

## The Effect of Visitor, Tourist, Hotel Occupancy Rate, and US Dollar Exchange Rates on the Value of Beef Imports

Pebrina Ronpalna<sup>1</sup>, Nyoman Djinar Setiawina<sup>2</sup>

<sup>1,2</sup> Faculty of Economics and Business, Udayana University (Unud), Bali, Indonesia

**ABSTRACT:** Beef is one type of commodity that is commonly imported in Bali. The development of the tourism industry, hotel and restaurant business in Bali causes the amount of imported beef to be increasingly needed. Beef is usually the most imported from Australia and New Zealand. The object of this study is the influence of tourist visits, hotel occupancy rates, US dollar exchange rates on the value of beef imports in Bali. This study uses secondary data from 2004 to 2018. This research uses multiple linear regression analysis methods and is processed using the Eviews program. The results showed that simultaneous tourist visits, hotel occupancy rates, and the US dollar exchange rate significantly influence the value of beef imports in the province of Bali. Partially, the number of tourist visits has a positive and significant effect on the value of beef imports in Bali, hotel occupancy rates and the US dollar exchange rate have no significant effect on the value of beef imports in Bali.

**Keywords -:** Tourist Visits, Hotel Occupancy Rates, Exchange Rates, Imports

**JEL Classification :** Z32, Z30, F13, F10

### I. INTRODUCTION

According to Krugman (1999), one of the factors driving imports is the limited quality of human resources and technology possessed in processing existing resources in order to achieve optimal effectiveness and efficiency. Recently, imports have become a type of activity that cannot be separated from our country. Some commodities commonly imported are rice, chicken, beef, chocolate, coffee, fruits, organic chemicals, copper and many other commodities. As in Bali, one of the commodities that is often imported is beef.

Food import is a dependency that is currently very alarming and is still a seasonal case that must be handled by the Government (Jiuhardy, 2016). The increasing population, the standard of living of the people and the changing tastes of consumers will cause a shift in food needs towards animal protein. This is what causes beef consumption in the country tends to increase. The need for domestic beef has been met through local cattle, imported cattle, and imported beef. If there is no significant technological change in the domestic beef production process and there is no significant increase in cattle population, then the gap between domestic beef production with the number of requests will widen, and have an impact on the higher number of imports (Hadi and Ilham, 2000).

Head of Animal Breeding and Animal Production of the Livestock and Animal Health Service Office of Bali explained that currently the population in Bali is around 4.2 million people and it is estimated that every day there is an additional mobilization of about 1 million people so that food consumption is needed for around 5.2 million people each the day includes beef needs. Meanwhile, the cattle population in Bali is around 507,794 cows with a production of around 11.3 thousand tons of beef or the equivalent of 83.822 cows. Of this amount, it turns out that in meeting local consumption only 31,190 head of cattle are used and the remaining 52,632 head of cattle are used to meet the supply quota for national needs (Balipost.com, 2018).

Through these data it can be shown that the beef supply demand balance in Bali is in a surplus position. However, if it is further investigated from the availability of beef in Bali that there is an importation of beef to Bali through imports with an average amount of around 1,428,693 kg or 1.4 thousand tons per year in 2015-2017 (Disnakeswan, 2018). The Chairperson of the Bali Cattle Management Committee said that Bali needs 2 thousand tons of beef each year where 80 percent comes from imported beef and 15 percent is local beef (Baliexpress, 2017). The Balinese themselves do not consume too much beef because the majority of the population in Bali are Hindu. Therefore, beef imports are generally carried out by the hotel and restaurant which is used for the food needs of tourists visiting Bali.

Beef imports in Bali can be influenced by several things including the first is the visit of tourists. The development of the tourism sector in Bali will attract more tourists from all over the world to visit it. Every year,

Bali experiences an increasing number of tourists both domestically and internationally which then triggers high food demand in Bali, especially beef which is not only a necessity for the local community but also a necessity for tourists. This also causes the food and beverage industry such as restaurants and cafes to grow rapidly. Through several studies conducted in several countries, the tourism sector and international trade (export-import) have a positive causal relationship. This means that the two sectors can influence each other (Turner & Witt, 2001 and Kadir & Jussof, 2010). Shan and Wilson (2001) conducted a similar study on the Chinese economy confirming that there is indeed a relationship between international trade (export-import) and tourism. According to Majewska and Struzik (2012), tourism can encourage the flow of international goods and on the other hand, trade can stimulate tourism.

Beef imports in Bali can also be affected by hotel occupancy rates. The development of tourism has also led to the development of accommodation facilities such as hotels needed by tourists to stay overnight while on vacation. The development of the hotel industry not only provides lodging but also provides almost all the needs of tourists including food needs. The hotel need for beef is also not insignificant, especially star-rated hotels in Denpasar and Badung which have high tourist occupancy rates. Beef is one of the foods that are really liked by guests where a lot of processed foods from beef are offered at hotels such as beef steak, beef burgers, and other menus.

The lack of absorption of local beef in Bali is due to the large number of hotels and restaurants in Bali who prefer to use imported beef because the quality of local beef cannot meet the standards of hotel and restaurant needs. In a previous study, Yuphardi (2017) explained that Harris Hotel in Kuta only uses 10 kg of Balinese beef per day for local cuisine while imported beef is used as much as 90 kg per day for western cuisine. This is because tourists who prefer imported beef because it has a softer and tender texture than local beef. In addition to the factor of tourist visits and hotel occupancy rates, the value of beef imports is also influenced by the dollar exchange rate because imports are one of the international trade activities. Currency exchange rates have a very important role in international trade because trade conducted between two countries always uses two different currencies. To facilitate transactions between countries, the use of the same exchange rate is needed because the value of the currency fluctuates and can affect the value of the transaction. Therefore we use an exchange rate that has a price level agreed upon by residents of the two countries to trade with each other (Mankiw, 2006: 128). The US dollar exchange rate is used as an international standard currency due to the stability of the value of the currency is high and can easily be traded and is also accepted by everyone as a means of payment (Latief, 2001: 15)

## II. LITERATURE REVIEW AND HYPHOTHESES DEVELOPMENT

Every study needs an explanation of the rationale for solving the problem being studied. That is why a conceptual framework is needed that makes it easy for us to describe the angle of research to be highlighted. Sugiyono (2014: 128) states that the conceptual framework will link theoretically between research variables namely between independent variables and dependent variables. Conceptual framework is a framework of thinking that can help us understand the main problems that usually use a scientific approach in it and explain the variables to be studied. In brief, this study will discuss the effect of tourist visits, hotel occupancy rates and the US dollar exchange rate on the value of beef imports in Bali.

One of the reasons for a country to import is not because the goods needed are not available in the area but there are limitations to the quality of human resources and technology in processing available resources so that imported products are considered to meet the required quality standards more than domestic products. Krugman (1999) explained that one of the factors driving imports was the limited quality of human resources and technology possessed to process available natural resources in order to achieve optimal effectiveness and efficiency in domestic production activities. This is the reason for the large amount of beef imported into Bali. The high supply of local beef in Bali is not accompanied by high demand by consumers.

Most beef in Bali is consumed by tourists who visit so beef imports in Bali are carried out because of the high demand for tourists for beef. Every tourists who visit definitely need food to support their physical needs during their vacation trips. In a previous study, Dharma and Dewi (2017) stated that the number of tourist arrivals had a significant effect on the import of alcoholic drinks in Bali. The increasing number of tourist visits in Bali has caused rapid development in the hospitality industry as a means for tourists to meet their accommodation needs. The hotel is not a facility that only provides a place to stay for guests who visit but also provides food and beverage services. Most of the beef imports in Bali are carried out by the hotel to support the consumption of tourists. The reason for hotels in Bali is to use imported beef is because local beef is considered not to meet the hotel needs. So that the increasing percentage of hotel occupancy rates will cause beef imports in Bali to increase.

In a previous study, Agus and Ayuningsasi (2016) stated that the US Dollar Exchange Rate influenced the import of Australian cattle into Indonesia. International trade is closely related to the exchange rate because trade carried out by two countries must use two different currencies so that one currency is needed by the two

countries. The United States Dollar Exchange Rate is a currency that can be accepted by most countries in the world. In this study it is assumed that beef imports in Bali are influenced by the US Dollar Exchange.

Based on the explanation above, the hypothesis that can be made is that simultaneously, the number of tourist visits, hotel occupancy rates and the US dollar exchange rate affect the value of beef imports in Bali. Partially, the number of tourist visits and hotel occupancy rates have a positive effect on the value of beef imports in Bali, the US dollar exchange rate has a negative effect on the value of beef imports in Bali and the US dollar exchange rate has a dominant effect on the value of beef imports in Bali.

### III. METHODS

This type of research is including quantitative research in which this research leads to data analysis by counting numbers. According to the quantitative method is interpreted as a research method based on the philosophy of positivism, used to examine the population or a particular sample, data collection using research instruments, quantitative / statistical data analysis, with the aim to test the hypothesis set (Sugiyono, 2012: 13). This research was conducted in Bali using data obtained from the Central Statistics Agency, the Ministry of Trade, Bank Indonesia and other sources related to the object of research concerned. The reason the writer chose Bali as a research location is because Bali is one of the places that imports beef and Bali is the most popular tourism area in Indonesia which has natural resources which are recognized tourism objects for foreign countries.

Import is an activity of entering goods from abroad into the country to fulfill needs or be marketed domestically. Beef import variable (Y) used in this study is the data on beef import values in Bali in 2004-2018 obtained through the Ministry of Trade. (in USD).

The number of tourist visits (X1) in this study refers to all people who visit Bali but do not intend to stay and settle. The variable tourist visits in this study is data on the number of foreign and domestic tourists visiting Bali in the period 2004-2018 obtained from the Bali Central Statistics Agency (in person units) According to Damardjati (2006: 121), the occupancy rate is the percentage of rooms occupied or rented out to guests compared to the total number of rooms rented calculated on a daily, monthly, or annual basis. Hotel occupancy rate variable (X2) in this study is the percentage of hotel occupancy rates in Bali in the period 2004-2018 obtained through the Bali Central Statistics Agency (in units of percent).

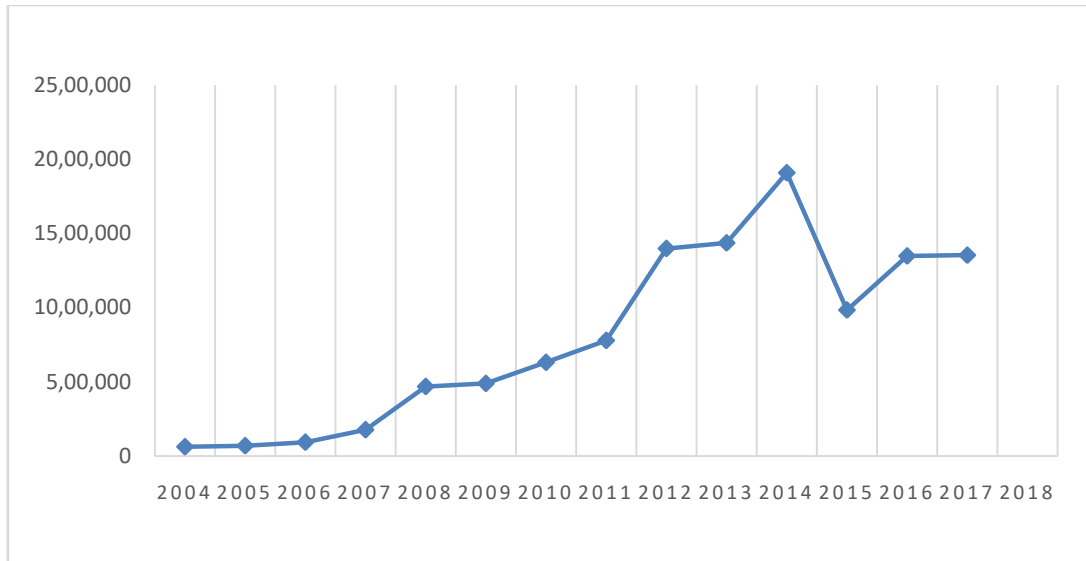
An exchange rate is an currency of a country that is measured or expressed in other currencies (Krugman 1999). The indicator used in this study is how much the exchange rate of the rupiah against the US dollar through data in the period 2004-2018 obtained through Bank Indonesia (in units of Dollars to Rupiahs) The types of data used in this study are qualitative and quantitative data. The data used in this study are secondary data that provide information about each of the variables studied. The data used in this study were sourced from the Central Statistics Agency, Bank Indonesia, the Ministry of Trade, and other sources related to variables.

Data collection method used in this study is the observation method that is collecting data by observing, taking notes studying the descriptions of books, theses, journals, articles, and observing the studied variables.

The analysis technique used in this study is multiple linear regression analysis to detect the relationship between the independent variables used on the dependent variable which is then tested using a classic assumption test to ensure that there is no serious imbalance of the assumptions that must be met in Ordinary Least Square (OLS) which includes normality test, heteroscedasticity test, multicollinearity test and autocorrelation test. Furthermore, in this study also carried out the F test and t test to see the relationship between the independent variables on the dependent variable simultaneously and partially.

### IV. RESULTS AND DISCUSSION

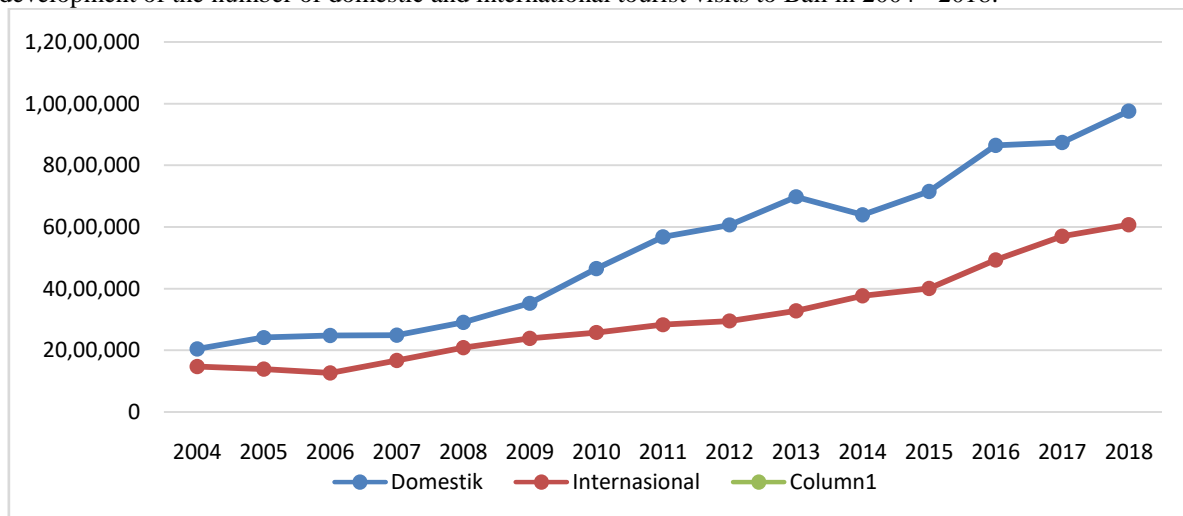
In Bali alone the cattle population reached 507,794 head with a production of around 11.3 thousand beef or equal to 83,822 head of cattle. In meeting local consumption needs only about 31,190 head of cattle are used and the remaining 52,632 head of cattle are used to meet the supply quota for national needs (Balipost.com, 2018). On the other hand, if it is further investigated, there is also the import of beef to Bali through imports, which on average amounts to 1,428,693 kg or 1.4 thousand tons per year in 2015-2017. The reason for the high demand for imported beef in Bali is because local beef in Bali itself is considered to have less good quality compared to imported beef which has a softer texture so that local beef is considered unacceptable by hotels and restaurants. Beef imported to Bali usually comes from Australia and New Zealand.



Source: Central Bureau of Statistics (processed PDSI, Secretary General of the Ministry of Trade)

**Figure 2: Value of Beef Imports in Bali 2004-2018 (in US \$)**

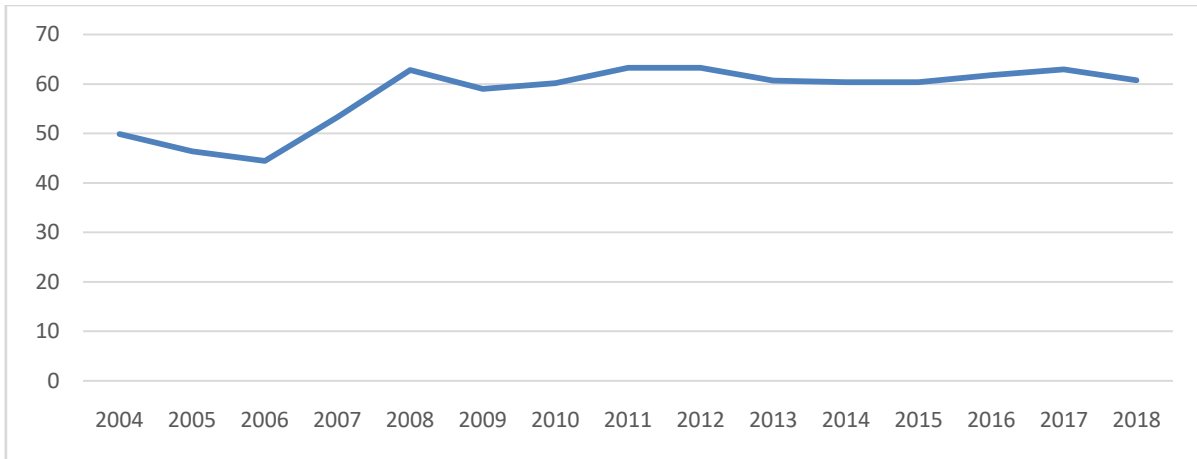
In figure 2 above, it has been shown data on the development of beef import values in Bali in 2004 - 2018 which tends to increase. The highest import value occurred in 2014 which was valued at USD 1,908,162 and experienced a significant decrease in 2015 to USD 983,737. Until now imported beef continues to be excellent for hotels and restaurants in Bali so that it directly impacts local cattle farmers. The following is a graph of the development of the number of domestic and international tourist visits to Bali in 2004 - 2018:



Source: Bali Central Statistics Agency (2019)

**Figure 3: Number of Tourist Visits to Bali in 2004-2018**

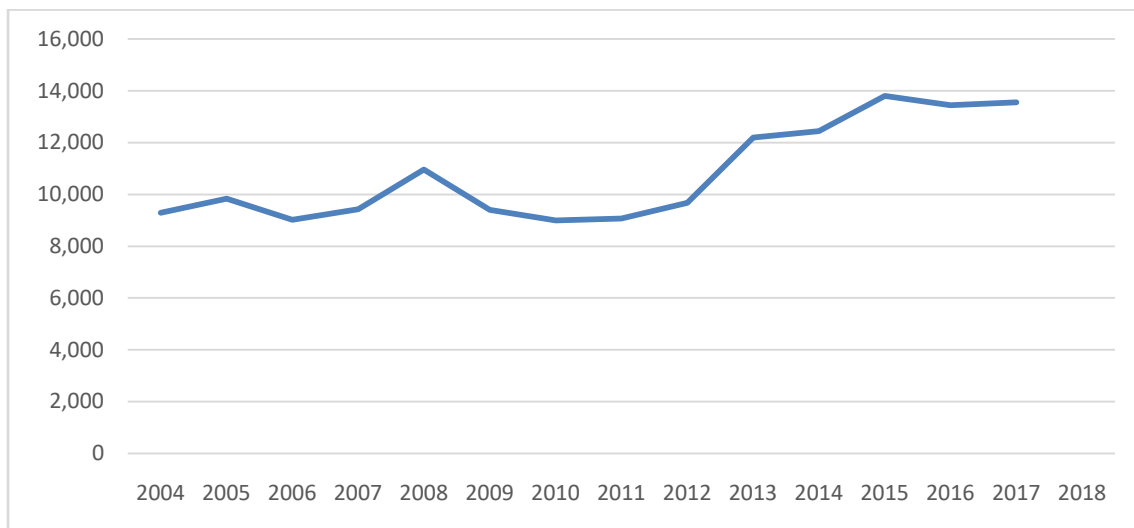
Through the above data it can be seen that the number of tourists visiting Bali every year has increased. Every year the number of international tourist visits is always higher, almost double that of domestic tourist visits. The highest number occurred in 2018 where total domestic and international visitors reached 15,828,464 people. the number of tourist visits to Bali is expected to affect the value of beef imports. The following is a graph of hotel occupancy rates in Bali in 2004-2018:



Source: Bali Central Statistics Agency (2019)

**Figure 4: Hotel Occupancy Rates in Bali 2004-2018 (in percent)**

Above is a table of developments in hotel occupancy rates in Bali that have fluctuated. Since 2010 hotel occupancy rates in Bali have experienced insignificant fluctuations. The highest hotel occupancy rate occurred in 2017 at 62.89. There was a significant decrease from 2004 to 2006 to the percentage of hotel occupancy rates in Bali which subsequently increased in 2008 with a significant increase.



Source: Central Bank of Republic of Indonesia (BI)

**Figure 5: Exchange Rates of US Dollar in 2004-2018 (in Rupiah)**

The table above shows the US dollar exchange rate which fluctuated from 2004 to 2011. But after that it continued to increase reaching Rp14,481 in 2018. The higher exchange rate of the dollar against the rupiah indicates that the rupiah is weakening which in turn has an impact on imports. Head of the Bank Indonesia Monetary Management Department (BI) NanangHendarsah (Kontan News, 2019) said, the main factor weakening the rupiah came from external sentiment.

**Descriptive statistics**

Descriptive statistical analysis is used to provide a general description of the data used. Table 4.1 shows the descriptive statistics of each variable used in the study in the form of independent variables namely the number of tourist visits (X1), hotel occupancy rate (X2) and US dollar exchange rate (X3) and the dependent variable is the value of beef imports in Bali (Y). The research variables are interpreted as mean, median, maximum, minimum. The number of observations in the study is 30 data and is a time series data (time series) with a span of time for the years 2004-2018.

**Table 2: Descriptive statistics**

	Y	X1	X2	X3
Mean	413183.6	4207476.	58.38267	11227.63
Median	390559.5	3875314.	60.31000	10237.00

Maximum	1023592.	8157703.	66.56000	15202.00
Minimum	17309.00	1513550.	41.00000	9224.000
Std. Dev.	316187.5	2082581.	7.023585	1946.957
Observations	30	30	30	30
Notes: Y = Value of beef imports in Bali; X1 = Number of tourist visits; X2 = hotel occupancy rate; X3 = US dollar exchange rate				

Source: Data processed with eviews 10, 2020

Based on the table above, the statistical analysis of each variable is as follows:

a. Value of beef imports in Bali (Y)

The highest import value of beef in Bali was 1023592 USD, occurring in July to December 2013. The lowest import value of beef in Bali (Y) was 17309 USD occurring in January-June 2004. The mean and median values for the variable meat import value cattle in Bali (Y) amounting to 413183.6 and 390559.5. The standard deviation of the variable value of beef imports in Bali (Y) is 316187.5.

b. Number of tourist visits (X1)

The highest number of tourist visits (X1) of 8157703 people occurred in July to December 2018 and the lowest number of tourist visits (X1) of 1513550 people occurred in January to June 2004. The mean and median number of visits tourists (X1) amounted to 4207476 and 3875314. The standard deviation of the number of tourist visits was 2082581.

c. Hotel occupancy rate (X2)

The highest hotel occupancy rate (X2) of 66.56 occurred in July to December 2018 and the lowest hotel occupancy rate of 41 occurred in January to June in 2006. The mean (mean) and median variables of hotel occupancy rates were 58,38267 and 60.31. The standard deviation of the hotel occupancy rate variable is 7.023585.

d. US dollar exchange rate (X3)

The highest US dollar exchange rate (X3) of 15202 USD occurred in July to December 2018 and the lowest US dollar exchange rate (X3) of 9224 USD occurred in January to June 2004. The mean and median value of the dollar exchange rate AS (X3) of 11227.63 and 10237. The standard deviation of the variable exchange rate of the US dollar (X3) is 1946,957.

### Classic assumption test

One purpose of using the regression model is the prediction of the dependent variable (Y). Therefore, to ensure the prediction results are not biased, it must be tested again so that the model is valid and does not violate the assumptions of the least squares method, namely BLUE (Best, Linear, Unbias Estimator) or in other words called the classical assumption test. To be more convincing, classical assumptions must be tested through: 1) Residual Normality Test, 2) Autocorrelation Test, 3) Multicollinearity Test, and 4) Heteroscedasticity Test (Utama, 2016: 99)

### Stationary Test

Stationary test is a test conducted to find out that time series data is not affected by time. The decision making criteria are as follows:

- Data stationer, if the probability value  $< 0.05$  or
- The data is not stationary, if the probability value  $> 0.05$

The first stage stationary test in this study can be seen in the table below:

**Tabel 3: Hasil Uji Stationer TahapPertama**

Variable	t-Statistic	Probability
Value of beef imports in Bali (Y)	-1.389011	0.5732
Number of tourist visits (X1)	1.968644	0.9997
Hotel occupancy rate (X2)	-1.910424	0.3228
US dollar exchange rate (X3)	0.235324	0.9702

Source: Data processed with eviews 10, 2020

The table above shows that the dependent variable beef import value in Bali has a probability value of 0.5732 greater than 0.05 and the independent variable number of tourist visits, hotel occupancy rates and the US dollar exchange rate has a probability value of  $> 0.05$ , so it can be concluded that the data in the study this is declared not stationary. Non stationary data in research can be overcome by doing difference data. The stationary test results after the difference are as follows:

**Table 4: Stationary Difference Test Results 2**

Variable	t-Statistic	Probability
Value of beef imports in Bali (Y)	-10.90510	0.0000
Number of tourist visits (X1)	-21.85126	0.0001
Hotel occupancy rate (X2)	-9.839265	0.0000
US dollar exchange rate (X3)	-3.995267	0.0048

Source: Data processed with eviews 10, 2020

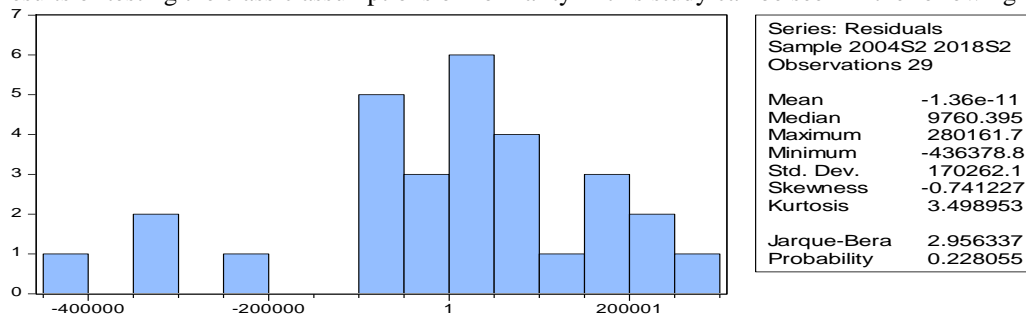
Stationary test after difference 2 test, shows that the dependent variable is the import value of beef in Bali and the independent variable is the number of tourist visits, hotel occupancy rate and US dollar exchange rate has a probability value smaller than alpha 0.05, so it can be concluded that the data in this study declared stationary.

**Normality test**

The normality test aims to test whether in the regression model, confounding or residual variables have a normal distribution. This normality assumption test is carried out using the Jarque-Bera test. Criteria for testing carried out are:

- a. Data are normally distributed, if JB (Jarque-Bera) Probability counts > alpha level 0.05 or
- b. Distributed data is not normality, if the JB Probability (Jarque-Bera) count < alpha level 0.05

The results of testing the classic assumptions of normality in this study can be seen in the following figure:



Source: Data processed with eviews 10, 2020

**Figure 6: Normality Test**

Based on the picture above, the value of Prob. JB count is 0.228055 > 0.05 so it can be concluded that the residuals distributed by the data are normally distributed, which means that the classical assumptions about normality have been fulfilled.

**Multicollinearity Test**

The multicollinearity test is used to show the existence of a perfect or certain linear relationship between some or all explanatory variables (free) of the multiple regression model. In this study the multicollinearity test uses Variance Inflation Factor (VIF) with the following decision-making criteria:

- a. Data does not occur multicollinearity problems, if the VIF value < 10 or
- b. Data experiencing multicollinearity problems, when the VIF value > 10

Multicollinearity test results can be seen in the table below

**Table 5: Multicollinearity Test Results**

Variance Inflation Factors			
Date: 02/12/20 Time: 13:15			
Sample: 2004S1 2018S2			
Included observations: 29			
Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	1.35E+09	1.203033	NA
D(tourist )	0.002415	1.563190	1.449950
D(occupancy )	69658163	1.485220	1.449021
D(exchange rates)	3424.023	1.130825	1.000869

Source: Data processed with eviews 10, 2020

Multicollinearity test results, can be seen in the Centered VIF column table. VIF value for variable X1 (number of tourist visits), variable X2 (hotel occupancy rate) and variable X3 (US dollar exchange rate) < 10. These three

independent variables have values less than 10, so it can be concluded that the three variables did not experience multicollinearity.

#### 4) Heteroscedasticity Test

Heteroscedasticity test is used to determine if the variance is not constant and there is a strong relationship between residuals. To test heteroscedasticity in this study using statistical methods with the Breusch-Pagan-Godfrey test. Criteria for testing carried out are:

- Data does not occur heteroscedasticity problems, if the value of Prob.Obs \* R-squared > alpha level 0.05 or
- Data experiencing heteroscedasticity problems, if the value of Prob.Obs \* R-squared < alpha level 0.05.

Heteroscedasticity test results can be seen in the table below:

**Table 6: Heteroscedasticity Test Results**

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.427300	Prob. F(3,25)	0.2583
Obs*R-squared	4.240678	Prob. Chi-Square(3)	0.2366
Scaled explained SS	3.937743	Prob. Chi-Square(3)	0.2683

Source: Data processed with eviews 10, 2020

Heteroscedasticity test results above indicate that the value of prob.obs \* r-squared has a value > alpha 0.05 which is equal to 0.2366 so, it can be concluded that the regression model in this study did not experience heteroscedasticity problems

#### Autocorrelation Test

Autocorrelation occurs if the error term value in a certain period is related to the previous error term value. In this study to see the presence or absence of autocorrelation can also be used Langrange Multiplier test (LM Test) by comparing the probability of R-squared with  $\alpha = 0.05$ . Criteria for testing carried out are:

- Data does not occur autocorrelation problems, if the value of Prob.Obs \* R-squared > alpha level 0.05 or
- Data experiencing autocorrelation problems, if the value of Prob.Obs \* R-squared < alpha level 0.05.

The results of the autocorrelation test can be seen in the table below:

**Table 7 Autocorrelation Test Results**

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	2.084958	Prob. F(2,23)	0.1472
Obs*R-squared	4.450788	Prob. Chi-Square(2)	0.1080

Source: Data processed with eviews 10, 2020

LM test results show that the value of prob.obs \* r-squared is 0.1080 > 0.05, so it can be concluded that the data in this study did not occur autocorrelation problems.

#### Multiple Regression Analysis

The relationship of the independent variable number of tourist visits (X1), hotel occupancy rate (x2) and US dollar exchange rate (X3) to beef import value variables in Bali (Y) will be analyzed using multiple data regression analysis supported by using eviews 10 software. The estimation results of the equation that have been done are presented in the following table:

**Table 8: Multiple Regression Results**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-40145.72	36700.08	-1.093887	0.2844
D(WISATAWAN)	0.195000	0.049146	3.967788	0.0005
D(HUNIAN)	3483.087	8346.147	0.417329	0.6800
D(KURS)	66.84145	58.51515	1.142293	0.2642

Source: Data processed with eviews 10, 2020

Based on the results of the regression that has been done, the equation model can be formulated as follows:

$$Y = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + e$$

$$\text{IMPORT} = -40145.72 + 0.195000 \text{ TOURISTS} + 3483,087 \text{ OCCUPANCY} + 66.84145 \text{ EXCHANGE RATE}$$

The results of the regression can be concluded that:

- A constant is -40145.72 meaning that if the independent variable is the number of tourist visits (X1), hotel occupancy rate (X2) and US dollar exchange rate (X3) = 0, then the dependent variable beef import value in Bali (Y) is 40145.72.
- The independent variable number of tourist visits (X1) has a correlation coefficient of 0.195000 showing a



positive sign. This means that if the independent variable the number of tourist visits (X1) increases by 1 unit while the independent variable hotel occupancy rate (X2) and the US dollar exchange rate (X3) is fixed then the dependent variable beef import value in Bali (Y) will increase by 0.195000 .

- c. The independent variable hotel occupancy rate (X2) has a coefficient of 3483,087 which shows a positive sign. This means that if the hotel occupancy rate variable (X2) increases by 1 unit and the independent variable number of tourist visits (X1) and the US dollar exchange rate (X3) is fixed, then the dependent variable beef import value in Bali (Y) will increase by 3483,087 .
- d. The independent variable US dollar exchange rate (X3) has a coefficient value of 66.84145 indicating a positive direction. This means that if the US dollar exchange rate (X3) increases by 1 unit and the independent variable number of tourist visits (X1) and hotel occupancy rate (X2) is fixed, then the dependent variable beef import value in Bali (Y) will increase by 66.84145 .

#### Determination Coefficient Test ( $R^2$ )

Determination Coefficient ( $R^2$ ) aims to see how much the ability of independent variables to explain the dependent variable seen through adjusted  $R^2$ . The coefficient of determination is zero and one. A small  $R^2$  value means that the ability of the independent variables to explain the variation of the dependent variable is very limited. The results of the coefficient of determination can be seen in the following table:

**Table 9 : Determination Coefficient Test ( $R^2$ )**

R-squared	0.522316	Mean dependent var	20965.69
Adjusted R-squared	0.464994	S.D. dependent var	246347.2
S.E. of regression	180188.5	Akaike info criterion	27.16884
Sum squared resid	8.12E+11	Schwarz criterion	27.35743
Log likelihood	-389.9481	Hannan-Quinn criter.	27.22790
F-statistic	9.111942	Durbin-Watson stat	2.120433
Prob(F-statistic)	0.000299		

Source: Data processed with eviews 10, 2020

Based on the test results, the table above shows that the value obtained from the determination coefficient of  $R^2$  square of 0.522316, this shows that the proportion of the influence of the independent variable number of tourist visits (X1), hotel occupancy rate (X2) and US dollar exchange rate (X3) on the dependent variable beef import value in Bali (Y) of 52.23 percent while the remaining 47.77 percent is influenced by other variables not in the regression model.

#### Simultaneous F-Test

F statistical test is performed to see whether all independent variables included in the model are feasible to explain the dependent variable. The f test is also used to prove whether together all the independent variables, namely the number of tourist visits (X1), hotel occupancy rate (X2) and the US dollar exchange rate (X3) have an influence on the dependent variable namely the value of beef imports in Bali (Y) . Criteria for testing carried out are:

- a) If the value of  $\text{Prob.} \leq \alpha$  (0.05), then  $H_a$  is accepted, that is, the independent variable simultaneously influences the dependent variable.
- b) If the value of  $\text{Prob} \geq \alpha$  (0.05), then  $H_0$  is accepted, that is, the independent variable has no effect simultaneously on the dependent variable.

F test results in this study can be seen in the following table:

**Table 10: F-Test Results**

R-squared	0.522316	Mean dependent var	20965.69
Adjusted R-squared	0.464994	S.D. dependent var	246347.2
S.E. of regression	180188.5	Akaike info criterion	27.16884
Sum squared resid	8.12E+11	Schwarz criterion	27.35743
Log likelihood	-389.9481	Hannan-Quinn criter.	27.22790
F-statistic	9.111942	Durbin-Watson stat	2.120433
Prob(F-statistic)	0.000299		

Source: Data processed with eviews 10, 2020

Prob value F (Statistic) of 0.000299 is smaller than the significance level of 0.05, so it can be concluded that the estimated regression model is able to be used to explain the effect of the relationship of the independent variable number of tourist visits (X1), hotel occupancy rate (X2) and US dollar exchange rate (X3 ) to the dependent variable value of beef imports in Bali (Y), in other words the number of tourist visits (X1), hotel occupancy rate (x2) and the US dollar exchange rate (X3) simultaneously significantly influence the value of beef imports in Bali (Y) .

#### Partial t test

Basically, the t test has the objective to show how far the influence of an explanatory or independent variable individually in explaining the independent variable. The level of significance used in this study was 0.05 ( $\alpha = 5\%$ ). Acceptance and rejection of the hypothesis will be carried out with the following criteria:

- a) If the probability value (prob.) is greater than 0.05, the hypothesis is rejected.
- b) If the probability value (prob.) is smaller or equal to 0.05, the hypothesis is accepted. T test results can be seen in the following table:

**Table 11: T-Test Results**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-40145.72	36700.08	-1.093887	0.2844
D(WISATAWAN)	0.195000	0.049146	3.967788	0.0005
D(HUNIAN)	3483.087	8346.147	0.417329	0.6800
D(KURS)	66.84145	58.51515	1.142293	0.2642

Source: Data processed with eviews 10, 2020

On the test results in the table above, it can be concluded that the hypothesis test of each independent variable on the dependent variable is as follows:

### 1) Test Results of the Effect of Tourist Visits (X1) on the Import Value of Beef in Bali (Y)

Prob value t count from the independent variable the number of tourist visits (X1) of 0.0005 which is smaller than 0.05 which means the independent variable number of tourist visits has a significant effect on the value of beef imports in Bali (Y). The coefficient value of 0.195000, shows a positive sign meaning that the independent variable number of tourist visits has a positive effect on the value of beef imports in Bali. This means that an increase in the number of domestic and foreign tourists will encourage the increase in the value of beef imports in Bali. This is supported by previous research conducted by Nizar (2013) entitled "The effect of tourism on international trade in Indonesia" which states that the number of tourist visits has a positive and significant effect on international trade (Export-Import) and is strengthened by previous studies by Dharma and Dewi (2017) entitled "Effect of Production, Number of Tourist Arrivals, and Dollar Exchange Rates on Imports of Alcoholic Beverages into Bali" which states that the number of tourist arrivals had a positive and significant effect on imports. The conclusions in this study were H1. Test Results of the Effect of Hotel Occupancy Rate (X2) on the Import Value of Beef in Bali (Y)

### 2) Test Results of the Effect of Hotel Occupancy Rate (X2) on the Import Value of Beef in Bali (Y)

Prob value t count from the independent variable hotel occupancy rate (X2) of 0.6800 which is greater than 0.05 which means that the independent variable hotel occupancy rate does not significantly influence the value of beef imports in Bali (Y). The coefficient value of 3483,087, shows a positive sign meaning that the independent variable hotel occupancy rate has no effect but is positively related to the value of beef imports in Bali. The conclusion in this study is H2 rejected.

### 3) Test Results of the Effects of US Dollar Exchange Rate (X3) on the Import Value of Beef in Bali (Y)

Prob value t count from the free variable of the US dollar exchange rate (X3) of 0.2642 which is greater than 0.05, which means that the free variable of the US dollar exchange rate does not significantly influence the value of beef imports in Bali (Y). The coefficient value of 66.84145, shows a positive sign meaning that the free variable of the US dollar exchange rate does not have a significant effect and has a negative effect on the value of beef imports in Bali. This is because the factor of consumer demand for imported beef is very large so that whatever the dollar exchange rate will not affect consumers' purchasing power of beef.

## V. CONCLUSION

The government as the controller of trade policies such as foreign trade policies namely importing cattle is recommended to prioritize improving the quality of local beef such as creating modern breeders, so that it can meet the demand standards of tourists and hotels in Bali so as not to always rely on beef imports.

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