

STUDY OF THE RELATIONSHIP BETWEEN ECONOMIC GROWTH AND SECTORAL EMPLOYMENT GROWTH IN INDONESIA

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ABSTRACT

The research aims to measure and analyze the relationship between growth and employment growth according to the economic sector in Indonesia, using secondary data for 2017-2021. Variable economic growth and employment growth in Indonesia. Data obtained from the Indonesian Central Bureau of Statistics. The descriptive quantitative analysis method uses the Coefficient of Employment Opportunity Elasticity with Elastic, Unitary, and In Elastic criteria. The results of the study show that the coefficient of elasticity of employment for all economic sectors during 2017-2022 is In Elastic, which is indicated by an elasticity number smaller than one.

Keywords : Economis Sector, Employment Elasticity

I. INTRODUCTION

One of the serious problems facing Indonesia today is the problem of unemployment. Unemployment is an employment problem that has now reached a fairly alarming condition. High unemployment and underemployment is a waste of existing resources and potential, becoming a burden on families and communities, the main source of poverty, can encourage an increase in social and criminal unrest, and can hinder development in the long term (Kemenakertrans, 2014). The number of unemployed people in Indonesia reaches 8.75 million people. Meanwhile, Indonesia's working-age population in February 2021 amounted to 205.36 million, based on data from the Indonesian Central Bureau of Statistics. According to data from the Indonesian Central Bureau of Statistics Indonesia's working-age population in February 2021 amounted to 205.36 million. Of these, 139.81 million or 68.08% are the labor force. Executive Director of the Center of Reform on Economics (CORE) Mohammad Faisal revealed that (3/5/2021), the increase in the number of open unemployed is much more significant than the poverty rate. The poverty rate in 2020 was an increase of 1.13 million or 0.41% and open unemployment increased by 3 million or 2.2%.

Employment problems can be caused by several things, such as labor education, available employment opportunities, and low economic growth. This could have an impact on reducing the unemployment rate. Employment are not only about economic problems, but also problems in the social sector, especially in times of economic crisis some time ago. The problem of employment is actually not only about the availability of employment for the labor force, but also questions whether the existing employment is sufficiently capable of providing decent returns for workers. Macro-wise, the growth rate of employment can be related to the rate of

economic growth, in other words, the rate of economic growth will affect the growth rate of employment.

Economic development is essentially a series of policy efforts aimed at improving the living standards of residents, expanding employment and directing the equal distribution of income. In Indonesia's economic development, employment are still a major issue. This arises because of the gap or inequality to get it. The point of this problem stems from the gap between the growth of the number of workers on one side and the progress of various sectors of the economy in labor force on the other.

Employment are a problem often faced by developing countries such as Indonesia. Because employment are an indicator to see the economic condition of a country. Although a country experiences high economic growth, it is not a guarantee of prosperity if unemployment is also high. High unemployment has an impact on the low distribution of income, potentially causing social turmoil which in turn will be a threat to further economic development.

Economic growth is an indicator of the success of a country's economic development. Economic growth in the aggregate is strongly influenced by the growth of economic sectors, especially the dominant sector. Economic growth can be known by looking at the added value generated by each economic sector. The economic development of a country can be measured by economic growth, which indicates the growth of the production of goods and services in a certain region of the economy in a certain interval of time. The production is measured in the concept of value added created by the economic sectors in the region concerned which in total is known as Gross Domestic Product.

The role of each sector of Indonesia's Gross Domestic Product in 2019, which is 10,949,155.40 billion rupiah. Indonesia in 2019 experienced economic growth of 5.02%. Indonesia's economic growth in 2019 was actually lower than in 2018. In 2018, there was a growth of 5.17%. This positive economic growth was followed by growth from all 17 existing economic sectors. Based on the economic sector, the Other Services sector was the sector with the highest growth with a growth of 10.5%. The second sector with the highest growth is the corporate services sector. Meanwhile, the lowest growth was in the mining and quarrying sector with a growth of 1.2%.

Economic activity related to economic mobility outside the home is the most affected sector. The Transportation and Warehousing sector was the sector that experienced the deepest decline in growth with a decline of 15.04%. Followed by the Accommodation and Food and Drink Supply sector which experienced an economic distraction of 10.22%. This sector is generally related to tourism where tourism is greatly affected during the pandemic. The sectors that have benefited the most during this covid pandemic are of course in the health and Information and Communication sectors. During the pandemic, people are very concerned about health and need health services. The Health Services and Social Activities sector experienced a growth of 11.6% in 2020. And the Information and Communication sector experienced a growth of 10.58% because the pandemic made people's activities switch to online-based (Central Bureau of Statistics 2021).

Developments that occur in an economic sector will be able to affect the absorption of labor in each of these sectors. The sector that acts as a support for economic development and launches economic activities that absorb a lot of labor is one alternative to expand employment. Macro economically, the growth rate of employment can be linked to the rate of economic growth. In other words, the rate of economic growth will affect the growth rate of employment, and this relationship can be explained by the Elasticity of Employment indicator (Widodo, 1990). Therefore, the author examines the relationship between the variables of economic growth and employment growth with the aim of analyzing the ability of each economic sector to absorb labor (menpower) based on the criteria of Elastic, In Elastic, and Unitary.

II. LITERATURE REVIEW

Economic Growth

Economic growth is defined as an increase in Gross Domestic Product regardless of whether the increase is greater or less than the population growth rate or whether changes in economic structure occur or not. This means that regional economic growth will directly or indirectly create jobs. (Arsyad 2000). Okun who introduced Okun's Law (Mankiw, 2000) stated that there is a close relationship between the unemployment rate and the real Gross Domestic Product (GDP), where there is a negative relationship between the unemployment rate and real GDP. This statement can be interpreted to mean that there is a positive relationship between employment and real GDP. Harrod-Domar (Todaro, 2000) in his growth theory states that definitively the growth rate of output (Y) is reduced by the growth rate of labor productivity (Y/L) approximately equal to the growth of employment opportunities (L).

Employment

Employment is a job and opportunity to work created for an economic activity (Swasono, 1987). Thus employment are a number of people who are in a job or have a job (Soeroto, 1983)", employment are people who have job opportunities to work and or people who are in a job". So the definition of "employment" in English is clear, that is, the opportunity that has been occupied. Macroeconomics. Employment growth can be attributed to economic growth. In other words, economic growth will affect the growth of employment. The relationship between economic growth and employment growth can be explained through the elasticity of employment (Widodo, 1990).

Employment Elasticity is a quantity that shows the level of sensitivity of economic growth to the growth of employment. Thus the elasticity of employment is defined as a comparison between the growth of employment and the economic growth of each economic sector (Simanjuntak, 1985). To explain the relationship between economic growth and employment opportunities, a tool for calculating the elasticity of employment is used. Glassbunner (1985) defines the elasticity of employment as the relationship between an increase in employment and an increase in production expressed in a comparison.

Analysis using the concept of elasticity will obtain the relationship between economic growth and the growth of employment with the following criteria (Mubyarto, 1986)

1. **Elastic** relationship: Elasticity > 1
2. **Unitary** relationship: Elasticity = 1
3. **In Elastic** relationship: Elasticity 0 < 1

III .RESEARCH METHODS

This type of research is descriptive research, aimed at describing things that are currently in force. It contains efforts to describe, record, analyze, and interpret conditions that are now occurring or not occurring. (Sugiyono, 2010), using Indonesian data for the 2017-2021 period. Data analysis using secondary data sourced from related institutions / agencies.

Analysis Models

The relationship of economic growth to employment growth using the Elasticity of Employment analysis tool:

$$\epsilon = \left\{ \left(\frac{\Delta N}{N} \right) : \left(\frac{\Delta Y}{Y} \right) \right\} \times 100 \%$$

Information:

€: Elasticity of employment in the overall sector of the economy

N: Labor of sector i.

ΔN: changes in the labor of sector i

Y: added value of sector i in GDP.

ΔY: changes in the added value of sector i in GDP

ΔY/Y: economic growth rate (GDP).

This elasticity indicator is often used to analyze the nature of capital-intensive or labor-intensive businesses (widodo, 1990)

$$Li = \left[\sqrt[n]{\frac{Ln}{Lo}} \right] - 1 \times 100\%$$

$$Qi = \left[\sqrt[n]{\frac{Qn}{Qo}} \right] - 1 \times 100\%$$

Information;

Ln = Number of employment for the year to – n

Lo = Number of employment for base year

Qn = Total GDP year to – n

Q_0 = Number of GDP for base year

n = Number of years base period

To find out the magnitude of employment as a result of changes in economic growth, an analysis of the coefficient of elasticity of employment is used with the following formula; (Glassbuner and A. Chandra, 1985; 164)

$$N_i = L_i/Q_i$$

Information;

N_i = Elasticity of employment sector i

L_i = Growth of sector i employment

Q_i = Economic growth of sector to i

Criteria for the relationship between economic growth rate and Employment growth:

$N_i > 1$ (**elastic**): Means an increase in economic growth by 1 % will Causing a growth in employment of more than 1 %.

$N_i = 1$ (**unitary**): Means that an increase in economic growth by 1% will lead to a growth in employment by 1%.

$N_i < 1$ (**in elastic**): Means economic growth of 1 % will causing employment growth below 1%

IV. RESULTS OF RESEARCH AND DISCUSSION

The Relationship between Economic Growth and Sectoral Employment Growth In Indonesia

Table 4.1 Elasticity Employment of Sectoral 2017-2021

Sektor Ekonomi	Elastisitas Kesempatan Kerja				
	2017	2018	2019	2020	2021
1. Agriculture, Forestry and Fisheries	0,060	0,055	0,060	0,008	0,058
2. Mining and Quarrying	0,049	0,023	0,065	-0,013	0,021
3. Manufacturing	-0,018	-0,009	0,054	-0,009	-0,017
4. Procurement of Electricity and Gas	-0,043	0,074	0,002	-0,126	0,054
5. Water Procurement, Waste Management, and Recycling	0,048	0,059	0,072	0,052	0,053
6. Construction	0,072	0,064	0,061	-0,034	0,030
7. .Whole sale and retail Trade; Repair of Motor Vehicles and Motorcycles	0,046	0,053	0,051	-0,014	0,033
8. Transportation And Storage	0,090	0,084	0,109	-0,185	0,054
9. Accomodation And Food Service Activities	0,058	0,064	0,073	-0,072	3,755
10. .Informationand Communication	0,102	0,074	0,099	0,112	0,073
11. Financial And Insurance Activities	0,042	0,024	0,022	0,020	0,055
12. Real Estate	0,038	0,037	0,061	0,024	0,030
13. Business Activities	0,089	0,091	0,108	-0,057	0,008
14. Public Administration And Defence,Compulsory Social Security	0,022	0,073	0,049	0,011	-0,004
15. Education.	0,039	0,056	0,06	0,02	0,001
16. Human Health Service And Social Work Activities	0,072	0,075	0,091	0,122	30,12
17. Other Services Activities	0,092	0,094	0,111	-0,043	-0,023

Source: Secondary Data processed, Bureau of Statistics

1. Agriculture, Forestry and Fisheries

This category includes any cultivation obtained from nature and constitutes biological (living) objects or goods which the results can be used for own consumption or to be sold to others. The cultivation includes activities whose main objective is to fulfil their own needs (subsistence) The results of the calculation of the elasticity of employment show a number below one, which means that the growth of employment in this sector is lower than the growth of the economy, with the category **In elasstis** during the five-year analysis period.

2. Mining and Quarrying

The Mining and Quarrying category includes four main subcategories, namely: Extraction of Crude Petroleum, Natural Gas and Geothermal; Mining of Coal and Lignite; Mining of Iron Ores; Other Mining and Quarrying. The results of the analysis show the elasticity figure with the category Mining and Quarrying sector Elasticity: **In Elastic**

3. Manufacturing

The Manufacturing category includes economic activities in the field of chemical or physical changes from materials, elements, or components into new products. The raw materials for the manufacturing industry come from agricultural, forestry, fishery, mining, or quarrying products and products from other manufacturing industry activities. The alteration, renewal, or reconstruction of the basic goods is generally treated as a manufacturing industry. **In Elastic**

4. Procurement of Electricity and Gas

This category includes the procurement activities of electric power, natural and artificial gas, hot steam, hot water, cold air and ice production and the like through permanent infrastructure networks, channels or pipelines. This category also includes the operation of power and gas generating engines that generate, control and deliver electric or gaseous power. Also includes the procurement of hot steam and air conditioning (air conditioning). **In Elastic**

5. Water Procurement, Waste Management, and Recycling

This category includes economic activities / business fields related to the management of various forms of waste / garbage, such as solid waste / waste or not both household or industrial, which can pollute the environment. **In Elastic**

6. Construction

The Construction category includes business activities in the field of general construction and special construction of civil building and building works, whether used as a residence or other means of activity. Construction activities include new work, repairs, additions and changes, prefabricated erection of buildings or structures on the project site and also construction of a temporary nature. **In Elastic**

7. Whole sale and retail Trade; Repair of Motor Vehicles and Motorcycles

This category includes economic activities/business fields in wholesale and retail trade (i.e. sales without technical changes) of various types of goods and providing compensation for

services that accompany the sale of these goods. Both wholesale and retail sales are the final stages in the distribution of merchandise. This category also includes the repair and maintenance of cars and motorcycles. Sales without technical changes also include trade-related activities, such as sorting, quality separation and assembly of goods, mixing, bottling, packing, unloading from bulk and repackaging into smaller sizes, warehousing, whether or not refrigerated, cleaning and drying of agricultural produce, cutting of wood or metal sheets. **In Elastic**

8. Transportation and Storage

This category includes the provision of passenger or freight transportation, whether scheduled or not, using railways, pipelines, road, water, or air and other activities related to transportation, such as terminal facilities and parking, loading and unloading, warehousing and others. This category also includes the rental of transportation equipment with drivers or operators, postal and courier activities. **In Elastic**

9. Accommodation and Food Service Activities

This category includes activities of providing short-term accommodation services for visitors and providing food and beverages for immediate consumption. However, it does not include the provision of long-term accommodation such as the main residence, preparation of food or beverages not for immediate consumption or through wholesale and retail trading activities. **In Elastic**

10. Information and Communication

This category includes the production and distribution of information and cultural products, supplies of tools to transmit or distribute these products and data or communication activities, information, information technology, data processing, and other information service activities. AAAA This category consists of several industries, namely publishing, motion picture production, video, sound recording and music publishing, broadcasting and programming (radio and television), telecommunication, programming, computer consulting, and information technology. **In Elastic**

11. Financial and Insurance Activities

This category includes financial intermediary services, insurance and pension funds, other financial services, and financial support services. This category also includes holding activities and activities of guarantee or funding institutions and similar financial institutions. **In Elastic**

12. Real Estate

This category includes sale or purchase, and lease of real estate, and the provision of other real estate services such as real estate estimating services. The activity of providing real estate services can be carried out on one's own or based on remuneration or contract. This category also includes real estate owned and occupied by themselves (owner occupied dwelling) and activities to manage real estate buildings. **In Elastic**

13. Business Activities

Business Activities is a combination of 2 (two) categories, namely M and N categories. M category includes activities such as professional, scientific and technical activities that require a high level of training and result in specific knowledge and skills available to users. Activities that fall into the M category include legal and accounting services, architectural and civil engineering services, advertising and market research, other professional, scientific, and technical services. Meanwhile, category N includes various activity that support business operations in general. Category N include leasing and leasing services without option rights, employment services, travel agency services, tour, and other reservation services, security and investigation services, services for buildings and landscaping, office administration services, and support services offices and other business support services. **In Elastic**

14. Public Administration and Defence, Compulsory Social Security

This category includes activities generally carried out by government administration. This category also includes legislation and legal translations relating to the courts and according to their regulations, such as program administration based on laws and regulations, legislative activities, taxation, national defence, state security and safety, immigration services, foreign relations and administration of government programs, and mandatory social security. **In Elastic**

15. Education

This category includes educational activities at various levels and for various occupations, either orally or in writing. This category also includes teaching that is primarily about sports activities, entertainment, and educational support. This business field covers basic education, secondary education, higher education, and other education (including non-formal education), also includes educational support services and early childhood education. **In Elastic**

16. Human Health Service and Social Work Activities

This category includes the provision of health services and social activities, starting from health services provided by trained professionals in hospitals to social activities that do not involve professional health workers. Human Health and Social Work Activities includes: hospital services, clinical services, other hospital services, doctor's practice, health services performed by paramedics, traditional health services, health support services, specific transportation services for the transportation of sick people (medical evacuation), and social activities services (for the elderly, orphanages, rehabilitation homes, and others). **In Elastic**

17. Other Services Activities

This category has a wide range of activities including arts, entertainment, and recreation; repair services for computers and personal needs and household equipment; individual services serving households; activities that produce goods and services that are used by households to fulfil their own needs and other private services including the activities of international agencies, such as the United Nations and UN agencies, regional agencies, IMF, and others. **In Elastic**

V. CONCLUSIONS AND SUGGESTIONS

Conclusion

1. The relationship of economic growth to employment growth for all sectors of the economy during the period 2017-2021 is In Eastis, which is indicated by an elasticity figure smaller than one. This means that employment growth is lower than economic growth.
2. The higher the elasticity of employment gives an indication of the higher the ability of the economic sector to create employment due to economic growth. The high elasticity of employment means that the economic sector is able to absorb labor in the presence of a value added sector, and vice versa. The elasticity of Employment is lower than one, indicating the low ability of each sector of the economy to absorb labor in that sector.

Suggestions

1. Economic growth will create employment, to increase employment growth, growth must continue to be improved by continuing to explore the existing economic potential. Especially with the existence of technological innovations, major changes have occurred in the production system to the distribution of goods, even in terms of services. So we can conclude, that technology is the main key in today's economic growth and development. To deal with it, we are required to improve our abilities or learn new skills in order to survive in the world of work. Although many replace human jobs, technology actually paves the way for job creation. Moreover, the current trend in Indonesia is very promising, namely e-commerce. Thanks to this online job market, it provides more space in the business world for small to medium-sized entrepreneurs.
2. From a macroeconomic point of view, the elasticity indicator is often used to analyze the nature of capital-intensive or labor-intensive businesses, so it is necessary to consider by the government to give priority to investment (new job creation) for sectors whose coefficient value is high, have a dominant share in a conducive investment climate (safe and secure legal certainty). It should be applied in the creation of new jobs by considering the alignment between labor-intensive (human) technology and capital-intensive technology (machine).

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