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International Tourism Trade Flows and the Impact of Indonesian Tourism

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Abstract: The objective of this study is to analyse impact of international investment, and trade of goods/services to Indonesia tourism sector, which used a Gravity model and Panel Least Square method where the cross-section data period 1990 - 2012 from 6 samples of countries are used. Gravity model analysed tourism trade flows from 6 samples data of countries to/from Indonesia include determinant factors which affect trade flows. The analysis estimation showed that total government spending, and total investment supply in Indonesian tourism has obtained least influenced to the supply of Indonesia tourism due to lack of leakage in sector especially in export commodities. This phenomenon shows that most of developing countries have some of transfer payment including Indonesia trade, where it exposed to crucial balance of payment and foreign trade deficits. At this point, tourism has a favourable effect in closing the gap in foreign trade and the balance of payments.

Keywords: Trade flows; Tourism of economics; Tourism investment supply; Balance of payment; Leakage

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[1] SAFA stands for Standardized Acceptance Factor Average which is calculated based on the review scores. If the obtained SAFA lies between 0.5 and 1 tends to be accepted for publication with the recommended level of revision, if other requirements are satisfied.

INTRODUCTION

Tourism is one of the most significant contributors to the Indonesia economy of growth and trade, with share of national tourism to GDP is 13.9 percent (BPS RI, 2012), through foreign exchange earnings as revenue from tourist consumption. As an economic activity, tourism in Indonesia influenced by various factors economic and non - economic domestically and internationally that can influence the development of tourism (supply - demand side).

Development of tourism activities also encourage economic growth, through the process of demand for both consumption and investment, which in turn lead to the production of goods and services, thus directly generate tourism final demand (goods and services). Furthermore, the final demand will raise demand for capital goods and raw materials (investment derived demand) to require the tourist demand for goods and services, and to meet the consumption needs of the tourist, then the supply of goods / services is an activity that needs to be done in order to meet the demand of tourists during their tourism activities in Indonesia (supply side).

As we know that tourism does not only include activities in domestic but also include international tourism activities involving two or more countries (Barudin, 2011). This means tourism activities led to the displacement of goods/services, capital and labor from one country to another, which eventually led to the flow of goods/ services, capital investment, as well as and labor, in other words, tourism is part of an economic activity in an open economy that creates interaction between the demand for travel products and services with the provision of services and tourism products (tourism supply) among the different geographical, economic, cultural, and social (Mathieson, 1992).

Table 1 shows an increase in tourist arrivals during the period 2011-2012 by 10 percent, followed by an increase in consumption of goods/services amounted to 18.1 percent of Indonesian tourism for inbound tourism activities. Besides, 7.43 percent to domestic tourism consumption activities that are categorized as a tourism activity that raises the demand for goods/services of tourism. While the development of export in the tourism sector during the years 2011-2012 is provided in Table 1 shows that during this period the value of exports from the tourism sector has decreased by 5.81 percent, in contrast to imports actually rose by 4 .66 percent. The development of tourism arrivals, consumption, and trade can be seen in Table 1.

Table 1: Contribution and development of Indonesia tourism on investment and trade

Variable	2011	2012	Change in percent
GDP (percent)	13.8	13.9	10
Foreign Exchange Reserves (trillion Rupiah)	7.43	8.6	13.6
Tourism Arrival (million people)	7,25	7,67	5.47

Table 1 continues….

Tourism Consumption			
Inbound	7618	8994	18.1
Domestics	160.89	172.85	7.43
Tourism Trade (billion USD)			
Export (*outflow*)	134.54	127.17	-5.81
Import (*inflow*)	7.953	8.324	4.66

Source: Central Bureau of Statistics (BPS RI), 2013

When we discuss about the transactions of goods/services, capital, and labor from one country to another in tourism sector, several factors are involved in activities such transactions such as currency, population, income (as an indicator of the ability to consume), taste, price, distances, cost, other goods (either complements or substitutes), including other factors that are not permanent such as natural conditions, security, political, and others (Bull, 1995) . The condition indicates that the factors involved in the activities of tourism transaction will require the attention of both the government and stakeholders in tourism (tourists or tour provider).

Meanwhile, in an effort to improve the performance of tourism; the role of the supply of goods/services must be improved tourism one of them is with a wide range of policies to support an increase in the competitiveness of the tourism product. As for the competitiveness of the tourism product that is owned by a country is one indicator of improved performance in this sector. Based on data from the World Economic Forum 2011, the product of the tourism sector in Indonesia is ranked 29 of 139 countries; it means that the competitiveness of Indonesian tourism products is quite able to compete in international markets. However, when compared to the amount of goods/services import /inflow to Indonesia, the value of exports/outflow of goods/services of tourism is still relatively small, so it cannot be denied if during the period 2011-2012, the value of Indonesia's tourism trade deficit by 1.2 percent. Thus, the conditions will become a challenge for policy makers to improve trade performance in Indonesia tourism sector, in other words an effort to improve the performance of the Indonesia tourism trade in the future needs to be supported by government policies (macro and micro policies) sufficient so as to increase tourism performance in overall (Durbarry, 2006). The study attempts to determine the factors that affect the international tourism flow of trade in Indonesia. Besides the authors also focused on the impact of the international flow of good/services to tourism demands and supply in Indonesia. In addition to that they also discussed the impact of the international tourism development to Indonesia tourism trade and competitiveness (World Economic Forum, 2011).

The authors review the relevant literatures and theories in the following section. A section on methodology follows to describe the tools used to satisfy the objective of this study. The findings and discussion section follow. Finally, the conclusions are drawn.

LITERATURE REVIEW

The concept of demand is the relationship between the quantity demanded (Qd) at a price (P) various price levels. The law of demand explained that in circumstances other things fixed (ceteris paribus) if prices rise, then the demand for goods will be reduced, and vice versa if the price goes down, then the demand for goods will increase (Mankiw, 2004).

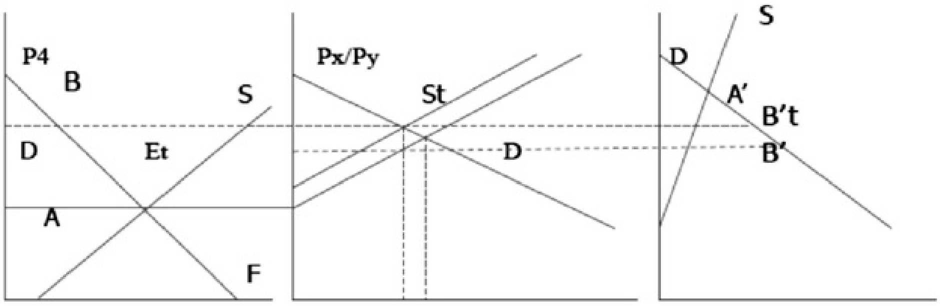
According to Bull (1995), and Sugiyarto et al. (2003), the supply will be commodity goods and services at various price levels are determined by many factors, among others: the price of the commodity itself and other commodity prices, costs of production, the purpose of manufacturers, technology, season, and others. In general, the higher the price of a commodity, the more the number of commodities that will be offered by the manufacturer, conversely, the lower the price of a commodity is less and less the amount offered by the sales.

Economic approach in the demand for goods/services allow for interaction between the price and quantity of goods/services to be consumed as well as other variables (Hanafiah, 2011). The emergence of demand for tourist activities between caused by two things: Effective / Actual demand, a demand that comes from a number of tourists who will travel, and suppressed demand, which demand that the amount derived from the structure of the total population/population of a country consists of : a) the potential demand that is a potential tourism demand from a country where changes of demand is strongly influenced by the conditions in the future, such as changes in exchange rates, b) deferred demand, a demand value influenced by the conditions of the offer in tourist destinations such as services / tourist facilities, c) absence of demand.

The factors that influence the amount of tourism demand by Tribe (2005) and Bull (1995) are: 1) the elasticity of demand for tourism, 2) Income, 3) the price of the goods themselves and other goods (substitution), 4) security, 5) the convenience and availability of facilities and tour services, 6) ease, such as: Free Short visit Visa (BVKS) BVKS, the implementation of Visa on Arrival (VoA), frequency Flights International Stop in Indonesia, and 7) the condition of the international economy, such as: the economic crisis , exchange rates, world population, per capita income countries, taxes / subsidies, and others.

Beside that tourism supply also include all forms of tourist attraction, all forms of convenience to facilitate travel (accessibilities), and all forms of facilities and services available at a tourist destination that can satisfy the needs and desires of tourists during visit (Matthieson, 1982). Some factors that influence the amount of a country's tourism supply include: 1. Price elasticity of tourism supplies, 2. Costs, 3. Changes in the technologies used, 4. infrastructure and support facilities from the sectors of tourism and other sectors (non-holidays), 5. Others; such as: the availability of goods/services of tourism that will be consumed, individual infrastructure (physical investment), even easiness entry and exit of goods/services the needs of tourism sectors.

The tourism sector is a form of an open economy in which there are two general level of prices common price prevailing in the country and the price levels prevailing abroad (Tantowi, 2009). The influence of the foreign price is the macroeconomic processes in particular lies in the emergence of the possibility for economic actors to choose whether they will buy or sell foreign markets or the domestic market.



Country A Tourism Commodity X

Country B International Tourism Commodity X

International Market Tourism commodity X

Figure 1. Curve tourism flow of goods/services

As other forms of open economy, commodity goods/services tourism is the type of activity that saw the commodity exchange relations between countries. Even Heckser-Ohlin theory states that the exchange transactions between countries because of differences in the ownership of the factors of production in each country (Pyndick, 1991; and Widjaja, 2000). Regarding international trade is formulated based on the concept of comparative advantage is derived from the difference in the ownership of the factors of production. The theory stated that the country is characterized by congenital factors different is the production function in all countries equally. By using these assumptions can be concluded that with the same production function and congenital factors that differ between countries (Dunning, 1980). It means that a country tends to export commodities that are relatively intensive in using function relatively widely held, and at the same time.

Open economies signaled their export and import activities. Physically, export is defined as the delivery and sale of goods produced in the country and abroad (Deardoff, 1998). This delivery will lead to a revenue stream that goes to the corporate sector. Thus, the aggregate demand will increase with their export activities and will ultimately increase national income. Instead of import is the activity of purchasing goods from abroad and will give rise to the payment flow out of the country (Pyndick, 1991; and Krugman et al, 2004). The flow out of the country will reduce national income. This suggests that the effect of the balance of exports and imports to national income depends on the amount of exports minus imports (Rüdiger et al, 2004). The import function is influenced by the size of national income so that the higher the national income will be the higher imports. The amount of imports of a country other than the affected national income is also influenced by other factors.

Tourism price is the price that is formed in the activities, where the interaction between supply and demand equilibrium prices of travel will form tourism (Bull, 1995). The formation of the equilibrium price in the tourism market caused by differences in geography and perception of tourism products requested and provided between regions (destination and origin of tourists).

As for the pricing method of tourism in Indonesia was based on data obtained from the Passenger Exit Survey (PES) performed by Kemenpraf every two years, the data Survey inbound / outbound tourism is conducted regularly every month, daily data on immigration (E/D card). The survey on the destination, length of stay and average expenditure by tourists during the visit recorded in PES is a referral data and set the standard for the pricing of tourism in Indonesia (Center for Data and Information Ministry of Tourism and Creative Economy, 2011).

METHODOLOGY

In general, the methodology used in this study using a panel approach Gravity and Panel Least Square (Anderson, 1979). Gravity panel model used in seeing how the flow of Indonesia tourism goods/services, and the factors that affect these flows. While the Panel method will be used to look at the impact of Indonesian tourism trade flows to the international tourism demand and supply in Indonesia. The flow model for Indonesian tourism Trade in Goods / Services are:

1. Indonesian Tourism Trade Outflow Model
$$L_nOF_{jt} = \beta_0 + \beta_1 LnDIST_{jt} + \beta_2 LnGDPC_{jt} + \beta_3 LnPOP_{jt} + \beta_4 LnEXCH_{jt} + \beta_5 LnPrice_{jt} + \beta_6 LnPrice_{kt} + \beta_7 LnOF_{jt-1} + \beta_8 D1_t + \varepsilon_{ij}$$
2. Indonesian Tourism Trade Inflow Model
$$L_nIF_{jt} = \beta_0 + \beta_1 LnDIST_{jt} + \beta_2 LnGDPC_{jt} + \beta_3 LnEXCH_{jt} + \beta_5 LnPrice_{it} + \beta_6 LnIF_{jt-1} + \beta_7 LnFDI_{jt} + \beta_8 D1_t + \varepsilon_{ij}$$

where:

$GDPC_{it}$ = GDP per capita of Indonesia in year t (Million USD / population)
$GDPC_{jt}$ = GDP per capita of the country of origin of foreign tourists in year t (million USD / population)
POP_{jt} = Total population (population) country of origin of tourists (Million)
$PRICE_{jt}$ = Price of Indonesian tourism in the country by foreign tourists (USD)
$PRICE_{kt}$ = price competitor country tourism in the country of origin of tourists (USD / unit)
$EXCH_{jt}$ = exchange rate (IDR / currency of the country of foreign tourists
$DIST_{jt}$ = distance between the Indonesian economy and the state of foreign tourists (Km / GDPjt)
OF_{jt} = Outflow of goods / services of Indonesian tourism to the country j (USD) (IDR / currency of the country tourists)
OF_{jt-1} = Lag outflow (million USD)

IF_{jt} = Inflow of goods / services of tourism of the country of origin of tourists (USD)
IF_{jt-1} = Lag inflow (million USD)
$D1_t$ = Travel warning in Indonesia

Meanwhile, to analyze the impact of trade flows of goods / services of international tourism to Indonesia tourism (supply-demand side) can be explained as follows:

I. Indonesia Tourism Demand

a. Tourism Arrival
$TA_{it} = \alpha\alpha_0 + \alpha\alpha_1 YC_{jt} + \alpha\alpha_2 OF_{jt} + \alpha\alpha_3 IF_{jt} + \alpha\alpha_4 P_{jt} + \alpha\alpha_5 ER_{jt} + \alpha\alpha_6 D1TRC_{it} + \alpha\alpha_7 D1_{it} + \alpha\alpha_8 D2_{it} + \mu_{1t}$

b. Tourists Consumption
$TE_{it} = b\alpha_0 + b\alpha_1 YC_{jt} + b\alpha_2 OF_{jt} + b\alpha_3 IF_{jt} + b\alpha_4 P_{jt} + b\alpha_5 ER_{jt} + b\alpha_6 D1_{it} + b\alpha_7 D2_{it} + b\alpha_8 D3_{kt} + \mu_{2t}$

Thus:
$$TD_{it} = d\alpha_0 + d\alpha_1 TA_{it} + d\alpha_2 TE_{it} + d\alpha_3 P_{it} + d\alpha_4 YC_{jt} + \mu_{3t}$$

II. Indonesia Tourism Supply

a. Total goods/tourism services available for consumption
$T_{INA} = eb_0 + eb_1 Y\_INA_t + eb_2 OF_{jt} + eb_3 IF_{jt} + eb_4 ER_{jt} + eb_5 P_{it} + eb_6 GT\_INA_t + eb_7 D1_{it} + eb_8 D2_{it} + eb_9 D3_{kt} + \mu_{10t}$

b. Government Budget for Tourism Sector
$GT_{INA} = fb_0 + fb_1 Y\_INA_t + fb_2 ER_{jt} + fb_3 P_{jt} + fb_4 IF_{jt} + fb_5 OF_{jt} + fb_6 D1_{it} + fb_7 D2_{it} + fb_8 D3_{kt} + \mu_{12t}$

c. Tourism Capital Goods and Investment:
$IT_{INA} = gb_0 + gb_1 Y\_INA_t + gb_2 ER_{jt} + gb_3 P_{jt} + gb_4 OF_{jt} + gb_5 IF_{jt} + gb_6 CT\_INA_t + gb_7 GT\_INA_t + gb_8 D1_{it} + gb_9 D2_{it} + gb_{10} D3_{kt} + \mu_{13t}$

Thus:
$$TS_{it} = hb_0 + hb_1 CT\_INA_t + hb_2 GT\_INA_t + hb_3 IT\_INA_t + hb_4 Y\_INA_t + \mu_{14t}$$

Where:
TD_{it} = Total Demand Tourism Indonesia in t- year
TA_{it} = The number of tourist arrivals to Indonesia in t-year
TE_{it} = Total consumption of foreign tourists in Indonesia in t-year
OF_{jt} = Flow out of Indonesia goods/services to the country of origin of foreign tourists in t-year
IF_{jt} = Flow of goods / services coming from the country of origin foreign tourists to Indonesia in t-year
TS_{it} = Total Indonesia Tourism Supply
CT_INA_t = Supply of goods / services tourist in Indonesia in t-year

FDI_INA_t = Investments provided on Indonesian tourism in t-year
GT_INA_t = Indonesian Government spending in Indonesia tourism sector in t-year
YC_{jt} = Income per capita of country of origin of foreign tourists in t-year
P_{jt} = Price of Indonesian tourism in the country of origin of foreign tourists in t-year
ER_{jt} = Exchange rate
TRC_{it} = Cost of transportation in Indonesia in t-year
R_{it} = Interest rate in Indonesia in t-year
$D1_{it}$ = Dummy Indonesia economic crisis t-year
$D2_{it}$ = Dummy travel warning in Indonesia t-year
$D3_{kt}$ = Dummy travel warning in competitor country in t-year

RESULTS AND ANAYSIS

Analysis of Indonesia Tourism Flow of Goods/Services

In the model outflow of goods and tourism services Indonesia (Table 2) variables within the economy, GDP per capita of the country by foreign tourists, price of Indonesian tourism in country of origin of tourists, exchange rate, tourist population of origin countries, tourism outflow in previous year, and Indonesia travel warning are an influential variable dominant with 83.2 percent level of influence.

The negative relationship between GDP per capita of tourist origin country to the Indonesia tourism goods/services outflow showed an increase in GDP per capita of tourist origin country actually reduce the outflow of goods / services of Indonesian tourism. Empirically, it can be explained that the increase in GDP per capita of the foreign tourist country will only increase the outflow of goods/services (Durbarry, 2006). It caused by the likelihood of leakage exports which generally occur in international trade transactions (especially in the tourism sector) in developing countries (Kweka, 2004; and UNWTO, 2009). It also happened by the use of the goods/services are standardized internationally that triggered the magnitude of import or procurement tourism goods/services (UNWTO, 2009). In developing country, most of the physical tourism facilities and infrastructure are in the form of investment types with a franchise system where a network of investment from abroad, which consequences on the franchising model is the use of goods/services are standardized internationally (Horváth, 1999).

The estimation results table 2 shows the relationship between the Indonesian tourism outflow of goods and services in the tourist origin countries are positively related, which means that if the price of Indonesian tourism in the countries of origin of foreign tourists increased by 1 percent, the value of the outflow tourism will rise by coefficient changes. In contrast with the state tourism competitor prices (Hanafiah, 2011), where the estimation results obtained negative correlation between the prices of the tourism competitor country against Indonesia tourism goods/services outflow. It shows that the Indonesian tourism is still a substitution of another country, so the price is formed also in the form of price substitution. In other words, if the price of the nearest competitor countries increases, travelers tend to choose Indonesian tourism products. Conversely when the price increases, the Indonesian tourism rating will tend to choose the goods/services from other countries.

While the relationship between the exchange rate to amount of tourism outflow is negative (Bull, 1995; Tribe, 2005; and Hanafiah, 2011), it means that if the exchange rate has depreciated by 1 percent would increase the value of tourism outflow coefficient changes (Hanafiah, 2011). The fall of the domestic currency against foreign currencies led to goods from abroad (imports) will be more expensive than the goods in the country, and it also leads to an increase in the outflow of goods and services.

The population size of the goods/services outflow showed that the size of the population of a country is a potential market for goods and a service, even according to Archer and Cooper (1994), Sugiyarto et al. (2003) and Barudin (2011) stated that a large population is a potential for a country in penetrating overseas markets. It means that the size of the potential market being owned by a country becomes a backdrop for a company other country to get into it. While the relationship between the Indonesia tourism outflow to the Indonesian tourism travel warning from the estimation results, expressed as a positive correlation indicates that the travel warning does not affect the amount of inflow/outflow tourism.

The results indicate that the variables within the economy between Indonesia and the countries of origin of foreign tourists showed a negative influence on the value of tourism goods and services outflow. It means with the increasing distance of the economy (Accessibility and mobility of goods/services out) between Indonesia to the country of origin of tourists increase the value of Indonesian tourism goods/services outflow. The model of Indonesian tourism inflow, estimation results also show that the variable distances, GDP per-capita foreign tourists, physical investments, and the Indonesian tourism goods and services inflow in the previous year are variables that influence the dominant against the Indonesian tourism goods / services inflow with the magnitude of the effect of 70 percent.

This study shows that the exchange rate is a factor to be reckoned because of the exchange rate will have an impact on the value of goods and tourism services in Indonesia where the current domestic currency depreciated to foreign currencies (Barudin, 2011); the prices of goods from abroad (imports) become more expensive compared to domestic goods (Durbarry, 2006). The results also show that the exchange rate and the Indonesian tourism goods/services inflow has negative relationship. Table 2 reveals the estimated trade flows of goods / services of international tourism as follows:

Table 2: Gravity Indonesian tourism flow of goods/services model estimation results (Inflow-Outflow)

Model	Variables	Co-efficient	t-stat	Prob.	R-square
Indonesia Tourism Trade Outflow	Economic distances	-0.52***	-3.89	0.0002	0.832
	GDP per capita tourist origin country	-4.94***	-3.01	0.0032	
	Population of tourist country	1.09**	0.90	0.3711	
	Exchange rate	-1.86***	-4.17	0.0001	
	Indonesia Tourism Price	-0.46***	-3.20	0.0017	
	Competitor Tourism Price	1.35***	2.78	0.006	
	Lag of Outflow	0.08***	3.03	0.0030	
	Indonesia Travel Warning	-0.04	-0.40	0.6881	
Indonesia Tourism Trade Inflow	Economic distances	-0.14***	-4.27	0.0000	0.700
	GDP per capita tourist origin country	-0.04***	10.37	0.0000	
	Indonesia Tourism Price	0.70***1	17.00	0.0000	
	Competitor Tourism Price	-0.08***	5.36	0.0000	
	Lag of Inflow	0.30***	19.04	0.0000	
	Tourism Investment (physically)	-0.00*	-0.55	0.0852	
	Travel Warning	0.13*	1.59	0.1147	

Source: Anderson (1979); and BPS RI (2013)

Results of the estimated equation the number of tourists (TAit) in Table 3 of the impact of the flow of Indonesian tourism demand for goods/services brought out (outflow) and inflow of goods/services of tourism to the amount of foreign tourists visiting the estimate is obtained based on the positive, The conditions show that with the increase in the amount of outflow/inflow of tourism goods/services from Indonesia to abroad by 1 percent would increase the coefficient changes of the number of foreign tourists coming to Indonesia. The amount of demand flow for goods/services tourist that entry/exit of course have an impact on the large number of foreign tourists visiting (Tribe, 2005; and UNWTO, 2009), because in tourism activities, both goods and services are commodities that are consumed and needed by tourists during the tourist activities such as food, accommodation, transportation, souvenirs, as well as other goods brought in (import) and outgoing (export).

The estimation results show a negative relationship between the variable exchange rate and the price of Indonesian tourism to the number of tourist visits. The decline in the value of the domestic currency against foreign currency (depreciation of the domestic currency) will have an impact on tourism through price transmission (Mankiw, 2004; and Tantowi, 2009). Where, at the time of the domestic currency depreciated against foreign currencies, the prices of goods in the country tend to be cheaper than the prices of foreign goods (Mankiw et al, 1992), including the price of tourism in turn triggered huge demand for tourist arrivals to Indonesia, because of perceived price Indonesian tourism is far cheaper than any other state tourism. Of course, with the increasing of Indonesian tourism prices in the tourist countries to the number of foreign tourists would affect the competitiveness of Indonesian tourism, if competitiveness (price) decreased the price of Indonesian tourism is considered expensive compared to other countries (Sugiyarto et al, 2003; and World Economic Forum, 2011).

Table 3: Indonesian tourism demand estimation results

Model	Variables	Coefficient	Pr> 1 t 1	R-square
Indonesia Tourism Inbound (TA)	GDP per capita tourist origin country	0.01**	0.041	1.00
	Tourism Trade outflow	-0.03**	0.032	
	Tourism Trade inflow	0.07*	0.088	
	Indonesian Tourism Riil Price	-0.27**	0.048	
	Riil Exchange Rate	-0.01	0.985	
	Transportation Cost	-0.01*	0.092	
	Economic Crisis	-0.00*	0.091	
	Indonesia Travel warning	-0.02**	0.016	
Tourism Consumption per visit (TE)	GDP per capita tourist origin country	0.17*	0.066	0.99
	Tourism Trade Outflow	0.05*	0.057	
	Tourism Trade Inflow	0.24***	0.000	
	Indonesia Tourism Riil Price	-0.63***	0.000	
	Riil Exchange Rate	-0.59*	0.103	
	Economic Crisis	-0.05	0.221	
	Indonesia Travel warning	-0.06**	0.032	
	Travel warning in Competitor country	0.09*	0.063	
Total Tourism Demand in Indonesia (TD)	Tourism Arrival	1.03***	0.000	1.00
	Tourism Consumption	0.06***	0.000	
	GDP per capita tourist origin country	0.00**	0.013	
	Indonesian Tourism Price	0.00*	0.107	

Note: (***) $\alpha \leq 0.01$, (**) $\alpha = 0.01\text{-}0.05$, (*) $\alpha = 0.05\text{-}0.15$. Source: Anderson (1979); and data processed (2014)

Overall results show that the estimated impact of all these factors to eight the number of foreign tourist visits (TAit) is approximately 99 percent. The estimation results showed their strong influence with the influence on the magnitude tourists' arrival and it remain 1 percent is influenced by other factors outside of observation. In addition, the estimation results can also be identified that factor, the tourism outflow of goods/services, the tourism inflow of goods/services, tourism price, exchange rates, GDP per capita, economic crisis, transportation cost, and travel warnings; are all factors that influence the amount of the number of international tourist visit to Indonesia, otherwise the Indonesia tourism investment, and the exchange rate is a factor that does not affect the amount of foreign tourists visit.

The results of the consumption estimation of tourists per visit (TEit) shows the negative impact cause of some factors in tourism such as exchange rate, the tourism goods/services outflow, economic crisis, and Indonesia travel warning. Empirically, Table 3 shows that the relationship between tourism price and the exchange rate to the expenditure/consumption of foreign tourists per visit is negative. This means that if the price rises, the consumption of Indonesian tourism tourist arrivals will decrease. The negative relationship between price and exchange rate on tourism consumption showed that the increase in prices and the appreciation of the exchange rate caused the price of Indonesian tourism tend to be expensive and would affect tourists' consumption (Sugiyarto et al, 2003).

In addition, the estimation results in Table 3 obtained the negative impact of foreign tourist consumption per visit to the tourism goods / services outflow. The relationship between the tourism outflow in goods / services to the amount of consumption of tourists per visit shows the large amount of goods/services used/consumed by tourists during in Indonesia both originating and taken out of the country during a visit to Indonesia (inflow) or local goods purchased and brought by foreign tourists to the country of origin (outflow). It means that when consumption increases (as a result of rising incomes), hence the need for goods either acquired domestically or from abroad (imports) is likely to increase, and vice versa when the consumption rate decreased tendency to allocate spending the goods/services both from domestic and imports also declined.

The overall impact of all the eight factors (Table 3) to the amount of foreign tourist consumption per visit is 99 percent which shows the impact of a large impact on the amount of foreign tourist consumption per visit, while the remaining 1 percent is influenced by other factors outside of observation. In addition, the estimation results indicated that factors GDP per capita, the tourism outflow of goods/services, the tourism inflow of goods / services, tourism price, exchange rates, travel warning in Indonesia, and the travel warning in competitor countries; are all factors that determine the magnitude of the number of international tourists visit to Indonesia.

Estimation results Table 3 shows that the number factor of foreign tourists, tourists consumption per visit, the price of Indonesian tourism and the per capita income of the tourist country are all factors that influence the amount of total tourism demand is dominant over Indonesia (TDit) with the magnitude of the effect 99 percent. This means that these factors are all factors that determine the development of Indonesian tourism demand which will directly affect the amount of revenues (foreign exchange income) from the tourism sector.

Analysis of Tourism Supply

Model Indonesian tourism flow of goods/services consumption (CT_INA), which as a whole is obtained 99 percent coefficient of determination (r-square), it shows the impact of endogenous factors such as Indonesia GDP, Indonesian tourism inflow of goods/services, tourism Indonesia outflow of goods/services, exchange rate, Indonesian tourism price, government spending tourism sector, Indonesian economic crisis, Indonesia's travel warning, and travel warning other countries, total Indonesia tourism consumption of goods/services (CT_INAt), and the remaining 1 percent is influenced by other factors outside of observation.

Factors that influence total consumption of Indonesian tourism is a tourism outflow of goods/services factor, exchange rate, Indonesian tourism price, economic crisis, and travel warning in competing countries are all factors that is affecting total supply of goods/services of Indonesian tourism, While the national income, and tourism inflow of goods/services are the factors that determine the magnitude of Indonesian tourism supply of goods/services.

Empirically, the impacts of tourism inflow of goods/services expressed as a positive impact, which means if there is 1 percent increase inflow would raise the level of consumption by the coefficient its changes and course will affect the amount of national income derived from tourism. In fact, according to Thapa (2005) these conditions are very potential for leakage of foreign exchange, while according to Sinclair and Sutcliffe, (1988) multiplier income in the tourism sector need to consider the level of leakage produced, including in this case the use of the imported goods (goods production / intermediate goods incoming and final goods carried by tourists).

The relationship between the tourism outflow of goods / services with a total supply of goods/services of Indonesian tourism is positive, which means if there is an increase of 1 percent inflow will increase the inflow of goods/services for tourism coefficient changes. Tourism outflow of goods/services will certainly affect the amount of consumption due to the increased demand for goods/services to be consumed and taken out by tourists and will result in increased consumption of raw materials in an effort to meet the needs of the production process of the tourism industry which produces commodities of tourism (Thapa, 2005).

The relationship of exchange rate against the total supply of goods/services empirically declared tourism as the opposite relationship (negative). This would mean when the exchange rate depreciated by 1 percent would increase the total amount of the supply of goods / services of the Indonesian tourism coefficient changes. Theoretically, the negative correlation between the exchange rate and the total supply of goods/services of tourism shows that the exchange rate as an instrument of payment in the transaction of goods/services in tourism sector determines the size of goods/services to be consumed. Based on the theory of Purchasing Power Parity, the exchange rate will determine a purchasing power of various kinds of commodities, including commodity goods/services imports (Hanafiah, 2011). This may imply that the strengthening/weakening of the domestic currency (rupiah) will affect the total tourism supply of goods / services.

In the model of total government expenditure in tourism sector Indonesia (GT_INAt) obtained the overall impact of factors such as income (GDP), total flow of incoming and outgoing goods/services in Indonesia tourism sector (inflow and outflow), the exchange rate, the price of Indonesian tourism , the economic crisis, Indonesia travel warning, and the travel warning to the rival state of total government expenditures Indonesia's tourism sector is 70 per cent, and the remaining 30 percent influenced by other factors outside of observation.

Indonesian tourism outflow of goods/services factors, provision of investment from the agricultural sector for Indonesian tourism, and the economic crisis are factors that determine the amount of government spending in the tourism sector in Indonesia. In addition, factor income (GDP), the exchange rate, the outflow of goods/services of Indonesian tourism, tourism prices in Indonesia, and the Indonesian economic crisis are all factors that reasonably determine the amount of total government expenditure in the tourism sector in Indonesia. The factors of national income, the price of tourism in Indonesia, the exchange rate are all factors that determine quite large / small of her government expenditure in the tourism sector. Conversely Indonesia travel warning and competitor countries, and the inflow of goods / services of Indonesian tourism is the dominant factor that should not or do not determine the size of government spending in the tourism sector in Indonesia.

Table 4: Results of the Indonesian tourism supply estimation

Model	Variables	Coefficient	Pr> 1 t 1	R-squared
Total Supply of Good/Services in Indonesia (CT/INA)	Indonesia National Income	0.41718***	0.0000	0.9976
	Outflow of Indonesian Tourism Good/Services	0.05523*	0.0683	
	Inflow of Indonesian Tourism Good/Services	0.13311***	0.0000	
	Exchange Rates	-0.25357***	0.0024	
	Indonesia Tourism Riil Price	-0.03859**	0.0205	
	Indonesia Government Budget in Tourism Sector	0.31260	0.4831	
	Indonesia Economic Crisis	0.0088***	0.0078	
	Indonesia Travel warning	0.006183	0.7853	
	Competitor Travel Warning	-0.0721***	0.0616	
Total Indonesia Government Budget inTourism Sector (GT_INA)	Indonesia National Income	-0.0007**	0.0101	0.7051
	Indonesia Tourism Riil Price	0.00147*	0.0648	
	Exchange Rates	-0.00124**	0.0381	
	Inflow of Indonesian Tourism Good/Services	-0.0001	0.6740	
	Outflow of Indonesian Tourism Good/Services	-0.0009***	0.0002	

Table 4 continues....

Model	Variables	Coefficient	Pr> 1 t 1	R-squared
	Indonesia Economic Crisis	-0.0003*	0.0551	
	Indonesia Travel Warning	-0.0002	0.3979	
	Competitor Travel Warning	-0.0001	0.7430	
Total Indonesia Investment for Tourism Sector (FDI_INA)	Indonesia National Income	0.1373*	0.602	0.4362
	Exchange Rates	0.4708*	0.1121	
	Indonesia Tourism Riil Price	-0.2256	0.4366	
	Outflow of Indonesian Tourism Good/Services Price	-0.2649*	0.1242	
	Inflow of Indonesian Tourism Good/Services	0.1252	0.5703	
	Total Indonesia Tourism Supply of Goods/Services	0.9288*	0.0586	
	Total Indonesia Govt Budget in Tourism Sector	4.1019	0.2056	
	Interest Rates	-0.9995*	0.1512	
	Indonesia Economic Crisis	-0.2032	0.2666	
	Indonesia Travel Warning	0.8985*	0.1112	
Total Indonesia Tourism Supplies (TS)	Indonesia National Income	0.3256***	0.0000	0.6048
	Total Indonesia Tourism Supply of Good/Services	0.2684***	0.0000	
	Total Indonesia Govt Budget in Tourism Sector	1.9621**	0.0290	
	Total Indonesia Investment of Tourism Sector	0.579**	0.0100	

Note: (***) $\alpha \leq 0.01$, (**) $\alpha = 0.01\text{-}0.05$, (*) $\alpha = 0.05\text{-}0.15$. Source: Anderson (1979); and data processed (2014)

The estimation results in Table 4 shows the relationship between outflow/inflow of goods/services of tourism in Indonesia with total government spending in Indonesia's tourism sector which showed a negative relationship. It means that if the outflow/inflow of goods/services tourism increased by 1 percent would reduce the magnitude of total government expenditure in the tourism sector in Indonesia amounted coefficient changes.

The third equations in Indonesia tourism supply model equation is the total equation model of investment and capital formation in tourism sector in Indonesia (FDI_INAt), which in this model obtained the coefficient of determination (R-square) explanatory factors against total investment and capital formation Indonesian in tourism sector by 43 percent. The factors that influence the variable investment spending Indonesian tourism sector that is a factor of GDP, exchange rate, outflow of goods/services of tourism, price of Indonesian tourism, and economic crisis are factors that determine the amount of investment that is provided in order to develop the tourism sector. While factors such as the total tourism supply of investment goods/services, Indonesian tourism inflow of goods/services, Indonesian tourism total supply of goods/services, travel warning Indonesia and competitor countries are all factors that do not specify the amount of the total supply of Indonesian tourism investment.

The impact of the Indonesian tourism outflow of goods/services to the total Indonesian tourism investment expenditure lies in the size/quantity of goods/services entry/exit as the goods/services consumption and taken from the country of foreign tourists to Indonesia goods/services that are consumed in the country by tourists and taken to his home country. The outflow impact will give the effect of induction (Mason, 2003; Mankiw et al, 1992) to the amount of government investment expenditure in the tourism sector. Due to the increased consumption of foreign tourists of course to be followed by an increase in output produced by sectors of economic production that are involved directly or indirectly support the tourism sector (such as agriculture, communications), and in order to support these sectors necessary infrastructure adequate and this means a need to increase investment spending to build an infrastructure and support facilities (Tribe, 2005).

The estimation results in Table 4 also show a negative correlation to the price of tourism and the exchange rate. This condition is empirically shows that the decline in the rupiah exchange rate against foreign currencies had a negative effect on the overall economic conditions, including investment. Fluctuations in the value of the rupiah against foreign currencies stable will greatly affect the investment climate in the country (Hanafiah, 2011). The appreciation of the rupiah against the dollar, for example, will have an impact on the development of marketing of Indonesian products overseas (Mathieson, 1992), particularly in terms of price competition, and if this happens, will indirectly impact the trade balance deficit then finally will also affect the Indonesia balance of payments (Antariksa, 2010). And with the worsening of the balance of payments will certainly affect the foreign exchange reserves. Reduced foreign exchange reserves would reduce investor confidence in the Indonesian economy.

Table 4 also shows that the total tourism supply of goods/services factors, tourism investment total provision Indonesia, total government spending in Indonesia tourism sector, and the Indonesian national income (GDP) are the factors that determine the amount of total Indonesian tourism supplies. These shows that the supply of goods/services, total investment, totals government spending and GDP of Indonesia are all factors that determine the development (size) Indonesia tourism supplies (Widjaja, 2000).

CONCLUDING COMMENTS

Factors that affect the flow of exit of the tourism goods and services (outflow) is predominantly economic variable spacing between Indonesia and the countries of origin of foreign tourists, population of the country of origin of tourists, the exchange rate, the price of Indonesian tourism in the countries of origin of tourists, and value stream (outflow) of goods and services in the previous year, with 83.2 percent of the variation magnitude of the influence of these factors on the development of Indonesian tourism outflow of goods/services.

Factors which influence the inflow of goods and tourism services is predominantly variable spacing economy, the GDP of Indonesia, and the lag of Indonesia tourism inflow of goods and services, the price of Indonesian tourism, and travel warning in competitors' countries with 70 percent of the variation influence of these factors on the development of the Indonesia tourism in flow of goods and services. The negative impact of the increase in GDP per capita of the country of origin of tourists to the activities of the flow of goods and services of the tourism economy shows any leakage (economy leakage) are essentially leak leakage arising mainly import (import leakage)

Factors GDP per capita of the country of origin of tourists, outflow/inflow of goods/services of Indonesian tourism, the price of Indonesian tourism, travel warning and Indonesia are all factors that influence the number of visits by foreign tourists, tourists consumption per visit and Indonesian tourism demand with a variety of factors influence factors that the Indonesian tourism demand by 99 percent and the rest influenced by other factors such as competitiveness product, tourism priced competitor countries, tariffs or subsidies.

Factor Indonesia's national income, the outflow/inflow of goods/services of tourism, the exchange rate are factors that greatly affect the total supply of goods /services of Indonesian tourism, total government spending in tourism sector in Indonesia, the total supply of tourism investment, and total tourism deals Indonesia with large variations in the effect of the explanatory factors are the Indonesian tourism offerings by 60 percent, and the rest influenced by other factors such as the competitiveness of infrastructure, tourism priced competitor countries, the amount of taxes and subsidies.

The ups and downs of developments in the tourism sector (demand -supply side) is strongly influenced by the economic conditions of a country (both domestic and international), but it also macroeconomic stability policies relating to trade in goods/services, GDP origin of tourists, and GDP per capita of the country of origin of tourists is also very impact on the development of national tourism.

Improving the competitiveness of Indonesian tourism products (according to the Report of the World Economic Forum in 2011 was ranked 29th out of 140 countries assessed) but not followed by an increase in outflow (export) goods/ services. This demonstrates that the leak rate (economy leakage) arising from trading transactions of goods/services due to the dominance of tourism standardization rules on goods/tourism services must be provided by travel service providers in order to meet the needs of foreign tourists. Based on the above discussion the researchers have drawn the following recommendations:

a. Increase the volume of trade goods/services of Indonesian tourism, through measures such as: increased cooperation and trade promotion, tourism product quality improvement, repair and construction of individual infrastructure, improved stability and security that supports the trading of goods / services of tourism, as well as support government policy (national and local) that facilitate the flow of goods/services of tourism,

b. Increased trade in goods/services of tourism needs to be done by improving the competitiveness of excellent quality, price competitiveness, technology used, and the resulting innovations, as well as support for government policies that facilitate the transaction flow of goods / services, and tax and fiscal policy both government spending that supports the development of tourism sector, and
c. Improving the competitiveness of Indonesian tourism products and services both domestically and abroad to increase the volume of trade in goods/services of tourism in order to compete with the goods/services of an international standard that is used/consumed by tourists during travel.

LIMITATIONS OF THE STUDY

This study has limitations, which in this study only to determine the factors that affect the international tourism flow of trade in Indonesia and discuss the impact of the international flow of good / services to the tourism and supply in Indonesia, and the competitiveness. Therefore, further research is needed, especially in relation to some findings such as the discovery of a considerable leakage potential in outflow transactions and the emergence of transfer pricing in trade and investment transactions in this sector in Indonesia.

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