. Due to the pull of these two forces resulted in a decline in the number of foreign tourists visiting Indonesia, and these conditions resulted in reduced tourism surplus in other words the deficit budget.

5. Qualitative factors such as the economic crisis and travel warning do not always affect the intention to visit Indonesia, as well as the intention of potential investors to invest in Indonesia in the tourism sector. Such as the Bali bombings experience I and II where the occurrence of events after the number of foreign tourist arrivals from countries like USA, Australia, and the European Union had a pretty drastic deterioration as well as the value of investments and trade of these countries, so it meskioun this does not happen on the number of visits, investment, trade and tourism from other countries especially from ASEAN (Singapore, Malaysia), Japan, and South Korea.

6. The amount of government expenditure on tourism sector affect the activities especially tourism investment and tourism trade. Because government investment spending is government spending that is used to fund activities related to the dimension of time longer than one fiscal year. Investment spending devoted to the formation of an asset (stocks of capital goods) in the future is expected to cause a large multiplier effect and more sustainable, so in this case the government expenditure related to investment in the tourism sector spending is done in order to meet the needs of the tourism demand and supply unytuk aims to increase economic growth and well-being of society as a result of the investment activity. The size of government spending will affect the demand and supply of tourism in the country. 7. Economic growth in these countries have a positive impact on the number of foreign tourists visiting Indonesia. Increase in GDP also have a positive impact on the amount of spending by foreign tourists to Indonesia per day. The greater the growth rate, the more positive impact on the level of consumption, the value of exports and imports of a country, this is because due to the ever increasing economic growth will result in increased purchasing power due to higher revenue semkin society as a whole, so that the increase in purchasing power will lead to an increase in demand and consumption of goods and services.

**BIBLIOGRAPHY**


