CAUSALITY OF TOURISM INCOME, FOREIGN DIRECT INVESTMENT AND ECONOMIC GROWTH IN INDONESIA
DOI: 10.31002/rep.v6i1.3220

Muhammad Habibur Rohman[1], Suyanto[2] , Firman Rosjadi[3]

[1,2,3]Universitas Surabaya
suyanto@staff.ubaya.ac.id

Abstract

Tourism sector and foreign direct investment in Indonesia are currently in a strategic position that receive a major attention from national as well as international parties. Tourism income and foreign direct investment inflows are largely believed to contribute greatly to the government income, thus increase economic growth of a country. However, the empirical findings on Indonesia are mixed. This current study contributes to the debate in the empirical literature by investigating the short-term and long-term relationship and the direction of causality between international tourism income, foreign direct investment and economic growth in Indonesia from 1995 to 2018. It provides insight into the literature by examining the national level data. Granger causality test is applied. The interesting finding is that foreign direct investment causes the increase in tourism income and in the economic growth. The reverse is also applied that the tourism income attracts foreign direct investment and spur economic growth. These findings support the efforts of the government, business players, and local society in promoting tourism sector in attracting foreign investment as well as promoting economic growth.

Keywords: tourism income, foreign direct investment, economic growth, granger causality.

INTRODUCTION

Indonesia was ranked in the ninth position as the world fastest growing country in term of the incoming international tourists in 2018 (World Travel & Tourism Council, 2018). Consecutively, the country was listed as the 40 most competitive countries in Tourism Index published by World Economic Forum (WEF) in 2019, so that Indonesia has been among the places worth visiting in travelling and tourism (Desrianto, 2019). These two recognitions mark the significant increase in the tourism sector's income recorded in the last five years, as presented in Table 1. It pictures that the sector is growing rapidly on the average annual rate of 10.09 percent, with the extreme increase in 2017 at the 22.51 percent. The significant increase pushes the tourism sector to become the second largest contributor on the foreign exchange of Indonesia (Indonesian Central Bank, 2019) and in turn contributes to the economic growth of the country and attracts foreign direct investment (Arain et al., 2020; Brida et al., 2020).

Table 1. International Tourism Income for Indonesia and Its Growth Rate

Year	Total (Million USD)	Growth (%)
2014	11.166	11,06
2015	12.266	9,49
2016	12.440	1,75
2017	15.240	22,51
2018	16.100	5,64

Source: Indonesian Ministry of Tourism, 2020

The significant increase in the tourism income for Indonesia shows that foreign tourists have a considerable interest in Indonesian tourism sector. This increase is to some extent due to the incessant promotion by the Ministry of Tourism through the Wonderful Indonesia program via many media, in which tourists are actively share their reviews after travelling in Indonesia

(Ministry of Investment/Indonesian Investment Coordinating Board, 2018). The rapid increase in the tourism income goes hand in hand with the increase in the value of Foreign Direct Investment (FDI) to the sector, as shown in Table 2, as well as the economic growth of the country. On the one hand, the international tourist arrivals bring a potential foreign investment as the market survey can be conducted during the tourism visit. On the other hand, the increase in tourism income induces the country's economic growth.

Table 2. Realization of FDI inThe Tourism Sector

Year	Value of Investment (Trillion Rupiah)
2015	12,01
2016	13,7
2017	19,1
2018	20,91

Source: (Indonesian Investment Coordinating Board, 2019)

A research of Tomohara (Tomohara, 2016) with a case study in Japan shows that tourism has a positive effect on FDI in the sector itself and other sectors. In turn, FDI has a positive effect on economic growth both directly and indirectly. Its direct effect is through the provision of valuable tangible and intangible assets, such as technology and physical assets related to capital formation and innovation capability (Wang, 2009). The indirect effect is of introducing new managerial skills from the country of origin into the tourism sector, so that the skills can become stimuli on economic growth through labor productivity (Iamsiraroj & Ulubaşoğlu, 2015). However, research conducted by Mahurisal*et al.* (Mahurisal et al., 2018) and Arta (Arta, 2013) with case studies in Central Java and Papua provinces provides results that foreign investment has no influence or negative effect on economic growth in the two regions, so that there is an empirical research gap on the influence of foreign investment on

economic growth in Indonesia. The difference between this study and relevant previous research is that this study discusses the short- and-long term relationship and the direction of causality between tourism income, foreign investment and economic growth in Indonesia by using the Granger Causality Test.

To provide insight into the inconclusive evidence in the previous studies, this study examines the short-term, long-term relationship and the direction of causality between tourism income, foreign investment and economic growth in Indonesia for the period of 1995 to 2018. This research is expected to make an empirical contribution in the literature debate that still going on regarding to the relationship of foreign investment, tourism income and economic growth in Indonesia.

LITERATURE REVIEW

Several researchers have found a positive relationship between foreign investment and economic growth (Al-Hallaq et al., 2020; De Pascale et al., 2020; Sarker & Khan, 2020). The positive relationship occurs as a result of inflows of FDI to productive sectors in a country, which in turn stimulate the economic growth of the country. In addition, Satrovic & Muslija (Satrovic & Muslija, 2017) noted a positive two-way causality relationship between foreign investment and tourism income. Further analysis conducted by Abdouly & Hammami (Abdouli & Hammami, 2020), Ho and Iyke (Ho & Iyke, 2018), Iamsiraroj (Iamsiraroj & Ulubaşoğlu, 2015) shows that in addition to the effect on economic growth, FDI to developing countries provides a positive impact on financial market progress and skilled labor through the transfer of new managerial skills from the country of origin and also stimulates domestic investment.

The effect of FDI is higher in the host countries with advanced financial institution if compared to less developed countries (Alfaro

et al., 2010). In their studies, Proença and Soukiazis (Proença & Soukiazis, 2008), Gramatnikovski *et al.* (Gramatnikovski et al., 2016) and Wu & Wu (Wu & Wu, 2018) found that tourism income has a significant influence on economic growth, so that the tourism sector can improve the living standards of people in the country. Tourism (through international income) contributes to real economic growth by stimulating GDP growth, opening new jobs, stimulating entrepreneurship, stimulating investment and various other important macroeconomic indicators (Gramatnikovski et al., 2016). Tourism income and economic growth have a causal relationship in the short-run as well as in the long-run. In the short term, Kumar *et al.* (Kumar et al., 2020) found that tourism (through international income) has a bi- direction causal relationship with economic growth, interpreting as that tourism income and economic growth are mutually benefitted each other. In the long run, tourism income has a positive causal relationship in the direction of international tourism income to economic growth Badulescu *et al.* (Badulescu et al., 2020).

FDI has different impacts on the tourism sector depending on the level of development of a country, which can be evaluated through, for example human resources, government policies, and natural resource (Bezić & Radić, 2017). Alam *et al.* (Alam et al., 2015) found that international tourism income has a positive impact on FDI because it provides a sizeable contribution to the country's economy in terms of building supporting infrastructure under foreign funds. There is also a significant correlation between FDI and tourism development, as FDI influences the development of a country's tourism (Işik, 2015). Tomohara (Tomohara, 2016) showed the existence of a one-way interaction between FDI and tourism income. An increase in tourism income has a positive impact on FDI in the tourism sector itself,

whereas the reverse relationship is not applied.

METHODS AND MODELS

This current research is an explanatory quantitative study, which utilizes a causality model to examine the two-way causal relationships. The research focuses on the causality relationship between tourism income, FDI and economic growth in Indonesia for the period 1996-2018. The data used are secondary data from The World Bank's official website and from the Foreign Direct Investment Statistic books published by Indonesia Investment Coordinating Board.

The research models for this study is adopted from Sokhanvar (Sokhanvar, 2019), with a difference in the research method. The Sokhanvar's (2019) method is Vector Autoregressive (VAR), while this current research applies the Granger causality test. The models are written as follows:

$$F_t = a_0 + a_1 F_{t-1} \dots + a_l F_{t-k} + b_1 E_{t-1} + \dots + b_l E_{t-k} + c_1 T_{t-1} \dots + c_l T_{t-k} + \varepsilon_t \quad (1)$$

$$T_t = a_0 + a_1 T_{t-1} \dots + a_l T_{t-k} + b_1 E_{t-1} + \dots + b_l E_{t-k} + c_1 F_{t-1} \dots + c_l F_{t-k} + \varepsilon_t \quad (2)$$

$$E_t = a_0 + a_1 E_{t-1} \dots + a_l E_{t-k} + b_1 T_{t-1} + \dots + b_l T_{t-k} + c_1 F_{t-1} \dots + c_l F_{t-k} + \varepsilon_t \quad (3)$$

FDI is Foreign Direct Investment, *TR* is Tourism Income, *EG* is Economic Growth, a_0 is a Constant, *t* is year, *k* is lag and is disturbance error. Technically, the three variables used are defined as follows: The Economic Growth (EG) is measured from real Gross Domestic Product in units of US$ with the base year 2010. Tourism Income (TR) is calculated from foreign exchange income originated from foreign tourists coming to Indonesia, stated in US$ unit. Meanwhile, Foreign Direct Investment (FDI) is measured by foreign investment inflows which are realized, in units of US$.

RESULTS AND DISCUSSION
Statistical Summary of the Main Variables

Before conducting the causality test under Equations (1) to (3), the summary statistic is performed in order to know the nature of the main variables. The statistical summary informs the arithmetic mean value of the variables for the period of 1995-2018 (23 years). It also presents the maximum and minimum values of variables to show the distance between the lowest value and the highest values of the variables. Standard deviation is added in the statistical summary to indicate the deviation of the data to the mean value. The summary statistics are useful for describing the basic information of the observed data. Table 3 shows the statistical summary of the observed variables.

Table 3. Summary Statistics of the Main Variables (billion US$)

Variable	Mean	Max.	Min.	Std. Dev
EG	685.29	1,146.84	428.76	23.16
TR	7.85	19.29	4.26	3.80
FDI	18.61	35.27	3.90	10.56

Source: World Development Index of World Bank (2020) and Indonesian Investment Coordinating Board (2020)

Economic Growth (EG) in Table 3 represents the real Gross Domestic Product (GDP) at the constant price of 2010. The mean value of EG is US$ 685.29 billion, with the standard deviation of US$ 23.16 billion. The maximum value of EG is US$ 1,146.84 billion, which is happened in 2018, and the minimum value is US$ 428.76 at the year of 1998. The tourism income (TR) is around 1.2% of the total real GDP, with the mean value of US$7.85 billion, with the standard deviation which is relatively large of US$3.80 billion, showing that the dispersion between the minimum and the maximum value is relatively large.

In contrast, the net inflows of foreign direct investment (FDI) are fluctuated even more than the TR. The standard deviation of the TR is more than half of the mean value. The spread between the minimum and maximum value is almost ten folds, with the

minimum value of US$ 3.90 billion and the maximum value is US$ 35.27 billion.

Results of the Causality Test

Equations (1) to (3) is estimated under the Granger Causality test. The test is conducted twice for two different lags, namely Lag 1 and Lag 5. Testing using Lag 1 gives an overview of the causality relationship between variables in one year (so called as the short term in this study), while testing using Lag 5 gives a picture of causality between variables in five years (or so called the long term in this study).

Table 4. Short-term Granger Causality Test Results

No.	*Null Hypothesis*	*Probability*	Information
1	EG *doesn't Granger Cause* TR	0,06509*	H_0 is rejected
2	TR *doesn't Granger Cause* EG	0,02727**	H_0 is rejected
3	FDI *doesn't Granger Cause* TR	0,12922	H_0 is not rejected
4	TR *doesn't Granger Cause* FDI	0,00646***	H_0 is rejected
5	FDI *doesn't Granger Cause* EG	0,00533***	H_0 is rejected
6	EG *doesn't Granger Cause* FDI	0,02531**	H_0 is rejected

Note: ***, **, * indicate significance at alpha 1%, 5%, 10% respectively.
Source: Short-term Granger Causality Test results using Eviews 10

The decision on the causal relationships among variables is determined by the probability values of the granger causality test. When the probability value is greater than the chosen alpha (which can be 1% or 5% or 10%), the null hypothesis is rejected, indicating the causal relationship is existed. In contrast, if the probability value is less than the chosen alpha, the null hypothesis can not be rejected, resulting in no causal relationship.

The results of causality test for lag 1 (short-run relationship) is presented in Table 4, whereas the results for lag 5 (long-run relationship) is given in Table 5.

In contrast, the causal relationship between tourism income (TR) and foreign direct investment (FDI) goes only from TR to FDI, but not the reverse. The increase in the tourism income does raise the foreign directinvestment. However, the rise in net inflowstourism income. They possible explanation is that the FDI to Indonesia within the period ofanalysis flows more to other sectors than tourism.

The causal direction between FDI and EG is two-way. A high FDI induces economic growth in Indonesia during the period of observation. Likewise, the high growth rate attracts FDI inflows to Indonesia. This finding highlights the FDI-growth nexus with the two-direction possibility.

While the results in Table 4 are based on the causality test on the one-lagged variables, results in Table 5 shows the causal findings under five-lagged variables. Results in Table 5 provide long-run relationship of the three observed variables. The results inform the possibility of 5 years influence of one variable to another.

Unlike the results of one-lagged causality, Table 5 shows that the causal relationship between tourism income (TR) and economic growth (EG) goes only one-direction from TR to EC. The last five-year TR does still have a causal impact on the current year EC, whereas the last five-year EC does not cause significant impact on TR. This long-run finding explains that the causal effect of TR to EC last long until 5 years, but the causal effect of EC to TR does not last long to 5 years.

Table 5. Long-term Granger Causality Test Results

No.	Null Hypothesis	Probability	Information
1	EG *doesn't Granger Cause* TR	0,43225	H$_o$ is not rejected
2	TR *doesn't Granger Cause* EG	0,09192*	H$_o$ is rejected
3	FDI *doesn't Granger Cause* TR	0,75091	H$_o$ is not rejected
4	TR *doesn't Granger Cause* FDI	0,04518**	H$_o$ is rejected
5	FDI *doesn't Granger Cause* EG	0,46411	H$_o$ is not rejected
6	EG *doesn't Granger Cause* FDI	0,00052***	H$_o$ is rejected

Note: ***, **, * indicate significance at alpha 1%, 5%, 10% respectively.

Source: Long-Term Granger Causality test results using Eviews 10

The long-run causal relationship of TR and FDI is similar to those of short-run relationship, where the direction goes from TR to FDI only. The impact of tourism income on foreign direct investment inflows happens not only in the one-year lag but also last long to 5-years lag. This causal relationship suggests that the tourism income has short-run and long-run effects on foreign direct investment, whereas the foreign investment does not have short-run and long-run impact on tourism income.

A one-direction long-run causal relationship also appears between economic growth (EG) and foreign direct investment (FDI). The causal flows from EG to FDI, but the reverse is not applied. The last 5-years EG has an impact on the current FDI. This long-run effect is different with the short-run two-way causal. In other words, the FDI has only a short-run effect but does not have along-run effect on EG. The nexus of EG-FDI is existed in the short-run but not in the long-run.

Findings of the short-run and long-run causal relationship provide a comprehensive picture that a causal relationship of one variable to another variable might be in a one-year lag only and does not last long. Some variables do have a long-lasting effect but some others do not.

Based on the Table 4 and Table 5 results, one can conclude that the causal relationship between TR and EG is two-ways in the short-run but one-way in the long-run. Meanwhile, the causal effect between TR and FDI is one-way direction both in the short-run and in the long-run. In addition, the causal influence between EG and FDI goes in two-direction in the short-run, but only one direction in the long-run.

Short-run and Long-run Causal Direction

After obtaining the causal relationship as being pictured in the previous section, one can present the flowchart of the direction of the causality between tourism income (TR), economic growth (EG) and foreign direct investment (FDI). The flowchart of the causal direction is useful to analyze the relationship among three observed variables. In turn, the flowchart is providing a comprehensive analysis on the causal effects and allowing for the comparison of the results with other previous studies.

Based on the results in Table 4 and Table 5, a flowchart of causal relationship is presented in Figure 1. It can be seen that the tourism income (TR) is the most dominant variable in influencing the two other variables, as the tourism income has strong influence to EG and FDI, both in the short-term and in the long-term. Tourism income has a positive influence on foreign investment and economic growth from 1995 to 2018, so that when tourism income or foreign exchange earnings from foreign tourists increase, the direct effect within one-year lag and the indirect effect within five-years lag affect foreign investment

inflows and economic growth in Indonesia. This finding is in line with Tomohara (Tomohara, 2016), although the observed country is Japan.

FDI in the short-term and long-term is influenced by Tourism Income and Economic Growth. This relationship occurs when the rapid growth of foreign tourists to Indonesia creates a positive impact on FDI and the high economic growth attracts FDI to flow to Indonesia. The rapid growth of the number of international tourists to Indonesia triggers FDI, especially those in the tourism sector. This result is similar to those in Tomohara (Tomohara, 2016) and Ohlan (Ohlan, 2017) for Japan and India, respectively.

Furthermore, tourism income is influenced by economic growth in the short-term. The provision of subsidies on the tourism sector to develop and improve various facilities in several tourism objects in Indonesia does significantly improve the people income. In contrast, the long-run finding shows that the causality effect is not existed from FDI and economic growth to Tourism Income, implying that the effect FDI and economic growth are no longer maintained within 5 years. The finding of the short-run relationship is the same as Habibi (Habibi, 2015), although it analyzes Malaysia. The result for the long-run supports the finding by Kaur & Sarin (Kaur & Sarin, 2016) for India.

The short-term causal relationship between Foreign Investment and Economic Growth is a two-way causal relationship (Figure 1), which means that any changes in foreign direct investment (FDI) in Indonesia in the previous year will directly affect economic growth in Indonesia in the current year, and vice versa, when Indonesia's economic growth increases, the direct inflow of foreign direct investment in Indonesia also increases. The findings support the FDI-Growth nexus and are in line with research by Alzaidy, *et al.* (Alzaidy et al., 2017). Within the framework of

five year (long run), the causal relationship between Foreign Investment and Economic Growth has only a one-way causal relationship from economic growth to FDI (Figure 1). Economic Growth has an influence on foreign investment in a period of five years, so that Indonesia's economic growth five years ago still have an effect on the inflow of FDI in the current year. The finding is similar with Badulescu *et al.*(Badulescu et al., 2020) and Shi *et al.*(Shi et al., 2020).
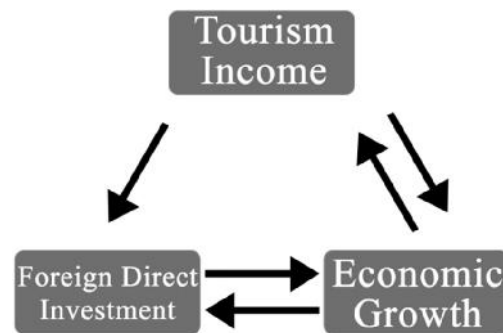
Figure 1. The Short-run Causality Relationship between Tourism Income, Foreign Direct Investment and Economic Growth
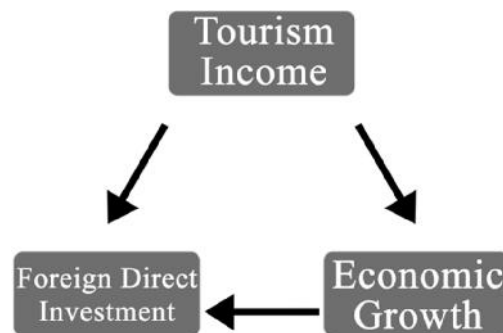
Figure 2. The Long-run Causality Relationship between Tourism Income, Foreign Direct Investment and Economic Growth

CONCLUSION

This paper examines the causal relationship between Tourism Income, FDI and Economic Growth in Indonesia from 1995 to 2018. It is found that there is a causal relationship in the short-and long-term from Tourism income to FDI and economic growth. In contrast, economic growth has a positive effect on tourism income only in the short-run, but it has no effect in the long run. The causal relationship between economic growth

and FDI is a two-way in the short-term, whereas the relationship in the long run goes only from economic growth to FDI. Another interesting finding is that tourism income is a dominant exogenous variable affecting FDI and economic growth, with the effect maintain both in the short-run and in the long-run.

These findings have implications on the importance of FDI for tourism sector and economic growth in Indonesia. The reverse is also applied that the increase in tourism income attracts foreign parties to invest in the Indonesian tourism sector, which in turn drives economic growth. The consistent policies and implementations carried out by the Indonesian government in promoting the Indonesian tourism sector are on the right track and need to be continued. The intense efforts in promoting and publicizing in order to enrich the attractiveness of Indonesian tourism in the international market should be highly appreciated. Infrastructure developments such as transportation, public security and accommodation need to be continuously improved, so as to increase the number of foreign tourists to Indonesia and also stimulate foreign investors to invest in the hotel and tourism sector. The role of tourism actors in providing good service in tourist areas will also increase foreign interest in investing in the tourism sector. Furthermore, the community around the tourist areas can continue to innovate in the development of tourism villages in their respective regions. Collaboration between academics, business people, government, community, and investors will be an effective hexa-helix in enhancing the tourism sector, economic growth, and foreign interest in investing.

REFERENCES

Abdouli, M., & Hammami, S. (2020). Economic Growth, Environment, FDI Inflows, and Financial Development in Middle East Countries: Fresh Evidence from Simultaneous Equation Models. Journal of the Knowledge Economy, 11(2), 479–511. https://doi.org/10.1007/s13132-018-0546-9

Al-Hallaq, S. S., Athamneh, A. B., & Suleiman, H. M. (2020). The impact of foreign direct investment on the growth of the tourism sector in Jordan (1980–2016). Journal of Public Affairs, 20(2), 1–9. https://doi.org/10.1002/pa.2005

Alam, A., Malik, O. M., Ahmed, M., & Gaadar, K. (2015). Empirical analysis of tourism as a tool to increase foreign direct investment in developing country: Evidence from Malaysia. Mediterranean Journal of Social Sciences, 6(4S3), 201–206. https://doi.org/10.5901/mjss.2015.v6n4s3p201

Alfaro, L., Chanda, A., Kalemli-Ozcan, S., & Sayek, S. (2010). Does foreign direct investment promote growth? Exploring the role of financial markets on linkages. Journal of Development Economics, 91(2), 242–256. https://doi.org/10.1016/j.jdeveco.2009.09.004

Alzaidy, G., Naseem, M., Niaz, B., & Lacheheb, Z. (2017). The Impact of Foreign-direct Investment on Economic Growth in Malaysia: The Role of Financial Development. International Journal of Economics and Financial Issues, 7(3), 382–388.

Arain, H., Han, L., Sharif, A., & Meo, M. S. (2020). Investigating the effect of inbound tourism on FDI: The importance of quantile estimations. Tourism Economics, 26(4), 682–703. https://doi.org/10.1177/1354816619859695

Arta, Y. K. (2013). The Impact of Foreign Direct Investment, Domestic Investment and Labour Force on Economic Growth in Central Java. Economics Development Analysis Journal, 2(2), 1–8.

Badulescu, A., Badulescu, D., Simut, R., & Dzitac, S. (2020). Tourism – economic growth nexus. The case of romania. Technological and Economic

Development of Economy, 26(4), 867–884. https://doi.org/10.3846/tede.2020.12532

Bezić, H., & Radić, M. N. (2017). Tourism foreign direct investment led tourism gross value added: A co-integration and causality analysis of croatian tourism. Economic Research-Ekonomska Istrazivanja , 30(1), 1443–1460. https://doi.org/10.1080/1331677X.2017.1340173

Brida, J. G., Matesanz Gómez, D., & Segarra, V. (2020). On the empirical relationship between tourism and economic growth. Tourism Management, 81(April), 1-11. https://doi.org/10.1016/j.tourman.2020.104131

De Pascale, G., Sardaro, R., Faccilongo, N., & Contò, F. (2020). What is the influence of FDI and international people flows on environment and growth in OECD countries? A panel study. Environmental Impact Assessment Review, 84(April), 106434. https://doi.org/10.1016/j.eiar.2020.106434

Desrianto, M. (2019). Indonesian Minister of Tourism feels happy that the position of Indonesia in Global rank has increased. https://travel.kompas.com/read/2019/09/06/114334127/menpar-su

Gramatnikovski, S., Milenkovski, A., & Blazheska, D. (2016). The Impact of the International Tourism Receipts on GDP: The Case of Republic of Macedonia. International Journal of Academic Research in Accounting, Finance and Management Sciences, 6(4), 220–225. https://doi.org/10.6007/IJARAFMS/v6-i4/2389

Habibi, F. (2015). Foreign Direct Investment, Tourism and Economic Growth in Malaysia. European Journal of Social Sciences, 48(3), 381–390.

Ho, S. Y., & Iyke, B. N. (2018). The Determinants of Economic Growth in Ghana: New Empirical Evidence. Global Business Review, 21(3), 626-644. https://doi.org/10.1177/0972150918779282

Iamsiraroj, S., & Ulubaşoğlu, M. A. (2015). Foreign direct investment and economic growth: A real relationship or wishful thinking? Economic Modelling, 51, 200–213. https://doi.org/10.1016/j.econmod.2015.08.009

Indonesian Central Bank. (2019). Gaining foreing exchange through Tourism. In Departemen Komunikasi Bank Indonesia. www.bi.go.id

Indonesian Investment Coordinating Board, -. (2019). Statistics of Foreign Direct Investment Realization in Tourism Sector. www.bkpm.go.id

Işik, C. (2015). Foreign Direct Investment in Tourism: Panel Data Analysis of D7 Countries. Athens Journal of Tourism, 2(2), 93–103. https://doi.org/10.30958/ajt.2-2-2

Kaur, H., & Sarin, V. (2016). Causality relationship between gdp, FDI, tourism: Empirical evidence from India. International Journal of Applied Business and Economic Research, 14(4), 2605–2613.

Kementerian Investasi/BKPM. (2018, Desember 28). Ini Negara dengan Investasi Pariwisata Terbanyak di Indonesia. Retrieved November 11, 2019, from Kementerian Investasi/BKPM: https://www.investindonesia.go.id/id/artikel-investasi/detail/ini-negara-dengan-investasi-pariwisata-terbanyak-di-indonesia

Kumar, N., Kumar, R. R., Kumar, R., & Stauvermann, P. J. (2020). Is the tourism–growth relationship asymmetric in the Cook Islands? Evidence from NARDL cointegration and causality tests. Tourism Economics, 26(4), 658–681. https://doi.org/10.1177/1354816619859712

Mahurisal, S., Amin, M., & Junaidi, J. (2018). The Effect of Foreign Direct Investment, Domestic Investment, and Export on Papua Economic Growth. Journal of Accounting Research, 7(10), 118–129.

Ohlan, R. (2017). The relationship between tourism, financial development and economic growth in India. Future Business Journal, 3(1), 9–22. https://doi.org/10.1016/j.fbj.2017.01.003

Proença, S., & Soukiazis, E. (2008). Tourism as an economic growth factor: A case study for Southern European countries. Tourism Economics, 14(4), 791–806. https://doi.org/10.5367/000000008786440175

Sarker, B., & Khan, F. (2020). Nexus between foreign direct investment and economic growth in Bangladesh: an augmented autoregressive distributed lag bounds testing approach. Financial Innovation, 6(1). https://doi.org/10.1186/s40854-019-0164-y

Satrovic, E., & Muslija, A. (2017). Foreign Direct Investments and Tourism: Empirical Evidence from Turkey. 9–11.

Shi, H., Li, X., Zhang, H., Liu, X., Li, T., & Zhong, Z. (2020). Global difference in the relationships between tourism, economic growth, CO_2 emissions, and primary energy consumption. Current Issues in Tourism, 23(9), 1122–1137. https://doi.org/10.1080/13683500.2019.1588864

Sokhanvar, A. (2019). Does foreign direct investment accelerate tourism and economic growth within Europe? Tourism Management Perspectives, 29(October 2018), 86–96. https://doi.org/10.1016/j.tmp.2018.10.005

Tomohara, A. (2016). Japan's tourism-led foreign direct investment inflows: An empirical study. Economic Modelling, 52, 435–441. https://doi.org/10.1016/j.econmod.2015.09.024

Wang, M. (2009). Manufacturing FDI and economic growth: Evidence from Asian economies. Applied Economics, 41(8), 991–1002. https://doi.org/10.1080/00036840601019059

World Travel & Tourism Council, -. (2018). World Travel Tourism Report. www.wttc.org

Wu, T. P., & Wu, H. C. (2018). The Influence of International Tourism Receipts on Economic Development: Evidence from China's 31 Major Regions. Journal of Travel Research, 57(7), 871–882. https://doi.org/10.1177/0047287517722231