Prediction of foreign tourist visits to Indonesia using moving average and exponential smoothing methods and acceptance of admission analysis

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Abstract. This paper discusses the foreign exchange analysis of foreign tourists based on the daily expenditure and the country of origin concerned. Furthermore, there will be presented statistical data analysis on the length of stay and prediction of foreign tourist arrivals to Indonesia based on the country of origin of tourists using the method of moving average and exponential smoothing. The calculation results show that the country's foreign exchange (revenue) from the tourism sector compared with the 11 largest export commodities ranked the highest in the period of 2011 to 2015 with an average of 10,224.24 in millions of USD. Based on the calculation of foreign tourist arrivals to Indonesia for the period of 2002 to 2016 an average of 7,041,315 people per year and an average growth rate of 8.55% per year for the last five years.

1. Introduction
The national tourism sector is now a new belle for national development. Foreign exchange contributions and employment in this sector are very significant for foreign exchange. In fact, it is estimated that in 2019 it has outperformed foreign exchange earnings from the palm oil industry (CPO). Foreign exchange from the tourism sector in 2016 amounting to US $ 13.568 billion was in second place after CPO of US $ 15.965 billion. In 2015, foreign exchange from the tourism sector amounted to US $ 12.225 billion or was in the fourth position under Oil and Gas at US $ 18.574 billion, CPO at US $ 16.427 billion, and coal at US $ 14.717 billion. The acquisition of state foreign exchange from the tourism sector since 2016 has outperformed revenues from oil and gas and is below the income from CPO. Based on the results of World Bank research, the tourism sector is the easiest contributor to foreign exchange and gross domestic income (GDP) of a country. The reason is that the derivative impact of investment in the tourism sector on GDP is indeed very large [1].

2. Visit of Foreign Tourists
The definition of foreign tourists in accordance with the recommendations of the UNWTO (United Nations World Tourism Organization) is every person who travels to a country outside the country of residence less than one year for business, vacation or other personal purposes. International tourists are divided into two categories, namely tourists (tourist) and travelers (excursionist). Tourists are visitors who live longer than 24 hours but less than 12 months. While travelers are visitors who live less than 24 hours.
3. Methods
The research methodology used in this paper uses descriptive quantitative methods. This paper describes systematically the facts and characteristics of foreign tourist visits data from country of origin, length of stay and foreign exchange receipts. To predict foreign tourist arrivals, the moving average method and exponential smoothing are used.

3.1. Moving average method
This method uses all the data that has been observed as a basis for determining the average value which is then used as a prediction of future conditions. The mathematical models used are as follows: [2]

\[ F_{t+1} = \frac{1}{T} \sum_{i=1}^{T} X_i \]  

With:
- \( T \) = observation period
- \( F_{t+1} \) = forecasting value for \((t + 1)\) period
- \( X_i \) = observation value for \( t \) period

3.2 Exponential smoothing method
In general, the data obtained in observations have different importance values when viewed from the time of getting them. In the exponential smoothing method the data obtained is now given greater weight than the data obtained in the past. The weighting of the data is given exponentially. The mathematical model used to predict future conditions with the Single Smoothing exponential method is as follows: [2]

\[ F_{t+1} = \alpha X_t + (1 - \alpha) F_t \]  

with:
- \( X_t \) = data at \( t \) period
- \( F_t \) = prediction for \( t \) period
- \( F_{t+1} \) = prediction for \((t + 1)\) period
- \( \alpha \) = exponential constant (1/N)
- \( N \) = period of observation

3.3 Data Collection Method
Data collection methods in this paper use secondary data obtained from the Central Statistics Agency (BPS). Data on international tourists includes all visitors arriving in Indonesia through airports and ports. There are 122 doors for the arrival of foreign tourists spread throughout the country of Indonesia. The four main doors for foreign tourist arrivals are through Jakarta's Soekarno-Hatta Airport, Bali's Ngurah Rai Airport, Kuala Namu North Sumatra, and Batam Riau Islands.

3.4 Data Analysis Method
After the data is collected then plotting the data is done to find out past data patterns. Furthermore, it is also calculated the size of descriptive statistics to analyze the data of the number of foreign tourists’ visits such as the mean (mean), standard deviation, average absolute deviation as follows: [Sudjana, 2005]

a. Average Value

\[ \overline{X} = \frac{\sum_{i=1}^{n} X_i}{n} \]  

(3)
b. Standard deviation

\[ SD = \sqrt{\frac{1}{n-1} \sum_{i=1}^{n} (X_i - \overline{X})^2} \]  \hspace{1cm} (4)

c. MAD (mean absolute deviation)

\[ MAD = \frac{1}{n} \sum_{i=1}^{n} |X_i - \overline{X}| \]  \hspace{1cm} (5)

3.5 Size of Accuracy of Forecasting

To analyze errors in the prediction of the number of foreign tourists used the following statistical measures: [2]

1. Error (\(e_i\))

\[ e_i = X_i - F_i \]  \hspace{1cm} (6)

2. Mean error (ME)

\[ ME = \frac{1}{n} \sum_{i=1}^{n} e_i \]  \hspace{1cm} (7)

3. Mean Absolute Error (MAE)

\[ MAE = \frac{1}{n} \sum_{i=1}^{n} |e_i| \]  \hspace{1cm} (8)

4. Mean Squared Error (MSE)

\[ MSE = \frac{1}{n} \sum_{i=1}^{n} (e_i)^2 \]  \hspace{1cm} (9)

with:

\(e_i\) = error in periode \(i\)
\(X_i\) = actual data in periode \(i\)
\(F_i\) = forecast value in periode \(i\)
\(n\) = number of data

4. Results and Discussion

Data on foreign tourist visits to Indonesia from 2002 to 2016 are presented in table 1.

| Year | Tourist         | Year | Tourist         |
|------|-----------------|------|-----------------|
| 2002 | 5 033 400       | 2010 | 7 002 944       |
| 2003 | 4 467 021       | 2011 | 7 649 731       |
| 2004 | 5 321 165       | 2012 | 8 044 462       |
| 2005 | 5 002 101       | 2013 | 8 802 129       |
| 2006 | 4 871 351       | 2014 | 9 435 411       |
| 2007 | 5 505 759       | 2015 | 10 406 759      |
| 2008 | 6 234 497       | 2016 | 11 519 275      |
| 2009 | 6 323 730       |      |                 |

Source: Badan Pusat Statistik [2017]

The results of plotting data on foreign tourists visiting from 2002 to 2016 are presented in Figure 1.
Based on Table 1 it can be seen that foreign tourist arrivals to Indonesia have increased with an average visit of 7,041,316 people per year. Increased foreign tourist arrivals to Indonesia in the last five years can be seen in table 2 below:

| Year | Tourist | Increase | % increase |
|------|---------|----------|------------|
| 2012 | 8,044,462 | 394,731 | 0.05       |
| 2013 | 8,802,129 | 757,667 | 0.09       |
| 2014 | 9,435,411 | 633,282 | 0.07       |
| 2015 | 10,406,759 | 971,348 | 0.10       |
| 2016 | 11,519,275 | 1,112,516 | 0.11    |

From Table 2 it can be seen that the increase in foreign tourists visiting Indonesia in the last five years continues to increase by an average of 8.55% per year. Monthly foreign tourist visits data from January 2015 to August 2017 are presented in the following table 3:

| Month | Tourist | Month | Tourist |
|-------|---------|-------|---------|
| Jan 2015 | 785973  | Mei 2016 | 915206 |
| Feb 2015 | 843928  | Jun 2016 | 857651 |
| Mar 2015 | 841071  | Jul 2016 | 1032741 |
| Apr 2015 | 801873  | Ags 2016 | 1031986 |
| May 2015 | 852388  | Sep 2016 | 1000653 |
| Jun 2015 | 872385  | Okt 2016 | 1040651 |
| Jul 2015 | 877584  | Nov 2016 | 1002333 |
| Ags 2015 | 911704  | Des 2016 | 1113328 |
| Sep 2015 | 920128  | Jan 2017 | 1032930 |
| Okt 2015 | 877798  | Feb 2017 | 957583 |
| Nov 2015 | 835408  | Mar 2017 | 1066588 |
| Des 2015 | 986519  | Apr 2017 | 1142180 |
| Jan 2016 | 814303  | May 2017 | 1150067 |
4.1 Results of prediction of foreign tourists visit
The results of the prediction of foreign tourist arrivals to Indonesia using the 4-monthly moving average method and the exponential smoothing method can be seen in Table 3 and Table 4 as follows: [Makridakis, 1983] [POM-QM 3.0]

Table 4 Results of predictions of foreign tourist visits by using Moving Average (4)

| Mounth | Tourist | Mounth | Tourist |
|--------|---------|--------|---------|
| Jan 2015 | Mei 2016 | 879682 |
| Feb 2015 | Jun 2016 | 904907 |
| Mar 2015 | Jul 2016 | 897243 |
| Apr 2015 | Ags 2016 | 926367 |
| Mei 2015 | Sep 2016 | 959396 |
| Jun 2015 | Okt 2016 | 982258 |
| Jul 2015 | Nov 2016 | 1028008 |
| Ags 2015 | Des 2016 | 1020406 |
| Sep 2015 | Jan 2017 | 1040741 |
| Okt 2015 | Feb 2017 | 1047311 |
| Nov 2015 | Mar 2017 | 1026544 |
| Des 2015 | Apr 2017 | 1042607 |
| Jan 2016 | Mei 2017 | 1049820 |
| Feb 2016 | Jun 2017 | 1079105 |
| Mar 2016 | Jul 2017 | 1117613 |
| Apr 2016 | Ags 2017 | 1195881 |
| Sep 2017 | | 1261502 |

Source: Badan Pusat Statistik 2017
The results of the prediction of tourist visits to Indonesia in September 2017 using the four monthly moving average method is 1,261,502 people. With the help of the 3.0 version of POM (Production and operation Management) software, ME (mean error) was obtained 43,985, MAE (mean absolute error) 59,749, and MAPE (mean absolute percentage error) 0.06. [POM-QM 3.0]

Complete results of predictions of foreign tourist arrivals using exponential smoothing method with the help of POM (Production and operation Management) software version 3.0 can be seen in Table 5. Predictions of foreign tourists for September 2017 were 1,220,247 obtained by ME (mean error) 56,035, MAE (mean absolute error) 71,277, and MAPE (mean absolute percentage error) 0.07. [POM-QM 3.0] [Untung, 1991]

Table 5 Results of predictions of foreign tourists visiting the exponential smoothing method (α = 0.25). [2] [POM-QM 3.0]

| Month    | Tourist | Month    | Tourist |
|----------|---------|----------|---------|
| Jan 2015 | 785973  | Mei 2016 | 891183  |
| Feb 2015 | 800462  | Jun 2016 | 897189  |
| Mar 2015 | 810614  | Jul 2016 | 887304  |
| Apr 2015 | 808429  | Sep 2016 | 950744  |
| Mei 2015 | 819418  | Okt 2016 | 964721  |
| Jun 2015 | 832660  | Nov 2016 | 983704  |
| Ags 2015 | 843891  | Des 2016 | 988361  |
| Sep 2015 | 860844  | Jan 2017 | 1019603 |
| Okt 2015 | 875665  | Feb 2017 | 1022935 |
| Nov 2015 | 876198  | Mar 2017 | 1006597 |
| Des 2015 | 866001  | Apr 2017 | 1021595 |
| Jan 2016 | 896130  | Mei 2017 | 1051741 |
| Feb 2016 | 875674  | Jun 2017 | 1076322 |
| Mar 2016 | 878832  | Jul 2017 | 1085146 |
| Apr 2016 | 887879  | Ags 2017 | 1158775 |
| Sep 2017 | 1220247 |

Table 6 Error Analysis Results Prediction of foreign tourists visiting Indonesia

| Statistik Descritif | Moving Average | Eksponential Smoothing |
|---------------------|----------------|-----------------------|
| Mean Error          | 43.985         | 56.053                |
| MAE                 | 59.749         | 71.277                |
| MAPE                | 0.06           | 0.07                  |

From table 6 shows that the moving average method has a smaller error analysis than the exponential smoothing method. Thus the results of the prediction of foreign tourist arrivals to Indonesia with the moving average method have a better level of accuracy than the exponential smoothing method.

4.2 Foreign Exchange Analysis of foreign tourists visiting

Foreign exchange of state revenue from the sector of foreign tourist visits to Indonesia from 2010 to 2014 can be seen in table 7 below.
Table 7 Foreign Exchange Revenue (in millions of USD)

| COUNTRY OF ORIGIN | 2010     | 2011     | 2012     | 2013     | 2014     |
|-------------------|----------|----------|----------|----------|----------|
| Brunei            | 34,83    | 36,43    | 26,53    | 17,31    | 18,29    |
| Malaysia          | 864,34   | 930,85   | 972,1    | 1,002,53 | 1,053,89 |
| Philippine        | 161,97   | 175,90   | 195,5    | 206,31   | 212,90   |
| Singapora         | 927,97   | 1,054,21 | 1,000,0  | 1,049,41 | 1,145,83 |
| Thailand          | 97,46    | 127,92   | 144,3    | 139,10   | 127,13   |
| Hong Kong         | 75,39    | 91,53    | 91,19    | 119,47   | 125,24   |
| India             | 147,29   | 175,13   | 171,4    | 221,62   | 254,95   |
| Japan             | 409,87   | 419,80   | 477,8    | 558,85   | 597,71   |
| South of Korea    | 251,05   | 295,82   | 290,3    | 381,83   | 420,89   |
| Pakistan          | 6,72     | 5,06     | 12,97    | 6,15     | 7,42     |
| Bangladesh        | 10,49    | 13,71    | 13,49    | 9,53     | 8,74     |
| Sri Lanka         | 7,65     | 6,73     | 11,75    | 9,33     | 11,04    |
| Taiwan            | 184,76   | 188,15   | 204,5    | 231,09   | 254,66   |
| China             | 433,38   | 520,61   | 714,5    | 810,79   | 981,46   |
| Arab Saudi        | 170,03   | 211,06   | 135,6    | 178,73   | 198,20   |
| Austria           | 24,26    | 24,01    | 28,88    | 31,74    | 35,66    |
| Belgia            | 40,38    | 32,73    | 40,20    | 52,12    | 48,08    |
| Denmark           | 26,99    | 29,48    | 38,45    | 39,48    | 37,27    |
| Perancis          | 244,25   | 229,33   | 273,63   | 316,26   | 345,96   |
| Germany           | 217,38   | 229,41   | 245,07   | 251,54   | 312,27   |
| Italia            | 49,63    | 68,66    | 70,76    | 105,19   | 101,17   |
| Belanda           | 269,20   | 263,02   | 243,16   | 280,64   | 320,03   |
| Spanyol           | 47,44    | 35,99    | 46,34    | 61,07    | 75,20    |
| Swedia            | 40,94    | 48,51    | 37,24    | 51,76    | 49,78    |
| Swiss             | 55,46    | 61,11    | 64,75    | 69,97    | 93,50    |
| England           | 277,14   | 269,61   | 321,92   | 349,20   | 401,48   |
| Finlandia         | 23,07    | 21,80    | 21,89    | 34,07    | 28,79    |
| Norwegia          | 21,22    | 27,78    | 33,20    | 29,32    | 26,60    |
| Rusia             | 136,80   | 178,64   | 170,00   | 191,97   | 176,91   |
| U S A             | 252,23   | 317,28   | 312,55   | 363,91   | 406,57   |
| Canada            | 67,70    | 80,97    | 80,95    | 96,35    | 122,12   |
| Central of America| 3,20     | 4,28     | 2,22     | 1,82     | 5,80     |
| South of America  | 42,64    | 41,00    | 46,31    | 49,27    | 54,05    |
| Australia         | 1,171,87 | 1,502,10 | 1,452,31 | 1,470,89 | 1,802,8  |
| New Zealand       | 43,25    | 60,27    | 93,56    | 82,80    | 120,73   |
| Egypt             | 4,02     | 5,18     | 5,17     | 6,35     | 10,80    |
| Others            | 742,39   | 754,56   | 1,005,85 | 1,144,32 | 1,135,5  |
| **TOTAL**         | **7,603,45** | **8,554,39** | **9,120,85** | **10,054,15** | **11,166,13** |

Sumber: Badan Pusat Statistik 2017
From table 7 it can be seen that tourists from Australia are the biggest foreign exchange earners during the period 2010 to 2014.

4.3 Contribution of tourism to foreign exchange revenue of the Republic of Indonesia

Indonesia’s foreign exchange rating from 2011 to 2015 can be seen in table 8

| Rank | Commodities     | Value (million USD) 2011 | Value (million USD) 2012 | Value (million USD) 2013 | Value (million USD) 2014 | Commodity Value (million USD) 2015 |
|------|-----------------|---------------------------|--------------------------|-------------------------|-------------------------|-----------------------------------|
| 1    | Minyak & gas bumi | 41,477.10                 | 32,633.20                | 18,052.10               | 30,318.80               | Minyak & gas bumi 36,977.00       |
| 2    | Batu bara        | 22,221.80                 | 24,501.40                | 15,543.00               | 20,819.30               | Batu bara 26,166.30               |
| 3    | Minyak kelapa sawit | 17,261.30                | 15,839.10                | 15,385.20               | 17,464.90               | Minyak kelapa sawit 18,845.00     |
| 4    | Pariwisata       | 14,258.20                 |                          |                         |                         | Pariwisata 12,125.89             |
| 5    | Pakaian jadi     | 8,554.39                  | 9,120.85                 | 7,571.90                | 7,450.90                | Pakaian jadi 9,120.85             |
| 6    | Alat listrik     | 7,801.50                  | 7,501.00                 | 6,456.30                | 7,021.70                | Alat listrik 7,304.70             |
| 7    | Tekstil          | 5,636.30                  | 5,434.80                 | 4,956.00                | 5,179.70                | Tekstil 5,135.60                  |
| 8    | Kayu olahan      | 4,802.10                  | 5,295.30                 | 4,064.80                | 4,269.10                | Kayu olahan 4,269.10             |
| 9    | Bahan kimia      | 4,630.00                  | 3,802.20                 | 3,815.80                | 3,914.10                | Bahan kimia 3,972.00              |
| 10   | Kertas dan barang dr kertas | 3,514.50            | 3,605.50                 | 3,653.70                | 3,656.30                | Kertas dan barang dr kertas 3,337.70 |
| 11   | Kayu olahan      | 3,288.90                  | 3,501.60                 | 2,807.60                | 3,780.00                | Kayu olahan 3,337.70             |

Source: Badan Pusat Statistika [2017]

From table 8, it can be seen that the tourism sector contributed to Indonesia's increasing foreign exchange revenue and ranked fourth in 2015 with an average of .10,224.24 million USD per year during the period 2011 to 2015.

4.4 Analysis of the length of stay of tourists

The average length of stay of foreign tourists in Indonesia by country of origin from 2009 to 2014 is presented in table 9 below.
Table 9 Average length of stay of tourists

| Negara Asal | Tahun 2009 | Tahun 2010 | Tahun 2011 | Tahun 2012 | Tahun 2013 | Tahun 2014 |
|-------------|------------|------------|------------|------------|------------|------------|
| Brunei      | 6,38       | 5,23       | 5,15       | 5,43       | 4,98       | 7,29       |
| Malaysia    | 5,28       | 5,03       | 5,23       | 5,26       | 4,82       | 5,30       |
| Filipina    | 7,92       | 7,09       | 6,11       | 6,38       | 5,45       | 5,46       |
| Singapura   | 4,51       | 4,67       | 4,44       | 4,27       | 4,17       | 4,16       |
| Thailand    | 5,77       | 5,78       | 6,25       | 6,32       | 6,33       | 5,88       |
| Hong Kong   | 5,90       | 5,85       | 5,92       | 5,59       | 5,81       | 5,96       |
| India       | 8,89       | 8,68       | 7,90       | 7,18       | 7,39       | 7,75       |
| Jepang      | 6,50       | 6,14       | 6,37       | 6,43       | 6,86       | 6,75       |
| Korea Selatan | 5,49 | 5,93       | 5,93       | 5,57       | 6,40       | 6,35       |
| Pakistan    | 7,50       | 11,69      | 4,68       | 7,94       | 7,80       | 7,41       |
| Bangladesh  | 11,05      | 11,42      | 9,08       | 6,82       | 8,80       | 5,71       |
| Sri Lanka   | 6,44       | 11,20      | 5,63       | 7,52       | 6,00       | 6,88       |
| Taiwan      | 5,79       | 5,84       | 5,63       | 6,12       | 5,78       | 5,89       |
| Cina        | 6,21       | 5,98       | 6,01       | 6,31       | 6,21       | 6,28       |
| Arab Saudi  | 10,31      | 9,37       | 9,14       | 8,69       | 7,69       | 7,42       |
| Austria     | 12,58      | 12,16      | 13,03      | 11,36      | 11,93      | 13,31      |
| Belgia      | 12,60      | 13,68      | 10,74      | 12,33      | 12,15      | 14,90      |
| Denmark     | 12,51      | 13,24      | 15,20      | 13,49      | 16,31      | 9,89       |
| Perancis    | 11,85      | 12,59      | 13,30      | 12,06      | 13,06      | 12,92      |
| Jerman      | 12,93      | 12,58      | 13,55      | 12,59      | 12,61      | 12,47      |
| Italia      | 10,95      | 10,69      | 11,62      | 10,18      | 11,34      | 10,04      |
| Belanda     | 14,10      | 15,52      | 13,97      | 14,59      | 13,39      | 15,14      |
| Spanyol     | 12,65      | 12,18      | 10,32      | 11,30      | 11,89      | 15,26      |
| Portugal    | 9,69       | 12,63      | 10,77      | 10,25      | 11,13      | 9,45       |
| Swedia      | 10,21      | 18,68      | 14,33      | 15,14      | 12,83      | 14,53      |
| Swiss       | 13,78      | 14,91      | 13,83      | 12,68      | 13,97      | 15,85      |
| Inggris     | 10,75      | 11,76      | 10,26      | 11,37      | 10,47      | 10,14      |
| Finlandia   | 19,21      | 12,20      | 13,15      | 13,17      | 12,21      | 11,41      |
| Norwegia    | 11,80      | 11,06      | 13,38      | 11,61      | 12,89      | 9,20       |
| Rusia       | 9,84       | 11,38      | 13,26      | 12,00      | 12,67      | 13,02      |
| Amerika     | 11,11      | 10,55      | 10,98      | 10,41      | 10,49      | 11,07      |
| Serikat     | 11,11      | 12,13      | 11,89      | 11,36      | 11,94      | 14,02      |
| Kanada      | 7,63       | 11,50      | 10,00      | 6,00       | 9,75       | 12,58      |
| Amerika     | 8,95       | 15,88      | 11,59      | 11,68      | 10,89      | 10,89      |
| Australia   | 10,22      | 10,56      | 9,47       | 9,26       | 9,62       | 9,08       |
| Selandia Baru | 10,06 | 10,16      | 10,97      | 11,20      | 10,10      | 10,24      |
| Mesir       | 8,27       | 6,38       | 9,64       | 12,75      | 5,75       | 5,00       |
| Lainnya     | 9,29       | 9,37       | 10,77      | 9,50       | 8,26       | 8,79       |

**RATA - RATA** | 7,69 | 8,04 | 7,84 | 7,70 | 7,65 | 7,66

*Source : Badan Pusat Statistik & passenger exit survey*
From table 9 it can be seen that the average length of stay of foreign tourists in Indonesia is 8 days.

4.5 Visit of Tourists in 2016-2017
Foreign tourist visits during 2016 to August 2017 are presented in table 10 below.

| Month   | Year 2016  | Year 2017  | Growth |
|---------|-----------|-----------|--------|
| January | 814,303   | 1,032,930 | 26.8%  |
| February| 888,309   | 957,583   | 7.8%   |
| March   | 915,019   | 1,066,588 | 16.6%  |
| April   | 901,095   | 1,142,180 | 26.7%  |
| May     | 915,206   | 1,150,067 | 25.7%  |
| June    | 857,651   | 1,111,616 | 29.6%  |
| July    | 1,032,741 | 1,379,661 | 33.6%  |
| August  | 1,031,986 | 1,404,664 | 36.1%  |
| September| 1,006,653 |           |        |
| October | 1,040,651 |           |        |
| November| 1,002,333 |           |        |
| Desember| 1,113,328 |           |        |

Source: Badan Pusat Statistika [2017]

4.6 Choice of Tourist Destinations in Wisman
Indonesia has a tourist attraction that has the attraction of beauty and uniqueness of each. Of the many destinations there are eight locations that are a favorite place for foreign tourists. The eight tourist destinations are as follows:

| NO | TOURISM DESTINATION | DESCRIPTION |
|----|---------------------|-------------|
| 1  | Bali Island         | Bali is the most sought after tourist destination by foreign tourists due to the beauty of its beaches such as Kute Beach, Pandawa Beach, Jimbaran, Nusa Penida, Nusa Lembongan, Siring, Tanah Lot, and unique cultural customs and various dances and pure etc. |
| 2  | Komodo National Park East Nusa Tenggara | The national park located in West Manggarai district, NTT has the beauty of Kanawa beach, Komodo animals, trekking to Gili Lawa and Padar Island |
| 3  | Bromo Tengger National Park, East Java | It has the beauty of the sunrise on the penanjakan, the crater of Mount Bromo, the desert savanna, and the mountain Semeru |
| 4  | Kelimutu Flores Mountain National Park | The beauty of the sunrise and the three-color lake and the hospitality of the villagers of Moni |
| 5  | Raja Ampat           | Unique natural landscapes and beautiful underwater nature and the hospitality of the Wayag, Waigeo, Waisai and Misool residents |
| 6  | Lombok               | Lombok Island is surrounded by beaches that have beautiful panoramas such as Sengigi, Gili Trawangan, Tanjung Aan, Mawun Beach, Mawi beach and Selong Belanak |
| 7  | Jogjakarta           | Has many beautiful beaches, majestic temples, Borobudur temple, Prambanan temple, Ratu Boko, Yogyakarta palace and Malioboro |
| 8  | Manado Bunaken National Park North Sulawesi | Located in Manado, North Sulawesi is famous for the beauty of the underwater park. Other tourist destinations are Manado Tua Island, Siladen Island, Nain Island and Mantehage Island. |

Source: Government Tourism Office
5. Conclusion
Tourism is a potential commodity in its role in increasing Indonesia's foreign exchange income. This is evident in the period of 2011 to 2015, the tourism sector ranks continuously increasing. The tourism sector contributes to Indonesia's increasing foreign exchange revenue and ranks fourth in 2015 with an average of 10,224.24 million USD per year. Based on the results of the calculation of foreign tourist visits to Indonesia for the period 2002 to 2016 an average of 7,041,315 people per year and an average growth rate of 8.55% per year for the last five years.

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