

The Effect of Investment, Labor and Exports on Economic Growth in East Nusa Tenggara Province

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ABSTRACT

Economic growth is an important indicator in measuring the success of a region's development. Sustainable and inclusive economic growth is the main goal for every local government, including East Nusa Tenggara Province (NTT). There are several factors that influence economic growth, namely investment, labor and exports. Based on the discussion of the effect of investment, labor and exports on economic growth in East Nusa Tenggara Province, it can be seen that investment variables in the short and long term have no significant effect on economic growth in East Nusa Tenggara Province in 2003-2023, labor variables in the short and long term have a significant but negative effect on economic growth in East Nusa Tenggara Province in 2003-2023, export variables in the short and long term have no significant effect on economic growth in East Nusa Tenggara Province in 2003-2023, and simultaneously investment, labor and export variables in the short and long term have a significant effect on economic growth in East Nusa Tenggara Province in 2003-2023.

Keywords: Economic growth, Development indicator, Sustainable economic growth, Inclusive economic growth, Local government

INTRODUCTION

Economic growth is an indicator that is generally used to see the success of the economic situation in a region from one period to the next. Economic growth is an important indicator in measuring the success of a region's development. Sustainable and inclusive economic growth is the main goal for every local government, including East Nusa Tenggara Province (NTT). NTT as one of the provinces in Indonesia, which has abundant natural resource potential, still faces various challenges in achieving optimal economic growth.

Table 1
ADHK and ADHB GRDP of NTT Province in 2018-2023

Year	ADHK (%)	ADHB (Million Rupiah)
2018	5,11	98.930.187
2019	5,25	106.731,763
2020	-0,84	106.482.448
2021	2,52	110.881.411
2022	3,05	118.718.197
2023	3,52	128.523.134

Source: NTT Central Bureau of Statistics, 2025

Based on Table 1, it can be seen that the GDP growth rate at constant prices (ADHK) of East Nusa Tenggara Province fluctuated during the 2018-2023 period. In 2018 and 2019, ADHK growth was quite high, at 5.11% and 5.25% respectively. However, in 2020, there was an economic contraction of -0.84% due to the COVID-19 pandemic. Growth returned to positive in 2021 to 2023, albeit at a lower rate than before the pandemic. Meanwhile, ADHB GRDP (at current prices) continues to increase every year, from 98,930,187 million rupiah in 2018 to 128,523,134 billion rupiah in 2023, which indicates nominal economic growth in NTT province. There are several factors that influence economic growth, namely investment, labor and exports. Based on the Harrod-Domar theory, investment has a good influence on the progress of a country. Because in his condition, the higher investment savings will increase capital and trigger an increase in total output, so that in the end it will trigger economic growth. and equipment, vehicles, plants, livestock, and other capital goods. In addition to investment, labor is also influential in economic growth, labor is a factor that affects the output of a region. A large labor force will be formed from a large population. On the other hand, it is not only investment and labor that affect economic growth, but exports also affect economic growth, exports can also help carry out a country's development efforts through the promotion and strengthening of economic sectors that contain comparative advantages, be it in the form of the availability of certain factors of production in abundance, or the superiority of efficiency or labor productivity.

Table 2
Investment, Labor and Exports of NTT Province in 2003-2023

Year	Investment (%)	Labor (Soul)	Export (Million US\$)
2018	5,11	2.411.533	17.802.082
2019	5,25	2.394.673	16.279.934
2020	-0,84	2.725.955	15.865.544
2021	2,52	2.808.620	16.644.832
2022	3,08	2.915.293	48.217.770
2023	3,47	2.896.901	60.047.468

Source: NTT Central Bureau of Statistics, 2025

Table 2 shows the performance of gross fixed capital formation (PMTB) investment, labor and exports. The value of investment or Gross Fixed Capital Formation (PMTB) in NTT showed fluctuations during the period 2018-2023. There was an increase from 2018 to 2019, a decrease in 2020, and then an increase again until 2023. The component of gross fixed capital formation (PMTB) in the presentation of GRDP by expenditure, explains more about the part of income (income) that is realized into physical investment. In addition, it can also be interpreted as a description of various goods and services that are partly used as physical investment (capital). The function of capital is as an indirect input in the production process in various business fields. Meanwhile, the labor force in NTT showed fluctuations during the 2018-2023 period. There was a decrease in 2019, a significant increase in 2020 and 2021, and a slight decrease again in 2023. As for exports, it can be seen that in the 2018-2021 period, the export value of NTT tends to fluctuate and is relatively stable in the range of 15-17 million US dollars. There was a decrease from 2018 to 2020, then a slight increase in 2021. In 2022 and 2023, there was a very significant increase in the value of exports. In 2022, the export value jumped to 48.22 million US\$, and continued to increase to 60.05 million US\$ in 2023. In the explanation above, economic growth is strongly influenced by investment, labor and exports. Based on the above problems, the authors are interested in conducting this research on the grounds that economic growth in NTT has decreased and increased from year to year which is seen from several factors, namely investment, labor and exports which have also decreased and increased from year to year, thus triggering economic growth in East Nusa Tenggara. Judging from the development of economic indicators or variables as described, it can theoretically occur, but in fact it often happens that between each independent variable and the dependent variable under study there is no influence. Independent variables are investment, labor, and exports, while the dependent variable is economic growth.

THEORETICAL FOUNDATION

Economic growth is an increase in a country's ability to cause goods and services produced to increase in society and will ultimately improve people's welfare. The increase in the country's ability to produce goods and services increases from year to year due to factors of production that will increase both in quantity and quality. The increase in real national income can be seen from the comparison of the value of real national income in a particular year and before (Sukirno, 2016). Economic growth is also influenced by several factors, namely investment, labor and exports. Investment will only have an influence on growth if it is used productively and is supported by various factors such as skilled labor, good management, and adequate infrastructure (Sukirno, 2011, Modern Macroeconomics, revised edition), according to Todaro and Smith (2006), population growth is closely related to the number of workers who work and is one of the factors that will affect economic growth. In addition to production factors, the number of workers who work if it increases from year to year and can be utilized optimally, it will increase economic growth. According to Dumairi (2004) export activities will not have a major influence on economic growth if they are not accompanied by an increase in domestic production capacity, industrial strengthening, and the creation of added value in the country. Exports that are only in the form of raw commodities tend not to provide sustainable benefits to the economy. According to Article 1 of the Indonesian Minister of Trade Decree No. 124/MPR/KEP/5/1996, exports are activities that remove goods from the customs area.

RESEARCH METHODOLOGY

This study uses a type of quantitative research in the form of units of measure or numbers in the analysis results. This study uses *time series* data, *time series* data used in econometrics are often not stationary. Non-stationary *time series* data is one of the causes of the estimation results on the regression model to be tapered or dubious. Deviant regression can be seen from statistically significant results and high coefficient of determination values but between variables have no relationship. In econometrics there is a method to overcome these problems, namely by using the *Error Correction Model* (ECM) to determine the short-term and long-term relationship between variables. The approach used in this research is an associative quantitative approach. According to Sugiyono (2019) associative research is a quantitative approach a research problem formulation that asks about the relationship between two or more variables. In this study, the associative approach is used to identify the extent of the influence of variable X (independent variable) consisting of investment (X1), labor (X2) and exports (X3) on variable Y, namely economic growth (dependent variable) simultaneously.

RESULTS AND DISCUSSION

Economic Growth

Economic growth measures the results and development of an economy from one period to the next. Economic growth can be seen from the value of GRDP (at constant prices). The use of constant prices is intended to avoid the influence of price changes, so that the changes measured are real economic growth. Economic growth in East Nusa Tenggara Province for the period 2003- 2023 can be seen in Figure 1:

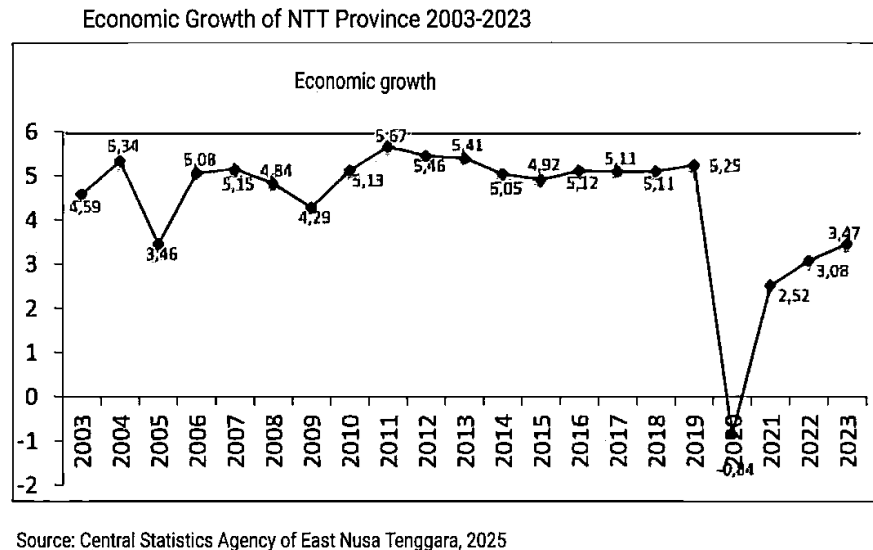


Figure 1.
Economic Growth of NTT Province 2003 - 2023

The Effect of Investment on Economic Growth

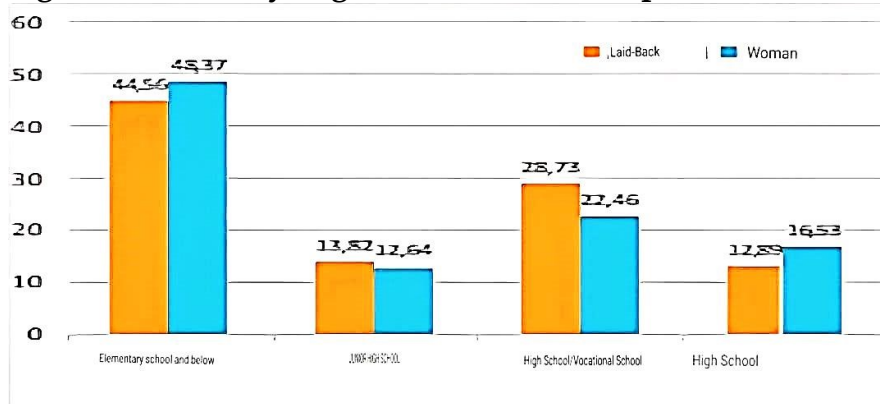
The results of the analysis show that the investment variable does not have a significant effect on economic growth in East Nusa Tenggara Province, either in the short or long term. This is reflected in the probability value that is greater than 0.05 and the t-statistic that is smaller than the t-table. Theoretically, this result is in line with Sadono Sukirno's view, which states that investment does not always produce growth if it is not supported by the efficient use of capital, labor readiness, and adequate infrastructure. In the context of NTT, the unoptimized condition of basic infrastructure, the low quality of human resources, and the lack of adequate infrastructure are the main reasons for this investment in productive sectors is a factor that limits the contribution of investment to economic growth. In fact, investment entering NTT has not been fully directed towards sectors with high productivity or the potential for large economic multipliers. Most investment is still focused on the trade, construction, and services sectors, which, although they contribute, do not have a sustainable effect on increasing regional added value. On the other hand, NTT's leading sectors such as dryland agriculture, cattle farming, and marine products have not received maximum attention in investment allocation. The realization of

government investment through capital expenditure is also still constrained by the efficiency of project implementation and the low quality of development planning. This situation is not in line with the policy direction contained in the 2018-2023 NTT Provincial RPJMD and the annual RKPD, where the government has emphasized strengthening the investment climate, simplifying licensing, and promoting leading sectors. However, the implementation of this policy still faces various challenges such as limited logistics infrastructure and a lack of integrated planning. The results of this analysis are also in line with Fauzi and Suhaidi's (2022) research, which shows that investment in Indonesia can have a negative impact if it is not managed efficiently or if the investment climate is not favorable, with factors such as legal certainty, land ownership, and the quality of basic infrastructure greatly affecting the success of investment in increasing growth.

The Effect of Labor on Economic Growth

The results show that the labor variable has a significant but negative influence on economic growth in NTT Province, both in the short and long term. This is because the labor force in NTT Province is still dominated by low- educated workers (elementary school and below) as shown in Figure 4 below:

Figure 2
Percentage of Workers by Highest Education Completed and Gender, 2023



The low level of education is one of the factors that affect the quality of the workforce in NTT Province. The relatively low quality of labor in NTT causes the performance of workers to also be low. The relatively low level of education also causes the absorption of labor to be not optimal because it does not meet the qualifications of the company, where competition in the labor market many companies prefer to use more skilled labor than *unskilled* labor so that labor in NTT is still concentrated in *unskilled* employment.

The Influence of Exports on Economic Growth in NTT

The results show that exports do not show a significant influence on economic growth in NTT in either the short or long term. This is indicated by the high probability value and low t-statistic in the regression test results. Structurally, exports in NTT are still dominated by raw commodities such as seaweed, live cattle, and agricultural products that do not go through further processing. This condition causes the added value generated from export activities to be very low and less able to encourage broad economic activity. In regional development planning documents such as the RPJMD and RKPD of NTT Province, the government has set the trade and industry sector as one of the priorities, by encouraging the development of leading export commodities such as salt, Flores coffee, beef cattle, ikat weaving, seaweed, and fresh fish. Downstream and industrialization programs are also the main focus in order to increase the added value of products. However, various challenges are still faced, including limited processing industries at the local level, low access to international markets, and not optimal support for logistics and port infrastructure. This has caused the contribution of exports to NTT's economic growth to remain very limited.

The Effect of Investment, Labor and Exports on Economic Growth

The results of this study indicate that simultaneously the three variables, namely investment, labor, and exports, have a significant influence on economic growth in NTT Province. The results of the analysis show that the three variables, namely investment, labor and exports, are jointly able to explain changes in Gross Regional Domestic Product (GRDP), which is the main indicator of economic growth. Investment plays an important role in the process of capital accumulation, as explained in the Harrod-Domar theory, where investment will increase production capacity and drive economic growth. In the context of NTT, investment is represented through Gross Fixed Capital Formation (PMTB), such as the development of infrastructure, production facilities, and other productive assets that support regional leading sectors such as agriculture, fisheries, and tourism. Labor also contributes significantly to economic growth, especially when viewed in terms of the quantity of the labor force. However, the

quality of labor in NTT is still a challenge, so productivity is not yet optimal. The Solow-Swan theory of economic growth explains that an increase in the number of workers accompanied by an increase in productivity will have a positive impact on output and long-term economic growth. In addition, exports are also proven to simultaneously boost economic growth. Based on the Heckscher-Ohlin theory, exports of goods with comparative advantage such as agricultural and fishery products can increase foreign exchange and domestic output demand. These results are consistent with the development direction in the RPJMD and RKPD of NTT Province, where these three sectors are prioritized for regional economic development. The local government has launched a program to accelerate investment, reform education and job training, and strengthen the export sector based on local potential as the main strategy for improving community welfare. Therefore, integration between macro policies and technical implementation in the field is key so that investment, labor, and exports can collectively accelerate sustainable economic growth in NTT Province.

CONCLUSIONS

Based on the discussion of the effect of investment, labor and exports on economic growth in East Nusa Tenggara Province, several conclusions can be drawn, namely the first Investment variables in the short and long term have no significant effect on economic growth in East Nusa Tenggara Province in 2003-2023, the second Labor variables in the short and long term have a significant but negative effect on economic growth in East Nusa Tenggara Province in 2003-2023, the third Export variables in the short and long term have no significant effect on economic growth in East Nusa Tenggara Province in 2003-2023. And the fourth simultaneously, investment, labor and export variables in the short and long term have a significant effect on economic growth in East Nusa Tenggara Province in 2003-2023.

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