The Roles of The Tourism Sector in The Labor Absorption in The Trade, Restaurant, and Accommodation Sectors in Bali Province in 2013-2017

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THE ROLES OF THE TOURISM SECTOR IN THE LABOR ABSORPTION IN THE TRADE, RESTAURANT, AND ACCOMMODATION SECTORS IN BALI PROVINCE IN 2013-2017

Gendhis Saras Zandy[1)], Lely Ratwianingsih[2)]
[1]Faculty of Economics and Business, Sebelas Maret University
email: gendhisxzandy@gmail.com
[2] Faculty of Economics and Business, Sebelas Maret University
email: lyrabalinew@staff.uns.ac.id

ABSTRACT

The purpose of this study was to analyze the effects of GRDP, regency/city (regional) minimum wage, the number of hotels and restaurants, and the number of tourist attractions on the labor absorption in the trade, restaurant, and accommodation sectors. Bali was selected due to its potential for cultural diversity and tourist attractions. This quantitative study used panel data with nine regencies/cities in Bali Province in 2013-2017. The best model applied in this study was the Fixed Effect Model. The results of the analysis show that all independent variables had simultaneous effects on the given variables. The results of the partial analysis confirmed that GRDP had a significant negative effect, regency/city minimum wage, and the number of hotels and restaurants had a significant positive effect, while the number of tourist attractions did not produce any effects on labor absorption. It is suggested that the local governments and related parties encourage tourism activities and improve the quality of the workforce.

Keywords: Tourism, Labor Absorption, GRDP, Regency/City Minimum Wage, The Number of Hotels and Restaurants, The Number of Tourist Attractions

1. INTRODUCTION

Regional development is one of the determining indicators for the advancement of a region. The Law of the Republic of Indonesia Number 23 the Year 2014 concerning Regional Government stipulates that the regional government has the authority to manage and utilize the potential of a region. The success of a region can be seen from its economy. One indicator of economic development is the aspect of employment. The potential of a region can be developed through the tourism sector. Yudananto (2011) has explained that the tourism sector has an important role in absorbing labor, encouraging equitable development, and improving community welfare.

The more attractive tourism in an area becomes opportunities to increase employment, as well as to escalate the trade and restaurant sectors. Based on the GRDP of Bali Province, the accommodation and the food and beverage sectors are the biggest contributors to the GRDP, followed by forestry and fisheries sectors, construction sector, and trade sector. It is expected that the accommodation and food and beverage sectors can absorb more labor.

The policy of minimum wage is the basis of economic growth. Waisgrais (2003) has explicated that the policy of minimum wage has a positive impact on the anticipation of wage gaps taking place in the labor market. The successful economic development of a region can be seen from the degree of labor absorption. The employment sector is a benchmark to identify the contribution of labor absorption. Figure 1 explains the number of labor working in the restaurant and accommodation sector in 2013-2017.

Data on the number of labor working in the trade, restaurant, and accommodation sectors have revealed that the sectors were able to absorb 625,302 labor in 2012, increased by 628,585 labor, 658,312 labor, and significantly 768,075 labor in 2013, 2014, in 2015, respectively, but decreased to 728,757 in 2016, and increased again to 760,093 labor in 2017. In other words, the labor absorption in trade, hotel, and accommodation sectors tended to experience an increase each year.

Facilities and infrastructure were built in order to increase the number of tourists visiting Bali. The facilities and infrastructure include restaurants, lodging or hotels, and places of entertainment that can create new jobs and expand employment opportunities. Table 1 shows the number of tourist attractions, restaurants, and hotels (stars and non-stars) in the Province of Bali.
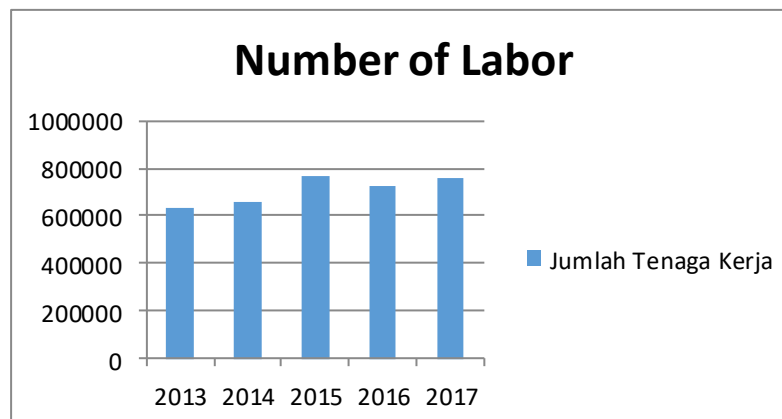
Source: Bali Provincial Statistics Agency (BPS Provinsi Bali)
Figure 1. Number of labor in the restaurant and accommodation sectors in 2013-2017

Table 1. Number of tourist attractions, restaurants and hotels (stars and non-stars) in the Province of Bali in 2013-2017

Year	Number of Tourist Attraction	Number of Restaurant and Hotel
2013	293 units	3,125 units
2014	299 units	4,328 units
2015	306 units	4,516 units
2016	313 units	4,646 units
2017	351 units	4,797 units

Sources: Statistics Indonesia (BPS) (processed)

As summarized in Table 1, the number of attractions, restaurants, and hotels has increased each year. Both the attractions and infrastructures are important in supporting tourism. Many choices of attractions will attract domestic and foreign tourists to visit Bali.

Considering the tourism condition and labor absorption in trade, restaurant, and accommodation sectors in Bali, the researchers were triggered to investigate "The Roles of the Tourism Sector in the Labor Absorption in the Trade, Restaurant, and Accommodation Sectors in Bali Province in 2013-2017".

1.1 Labor

The Indonesian Law on Number 13/2003 on Manpower specifies that workers are people aged 15 years up to 64 years. BPS explains that workers are those who are 15 years or older. The population is absorbed due to the demand for labor (Kuncoro, 2002).

1.2 Gross Regional Domestic Product (GRDP)

Soebagiyo (2007: 179) describes the GRDP as a benchmark for assessing regional economic activity. BPS gives details that GRDP is one of the macroeconomic indicators that can show the economy of a region. The greater production of outputs will encourage a company to increase employment opportunities, and this will reduce unemployment (Mankiw, 2000).

1.3 Minimum Wage

Wage is the compensation paid by the company to employees in exchange for producing a unit of goods (Simanjuntak, 2001). Minimum wage is the minimum amount of wage, including basic wage and benefit, set at a regional, sectoral, or subsectoral level (Sumarsono, 2003: 141).

1.4 Hotel and Restaurant

Sulastiyono (2011: 34) has defined that a hotel is a company that provides lodging, food, and beverage. Another definition of the restaurant is proposed by Suarthana (2006), that restaurant is a commercial place of business with the scope of activities to provide food and beverage services.

1.5 Tourist Attraction

Marpaung (2002) has denoted that a tourist attraction is a group of related activities that attract tourists to visit a particular place. According to Yoeti (2001), a place or area that is considered a tourist attraction should meet a number of criteria, including the existence of something to see, something to buy, and something to do.

1.6 The relationship between GRDP and labor absorption

GRDP is assumed to affect employment. If the GRDP increases, the amount of output of the economy of a region also rises. The greater value of output will encourage a company to improve the number of labor to fulfill the market demand.

1.7 The relationship between wage and labor absorption

The wage has a two-sided relationship with labor absorption. When the wage increases, it can either decrease or increase the number of labor.

1.8 The relationship between the hotels, restaurants, and tourist attractions and labor absorption

The increasing number of hotels, restaurants, and tourist attractions will multiply job opportunities. Therefore, the company will require more labor to provide services to hotel and restaurant visitors.

1.9 Hypothesis

a. The increasing number of hotels, restaurants, and tourist attractions will multiply job opportunities. Therefore, the company will require more labor to provide services to hotel and restaurant visitors. It is estimated that GRDP influences labor absorption in the trade, hotel, and restaurant sectors in Bali province.

b. It is estimated that the Regency/City (Regional) Minimum Wage (RMW) contributes to the labor absorption in the trade, hotel, and restaurant sectors in Bali province.

c. It is estimated that the number of hotels and restaurants affects the labor absorption in trade, hotel, and restaurant sectors in Bali province.

d. It is estimated that the number of attractions influences labor absorption in the trade, hotel, and restaurant sectors in Bali province.

2. RESEARCH METHOD

This study used one dependent variable and four independent variables. The dependent variable was the number of workers, while the independent variables were GRDP, Regency/City Minimum Wage (RMW), the number of hotels and restaurants, and the number of tourist attractions. This study used annual data, in the form of panel data with cross-section data of nine regencies/cities in Bali province in a period of five years, from 2013 to 2017, using Eviews 10.

$$LA = \beta + \beta1 GRDPit + \beta2 RMWit + \beta3 NHRit + \beta4 NTAit + \varepsilon it$$

where:
|	
LA	= Labor Absorption
GRDBit	= GRDP in regency/city i in year t
RMWit	= RMW in regency/city i in year t
NHRit	= Number of hotels and restaurants in regency/city i in year t
NTAit	= Number of tourist attractions in regency/city i in year t
β	= Constant/Intercept
$\beta1, \beta2, \beta3, \beta4$	= Coefficient of regression in each independent variable
εit	= Error term in regency/city i in year t

3. RESULTS AND DISCUSSION

3.1 Overview of Research Data

The data provided by BPS in 2013-2017 recorded that the trade, restaurant, and accommodation were the sectors absorbing the most labor if compared to other sectors. This is demonstrated in Figure 1.
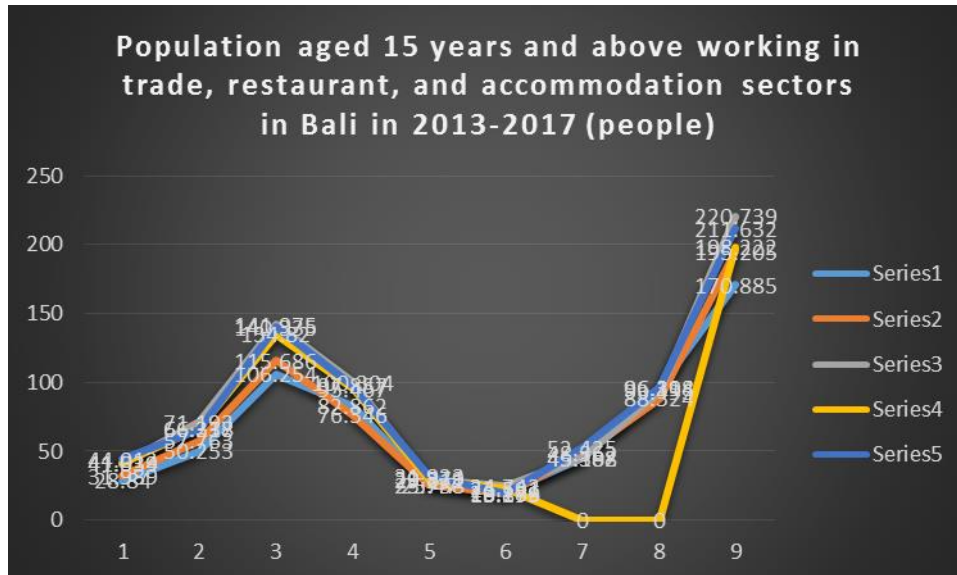
Source: Authors

Figure 2. Population aged 15 years and above working in trade, restaurant, and accomodation sectors in Bali in 2013-2017

Population aged 15 years and over, working in the trade, restaurant and accommodation sectors spreading in nine regencies and cities in Bali from the last five years (2013-2017) fluctuated, meaning that an increase and a decrease in employment absorption occurred each year. The highest absorption of employment in these sectors was in Denpasar City in 2017, reaching 211,632 labor, while the lowest absorption took place in Bangli Regency in 2017, which only reached 19,273 labor. The trend of increase in labor absorption in each regency/city appeared to be slow.

BPS (2019) categorizes GRDP into 18 sectors based on the business fields. This is in accordance with the formulation of the problems that have been set, examining the relationship between employment absorption in the trade, hotel, and restaurant sectors and the contribution to the GRDP on the basis of constant prices in 2010-2017.

Table 2. Gross Regional Domestic Product (GRDP) at constant 2010 prices according to the field of business in 2013-2017 (IDR Million)

Regency/City	2013	2014	2015	2016	2017
Jembrana	6,727,786.41	7,134,660.29	7,576,313.96	8,027,934.52	8,454,052.24
Tabanan	11,178,190.8	11,907,999.37	12,644,521.47	13,420,550.43	14,113,208.67
Badung	25,666,531.6	27,458,061.1	29,170,235.6	31,157,371.6	33,061,419.6
Gianyar	13,364,397.05	14,272,745.42	15,168,553.35	16,125,283.48	17,011,480.62
Klungkung	4,280,452.8	4,536,261.3	4,813,393.04	5,155,608.62	5,388,934.20
Bangli	3,281,161.8	3,472,303.15	3,686,101.2	3,916,096	4,125,457.6
Karangasem	8,002,138.55	8,482,884.77	8,991,745.71	9,524,226.08	10,008,331.15
Buleleng	16,587,191	17,740,832.9	18,824,842.31	19,950,718.35	21,028,112.31
Denpasar	25,026,379.3	26,778,585.10	28,422,697.54	30,273,394.32	32,114,757.77

Sources: Bali, Bali Province and Regencies/Cities on Year

The GRDP of each regency/city in Bali tended to experience a significant increase. The highest GRDP occurred in Denpasar City while the lowest GRDP took place in Bangli Regency.

Regency/City Minimum Wage (RMW) used in this study was based on the data on the development of RMW of Bali Province in 2013-2017 provided by the Provincial Central Statistics Agency (BPS Bali). These data are demonstrated in Table 3.

Table 3. Regency/City Minimum Wage (RMW) in Bali in 2013-2017 (IDR Million)

Regency/City	2013	2014	2015	2016	2017
Jembrana	1,212,500	1,542,600	1,662,500	1,807,500	2,006,617
Tabanan	1,250,000	1,542,600	1,706,700	1,902,970	2,059,965
Badung	1,401,000	1,728,000	1,905,000	2,124,075	2,299,311
Gianyar	1,230,000	1,543,000	1,707,750	1,904,141	2,061,233
Klungkung	1,190,000	1,545,000	1,650,000	1,839,750	1,991,529
Bangli	1,182,000	1,542,600	1,622,000	1,803,530	1,957,734
Karangasem	1,195,000	1,542,600	1,700,000	1,895,500	2,051,879
Buleleng	1,200,000	1,542,600	1,650,000	1,839,750	1,991,529
Denpasar	1,358,000	1,656,900	1,800,000	2,007,000	2,173,000

Sources: Bali, Bali Province and Regencies/Cities on Year

The data on the amount of RMW in Bali in 2013-2017 recorded the amount of RMW appeared to continue to increase each year. The highest amount of RMW in 2017 was found in Badung Regency at IDR2,299,311, followed by Denpasar City, reaching IDR2,173,000, while the lowest amount of RMW was found Bali Regency, which was IDR1,957,734.

Table 4. The number of hotel and restaurant in regency/city in Bali in 2013-2017 (unit)

Regency/City	2013	2014	2015	2016	2017
Jembrana	205	147	146	149	169
Tabanan	146	142	144	144	182
Badung	732	1,474	1,499	1,499	1,517
Gianyar	787	808	887	894	899
Klungkung	134	135	143	132	235
Bangli	41	41	41	46	73
Karangasem	453	283	283	420	421
Buleleng	278	369	385	385	478
Denpasar	349	929	988	977	823

Sources: Bali, Bali Province and Regencies/Cities on Year

The data detailed that the number of hotels (stars and non-stars) and restaurants appeared to change. In 2017, eight districts in Bali experienced an upturn in the number of hotels and restaurants, but within the same year, Denpasar experienced a decrease in the same sectors.

Table 5 below, summarizes that the number of attractions in regency/city in Bali for the period of 2013-2016 did not experience a significant increase, denoting that it was stable. However, in 2017, the number of attractions in Klungkung and Buleleng Regencies experienced a substantial upsurge.

Table 5. The number of tourist attractions in regency/city in Bali Province

Regency/City	2013	2014	2015	2016	2017
Jembrana	14	17	17	24	24
Tabanan	22	22	24	24	24
Badung	33	36	36	36	36
Gianyar	61	61	62	62	62
Klungkung	28	28	31	31	40
Bangli	39	39	40	40	40
Karangasem	15	15	15	15	15
Buleleng	57	57	57	57	86
Denpasar	24	24	24	24	24

Sources: Bali, Bali Province and Regencies/Cities on Year

3.2 Model Selection Test

MWD test or MacKinnon, White, and Davidson test was used to determine the regression model using either the linear or log-linear model, by finding Z1 or Z2 with a significance level of 5%. The results of the MWD test have shown the Z1 value of 0.0004 <0.05, meaning that the linear log model was proper for use. The results have also indicated the Z2 value of 0.0000 <0.05, denoting that the linear and log-linear models were appropriate to be used and the authors decided to use the linear model for this research.

3.3 Chow Test

A chow test was performed to determine between the common effect and fixed effect, using the following hypotheses.
H0: Common Effect
H1: Fixed Effect

The results of the Chow test have revealed the statistical value of 188.863916 with d.f (3.2) and probability value of cross-section F of 0.0000 <α = 0.05, and thus, H0 was rejected and H1 was accepted, so the proper model was the Fixed Effect Model.

3.4 Hausman Test

The purpose of conducting the Hausman test was to select a model between Fixed Effect and Random Effect models, with the following hypotheses.
H0: Random Effect
H1: Fixed Effect

The Hausman test resulted in the probability value of 0.0154 <α = 0.05, and thus, H0 was rejected and H1 was accepted. In other words, the appropriate estimation model applied in this research was the Fixed Effect model.

3.5 Normality Test

The normality test was utilized to determine whether the data were normal or not, with the assumption that if the value prob. JB> 5%, then the data were normally distributed. The results of the normality test have revealed the probability value of 0.407284. Because the probability value of 0.407284> α = 0.05, the data were considered normally distributed.

3.6 Multicollinearity Test

Multicollinearity test was applied to examine the regression model for the presence or absence of correlation between variables. If there is a high enough correlation between variables> 0.80, then multicollinearities occur (Ghozali, 2016: 110). Table 6 indicates the correlation between independent variables <0.80, representing that the model did not have multicollinearity problems.

Table 6. Multicollinearity test

	GRDP	RMW	NHR	NTA
GRDP	1.000000	0.110219	0.489658	0.043299
RMW	0.110219	1.000000	0.379244	0.069206
NHR	0.489658	0.379244	1.000000	0.228294
NTA	0.043299	0.069206	0.228294	1.000000

Sources: Data processed using Eviews 10

3.7 Heteroscedasticity Test

The results of the heteroscedasticity test have shown the insignificant probability value of each independent variable (p value> 0.05). This means that the model was homoscedastic, instead of heteroscedastic.

3.8 Autocorrelation Test

The Durbin Watson value was 2.763920. The statistic test with the formula of dU (2.5881) $\leq$ dw (2.763920) $\leq$ 4 – dL (0.2957) resulted in 2.5881 $\leq$ 2.763920 $\leq$ 3.7043 value, exemplifying that the model did not appear to have autocorrelation.

3.9 Regression Analysis of Panel Data

Based on the data processing with Eviews 10, the selected model was Fixed Effect, as presented in Table 7.

Table 7. The results of the t-statistic test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	47272.75	7953.107	5.943935	0.0000
GRDP	-7.21E-05	2.85E-05	-2.534328	0.0164
RMW	0.011514	0.004073	2.827003	0.0080
NHR	36.09896	7.962807	4.533447	0.0001
NTA	-110.1485	234.4347	-0.469847	0.6417

Source: Data processed using Eviews 10

By using the Fixed Effect model, we obtained the following equation model.

$$LA_{it}= 47272.75 – 7.21E\text{-}05\ GRDP_{it} + 0.011514\ RMW_{it} + 36.09896\ NHR_{it} – 110.1485\ NTA_{it} + \varepsilon_{it}$$

3.10 T-Test

The t-test was carried out to assess the significance level between the independent variable and the dependent variable, with a significance level of 5%. The results have revealed that the GRDP, RMW, and the number of hotels and restaurants contributed to the absorption of labor. Meanwhile, the number of tourist attractions did not give any significant effect on labor absorption.

3.11 F-Test

It was found that the probability value (F-Statistics) was 0.000000, where the value was known to be smaller if compared to the significance level of α = 5% (0.000000 <0.05). The result confirmed that GRDP, RMW, the number of hotels and restaurants, and the number of tourist attractions together put effects simultaneously on the labor absorption in the trade, restaurant, and accommodation sectors in the regencies/cities in the area of Bali in 2012-2017.

3.12 Coefficient Determination Test R^2

The test resulted in the adjusted R-Squared value of 0.990676, which means that 99% of the independent variables could explain the independent variable. The remaining 1% was explained by other variables that affected the employment absorption in the tourism sector but outside the variables in this study.

3.13 The effects of GRDP on labor absorption in the tourism sector

The GRDP variable had a coefficient value of -7.21E-05 with a probability value of 0.0164 and a significance level of 5%, meaning that the GRDP had a significant negative effect on labor absorption in the tourism sector in Bali Province. When the GRDP increases by 1%, it reduced employment in the trade, restaurant, and accommodation sectors by 7.21%. Therefore, the results of the analysis are not in accordance with the hypotheses that have been made.

The increase in GRDP was not followed by a rise in the absorption of labor in the trade, restaurant, and accommodation sectors, while the share of GRDP in nine regencies/cities in Bali did not spread evenly. Based on the data from the BPS of Bali Province in 2018, it was known that the highest share of GRDP in Bali was in the trade, restaurant and accommodation sectors, but further examination according to BPS on year revealed that the highest GRDP share in trade, restaurant, and accommodation sectors only occurred in particular regions such as in Denpasar City, Badung Regency, and Gianyar Regency. On the other hand, in other regions, the highest share of GRDP came from the agriculture, forestry, and fisheries sectors.

3.14 The influence of RMW on labor absorption in the tourism sector

The RMW variable had a coefficient value of 0.015176 with a probability value of 0.0061 and a significance level of 5%, and this denotes that RMW had a significant positive effect on employment in the tourism sector. The statistics show that if the coefficient of the minimum wage increased 1%, it upsurged the employment absorption by 0.0152%, or when the minimum wage rose to IDR10,000, then the employment absorption increased by 152 people. Therefore, RMW affected labor absorption. The results of the study are in line with the hypotheses that have been made.

3.15 The effects of the number of hotel and restaurant on the labor absorption in the tourism sector

The number of hotels and restaurants had a coefficient value of 33.52710 with a probability value of 0.0006, meaning that this had a significant positive effect on employment. The data statistics show that if the coefficient of the number of hotels and restaurants increased by 1 unit, it would increase labor absorption by 33 people. The results of this study are consistent with the hypotheses that have been set.

3.16 The effects of tourist attractions on labor absorption in the tourism sector

The number of tourist attraction had a coefficient value of -120.3212 with a probability value of 0.6412 and a significance level of 5% (0.05), which means that this variable had a significant negative effect on the labor absorption in the trade, restaurant, and accommodation sectors. The results of the study are not in accordance with the hypothesis. This is related to the fact that the number of tourist attractions in Bali was limited, which could not increase employment opportunities.

4. CONCLUSIONS

Based on the results of the analysis, this study concludes that the increase in GRDP was not followed by a growth in the number of employment absorption in the trade, restaurant, and accommodation sectors. An escalation in RMW, as well as an increase in the number of hotels and restaurants surged employment absorption. However, the number of tourist attraction did not contribute to the increased absorption of labor.

It is expected that the government can pay more attention to the development of the tourism sector in the Province of Bali, so as to open employment opportunities in the trade, restaurant, and accommodation sectors. The government, in making policy to determine the RMW, should always consider the standard of living needs (SLN) of the local communities and the impact on the company. Local governments can build equitable infrastructures in Bali, with the aim of creating new tourist attractions and magnetize tourists to visit the island and making a thorough mapping of the areas in determining potential areas to be used as tourist attractions.

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