THE EFFECT OF HUMAN DEVELOPMENT INDEX, COMPARISON RATIO GENDER AND INFLATION ON OPEN UNEMPLOYMENT RATE IN THE CITY OF MEDAN

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A R T I C L E I N F O R M A T I O N

A B S T R A C T

This study examined the effect of the Human Development Index, Gender Ratio, and Inflation on the Open Unemployment Rate in Medan City. This study used secondary data obtained from the Central Bureau of Statistics during 2005-2020. The analytical method used was multiple linear regression analysis with the help of E-Views software. The results partially indicated that the Human Development Index (HDI) was negatively and significantly affected the Open Unemployment Rate in Medan City, the Gender Ratio positively and significantly affected the Open Unemployment Rate in Medan City, and Inflation negatively affected the Open Unemployment Rate in Medan City. Simultaneously, the Human Development Index, Gender Ratio, and Inflation positively and significantly influenced the open unemployment rate in Medan City.

1.   INTRODUCTION

The city of Medan is the capital of the province of North Sumatra, Indonesia. This city is the third largest city in Indonesia after Jakarta and Surabaya, and the largest city outside Java (Fikri et al, 2019) . The city of Medan is also experiencing rapid population growth and development, causing various problems, one of which is unemployment. Unemployment is the number of the workforce who are not working and are looking for work (Bps, 2016). Unemployment is a problem faced by various regions, including the city of Medan. This is because the population density in the city of Medan continues to grow, not matched by the high demand for labor and the lack of available jobs. A large population causes more workers, which means the number of people looking for work or unemployed also increases, causing problems in the form of open unemployment.

Following this is Development Open Unemployment Rate in Medan City 2005-2020.
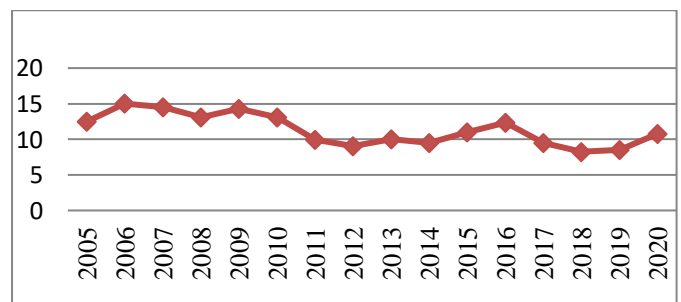
Source: BPS Medan City 2022

In the graph it can be concluded that open unemployment in Medan City has fluctuated, graph 1.1 shows that the open unemployment rate in Medan City is still high and unstable, experiencing several ups and downs phases. The highest open unemployment rate in 2006 was by 15.01% and the lowest occurred in 2018 at 8.25%.

The very high unemployment rate shows the low human development index (HDI). HDI is a quality measure that can be used to determine the extent to which the quality of human development has been successfully achieved. The higher growth in the human development index figure illustrates that the quality of human beings is getting better. Unemployment will

decrease if the human development index increases, from the field of education the higher a person achieves education, the unemployment rate decreases (Zulaili, 2017) .

The following is a graph of the HDI development in Medan City in 2005-2020.
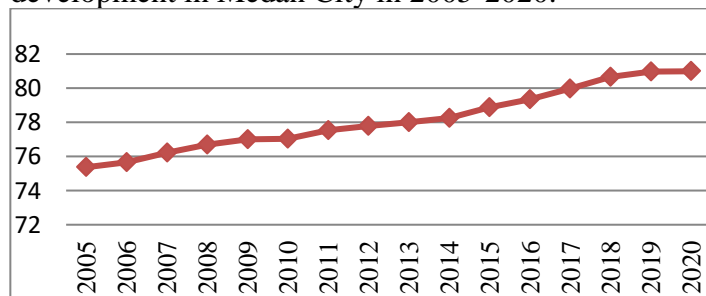
Source: BPS Medan City, 2022

HDI graph above can be concluded that the HDI in Medan City from 2005-2020 continues to increase which is always in the "high" category because it has passed 70. This shows that there has been a positive increase in Medan City, both from health factors, school/educational expectations as well as economic/decent living factors. However, the problem that arises is that the increase in HDI is not followed by a decrease in the number of unemployed as happened in 2013. Should the HDI increase, unemployment will decrease (Arizal & Marwan, 2019)).

Problem height level unemployment open that occur in the city of Medan also no miss from height the city's gender ratio. (According to Bps, the gender ratio is the ratio of male and female population women in an area and at a certain time which is usually expressed in terms of the number of male population per 100 women. When the gender ratio is high, the difference will affect the open unemployment rate.

Another factor that affects unemployment is the inflation rate that occurs, inflation in general can be defined as an increase in the price of goods and services in general and continuously within a certain period of time. The high rate of inflation has an impact on the unemployment rate . With high prices (inflation), to meet this demand, producers increase their production capacity by adding more labor (labor is the only input that can increase output). As a result of the increase in demand for labor, with rising prices (inflation), the unemployment rate will decrease in the city of Medan . Chart inflation development as follows:
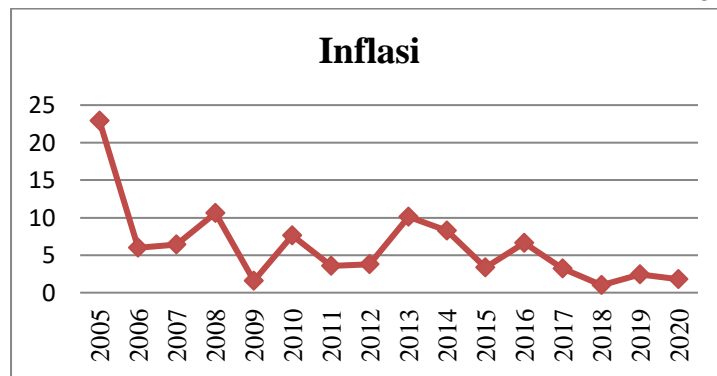
Source: BPS Medan City, 2022

Based on Graph.4 above, it can be concluded that inflation in Medan city fluctuates and tends to decrease. The highest inflation occurred in 2006 namely at 22.91% and the lowest inflation was in 2018 at 1.00%.

Based on the phenomena described above, the authors are interested in researching **"The Effect of Human Development Index, Gender Comparison Ratio and Inflation on Open Unemployment Rates in Medan City".**

2. LITERATURE REVIEW

UNEMPLOYMENT

According to Sukirno (2015), unemployment is a condition where people who belong to the labor force want to have a job, but do not get it. A person who is unemployed but is not actively looking for work is not classified as unemployed. The main cause of unemployment is a lack of total spending. Entrepreneurs produce goods and services for the purpose of making a profit, but if these entrepreneurs can sell the goods and services they produce. The greater the demand, the greater the goods and services they create. The increase in production will increase the use of labor.

According to Kuncoro (2015) unemployment are people who are looking for work, or people who are preparing for a business, or people who are not looking for work because they feel it is impossible to get a job (previously classified as not in the workforce), and those who already have a job. but have not started working (in the past it was classified as working) and at the same time they are not working. Open unemployment can be caused by the increase or availability of job vacancies that are lower than the first material of labor each year. Open unemployment can also be caused by a decline in various economic activities and technological advances that reduce the use of labor. lower than the first material of labor each year. Open unemployment can also be caused by a decline in various economic activities and technological advances that reduce the use of labor.

HUMAN DEVELOPMENT INDEX

According to the Central Statistics Agency (2011), the Human Development Index (HDI) is an indicator to measure human development achievements. Many basic components are based on quality of life. The Human Development Index (HDI) describes several Components, namely achieving a long and healthy life, which represents Health; literacy rates, enrollment rates, and average longevity School performance in measuring developments in education; and ability To see people's purchasing power for some basic needs from the average The average amount spent per capita.

The Human Development Index is an index that measures the achievement of socio-economic development of a region or country, which combines achievements in the fields of education, health, and adjusted real income per capita. The Human Development Index explains how the population obtains development outcomes in terms of income, health, and education.

GENDER RATIO

According to Hungu (2016) the gender ratio is the difference between women and men biologically since a person is born. Biological differences and biological functions of men and women are not interchangeable between the two, and their functions remain with men and women on earth. As in the field facts that we often encounter today, a lot of field workers are generally dominated by men, while in the office part of a company it is generally dominated by women. This is not a coincidence, but there are various considerations made by a company regarding the specifications of each gender or gender. The gender factor also determines the level of participation and productivity of a person in work. Labor is basically indistinguishable based on gender. But in general, men will be more productive for jobs that rely on physical strength. However, in certain circumstances, women's productivity can be higher than men's, because women are more thorough, patient, and diligent.

3. RESEARCH METHODS
Research Objects and Locations

In this study, the objects of research are the variables of the human development index, gender ratio, inflation and the open unemployment rate. The research location was taken on a regional scope, namely in the city of Medan.

Types and Sources of Data

The type of data used in this study is quantitative data. Because the data used are in the form of numbers, multiple linear regression methods are used to determine the relationship or influence of two or more variables. This study uses quantitative data with a time series data approach Medan City 2010-2020 (10 years).

Sources of data obtained in this study the authors use secondary data. Secondary data is data obtained indirectly from research subjects. Secondary data has been collected and presented by other parties for both commercial and non-commercial purposes. Secondary data is usually in the form of statistical data from research results from survey report books, magazines/newspapers, documentation and official archives (Suliyanto, 2017).

Data Analysis Method

The analytical method used in this research is multiple linear regression analysis. Multiple regression analysis is used for knowing how affect variable free (independent) that is human development index (X_1), gender ratio (X_2) and inflation (X_3) to variable bound (dependent) that is Open unemployment (Y) . This relationship is usually conveyed by the equation formula, namely:

$$Y = a + 1X1t + 2X2t + 3X3t + et$$

Information:
Y : Open Unemployment
a : Constant
1,β2,β3 : Regression Coefficient
X1 : Human Development Index
X2 : Gender Ratio
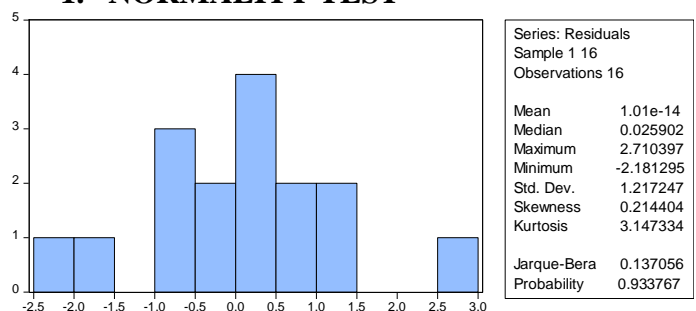X3 : Inflation
et : Error tem

4. RESULTS AND DISCUSSION

1. NORMALITY TEST

Series: Residuals	
Sample 1 16	
Observations 16	
Mean	1.01e-14
Median	0.025902
Maximum	2.710397
Minimum	-2.181295
Std. Dev.	1.217247
Skewness	0.214404
Kurtosis	3.147334
Jarque-Bera	0.137056
Probability	0.933767

Based on JB (Jarque-Berra) 0.137056 compared to Chi-Square Table with df (3) at 5% of = 7.81 so 0.137056 < 7.81, the residual data in this study is normally distributed. This can also be seen from the probability of JB of 0.93 > 0.05.

CLASSIC ASSUMPTION TEST

1. MULTICOLINERITY TEST

Table 4.1
Multicollinearity Test

	X1	X2	X3
X1	0.063138	0.045282	0.011765
X2	0.045282	0.437938	-0.003963
X3	0.011765	-0.003963	0.006849

Based on Table 4.1 above, it can be concluded that there is no high correlation value between independent variables not exceeding 0.80 so it can be concluded that in this study there is no multicollinearity between independent variables.

2. AUTOCORRELATION TEST

Table 4.2
Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test:		
F-statistics	1.623242 Prob. F(2,10)	0.2452
Obs*R-squared	3.921323 Prob. Chi-Square(2)	0.1408

Source: 2022 research results (data processed)

Based on Table 4.2 above, it can be concluded that there is no autocorrelation because it can be seen that the value of Prob. Chi Square is greater than the alpha value of 5%, namely 0.1408 > 0.05, so it can be concluded that this study is free from autocorrelation.

3. HETEROSCEDASTICITY TEST

Table 4.3
Heteroscedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey		
F-statistics	0.541353 Prob. F(3,12)	0.6631
Obs*R-squared	1.907285 Prob. Chi-Square(3)	0.5919
Scaled explained SS	1.151881 Prob. Chi-Square(3)	0.7646

Source: 2022 research results (processed data)

Based on Table 4.3 above, it can be seen that Obs * R-squared is 1.907 and Chi-Square (3) at 5% alpha is 7.81, so 1.907 < 7.81 then in this model there is no symptom of heteroscedasticity.

HYPOTHESIS TEST

1. Partial Test (t)

Big variable	t-Stats	Table	Prob	Information
X1	3.589910	,681	.0037	gative and Significant Effect
X2	2.333868	,782	.0378	sitive and Significant Influence
X3	1.391152	.356	.1894	gative and insignificant effect

Based on the table above, it can be seen that the human development index variable has a t count of -3.589910 with a statistical probability value of 0.0037 and a t table value with (df) = nk (16-4 = 12) at = 0.01, a value of 2.681 is obtained. So it can be concluded that t count > t table, which is -3.589910 > 2.681, meaning that partially the human development index has a negative and significant effect on the open unemployment rate in the city of Medan.

The gender ratio variable has a t count of 2.333868 with a statistical probability value of 0.0378. It can be concluded that t count > t table, which is 2.333868 > 1.782, meaning that partially the gender ratio has a positive and significant effect on the open unemployment rate in the city of Medan.

The inflation variable has a t count of -1.391152 with a statistical probability value of 0.1894 and so it can be concluded that t count > t table, which is -1.391152 > 1.356 meaning that partially inflation has a negative and insignificant effect on the open unemployment rate in the city of Medan.

2. Simultaneous Test (f)

F-Stats	F-table	Probability	Information
9.365	5.95	0.001816	ignificant

Based on the table above, it can be seen that the variables of the human development index, gender ratio and inflation have a calculated F of 9.365628 with a statistical probability value of 0.001816 and the value of F table with df = (k-1) (nk) is (4-1) (16-1) 4) = (3) (12) at = 0.01 a value of 5.95 is obtained, it can be concluded that f count 9.365 > 5.95 means that simultaneously and together the human development index, gender ratio and inflation have a positive and significant effect on the level of open unemployment in the city of Medan.

DETERMINATION COEFFICIENT (R^2)

The coefficient of determination is used to see how much the independent variable contributes to the dependent variable (Larasati, 2014). To determine the effect of the independent variable on the dependent can be seen from the value of R^2.

Based on the test of table 4.4, it can be seen that the value of the coefficient of determination is 0.6259 seen from the Adjurted R-squared, which means the human development index, gender ratio and inflation to the open unemployment rate are 0.6259 or 62.59% while the remaining 37.41% is influenced by other variables. which were not included in this study.

CORRELATION COEFFICIENT (R)

The correlation coefficient is used to see the close relationship that occurs between the independent variable and the dependent variable. The correlation coefficient is obtained from R $=R^2$ Based on the test results in table 4.4, it can be seen that the correlation coefficient value is 0.700725, so to obtain the correlation coefficient we need to root the termination coefficient value, namely 0.700725 = 0.837132 from these results, meaning the relationship between the human development index, gender ratio, and inflation to the level of Open unemployment in Medan City is very strongly (very closely) positively related, because the correlation value of 0.837132 is close to positive 1 (+).

5. CONCLUSIONS AND RECOMMENDATIONS

CONCLUSION

Based on the results of research and discussion, it can be concluded as follows:

1. Partially, the Human Development Index variable has a negative and significant effect on the open unemployment rate in the city of Medan.
2. Partially, the Gender Ratio variable has a positive and significant effect on the open unemployment rate in the city of Medan.
3. Partially the inflation variable has a negative and insignificant effect on the open unemployment rate in the city of Medan.
4. Simultaneously, the variables of the Human Development Index, Gender Ratio and Inflation on the Open Unemployment Rate have a positive and significant effect on the Open Unemployment Rate in Medan City.

SUGGESTION

Based on the results of research conducted in the city of Medan, it can be given the following suggestions:

1. Medan city government can predict the unemployment rate for the future.
2. Job creation as the government's priority in developing the economy is appropriate and the government is also required to be more serious in achieving the target of the human development index to reduce the unemployment rate.
3. The Medan City Government must reduce unemployment every year by making policies on the use of increasing the human development index, gender ratio and inflation to the unemployment rate in order to have an impact on reducing unemployment.
4. The government needs to improve the quality of human resources through education to increase the human development index in order to reduce the unemployment rate in the city of Medan in particular.
5. The Medan City Government should be able to increase or expand job opportunities as much as possible for workers who have not got a job.
6. For further researchers, it is recommended to use a more complete and varied variable by adding another independent.

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