

## DOES GOOD FINANCIAL DEVELOPMENT ATTRACT TOURISTS? EVIDENCE FROM ASEAN COUNTRIES

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### ABSTRACT

*This study examines the impact of financial development on tourism demand in member countries of the Association of Southeast Asian Nations (ASEAN). The indicators are the financial development index, financial institution depth index, institutional financial access index, and financial institutions efficiency index. This study employs several control variables: consumer price index, health expenditure, poor air quality, and trade openness. This study uses panel data between 2010 and 2018 from 10 ASEAN countries. Data are sourced from international institutions such as the World Bank, the United Nations of World Tourism Organization (UNWTO), the International Monetary Fund (IMF), and the World Health Organization (WHO). The method used in the analysis is static panel data regression. The results show that financial development has a positive effect on tourism demand. In terms of control variables' impact, consumer price index, health expenditure and trade openness have a positive impact, whereas poor air quality has a negative impact. The current study's implication on policy making is to develop the financial sector by increasing the number of ATMs and improving mobile banking facilities.*

**Keywords:** Tourism Demand, Financial Development, ASEAN, Panel

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### Introduction

The tourism sector is essential in improving a country's economy (Anggraeni, 2017; Liu & Wu, 2019; Santamaria & Filis, 2019). The tourism sectors can increase gross domestic product (GDP) and investment, create jobs, and contribute to a country's national identity (Kum, Aslan & Gungor, 2015). In 2019, international tourism contributed USD 9.8 trillion (11%) to the global GDP. Meanwhile, Three hundred thirty million jobs were created (1/10 of his jobs in the world), attracting capital investment of USD 948 billion (approximately 4.3% of global investment) (WTTC, 2020).

With all of its potential, tourism has overgrown over the last decade. The total contribution to the global GDP has increased by 60 per cent from US\$5.8 trillion in 2009 to US\$9,258 trillion in 2019 (WTTC, 2020). It is one of the fastest-growing economic sectors and accounts for a significant portion of the global economy.

The demand for tourism in Southeast Asia steadily increases yearly (World Bank, 2020) as the countries have plenty of natural attractions that offer distinctive experiences. In member countries of the Association of Southeast Asian Nations (ASEAN), over the past decade, the tourism sector's contribution to the GDP has increased by almost 100 per cent, from



US\$197.30 billion in 2010 to US\$393.12 billion in 2019 (WTTC, 2020). Considering this and the significant contribution of the tourism sector to the economy and public welfare (WTTC, 2010), it is necessary to strategize the development.

The tourism sector has been given serious attention by ASEAN countries since 2015, as stated in the framework of the economic integration—Economic Community (AEC) programme 2015. One of the promotions was through the campaign and tagline “Southeast Asia, feel the warmth,” which portrays tourist attractions in all ASEAN countries. This promotion targeted international tourists and offered various destinations in Southeast Asia.

Regarding economic viability, research has shown what factors affect tourism demand and develop the overall sector. Key factors include the use of technology (Atembe, 2015), the use of energy and the environment (Martins et al., 2017), political climate and governance (Detotto et al., 2020), and economic policies (Tiwari et al., 2019). However, to the researcher’s knowledge, a research study has yet to focus on the relationship between financial development and tourism demand.

According to Damanik and Weber (2006), there are three crucial factors in tourism development—attractions, accessibility and amenities. A country may have natural resources, but this must be supported by, among others, human resources, infrastructure, institutions, and security. Several studies have found that liberalization, modernization and development of the financial sector are essential factors in increasing a country’s tourism demand (Ali et al., 2018; Khan et al., 2019; Shahbaz et al., 2019).

Financial development can be interpreted as the growth in market size, efficiency, access and stability of the market. Financial development increases a country’s liquidity, making it easier for individuals and companies to access financial services. It also increases efficiency by lowering the cost of financial services. Taken together, this can increase tourist arrivals and expenses as it will be easier for them to make payments and transactions with lower fees and restrictions.

The purpose of this article is to analyze how financial development affects tourism demand. This research’s novelty includes using panel data from 10 ASEAN countries. Previous research has examined the top 20 countries with the highest number of tourists in the world, which all are classified as developed countries. Previous studies have also examined countries in different regions, which could lead to biased findings because the socioeconomic characteristics are different (Mulali et al., 2020). Second, the variables used in this study cover more than just the depth of finances. According to the IMF, there are three indicators of financial development: financial institution depth, access, and efficiency (Svirydzenka, 2016). The current study considers these three variables to determine the essential variables of financial development that impact tourism demand in ASEAN countries.

## Literature Review

Tourism is an interrelated system covering tourism activities and related services (Fennel, 1999: 4). Tourism demand is the total number of people who travel or wish to travel and use tourism facilities and services away from where he lives or works (Mathieson & Wall, 1982). The tourism-led growth hypothesis states that the tourism sector can increase a country’s economic growth. Motivated by the vital role of tourism in the economy, research has tried to look for factors that can increase a country’s tourism demand. The indicators include the number of international tourist arrivals, length of stay, and the amount of tourist expenditure

(Theobald, 2005; Tribe, 2004). According to Inskip (1991: 38), three essential factors influencing tourism demand are the tourist attractions, the accessibility, and the amenities in the destinations.

Financial development can increase tourist arrivals and expenses because they find it easier to make transaction payments, as well as to invest in tourism (Dwyer and Forsyth, 2006: 5). Financial development can provide supporting facilities such as money changer services, money-saving services, and cash withdrawals (Suwantoro, 2004).

Mulali et al. (2020) researched the direct impact of financial development on tourism demand. They use the Generalized Method of Moment (GMM) method by taking samples of 20 countries with the highest tourist visits in the world. The results of this study indicate that financial development has a positive and significant effect on international tourism demand. This finding is also supported by several studies, such as Shahbaz et al. (2018), Khan et al. (2019), and Basarir and Cakir (2015), which found a two-way relationship between financial development and tourism demand. Moreover, there is an indirect relationship between financial development and tourism demand (Kumar, 2013).

## Data and Research Methods

### Data

We use data from 10 countries in ASEAN in the period of 2010-2018. The data used in this model were taken from several sources. Tourism demand can be measured by tourist arrivals (quantity) and expenditure (value). We obtained this dataset from the World Tourism Organization (WTO).

Financial development is defined as an index that summarises the condition of financial development measured by depth, access and efficiency. Data used in this study from 2005-2018 from the International Monetary Fund (IMF). We also incorporate three main financial development indicators into the model: financial institutions' access, depth, and efficiency. These three variables can break down the complex notion of financial development. The consumer price index measures consumer goods and services prices. In this model, we use domestic CPI to describe the price conditions in each ASEAN country. The data collected for the CPI is from 2010 to 2018, sourced from the World Bank.

Health expenditure measures the value of annual expenditure spent by the public on health products and services. Health expenditure data is often used as a proxy for health development in a country. Data from 2010 to 2017 from the World Health Organization (WHO) was used in this research. The interest rate is defined as the price charged on borrowed money. This model uses real interest rate data from the International Monetary Fund (IMF). The real interest rate is the inflation-adjusted lending rate measured by the GDP deflator. Data used in this study from 2010 to 2018 was sourced from the World Bank. Trade openness is the number of imports and exports of goods and services measured as a percentage of GDP. We use data on the percentage of total exports and imports to GDP because this is the most relevant variable as a proxy for trade openness.

### Methodology

This study uses panel data to overcome the limitations of time series data that are unavailable over a long period. Using panel data makes it possible to obtain efficient estimation results by increasing the number of observations, which will affect the degree of freedom (Baltagi, 2005).

We use two dependent variables in this study: international tourist arrivals (quantity) and tourist expenditure (value). The use of these two variables as a proxy for tourism demand is suggested by Theobald (2005). We use the two dependent variables because the number of arrivals only describes the quantity, so the estimation results of tourist demand tend to be biased. For example, tourist arrivals are counted from the number of tourists who leave the immigration counter. Suppose an international citizen transits in a country and leaves the immigration counter. It is considered a tourist arrival, even though the person is not on vacation in that country. It increases the number of tourist arrivals, but it does not mean that the demand for tourism is as high. Therefore, we add the tourist expenditure variable as a proxy for tourism demand.

Based on the demand function, tourism demand will be influenced by price factors in the country of destination and non-price factors (socio-economic and demographic factors including income, health, population, quality of tourism services, and tourist preferences). The study adds a tourism demand model, which assumes that prices determine tourism demand, interest rates, trade openness, health expenditure, consumer price index, and tourism-related transaction costs (see Husein and Kara, 2020; Gu, 1995; Chaisumpunsakul & Pholphirul, 2017; Ucak, 2016; and Mulali et al., 2020).

This study estimates tourism demand using six models using log-lin specifications. In models 1 to 3, we use the number of tourist arrivals as the dependent variable. Then in models 4 to 6, we use tourist expenditure as the independent variable. The following is a model of this research:

$$\ln Arrival_{it} = \alpha + \beta_1 FD_{1it} + e_{it} \quad (1)$$

Where  $\ln Arrival$  is the natural log of international tourist arrivals,  $FD$  is the financial development index issued by the International Monetary Fund (IMF).  $\alpha$  is a constant or intercept,  $x_{it}$  is the independent variable time series and time series,  $\beta$  is the slope of the coefficient, and  $e_{it}$  is an error term.

In model 2, we divide the financial development variable into three indicators according to those issued by the IMF. The three indicators are the financial institution's depth index, access index, and efficiency index. It is to determine which variables have the most influence on increasing tourist arrivals in ASEAN.

$$\ln Arrival_{it} = \alpha + \beta_1 FID_{1it} + \beta_2 FIA_{2it} + \beta_3 FIE_{3it} + e_{it} \quad (2)$$

$FID$  is the financial institution's depth index,  $FIA$  is the financial institution's access index, and  $FIE$  is the financial institution's efficiency index.

In model 3, we add other essential variables to be included in the demand model. It is to test the robustness of the second model, equated as follows:

$$\ln Arrival_{it} = \alpha + \beta_1 FID_{it} + \beta_2 FIA_{2it} + \beta_3 FIE_{3it} + \beta_4 CPI_{4it} + \beta_5 Openness_{5it} + \beta_6 Health_{6it} + \beta_7 IR_{7it} + \beta_8 GovExp_{8it} + e_{it} \quad (3)$$

Where  $CPI$  is the consumer price index in the destination country,  $Openness$  is the ratio of goods and services exported and imported to the GDP. Meanwhile,  $Health$  is the total health expenditure and consumption by the people of the destination country,  $IR$  is the lending interest rate in the destination country, and  $GovExp$  is the government expenditure for public goods for the community's welfare.

In models 4 to 6, we use tourism expenditure as the dependent variable. We do this to determine the value of tourism demand and reduce the potential for bias from the estimated tourist arrivals.

$$LnExpenditure_{it} = \alpha + \beta_1 FID_{it} + e_{it} \tag{4}$$

$$LnArrival_{it} = \alpha + \beta_1 FID_{1it} + \beta_2 FIA_{2it} + \beta_3 FIE_{3it} + e_{it} \tag{5}$$

$$LnArrival_{it} = \alpha + \beta_1 FID_{it} + \beta_2 FIA_{2it} + \beta_3 FIE_{3it} + \beta_4 CPI_{4it} + \beta_5 Openness_{5it} + \beta_6 Health_{6it} + \beta_7 IR_{7it} + \beta_8 GovExp_{8it} + e_{it} \tag{6}$$

Overall, the variables and descriptions of models 4 to 6 are almost identical to models 1 to 3. The difference is that, in models 4 to 6, we substitute the dependent variable with tourist expenditure spent in the destination country. *LnExpenditure* is the expenditure of international tourists spent in the destination country.

Deterministic effects over time may influence the global demand for tourism. This study uses panel data that considers time's effects on the model. We have nine years of observation in the sample. Since we have a micro-type panel (number of years, T=9, 'smaller' than the number of countries, n=10) with balanced data, we do not use a dynamic panel model. In addition, the unit root and cointegration panels are also not considered because the asymptotic theory required in this sample is fixed T and  $n \rightarrow \infty$ .

### Finding and Discussion

In the following subsection, we analyse the estimation results of our six empirical models for tourism demand. Table 1 presents the estimation results of the six models in this study.

It is to determine which indicators have the most influence on tourism demand. In model 1, financial development has a coefficient of 4.83 and a p-value of 0.000, which indicates that financial development has a positive and significant effect on international tourist arrivals. In model 2, financial development is divided into three parts: financial institution depth, access, and efficiency. The p-values for the three variables are 0.000, 0.001, and 0.58, respectively. The p-value indicates that financial institution depth, access, and efficiency significantly affect the number of international tourist arrivals. The coefficient values for the variables of financial institution depth, access, and efficiency are 2,798, 1,970, and 2,072, respectively, indicating that these three variables positively impact the number of international tourist arrivals.

In model 3, four control variables are added to the model to test the robustness of the variables in model 2. The p-value of each variable in model 3 shows that financial institution depth, consumer price index, health expenditure, delicate particulate matter (PM2.5), and trade openness significantly affect international tourist arrivals.

The coefficient of each variable shows that financial institution depth, consumer price index, health expenditure, and trade openness positively influence international tourist arrivals in ASEAN. Meanwhile, PM2.5 negatively and significantly affects international tourist arrivals in ASEAN.

In model 4, financial development has a p-value of 0,000, which indicates a positive and significant impact on tourist expenditure in ASEAN. It shows that if there is an increase in financial development by one index unit, it will increase the total expenditure by 6 per cent. Overall, these results are the same as the estimation results in model 1.

**Table 1: Estimation Results**

Dependent Variable	Arrival			Expenditure		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
FD	4.839*** (0,000)			6.146*** (0,000)		
Specific FD						
FID		2.798*** (0,000)	1.934*** (0,000)		2.780*** (0,002)	1.724*** (0,005)
FIA		1.970*** (0,001)	0.565 (0,167)		1.494* (0,100)	0.587 (0,232)
FIE		2.072** (0,058)	0.560 (0,418)		6.601*** (0,000)	1.259 (0,17)
Control Variables						
CPI			0.010*** (0,000)			0.006*** (0,019)
Health			0.211*** (0,000)			0.296*** (0,000)
PM 2.5			-0.0195* (0,09)			-0.028** (0,047)
TO			0.005*** (0,000)			0.006*** (0,000)
Hausman	0.4462	0.0759	0.6231	0.7906	0.5458	0.9368
Effect	REM	REM	REM	REM	REM	REM
R-Squared	0.3801	0.3073	0.30	0.5457	0.4691	0,4034

Note: \*\*\* = significant at the level of 1%, \*\* = significant at the level of 5%, \* = significant at the level of 10%.

In model 5, financial development is divided into three indicators: financial institution depth, access, and efficiency. The coefficient values for financial institution depth, access, and efficiency are 2,696, 1,5122, and 6,236, respectively. The p-value for each variable shows that financial institution depth, access, and efficiency positively and significantly impact the total tourist expenditure.

In model 6, four control variables are added to test the robustness of model 3. The p-value of each variable shows that financial institution depth, consumer price index, health expenditure, PM2.5, and trade openness significantly affect tourist arrivals.

The coefficient on each variable shows that the depth of financial institutions, the consumer price index, health expenditure, and trade openness positively affect tourist arrivals. Meanwhile, PM2.5 has a negative and significant effect on tourist arrivals. Overall, this result is the same as the estimation result in model 3.

### **Discussion**

This study examines financial development's effect on ASEAN countries' tourism demand. The static panel data were gathered from 2010 to 2018 to determine the relationship



between the independent variables (financial institution's depth, access, efficiency) and the dependent variables (international tourist arrivals and value).

The estimation results show that the financial development variable positively and significantly affects tourism demand. The increase in tourism demand can occur if the development of the financial sector is reflected in the public and financial institutions. This implementation can be in the form of investment in businesses that support the tourism sector, such as expanding networks, improved payment systems, and technology used to support the tourism and financial sectors. These results align with research by [Mulali et al. \(2020\)](#), which found that financial development increases the number of tourists in 20 countries with the highest number of international tourist arrivals in the world. They use the generalised methods of moments (GMM) in analysing the relationship between financial development and tourism demand; and found that financial development has a significant effect on investment spending, health spending, and primary necessity spending ([Sehrawat and Giri, 2017](#)).

Development in the financial sector will increase the economy's liquidity, making it easier for individuals and companies to invest, save, and access financial services, hence increasing efficiency by reducing the cost of financial services ([Hartmann et al., 2007](#)). In other words, financial development can increase tourism demand because it is easier for tourists to pay for transactions with lower costs and limitations and for stakeholders to invest in tourism ([Dwyer and Forsyth, 2006: 5](#)).

The development of the financial sector will provide facilities that support international tourist activities while staying in the destination country. [Suwanto \(2004\)](#) argues that facilities support a country's tourism. One needed facility is financial service facilities such as money changers, account deposit services and cash withdrawals. Ease of transaction will prompt tourists to purchase more, increasing tourism demand ([Damanik & Weber, 2006](#)). No matter how big a tourist destination is, if the facilities are adequate, tourists may want to avoid visiting ([Spillane, 1987](#)).

[Ali et al. \(2018\)](#), using the VECM and FMOLS models, found a two-way relationship between financial development and the tourism sector in Asia, but this only applies to high-income countries. Similar to the results obtained by [Ali et al. \(2018\)](#), this study also shows that financial development affects tourism demand in developing countries in Southeast Asia. The positive impact of financial sector development on tourism demand is also consistent with the findings by [Ngoasong and Kimbu \(2015\)](#), which show the impact of the flow of financial development on tourism demand in Cameroon. Using a micro-ethnographic approach, they found that financial development, seen from the perspective of the informal microfinance institution, has a positive effect on Cameroon tourism companies. Good financial development will improve the performance of finance companies. In turn, this will increase the allocation of capital funds for tourism businesses. With such capital, the businesses will be able to meet the tourism demand.

The financial institution depth variable positively and significantly affects tourism demand. This result is in line with previous findings such as [Kumar \(2013\)](#), which found that financial institution depth, represented by high money supply, significantly affects tourists' expenditure. In contrast to the results of the analysis of models 1 to 3, Kumar uses tourist expenditure as a proxy for tourism demand.

Financial institution deepening will increase the liquidity of the financial sector in a country. This high liquidity will ease the flow of credit allocated for investment, venture capi-

tal, and project financing, oriented towards economic development and community welfare. That way, the financial sector will positively affect the economy (Bittencourt, 2011). Likewise, if liquidity is low, public consumption will also decline (Kuijs, 2005; Aziz & Cui, 2007).

Mehrotra and Yetman (2015) found that development through financial institution deepening can increase the effectiveness of monetary policy in developing countries. It means that the development of the financial sector can support government policies in a country. Effective monetary policy will stabilise the price of goods, the exchange rate, and the inflation and interest rates. It will eventually stabilise the economy (Saira, 1997) and create policy certainty that makes tourists more confident to visit the country (Tiwari et al., 2019).

The financial institution access variable positively and significantly affects tourism demand. Open access to financial services will increase their use; the more users of financial services, the easier the payment system will be. This ease of payment may encourage people's consumption and expenditure (Xiao et al., 2019). These results align with Shi's research (2020), which found that financial institution access, represented by financial inclusion, significantly affects tourists' spending on business, investment, and basic necessities.

The financial institution efficiency variable positively and significantly affects tourism demand. An efficient financial institution can minimise costs or maximise profits by using inputs optimally and increasing productivity through technology leverage, such as using digital tools for operations and promotions. Mulali et al. (2020) found that financial institutions with digital technology may attract more customers. Efficient financial institutions can also offer a transparent system that allows the public to find reliable information about financial services. It will create a feeling of security that positively impacts tourism demand (Magano & Cunha, 2020).

The price level variable shows a positive and significant effect on tourism demand. This finding is not consistent with the initial hypothesis stating that prices have a negative effect on tourism demand. This positive relationship between prices and tourism demand may be because people are willing to pay more for pleasure and relaxation. Differences in income level consumer goods' prices can also affect this. For example, the income and prices of goods in developed countries are higher than in developing countries in ASEAN. Therefore, prices in ASEAN countries appear cheaper than prices in developed countries. These results align with research by Muryani et al. (2020), finding that relative prices positively impact tourism demand in Indonesia.

The health expenditure variable shows a positive and significant effect on tourism demand. It is in line with the findings of Ucak (2016), stating that a country's health sector, as measured by health expenditure, has a relationship with tourism demand in the health sector. Foreigners who need health services will come to a country with good health services and quality. The arrival of tourists in the context of health is often referred to as health tourism.

The air quality variable shows a negative and significant effect on tourism demand. These results align with research by Xu et al. (2019) and Xu and Dong (2020), stating that PM2.5 negatively affected tourist arrivals in China. A high PM2.5 indicates poor air quality and the environment. The worse the air quality in a country, the less tourism demand in that country.

The trade openness variable shows a positive and significant influence on tourism demand. Trade openness describes a country's economy from the point of view of international



trade. If a country is open to international trade, then the country tends to be open to international tourist arrivals as well. This result is in line with the findings by Chaisumpunsakul and Pholphirul (2017), finding that the higher a country's international trade is, the higher the tourist arrivals in that country will be.

## Conclusion

Based on the estimation results, the following conclusions are that financial development positively and significantly affects tourism demand. Financial institution depth is a financial development indicator with the most significant influence on tourism demand in ASEAN. The control variable in this study has a significant effect on tourism demand. The consumer price index, health expenditure, and trade openness positively and significantly impact tourism demand in ASEAN. Meanwhile, PM2.5 has a negative and significant impact on tourism demand in ASEAN.

The practical implications of this research are: 1) policymakers can improve the financial development sector. Financial authorities can increase the number of ATMs and improve the performance and mobile banking facilities. The authorities can also increase the liquidity of financial institutions, which can be used for business credit and investment in the tourism sector. The government can also engage in international trade, improve health sector infrastructure, and maintain price and interest rates. More control variables could be added for further research, and the period covered could be extended to find more consistent research results.

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