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Research Article

An Analysis of the Factors Affecting Income Distribution Inequality in Regencies/Municipalities in Bali Province

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Abstract: Income distribution inequality is a key indicator in evaluating the success of a region's economic development. This study aims to analyze the influence of several factors on income distribution inequality across regencies/municipalities in Bali Province. The independent variables examined include economic growth, the regency/municipal minimum wage (UMK), education level, and locally generated revenue (PAD). The research method employed is panel data regression analysis using secondary data obtained from the Central Bureau of Statistics (BPS). The objectives of this study are: (1) to analyze the simultaneous effects of economic growth, UMK, education level, and PAD on income distribution inequality in regencies/municipalities in Bali Province, and (2) to analyze the partial effects of these variables on the same outcome. The study uses secondary data with a total of 90 observation points.

Keywords: Economic Growth, Minimum Wage, Education Level, Local Revenue, Income Distribution Inequality

1. INTRODUCTION

Income distribution inequality across regions remains a serious issue in many developing countries, including Indonesia. Despite the national economy showing positive growth trends over the past few decades, regional disparities continue to persist. This inequality is evident between regions that have developed rapidly and those that remain lagging in terms of economic, social, and infrastructural development. As a result, achieving equitable development poses a major challenge in the formulation of national economic policy.

As an archipelagic country with 38 provinces, Indonesia possesses diverse resources and regional characteristics. Bali Province presents an interesting case—not only is it globally recognized as a tourism destination, but it also faces income distribution inequality among its regencies and municipalities. Regencies such as Badung and Gianyar have experienced rapid growth due to tourism, whereas regions like Karangasem and Jembrana, which still rely heavily on agriculture and fisheries, have shown slower economic growth. This disparity reflects differences in access to infrastructure, investment, and key economic sectors in each area.

Geographical characteristics, the quality of human resources, and development strategies are among the main factors driving regional inequality. Such inequality can be measured using various indicators, including the Gini Coefficient, Williamson Index, Theil Index, and Palma Ratio. In addition, the Human Development Index (HDI) reflects variations in quality of life and productivity among regions. Bali's high dependency on tourism also renders it particularly vulnerable to external shocks such as the COVID-19 pandemic, which significantly impacted local income and economic resilience.

Beyond economic factors, Bali's social and cultural aspects also influence inequality. Traditional systems such as desa adat and subak carry strong social value but, in some cases, limit economic mobility. The patrilineal inheritance system, for example, contributes to asset ownership disparities between men and women. Heavy reliance on the tourism sector has also led to a concentration of wealth in specific regions, further widening the welfare gap between areas.

Persistent inequality can weaken social stability, solidarity, and economic efficiency. Therefore, a comprehensive understanding of the causes and measurements of inequality is crucial in supporting the formulation of inclusive development policies. This study aims to analyze regional income distribution inequality in Bali Province using relevant economic and

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social indicators, thus providing a comprehensive foundation for more equitable and sustainable development policymaking.

Table 1. Gini Ratio of Bali Province According to Regency/City of Bali Province

Regency/City	Gini Ratio of Bali Province by Regency/City				
	2019	**2020**	**2021**	**2022**	**2023**
Jembrana	0.2903	0.3531	0.3170	0.3260	0.3260
Tabanan	0.3080	0.3239	0.3110	0.2990	0.3470
Badung	0.3244	0.3167	0.3320	0.3160	0.2800
Gianyar	0.2866	0.3171	0.3330	0.3070	0.3170
Klungkung	0.3847	0.3575	0.3460	0.3510	0.3380
Bangli	0.2744	0.2829	0.2850	0.2880	0.2820
Karangasem	0.3125	0.3268	0.3180	0.2970	0.3370
Buleleng	0.2847	0.2851	0.2820	0.2810	0.3140
Denpasar	0.3473	0.3301	0.3750	0.3680	0.3420
Bali Province	**0.3662**	**0.3690**	**0.3780**	**0.3630**	**0.3620**

Source: BPS, 2023 (Secondary Data processed 2024)

In Table 1, the inequality in income distribution measured using the Gini ratio in regencies/cities in Bali Province shows fluctuations during the 2019-2023 period. In 2019, the Gini Ratio value was 0.3662, then increased to 0.3690 in 2020 and peaked at 0.3780 in 2021. The Gini ratio fell to 0.3630 in 2022, but rose slightly again to 0.3620 in 2023. This fluctuation reflects income inequality which tends to be stable although there has been a slight improvement after 2021. In Table 1, in the last 5 years, the regions that have succeeded in reducing their income distribution inequality are Badung Regency from 0.3244 to 0.2800, Klungkung Regency from 0.3847 to 0.3380. Most districts in Bali Province experienced an increase in the Gini ratio, namely Jembrana, Tabanan, Gianyar, Karangasem, Buleleng and Denpasar City.

Based on Table 1, the Gini Ratio from 2019-2023 in Badung Regency tends to be smaller even though it has fluctuated, where the smaller the Gini Ratio, the smaller the income inequality in the regency, while the Regency/City with the Highest Gini Ratio is Klungkung which has the highest Gini Ratio value in 2019 of 0.3847 and remains at a high level until 2023 of 0.3380. This shows a more significant inequality compared to other regions. This means that the distribution of income or wealth among the residents of the regency is increasingly even. From the differences in the Gini Ratio, it is important to identify the inequality that exists in a region, which can affect the quality of life of the community. Although Bali's Gini Ratio is relatively low, income inequality between Regencies/Cities still occurs due to structural factors such as the Regency/City Minimum Wage (UMK), Local Original Income (PAD), and Average Length of Schooling which indicate hidden economic disparities. The much higher UMK in Badung and Denpasar compared to Karangasem or Bangli reflects the income gap due to differences in the dominance of economic sectors, such as tourism versus agriculture. In addition, the larger PAD in tourist areas such as Badung and Denpasar allows for better infrastructure development and public services compared to districts with low PAD such as Jembrana or Bangli, thus strengthening the welfare gap. Other factors, such as the higher average length of schooling in urban areas compared to rural areas, also contribute to differences in access to high-wage jobs. Thus, although the Gini Ratio shows a relatively small gap, the analysis based on UMK, PAD, and education reveals deeper economic inequality between regions in Bali, and although the Gini Ratio in Bali Province is relatively stable from year to year, it does not necessarily reflect inequality conditions at the sectoral, spatial, or specific community group levels. The stability of the Gini Ratio does not mean that inequality has actually decreased, because there is the possibility of changes in the economic structure,

differences between regions, and inequality in access to education and job opportunities that are not visible in a single indicator. For example, Bali has a high dependence on the tourism sector, which tends to create income disparities between rapidly developing areas such as Badung and Denpasar and areas that still rely on traditional sectors such as agriculture and fisheries. In addition, different levels of education in each region affect the quality of the workforce and the opportunity to get high-paying jobs, thus increasing socio-economic disparities. On the other hand,Unequal Local Original Income (PAD) can also create gaps in infrastructure development and public services, which ultimately affect the quality of life of people in various regions. Different Regional Minimum Wages (UMR) between regions in Bali can also be a factor causing inequality in income distribution. Therefore, although the Gini Ratio shows a stable figure, further research is still needed to understand the hidden inequalities in various sectors, regions, and social groups, and to design more inclusive policies to achieve equitable and sustainable economic growth.

According to the Central Statistics Agency in 2023, there are several districts that have a shorter level of education compared to other districts, which means that if education in a region is shorter, the Gini Ratio obtained by the region tends to be high. In general, there is a negative correlation between education level and Gini ratio. This means that the higher the level of education of an individual or population, the less likely they are to have a high Gini ratio or a large level of inequality. This is due to the fact that higher education is often correlated with better access to higher-paying jobs and more economic opportunities in general. Although other provinces also experience income inequality, inequality in Bali is more concentrated in a particular sector, namely tourism. Provinces such as West Java or East Java have a more diverse economic structure, with wider industrial and agricultural sectors, so their income inequality may be more spread out and not as concentrated in one sector as tourism in Bali. From the tourism sector, it can automatically accelerate the rate of economic growth and increase Regional Original Income in certain areas where tourism is developing more rapidly.

According to Kuznets (1995), one of the main factors influencing the inequality of income distribution between regions is economic growth. Economic growth is one of the main indicators used to assess how a region develops and to what extent its people feel the benefits of that growth. In economic theory, high economic growth should be able to improve the welfare of society as a whole and reduce inequality if the results are distributed fairly. However, in practice, economic growth often only benefits certain groups, such as capital owners, workers in the formal sector, or areas that already have adequate infrastructure and investment, thus causing income inequality to widen.

In the context of income distribution inequality, non-inclusive economic growth can exacerbate inequality (Joseph Stiglitz, 2012), especially when the results of growth are more concentrated in certain regions or sectors. For example, in areas experiencing rapid economic growth due to the industrial or tourism sectors, people's incomes tend to be higher due to the many job and investment opportunities. Conversely, areas that still rely on the agricultural and natural resource sectors often experience slower growth due to limited access to the technology, capital, and infrastructure needed to increase productivity. This inequality is further exacerbated by limited access to education and skills training, which makes it difficult for workers in disadvantaged areas to compete with workers in more developed areas.

In addition, uneven infrastructure development also plays a role in widening economic disparities between regions. Regions with good transportation networks, adequate internet access, and complete public facilities find it easier to attract investment and develop their leading economic sectors. On the other hand, regions with lagging infrastructure find it difficult to develop due to a lack of connectivity that hinders the distribution of goods and services and reduces the competitiveness of the local economy. As a result, high economic growth in one region does not always have a positive impact on other regions, and can even widen the gap by creating a concentration of wealth in developed regions.

Unequal employment opportunities are also a factor that exacerbates inequality in the context of economic growth. Regions with advanced industries and growing service sectors tend to provide more jobs with higher wages, while regions that still rely on traditional sectors such as agriculture and fisheries often face limitations in creating stable and sustainable jobs. This encourages the migration of workers from disadvantaged areas to large cities that offer more economic opportunities, which in turn can lead to new problems such as increasing urban populations, the emergence of slums, and pressure on infrastructure and public services.

In addition, Minimum Wage also plays an important role in the inequality of income distribution in various regions. Different UMK policies in each region often reflect local

economic conditions, including inflation rates, cost of living, and labor competitiveness. Regions with advanced industries and rapidly growing economic sectors, such as large cities and tourist centers, tend to have higher UMK to adjust to a more expensive standard of living. With a high UMK, workers in these areas earn better incomes, which in turn increases their purchasing power and quality of life. This not only impacts individual welfare, but also has a positive effect on the economic growth of the region, as people have more money to spend on other sectors, such as housing, education, and health services.

However, on the other hand, areas that still rely on traditional sectors such as agriculture and small-scale industry generally have lower UMK. This is often caused by low labor productivity and limited capacity of business actors to pay higher wages. Low UMK has an impact on low purchasing power of the community, so that consumption and economic turnover in the area are slower than in areas with high UMK. This condition can worsen economic inequality between regions, because people in areas with low UMK often have difficulty meeting decent living needs. The cost of living that continues to increase due to inflation is not always balanced by adequate wage increases, causing people's purchasing power to be further eroded and triggering an increase in poverty rates.

In addition, differences in UMK can also encourage uncontrolled urbanization. Many workers from areas with low UMK choose to migrate to big cities or areas with higher wages in search of better job opportunities. As a result, underdeveloped areas experience a loss of productive labor which actually further hampers local economic growth. On the other hand, big cities face new challenges such as increasing urban population, limited job opportunities, traffic jams, and increasing slums due to urbanization that is not balanced by the provision of adequate infrastructure. In other words, uneven UMK policies can create structural inequalities that impact various economic and social aspects.

Not only that, the UMK policy that is too high in some regions can also have a negative impact on investment and economic competitiveness. For business actors, especially in labor-intensive sectors, high wages can be a significant burden on operational costs. As a result, some companies may choose to carry out labor efficiency, such as replacing human workers with technology or automation, which can lead to increased unemployment. In addition, the high UMK in one region can also encourage investors to move their businesses to areas with lower wages, which ultimately creates economic disparities between regions. This further shows that the UMK policy must be designed with a balance between improving worker welfare and the sustainability of the business world so as not to create new inequalities. To overcome this problem, the government needs to design a UMR policy that not only focuses on increasing nominal wages, but also takes into account the long-term impact on economic growth and equitable development. One step that can be taken is to encourage increased labor productivity through education and skills training. If workers have better skills, they will be able to make a higher economic contribution so that employers can pay more decent wages without having to sacrifice the sustainability of their businesses. In addition, incentives for companies investing in areas with low MSEs, such as tax breaks or capital assistance, can be a solution to stimulate economic growth in underdeveloped areas and reduce income inequality between regions.

Furthermore, equitable development policies must also be a priority so that the gap between regions does not widen due to differences in UMK. The government can allocate a larger budget for infrastructure development in disadvantaged areas, such as roads, electricity, and internet access, which can increase the attractiveness of investment in the region. In addition, policies that encourage the development of local economic sectors, such as MSMEs and the creative industry, can help create more jobs that provide decent incomes for local communities. With a more comprehensive strategy, UMK policies can be an effective tool in reducing inequality in income distribution and creating more inclusive and sustainable economic growth for all regions.

The level of education is a crucial factor that greatly influences the distribution of income between regions. Quality education plays a role in forming superior, competitive human resources with skills that are in accordance with the needs of the labor market. According to Becker, GS (1964) in the theory of human capital, the higher the level of education a person obtains, the greater the opportunity to get a job with decent wages and more promising career prospects. Areas with good access to education, from elementary to tertiary levels, tend to have residents with higher levels of skills, so they can access high-productivity economic sectors, such as technology-based industries, financial services, and international trade. This ultimately contributes to increasing community income and encouraging more inclusive economic growth. Conversely, areas with low levels of education

often face limitations in terms of quality labor, so that their economies tend to stagnate and their communities are more vulnerable to poverty.

Average length of schooling is a key indicator in measuring the quality of education in a region and has a direct relationship with the level of community income. A high average length of schooling indicates that the population of the region has a better level of education, which automatically increases their chances of getting a job in the formal sector with a higher salary. Conversely, regions with a low average length of schooling usually face difficulties in improving the standard of living of their population due to the lack of skills needed to compete in the modern world of work. Significant differences in average length of schooling between regions are one of the main factors causing inequality in income distribution, because regions with a low average length of schooling tend to have a larger proportion of workers in the informal sector or low-wage jobs that do not guarantee long-term economic stability.

One of the main causes of the low average length of schooling in some areas is the lack of access to adequate educational facilities. In rural and remote areas, limited educational infrastructure is a major obstacle for children to obtain quality education. Schools in remote areas often face problems such as a lack of qualified teachers, inadequate facilities, limited teaching materials, and difficult access due to poor road and transportation infrastructure. As a result, many children have difficulty continuing their education to a higher level, both due to geographical and economic factors. On the other hand, urban areas with more complete educational facilities, from elementary schools to universities, provide greater opportunities for their residents to obtain quality education and improve their standard of living.

In addition to differences in access to education, family economic factors also play a major role in determining a person's level of education. Many children in low-income areas are forced to drop out of school because they have to help their parents work to meet the family's economic needs. Children from poor families often face limitations in paying for education, whether in the form of school fees, books, uniforms, or transportation. As a result, they lose the opportunity to gain better skills and end up trapped in a cycle of ongoing poverty. Meanwhile, children from families with better economic conditions have a greater chance of completing their education to a higher level, so they are better able to access jobs with higher incomes.

Not only that, differences in the quality of education are also a factor that widens the income gap between regions. Education is not only about how long someone goes to school, but also about the quality of learning obtained during that education period. Regions that have a more advanced education system, such as the use of technology in learning, a curriculum that is in accordance with industry needs, and quality teaching staff, tend to produce graduates who are better prepared to enter the workforce. Conversely, in regions that still face problems in terms of the quality of education, school graduates often do not have the skills needed by the labor market, so they have difficulty getting jobs with decent wages. As a result, many of them end up working in the informal sector with low and uncertain incomes.

The gap in education levels also impacts the social and economic mobility of a region. Regions with better education not only have a more productive workforce, but are also more attractive to investors and companies that need quality workers. With the investment coming in, the region will experience faster economic growth, which ultimately improves the welfare of its residents. Conversely, regions with low levels of education tend to have difficulty in attracting investment, due to the lack of workers who have the skills according to industry needs. As a result, economic growth in these regions is slower, which then worsens the income gap between developed and underdeveloped regions.

To address this inequality, a comprehensive policy is needed to improve access and quality of education in all regions, especially in disadvantaged areas. The government needs to ensure that all children have an equal opportunity to receive quality education, either through building schools in remote areas, improving teacher welfare, or providing scholarships for students from underprivileged families. In addition, vocational education and skills training must also be strengthened, especially for those who do not have the opportunity to continue to higher education. By improving the skills of the workforce in disadvantaged areas, they can have a better chance of getting jobs with higher incomes, which can ultimately help reduce the inequality of income distribution between regions.

In addition to the role of government, the private sector and society must also contribute to improving the quality of education. Companies can play a role in supporting education by providing training and internship programs for students and school graduates, so that they are better prepared to face the world of work. Meanwhile, society can play a role in promoting the importance of education for children and ensuring that they get access to

decent education. With collaboration between the government, private sector, and society, it is hoped that the gap in education levels can be reduced, so that income distribution between regions becomes more equitable and the welfare of society as a whole can increase. Overall, education has a very large impact in determining the level of income and welfare of society. Regions that have a good education system will find it easier to achieve sustainable economic growth, while regions with low levels of education tend to lag behind in various aspects of development. Therefore, investment in education must be a top priority in efforts to reduce inequality in income distribution and create a more prosperous and competitive society. With the right approach, education can be an effective tool in creating economic equality and improving the quality of life of the entire community, regardless of their regional background.

Local Original Revenue (PAD) is one of the main sources of financing for regional development in Indonesia, reflecting the level of fiscal independence of a region in managing and financing its own needs. PAD is obtained from various sources, including local taxes, local levies, results of management of separated regional assets, and other legitimate income. Local taxes, such as hotel, restaurant, entertainment, advertising, and motor vehicle taxes, are often the largest contributors to PAD, especially in areas with high economic activity, such as large cities and tourist areas. Meanwhile, local levies come from services provided by the local government, such as market, parking, and health service levies. Results from management of separated regional assets, such as dividends from Regionally-Owned Enterprises (BUMD), also contribute to PAD, although the amount depends on the performance of the regional company. In addition, other legitimate income includes various additional sources, such as administrative fines and results of inter-regional cooperation.

PAD plays a very important role in determining the capacity of a region to carry out development and provide public services to its people. Regions with high PAD have greater fiscal flexibility in financing infrastructure development, improving the quality of education and health services, and encouraging more sustainable economic growth. Conversely, regions with low PAD often experience budget constraints in implementing development programs, so they are more dependent on transfer funds from the central government, such as the General Allocation Fund (DAU), Special Allocation Fund (DAK), and Revenue Sharing Fund (DBH). This dependence can limit regional autonomy in determining development policies that are in accordance with local needs, because they must follow the rules and regulations set by the central government.

However, the distribution of PAD between regions in Indonesia is still very uneven, which is one of the main factors in economic and income inequality between regions. Regions with a strong economic base, such as Jakarta, Surabaya, Bandung, and Bali, have much larger PAD compared to regions that still rely on primary sectors such as agriculture and fisheries. This inequality is caused by differences in economic structure, resource potential, and levels of investment and industrialization in each region. Regions that have leading economic sectors, such as manufacturing, trade, and tourism, tend to be able to collect large amounts of PAD due to the high economic activity that generates tax and levy revenues. Conversely, regions that still rely on traditional sectors and have limited infrastructure often have difficulty increasing their PAD, due to the low economic capacity that can be taxed.

In addition, the effectiveness of PAD management is also an important factor in determining how much PAD contributes to regional development. Many regions still face challenges in terms of tax administration, transparency, and accountability in regional financial management. A suboptimal tax system, low public awareness in paying taxes, and revenue leakage due to corrupt practices can hinder PAD optimization. Therefore, increasing the capacity of local governments in managing PAD effectively is crucial so that regional income can be used optimally to improve community welfare.

PAD inequality also has a direct impact on income inequality between individuals within a region. Regions with high PAD tend to be able to provide more jobs through development projects and investments funded by PAD, so that local communities have better economic opportunities. Conversely, regions with low PAD often face limitations in creating job opportunities, leading to high unemployment and poverty rates. This inequality can be further exacerbated by differences in budget allocation, where regions with large PAD are able to provide subsidies, incentives, and broader social assistance programs for their residents, while regions with small PAD do not have the fiscal capacity to do the same.

To reduce the inequality in PAD distribution, a comprehensive strategy is needed from the central and regional governments. One step that can be taken is to increase regional capacity in managing their economic resources in order to increase PAD revenues. Regional governments need to develop potential economic sectors that can be new sources of income,

such as developing locally-based tourism, strengthening the MSME sector, and optimizing the use of regional assets. In addition, regional tax policy reform also needs to be carried out to ensure that tax and levy collection is carried out fairly, transparently, and efficiently.

In addition to internal efforts at the regional level, the central government also has a role in reducing regional PAD disparities through fairer and needs-based fiscal transfer policies. The General Allocation Fund (DAU) and Special Allocation Fund (DAK) schemes must be designed in such a way that they can help regions with low PAD to increase their fiscal capacity without reducing incentives for regions that are already fiscally independent. The fiscal decentralization program must also be strengthened by providing greater authority for regions to manage their own revenue sources, but still within a framework of strict accountability and supervision to prevent budget misuse.

Overall, PAD is a key element in regional development that determines how much capacity a region has to finance its own needs. However, inequality in the distribution of PAD is still a major challenge that contributes to economic inequality between regions in Indonesia. Therefore, efforts to increase PAD in disadvantaged regions through strengthening the local economy, optimizing the tax system, and more equitable fiscal transfer policies must be a priority in encouraging more inclusive and sustainable development throughout Indonesia.

One relevant theory in explaining the relationship between education level and inequality is the Human Capital theory, which was first proposed by economist Gary Becker (1964). Human Capital theory states that investment in education and training of individuals can be considered as an investment in "human capital" which in turn increases their productivity and income. According to Human Capital theory, education acts as a provider of skills, knowledge, and capacities that allow individuals to maximize their potential in the labor market. With increasing education, individuals tend to have more access to jobs that require higher skills and therefore tend to pay higher. Thus, education is considered a key mechanism for reducing income inequality, as it can increase social mobility and expand economic opportunities for individuals from different backgrounds.

The importance of education in reducing income inequality by promoting basic skills and equal access to economic opportunities. According to this approach, income inequality can be reduced by providing more equal access to basic education and economic opportunities for the entire population. Although different theories provide different insights, all highlight the important role of education in reducing income inequality by increasing access to economic opportunities, expanding skills and knowledge, and promoting equal access to resources and opportunities.

Some points that can be taken from the Central Statistics Agency data are the variations in minimum wages between regencies/cities in Bali. For example, Denpasar and Badung tend to have higher minimum wages compared to other regencies such as Bangli and Klungkung. This variation shows differences in economic conditions and living costs in various regions. Income inequality can occur if minimum wage increases are not evenly distributed across regions. Regions with higher minimum wages such as Denpasar and Badung may have greater purchasing power.

Compared to areas with lower minimum wages. This can lead to income and welfare disparities among Balinese people. Different minimum wages across regencies/cities in Bali reflect varying economic conditions and can contribute to income inequality in the province. Efforts to reduce this disparity may require policies that focus more on economic equality and increasing employment opportunities in areas with lower minimum wages.

According to the Central Statistics Agency, the economic growth rate in Badung Regency has the highest value compared to other regencies. Although high economic growth in Badung Regency can improve the welfare of the people in the area, this can worsen the income inequality between Badung Regency and other regencies/cities in Bali Province. Rapid growth, especially if concentrated in the tourism sector and related sectors, can lead to a greater income gap between Badung and other areas that have not developed rapidly. Badung Regency, which is a major tourism center, may attract more investment, skilled labor, and economic actors, while other areas that do not have similar sectors or limited access to these key economic sectors will be left behind, widening the gap in income inequality.

Districts with lower economic growth rates will have a harder time catching up, given this uneven growth. Districts that rely on traditional sectors or are less involved in fast-growing sectors (such as tourism) may not see the same benefits from Badung's high economic growth.

Based on the background explained above, this study was conducted to examine more deeply the factors that influence and why there is inequality in income distribution in Bali

Province. The solution to the problem of inequality is not aimed at making all people at the same level. But rather how to reduce the disparity.

2. METHOD

This study employs an associative quantitative approach aimed at analyzing the influence and relationship among the examined variables, namely economic growth, education level, district/city minimum wage (UMK), and regional original revenue (PAD), on income distribution inequality in Bali Province. The data used are secondary panel data (cross-sectional and time series) from 2014 to 2023, covering nine districts/cities, resulting in a total of 90 observations. The data were obtained from the Bali Province Central Bureau of Statistics (BPS), and the data collection method was non-participant observation. The type of data used is quantitative, and the analytical technique employed is explanatory analysis to identify patterns of relationships between variables.

Variables and Operational Definitions

This study involves one dependent variable, namely income distribution inequality (Y), measured using the Gini ratio index, and four independent variables: economic growth (X1), measured in percent; UMK (X2), measured in million rupiahs; education level (X3), based on the average years of schooling; and PAD (X4), measured in hundreds of million rupiahs. Operational definitions are used to ensure each variable holds a consistent meaning relevant to the research object. These variables were selected for their relevance in explaining economic disparities among districts/cities in Bali, encompassing aspects of development and regional finance.

Data Analysis Technique

The data were analyzed using panel data regression, which offers advantages in combining time-series and cross-sectional dimensions, thereby improving efficiency and reducing multicollinearity among variables. Model testing was conducted using the Chow Test, Hausman Test, and Lagrange Multiplier Test to determine the most suitable model among common effect, fixed effect, and random effect. In addition, classical assumption tests such as the normality test were performed to ensure the validity of the regression model used. The selected model was then used to test the hypotheses and to explain the influence of each independent variable on income distribution inequality in Bali Province.

3. RESULTS AND DISCUSSION

Description of Research Variables

Table 2. Results of Descriptive Statistical Analysis

	Y	X1	X2	X3	X4
Mean	0.328561	3.58222	2.264710	8.324889	7.440060
Median	0.326000	5.490000	2.338845	8.135000	3.185353
Maximum	0.402600	11.29000	3.163837	11.52000	63.08870
Minimum	0.268200	-16.55000	1.542600	5.390000	0.457210
Std. Dev.	0.030642	4.616158	0.432248	1.622765	11.62181
Observations	90	90	90	90	90

Source: Appendix 2

According to Ghozali (2016), descriptive statistics provide an overview or description of data that can be obtained through minimum, maximum, average (mean) and standard deviation values.

Based on the results of the descriptive statistical analysis in Table 2, it shows that the inequality of income distribution has a minimum value of 0.268 points and a maximum value of 0.402 points. With an average of 0.328 points and standard deviation 0.030 points. The average value that is higher than the standard deviation indicates that the distribution of data in the variable is in a good category.

Based on the results of descriptive statistical analysis in Table 2 shows that economic growth has a minimum value of -16,550 percent and a maximum value of 11,290 percent. With an average of 3,583 percent and a standard deviation of 4,616 percent. The average value that is lower than the standard deviation indicates that the variation of data on the variable is in the high category.

Based on the results of the descriptive statistical analysis in Table 2, it shows that the district/city minimum wage has a minimum value of 1,542 million rupiah and a maximum value of 3,163 million rupiah. With an average of 2,264 million rupiah and a standard deviation of 0.432 million rupiah. An average value that is higher than the standard deviation indicates that the distribution of data in the variable is in a good category.

Based on the results of descriptive statistical analysis in Table 2, it shows that the average length of school has a minimum value of 5,390 years and a maximum value of 11,520 years. With an average of 8,324 years and a standard deviation of 1,622 years. The average value that is higher than the standard deviation indicates that the distribution of data in the variable is in a good category.

Based on the results of descriptive statistical analysis in Table 2, it shows that the original regional income has a minimum value of 0.457 hundred million rupiah and a maximum value of 63.088 hundred million rupiah. With an average of 7.440 hundred million rupiah and a standard deviation of 11.621 hundred million rupiah. The average value that is higher than the standard deviation indicates that the distribution of data in the variable is in a good category.

Panel Data Model Selection

1) Chow Test

Table 3. Chow Test Results

Effects Test	Statistics	df	Prob.
Cross-section F	4,410	8,760	0.002
Cross-section Chi-square	33,937	8	0.0001

Source: Appendix 3

In the Table3, the Chi-square value of the results obtained using eviews 12 is 33.937 with a probability of 0.0001 < 0.05, meaning that H0 is rejected, so the fixed effect model is used.

2) Hausman test

Table 4. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. df	Prob.
Random cross section	0.790	4	0.939

Source: Appendix 3

The Chi-square distribution value of the results obtained using eviews 12 is 0.790 with a probability of 0.939 > 0.05, meaning that H0 is accepted, so the model used is the random effect model.

3) Lagrange Multiplier Test.

Table 5. Lagrange Multiplier Test Results

	Cross section	Time	Both
Breusch Pagan	21,410 (0.0000)	0.004 (0.9483)	21,415 (0.0000)

Source: Appendix 3

The Breusch-Pagan cross section probability value is 0.0000 < 0.05, so H0 is rejected, so the random effect model is selected.

Panel Data Regression Equation

Based on the results of the panel data model test using the Chow Test, Hausman Test, and Lagrange Multiplier Test, the most appropriate model for this study is the Random Effect Model (REM). Based on the results of data processing, the panel data regression equation that describes how Economic Growth, Regency/City Minimum Wages, Education Level, and Local Original Income affect income distribution inequality is as follows:

$\hat{Y}$= 0.329 - 0.0001(X1) - 0.037(X2) + 0.010(X3) - 0.0006(X4) + [CX=R]

Information:

$\hat{Y}$= Income Distribution Inequality
X1 = Economic Growth
X2 = District/City Minimum Wage
X3 = Education Level
X4 = Local Original Income

Classical Assumption Test Results

Normality Test

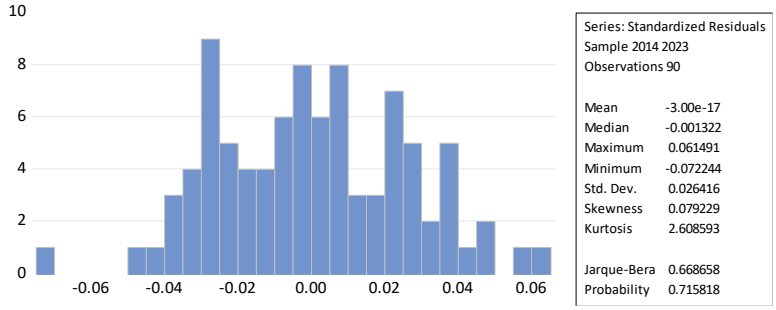

Figure 1. Results of the Jarque-Bera Normality Test

Source: Eviews 12 Processing Results

Based on the results in Figure 1, it can be seen that the results obtained from the Jarque Bera (JB) test, the Jarque Bera (JB) probability value is 0.668> 0.05. Thus, it can be concluded that the residuals are normally distributed on the assumption that the data normality test has been met.

Multicollinearity Test

Table 6. Multicollinearity Test Results

	X1	X2	X3	X4
X1	1	-0.469	-0.080	0.169
X2	-0.469	1	0.441	0.304
X3	-0.080	0.441	1	0.535
X4	0.169	0.304	0.535	1

Source: Appendix 4

Based on Table 6, it can be seen that the correlation between variables is less than 0.8, so it can be said that the regression model does not contain multicollinearity.

Heteroscedasticity Test

Table 7. Results of Heteroscedasticity Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C Y	0.111 0.029	0.025 0.063	0.447 0.459	0.655 0.646
X1	0.0005	0.0004	1,215	0.227
X2	0.002	0.005	0.376	0.707
X3 X4	-0,000 -0.0003	0.001 0.0002	-0.300 -1,500	0.764 0.137
R-squared	0.058		F-statistic	1,028
Adjusted R-squared	0.001		Prob(F-statistic)	0.406

Source: Appendix 4

Based on Table 7, it shows that the probability values of economic growth, education level, district minimum wage, and local original income are greater than 0.05, so it is concluded that there is no heteroscedasticity.

Testing the Effect of Economic Growth, Education Level, UMK, and PAD Simultaneously on Income Distribution Inequality (F Test)

Table 8. Simultaneous Regression Coefficient Test (F-Test)

R-squared	0.278	F-statistic	8,086
Adjusted R-squared	0.243	Prob(F-statistic)	0.000
SE of regression	0.022		

Source: Appendix 5

Based on Table 8, the Fcount value is 8.086 > 2.48 with a probability of 0.000014 < 0.05, so H0 is rejected and H1 is accepted. This shows that economic growth, education level, district minimum wage, and local revenue together have a significant effect on community welfare. The R-Square value is 0.243, this shows that variations in economic growth (X1),

education level (X2), district minimum wage (X3), and local revenue (X4) affect the inequality of income distribution in Bali Province in 2014-2023 by 0.243, while the remaining 0.757 is influenced by other factors.

Testing the Influence of Economic Growth, Education Level, UMK, and PAD Partially on Income Distribution Inequality (t-Test)

Table 9. Partial Regression Coefficient Test (t-Test)

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	0.329	0.029	11.133	0.000
X1	-0.0001	0.0006	-0.257	0.797
X2	-0.037	0.008	-4,546	0.000
X3	0.010	0.003	2.935	0.004
X4	-0.0006	0.0004	-1,591	0.115
R-squared	0.278	F-statistic		8,086
Adjusted R-squared	0.243	Prob(F- statistic)		0,000

Source: Appendix 5

In this study, with a significance level of $\alpha = 0.05$, sample size n = 90, number of parameters k = 5, and degrees of freedom df = (n - k) = 90 - 5 = 85, the critical t-value (ttable) is 1.662. Based on the t-test results shown in Table 9, the effect of economic growth on income distribution inequality yielded a tstatistic of -0.257, which is greater than -ttable (-1.662), with a probability value of 0.797 > 0.05. Thus, the null hypothesis (H_0) is accepted, indicating that economic growth has a negative but statistically insignificant effect on income distribution inequality.

The partial test results for the effect of the district/city minimum wage on income distribution inequality show that the absolute tstatistic value is |4.546| > ttable = 1.662, with a probability value of 0.000 < 0.05. Therefore, H_0 is rejected, suggesting that the district/city minimum wage has a significant negative effect on income distribution inequality.

The partial test results for the effect of education level on income distribution inequality indicate that the tstatistic is 2.935 > ttable = 1.662, with a probability value of 0.004 < 0.05. Hence, H_0 is rejected, implying that the level of education has a significant positive effect on income distribution inequality.

The partial test results for the effect of locally generated revenue (PAD) on income distribution inequality show a tstatistic of -1.591 < ttable = 1.662, with a probability value of 0.115 > 0.05. Therefore, H_0 is accepted, indicating that locally generated revenue has a negative but statistically insignificant effect on income distribution inequality.

4. CONCLUSION

Based on the results and discussion presented, the following conclusions can be drawn:

- Economic growth, district/city minimum wage, education level, and locally generated revenue simultaneously have a significant effect on income distribution inequality in the regencies/municipalities of Bali Province.
- Economic growth and locally generated revenue do not have a significant effect on income distribution inequality in the regencies/municipalities of Bali Province. Meanwhile, the district/city minimum wage has a significant negative effect, and the level of education has a significant positive effect on income distribution inequality in the regencies/municipalities of Bali Province.

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