Confirming the Receipts of International Tourism in Indonesia after the COVID-19 Pandemic: Analyzed with Macroeconomic Indicators

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ABSTRACT

This study aims to analyze International Tourism Receipts in Indonesia with the variables of International Trade, Inflation, and Exchange Rates during and after the COVID-19 pandemic. The analysis technique used to answer the problem is regression analysis using the Ordinary Least Squares (OLS) method. This type of research data uses secondary data obtained from the World Bank, Central Statistics Agency, and Bank Indonesia during the 2002-2022 period. The results of research analysis show that 1) the International Trade variable has a significant negative effect on International Tourism Receipts in Indonesia during and after the COVID-19 pandemic. The stability of international trade fluctuates, tends to decrease, but after the COVID-19 pandemic and the relaxation of social distancing policies, there has been an increase in international tourism. 2) The Inflation variable has a significant negative effect on International Tourism Receipts in Indonesia. A higher inflation rate increases living and travel costs, then reduces tourist interest. 3) The exchange rate variable has a significant and positive effect toward international tourism receipts. The increase of dollar exchange rate against the rupiah, will increase tourist interest in Indonesia. The implications of the results of this research are important for stakeholders and tourism sector companies so that they can continuously increase International Tourism Receipts in Indonesia through keeping macroeconomic indicators consisting of International Trade, Inflation and Exchange in Indonesia.

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Introduction

Tourism plays a crucial role in the economic growth of many countries, both developing and developed countries. The contribution of the tourism sector as one of the sources of foreign exchange receipts that must be utilized optimally. Compared to other sectors, tourism is a different sector because it is based on the concept of demand. Gül (2013) explains to show the demand side, appropriate indicators use the components of tourist visits and tourism receipts. Indonesia offers a myriad of tourist destinations catering to a wide variety of interests. Its natural beauty which includes mountains, beaches, oceans, as well as flora and fauna provides an unforgettable experience for tourists. Besides nature, Indonesia's cultural wealth is also a must for visitors. Each region has a unique blend of history, ethnic diversity, customs and traditions worth exploring. With good development and management, this cultural property can generate substantial income for the country. Unfortunately, the COVID-19 pandemic in 2019-2022 has had a devastating impact on the tourism industry, hindering its growth and movement.

The COVID-19 pandemic has had a profound and widespread impact on the tourism industry globally. The Indonesian government issued a policy of Enforcement of Community Activity Restrictions (PPKM) to restrictions on travel to and from countries with red zone status of transmission during the pandemic. The restriction policy has an impact on the number of foreign tourist visits to Indonesia in 2020 is very concerning, reaching only 4.052 million people, or a decrease of 75% from the number of foreign tourist visits in 2019. Even in 2021, the number of international tourists coming to Indonesia was only 1.6 million or decreased by 84% (Kemlu RI, 2021). According to the Organization for Economic Co-Operation and Development (OECD) records in the Tourism Trends and Policies 2022 report before the COVID-19 pandemic, Indonesia's tourism sector contributed up to 536.8 trillion rupiah or reached 4.1% of Indonesia's total Gross Domestic Product (GDP) in 2017 and increased to 6.1% in 2019. However, the impact of COVID-19 saw tourism GDP drop by 56% in 2020 to just 2.2% of the total economy (OECD, 2022).

In 2023 is Indonesia’s recovery process after the COVID-19 pandemic, especially the tourism sector. As one of the main foreign exchange contributors to state finance, Indonesia's tourism sector has great potential to continue to be maintained and developed. Proven in 2022 in the World Travel & Tourism Council Annual Report, Indonesia's position rose to 32nd place from the previous position of 44, as a country that has the largest share and contribution to GDP from the tourism sector. However, Indonesia's tourism potential and achievements cannot simply provide added value for the development of Indonesian tourism. It takes efforts and cooperation from the government, private sector and community to attract foreign tourists to make Indonesia a choice of tourist destinations.

Tourism is related to tourist spending (Li, G.; Song, H.; Cao, Z.; Wu, 2013). The competitiveness of a tourist destination is often measured by its ability to attract and retain visitors, increase tourist spending, and generate foreign exchange receipts. A tourist destination can be said to be competitive if it can increase tourist spending and attract more tourist visits than competing destinations so that it will increase tourism foreign exchange receipts (Crouch, G.I.; Ritchie, 2019). Based on World Bank data, during 2002-2022 international tourism receipts to Indonesia showed fluctuations that tended to increase. Data from the Central Statistics Agency (2023) (BPS RI, 2022; worldbank, 2021a) shows that in 2022 the number of foreign tourist visits will reach more than 470 thousand people, seen in Figure 1.
Foreign tourist arrivals in Indonesia 2012-2022

This is the highest record since the COVID-19 pandemic. Cumulatively international tourist arrivals throughout semester 1 2022 reached 1.2 million people. This condition is a significant increase, after the COVID-19 pandemic crisis in 2020-2021 which caused a decline in tourism due to lockdown policies in almost all countries. In addition, during 2022-2024 the tourism sector is predicted to bring in as many as 9.5-14.3 million foreign tourists. In Indonesia's efforts to increase international tourism receipts, researchers are interested in conducting research on international tourism receipts with the aim of research to find out what variables influence the increase in the amount of expenditure of international tourists when visiting Indonesia.

Previous study conducted by Soofi et al. (2018) used the variables Exchange Rate, Population, Trade, and Consumer Price Index in OIC Countries which have a positive effect on tourist acceptance. As for Nimanussornkul & Do (2017) study, oil price variables, inflation, and exchange rates in 13 Asia-Pacific Countries significantly affect international tourism receipts. In contrast to the results of Haseeb et al. (2019) study, exchange rates and inflation do not significantly affect international tourism receipts. While another study by Alola et al. (2019) use Political Risk, Exchange Rate, Metal Goods Exports, and Trade to influence international tourism receipt in Turkey.

Based on the explanation of the impact of the COVID-19 pandemic on the tourism sector and the gap in the results of previous studies, the researcher will analyze using macroeconomic indicators consisting of International Trade, Inflation, and Exchange Rates as variables that influence International tourism receipts in Indonesia. As far as the researcher's knowledge is concerned, the limitations of discussion are related to the determination of international tourism receipts in Indonesia by correlating international trade variables, so the novelty of this research is with international trade proxies. So, this research can contribute to becoming a literature reference, especially in the field of tourism, especially foreign tourism receipts. The problem formulation in this research is whether there is an influence of International Trade, Inflation, Exchange Rates toward tourism receipts in Indonesia from 2002 to 2022, particularly within the context of economic recovery following the COVID-19 pandemic.
Literature Review

International Tourism Receipts

International Tourism Receipts is the amount of incoming foreign/international tourist expenses, including payments to national operators for international transportation. Not only payment for travel expenses, but international tourists must also include payment for goods and services purchased from the country visited either in advance or payment made afterward (World Bank, 2021b). For most developed and developing countries, tourism receipts contribute to an increase in the country’s economic income. This is because the tourism industry is related to every sector of the economy so it will have an impact on the country's GDP. Through the tourism industry, it can open jobs that play a major role in poverty alleviation and socio-economic improvement in the world. In addition, increasing tourism receipts is a moment to expand interconnection between countries through economic cooperation, trade, and investment, and at the same time introducing local cultural knowledge to foreign countries (UNWTO, 2023).

International Trade toward International Tourism Receipts

International trade (ITR) refers to the economic collaboration between two countries involving the exchange of goods and services, aimed at fostering prosperity within each participating country (Bawon et al., 2020). While the definition of International Trade according to the World Bank is the amount of exports and imports of goods and services measured as a share of gross domestic product (GDP) (World Bank, 2022). Export is the activity of removing goods from the Indonesian customs area to the customs area of other countries. The import is the activity of entering from a country (abroad) into the Indonesian customs area (Bea Cukai, 2023). International trade is very important for a country because there is not a single country in the world that can meet all its needs without doing trade or business with other countries (Diphayana, 2018).

If international trade is stable and even increases, then Tourism Receipts will increase as well. This is because of the relationship between international trade with the tourism sector and the economy of a country. Shahbaz et al. (2017) and Hojeghan & Esfangareh (2011) found that international trade has a positive impact on tourism flows, leading to a subsequent rise in tourism receipts within the country. Another investigation by Alola et al. (2019) revealed that a country’s economic stability significantly contributes to the growth of tourism, particularly in tourist destinations.

Inflation on International Tourism Receipts

Inflation (IN) is a general and continuous increase in the price of goods and services over a period of time (Bank Indonesia, 2020). If the price of goods and services increases, it will have an impact on the increase in the inflation rate. Elevating the prices of goods and services leads to a devaluation of currency. Consequently, it can be inferred that inflation indicates a decline in the general value of money concerning goods and services in society. The Consumer Price Index (CPI) is a metric employed to assess the inflation rate, calculated based on the percentage growth in the prices of a selection of goods and services representing the typical consumption spending of the general public (bps.go.id).

An upsurge in inflation within a country is likely to lead to a reduction in Tourism Receipts. This is due to the correlation between inflation and the overall escalation in prices of goods and services, directly influencing the rise in the expenses associated with tourist travel. Consequently, this is expected to result in a decrease in the volume of foreign tourist visits, thereby causing a decline in foreign tourism receipts.
This is proven in Nimanussornkul & Do (2017) research that the increase in the inflation rate affects tourism receipts.

**Exchange Rate on International Tourism Receipts**

The exchange rate (ER), commonly known as the currency exchange rate, represents the cost of one unit of foreign currency in terms of domestic currency. Alternatively, it can be expressed as the value of domestic currency relative to foreign currency (Simorangkir, 2005). For instance, when considering the exchange rate (ER) between the Rupiah and the US Dollar (USD), it denotes the price of one US dollar (USD) in Rupiah (Rp). Conversely, it can be understood as the valuation of one Rupiah against one USD. If the exchange rate is defined as the Rupiah's value in foreign currency, it can be formulated as follows: 

\[ \text{ER}_{\text{IDR/USD}} = \text{Rupiah required to buy 1 US dollar (USD)}. \]

An increase in the exchange rate (dollar against rupiah) is expected to influence a rise in Tourism Receipts. The increase in the exchange rate means that the value of the Rupiah depreciates so that when tourists exchange dollars for rupiah will get a greater amount of rupiah. Utami & Hartono (2016) explained that a reduced exchange rate in the destination country tends to heighten tourists' interest in visiting and spending more money due to the perceived affordability of prices. Consequently, there will be a shift in the selection of tourist destinations from countries with higher exchange rates to those with lower exchange rates. The changes will increase the number of international tourism receipts (Li et al., 2005; Song et al., 2008). This is evidenced by research conducted by Nimanussornkul & Do (2017) that the exchange rate stands out as the primary factor influencing tourism demand.

Based on theoretical and empirical studies, a conceptual framework is developed that underlies research as an illustration that shows the relationship of exogenous variables to endogenous variables. The endogenous variables of this study are International Tourism Acceptance, then exogenous variables include International Trade, Inflation, and Exchange Rates. So in Figure 1, illustrates the relationship of influence between variables in this study.

![Conceptual Framework](image)

**Figure 2. Conceptual Framework**

**Hypothesis**

- **H1**: International Trade affects International Tourism Receipts
- **H2**: Inflation affects International Tourism Receipts
- **H3**: Exchange Rate affects International Tourism Receipts
Methodology

This research adopts a quantitative approach, emphasizing the testing of research variables through numerical data or statistical procedures for data analysis (Sugiyono, 2016). The type of data for this study involves secondary data obtained from official websites such as worldbank.org, bi.go.id, bps.go.id in the form of annual data starting from 2002-2022.

Table 1. Variable Operational Definition

<table>
<thead>
<tr>
<th>Variable</th>
<th>Operational Definition</th>
<th>Source</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Tourism Receipts (TR)</td>
<td>Total State receipts based on International tourist expenditure</td>
<td>World Bank</td>
<td>Rupiah</td>
</tr>
<tr>
<td>International Trade (ITR)</td>
<td>Number of International trade by international transportation services</td>
<td>World Bank</td>
<td>%</td>
</tr>
<tr>
<td>Inflation (IN)</td>
<td>Price change from the previous period based on the Consumer Price Index (CPI)</td>
<td>Central Bureau of Statistics</td>
<td>%</td>
</tr>
<tr>
<td>Exchange Rate (ER)</td>
<td>Dollar against domestic currency</td>
<td>Bank Indonesia</td>
<td>Rupiah</td>
</tr>
</tbody>
</table>

Source: secondary data, processed by the author.

The analysis technique used in this study is multiple linear regression with the Eviews 10 test tool (software). Multiple linear regression to empirically test the ability to predict exogenous variables (International Trade, Inflation, and Exchange Rates) against endogenous variables (International Tourism Receipts). This predictive ability is shown from the value of the coefficient on each exogenous variable. The equation of the regression model (1), is described as follows:

\[ TR_i = \beta_1 + \beta_2 ITR_i - \beta_3 IN_i - \beta_4 ER_i + \varepsilon_i \]  

Note:
- \( TR \) = International Tourism Receipts
- \( ITR \) = International Trade
- \( IN \) = Inflation
- \( ER \) = Exchange Rate
- \( \beta_1 \) = Intercepts/Constants
- \( \beta_2,3,4,5 \) = Variable Regression Coefficient
- \( i \) = Research Unit
- \( \varepsilon \) = Error Components (error)

Results and Discussion

Based on statistical data on International Tourism Receipts, International Trade, Inflation, and Exchange Rates in 2002-2022, presented in Table 2, descriptive statistical results aimed at providing an overview of data with average value, middle value, maximum value, minimum value, and standard deviation.
Table 2. Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>(ln)TR</th>
<th>ITR</th>
<th>IN</th>
<th>(ln)ER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>22.86444</td>
<td>15.61500</td>
<td>6.489444</td>
<td>9.282222</td>
</tr>
<tr>
<td>Middle Value</td>
<td>22.87000</td>
<td>15.83500</td>
<td>6.210000</td>
<td>9.185000</td>
</tr>
<tr>
<td>Maximum</td>
<td>23.64000</td>
<td>17.90000</td>
<td>13.11000</td>
<td>9.580000</td>
</tr>
<tr>
<td>Minimum</td>
<td>22.22000</td>
<td>11.51000</td>
<td>3.030000</td>
<td>9.040000</td>
</tr>
<tr>
<td>Std. Deviasi</td>
<td>0.454561</td>
<td>1.598688</td>
<td>3.011932</td>
<td>0.190558</td>
</tr>
<tr>
<td>N</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: secondary data, processed.

Table 2, statistically describe 20 observations, that the endogenous variable, namely International Tourism Receipts (TR) has a maximum value of 18,400,000,000 (23.64), a minimum of 4,460,000,000 (22.22), an average of 9,400,000,000 (22.86), and a standard deviation of 4,460,000,000 (0.45) smaller than the average, meaning that International Tourism Receipts (TR) has a small distribution. The exogenous variable, International Trade (ITR) has a maximum value of 17.90, and a minimum value of 11.51. Inflation (IN) has a maximum value of 13.11 and a minimum of 3.03. Then the Exchange Rate (ER) has a maximum value of 14,481 (9.58) and a minimum value of 8,465 (9.04). Each exogenous variable has a small distribution with a standard deviation smaller than the average.

Furthermore, multiple linear regression models (1) are carried out classical assumption testing to ensure the model has accuracy in estimation (unbiased and consistent), consisting of normality tests, multicollinearity tests, heteroskedasticity tests, and autocorrelation tests. The test results showed that the regression model was normally distributed, there was no indication of Multicollinearity and Heteroskedasticity. While in Autocorrelation, Durbin Waston test shows that the autocorrelation coefficient cannot be concluded, but in LM (Breusch-Godfrey) test the results show no indication of autocorrelation.

Then, after going through the classical assumption test, The hypothesis testing was conducted with the goal of assessing the precision of the regression function in predicting the actual value, as determined by the goodness of fit. Statistically, this can be measured through the F test, the coefficient of determination (R2), and the t-test. Based on the F Test, the F value is obtained at 59.34 with a significant value of 0.000 (<0.05), which means that International Trade, Inflation, and Exchange Rates simultaneously have a significant effect on International Tourism Revenue. Coefficient of Determination (R2), resulting in an Adjusted R square value of 0.9320 or 93.20%. That is, the contribution of the influence of International Trade, Inflation, and Exchange Rates on International Tourism Revenue in Indonesia is 93.20%, while the remaining 6.8% is influenced by other variables that are not studied in the regression model. The results of linear regression estimation are presented in Table 3.

Table 3. Regression Estimation Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>9.029460</td>
<td>2.557502</td>
<td>3.530578</td>
<td>0.0037</td>
</tr>
<tr>
<td>ITR</td>
<td>-0.078377</td>
<td>0.026296</td>
<td>-2.980593</td>
<td>0.0106</td>
</tr>
<tr>
<td>IN</td>
<td>-0.032425</td>
<td>0.011138</td>
<td>-2.911169</td>
<td>0.0121</td>
</tr>
<tr>
<td>(ln)ER</td>
<td>1.225279</td>
<td>0.232388</td>
<td>5.272551</td>
<td>0.0002</td>
</tr>
</tbody>
</table>

Source: secondary data, processed.

In Table 3, the linear regression equation can be formulated as follows;

\[(ln)TR_t = 9.0294 - 0.0783ITR_t - 0.0324IN_t + 1.2252(ln)ER + \varepsilon_t \] .................(2)
Based on the regression equation (2), a constant value of 9.0294 is obtained, meaning that if the variables International Trade, Inflation, and Exchange Rate are 0, then International Tourism Receipts is 9.0294. Then the value of the regression coefficient of International Trade is 0.0783, meaning that every increase in one unit of International Trade will reduce International Tourism Receipts by 0.0783. The value of the Inflation coefficient is 0.0324, meaning that every increase in one unit of Inflation will decrease International Tourism Receipts by 0.0324. The value of the Exchange Rate regression coefficient is 1.2252, which means that every increase of one unit of the Exchange Rate will increase International Tourism Receipts by 1.2252.

Discussion

The Effect of International Trade toward International Tourism Receipts

International Trade has a significant and negative effect toward International Tourism Receipts, with a probability value of 0.0106 (<0.05). This means that when international trade decreases, it will increase tourism receipts. As is known that international trade is related to the economic stability of a country, Alola et al. (2019) stated that the more stable a country is, it has a significant effect on tourism development, especially for tourist destination countries. However, this study found that there are differences in theory with statistical test results, international trade has a significant effect in a negative direction on international revenues, where during the period 2002-2022 international trade fluctuates which tend to decrease, while international tourism receipts have increased. This also explains that in 2022, after the COVID-19 pandemic, there has been an increase in international tourism even though the performance of international trade in Indonesia has decreased. The findings of this study are in line with Alola et al., (2019) and Aziz et al., (2018) which found that International Trade has an effect toward Tourism Receipts.

The Effect of Inflation toward International Tourism Receipts

Inflation has a significant and negative effect toward International Tourism Receipts, with a probability value of 0.0121 (<0.05). This means that a higher inflation rate will reduce international tourism receipts. High inflation represents the increase in prices of goods and services in general in a country, the impact will affect the increase in the cost of living and also the cost of travel (Meo et al., 2018). So that the increase in tourist travel costs will result in a decrease in tourist visits and tourism receipts (Tang, 2011). Tourism receipts earned by destination countries include all tourism receipts generated from expenditures made by visitors from abroad (Khan et al., 2020; Tang, 2011). This inverse relationship shows that a low inflation rate is more expected by international tourists in choosing tourist destinations. When costs are low, tourist spending will tend to increase. And declining tourist spending, this is due to a decrease in purchasing power because the cost of living in destination countries is expensive (high). Tang (2011) also mentioned that the negative economic effect on tourism in destination countries is price increases due to inflation. Where price trends in most developing countries, Indonesia is one of them, becoming the main determinant of economic stability so that it affects international tourism trends. Then it can be explained that during and after the COVID-19 pandemic in 2022, the inflation rate can significantly affect international tourism receipts in Indonesia. Where when the purchasing power and consumption of domestic people due to low prices, it is able to increase visits and international tourism receipts. The findings of this study are in line with the findings of Tang (2011), Meo et al., (2018), dan Nimanussornkul & Do (2017) which states that inflation affects Tourism Receipts.
The Effect of Exchange Rate toward International Tourism Receipts

The Exchange Rate has a significant and positive effect toward International Tourism Receipts, with a probability value of 0.0002 (<0.05). This means that if the exchange rate (dollar against rupiah) increases, it will affect the increase in international tourism acceptance. When the currency of the tourist destination country (IDR) depreciates, the exchange rate of the currency of the tourist home country against the tourist destination country will strengthen (appreciation). Exchange rate variations greatly affect the purchasing power of tourists. The lower exchange rate of the tourist destination country will increase the interest of tourists to visit and spend more money because tourists consider prices to be cheaper (Utami & Hartono, 2016). Conversely, when there is an appreciation or strengthening of the destination country's currency, the exchange rate of the currency of the tourist's home country against the tourist destination country will depreciate or weaken so that it will increase tourism costs and result in a decrease in international tourism receipts. The findings of this research explain the condition of the exchange rate that there was a weakening of the rupiah at the end of March 2020 during the COVID-19 period. Conditions caused by the COVID-19 pandemic are peaking for the first time in Indonesia and the world. Then, after Bank Indonesia raised the benchmark interest rate again, the rupiah strengthened in 2021. After that, despite fluctuating, the rupiah during the post-COVID-19 period continued to be on an appreciation trend. The findings of this study are in line with Nimanussornkul & Do (2017) and Haseeb et al. (2019) which states that the Exchange Rate affects Tourism Receipts.

Conclusion

The influence of macroeconomic indicators, namely International Trade, Inflation, and Exchange Rates as variables affecting International Tourism Receipts in Indonesia, before and after the COVID-19 pandemic during 2002-2022. Through a quantitative approach of secondary data, with multiple linear regression analysis techniques, research results were obtained that simultaneously International Trade, Inflation, and Exchange Rates affected International Tourism Receipts before and after the COVID-19 pandemic, with a percentage of influence contribution of 93.20%. Then the results of partial regression with the t-test, explain that the variables of International Trade and Inflation have a significant negative effect on International Tourism Receipts. While the Exchange Rate has a positive and significant effect on International Tourism Receipts. Among International Trade, Inflation, and Exchange Rate, the variable that has the largest contribution to influencing International Tourism Receipts in Indonesia is the variable of international trade.

The implications of the research based on research findings are for stakeholders including the Indonesian government, especially the Ministry of Tourism and Creative Economy, and tourism sector companies in increasing International Tourism Acceptance in Indonesia by optimizing global and domestic trade potential. Especially during the economic recovery period after the COVID-19 pandemic, this increases the competitiveness of Indonesian tourism to become the choice of tourist visiting countries among other countries. The findings of this research are expected to contribute to complementing the previous literature and add to the study of theories related to tourism, especially the demand and acceptance of international tourism based on a quantitative approach. This research is inseparable from shortcomings and limitations, so the researcher recommends further research to increase the research period, and the location of other research objects so that they can obtain optimal results.
Author’s Contribution
All authors have contributed to the final manuscript. The contributions of each author are as follows, Asma Munifatussaidah and Jihan Nabila Zahara; drafting key conceptual ideas, literature management, collecting data, methodology, and drafting manuscripts, and Siti Zubaidah provided excellent guidance of research funding, editing, drafting manuscripts, and provided critical revisions of articles.

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Declaration of Competing Interest
The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Reference


