

Analysis of Demand and Consumption of International Visitors to Indonesia (from selected countries)

Mila Hertinmalyana
Master of Commerce, Finance Statistics Division-Statistics Indonesia

Amalia Harinda Rahayu and Rina Retno Wati
Data Processor

Abstract:

This paper aims to examine the variables that influence the demand of international tourist to Indonesia, and their consumption pattern from some major countries. Six countries have been selected, based on the region and the rank of the highest arrival (**Singapore, Malaysia, Australia, USA, England, and South Africa**). It is indicated that the country GDP, number of population, the price competitiveness and the social and political condition are the factors that influenced the demand of tourism to Indonesia. The regression analysis is applied in testing the hypothesis. The profile and consumption pattern (based on Passenger Exit Survey result) of the tourists from those six countries is also analyzed.

Key words: inbound tourist, demand, consumption, regression

INTRODUCTION

The tourism activity sector has become one of economic driving nowadays. The number of international tourist arrival recorded as much as 1.08 million in 2013, exceed the expectation and reached US\$1,159 billion of tourism receipt (UNWTO, Barometer, February 2014, ed). As a number of countries, tourism is one of prime mover economy in Indonesia, and tourism industry becomes one of government concern nowadays. Tourism industry in Indonesia has been developed since 1900. Before, this industry are not managed well and professional as it is, due to the government had another priority program to increase the economic development, i.e. social welfare and agriculture concern. But then, since 1992, the tourism activity become one of government priority since it's gave impact to economy as well. The government has realizes that tourism activity can give benefit to local society in particular and the development of regional area.

Ministry of Tourism and Creative Economy said (on Press Release, October 6, 2014) that "we are optimistic that tourism sector and creative economy will continue and demonstrate high growth rates in the future to become a new force to Indonesia. Over the last three years tourist arrivals increased steadily and creative economy sector growth in line with the dynamic of creative people to create added value ". Then, the focus is on attracting the international tourist coming to Indonesia. In 1990 number of inbound tourist reached 2.7 million, increased to 5 million in 2000. After that the inbound tourist recorded more than 5 million. In 2013 the tourist arrival reached 8.8 million (BPS-Statistics Indonesia). The ASEAN region still the potential market to Indonesia, and it share 40.69 percent to total arrival in 2013, while the Asia Pacific (minus ASEAN) contributed to 26.5 percent, America 3.78 percent, Australia 12.18 percent, Europe 14.12 percent, and Africa 0.58 percent. The consumption expenditure of tourist during their stay in Indonesia is becoming the revenue to Indonesia economy. And this revenue is enjoying by many tourisms actor, and also by the local society. Therefore the government has applied any policy and strategies to maintain the inbound tourist to visit to Indonesia and spend their money as enjoying the attraction, culinary, and culture.

The growth of revenue from inbound tourist has been spectacular, that is from 1,290 US\$ in 1990 to 10,054.15 US\$ in 2013. And it is predicted to become 11,000 US\$ in 2014 (Ministry of Tourism and Creative Economy). In 2012, the direct and indirect effect of tourism has been accounted for 3.96 % of GDP and absorbs 9.35 million employment or 8.46 percent to total employment (BPS-Statistics Indonesia). Compare to other commodity and services sector that generated foreign exchange, in 2013, tourism (travel) placed the fourth rank after oil and gas, coal, and palm oil.

The tourism competitiveness of Indonesia also experienced an increasing, that is from rank 74 of 136 countries in 2011, to 70 out of 140 countries in 2013 (Tourism Competitiveness -World Economic Forum, 2013). The positive effect of tourism is also shown in Balance of Payments (BOP) of Indonesia. The travel item is the only services sector in current account that contribute surplus to Indonesia Economy. This improvement has to be maintained and even further enhance.

However the inbound tourist arrival during 1990 to 2012 shows some fluctuation, due to some factors behind it. This paper is aiming to know the factors that influence inbound tourist come to Indonesia, and how the factors affect the demand of inbound tourist to Indonesia. To attract people to come to Indonesia it is necessarily to know the factors that push tourist to go to somewhere out of their usual residence. This paper also analyzes the profile and consumption pattern of inbound tourist from the six countries.

LITERATURE STUDY

Some researches and studies have been done in analysing the demand for inbound tourism. Most of them investigate the factors that influence the tourist to come to a country destination, and the profile of them.

Tourism Demand

Medlik (1980), the main factors and other factors that influence tourism demand among others are:

1. Price; high price in tourism destination will give impact to tourist, so the demand will be decrease and other way round.
2. Income; if a country income is high, so the people tend to have choice in spending their holiday time in tourism destination.
3. Social and Culture; the unique and typical culture become one factor that attract people to come and see. Therefore the demand for tourism will rise.
4. Social and politic; the social politics condition of a country can influence the tourism demand of the country. The safety and comfort level is the major factor for international tourist.
5. Intensity of Family; number of family member is very significant in determining the tourism demand. It pointed out that the huge number of family member indicated that their want to travel is high as well.
6. The Price of Substitution goods; in tourism sector perception, the substitution is the competitor country. Usually the neighbor country.
7. The price of competitor; in terms of tourism, it includes the tourism destination, tourism product and tourism object.

According to Jacson (1989), there are several factors derived from the origin country of tourist, namely:

1. Population
2. Dis-possible income of community
3. Leisure time
4. Transportation system
5. Marketing system

According to Adi Lumaksono, 2012, tourism demand is also influenced by the previous demand. It means that the first arrival will affect the next arrival. It is indicated by the first good impression that received by the tourist. The more tourist come to destination, the more information spread about the destination.

Related research/study

Mohammed Abbas M Ali Ibrahim in his journal: The Determinant of International Tourism Demand for Egypt: Panel Data Evidence (2010), conclude that income, price, trade openness, and special factors as an independent variable in investigating the factors that influence the tourist arrival in Egypt.

Fatema Tohid Ardahaey, et all, in Factors Affecting the Development of Tourism Industry in Iran, including the security, citizen participation, media and tourism, and information technology and tourism, in examine the factor that support the development of Tourism Industry.

Australian Government, Tourism Research Australia in Factors Affecting the Inbound Tourism Sector, the impact and implication of the AustraliaDollar (2011); covering the income, relative price, and air capacity in analysing the factors that influence inbound tourism in Australia, particularly in investigating the volatility of exchange rate (Australian Dollar).

Moh. Hafidz M. Hanafiah, et all, in Tourism Demand in Malaysia: A Cross Sectional Pool Time Series Analysis (2010),; including the income, inflation, population rate, and short haul destination, economic crisis, as independent variables in analysing tourism demand in Malaysia

AswadKusni, et all; in International Tourism Demand in Malaysia by Tourist from OECD countries: A Panel Data Econometrics Analysis (2010); concluding that the relative price, substitution country, SARS epidemic, global economic crisis, as independent variables that influence the demand for tourism in Malaysia.

METHODOLOGY

Data for this research is a secondary data from many sources, namely BPS-Statistics Indonesia, Ministry of Tourism and Creative Economy, World Bank, and International Finance Statistics Publication. The reference year for this study is from 1990 to 2012 with the reason that this period is the massive development of tourism in Indonesia and the availability of data for each variable as well. The research is conducted in Jakarta, during April-October 2014.

The analysis using two types , namely:

1. Descriptive analysis: in this case the writer tries to analyze the consumption patterns of inbound tourist from selected countries (based on Passenger Exit Survey 2013)

2. Regression analysis:

In this paper the multiple regressions is applied to analyze the influence of some economics and social variables to the demand on inbound tourist to Indonesia from each selected country.

Dependent variable is number of tourist arrival, and the independent variables are lag of number of tourist (number of tourist in t-1), population of origin country, income (GDP real) of origin country, price competitiveness, and dummy variable (Bali Bomb, and economic crisis).

Hypothesis

1. The lag of number of tourist, population, income (GDP), price, economic crisis and Bali Bomb are in together significantly influence the total arrival from those six countries in 1990-2012.
2. Lag of number of tourist arrival, population of origin country, and income (GDP) of origin country are partially has positive influence and significant to the total arrival of tourist from those six countries during 1990-2012.
3. Price, crisis economic, and Bali Bomb are partially has negative influence and significant to total arrival of tourist from those six countries during 1990-2012.

Variables definition:

Dependent variable:

number of inbound tourist from each country

Independent Variable:

Income: in this case income is reflected in the measurement of GDP real of the origin country.

$$GDP_{\text{real}} = \frac{GDP_{\text{at current price}}}{GDP \text{ deflator}}$$

Price

Price in this study is reflected in terms of CPI in Indonesia relatives to the CPI in the origin country. It reflected the price competitiveness between Indonesia and the origin country.

$$TRP_{i,t} = \frac{CPI_{INA,t}}{CPI_{i,t} ER_{i,t}}$$

where:

$TRP_{i,t}$ = Relative price of tourism country i year t

$CPI_{INA,t}$ = Indonesia Consumer Price Index year t

$CPI_{i,t}$ = Consumer Price Index country i year t

$ER_{i,t}$ = Relative exchange rate country i year t

Population of origin country

Number of population form each origin country

Other

Other than economic variables, it is assumed that the factor such as political and economic condition also influence the demand of international tourist.

Model used:

$$\ln TA_t = \beta_0 + \beta_1 \ln TA_{t-1} + \beta_2 \ln GDP_t + \beta_3 \ln POP_t + \beta_4 \ln TRP_t + D_1 + D_2$$

Where:

TA_t = Number of tourism arrival to Indonesia in year t

TA_{t-1} = Number of tourism arrival to Indonesia in year t-1

GDP_t = Real GDP of origin country in year t

POP_t = Population of origin country in year t

TRP_t = Relative price of tourism in year t

D_1 = Dummy variable of Bali Bomb

D_2 = Dummy variable of economic crisis

ANALYSIS

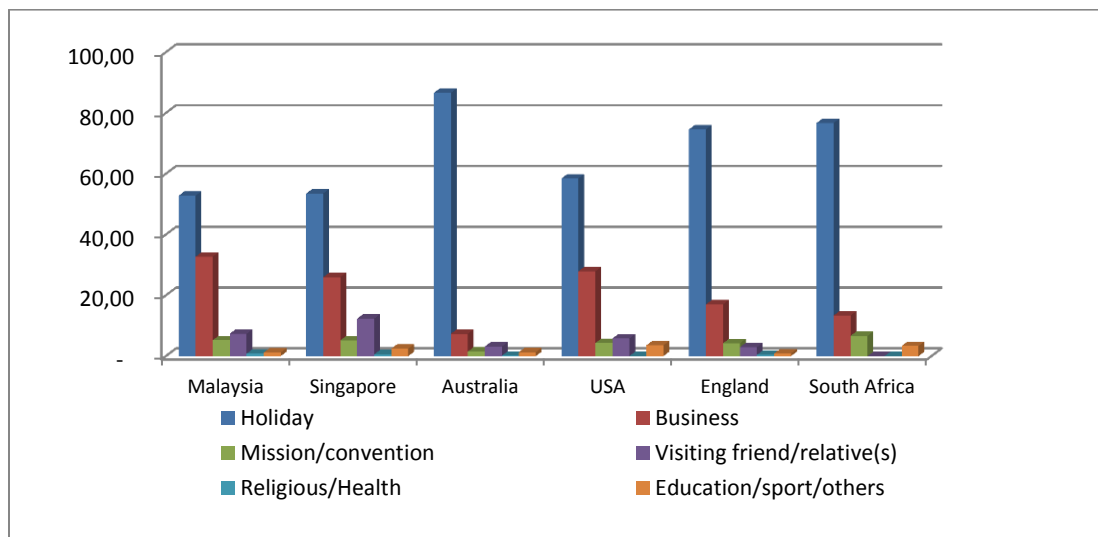
Analysis

The descriptive analysis is referring to the result of Passenger Exit Survey 2013, by Ministry of Tourism and creative Economy.

1. Profile of Inbound Tourist to Indonesia

Purpose of visit

The desire of traveling for many people is very influenced by the interest and purpose of visit. Certainly, the majority of people do travel is for pleasure. And it is also depicted in the data of visitor's main purpose of visit to Indonesia, which is 63 percent of them coming for holiday, followed by business purposes (24 percent). Looking further, the pattern of profile of tourist from those six countries is almost similar to the total. Most of them came to Indonesia for holiday, followed by business purposes. The visitor from Australia has the highest percentage for holiday, and most of them come to Bali Island, the one of famous islands for tourism. Also, holiday purposes place the highest priority for tourist from South Africa. While tourist from Malaysia, Singapore, and USA, has significant amount for business purposes. It indicated that these countries have economic relationships with Indonesia, that can be in the form of the existence of their company, or even as a consultant. Interestingly, the visitors from South Africa has no much friend/relatives in Indonesia that indicated by the very small percentage for this purpose and also for religious/health purposes.



Graph 1. Distribution of Tourist Arrival from Six Countries by Purpose of Visit (percent)

Age

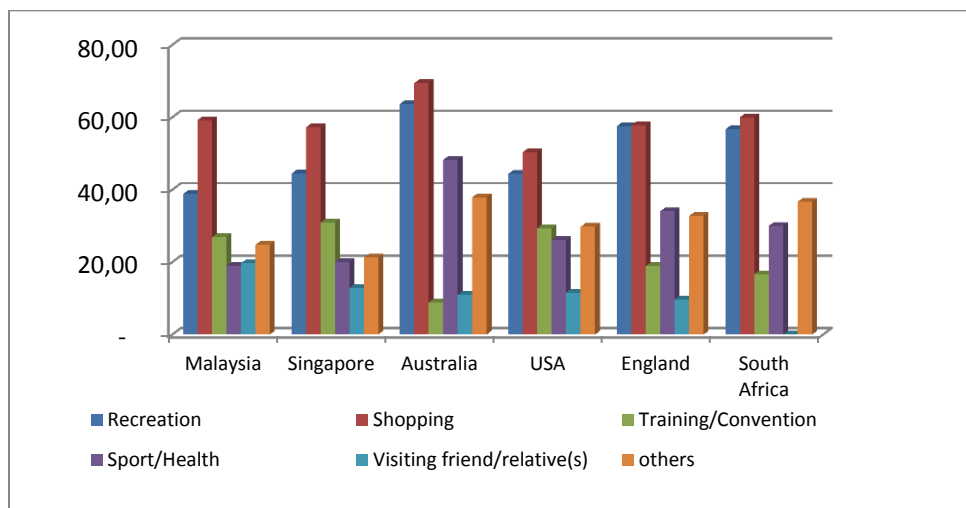
In terms of age, the majority of inbound tourists are coming from aged group 25-34 years, except them from South Africa which is dominated by the more mature age, 35-44 years. Tourist from Malaysia, Singapore and USA, have the similar pattern, which is the proportion of 25-34 and 35-44 age group are almost the same. As their purposes of visit are for business and holiday, so it will done by the both age group, as a productive age. Whereas the proportion of visitors with 64 years and above is still very low.

Accommodation and Frequency of Visit.

Most of tourists are staying at star hotel, followed by non- star hotel and apartment/villas. Exception is made for tourist from Malaysia and Singapore. As mostly their purpose of visit is for visiting friends/relatives, they prefer to stay at their friend/relative house, other than at non-star hotel/apartment. In terms of frequency of visit, the neighbor countries like Malaysia and Singapore, have been visiting Indonesia more than 3 times. While tourists from USA, England, and South Africa, this travel to Indonesia is their first time visit. The distance between the countries has significant influence for their traveling planning and purpose.

Activities

During their stay in Indonesia, tourists are enjoying many activities, either culture, nature or others. Form the survey result, most of them always spent their time for shopping, no matter their main of purpose. The price competitive compare to their country, makes Indonesia is a place for shopping. The kind of souvenirs they bought is quite different in preferences among them. However, many of them like to buy Batik and Handicraft, and also Indonesian food. Batik is like an icon for Indonesia, and UNESCO has assign batik as a culture heritage for Indonesia. The other activity done by them is obviously for recreation. Even they come for meeting/conference they also took time for shopping and recreation. Interestingly, the proportion of England tourist who do shopping and recreation is almost the same.



Graph 2. Distribution of Tourist Arrival from Six Countries by Activities (percent)

Sources of Information

The media of internet has become more popular and friendly to many people in the world. It can be used for any purposes such as looking for information of place, science, language, and others. Also, the tourists who are willing to travel to some places, they need to find detail information about the place they have to visit, and also the travel arrangement. They get that information mostly from internet (in average of 68 percent of the total tourist). Prior coming to Indonesia, most of tourist also should find information for the place they have to be visited in Indonesia and any information about accommodation and travel arrangement. The usage of internet becoming more familiar because it makes easier, faster and cheaper for people in looking for the information needed. The other source of information for tourist before coming to Indonesia is from friends. The terms “mouth to mouth” can be as one of marketing strategy. That is why first good impression is very important for tourist, because they will share their attractive and fun experiences with their friends or families. It will attract their

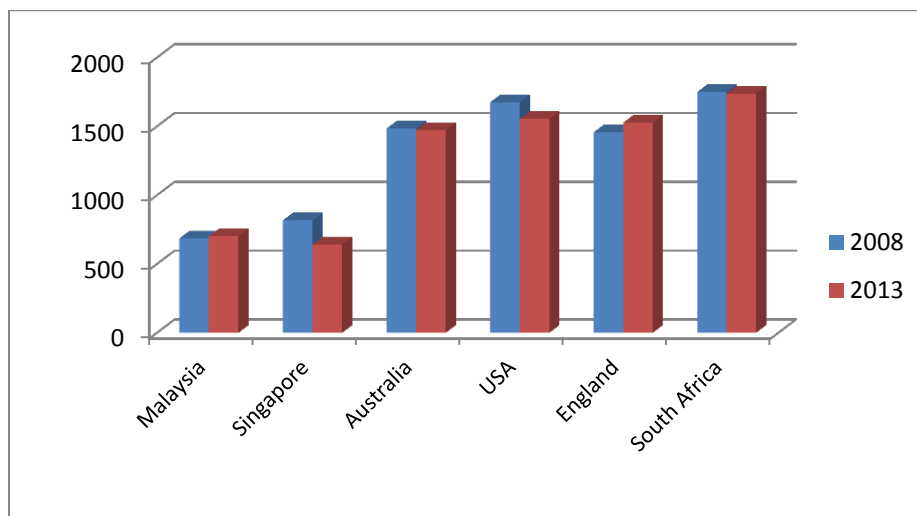
friends and families to visit Indonesia. The other sources that tourist is looking for information of Indonesia is from book/magazine.

Length of stay

The length of stay of visitor is influenced by the purpose of visit, distance between countries, budget and technology development as well. The transportation and communication technology development have made the traveling easier and faster. On the average, the length of stay of tourist in Indonesia decreased from year to year. The economic crises in last 2008 make people tend to travel in short haul than long haul. In 2008, the length of stay is 8.58 days decreased to 7.65 days in 2013. The improvements of connecting between countries also make time of traveling become shorter. The tourist from Singapore and Malaysia give the shortest one in staying, namely 4.17 and 4.82 days. While the length of stay of tourist from South Africa is the longest one that is 12.67 days, as the distance from Indonesia is the furthest. Then tourist from USA and England have the similar pattern in length of stay, that is 10.49 and 10.47 days respectively. View based on purpose of visit, the longest one is for education purposes (19.10 days), and the shortest one is for convention (4.31 days). Interestingly, in terms of age, the visitor with 64 years old and over stayed the longest one. Since this age group is dominant with them with retired people, so they can enjoyed the traveling without any boundaries of work. The shortest one is visitor with 35 – 44 years old.

Expenditure

The expenditure pattern of visitors is also influenced by the purpose of visit, economic conditions of the origin and destination country, and the facilities that the tourist get. Unlike the length of stay, the expenditure of tourist tends to fluctuated during 2008 and 2013. The money that tourist spend is very depend on the activity they do. The average expenditure per visit in 2008 reached US\$ 1,178.54, the significant amount for tourism industry. Then , the economic crisis at the quarter IV of 2008, gave impact to the tourism activity in 2009. In this year the average expenditure per visit only reached US\$ 995.93. The recovery of global economic in the next few year make the economic activity in some countries rise again. The average expenditure per visit in 2013 reach US\$ 1,142.24. Generally, the expenditure was spent much for accommodation, followed by food and beverages.



Graph 3. Average Expenditure per Visit of Inbound Tourist from Six Selected Countries (US\$)

The average expenditure per visit from the six countries showed similar pattern with length of stay. Singaporean is the lowest in the average expenditure per visit, that was US\$ 642.17. This is because, the distance between Singapore and Indonesia can be reached in about one hour. Sometimes the Singaporean come to Indonesia, particularly in the border area like Batam, Tanjung Pinang and around, in the morning and back to Singapore in the evening. Consequently they do not much spend money in Indonesia. While tourist from South Africa, gave the highest average expenditure, that was US\$ 1,739.30. The long distance makes them to spend more for ticket, accommodation and foods. Because they stay longer than tourist from other countries, consequently they have to spend more.

2. Analysis Demand of inbound tourist

The model used in this analysis is Multiple Regression Analysis. The dependent variable is the number of visitors arrival from each country, and the independent variables are number of tourist arrival (lag), GDPreal, population, price relative, and dummy variable (Bali Bomb and Economic Crisis).

The first step that is done is to make sure that the data are stationary for each variable, because we use the data series. Then we run by the regression model, and check the classical assumptions of linear regression to make sure that the model is the best for each country.

The result for each country is the following:

1. Singapore

The model for this country:

$$\ln(TA_t) = 2.517 + 0.824 \ln TA_{(t-1)} - 0.104 \ln (PR_t)$$

$R^2 = 0.90$ $DW = 2.39$

From the result, it can be shown that the demand of tourist arrival from Singapore is significantly influenced by the arrival_(t-1) and the price. The interpretation of the result is: the increasing of 1 percent of the arrival_(t-1), it will increase the tourist arrival by 0.82 percent. And the increase of 1 percent in price, it will decrease the arrival by 0.1 percent (by using $\alpha = 10\%$). However, if we use $\alpha = 5\%$, that usually statistician recommended, the tourist arrival from Singapore is only influenced by the arrival in year before. For Singapore tourist, Indonesia is like a second country due to the distance between these two countries. Therefore other variables like GDP, Bali Bomb tragedy, and Economic Crisis do not give much influenced to their decision in visiting Indonesia.

Dependent Variable: LNTA
Method: Least Squares
Date: 10/01/14 Time: 10:25
Sample (adjusted): 1992 2012
Included observations: 21 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.517056	0.998275	2.521405	0.0227
LNTA(-1)	0.824477	0.070937	11.62264	0.0000
D(LNGDPC)	0.135462	0.334934	0.404444	0.6912
D(LNPR)	-0.103876	0.057395	-1.809841	0.0891
DummyBom	-0.092061	0.051350	-1.792815	0.0919

2. Malaysia

The best model for explaining demand from Malaysia tourist:

$$\ln(TA_t) = 0.09 - 0.55 \ln TA_{(t-1)} - 0.24 \ln(PR_t)$$

$R^2 = 0.43$ $DW = 2.059$

Similar to Singapore, the tourist arrival from Malaysia is also influenced by the arrival (t-1) and price. The R^2 in this equation is quite small, but it can be used in this model because R^2 doesn't always reflect the best model. The economic sense is also influence the model. For variable lag of total arrival, the sign is negative, which is not fit with the hypothesis. It means that during the period of data, the arrival_(t-1) has significant influence to the total arrival, but it can be concluded as positive influence. Malaysia, the other neighbor country of Indonesia and has similar culture to western if Indonesia, does not really depend on other variables in making decision for visiting Indonesia. The GDP, economic crisis and number of population do not influence much to them.

Dependent Variable: D(LNTA)
Method: Least Squares
Date: 10/01/14 Time: 11:10
Sample (adjusted): 1993 2012
Included observations: 20 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.092814	0.051850	1.790058	0.0936
D(LNTA(-1))	-0.551106	0.208477	-2.643485	0.0184
D(LNHRP(-1))	-0.242030	0.096919	-2.497234	0.0246
D(LNGDPC)	0.925844	0.961989	0.962427	0.3511
DummyKrisis	0.187059	0.110687	1.689983	0.1117

3. Australia

The best model for demand of Australia tourist:

$$\ln(TA_t) = 0.20 - 0.51 D_1(\text{Bali Bomb})$$

$R^2 = 0.43$ $DW = 2.05$

Australia tourist is also the potential market for Indonesia. Most of them are visiting Bali every year. And the number of them keep increasing in the last five years. From the model, it can be said that during the period, the demand of Australia tourist is much influenced by Bali Bomb. The tragedy of Bali bomb, in October 2002 and October 2005, was very shocked Australian. The number of visitor decreased significantly after that. The government of Australia issued "travel warning" to Indonesia for their citizen. However, since 2008 and beyond, the number of tourist from Australia showed significant growth. The conducive situation in Indonesia makes them feel comfort and believe to come to Indonesia, particularly to Bali island. The price and GDP do not necessarily influence the demand of Australia visitor. Price in Indonesia is cheaper compare to Australia, and it is reflected in foreign exchange between two countries.

Dependent Variable: D(LNTA)
Method: Least Squares
Date: 10/01/14 Time: 12:05
Sample (adjusted): 1992 2012
Included observations: 21 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.200845	0.101699	1.974907	0.0647
D(LNHRP)	-0.073864	0.075030	-0.984464	0.3387
D(LNGDPC)	-3.376893	4.312014	-0.783136	0.4443
DummyPascaBom	-0.510501	0.156887	-3.253929	0.0047

4. United State of Amerika

The best model for demand of USA tourist:

$$\ln(TA_t) = 5.33 + 0.56 \ln TA_{(t-1)} - 0.27 D_1 (\text{Bali Bomb})$$

$$R^2 = 0.677 \quad DW = 2.18$$

Almost similar to Australian, the model for demand of America tourist is influenced by lag of arrival and tragedy Bali Bomb. The tragedy was really made a deep hurtful to their memory. The America visitors arrival decreased significantly after the bomb, due to their traumatic after their experienced of Wall Trade Center Street Bomb tragedy in America in 2001. The Government of America also issued the travel warning for their citizen to visit Indonesia. The safety and comfort is very important for them. Whereas other variables like GDP and Price do not significantly influence the demand of American tourist.

Dependent Variable: LNTA
Method: Least Squares
Date: 10/01/14 Time: 12:36
Sample (adjusted): 1992 2012
Included observations: 21 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.333657	1.595668	3.342586	0.0041
LNTA(-1)	0.561065	0.133055	4.216798	0.0007
D(LNGDP)	-0.151018	1.190061	-0.126899	0.9006
D(LNHRP)	-0.057666	0.048213	-1.196066	0.2491
DummyPascaBom	-0.267240	0.066754	-4.003343	0.0010

5. United Kingdom

The best model for demand of UK tourist:

$$\ln(TA_t) = -0.547 D_1$$

$$R^2 = 0.692 \quad DW = 1.767$$

Interestingly it is found that for England visitor model, Bali Bomb tragedy is the only variable that significantly influence their demand. The other variables like lag of visitors, price, and number of population do not significantly influence their demand. Most of Europe and America countries are very traumatic with the Bomb tragedy. Consequently they will suspend their travel to the instable political and safety condition country. The safety is the highest priority to them compare to other variables.

Dependent Variable: D(LNTA)

Method: Least Squares

Date: 10/01/14 Time: 13:15

Sample (adjusted): 1993 2012

Included observations: 20 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.010526	0.079801	-0.131902	0.8968
D(LNTA(-1))	0.046525	0.143908	0.323298	0.7509
DummyPascaBom	-0.547689	0.095327	-5.745396	0.0000
D(LNHRP)	-0.025681	0.066911	-0.383808	0.7065
D(LNPOP)	19.84248	13.89404	1.428129	0.1737

6. South Africa

The best model for demand of South Africa tourist:

$$\ln(TA_t) = 0.665 + 0.665 \ln TA_{(t-1)} + 0.622 \ln(PR)$$

$$R^2 = 0.74$$

$$DW = 1.99$$

For African, particularly them from South Africa, the lag arrival and price are variables that influenced their demand to visit Indonesia. The long distance from Indonesia makes them should prepare well in advanced before leaving, particularly for the money they have to spend. However the sign of variable price is positive, which is not corresponding with the hypothesis. It means that the price is significantly influence the demand of South Africa tourist, but it can be concluded that the impact is positive or negative.

Dependent Variable: LNTA

Method: Least Squares

Date: 10/08/14 Time: 06:50

Sample (adjusted): 1992 2011

Included observations: 20 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.388844	1.218938	2.780160	0.0140
LNTA(-1)	0.665142	0.124147	5.357712	0.0001
D(LNGDPC)	3.577630	4.776953	0.748936	0.4655
D(LNHRP)	0.622644	0.328258	1.896812	0.0773
D2	-0.252024	0.300737	-0.838022	0.4152

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