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## [JEMT] Submission Acknowledgement

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**Ramona PIRVU** <jemt@aserspublishing.eu>

Min, 25 Feb 2018 pukul 11.33

Kepada: I Made Sara <madesara@warmadewa.ac.id>, Ida Bagus Agung Dharmanegara <dharmanegara@warmadewa.ac.id>, I Nyoman Sugawa Korri <sugawa.korri@warmadewa.ac.id>

Hello,

I Made Sara has submitted the manuscript, " The Dynamics of International Tourism and Economic Growth Convergence in ASEAN+3" to Journal of Environmental Management and Tourism.

If you have any questions, please contact me. Thank you for considering this journal as a venue for your work.

Ramona PIRVU

The following message is being delivered on behalf of Journal of Environmental Management and Tourism.

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**I MADE SARA** <madesara@warmadewa.ac.id>

Sen, 25 Jun 2018 pukul 16.24

Kepada: Ramona PIRVU <jemt@aserspublishing.eu>

Cc: I Made Sara <madesara@warmadewa.ac.id>, Ida Bagus Agung Dharmanegara <dharmanegara@warmadewa.ac.id>, I Nyoman Sugawa Korri <sugawa.korri@warmadewa.ac.id>

Dear Editors-in-chief,  
Journal of Environmental Management and Tourism

I have been submitted our manuscript entitled "The Dynamics of International Tourism and Economic Growth Convergence in ASEAN+3" for Journal of Environmental Management and Tourism. May I know how the progression of our article submission?

We are looking forward to hearing from you. Thank you in advance.

Sincerely Yours,

I Made Sara  
Department of Economics, Faculty of Economics, Warmadewa University,  
Indonesia  
Address: Jl. Terompong, Sumerta Kelod, Denpasar Tim., Kota Denpasar,  
Bali, Indonesia  
Email: [madesara@warmadewa.ac.id](mailto:madesara@warmadewa.ac.id)

On Sun, February 25, 2018 10:33 am, Ramona PIRVU wrote:

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> Ramona PIRVU  
> The following message is being delivered on behalf of Journal of  
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**I MADE SARA** <madesara@warmadewa.ac.id>

Sel, 26 Jun 2018 pukul 11.26

Kepada: I MADE SARA <madesara@warmadewa.ac.id>

Cc: Ramona PIRVU <jemt@aserspublishing.eu>, I Made Sara <madesara@warmadewa.ac.id>, Ida Bagus Agung Dharmanegara <dharmanegara@warmadewa.ac.id>, I Nyoman Sugawa Korri <sugawa.korri@warmadewa.ac.id>

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On Mon, June 25, 2018 3:24 pm, I MADE SARA wrote:

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> I Made Sara  
> Department of Economics, Faculty of Economics, Warmadewa University,  
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> Address: Jl. Terompong, Sumerta Kelod, Denpasar Tim., Kota Denpasar,  
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45 of 52 < >

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### Editorial Decision - Re: Manuscript Submission Inbox x



**JAES JAES** <jaes\_secretary@yahoo.com>  
to me, JEMT

Fri, Feb 16, 2018, 3:43 PM ☆ ↶ ⋮

Dear Author,

concerning the paper entitled *The Dynamics of International Tourism and Economic Growth Convergence in ASEAN+3* submitted to our redaction, please allow us to recommend you, the *Journal of Environmental Management and Tourism (JEMT)* because it is more suitable with its scope and aims, having great chances to be published in the next Issues of 2017.

In this regards, already I send our recommendation to the Editors of JEMT and in short time you will receive an invitation.

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Best regards,  
Editor in Chief

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On Wednesday, January 17, 2018, 12:58:46 AM GMT+2, sara made <[saramade.25a@gmail.com](mailto:saramade.25a@gmail.com)> wrote:

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Sincerely Yours,

I Made Sara  
Department of Economics, Faculty of Economics, Warmadewa University, Indonesia  
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Email: [saramade.25a@gmail.com](mailto:saramade.25a@gmail.com)

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Thank you for your mail.

Noted with thanks.

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# Paper - I Made Sara



**sara made** <saramade.25a@gmail.com>  
to jemt, madesara

Tue, Jul 31, 2018, 10:53 PM [Star] [Reply] [More]

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I Made Sara  
Department of Economics, Faculty of Economics, Warmadewa University,  
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Email: [madesara@warmadewa.ac.id](mailto:madesara@warmadewa.ac.id); [saramade.25a@gmail.com](mailto:saramade.25a@gmail.com)

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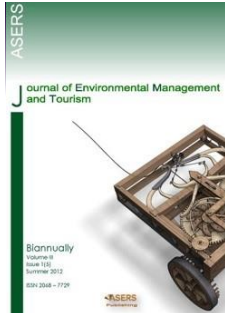
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This form refers to the manuscript of the paper having the title and the authors as below:

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Date: August 1, 2018

Third Party(ies) Signature(s) (if necessary): \_\_\_\_\_

# The Dynamics of International Tourism and Economic Growth Convergence in ASEAN+3

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## Abstract:

This study aims to analyze the impact of the tourism sector on economic growth and to identify the convergence of economic growth both in absolute and conditional of ASEAN + 3 countries. The analytical method used is Arellano-Bond Generalized Method of Moment (AB-GMM) with the period of 2003-2015 for 13 ASEAN countries: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam plus China, Republic of Korea and Japan. The variables used are Gross Domestic Product (GDP) and International Tourist Arrival.

The results show that conditional convergence beta by entering tourism indicator has the speed of convergence process in economic growth compared to without entering the tourism indicator. However, the half-life that needed is long enough to achieve steady-state conditions, and it is important to get the attention of policymakers and relevant stakeholders in accelerating the achievement of growth targets through tourism.

**Keywords:** Inbound Tourism; Economic Growth; Beta Convergence; Dynamic Panel AB-GMM

**JEL Classification:** Z32; O40; O47; C51.

## Introduction

The dynamics of global economy and without knowing the boundaries between countries give a challenge for all countries in the world to encourage economic growth including tourism sector. Nowadays, tourism is still the major driver that contributes to economic growth because it's able to absorb labor and become gravity in creating economic opportunities, social and cultural mobility. For ASEAN countries, tourism becomes the main capital of development supported by geography, natural wealth potential and diversity also the people socio-cultural uniqueness that develops in it.

But another very important thing to be concerned is the acceleration of economic growth in an economic region like ASEAN plus three other countries that is China, Republic of Korea and Japan with the existence of tourism development. Convergence of economic growth becomes very important because it can reduce the disparity between regions. According to (Sala-i-Martin 1996), convergence is interpreted as a tendency to shrink the economic disparity between countries in a given period of time.

Responding the importance of tourism sector in promoting economic growth especially in ASEAN + 3 countries and supported by the tangible and intangible potential of natural, social and cultural, this study aims to analyze the impact of tourism sector on economic growth and identify the convergence of economic growth both the absolute and conditional of ASEAN + 3 countries.

## 1. Literature Review / State-of-Arts / Research Background

The results of empirical studies indicate a positive contribution from tourism sector to economic growth known as tourism-led-growth hypothesis. The impact of tourism on economic growth is based on the tourism led growth (TLG) hypothesis. The TLG Postulation mention that the expansion of tourism activities encourages economic growth through its linkage with other economic sectors that are crucial in contributing to economic growth. TLG hypothesis is also directly derived from hypotheses that consider exports as drivers of economic growth. As

in the theory of new economic growth developed by (Balassa 1978) that exports and tourism have a positive impact on economic growth through improved allocation of production factors or expansion of resource utilization (Brida et al 2015).

The significance of tourism in promoting economic growth theoretically has two meanings (Sharma 2004) that is 1) tourism as a regional development vehicle developed country to reduce regional disparities, especially metropolitan centers and peripheral areas, 2) the role of tourism in the context of differences between developed and less developed countries, which assumes the differences between them can be reduced by the tourism development project in the less developed countries. While (Keskin and Cansiz 2010) mentioned the positive aspects of tourism development is for world peace, education and the environment. While (McKinnon 1964), mentioned the tourism sector has a positive impact on economic growth through several channels, that is 1) the tourism sector income provides foreign exchange income from imports of capital goods that are very important in the production process, 2) the tourism sector can create benefits and multiplier effect to other sectors such as agriculture, manufacturing, services and other sectors; 3) the tourism sector enhances the competitiveness of small countries through productive investment; 4) tourism income decreases the current account deficit; 5) tourism sector also reduces unemployment through job creation. The tourism sector enhances local economic development. The impact of tourism on economic growth is based on the tourism led growth (TLG) hypothesis. The TLG Postulation states that the expansion of tourism activities encourages economic growth through its linkage with other economic sectors that are crucial in contributing to economic growth.

Several studies about the effect of tourism on growth have been done in many countries with various analytical methods. (Demirhan 2016) conducted studies in Mediterranean countries using FMOLS panels and COLS panels during the years 1995-2014. The study results show that tourism receipts and tourism arrivals affect to economic growth in long-term and positive and prove tourism-led growth hypotheses. (Shakouri et al 2017) uses the Granger Panel test and variance decomposition, with the result of a study that is tourism receipt and economic growth is very important in policy and causality test as a tool to allocate limited resources in formulating tourism strategy. The result of (Brida 2009) study mentions the existence of cointegration between real GDP per capita, Colombian tourism expenditure and real exchange rate. The result of causality test proves the influence of tourism expenditure to real GDP per capita. (Nizar 2011) study shows that tourism growth and economic growth have a reciprocal relationship where the impact of tourism receipt increases economic growth by 5-6 quarters. The policy of tourism promotion influences the growth of tourism 1-3 quarters. (Sequeira 2005) uses a data panel method to overcome endogenous issues. The study shows that tourism cannot explain the high economic growth. While (Jackman 2012) conducted a study in Barbados with a study result there are existence of the causality of tourism to growth during the period 1975Q1-2010Q2, but the relationship between these variables is unstable. (Bento 2016) in Portuguese shows results that supporting the tourism-led growth hypothesis where there is a long-term cointegration relationship between real GDP and tourist arrivals both domestic and foreign. Relationships do not affect each other from domestic tourist to real GDP but not vice versa. So, the tourism promotion is needed. (Wang and Xi 2015) study estimate determinant factor of inbound tourism in China from 1995-2012. The result found that cloudy has a positive and negative impact on international tourist flow in China. Compared with several previous studies, this study has different analyzes in looking at the relationship between tourism and economic growth that emphasizes to the occurrence or not of the convergence process of economic growth in an economic region with the existence of tourism development...

## **2. Methodology**

The type of data used in this study is the secondary data panel is a combination of time series data and cross section data with the period of 2003-2015 and the number of ASEAN member countries Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Singapore, Thailand, Vietnam and added three countries that is China, Korea and Japan. So the total observation is 169. The variable used is Gross Domestic Product (GDP) annual percentage growth rate at market prices based on constant 2010 U.S. dollars, and the number of international tourist arrivals.

The dynamic panel model in this study is Arellano Bond - Generalized Method of Moment (AB-GMM) to analyze the determinants of economic growth and calculate the beta convergence of economic growth that influenced by the development of tourism. The use of static panel estimation methods such as OLS in dynamic panel equations models will be biased and inconsistent (Baltagi 2005). Likewise, to eliminate the individual effects, the transformation is done in the form of first difference. To overcome the bias and inconsistency of least square estimators, according to (Anderson and Hsiao 1982) can be used Instrumental Variable (IV) estimation method that is by instrumenting variables that correlate with error. This Anderson and Hsiao methods, then developed by



(Arellano and Bond 1991) (Arellano and Bond Generalized Methods of Moments Estimator) and resulted in unbiased, consistent and efficient estimates.

Advantages of GMM is first, GMM is common estimator and provides a more useful framework for comparison and assessment. Secondly, GMM provides a simple alternative to other estimators, especially with maximum likelihood. However, GMM estimates are also inseparable from weaknesses. Some of the disadvantages of this method are: (i) GMM estimators are asymptotically efficient in large sample sizes but are less efficient in limited sample sizes (Indra 2009; Hasriati 2016).

The beta convergence used is the absolute convergence and conditional convergence of ASEAN + 3 countries. The following model specifications are used for absolute convergence

$$\Delta gdp_{i,t} = \beta gdp_{i,t-1} + \delta \Delta gdp_{i,t-1} + v_{i,t} \quad \text{"(3.1)"}$$

Where,  $gdp_{i,t}$  is the economic growth of ASEAN + 3 countries during the period 2003-2015,  $gdp_{i,t-1}$  is the economic growth of the previous year.

While conditional convergence in this study was calculated using the following model specifications.

$$\Delta gdp_{i,t} = \beta gdp_{i,t-1} + \delta \Delta gdp_{i,t-1} + \gamma \Delta arr_{i,t} + v_{i,t} \quad \text{"(3.2)"}$$

Where,  $gdp_{i,t}$  is the economic growth of ASEAN + 3 countries,  $arr_{i,t}$  is the number of international tourist arrivals, whereas  $gdp_{i,t-1}$  is the economic growth of the previous year.

Calculation of beta convergence yields two indicators, there are the speed of economic growth convergence and the half-life test. The speed of economic growth convergence test for measure how fast the convergence of economic growth will be steady state or to a balance line where economic growth between countries will have in common with each other.

$$\lambda = \frac{-\ln(\beta + 1)}{T} \quad \text{"(3.3)"}$$

T is the time period.

The half-life test ( $t^*$ ) shows the time required to achieve steady state conditions from the convergence process of economic growth or the time required to achieve half of the economic growth convergence.

$$t = \frac{-\ln 0.5}{\ln(\beta) / T} = \frac{\ln 2}{\lambda} \quad \text{"(3.4)"}$$

If the null hypothesis is rejected ( $\beta < 0$ ) then it is concluded that a country with high economic growth will decrease and converge on the same economic growth. If the value of beta approaches zero, then the process of economic growth convergence will tend to be slow.

### 3. Result of Analysis

The Association of Southeast Asian Nations (ASEAN) is a very dynamic area with a population of about 600 million and has a rich variety of natural resources and a relatively stable economic environment. Amid the dynamics of the global economy, ASEAN has a commitment to competitiveness in the global market. As ASEAN's vision of achieving inclusive, green and knowledge-based economic growth and tourism sector becomes a leading player in achieving the vision of ASEAN.

The momentum of tourism development in ASEAN is contained in the ASEAN Tourism Strategic Plan 2011-2015 with aim to give greater contribution towards achieving the ASEAN integration objectives through an inclusive, green and knowledge based economic growth scenario. In this case, it needs a strategy in marketing, quality standard, human resource development, connectivity, investment, community participation, safety and security and natural and cultural heritage conservation which more competitive, sustainable and inclusive. The vision of ASEAN tourism until 2025 is "By 2025, ASEAN will be a quality tourism destination a unique, diverse ASEAN experience, and will be committed to responsible, sustainable, inclusive and balanced tourism development, so as to contribute socioeconomic well-being of ASEAN people."(ASEAN 2015: [http // www.asean.org](http://www.asean.org)).

Tourism become very important component for all ASEAN members, especially Cambodia, Lao PDR, Malaysia, Philippines, and Thailand whose tourism growth is more than 10% of GDP. Based on WTTC data, in 2013, ASEAN is able to generate US \$ 112.6 billion in tourism exports or foreign exchange earnings and \$ 294.4

billion of value added from travel and tour services, shopping, entertainment, transportation and other tourism services which is 12.30% of regional GDP. While the development of international tourism arrivals in 2012 more up to 86.7 million. While some of the biggest tourist destinations that is Malaysia, Singapore and Thailand have decreased by 70.71% of total arrivals in 2010 to reach 64.1% in 2014, while some countries that have increased are Cambodia, Myanmar and Vietnam. (ASEAN 2015: [http // www.asean.org](http://www.asean.org)).

One indicator of the tourism sector development in a country or region is the number of tourists who come to the country with a variety of purposes. The evolution of tourist arrivals in ASEAN as shown in table 1, recorded in 2015, the total number of arrivals increased to 108,904,000 compared to 2014 of 105,084,000 people who were dominated by extra ASEAN. Some countries experienced a rise except Malaysia which decreased from the previous 27,437,000 people, to 25,721,000 people despite being the country with the greatest arrival to compete with Thailand. The interesting thing is the presence of Thailand, Cambodia and Myanmar. The ASEAN region has increased significantly in arrivals and receipts from 2010 to 2014.

Table 1. Tourist Arrivals in ASEAN (in thousand Persons)

Country	2014			2015		
	Intra-ASEAN	Extra-ASEAN	Total	Intra-ASEAN	Extra-ASEAN	Total
Brunei Darussalam	3,662	223	3,886	119	99	218
Cambodia	1,992	2,511	4,503	2,098	2,677	4,775
Indonesia	3,684	5,752	9,435	3,861	6,546	10,407
Lao PDR	3,224	935	4,159	3,589	1,096	4,684
Malaysia	20,373	7,064	27,437	19,147	6,575	25,721
Myanmar	1,598	1,483	3,081	1,763	2,918	4,681
The Philippines	461	4,372	4,833	482	4,879	5,361
Singapore	6,113	8,982	15,095	5,748	9,483	15,231
Thailand	6,620	18,160	24,780	7,886	21,995	29,881
Viet Nam	1,495	6,379	7,874	1,301	6,643	7,944
<b>ASEAN</b>	<b>49,223</b>	<b>55,861</b>	<b>105,084</b>	<b>45,992</b>	<b>62,912</b>	<b>108,904</b>

Source: ASEAN Secretariat, 2017

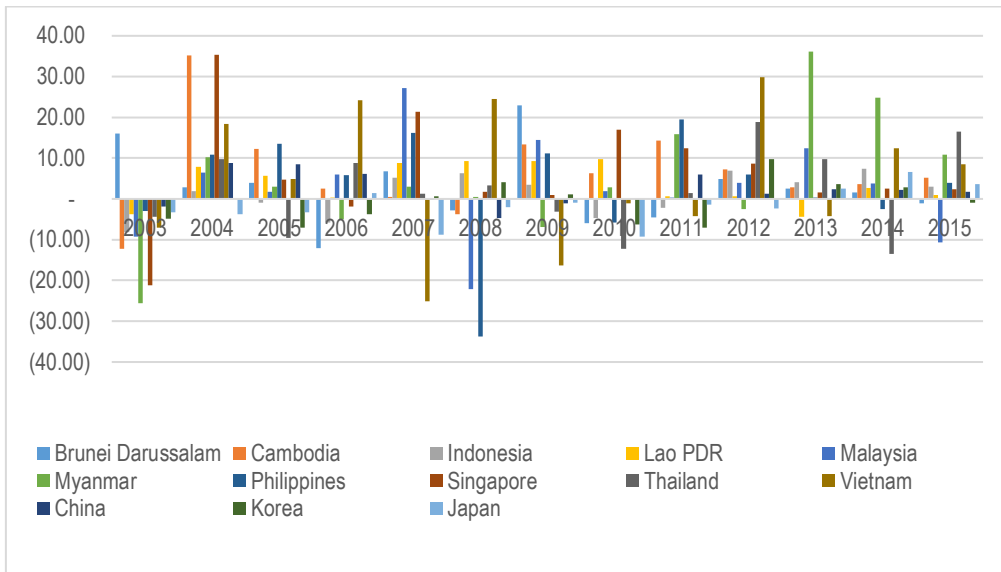
The main market is intra-ASEAN 46.8% of total visitor arrivals to ASEAN in 2014, but in 2015 decreased to 42.2%. China in second ranks with 17.1% followed by European Union 28, Republic of Korea 8.8% followed by Japan, Australia, USA, India, Taiwan and the lowest is Hong kong 1.4%.

Table 2. Top Ten Country/Regional Sources of Visitor to ASEAN

Country of origin	2014		Country of origin	2015	
	Number of tourists	Share to total		Number of tourists	Share to total
	thousands	percent		thousands	percent
ASEAN	49,223	46.8	ASEAN	45,992	42.2
China	13,059	12.4	China	18,596	17.1
European Union 28	9,275	8.8	European Union 28	9,570	8.8
Republic of Korea	5,018	4.8	Republic of Korea	5,839	5.4
Japan	4,634	4.4	Japan	4,703	4.3
Australia	4,384	4.2	Australia	4,191	3.8
USA	3,254	3.1	USA	3,382	3.1
India	3,071	2.9	India	3,308	3.0
Russian Federation	2,378	2.3	Taiwan (ROC)	2,099	1.9
Taiwan (ROC)	1,920	1.8	Hong Kong	1,515	1.4
Top ten country/regional sources	96,217	91.6	Top ten country/regional sources	99,194	91.1
Rest of the world	8,867	8.4	Rest of the world	9,709	8.9
Total tourist arrivals in ASEAN	105,084	100.0	Total tourist arrivals in ASEAN	108,904	100.0

Source: ASEAN Secretariat, 2017

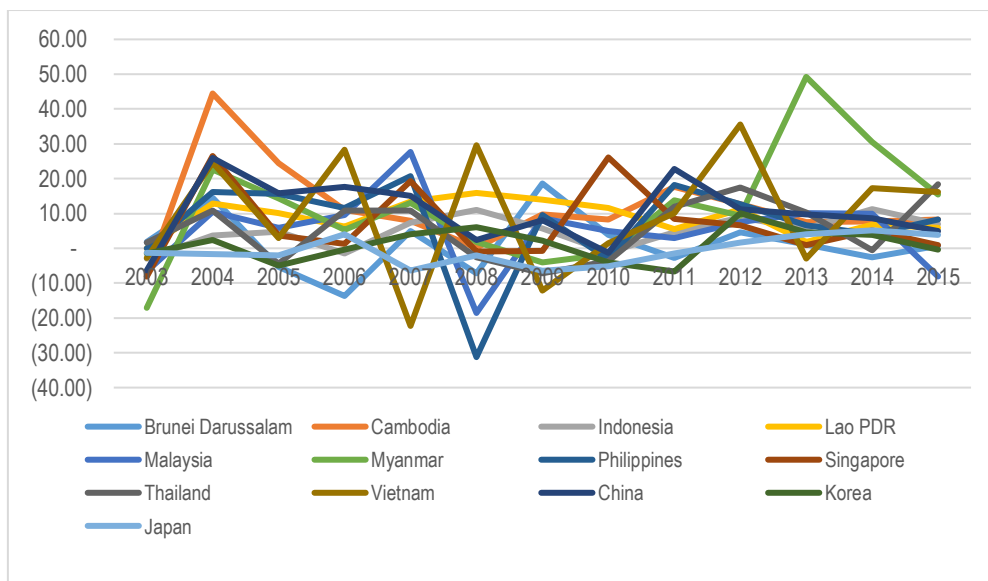
China becomes the top source of non ASEAN inbound tourist countries for ASEAN countries over Europe with tourist travel reaches 100 million trips by 2015, about 89.5% with destinations in Asian including Hong Kong, Macau, Vietnam, Thailand, Singapore, Cambodia and South Korea. China's increased outbound tourism is driven by the transformation and development of regional tourism in Asia and China's rapid economic development so that holidays become cultural trend. Travel has become a popular leisure activity phenomenon. Tourism has become an intraregional migration not only for working but also seeking investment and education opportunities. This dynamic development of tourism has an impact on economic growth and employment absorption. Figure 1 shows the total contribution of tourism to employment opportunities.



Source: World Bank, 2017

Figure 1. Total Contribution of Tourism to Employment (%)

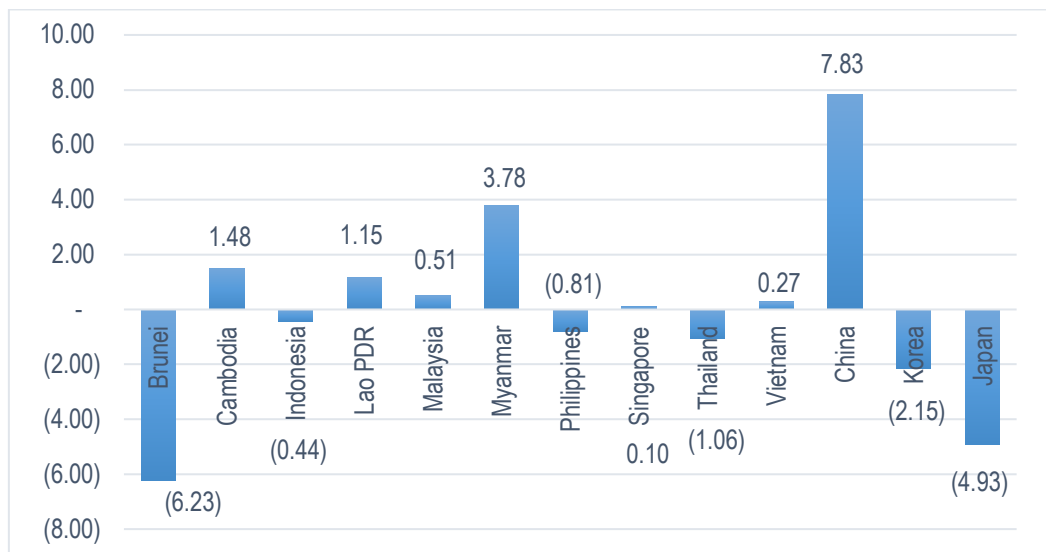
Some countries with the largest employment absorption in 2013 to 2015 are Myanmar and followed by Myanmar. This shows the success of tourism in encouraging economic growth significantly.



Source: World Bank, 2017

Figure 2. Total Contribution of Tourism to Gross Domestic Product (GDP) (%)

As figure 2, Myanmar is still become leading tourism growth contribution to economic growth until it reaches and is followed by Thailand. This is also shown by the estimation of static panel analysis by using fixed effect where China has the largest growth rate and followed by Myanmar and other countries like Cambodia, Lao PDR, Malaysia, Vietnam although not as big as China and Myanmar.



Source: Data, processed, 2017

Figure 3. Average ASEAN Economic Growth + 3 Fixed Effect Estimation Results

While other major countries in ASEAN, Brunei experienced the average negative or the highest decline, even though only small Indonesia, Philippines, Singapore, Thailand and countries outside the members of Korea and Japan.

The beta convergence in economic growth in ASEAN+3 is divided into two absolute beta convergence and conditional beta convergence. The absolute beta convergence does not depend on the characteristics of each observation object because of different economic conditions and convergent at the same level. While in conditional beta convergence or conditional each observed object will reach the steady state depending on the characteristics of each region and other factors.

Table 3. The Absolut Beta Convergence of Economic Growth in ASEAN+3

Dependent Variable : d(GDP)		
Independent Variable	Coefficient	t-Statistic (Probability Value)
GDP (-1)	-1.230	-12.577 (0.000)
D(GDP)(-1)	0.208	4.534 (0.000)
J-Statistic = 9.158 ; Prob.-value = 0.607		
Arellano-Bond Test: AR (1) m-stat = -0.332; Prob.-value = 0.739		
Speed of Adjustment $\lambda$ (%/year) = 0.062		
Half-life (year) = 11.24		

Source: Data processed, 2017

The estimation result using the GMM Arellano-Bond two step estimator shows the parameter significance with the *p-value* of 0.000 in each independent variable. Dynamic panel method with Arellano-Bond GMM approach has met the statistical criteria of the best models are consistent and the instrument variables used are valid. Arellano-Bond (AB) residual diagnostic test at  $m_1$  shows a *p-value* of 0.739 or does not reject the null hypothesis. Thus, the estimate can be said consistent and there is no autocorrelation in the first-order of *error first difference*.

While the absolute beta coefficient value is less than zero indicating the process of economic growth convergence in ASEAN+3 with other variable summation is considered fixed. This condition indicates the existence of a process of economic growth convergence where a country with low economic growth is able to converge on growth relatively similar to other countries. On the other hand, the half-life for the absolute beta convergence model

shows a considerable value of 11.24 years of time required to achieve steady state conditions from the convergence process or required period to achieve half of the convergence.

Table 4. The Conditional Beta Convergence of Economic Growth Beta in ASEAN+3

Dependent Variable : d(GDP)		
Independent Variable	Coefficient	t-Statistic (Probability Value)
GDP (-1)	-1.193	-13.657 (0.0003)
d(GDP)(-1)	0.180	3.749 (0.0000)
d(arrive)	10.054	10.425 (0.0000)
J-Statistic = 8.876; Prob.-value = 0.544 Arellano-Bond Test: AR (1) m-stat = -2.277; Prob.-value = 0.023 AR (2) m-stat = 0.212; Prob.-value = 0.832 Speed of Adjustment $\lambda$ (%/year) = 0.060 Half-life (year) = 11.47		

Source: Data processed, 2017

The estimation result using the GMM Arellano-Bond two step estimator shows the parameter significance with the *p-value* of 0.000 in each independent variable. Dynamic panel method with GMM Arellano-Bond approach has met the statistical criteria of the best models are consistent and the instrument variables used are valid. The Arellano-Bond (AB) residual diagnostic test at  $m_2$  shows a *p-value* of 0.832 or does not reject the null hypothesis. Thus, the estimate can be said to be consistent and there is no autocorrelation in the first-order of *error first difference*.

While the absolute beta coefficient value is less than zero indicating the process of economic growth convergence in ASEAN + 3 with other variable summation is considered fixed. Compared with the absolute beta convergence model, conditional beta convergence has a smaller beta coefficient value. This condition indicates the existence of a process of economic growth convergence where a country with low economic growth is able to converge on growth similar to other countries. Convergence also shows a smaller differential economic growth with a convergence trajectory that is also increasingly docked during the study period towards long-term equilibrium. On the other hand, the half-life for the absolute beta convergence model shows a considerable value of 11.47 years of time required to achieve steady state conditions of the convergence process or the time required to achieve half of the convergence.

### Acknowledgements

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### Conclusion

Based on the results of the analysis, it can be concluded:

1. The absolute beta convergence of economic growth of ASEAN + 3 countries without entering the indicator of tourism shows the process of convergence of economic growth where low-growth countries can converge on growth similar to other countries. Half-life needed to achieve steady state relative long enough is 11.24 years.
2. Convergence of conditional beta of economic growth of ASEAN + 3 countries by entering tourism indicator that is international tourist arrivals shows the process of convergence of economic growth faster than without entering the influence of tourism. But the half-life required is longer that's 11.47 years.
3. Countries such as Myanmar, Thailand, and Cambodia are a new comer capable of significantly developing the tourism sector or industry amid increasing competitiveness of other countries in ASEAN + 3 which experienced rapid growth first.
4. Compared with the empirical study of the relationship of tourism to economic growth as tourism-led economic growth hypothesis, this study is more comprehensive in viewing the process or speed of economic growth convergence among countries in ASEAN + 3 with the important role of tourism in driving economic growth.

Policy Implication

1. In order to achieve the inclusive economic growth targets as well as the vision of ASEAN, and the acceleration of achievement of targets, the increasingly attractive and intensive selling of tourism programs can boost the contribution of the tourism sector to the tourism industry.
2. Strengthening the carrying capacity of the tourism sector such as infrastructure, human resources, sustainability of natural resources, more innovative socio-cultural, creative and competitive. The tourism sector can create inter linkage with other economic sectors that ultimately provide a multiplier effect of economic growth.
3. Strengthening institutions through cooperation among ASEAN + 3 countries and other countries in the world so that it becomes a region not only strong in economic structure but also social and culture.

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