Understanding The Asean-5 Tourism Sector Based On Australia Outbound Tourism
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ABSTRACT
Many studies have been conducted with the aim at investigating the relationship between the tourism performance and macroeconomic variables. However, only few studies investigated the regional tourism performance based on a specific origin country. This study investigated the relationship between ASEAN-5 international tourism receipts as the dependent variable and macroeconomic variables as the independent variables namely the exchange rates to Australian Dollar, Australia GDP per capita, international tourism expenditure, and transportation costs. The method used to investigate this study is panel data regression model to determine the influence among the explanatory variables to the dependent variable. The results denote that the exchange rates, GDP per capita, and the transportation cost are significant to the tourism receipts. Meanwhile, the international tourism expenditure variable shows an insignificant result to the tourism receipts.
Introduction

In the era of modern economics, most countries around the world cannot rely only on exploiting their natural resources to boost the economies. The world is being shifted to the era of creative economy where people must find creative ways to earn an income. The first terms of creative economy was invented by Howkins in 2001 (Cited in Kyung Sung 2015). He stated that a creative economy is the situation where the businesses promote creativity, knowledge convergence, and advance scientific technology based on structured learning to invent new markets and new jobs. Furthermore, the presence of unpredictable economic challenges around the world has forced many nations and social activists to adapt in new ways which include promoting the creative economy (Flew, 2012). For instance, the most basic economic problem is the scarcity when human have unlimited needs but they are constrained by the limited resources.

Due to the world’s problem of resource scarcity, hence countries must find another sector as an alternative sector to maintain their national income. One of the sectors that can be expanded as an income for a country is the tourism sector. According to World Tourism Organisation (WTO), the sector of tourism has experienced gradually growth to be the fastest growing sector in the world. The Word Travel and Tourism council estimate that tourism sector assist 9.2 percent of global GDP and forecast that this growth will continue to grow at over 4 percent per annum during the next ten years to be around 9.4 per cent of GDP (Cited in Dwyer & Spurr 2011). According to Satria (2011), the demand of an efficient economy affects a high need for innovation and tourism is one of the sectors that can be developed to fulfill this demand.

According to the data published by ASEAN (2015) revealed that the tourism arrivals in the selected countries from Southeast Asia region, respectively Indonesia, Malaysia, Singapore, Thailand, and Philippines gradually increased and some were relatively stagnant from 2010 to 2014. For instance, Indonesia had additional 400,000 arrivals in average per annum. This annual additional average performed higher compared to what Malaysia had even though its annual tourist arrival number was bigger. The highest incremental arrivals were from Thailand in which by December 2013 they recorded 4 million increasing in their arrivals which made them the most top perform tourism sector during that year with more than 26 million tourists both local and foreign.

Australia outbound tourism has possessed a superb form for the last five years. Data published by Visa (2015) explained that Australia is among the top five spenders in 2015 along with Saudi Arabia, Egypt, China, and Brazil with median spending for travelling reached $3603 for each trip. This number was not even a surprise because the results in 2012 showed that 8.2 million residents left Australia borders. This meant 31 out of 100 Australian residents travelling overseas (Australia Post 2016). Furthermore, the data in Australia Post (2016) revealed that based on the top 10 of Australia destinations, four of ASEAN countries were mentioned, namely Indonesia with 11.1% (2nd), Thailand visited by 7.6% of total Australia citizens in 2012 (4th), Singapore with 3.7%(8th), and Malaysia with 3.2% of total Australia outbound toursms (9th). In addition, the similar data was published by the Australia Bureau Statistics (2012). Moreover, according to Australia Post (2016), there are several reasons why Australians go for travelling. It was said that 57 percent of the people travelled abroad for holiday, while 23 percent travelled to visit friends and family, lastly following with 10 percent on business purposes.

However, this study replicates the previous research about the tourism sec-
tor performance, the author of this study has certain gap between this study and the previous studies. This research will focus on the tourism receipts, while some previous studies used tourism arrivals in a specific country. Moreover, this study will concentrate on the regional tourism performance based on the tourism receipts within the ASEAN-5 region, namely Indonesia, Malaysia, Singapore, Thailand, and Philippine while in contrast most of the previous studies focused on one destination country to numerous origin countries. Furthermore, this research put the influence of transportation cost in term of jet fuel consumption to determine the relationship between dependent and independent variables. In addition, tried to figure out whether the Australian citizens are attracted to travel to the Southeast Asia regions not only through the relationship of exchange rates between the Australian dollar and the ASEAN-5 currencies but also the income of the Australian. Besides, this study also addressed to determine which variable is the most influential to the regional tourism performance in ASEAN-5 and even though this research is a replication of the previously conducted studies, this research has divers gap mentioned before as some new evidence of the essential of the tourism performance to the economy of a country.

**Literature Review**

In this paper, the author found several references related to the topic discussed. Before the term of creative economy existed in public, Uysal and John L. Crompton (1984) analysed the determinants of demand for international tourist flows of Turkey. This research used per capita income from origin countries, relative price, exchange rate, transportation cost, and promotional expenditure. There were eleven foreign countries from 1960 to 1980 observed as the target generating countries namely Austria, Canada, France, Greece, Italy, Spain, Switzerland, FR Germany, UK, USA, and Yugoslavia. The results show that all the variables measured are significant to the Turkey international tourist flow. However, in the exchange rate variable, even though most of the origin countries shows the positive role in stimulating international tourist flows of Turkey, Italy showed the only exception with a negative sign. Further, the promotional expenditure variable only shows a positive role on the demand for international tourism for six countries not for all eleven countries observed.

At the beginning of 21st century, two researchers, Lindsay Turner and Stephen Witt (2001) analysed the similar research as Muzaffer and John (1984) conducted based on New Zealand case. This paper aimed to examine tourist flows divided into holidays, business travel and visit to friends and relatives (VFR) for each origin country-destination country to discover whether the various demand had a difference impact depending upon the purpose of visit consideration. The method used was the Structural Equation Modelling (SEM) with time series analysis, while the data observed were taken from the tourist flows over the four origin countries to New Zealand from 1978 to 1997. The explanatory variables were origin country population, origin country personal disposable income, and the cost of living in destination country adjusted by the exchange rate between two countries. The additional variables observed were the presence of airfare cost and the influence of international trade between New Zealand and the target countries, respectively Australia, USA, Japan, and the UK.

The empirical results showed that international trade plays the major part in influencing business tourism demand, retail sales are the major influence on the demand for foreign holidays, and new private car registrations are the major determinant of VFR tourism demand. In particular, this
study has shown that international trade (in the form of trade openness) is the major determinant of business tourism demand, and that new private car registrations, retail sales and domestic loans are also important influences in term of the trade between two countries.

Tourism Research Australia in 2011 investigated the factors affecting inbound tourism in Australia with the specific focus on the roles, impacts and implications of the Australian dollar. The study continued to put income as one of the key determinants of decision by tourists to travel in addition to exchange rate. The empirical results of the study revealed that in the short-run, income is responsible for the strongest causality in relation to tourism demand. In particular, one percent additional in in-bound source market incomes caused tourism demand increase of 0.8%. In the long-run term, the causality was even found to be stronger. The study also explained that exchange rate volatility had an impact on Australia’s inbound tourism. In addition, there was nonlinear relationship between the strength of the Australian dollar and the demand for inbound tourism. The appreciation of the Australian dollar against the currencies of the source markets for inbound tourists entails that tourists have either to spend more on their tourism budgets or reduce the number of days of the visits.

Moreover, Shuhada and Ismail (2012) conducted a research about the demand factors of international tourism in Malaysia. This work covered data spanning from 2002 to 2010 with tourism receipts in Malaysia as the dependent variable and the independent variables observed were personal disposable income for the destination country, personal disposable income for origin countries, relative price in term of CPI, exchange rates, population from origin countries, and the distance between Malaysia and the origin countries. The results showed that all the variables were significant to the model.

The different research was conducted by Emmanuel, et al. (2013) as the inbound tourism target. The explanatory variables used were the domestic tourism per capita and international tourism per capita while the difference is the method used. The author used the Johansen Cointegration approach in addition. The final results showed the exact conclusion like the previous research where all the explanatory variables were significant and can explain the model.

Glauco (2014) conducted research entitled “The Long-run Impact of Exchange Rate Regimes on International Tourism Flows”. The explanatory variables used were the trade between the source and the destination countries, the GDP per capita for both origin and destination countries, population of origin and destination countries, the real exchange rate volatility, the distance between two countries and the effective real relative prices. In addition, there were some dummy variables such as whether the source and destination countries shared the same language, the existence of free trade agreement between two countries, the colonial relationship, and the exchange rate regimes, whether both origin and destination countries were members of the same currency at specific time, the fixed exchange rate, or whether one country was in a currency union and the other floated its currency. The empirical results showed although the short-run effects were beyond the scope of this investigation, this model works for across three classifications of the exchange rate regimes in the long-run. Further, the results showed that the trade variable had a positive correlation to the tourism flows. Suggesting this will promote inbound tourist flows and the GDP per capita and the population of the source countries were found have a larger impact on tourism flows compared to the origin country’s GDP per capita and population.
In the same year, Jana (2014) in her study “The Determinants of International Tourism Demand” analysed the factors influencing the tourism in Czech Republic from 2000 to 2012. The independent variables used were personal income for source country, the relative price in term of CPI of origin and destination countries, the exchange rates, trade openness, population from origin countries, promotion expenditure, and the dummy variables in term of peak season and the political condition of the destination countries. In addition, this research used the lagged of the dependent variable to analyse the effect of word-of-mouth (WOM) and repeated visit as a result of habit formation. The method approach was the Arellano-Bond GMM. The results showed that income, trade openness, and the WOM effect showed the positive correlated to the model whereas the relative price and the dummy variable were found to be negatively correlated.

In 2015, Richard, in his study “Macroeconomics Determinant of Tourism Sector Performance in Malawi” explain the macroeconomics factor that influenced Malawi tourism industry that affects economic growth. Both short-run and long-run impacts were covered in the Malawi case. This research used four independent variables namely, the exchange rate, the level of investment in Malawi, and the income per capita of origin countries. Besides, this research covered the dummy variable in term of political and economic stability in Malawi’s neighbouring states. Therefore, the dummy variable measured in term of political instability. The results show that in the explanatory variables were able to explain the model in the long-run, but in the short-run, the author concluded that there is another factor that explain the model outside the variables investigated in his study. Further, the political and economic instability could be the only factor that might lead to tourists to postpone or even withhold their decision to visit Malawi and choose another destination in the short-run.

Jewoo & Choong-Ki Lee (2016) in their study analysed the role of tourism price in attracting international tourist for Japan based on South Korea outbound tourists. They developed six models among the first three models there was no living cost included, but they managed to put that variable in the last three models. The dependent variable was the number of South Korean tourists divided by its population. The first model used exchange rates, real price in term of CPI, GDP per capita of Korean tourists, and several dummy variables measured. The results of this research showed that all six models explained more than 70% percent in Korean tourist arrivals to Japan. However, the first three model which treated relative price and exchange rate separately appeared to provide a better fit model. Further, the results appeared to show that the removal of the transportation cost variable did not significantly change the explained variance in Japanese inbound tourism for South Korea.

In the same year, Peter and Ronald (2016) analysed the economics of tourism growth for small island countries based on the impact of changes in foreign income tourism source countries on the growth of tourism dependent small island economies. The variables used were the elasticity of demand of tourism goods and services, the competition among hotel, and services and income elasticity of foreign income of countries tourist source. This research was under assumption a fixed exchange rate and perfect competition for tourism sector in island countries. The results showed that foreign income and competition among hotels showed the positive correlation, and further, appropriate policy which led to strong competition in the services sector would maximise the growth rate and national income. In their view, the model presented can be extended to
capture other important aspects such as the role of land property laws, spatial land planning, capital controls, tax policies and public infrastructure.

**Method**

The research type used in this research is the explanatory research with the quantitative method. This method methodically examines the relationship between dependent and independent variables by regressing them with mathematical equation. Indeed, this type of approach requires a high organized measurement process because it describes the relationship between observed phenomenon and the results of regression explained by mathematical model.

In this research, the author uses one dependent variable and several independent variables. The dependent variable (Y) is a variable influenced by the independent variables whereas independent variables (X) are expected to affect the dependent variable. This research encompassed five countries in Southeast Asia, namely Indonesia, Malaysia, Singapore, Thailand, Philippines. Those countries were the limited variables used in this research. Further, the data are taken from 1999-2014. These countries are chosen due to the high performance in their tourism sector in Southeast Asia compared to the other Southeast Asia countries.

This research will provide a regression from panel data based on panel data corrected standard error (PCSE) model. The equation for this model is:

\[
\text{TOURCP}_{it} = \beta_0 + \beta_1 \text{EXC}_{ijt} + \beta_2 \text{GDPPERCAP}_{jt} + \beta_3 \text{EXP}_{it} + \beta_4 \text{JETFCON}_{jt} + \epsilon_{it}
\]

Where TOURCP= Tourism Receipts ASEAN-5 Countries, \(\beta_0\)= Constant, \(\beta_1, \beta_2, \beta_3, \beta_4\) & \(\beta_5\)= Coefficients regression, \(\epsilon\)= Error or disturbance, \(i\)= country destination, \(t\)= country of origin, EXC= ASEAN-5 Countries exchange rates to Australian Dollar, GDPPERCAP= Australia GDP Per Capita, EXP= International tourism expenditure for destination countries, JETFCON= transportation cost which is the jet fuel consumption.

**Finding and Discussion**

**The Results of Panel Data Regression With Panel Corrected Standard Error (PCSE)**

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Dependent Variable</th>
<th>TOURCP</th>
<th>Coefficient</th>
<th>Panel Corrected Standard Error</th>
<th>t-value</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td></td>
<td></td>
<td>-6.91e+09</td>
<td>1.65e+09</td>
<td>-4.12</td>
<td>0.000</td>
</tr>
<tr>
<td>EXC</td>
<td></td>
<td></td>
<td>-813421.4</td>
<td>90604.38</td>
<td>-8.98</td>
<td>0.000</td>
</tr>
<tr>
<td>GDPPERCAP</td>
<td></td>
<td></td>
<td>207166.3</td>
<td>35967.09</td>
<td>5.76</td>
<td>0.000</td>
</tr>
<tr>
<td>EXP</td>
<td></td>
<td></td>
<td>-0.0803599</td>
<td>0.0785742</td>
<td>-1.02</td>
<td>0.306</td>
</tr>
<tr>
<td>JETFCON</td>
<td></td>
<td></td>
<td>109655.3</td>
<td>27641.33</td>
<td>3.97</td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Prob&gt; chi2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>Rsg</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.4170</td>
<td></td>
</tr>
</tbody>
</table>

Source: The writer’s calculation (data from world bank and the global economy), 2016
The value of EXC (ASEAN-5 Exchange Rates to AUD) indicates a negative but statistically significant to the international tourism receipts. The negative sign is in line with Uysal and John L. Crompton (1984) while the exchange rates are significant but negatively affects the tourism performance. In addition, the exchange rates play an important role to attract the international tourists. This pictures the degree of confidence of the citizens of origin countries to the destination countries. For example, the citizen of Australia figure out that their currency has a strong rate to the desired destination country and hence they will decide to travel and make a visit to that destination country. In contrast, if the currency of a destination country seems to be higher compared to the origin countries, it may cancel the travelling decision to make a visit. Furthermore, the exchange rates are able to determine the living cost within the destination country. If the destination country’s currency keeps appreciating to the origin, it indicates that the living cost spent for travel will be higher than it used to be and vice versa. To sum up, these are the explanation of how exchange rates affect the the tourism receipts based on its demand for international tourists (Chumni, 2001).

The interpretation of GDPPERCAP which represents the term of Australian income is both significant and have a positive mark. Jana (2014) study in the tourism performance in Turkey showed a similar result while the inbound tourism is affected by the fluctuation of origin countries’ incomes. This fact is based on the degree of people who are willing to spend their income for travelling purposes. This research used the Australian GDP per capita to determine the Australian preference on spending to travel to ASEAN-5 tourism. For instance, when a huge increase occurred in the Australia GDP per capita in 2011, the tourism receipts of Indonesia experienced a linear outcome by increasing their tourism receipts approximately 2 billion US$ in the same year. The similar results took place for all ASEAN-5 members where all of their receipts from tourism went up as a results of a moderate incline in the Australian income. These results are consistent to the statement from Vanegas and Croes (2000) that premised that the more the real income increases, the more the people are likely to travel and tourists expenditure is a positive function of income.

The other significant variable is the transportation cost in which is represented by the value of Jet fuel consumption. Further, a positive sign showed indicates that a possible increase in jet fuel consumption of an origin country in barrel would lead to an increase of the destination countries’ tourism receipts based on a fact that jet fuel consumption in barrel has counted the price of the oil itself.

The only insignificant variable is the International Tourism Expenditure (EXP) which provides a negative sign and insignificant value. The possible interpretation is the ASEAN-5 countries expenditures on international tourism in term of promoting and developing are not effective yet to boost the international tourism receipts in their country. The case of ASEAN-5 similarly corresponds to the case in Turkey (Muzaffer and Crompton, 1984) when the promotional expenditure was likely to have positive impact on the international tourism sector in Turkey. Furthermore, this may indicate that the destination country should not spend a high amount budget for promoting expenditure and instead should develop more tourist destinations. Satria (2009) suggested that encouraging the local people surrounding the tourism destinations will be more essesential and more effective to generate more receipts especially for international tourists.
Standardized Coefficient Test

Standardized coefficient regression test is useful to determine the robust relationship between the dependent and independent variables. To decide which independent variable is the most influence to the international tourism receipts is by looking at the value of the regression coefficient. Based on the table above, the variables name are changed with an additional word ‘Z’ after thet were standardized (after their own value has been eliminated). Futhermore, it shows that the highest value after the variables have been standardized are the exchange rates with the value of 0.677503 with a negative sign. The second most influence is the GDP per capita following by the jet fuel consumption and the international tourism expenditure.

Conclusion

After regressing and analyzing the tourism receipts in ASEAN-5 countries based on the Australia outbond tourisms from 1999 to 2014, there are several conclusions drawn:

The purpose of this research is to analyse the factors that influence the tourism sector in form of the tourism receipts in the ASEAN-5 countries. This includes the effect of the exchange rates to AUD, Australia GDP per capita, the international tourism expenditure, and the jet fuel consumption on tourism receipts and the level of the influence of these variables on tourism receipts.

Only three explanatory variables namely the ASEAN-5 exchange rates to Australian dollar, Australia GDP per capita, and jet fuel consumption are statistically significant to the ASEAN-5 tourism receipts even though the exchange rates show a negative mark. This fact denotes that if there is an increase in exchange rates to AUD (appreciation), the tourism receipts will decrease and vice versa when the currencies of ASEAN-5 countries depreciate to AUD, it will by chance increase the tourism receipts. Conversely, when the Australia GDP per capita and the jet fuel consumption increase, it will affect to an incline of the tourism receipts. This indicates a positive impact from tourism income in ASEAN-5 countries.

Among all variables, only the international tourism expenditure is not statistically significant and has a negative sign to the model. This indicates that tourism expenditure should be minimised due to inefficiency in generating income from tourism receipts. The decreasing rate in the model indicates that there is a decrease in tourism receipts when an increase occurs in the tourism expenditure.

As tourism becomes more essential as an income for a country, this sector must be developed especially for ASEAN-5 country member in order to at-
tract the Australian tourists. It is necessary for all parties to collaborate to develop the tourism sector in ASEAN-5 countries. With Thailand which possessed the highest tourism receipts in the given year, the rest of ASEAN-5 countries should be able to compete in the development and promotion for the tourism sector.

The most influence factor to the international tourism receipts of the ASEAN-5 countries is the exchange rates with the negative relationship. Thus the presence of a stable exchange rate currency is essential.

The government should maintain the exchange rates to the origin country, to prevent extreme appreciation or depreciation in order to be able to attract the international tourists because it represents whether the inbound tourism in a region will be chosen by an outbond tourists from their origin country.

The government is suggested to make policies to minimize the cost for enrolling travelling visa or tax holiday, so people from other countries will be interested to visit ASEAN. Consequently, there will be an increase in the tourism sector.

The government should conduct a promotion efficiently thus in the following year, so the expenditure for tourism will positively impact to the international tourism sector.

For Indonesia, it is prominent to add more tourism objects instead of Bali to attract the international tourists. With an intense promotion with Australia and improve the infrastructure available, it will be possible for Indonesia to be the highest country in ASEAN with the biggest international tourism receipts.

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