

Determinants of Formal and Informal Sector Labor Absorption in South Sulawesi Province

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ABSTRACT

This research aims to determine the influence of the Human Development Index and GRDP on the absorption of formal and informal sector workers in South Sulawesi Province. This research uses multiple regression analysis and panel data, namely using cross-section and time series data in 24 regencies/cities in South Sulawesi Province with a time interval of 5 years 2019-2023. The research results obtained show that HDI has a negative and significant influence on labor absorption, with a significance value of 0.000, a t-statistic value of -4.920, and a regression coefficient value of -0.058, GRDP has a positive and significant influence on labor absorption, with The significance value is 0.000, the t-statistic value is 10,748 and the regression coefficient value is 0.610. MSMEs support the stabilization of income of people who work in the informal sector.

INTRODUCTION

Work is a requirement for earning a living and a benchmark for alleviating poverty in a region or country which is a shared responsibility for the social order within it. Obtaining work for people within the state structure is a right that must be obtained, whether the work is in the sector formal or informal. Choice based on will is the freedom of the people themselves, both those who have qualifications as required by job providers in the private and government sectors, whether formal or informal. Decent work can include elements of employment opportunities, decent income, working hours that comply with regulations, productivity, a healthy work environment, work safety, and equal treatment at work as well as several things that make you feel comfortable at work, and this applies to everyone. types of work, both in the formal and informal sectors, although we know that the consequences of each type of work have advantages and disadvantages.

The problem of unemployment is related to the availability of jobs or not, the increase in population in an area can be a factor in increasing unemployment which must be accompanied by an increase in the availability of jobs, it is the duty and responsibility of the government and the community themselves to choose the options available. Indonesia as a developing country that has various sources of wealth that are processed into several sectors including industry, agriculture, mining, transportation, services, and others is expected to be able to absorb the workforce. This is a challenge for the government, both central and regional governments, in managing sources of wealth for the prosperity of the community, the hope is that there will be resources that can be managed, namely the absorption of labor.

Developing countries face significant challenges in overcoming poverty primarily due to higher levels of unemployment compared to developed nations, and a technological and scientific prowess that remains predominantly in the hands of more economically advanced countries. Prathama and Mandala (2008) cited in Utami, FP (2020), explain that in the field of demography, those actively seeking employment are categorized within the labor force, typically aged between 15 and 64 years. However, not all individuals within this age range are considered part of the labor force; it excludes those occupied with caregiving responsibilities or education. This situation underscores a critical issue: many capable and willing individuals find themselves jobless due to limited opportunities, yet still must support themselves and their families.

Emily Conover, Melanie Khamis, and Sarah Pearlman (2022) argue that developing and middle-income countries are currently witnessing a rise in human capital, marked by the availability of diverse job opportunities of varying quality. This trend is reshaping the labor market dynamics and enhancing the mobility of workers across different job types. Recognizing the pivotal role of education in navigating transitions within both formal and informal sectors is crucial for devising targeted policy interventions. Particularly in times of increasing educational attainment, strategies aimed at facilitating the shift from schooling or informal employment to more lucrative formal jobs or entrepreneurship can significantly benefit a wide spectrum of

workers. The absorption of formal and informal sector workers can be influenced by the quality of human resources by looking at educational status, such as the results obtained by Sari, IM (2020) . Based on research that has been conducted, the education variable has a probability of 0.000 with $\alpha=5\%$ and an odds ratio value of 1.188662. So the education variable has a positive and significant effect on labor absorption. When there is a one-year increase in education completed, the tendency for workers to be absorbed in the formal sector is 1.188662 times greater than the informal sector. The increase in the number of labor offers in the labor market is not commensurate with the availability of decent jobs for workers.

The inability to secure employment, whether due to a lack of opportunities in both formal and informal sectors or inadequate qualifications and access to capital, can significantly contribute to poverty. In Indonesia, addressing the persistent issue of unemployment is crucial for sustainable development, especially considering the growing workforce each year. According to BPS data, the workforce in South Sulawesi was 4,412,782 in 2021 and is projected to increase to 4,559,375 in 2022 and further to 4,694,483 in 2023. This rising workforce necessitates corresponding growth in job opportunities, both in formal and informal sectors, to absorb these additional workers effectively in South Sulawesi Province.

Table 1. Number of Workers According to Formal and Informal Sectors in South Sulawesi Province

Regency/City	Number of Workers by Sector and Regency/City (Person)					
	Formal			Informal		
	2021	2022	2023	2021	2022	2023
Selayar Island	29250	28361	29881	40272	43675	47609
Bulukumba	61989	55699	74653	143943	155081	170302
Bantaeng	25015	33211	31027	78240	73722	83515
Jeneponto	39219	46046	50578	144709	161277	155420
Takalar	59757	49429	59372	86034	96510	89847
Gowa	150834	141227	146924	239206	283716	262957
Sinjai	36529	33486	39797	92390	81897	95591
Maros	68756	73613	87014	81777	85159	93616
Pangkep	69077	78425	83470	86358	104751	95210
Barro	31292	34725	38548	41705	45240	46248
Bone	100191	107972	113953	267841	279904	276918
Soppeng	32579	37640	39011	72066	73375	69803

Wajo	54687	54367	55300	146307	140816	139594
Sidrap	46196	47271	49730	85165	84798	85325
Pinrang	54714	54013	64374	104000	108092	121049
Enrekang	24509	25656	27472	83027	84072	91531
Luwu	41884	51340	66125	121387	124672	122316
Tana Toraja	15023	24774	36068	115460	120293	142823
North Luwu	36783	48768	41578	104245	116303	123789
East Luwu	56562	59557	55458	97568	94683	93321
North Toraja	27258	24534	30000	89454	89809	121165
Makassar	381994	389921	357794	247939	253447	224914
Pare Pare	38859	38044	41911	30918	29860	30611
Palopo	46390	48693	51888	31075	35726	35583
South Sulawesi	1529347	1586772	1671926	2631086	2766878	2819057

Source: South Sulawesi Province Central Statistics Agency 2024

The number of workers according to the formal sector in South Sulawesi Province increases every year. It is known that the number of informal sector workers is greater than that of formal sector workers. Based on the table above, the highest number of formal sector workers will be in 2023, amounting to 1,586,772 people and the highest number of informal sector workers in 2023 will be 2,819,057 people, we can assume that the large number of informal sector workers compared to the formal sector is a sign of the lack of formal employment opportunities available in South Sulawesi Province and the large number of informal workers in Sulawesi The South indicates that the informal sector has a major contribution in absorbing labor.

Based on background data on the number of formal and informal sector workers as well as employment conditions and the unemployment rate according to BPS in 2023 of 203,500 people which still needs to be a concern for the people of South Sulawesi Province, the author draws the problem formulation below:

1. Does the Human Development Index have a positive and significant influence on the absorption of formal and informal sector workers in South Sulawesi Province (H1)?
2. Does GRDP have a positive and significant influence on the absorption of formal and informal sector workers in South Sulawesi Province (H2)?

LITERATURE REVIEW

Formal and Informal Labor

According to the concept and definition of the Central Statistics Agency (BPS), labor is divided into two employment sectors, namely formal and informal sector labor. By using the main employment status of the working population, BPS identifies the formal and informal sectors. Workers who are included in the formal sector include those with business employment status assisted by permanent workers and workers/employees/employees.

Meanwhile, workers with employment statuses such as casual agricultural workers, non-agricultural casual workers, self-employed, self-employed workers, and family workers are classified as informal sectors (BPS, Indonesian Labor Market Indicators, 2022). In general, the formal sector has a business entity or is registered, is capital intensive, has an educated workforce, receives a steady income, and has high work productivity in operating technology. Meanwhile, the informal sector tends to not have a business entity, is labor intensive, has low education, receives irregular income, and has low work productivity because it still uses traditional technology. This makes the informal sector easier to enter compared to the formal sector (Sethurahman, 1981).

Employment

According to Muhdar, HM (2015), employment plays a crucial role in fostering economic development as labor represents a fundamental factor of production. The issue of job opportunities and its impact on economic growth has garnered significant attention both nationally and regionally. Achieving high levels of economic growth necessitates increased investment and the implementation of supportive economic policies. It is anticipated that expanding investments will stimulate economic growth, thereby generating new employment opportunities.

In terms of the Central Bureau of Statistics (2007), several employment terms that must be understood as a basis for understanding this problem in Indonesia include (1) labor force participation rate which is an indicator that can describe the condition of the population aged 15 years and over who participate in activities. economics, (2) open unemployment rate, and (3) labor absorption, namely those who are absorbed in various jobs in a period. In employment theory according to BPS (2007), the Basic Labor Force Concept (Standard Labor Force Concept) is used as used in the National Labor Force Survey (Sakernas). This concept is a concept suggested and recommended by the International Labor Organization (ILO).

Human Development Index

The concept of human capital, initially introduced by Gary S. Becker and elaborated by Ace Suryadi (1994) as cited in Boediono (1999), underscores the critical role of formal education in driving economic growth. According to this theory, higher levels of formal education correlate with increased labor productivity, thereby enhancing economic output. This perspective posits that

individual productivity influences population economic growth, as higher education levels lead to higher incomes across the population. Since 1999, the United Nations Development Program (UNDP) has utilized the Human Development Index (HDI) to gauge the quality of human capital. A rise in HDI reflects improvements in human resources, which can lead to higher future output and income, thereby bolstering overall economic growth. The evolution of HDI serves as a metric for assessing both the quantity and quality of human resources within a region or country, as discussed by Darwin (2022).

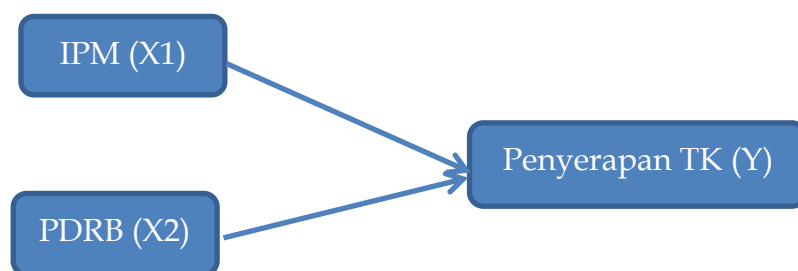
Economic Growth

Economic growth as a process of increasing *output* over time is an important indicator for measuring the success of a country's development (Todaro, 2005) in Ma'ruf, A., & Wihastuti, L. (2008). Therefore, identifying various factors that influence it, including the role of government, is interesting to study in more depth. According to the basic theory of Neoclassical economic growth from Solow and Swan (1956), there is no influence of the government's role on growth in the form of expenditure or taxes (Kneller et al., 1999). Economic growth is only influenced by the exogenous stock of capital, labor and technology. The government can influence population growth which will affect the availability of labor but has no impact on economic growth.

Previous Research

Results of research conducted by Prawoto, DA (2018) HDI has a negative and insignificant effect on the labor absorption rate with $\alpha = 5\%$ with a coefficient value of -1856.333, meaning that when the HDI rises by 1% it causes the labor absorption rate to fall by -1856.333%. Budi Utami, T. (2009) said that gross regional domestic product (GRDP) had a significant positive effect on employment opportunities in Jember Regency from 1980 to 1980. 2007. GRDP is a reflection of economic growth (increasing output produced), if GRDP increases then the number of job opportunities will be greater.

Figure 1. Conceptual Framework



METHODOLOGY

This research approach uses a quantitative descriptive method by analyzing quantitative data and describing it then using statistical testing tools. Panel Data Regression Analysis is part of a regression model that can be used to analyze causal relationships between one variable and another variable. The data collection technique used is direct recording in the form of panel data, namely a combination of *cross-section data* and *time series data*, consisting of 24

regencies/cities and a time interval of 5 years (2019 - 2023) originating from the Sulawesi Central Bureau of Statistics South.

Multiple linear regression analysis is used using regression correlation so that it can be seen to arrive at the final dependent variable with the formula that can be seen below:

$$Y = f + (X_{1it}, X_{2it},) \dots\dots\dots$$

$$\ln Y = f + (\ln X_{1it}, \ln X_{2it},)$$

Where :

X1 = Human Development Index

X2 = GRDP

Y = Labor Absorption

Test Parameters

1. Coefficient of Determination Test (R^2)

The coefficient of determination is a measure to determine the suitability or accuracy of the relationship between the independent variable and the dependent variable in a regression equation. The greater the coefficient of determination, the better the ability of the independent variable to explain and explain the dependent variable.

2. Hypothesis testing

a. Partial testing (t-test)

According to Kuncoro (2012), the t-statistical test shows how far an individual explanatory variable is in explaining variations in the dependent variable. The hypothesis to be tested is as follows:

- 1) $H_0: b_i = 0$. then X_1 , and X_2 , have no effect on Y.
- 2) $H_a: b_i \neq 0$. then X_1, X_2 , have an effect on Y.

Test criteria:

- If the significance value is > 0.05 . means there is no influence between the independent variable and the dependent variable.
- If the significance value is < 0.05 . This means that there is an influence between the independent variable and the dependent variable.

b. Simultaneous testing (F test)

According to Kuncoro (2012), the F statistical test shows whether all the independent variables included in the analysis model have a joint influence on the dependent variable. The hypothesis to be tested is as follows:

- 1) $H_0: b_i = 0$. then the independent variable (i) simultaneously has no effect on Y.
- 2) $H_a: b_i \neq 0$. then the independent variable (i) simultaneously influences Y.

RESEARCH RESULT

Table 2. Research Results

Research variable	Regression Coefficients	t-statistics	Sig.
HDI (X ₁)	-0 . 058	-4 . 920	0 .0 00
P DRB (X ₂)	0.610	10 . 748	0.000
C	11,439	14,645	0,000

F-statistic = 57 . 882

(F-Sig) = 0.0 0 0

*) Significant at $\alpha = 5\%$; $R^2 = 0.497$

Test of the Coefficient of Determination R²

The coefficient of determination value from the table above shows the number 0.497, which means the total contribution value of the HDI and GRDP variables is 49.7% to the Formal and Informal Sector Labor Absorption in South Sulawesi Province. This figure also means that other variables still have a big influence on Labor Absorption in where the total influence of these other variables is 50.3%.

t-test

The HDI significance value in the table above shows the number 0.000, the t-statistic value is -4.920 and the regression coefficient value is -0 . 058 , which means that partially the HDI variable has a negative and significant effect on the absorption of formal and informal sector workers in South Sulawesi Province.

The GRDP significance value in the table above shows the number 0.000, the t-statistic value is 10,748 and the regression coefficient value is 0.610, which means that partially the education expenditure variable has a positive and significant effect on the absorption of formal and informal sector workers in South Sulawesi Province.

F test

The significance value of F in the table above shows 0.000, which means that simultaneously the HDI and GRDP variables have a significant influence on the absorption of formal and informal sector workers in South Sulawesi Province.

DISCUSSION

The Influence of the Human Development Index on Labor Absorption

The research results obtained from this study showed negative and significant results between the human development index variable and labor

absorption, which is the basis for the assumption that a higher human development index usually indicates an increase in the quality of education, health, and living standards. This is inversely proportional to labor absorption, it is possible that sectors that absorb a lot of labor (for example the informal sector or agricultural sector) experience a decrease in the number of workers along with an increase in HDI. People with a higher level of education may choose and switch to more formal jobs or move to other sectors. An increase in HDI could be accompanied by changes in the regional economic structure in South Sulawesi Province, namely a shift from the agricultural/traditional sector to the service or industrial sector which may require fewer workers or with certain skills. According to Emily (2022), The transition from informal paid work to independent work is highest among workers with lower and upper middle school education, but lower among workers with tertiary education. This complicates the story of entrepreneurship as a sector of opportunity for those who acquire skills and capital in the formal sector and use them to start their own businesses.

The Influence of GRDP on Labor Absorption

The results of the influence between GRDP and labor absorption in this study obtained significant and positive results, this shows that the increasing GRDP/Economic Growth in South Sulawesi Province will increase labor, both in the formal sector because of the link between current labor demand. The economy grows, companies that develop and require large production in the industrial sector will absorb new workers, as well as in the service sector, the demand for labor is a factor that is influenced by the amount of consumption of the population which requires the production of services, agriculture, fisheries, plantations, industry, processed production, warehousing, and other real sectors, in the informal sector the increase in labor absorption is driven by an increase in MSMEs, of which there are 1.2 million MSMEs and those who utilize digital technology are still relatively low, namely 10 percent or approximately 120,000 MSMEs. according to Bappelitbangda South Sulawesi Province. The increasingly high qualifications of workers in the formal sector also affect the number of workers in the informal sector.

CONCLUSIONS AND RECOMMENDATIONS

The negative influence of the Human Development Index on labor absorption can be caused by the low level of formal education qualifications required by the formal labor market in South Sulawesi Province, differences in perceptions of work by some communities and cultures can be the causal factors. The positive and significant influence of GRDP on labor absorption is a result that is in line with the expectation that economic growth must create employment opportunities for the community, both in the formal and informal sectors.

FURTHER STUDY

With all the limitations of this research, of course the author hopes that there will be new models and variables in discussing labor, both quantitative and qualitative.

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