



The Influence of Education Level, Technology and Regional Original Income on Economic Growth in Districts/Cities of Bali Province

Mutiara Tria Natalia Sitorus¹, Anak Agung Putu Bagus Widanta²

^{1,2}Economics, Udayana University, Indonesia

Author's correspondence: mutiatns@gmail.com

Abstract. Bali Province, which is an international tourism destination, must be able to improve its human resources by utilizing technology and allocating stable local revenue. The purpose of this study was to analyze the effect of education level, technology and local revenue on economic growth in the Regency/City of Bali Province, both simultaneously and partially. The data sources used in this study were secondary sources with 45 observation points that combined time series and cross-section data. The results of the study showed that 1) the level of education, technology and local revenue had a positive and significant effect simultaneously on economic growth in the Regency/City of Bali Province, 2) the level of education and local revenue partially had a positive effect on economic growth in the Regency/City of Bali Province, 3) Technology partially had a negative effect on economic growth in the Regency/City of Bali Province. Based on the results of the study, to increase economic growth, investment in human resource development needs to be carried out by increasing access and quality of education for the community, then the local government also needs to evaluate and adjust the technology implementation strategy in order to provide a positive contribution, and finally the local government can optimize sources of local revenue and increase the efficiency of its management.

Keywords : Education level, Technology, Local Original Income, Economic Growth

1. INTRODUCTION

The Human Development Index (HDI) for 2018-2022 shows an increasing trend, as seen from table 1.2 in 2022, Bali's HDI was recorded at 76.44. Meanwhile, in 2018, Bali's HDI was recorded at 74.77. In other words, the increase in HDI for 5 years reached 1.67 points. On average, the increase in HDI each year during the 2018-2022 period reached 0.5 percent. When compared by district/city, the HDI achievements of Denpasar City and Badung Regency are in the top two highest positions compared to other regions in Bali with respective amounts of 84.37 (Denpasar) and 82.13 (Badung). The growth of HDI in the period 2018 to 2022 did not change the status of Bali's HDI achievement. According to the Central Statistics Agency (2022) since 2010 until now, the HDI status is still relatively high. However, it should be noted that the achievement of Bali's Human Development Index in 2022 according to the Central Statistics Agency (2022) has not exceeded the target of the Regional Medium-Term Development Plan (RPJMD) for the 2018-2023 period, especially in 2022, which set a year-end target of 76.93 (Central Statistics Agency (2022)).

The pattern that occurs in long-term economic growth appears to be in line with the growth of the HDI. On the side of growth, the creation of economic added value and the side of HDI growth tend to experience a slowdown. However, what is produced by an economic process has a correlation with the impacts produced in relation to the increase in the quality of

life of the community. If, the economic growth of Bali Province feels quite even so that it can also be followed by an increase in the capability of the population in the process of achieving it. On the other hand, the relationship between human quality will become capital to activate the economy in a region. The difference in HDI between regencies/cities is certainly caused by the differences in resources owned by each region. As is known, HDI is measured based on health, namely UHH, education, namely HLS and RLS and a decent standard of living, namely per capita expenditure, so the development of the three aspects that are the focus of attention in calculating the HDI cannot stand alone and requires synergy between the three (Rustariyuni, 2014). With quality human resources, the tendency is to be able to support the process of creating more effective added value and of course will lead to efficiency and a quality economy.

Table 1. Human Development Index Indicators for Bali Province, 2018-2019 (in percent)

Bali	Year				
	2018	2019	2020	2021	2022
IPM	74.77	75.38	75.50	75.69	76.44
Improvement	0.47	0.61	0.12	0.19	0.75
Growth	0.63	0.82	0.16	0.25	0.99
IPM Status	Tall				

Source: Central Statistics Agency (2022)

The National Medium-Term Development Plan (RPJMN) is a strategic plan created by the Indonesian government to set priorities and targets for national development over the next five years. RPJMN is an important instrument in ensuring the continuity of national development including human development. Human development is one of the priorities of RPJMN because good human development is the key to sustainable economic development and creating a prosperous society (RPJMN 2020-2024, 2020).

One of the RPJMN targets in improving human development is increasing the overall HDI. In the 2020-2024 RPJMN, the Indonesian government targets the HDI to increase from 72.29 in 2021 to 75.54 in 2024 (Central Bureau of Statistics, 2023). To achieve this target, the government focuses on improving access and quality of health, education, social protection, developing policies that support sustainable economic growth and strengthening the financial system and equitable development throughout Indonesia.

In the concept of human capital quality or the so-called Human Development Index (HDI), there are three indicators used to measure the average achievement of a country in human development, namely health level, education level and decent living standards (Central Bureau of Statistics, 2022). The level of education is the most important aspect in determining human quality (Nugroho, 2014). According to Todaro (1994) the way for someone who expects a good job and high income is to have a higher education. Education can improve the quality of human resources through increased knowledge, so that it will encourage increased productivity from a person which will be able to increase the income received and lead to increased community welfare and economic growth (Parwa & Yasa, 2019).

The relationship between economy and education is very large because education provides the ability to develop through mastery of knowledge and skills. Empirical studies according to Darmawan and Wenagama (2017) suggest that education has a close relationship to economic growth and decline, where if the level of education increases, poverty will decrease and be followed by an increase in the economy. Based on the Central Statistics Agency, the knowledge dimension in the HDI is formed by two indicators, namely Average Length of Schooling (RLS) and Expected Length of Schooling (HLS). HLS describes the opportunities that people have to pursue formal education, while RLS describes the level of education in the stock of human capital owned by a region. The calculation of these two indicators utilizes data sourced from Susenas, data on the number of students undergoing education, and the results of sectoral data inventory in districts/cities.

Table 2. Expected Years of Schooling and Average Length of Schooling in Bali Province 2018-2022 (in years)

No	Year	Old School Expectations	Average Length of Schooling
1	2018	13.23	8.65
2	2019	13.27	8.84
3	2020	13.33	8.95
4	2021	13.40	9.06
5	2022	13.48	9.39

Source: Central Statistics Agency (2022)

The HLS and RLS indicators continue to increase from year to year. However, in theory, if we look at the current conditions, the Average Length of Schooling (RLS) will better reflect the condition or quality of education of the population in a region. The Average Length of

Schooling (RLS) showed an increase in 2022 for all regencies/cities in Bali. In 2022, the RLS of Bali Province was recorded at 9.39 years. This means that on average, the Balinese population aged 25 years and over have studied for 9.39 years or completed formal education up to the third grade of junior high school.

This education indicator is inseparable from the COVID-19 pandemic. Although RLS increased, its growth actually slowed by 0.15 percent. The slowdown in growth in 2021 to 2022 was due to the increase in dropout rates at all levels of education. The high school/equivalent level has the highest dropout rate compared to lower levels of education, which is 1.38 percent.

Table 3. Average Length of Schooling (RLS) by Regency/City in Bali Province, 2020-2022 (in years)

Regency/City	Average Length of Schooling			Ascension		
	2020	2021	2022	2019-2020	2020-2021	2021-2022
Jembrana	8.23	8.35	8.64	0.01	0.12	0.29
Tabanan	8.88	9.14	9.15	0.01	0.26	0.01
Badung	10.39	10.62	10.64	0.01	0.23	0.02
Gianyar	9.04	9.29	9.55	0.10	0.25	0.26
The city of Klungkung	8.13	8.14	8.46	0.01	0.01	0.32
Bangli	7.17	7.18	7.47	0.01	0.01	0.29
Karangasem	6.32	6.33	6.67	0.01	0.01	0.34
Buleleng	7.24	7.25	7.56	0.16	0.01	0.31
Denpasar City	11.47	11.48	11.50	0.24	0.01	0.02
Bali	8.95	9.06	9.39	0.11	0.11	0.33

Source: Central Statistics Agency (2023)

Table 3 shows that the RLS of Denpasar City was recorded as the highest in 2022, reaching 11.50 years. Meanwhile, Karangasem Regency was recorded as the region with the lowest RLS, namely 6.67 years. Based on the RLS achievement in 2022, only four regions in Bali, namely Denpasar, Badung, Gianyar and Tabanan, were recorded as having RLS equivalent to education above junior high school. Judging from the increase in 2021-2022, five of the nine regencies/cities were recorded as experiencing a higher increase than the increase

in the previous period. The three highest RLS increases in the 2021-2022 period were recorded in Karangasem Regency which increased by 0.34 years, Klungkung Regency which increased by 0.32 years and Buleleng Regency which increased by 0.31 years. Over the past three years, the average annual increase in RLS for all regencies/cities was recorded at 0.21 years. Gianyar Regency was recorded as the region with the highest average increase, namely 0.20 years. In contrast, Denpasar City, Badung Regency and Tabanan Regency, which had an average annual increase in RLS of 0.09 years, were recorded as the lowest over the last three years.

Economic growth is not only influenced by the quality of human resources as measured by the level of community education, but also by technological advances which are one of the important factors in determining the direction of economic development in a region (Nadia, et al., 2014). The existence of technology is a factor that needs to be taken into account in improving the quality and formation of competitiveness of human resources. This is supported by several previous studies, such as research from Agustina and Pramana (2019) which states that the development of Information and Communication Technology (ICT) together with government spending in the ICT sector has a positive and significant influence on economic growth in Indonesia. Government spending on ICT infrastructure and policy support will accelerate the adoption of technology, which can increase productivity, expand global market access and encourage innovation and certainly support sustainable economic growth.

The economy cannot be separated from modern technological innovations from time to time, making a person's ability to operate technology quite crucial (Hardiani, 2009). People who are able to master and utilize technology by continuously updating their knowledge will make them far superior. Based on table 4, it can be seen that the percentage of the population aged 5 years and over who access the internet is recorded at 46.42 percent. The internet access covered here is the population who access Facebook, Twitter, Blackberry Messenger (BBM), and Whats App (WA). In general, Karangasem Regency is recorded as having the lowest percentage, namely only 28.89 percent of its population who access the internet, while the highest is in Denpasar City, reaching 66.11 percent.

Table 4. Internet Access Users in Regency/City of Bali Province 2018-2022 (in percentage units)

Regency/City	Internet Access Users in Regency/City of Bali Province				
	2018	2019	2020	2021	2022
Jembrana	33.99	45.86	50.6	61.84	70.01
Tabanan	41.18	48.06	56.64	63.9	66.16
Badung	61.18	67.62	72.91	77.84	79.68
Gianyar	47.44	54.81	62.5	65.74	67.28
The city of Klungkung	38.29	47.67	53.37	54.24	65.85
Bangli	30.94	37.38	45.39	56.26	62.66
Karangasem	28.89	35.06	40.38	47.75	54.08
Buleleng	30.84	38.66	46.37	56.01	59.91
Denpasar	66.11	74.04	81.55	86.73	84.51

Source: Central Statistics Agency (2022)

Technology has a major contribution to economic growth, where in business processes, the use of technology can make every process faster and cheaper which can increase production. Agustina and Pramana (2019) said that ICT development and government spending in the ICT sector have a positive and significant influence on economic growth in Indonesia.

In addition to the level of education and technology, factors that influence the level of economic growth in a region are the existence of stable regional original income (Wididarma & Made Jember, 2020). Regional Original Income (PAD) is a source of original regional income that is excavated in the region to be used as the basic capital of the regional government in financing regional development. According to Bela & Djinar Setiawina (2017), Regional income is essentially obtained through tax and levy mechanisms or other levies imposed on the entire community. Law Number 33 of 2004 states that the sources of regional income in the implementation of decentralization are clarified into 3 sources, namely: PAD: balancing funds: and other legitimate income.

The increase in PAD is expected to encourage better economic growth in the region and can create equitable economic development. Research conducted by Arini and Mustika (2015) states that if a region has a stable PAD and does not decrease, it will be able to reduce poverty levels and increase economic growth in the region. The results of the research by Laksmi (2013) and Suwandika (2015) stated that PAD has a positive effect on economic growth in the region. This means that if the increase in PAD is measured by its role in regulating the community's economy so that it can develop further, which in the end can improve community welfare and regional economic growth.

**Table 5. Original Regional Income (PAD) of Regency/City of Bali Province, 2018-2022
(in thousands of rupiah)**

Regency /City	Local Original Income (PAD) of Regency/City of Bali Province				
	2018	2019	2020	2021	2022
Jembrana	126,477,267	133,698,784	148.045.103	185.004.035	175,992,613
Tabanan	363,370,469	354,558,239	313,042,530	362,314,631	436,408,393
Badung	4,555,716,407	4,835,188,460	2,116,974,302	1,750,345,226	3,705,745,447
Gianyar	770.204.849	997,478,368	545,869,873	430.172.109	857,553,633
The city of Klungkung	186,974,284	225,063,772	220,893,875	254,494,496	309,462,458
Bangli	122,686,254	127,040,436	104,325,150	163,537,096	144,005,843
Karangasem	200,361,247	233.013.033	219.176.733	252,688,747	301.332.231
Buleleng	335,555,494	365,595,301	318,986,891	391,988,445	410,564,892
Denpasar	940.110.335	1,010,779,481	731.261.281	792,362,414	888,051,856
Bali	3,718,499,635	4,023,156,316	3,069,474,218	3,117,070,009	3,863,191,407

Source: Central Statistics Agency (2023)

According to Mardiasmo (2002), PAD has a major role in the implementation of regional autonomy in order to achieve the main objectives of regional autonomy in improving public services and advancing the regional economy. Based on table 5, the Original Regional Income (PAD) of Regencies/Cities in Bali Province in 2018-2022 as a whole tends to increase except in 2020, the PAD of Bali Province decreased by IDR 953,682,098 thousand rupiah. In 2022, the PAD of Bali Province managed to increase again, although not as high as in 2019, which was IDR 3,863,191,407 with the highest PAD value achieved by Badung Regency of IDR 3,705,745,447 thousand rupiah and followed by Denpasar City of IDR 888,051,856 thousand rupiah. The lowest PAD was achieved by Bangli Regency, which was IDR 144,005,845 thousand rupiah and followed by the second lowest, namely Jembrana Regency, which was IDR. 175,992,613 thousand rupiah. Although the level of PAD of the Regency/City of Bali Province tends to increase, the poverty rate in Bali Province is still relatively high, which means that economic growth has not been maximized. According to Nurmaniah, S (2013) Regional Original Income (PAD) has an influence on reducing regional poverty rates. The better the region is in managing its regional potential, the higher the income received so that the region can also improve the welfare of its people.

Based on the background that has been described, one of the efforts made in order to achieve regional development that is able to improve the welfare of the community and can be felt by the entire community, especially in the Province of Bali, is that education, technology and local revenue still need to be studied for their influence on economic growth in the Regency/City of the Province of Bali. So it is hoped that this research can provide convenience for the government to make decisions that are specifically related to improving the economy in a region.

2. RESEARCH METHODS

The approach used in this study is a quantitative approach, because it uses data in the form of numbers, starting from data collection, interpretation of data, and presentation of research results also in the form of numbers (Arikunto, 2010). In addition, based on its approach, this study is an associative study. Associative research is a study that seeks a relationship or influence between two or more variables. The data sources used in this study are secondary sources with 45 observation points that combine time series and cross-section data.

This research was conducted in Bali Province. This location was chosen because Bali is an area that depends on tourism and is greatly affected by COVID-19, in addition, community development in the Regency/City of Bali Province is still uneven. Although Bali Province is slowly starting to recover, we cannot rely entirely on tourism aspects alone but must also be able to improve the quality of its people by utilizing technology and allocating stable local revenues in each Regency/City of Bali Province to increase economic growth.

3. RESULTS AND DISCUSSION

Data Analysis Results

Descriptive Test

Table 6. Descriptive Test Results

	X1	X2	X3	Y
Mean	8,560444	55.96156	720,321,617,4000	1.317556
Median	8,350000	56.01000	335,555,494	3,110000
Maximum	11,50000	86,73000	4,835,188,460	9,970000
Minimum	5.970000	28,89000	104,325,150	-16,55000
Std. Dev.	1,545560	15,16039	108,678,309	5.568635
Observations	45	45	45	45

Source: Processed Data, 2024

Table 6 shows that the average level of education is around 8.56 with a median of 8.35 and a range of values between 5.97 to 11.50. Technology, measured in percentage, has an average of around 55.96% with a median of around 56.01% and a range of 28.89% to 86.73%. Local Original Income has an average of around 720,321,617,400 with a median of 335,555,494 and a range of 104,325,150 to 4,835,188,460. While for Economic Growth in percent has an average of around 1.32% with a median of 3.11% and a range of -16.55% to 9.97%.

Panel Data Regression Model Test

1. Chow Test

The Chow test is a testing method used to select the best estimation model between the fixed effect model or the common effect model in panel data analysis.

Table 7. Chow Test Results

Redundant Fixed Effects Tests			
Equation: Untitled			
Cross-section fixed effects test			
Effects Test	Statistics	df	Prob.
Cross-section F	2.357048	(8.33)	0.0398
Cross-section Chi-square	20.338673	8	0.0091

Source: Processed Data, 2024

Based on the results of the Chow test in Table 7, the probability value is $0.0091 < 0.05$, so the model selected in this study is fixed effect (FEM).

1. Hausman test

Table 8. Hausmann Test Results

Correlated Random Effects - Hausman Test			
Equation: Untitled			
Cross-section random effects test			
Test Summary	Chi-Sq. Statistic	Chi-Sq. df	Prob.
Random cross-section	18.841746	3	0.0003

Source: Processed Data, 2024

Based on the results of the Hausmann test in table 8, it is known that the probability value is $0.0003 < 0.05$, so the selected model is fixed effect (FEM).

2. Langrage Multiplier (LM) Test

Table 9. Langrage Multiplier (LM) Test Results

Lagrange Multiplier Tests for Random Effects			
Null hypothesis: No effects			
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives			
	Cross section	Hypothesis Testing Time	Both
Breusch Pagan	2.583170 (0.1080)	117.0073 (0.0000)	119.5904 (0.0000)

Source: Processed Data, 2024

Based on the results of the Langrage multiplier test(LM) in table 9, it is known that the probability value is $0.1080 > 0.05$, so the selected model is the common effect model (CEM).

It can be concluded that based on the model tests conducted, the model used in this study is a fixed effect model (FEM).

Classical Assumption Test

1. Normality Test

Based on the results of the normality test, it can be concluded that the Jarque-Bera probability value is $0.125 > 0.05$, so the data in this study is normally distributed.

2. Multicollinearity Test

This multicollinearity test is conducted to test whether there is a correlation between independent variables in a regression model. If the correlation value is < 0.90 , there is no correlation so there is no multicollinearity problem (Ghozali, 2017).

Table 10. Multicollinearity Test Results

	X1	X2	X3
X1	1	0.8292986552310659	0.5356090145950774
X2	0.8292986552310659	1	0.4253427388260501
X3	0.5356090145950774	0.4253427388260501	1

Source: Processed Data, 2024

Based on the test results in table 10, a correlation value of < 0.90 was obtained so that the regression model tested did not have intercorrelation or collinearity between the independent variables so that it can be concluded that no symptoms of multicollinearity were found in the model.

3. Heteroscedasticity Test

Based on the test results, all independent variables used have a probability value > 0.05 . This indicates that there is no heteroscedasticity symptom in the study.

4. Autocorrelation Test

Based on the test results, the Durbin-Watson value obtained was 2.2800, which is in accordance with the decision making, namely $dU = 1.662 < 2.280 < 4-dU = 2.338$.

Panel Data Regression Analysis

Based on the panel data regression model above, information can be obtained that can be interpreted as follows:

- 1) The constant of -116.6340 shows that if the level of education (X1), technology (X2), and local original income (X3) have a constant value or zero (0), then economic growth will decrease by 116.6340 percent.
- 2) The level of education (X1) of 16.11137 shows that every 1 year increase in the level of education will result in an increase in economic growth of 16.11137 percent. This means that the higher the level of community education, the higher the economic growth of districts/cities in Bali Province.
- 3) Technology (X2) of -0.448197 shows that every increase in the application of technology, especially internet users by 1 percent will result in a decrease in economic growth of 0.448197 percent. This means that the higher the application of technology, the more it will encourage a decrease in economic growth in districts/cities in Bali Province.
- 4) Local Original Income (X3) of 0.00000000710 shows that every increase in district/city PAD of 1 Rupiah will result in an increase in economic growth of 0.00000000710 percent. This means that the higher the PAD received by the district/city, the more it will encourage an increase in economic growth of the district/city in Bali Province.

Coefficient of Determination Test (R²)

The determination coefficient test aims to measure how well the model can explain variations in the dependent variable. The adjusted R² value is used to evaluate the best regression model, because its value can change if independent variables are added or removed from the model. The test results show an adjusted R² value of 0.294 or 29.4%. This means that 29.4% of the variation in economic growth of districts/cities in Bali Province can be explained

by variations in education levels, technology, and local revenue. While the remaining 70.6% is explained by other factors not included in this research model.

Simultaneous Regression Coefficient Test (F Test)

The influence of independent variables, namely education level (X1), technology (X2), and local revenue (X3) simultaneously on the dependent variable, namely economic growth (Y) of districts/cities in Bali Province can be determined by comparing the probability value of the F-statistic with a value of $\alpha = 0.05$. The probability value of the F-statistic is $0.014426 < \alpha = 0.05$. This means that H0 is rejected and H1 can be accepted. This shows that the variables of education level (X1), technology (X2), and local revenue (X3) together or simultaneously have a significant effect on the economic growth of districts/cities in Bali Province. This means that the three independent variables are simultaneously able to explain variations in the dependent variable, namely economic growth.

Partial Regression Coefficient Test Results (t-Test)

The t-statistic test aims to explain how far the influence of one independent variable individually in explaining the variation of the dependent variable. The t-test can be done as follows.

- 1) The level of education (X1) has a t-statistic value = $2.202740 > t_{table}(0.05; 41) = 1.68$ and a probability value = $0.0347 < \alpha = 0.05$, which means that the level of education has a positive and significant partial influence on the economic growth of districts/cities in Bali Province. This means that H0 is rejected and H1 can be accepted.
- 2) Technology (X2) has a t-statistic value = $-2.943770 < t_{table}(0.05; 41) = -1.68$ and a probability value = $0.0059 < \alpha = 0.05$ which means that technology has a negative and significant partial influence on the economic growth of districts/cities in Bali Province. This means that H0 is rejected and H1 can be accepted.
- 3) Local revenue (X3) has a t-statistic value = $4.269104 > t_{table}(0.05; 41) = 1.68$ and a probability value = $0.0002 < \alpha = 0.05$, which means that local revenue has a positive and significant partial influence on the economic growth of districts/cities in Bali Province. This means that H0 is rejected and H1 can be accepted.

4. DISCUSSION OF RESEARCH RESULTS

Testing the influence of education level (X1) on economic growth of districts/cities in Bali Province (Y)

Based on the t-test that has been conducted, it can be seen that the education level variable has a positive and partially significant effect on the economic growth of districts/cities in Bali Province. These findings support research by Widnyana & Darsana (2020) and Purnami & Saskara (2016) which state that the level of education has a positive and partially significant effect on economic growth. This indicates that increasing the level of community education will contribute significantly to driving economic growth in the region.

It should be noted that the level of education plays an important role in improving the quality of human resources which will ultimately increase labor productivity. The higher the level of education, the greater the opportunity to get a better job and higher wages. This will increase people's purchasing power and in turn will encourage economic growth in districts/cities in Bali Province. In addition, education also plays a role in disseminating new knowledge and skills that can support innovation and technology adoption. With innovation and new technology, the productivity of economic sectors can increase, which will ultimately contribute to overall economic growth (Judijanto, 2023)

Testing the influence of technology (X2) on economic growth of districts/cities in Bali Province (Y)

Based on the t-test that has been conducted, it can be seen that the technology variable interpreted in the form of internet users by the community has a partial negative influence on the economic growth of districts/cities in Bali Province. This finding is quite surprising considering that in general technology, especially the internet, during the COVID-19 pandemic increased and is considered the main driver of economic growth in the current digital era.

This negative impact can be caused by several factors, such as the suboptimal use of the internet by the people of the districts/cities in Bali Province in supporting productive economic activities. Most people may only use the internet for entertainment or social communication purposes, not for activities that can increase their productivity and income, which will indirectly reduce economic output. For example, the use of the internet to search for information about business opportunities, market products or services, or run an online business is still minimal and has not become a common practice among the community. This is evident as of May 2022, the use of the internet to improve the economy through MSMEs is

still only 19 million of the target of 30 MSMEs going digital in Indonesia (CNN Indonesia, 2022)

In addition, the lack of digital skills and literacy among the community can also be an obstacle in utilizing internet technology optimally for economic activities. The increasing internet access also triggers an excessive consumer lifestyle that encourages Balinese people to continue to consume goods and services that are actually not really needed in shops outside Bali that sell *one-commerce* which causes a lack of consumption activities for goods produced in Bali Province, thereby reducing Bali's economic growth (Indriani, 2023).

Testing the influence of Regional Original Income (X3) on economic growth of districts/cities in Bali Province (Y)

Based on the t-test that has been conducted, it can be seen that the variable of local revenue has a partial positive effect on the economic growth of districts/cities in Bali Province. During the COVID-19 pandemic, local revenue decreased as did economic growth in Bali Province. This shows that the higher the local revenue obtained by a district/city in Bali, the higher the level of economic growth achieved by the region, and vice versa. These findings support research by Putri (2015) and Priambodo (2014) which state that local revenue has a positive and significant partial effect on economic growth.

This finding further strengthens the argument regarding the importance of the role of local revenue sources in driving the economic development of a region. Local revenue, obtained by local governments from various receipts such as taxes and levies, plays a crucial role in financing various infrastructure development programs, improving public services, and other economic initiatives aimed at driving the economy at the local level. The greater the local revenue that can be collected, the greater the local government will have a budget to invest in strategic sectors such as education and adequate infrastructure development (Todaro & Smith, 2011). This will ultimately contribute significantly to increasing economic activity and creating higher economic growth overall. Therefore, this finding provides strong justification for local governments in Bali to continuously strive to optimize the management of local revenue sources efficiently and effectively, and to formulate sustainable strategies in order to increase local revenue receipts.

Conclusion

Based on the analysis explained previously, several research hypotheses that have been formulated can be concluded, namely:

- 1) The level of education, technology and local original income have a positive and significant simultaneous influence on economic growth in the regencies/cities of Bali Province.
- 2) The level of education and local revenue have a partial positive effect on economic growth in the Regency/City of Bali Province. While technology has a negative effect on economic growth in the Regency/City of Bali Province.

BIBLIOGRAPHY

- Agustina, & Pramana. (2019). The impact of development and government expenditure for information and communication technology on Indonesian economic growth. *Journal of Business Economics and Environmental Studies*, 9(4), 5-13.
- Anggraini, R., Ayun, & Muta'ali, L. (2013). Relationship pattern of economic growth and human development in East Java Province in 2007-2011. *Jurnal Bumi Indonesia*, 2(3), 233-242.
- Anwar, M. L., Palar, S. W., & Samuel, J. L. (2016). The influence of DAU, DAK, PAD, on economic growth and poverty (Manado City 2001-2013). *Jurnal Berkala Ilmiah Efisiensi*, 16(2), 218-232.
- Arikunto, S. (2010). *Research procedures: A practical approach*. Jakarta: Rineka Cipta.
- Arini, & Mustika, M. D. S. (2015). The influence of local original income and indirect spending on poverty through economic growth in Bali Province 2007-2013. *E-Journal of Development Economics*, Udayana University, 4(9), 1140-1163.
- Arka, S., & Yasa, O. A. (2015). The influence of economic growth and income disparity between regions on community welfare in Bali Province. *Journal of Applied Quantitative Economics*, 8(1), 63-71.
- Arsyad, L. (2010). *Development economics*. Yogyakarta: UPP STIM YKPN.
- Astuti, W. A., Hidayat, M., & Darwin, R. (2017). The influence of investment, labor and population growth on economic growth in Pelalawan Regency. *Journal of Accounting & Economics*, 7(2).
- Aswin, N. D. A., & Yasa, I. N. M. (2021). The influence of education level, health level and population growth on poverty levels in districts/cities in Bali Province. *E-Journal of Development Economics*, Udayana University, 10(11).

- Bela, G. B. K., & Setiawina, D. (2017). The influence of PAD, PMDN, labor and human development index on economic growth of regency/city of Bali Province. *E-Journal of Development Economics*, Udayana University, 8(7), 1666-1696.
- BPS. (2018-2022). Gross regional domestic product growth of regency/city in Bali Province.
- BPS. (2018-2022). Human development index of regency/city in Bali Province.
- BPS. (2018-2022). Local original income (PAD) of regency/city of Bali Province.
- BPS. (2022). Bali Province economic review.
- Christy, F. A., & Adi, P. H. (2009). The relationship between general allocation fund, capital expenditure and quality of human development. *UKWMS National Conference Journal*, October 10. Surabaya: Satya Wacana Christian University Salatiga.
- CNN Indonesia. (2022). 19 million MSMEs enter the digital ecosystem.
- Darmawan, A. P., & Wenagama, I. W. (2017). The influence of local original income, education and unemployment on poverty in Bali Province. *E-Journal of Development Economics*, Udayana University, 6(10), 1868-1895.
- Despotis, D. K. (2005). A reassessment of the human development index via data.
- Dewi, D. K. R., Suwendra, I. W., & Yulianthini, N. N. (2016). The influence of education level and work motivation on employee performance. *Bisma E-Journal Ganesha University of Education*, 4, 2016.
- Fisanti, A. A. E. (2013). Analysis of factors affecting local original income (PAD) in Rokan Hulu Regency. *Research Journal of the Faculty of Economics*, Pasir Pengaraian University.
- Huda, N. (2015). *Islamic development economics*. Jakarta: Premamedia Group.
- Indriani, E. A. (2023). The emergence of online stores affects consumerist lifestyles in students. *Sahmiyya: Journal of Economics and Business*, 2(2), 418-426.
- Jhingan, M. L. (2010). *Development economics and planning*. Jakarta: Rajawali Publisher.
- Judijanto, L., Sandy, S., Yanti, D. R., Kristanti, D., & Hakim, M. Z. (2023). Development of small and medium enterprises (SMEs) based on technological innovation to encourage local economic growth. *Community Development Journal: Journal of Community Service*, 4(6), 12500-12507.
- Laksmi Dewi, S. (2013). The influence of PAD, PMA, and inflation on the economic growth of Bali Province. *E-Journal EP Unud*, 2(11), 502-512.
- Maipita, I. (2014). *Understanding and measuring poverty* (1st ed.). Yogyakarta: Absolute Media Publisher.
- Mankiw, N. G. (2006). *Introduction to macroeconomic theory* (3rd ed.). Jakarta: Salemba Empat.

- Mankiw, N. G., Queh, E., & Wilson, P. (2012). *Introduction to macroeconomics*. Jakarta: Salemba Empat.
- Mardiasmo. (2002). *Regional financial autonomy and management*. Yogyakarta: ANDI Publisher.
- Mariyanti, T., & Mahfudz, A. A. (2016). Dynamic circular causation model in poverty alleviation: Empirical evidence from Indonesia. *Humanomics*, 32(3), 275-299.
- Mirza, D. S. (2012). The effect of poverty, economic growth, and capital expenditure on the human development index in Central Java 2006-2009. *Economics Development Analysis Journal*, 1(1).
- Mulyasana, D. (2012). *Quality and competitive education*. Bandung: Rosdakarya.
- Nadia, I., & Suprpto. (2014). Analysis of factors affecting human development index in Indonesia for the period 2008-2012. *Journal of Economics and Finance*, 18(4), 452-469.
- Nurmaniah, S. (2013). Analysis of the influence of regional government capital expenditure, absorbed labor and human development index on economic growth and poverty. *Journal of Business and Economics (JBE)*, 20(2), 131-141.
- Parwa, I. G. N. L. A., & Yasa, I. G. W. M. (2019). The influence of education level and investment on economic growth and poverty in Bali Province. *E-Journal of Development Economics*, Udayana University, 8(5), 945-973.
- Purnami, N., & Saskara, I. (2016). Analysis of the influence of education and contribution of the agricultural sector to economic growth and the number of poor people in Bali Province in 2004-2013. *E-Journal of Development Economics*, Udayana University.
- Rustariyuni, S. D. (2014). The influence of Gini ratio, non-food expenditure per capita, economic growth rate expenditure on the human development index of regency/city in Bali Province for the period 2004-2012. *PIRAMIDA Journal*, 10(1), 45-55.
- Samuelson, P., & Nordhaus, W. (2007). The relationship between education, unemployment, and economic growth with poverty. *Journal of Applied Quantitative Economics*, 10(1), 59-71.