

Effect of Export, Digital on Tourism: Case Study of ASEAN Countries

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Abstract: The ASEAN Economic Community (AEC) was formed with the aim of achieving the perfect economic integration in the ASEAN region which is believed to provide tangible benefits for all elements of society. Export activities are needed in the AEC to increase purchasing power. Digital technology is needed to help increase the number of goods produced. This will also affect the tourism sector. The higher the value of exports, the better the impact on the tourism sector. Digital technology is needed to improve the tourism sector to better introduce tourism places to tourists. This study uses a quantitative method with panel data secondary to the 2011-2015 period by combining 10 ASEAN countries (Indonesia, Malaysia, Singapore, Thailand, Philippines, Vietnam, Myanmar, Brunei, Laos, Cambodia). From the calculation of T-Test, it can be concluded that the export variable partially influences the significance of the tourism variable and Digital variable partially influences the positive significance of the Tourism variable. From the calculation of F value, that simultaneously or together the independent variables have a significant effect on the dependent variable. The influence of export, digital on the number of arrival of ASEAN countries needs to be improved even though it is good. Tourism (Number of Arrivals) growth in all ASEAN countries experiencing good growth. The problem is how to keep this Number of Arrival getting better. Export activities are one of the things to maintain the number of arrival in order to create a quality product so that it will have high purchasing power. Of course the role of the digital economy is urgently needed, the growing internet users will have a positive impact on increasing tourism in ASEAN countries which will help better economic openness in ASEAN countries.

1 INTRODUCTION

Export activities will result in a rising demand for the currency of the exporting country so that the currency will strengthen. Activities will result in an increase in the demand for the currency of the importing country so that the value of the domestic currency will weaken. Exports and imports also have an influence on the purchasing power of a country's people. Murni (2009) in Sedyaningrum (2016) an increase in the number of exports due to an increase in the number of domestic goods production will result in full employment resulting from a country's per capita income which means that purchasing power also increases.

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believed to provide tangible benefits for all elements of society. Export activities are needed in the AEC to increase purchasing power. Digital technology is needed to help increase the number of goods produced. This will also affect the tourism sector. The higher the value of exports, the better the impact on the tourism sector. Digital technology is needed to improve the tourism sector to better introduce tourism places to tourists.

2. LITERATURE REVIEW

2.1 Export

Sedyaningrum (2016) Exports can be interpreted as shipping and selling goods from within the country to foreign countries. According to Murni (2009):

208), exports are an economic activity selling domestic products to overseas markets. The advantage of exporting according to Sukirno (2010: 205) in Sedyaningrum (2016) is that it can expand the market, increase foreign exchange, expand employment.

Export is the delivery and sale of goods and services produced domestically abroad. The increasing number of exports will cause a demand for a rising domestic currency and a stronger Rupiah exchange rate. The high amount of exports also causes labor in a country to be fully absorbed so that unemployment decreases and increases the country's per capita income so that purchasing power increases.

2.2 Digital

Setiawan (2017) explains that the digital world not only offers great opportunities and benefits for the public and business interests. But it also presents challenges to all areas of life to improve quality and efficiency in life. The use of various technologies really makes life easier, but even a digital lifestyle will depend more on cellphone and computer usage.

According to Musafak (2012) explained that the digital economy is an economy based on electronic goods and services produced by electronic businesses and traded through electronic commerce. That is, businesses with electronic production and management processes and who interact with partners and customers and conduct transactions through the Internet and Web technologies. Musafak (2012) also describes the Digital Economy definition version of Encarta Dictionary is "Business transactions on the Internet: the marketplace that exists on the Internet". Understanding Digital Economy focuses more on transactions and markets that occur in the internet world. A broader understanding of just transactions or markets is the New Economy which according to PC Magazine is "The impact of information technology on the economy". The understanding is more emphasized on the application of information technology in the economic field. The digital economy is the economic sector which includes goods and services when developing, producing, selling or supplying depends on digital technology.

2.3 Tourism

Nikita (2017) Tourism is one of the basic human needs. According to Wahab (1996) tourists arriving in a foreign country, both individually and in groups,

whatever their travel destination, will spend their money while staying in the destination to pay for services or tourist goods and buy services or goods that are not related to travel. The total amount of money spent is the amount of state revenue from the tourism sector and a pattern of consumption of tourists in the country. The more consumption of tourists, the more tourism services produced in Trade, Hotels and Restaurants. Theoretically, the more the number of tourists and the longer tourists stays in a tourist destination, the more money spent in the tourist destination, at least for food, drink and lodging during their stay in the area. Various kinds of tourist needs during the tour it will cause consumptive symptoms for products in tourist destinations. With the consumptive activities of both foreign and domestic tourists, it will increase the income received by business owners in the tourism industry including Trade, Hotels and Restaurants which from payments for services received by tourists which will increase the number of tax revenues and revenue from the Sulawesi tourism sector North.

According to Ida Austriana (2005) in Nikita (2017), the longer tourists stay in a tourist destination, the more money spent in the tourist destination, at least for food, drink and lodging during their stay in the area. Various types of tourist needs during the tour will cause consumptive symptoms for products in tourist destinations. With the consumptive activities of both foreign and domestic tourists, it will increase revenue from the tourism sector of a region.

According to Mill (2000) in Nikita (2017) foreign tourists are every person who visits a country, other than the country usually occupied for a period of approximately 24 hours. Foreign tourists are suppliers of foreign exchange reserves for the area they visit. The entry of

foreign tourists will increase foreign exchange, which means that it will strengthen the balance of payments and trade.

3. METHOD

The population that became the object in this study came from secondary data obtained from the company Knoema, one of the digital economic data provider companies. The sampling method uses purposive sampling method, namely the determination of samples with certain considerations. In this study the sample was used using panel data obtained by time series data for 5

years and cross-section data of 10 ASEAN countries namely Indonesia, Malaysia, Singapore, Philippines, Thailand, Vietnam, Myanmar, Laos, Brunei, Cambodia.

3.1 Variable Identification

Research variables are independent and dependent. for the independent variables that exist in this study are Export (X₁), Digital (X₂) while the dependent variable Tourism (Y).

3.2 Data Analysis

The analytical method used in this study is a quantitative technique that uses mathematical and statistical models that are classified in certain categories to facilitate analysis using the Eviews program. While the analysis technique used is multiple linear regression analysis techniques to see the relationship between the independent variable and the dependent variable. The data used is the panel data there are three kinds of data panel estimation techniques, namely pooled the least square, fixed effect model, and random effect model. Test the suitability of the model to determine the most appropriate model is to use the Chow test. After that, the classic assumption test is a normality test and also hypothesis testing, namely partial t-test, simultaneous F test, a test of the coefficient of determination.

3.3 Econometry Model

The analysis technique in this study is a panel data regression analysis, while the regression model in the form of logs can be written as follows:

$$\ln Y_{it} = \beta_0 + \beta_1 \ln X_{1it} + \beta_2 \ln X_{2it} + e_{it}$$

Where:

Y = Tourism; X₁ = Expor; X₂ = Digital, i = Country; and t = time.

4.RESULT

There are three estimations of panel data regression, namely common effects (OLS), fixed effect models (FEM) or Random Effect (REM) models. Determining the panel model that will be used in this study, several tests must be carried out. Chow Test that can be used to determine whether the panel data model can be regressed with common effect models (OLS), fixed effect models (FEM) or Random Effect

(REM) models. Chow test is used to determine whether the panel data model is regressed with the Common Effect model or with the Fixed Effect model.

H₀: The best model is the Common Effect

H₁: The best model is the Fixed Effect

4.1 Chow Test

Table 1: Chow Test

Redundant Fixed Effects Tests			
Equation: Untitled			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	142.320558	(9,38)	0.0000
Cross-section Chi-square	177.347791	9	0.0000

The table above shows that the best model is the fixed effect because the Chi-square probability value is below 0.05, this means that H₀ is accepted.

Table 2: Fixed Effect Model

Dependent Variable: TOURISM				
Method: Panel Least Squares				
Date: 06/10/18 Time: 20:34				
Sample: 2011 2015				
Periods included: 5				
Cross-sections included: 10				
Total panel (balanced) observations: 50				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DIGITAL	0.092698	0.045012	2.059404	0.0464
EXPOR	3.74E-05	9.87E-06	3.791329	0.0005
C	1599167.	1381541.	1.157523	0.2543
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.982894	Mean dependent var	8559480.	
Adjusted R-squared	0.977943	S.D. dependent var	8404654.	
S.E. of regression	1248237.	Akaike info criterion	31.11793	
Sum squared resid	5.92E+13	Schwarz criterion	31.57681	
Log likelihood	-765.9482	Hannan-Quinn criter.	31.29267	
F-statistic	198.4977	Durbin-Watson stat	0.908581	
Prob(F-statistic)	0.000000			

From the results of panel data regression with the selected model is the Fixed Effect model, the regression model equation is obtained as follows:

$$\text{TOURISM} = 3.74 (\text{Export}) + 0.092 (\text{DIGITAL}) + e$$

4.2 Normality Test

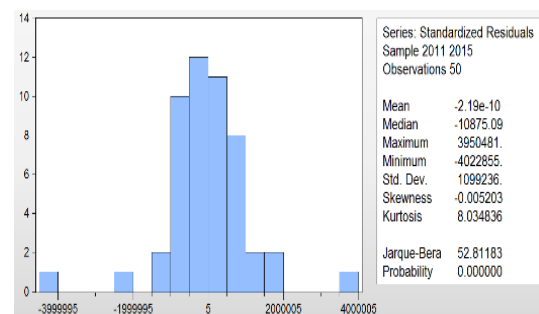


Figure 1: Histogram

From the output that has been tested, it states that the histogram form is distributed symmetrically so that the residuals are distributed normally. Based on the JB statistical test, the value is 52.81183 with a probability of 0.0000 while the chi-square value with significance ($\alpha = 5\%$) is 0.05, so $JB < Chi$ Square, then H_0 is accepted and H_1 is rejected meaning that the residual is normally distributed.

4.3 T-test (Partial)

Table 3: T-test (partial)

Dependent Variable: TOURISM
 Method: Panel Least Squares
 Date: 06/10/18 Time: 20:34
 Sample: 2011 2015
 Periods included: 5
 Cross-sections included: 10
 Total panel (balanced) observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DIGITAL	0.092698	0.045012	2.059404	0.0464
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Log likelihood	-765.9482	Hannan-Quinn criter.	31.29267
F-statistic	198.4977	Durbin-Watson stat	0.908581
Prob(F-statistic)	0.000000		

Based on the results above as follows:

Effect of Export on Tourism

The t-statistical probability value obtained is 0.0005, then the statistical probability $<\alpha = 5\%$ is $0.0005 < 0.05$. So that it can be concluded that the export variable partially influences the significance of the Tourism variable.

Effect of Digital on Tourism

The obtained t-statistical probability value is 0.0464. Then the statistical probability $<\alpha = 5\%$ is $0.0464 < 0.05$. So it can be concluded that the Digital variable partially influences the positive significance of the Tourism variable.

4.4 F Test (Simultaneous)

From the calculation of F value, it is known that $F_{arithmetic} > F_{table}$ ($198.4977 > 3.18$) then H_0 is accepted and H_1 is rejected ($F_{arithmetic}$ is in H_1 reception area). Then also the probability (prob.) Of the table above is equal to $0.000 < 0.005$, then H_0 is accepted and H_1 is rejected. So that simultaneously or together the independent variables have a significant effect on the dependent variable.

Coefficient Determination

Based on the table above, the Adjusted R-Square value is 0.9779. This shows that the model is able to explain 97.79% of the dependent variable, while the remaining 2.21% is influenced by other factors outside the regression model.

5 DISCUSSION

Table 4: Tourism (Number of Arrivals)

Growth Tourism Arrivals	Indonesia	Malaysia	Singapura	Thailand	Philpines	Vietnam	Myanmar	Laos	Brunei	Kamboja
2012	5,15	0,56	6,81	16,25	9,09	13,87	29,78	20,96	(13,64)	24,36
2013	9,42	1,29	7,22	18,76	9,55	10,57	93,01	17,85	7,66	17,47
2014	7,19	2,72	(0,29)	(6,54)	3,25	3,99	50,73	17,19	(10,67)	6,96
2015	10,30	6,70	8,43	20,61	10,92	0,89	51,93	11,98	8,46	6,04

The influence of export, digital on the number of arrival of ASEAN countries needs to be improved even though it is good. Table 4 describes the 2014-2015 Tourism (Number of Arrivals) growth in all ASEAN countries experiencing good growth. The problem is how to keep this Number of Arrival getting better. Export activities are one of the things to maintain the number of arrival in order to create a quality product so that it will have high purchasing power. Of course the role of the digital economy is urgently needed, the growing internet users will have a positive impact on increasing tourism in ASEAN countries which will help better economic openness in ASEAN countries.

6 CONCLUSION

This study aims to analyze the relationship between export, digital towards ASEAN countries tourism in the period 2011-2015 using panel data regression analysis techniques. Based on the results of statistical tests, the following conclusions can be drawn:

Effect of Export on Tourism, the t-statistical probability value obtained is 0.0005, then the statistical probability $<\alpha = 5\%$ is $0.0005 < 0.05$. So that it can be concluded that the export variable partially influences the significance of the Tourism variable. Effect of Digital on Tourism, The obtained t-statistical probability value is 0.0464. Then the statistical probability $<\alpha = 5\%$ is $0.0464 < 0.05$. So it can be concluded that the Digital variable partially influences the positive significance of the Tourism variable.

From the calculation of F value, it is known that $F_{\text{arithmetic}} > F_{\text{table}}$ ($198.4977 > 3.18$) then H_0 is accepted and H_1 is rejected ($F_{\text{arithmetic}}$ is in H_1 reception area). Then also the probability (prob.) Of the table above is equal to $0.000 > 0.005$, then H_0 is accepted and H_1 is rejected. So that simultaneously or together the independent variables have a significant effect on the dependent variable.

REFERENCES

- Abdurofiq, Atep.2015.*Menakar pengaruh Masyarakat Ekonomi ASEAN Terhadap Pembangunan Indonesia*.Jurnal Filsafat dan Budaya Hukum
- Amala, Faizatul & Unggul Herqbalidi.2015.*Dampak keterbukaan perdagangan internasional terhadap pertumbuhan ekonomi : pendekatan panel dinamis*. Jurnal Ekonomi dan Bisnis. Universitas Airlangga
- Astuti.Pudji.2018.*Analisis pengaruh ROE,EPS,PBV,BVPS,PER dan kepemilikan institusi terhadap harga saham perusahaan*. Jurnal Ekonomi. Univesitas Borobudur
- Ghozali, Imam, 2013. *Aplikasi Analisis Multivariat dengan Proram IBM SPSS 21*. Edisi7. Semarang: Universitas Diponegoro.
- Li.Quan & Rafael Reveny.2013. *Economic Globalization and Democracy*. British Journal of political science
- Nikita, Anastasia.2017. *Pengaruh pendapatan per kapita terhadap jumlah wisatawan asing dan PDRB sektor pariwisata Sulawesi Utara..* Jurnal Berkala Ilmia Efisiensi
- Musafak.2012.*Budaya ekonomi digital kalangan masyarakat menengah atas*.Universitas Gunadarma
- Razmi, Mohammad Javad. 2013. *The effect of trade openness and economic freedim on economic growth: the case of east and east asian contries*. International Journal of Economics and Financial Issue.
- Sedyaningrum.Miranti.2016. *Pertumbuhan ekonomi terhadap nilai tukar dan daya beli masyarakat di Indonesia*. Jurnal Administrasi Bisnis. Universitas Brawijaya Malang.
- Semancikova, Jozefina. 2016. *Trade, Trade Openes and macro economic performance*.International Journal Elsevier
- Setiawan, Wawan.2017. *Era Digital dan Tantangannya*.Universitas Pendidikan Indonesia
- Sugiyono. 2013. *Metode Penelitian Kuantitatif, Kualitatif dan R & D*. Bandung: Alfabeta.
- Zaroni, Akhmad Nur.2015.*Globalisasi ekonomi dan implikasinya bagi negara-negara berkembang : telaah pendekatan ekonomi islam*. IAIS Samarinda