The Effect of Foreign Investment, Population, Inflation and Wages on Educated Unemployment in Surakarta in 2016-2022

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ABSTRACT:
The problem in the economy that often occurs is unemployment. Unemployment cases are a problem that occurs a lot and is difficult to overcome. For this reason, this study was conducted with the aim of understanding well what factors cause the occurrence of educated unemployment in Surakarta City. For this reason, this study uses several factors that will be tested such as the influence of foreign investment, the number of residents, the amount of inflation and the difference in the minimum wage of the city of Surakarta. All data is based on information published from 2016-2022. The method used in this study is quantitative through time series data for 7 years. The source of data from this study is BPS (Central Statistics Agency) as well as various other sources that support. Then the analysis was carried out using the Ordinary Least Square (OLS) method. All tests are done with number processing and spss analysis applications. In accordance with the analysis actions carried out on all the data obtained, it can be explained some information on the findings of foreign investment variables that have a negative and significant effect on educated unemployment, population has a positive and significant effect on educated unemployment, inflation has a positive and insignificant effect on educated unemployment, wages have a positive and significant effect on educated unemployment in Surakarta City. For this reason, in general, all variables carried out in the study have a real influence as much as 96% on educated unemployment in Surakarta City.

Keywords: Foreign Direct Investment, Population, Inflation, Wages and Educated Unemployment.

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INTRODUCTION

Indonesia is part of a country that is still in the process of development so that there are still various kinds of economic development and development in order to achieve prosperity in society. In order for positive developments to occur, the most important step is to encourage the community to participate in economic development (Ryan Z et al., 2017). For this reason, it is necessary to have good enough job opportunities so that many people can have a balanced income and reduce social inequality. This is due to the real conditions in the field that there is a gap between employment opportunities and the existing workforce so that this is not comparable to what is needed which causes non-absorption of the existing workforce.

Even though we know that the increase in the workforce is far faster than the number of workers needed. For this reason, this turned out to be able to have a negative impact on the economy, namely the creation of unemployment and this unemployment had a bad influence on the condition of economic development. This bad influence can actually provide obstacles to the government which focuses on economic development which they do this because it turns out that unemployment can have a negative impact on criminal crimes which increase in social actions which turn out to be not very conducive to even increasing welfare and poverty (Kuncoro, 2014).

Moreover, what is most threatening is that there will be a large number of productive age people this year, namely as many as 300 million people of productive age 15 to 64 years and this will dominate so that many of the workforce need jobs while job offers are limited.

The most common case in the presence of labor is unemployment and this turns out to be a problem experienced by all developing countries, including that experienced by Indonesia and the city of Surakarta. The cases of unemployment are increasing every year and sometimes there is also a slight decrease but there is also an increase and this turns out to have a significant influence and impact on the economy and society. Socially, the existence of higher unemployment causes the community to lose more and more trust in the government so that this provides a negative effort that they take in the form of criminal acts, then there are disputes in the community and various other negative actions. In accordance with the explanation that unemployment is a problem that must and must be resolved immediately because it involves economic and social problems (Rasyidin et al., 2017).

For this reason, all parties need to pay attention to this because this concerns the interests of all stakeholders and the community. The existence of higher unemployment is a manifestation of one of the problems related to increasingly high social change due to the failure of development and economic growth (Handayani et al., 2019). For this reason, this will hamper economic activities that are being developed, especially those related to
productivity. If the level of productivity of the country's economy increases, the value of production or output will increase and a lot of labor will be absorbed thereby increasing the income and welfare of the community.

All countries in various parts of the world will experience unemployment and this is something that is natural and certain to happen in all countries (Pratama & Setyowati, 2022). In fact, this will affect the condition of everyone, this is a serious problem and can cause pressure or decrease in living standards and psychologically from humans. For this reason, this has a serious impact on all parties when experiencing this unemployment condition. If we know from a conceptual or understanding point of view, technically unemployment is a human being where he is involved at a certain time but his condition is not doing any work and not getting a salary or he is trying to get a job so he is active in looking for a particular job (Sa’adah & Ardyan, 2016).

In fact, all people, both foreigners and Indonesian citizens who live in Indonesia but do not get jobs, are considered unemployed (Pramudjasi & Lestari, 2019). This is because on the basis of the rules governing the residence of the community, namely for 6 months or more in the territory of the Unitary State of the Republic of Indonesia, it can be declared as a resident or community. For this reason, before we discuss unemployment, we must pay attention to the population and this population will affect the amount of existing unemployment and also the actions focused on overcoming this unemployment. Even the community or residents who are not given proper attention will affect and disrupt the development or economy of an area including uncontrolled unemployment (Ginting, 2021).

One of the effects of the unemployment rate is one of them influenced by foreign investment. Investment investment made by foreigners means the actions of foreign citizens in investing, both capital for joint ventures and domestic investment (Oanh et al., 2023). This action is a form of investment that they make to meet the domestic capital needs of business actors. What’s more, we know that investment is part of the expenditure of buyers of capital goods and various means of production to increase the production capacity of goods and services in the economy. The investment they did turned out to have a positive impact, namely encouraging the development of other industries. Various kinds of industries and other business actors will develop when investments are made (Arifi, 2022).

Then the next impact is that the investment will also increase employment so that many Indonesian people will be accepted to work and earn income. Through the investment efforts made it will stimulate the creation of wider employment opportunities and this will encourage an increasingly advanced economy which will overcome various kinds of economic problems including unemployment. This is in accordance with the explanation that
more and more investment in Indonesia will cause employment to develop better so that the unemployment rate will be minimized (Rahayu, 2017). For this reason, both foreign and domestic investors have had a positive impact on the economy, including solving the problem of unemployment (Frisela, 2021).

One of the further factors that affect the amount of unemployment is the population. We know that the number of population affects the unemployment rate because the growth of the labor force is not proportional to the supply of jobs. The development of the population is said to be very fast while the demand for labor or the supply of it turns out to be moving slowly. For this reason, this can encourage high unemployment (Pramudjasi & Lestari, 2019).

This relates to the concept of demography which emphasizes human behavior in the actions they take. In addition, inflation can also affect the amount of unemployment that exists. Conceptually, inflation is a condition in which prices increase for various types of demand and decreases in supply, and this lasts for a certain period of time, thus affecting the economy (Roncaglia de Carvalho et al., 2018). This inflation turns out to be caused by increasing aggregate demand while a decrease in aggregate supply will cause the price level to increase. However, what is happening in Indonesia is that inflation is still classified as a mild invasion, meaning below 10%, and can still be controlled properly. In addition to inflation there is also related to differences in wage levels made by each region. This reward relates to the income that everyone gets for the actions they take. The better the quality of the actions or behavior they perform in the company, the greater the income or wages received (Jufriadi, 2014).

Even so, everything is still controlled by the regional government or the central government in accordance with existing regulations. Wages can actually provide a decision for workers because through wages someone can be interested in working or not. When wages can increase, many applicants are interested in applying for jobs, including educated unemployed (Jufriadi, 2014). Many educated unemployed hope they will get an income that is in accordance with their abilities, if it is not in accordance with their abilities, they choose not to apply for the job.

For this reason, in accordance with this, it can be clarified that foreign investment or investment made by foreigners can affect the amount of labor absorbed, the number of existing residents can also affect the unemployment rate of a region, the development of an invasion can also affect unemployment and differences existing wages will boost the morale of job seekers. For this reason, this study focuses on this matter to find out how much influence all the variables have in influencing educated unemployment.

**RESEARCH METHODS**

This research was conducted in the city of Surakarta or Solo where this is one of
the studies to measure how much the unemployment rate is there. This location determination is based on several findings which underlie that in fact the city of Solo also has quite a lot of unemployment, almost around 3 to 5% of the total population of the city of Solo. For this reason, this is an important topic to be further investigated whether foreign investment, population, inflation and wages influence the decision on educated unemployment.

All data needed in this study utilizes secondary sources, namely publications conducted by the Central Statistics Agency from 2016 to 2022. All data obtained is in the form of publication data contained in print and electronic sources. All of these data will be summarized in such a way then presented in tables and then analyzed. The data summarized is data related to foreign investment made in the city of Surakarta, the population in the city of Surakarta, inflation that occurred from 2016 to 2022, as well as the minimum wage or income of the city of Surakarta.

This research was conducted on the basis of a time series, meaning that there is a chronology of time from 2016 to 2022, both increases and decreases (Sugiyono, 2019). The research data will be sorted later to see how the effects of changes over that time span. This time series data relates to data obtained on a daily, weekly, monthly, quarterly or annual basis. However, this suffering benefits from the data obtained from annual reports. Then the research will be examined using the OLS (Ordinary Least Square) analysis method or the ordinary power of least squares. The essence of the Ordinary Least Square (OLS) method is to estimate a regression line by minimizing the sum of the squared errors of each observation of that line (Hardani, 2020). The simple regression model or ordinary least squares (OLS) looks at the relationship between the two variables. For foreign investment, inflation and wages are included in the independent variable and educated unemployment is included in the dependent variable. The mathematical equation of the linear log regression model is as follows:

where:

\[ \ln(Y) = \text{Educated Unemployment (percent)} \]
\[ X_1 = \text{Foreign Investment (in dollars)} \]
\[ X_2 = \text{Population (in person)} \]
\[ X_3 = \text{Inflation (one percent)} \]
\[ X_4 = \text{Wages (in million)} \]
\[ b_0 = \text{Constant} \]
\[ b_1...b_3 = \text{Independent Variable Regression Coefficient} \]
\[ \epsilon = \text{Error Term} \]

RESULTS AND DISCUSSION

This research was conducted to analyze and discuss further the factors that influence educated unemployment in the city of Surakarta. The period analyzed in this study relates to 2016-2022. The analysis used was multiple linear regression with the help of SPSS. The results can be seen in table 1.
Table 1. Panel Data Regression Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>T-Statistic</th>
<th>Probabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign Investment</td>
<td>0.000</td>
<td>0.000</td>
<td>2.87495</td>
<td>0.010</td>
</tr>
<tr>
<td>Total Population</td>
<td>0.003</td>
<td>0.002</td>
<td>5.165753</td>
<td>0.028</td>
</tr>
<tr>
<td>Inflation</td>
<td>0.333</td>
<td>0.035</td>
<td>0.400911</td>
<td></td>
</tr>
<tr>
<td>Wages</td>
<td>0.03524</td>
<td>0.000</td>
<td>2.893243</td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>0.965</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

F-statistics 13,756

Source: Processed Data, SPSS

In accordance with the acquisition of research results carried out by regression, it can be included in econometric form, namely: \( \ln Y = \beta_0 - \beta_1 \ln IA + \beta_2 \ln JP + \beta_3 \ln P + \beta_4 \ln F + e \), if included in this equation, the results are: Educated Unemployment = -1676.911 - 0,000 \( \ln IA \) + 0.003 \( \ln JP \) + 0.333 \( \ln P \) + 0.05002 \( \ln F \) + e

Statistical t Test

In order to be able to know well each effect that is produced by each variable, it is continued with this research. The goal is expected to be able to influence the resulting influence between the research variables. The results of the analysis and their effects are presented in the statistical t test which is summarized in table 2.

Table 2. Statistical T Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>t-statistics</th>
<th>Probabilities</th>
<th>t-table</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign Investment</td>
<td>-2.819123</td>
<td>0.010</td>
<td>2.446</td>
<td>Significant at ( \alpha = 5% )</td>
</tr>
<tr>
<td>Total Population</td>
<td>2.792</td>
<td>0.028</td>
<td>2.446</td>
<td>Significant at ( \alpha = 5% )</td>
</tr>
<tr>
<td>Inflation</td>
<td>0.840</td>
<td>0.489</td>
<td>2.446</td>
<td>Not Significant at ( \alpha = 5% )</td>
</tr>
<tr>
<td>Wages</td>
<td>2.893243</td>
<td>0.035</td>
<td>2.446</td>
<td>Significant at ( \alpha = 5% )</td>
</tr>
</tbody>
</table>

Source: Processed Data, SPSS

In accordance with the acquisition of calculations and analysis of the regression results, the t-count for the foreign investment variable is -2.819123 and the probability value is 0.010, which is significant at \( \alpha 5\% \). In accordance with these results, investment or foreign investment has a negative effect on unemployment having a level of education...
and this relationship is in accordance with the hypothesis and statistically significant, so that it can be decided that foreign investment has a significant effect on educated unemployment in Surakarta City.

In accordance with the acquisition of calculations and analysis of the regression results, the t-count for the foreign investment variable is 2.792 with a probability of 0.028, which is significant at 5%. These results provide information that the number of residents has a positive effect on educated unemployment and this correlation is in accordance with the hypothesis and is statistically significant, so that it can be concluded that the number of residents in Surakarta City has a significant effect on educated unemployment.

In accordance with the acquisition of calculations and analysis of the regression results, the t-count for the foreign investment variable is 0.840 with a probability of 0.489 which is not significant at the 5% error level. These results can clarify that inflation has a positive effect on educated unemployment, this is not in accordance with the hypothesis and is not statistically significant, so it can be said that in the city of Surakarta, inflation has no significant effect on educated unemployment.

In accordance with the acquisition of calculations and analysis of the regression results, the t-count for wages is 2.893243 with a significant probability of 0.035 at an alpha of 5%. These results make it clear that wages have a positive effect on educated unemployment and this correlation is in accordance with the hypothesis and statistically significant, so that it can be said that educated unemployment in Surakarta City is significantly influenced by people's wages which are not appropriate.

**Statistical F Test**

Calculations in this section are carried out by comparing the results of calculations between the F table and calculated F values which are then interpreted to make it easier to carry out further analysis. The results of the calculations carried out obtained the following data F count 13.756 > F table 3.971 for that according to this it can be further clarified if Ho is rejected and H1 is accepted. In accordance with these results, it is answered that all variables of foreign investment, population, inflation and wages have an influence simultaneously or jointly on educated unemployment in Surakarta City.

**Determinant Coefficient Test (R²)**

The coefficient of determination shows the level/degree of accuracy of the relationship between the independent variables and the dependent variable. From the regression results, the value of R is obtained² = 0.965 which means that educated unemployment in Surakarta City can be explained by variations in models from foreign investment, population, inflation and wages of 96% and the remaining 4% is explained by other variables outside the model.
Discussion

In accordance with the results of the analysis conducted, it turns out that foreign investment has a negative but significant effect. This can be seen from the t test conducted. Calculations are negative, but the level of significance is significant because the value of foreign investment in unemployment is smaller than the error level of 0.05. These results can provide valid information that investment actions carried out by foreigners have a negative but significant effect on educated unemployment in the city of Surakarta in the period 2016 to 2022.

For this reason, this can provide information that when investment in the city of Surakarta increases by 1,000 dollars, the educated unemployment in the city of Surakarta will decrease by 2.8%. For this reason, if more investments are made, the reduction in unemployment will also increase. These results are appropriate because they have a significant, albeit negative, effect on educated unemployment in the city of Surakarta.

This is consistent with the explanation that the investments made by several companies have not only increased demand capacity but can also increase the company's ability to carry out production activities (Johan et al., 2016; Rasyidin et al., 2017). This means that there is an increase in the development of the business being carried out and this will expand the jobs needed by the company. When the investment increases, many business actors in the city of Surakarta can increase their production capacity so that they can absorb a large number of workers and reduce the existing unemployment rate. It is also the same that investment that occurs in Indonesia also increases employment opportunities and reduces unemployment rates (Hardani et al., 2020).

Then the next result is that unemployment is also positively and significantly influenced by the population in the city of Surakarta. In accordance with the results obtained, it can be stated that this is a positive influence and also a significant influence on educated unemployment. In accordance with the good value, the regression is a positive sign, meaning that when the population increases by one thousand people, the educated unemployment will also increase by 2.7%. If so, when the population of the city of Surakarta increases by 1,000 people every year, the educated unemployment will also increase by 2.7% or 27 people.

This number is of course quite a lot because we know that unemployment is difficult to solve properly because every year there will be an increase and increase as much as that amount. The results are in accordance with the existing hypothesis that population has an influence on unemployment in the city of Surakarta. If this is conveyed in theory, when the population is large enough, the production function will decrease which will then reduce the level of productivity and reduce the prosperity of its citizens so that in terms of national income it will also decrease and will indirectly increase the increase in the
number of unemployed (Demidova, 2021; Oanh et al., 2023).

In accordance with the results of research conducted inflation turned out to have a positive but not significant effect on the existing educated unemployment. In accordance with the analysis for the 2016 to 2022 period, it can be explained that inflation has no significant sign of unemployment in the city of Surakarta. If this is explained further, every one percent increase in inflation in the city of Solo will cause unemployment to increase by 0.84%. For this reason, the results are not in accordance with the hypothesis which states that it is not in accordance with the hypothesis formulated earlier.

Usually inflation will increase demand and then increase prices so that the profit level of producers increases and their production capacity will also increase so that unemployment will decrease and welfare will increase. However, in relation to this inflation, it turns out that this is unfavorable inflation, meaning that this inflation is related to general price increases, then production activities are unprofitable, it turns out that because the prices have increased, even other prices have also experienced this. Capital owners usually only use money for various kinds of activities related to speculative or inefficient investment and this will make inflation increase and interest rates will also increase so that employment opportunities decrease and unemployment increases (Roncaglia de Carvalho et al., 2018). For this reason, these results are in accordance with previous research which states that inflation has a negative and insignificant effect on educated unemployment in the city of Surakarta.

The next factor related to unemployment is influenced by the level of wages in the city of Surakarta. In accordance with the existing time period from 2016 to 2022, some information is obtained that is important enough to formulate whether the hypothesis is accepted or rejected. The results are expressed as positive results and also significantly affect the decrease or increase in the number of educated unemployed.

As a result, it can be explained that when there is an increase in wages, it will reduce or reduce the unemployment rate by 2.89%. But besides that, when there is a change in wages in society, it is also likely to increase by as much as 2.89% of educated unemployment in the city of Surakarta. For this reason, wages are one of the things that need to be considered because it greatly affects the number of unemployed people in that area and that time period. For this reason, this research is in accordance with the results of previous research which stated that wages have a significant and positive influence on the amount of the number of unemployed in the city (Hasan & Sasana, 2020).

Then everything has been well conveyed, further research can be carried out regarding if the independent variables, be it foreign investment, population, inflation, or wages, are analyzed into the number of educated unemployed in the city.
of Surakarta, the result is that by determination of r square, data is obtained as much as 0.96 which means that when taken as a whole these variables are able to influence the level of educated unemployment as much as 96% and the remaining 4% is influenced by other factors.

For this reason, the government must pay attention to several of these aspects to minimize the number of unemployed in the city of Surakarta and the government must pay attention to some of these aspects so that unemployment does not increase. In addition, simultaneously or as a whole, information is also obtained that the calculated f value is greater than the f table, which means that foreign investment in the population, inflation and wages has a simultaneous or joint effect on educated unemployment in the city of Surakarta. For this reason, these results are in accordance with research that all of these aspects affect educated unemployment in the city of Surakarta (Putri, 2015).

**CONCLUSION**

In accordance with the results of the analysis carried out, we obtained some concluding information from this study, namely 1) Foreign investment has a significant but negative effect on reducing the number of unemployed. This is because the greater the investment, the lower the unemployment rate by 2.81%. 2) The number of residents also has an influence on unemployment in the city of Surakarta. It is known that as many as 1,000 people with a growing population in Surakarta City there will be as many as 2.79 educated unemployed. 3) Inflation has no significant effect on educated unemployment in the city of Surakarta. This is because the inflation that occurs causes the price of goods to also rise and is not profitable for the company or for the company’s income. 4) Increasing wages can reduce unemployment by 2.89% because it is able to attract the attention of the people of Surakarta City to apply for jobs. 5) For that as a whole it has a simultaneous influence and the magnitude of the effect is 96% while the remaining 4% is influenced by other factors in this study.

In accordance with the findings of this study, the appropriate recommendations are 1) the government must try to attract as much foreign investment as possible so that business actors are able to develop their production and create the widest possible employment opportunities. 2) The government and society must pay attention to efforts to reduce and stabilize the population so that it does not increase drastically. This is because if there is a birth or an increase in the population of the city of Surakarta by 1000 people per year, then educated unemployment will increase by 2.7%. For this reason, family planning programs and public perceptions of having a reasonable number of children are mandatory efforts to reduce the number of educated unemployed in the future.

**BIBLIOGRAFI**

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