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# Analysis of the Impact of Pre-Employment Cards, Human Development Index, and Population on Indonesia's Open Unemployment Rate

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**Abstract:- Macroeconomics, the concept of which is still dsigned and issued by governments in the form of pre-employment cards, the human development index and number of residents seen from the number of the workforce with the basic problem in the form of open unemployment rate. The analyzes of this study were performed partially or concurrently and included types of causal-associative investigations by quantitative approaches. The data used is secondarydata, namely panel data in the 34 provinces in Indonesia (Aceh, North Sumatra, West Sumatra, Riau, Jambi, South Sumatra, Bengkulu, Lampung, Bangka Belitung Islands, Riau Islands, DKI Jakarta, West Java, Java Central, DI Yogtyakarta, East Java, Banten, Bali, NTB, NTT, West Kalimantan, Central Kalimantan, South Kalimantan, East Kalimantan, North Kalimantan, North Sulawesi, South Sulawesi, East Sulawesi, Gorontalo, West Sulawesi, Maluku, North Maluku, West Papua, and Papua) by gender in 2020. The data sources are form BPS, employment and pre-employmentcards website.The analysis methode used ismultiple regression analysis using SPSS version 26 program tools. The results of data processing form SPSS versions 26 show that he pre-employment card and population have no significant positive efffect on the open unemployment rate in 34 provinces in Indonesia in 2020. On the other hand, the human development index or HDI of each province in Indonesia has a positive effect on the unemployment rate. And taken together, the pre-employment card, HDI, and the population proxied by the number of the workforce have positive and significant impact on the open unemployment rate in Indonesia.**

***Keywods:*** *pre-employment card, human development index, population, open unemployment rate.*

## I. INTRODUCTION

Economic development is closely related to economict growth. It is a place where both sides ifluence each other and discuss the economic development of the country. Some economists understand this event or convey it's relationship to the term "*economic development is growth and change*" (Sukirno, 2013:423). Economic activity that doesn't achieve efficiencies affects a serious problem: unemploymnet.

According to a document from the Organization for Economic Cooperation and Development (OECD), the open unemployment rate in 2020 was higher than te 2008 crisis, and the unemployment rate in February 2020 was 5,2% but in May 2020, the open unemployment rate rose to 8,4% (Fikri & Gopar, 2021:108)

Indonesia's open unemployment rate or OUR has also risen significantly over the past three years. this can be found on the official website of the Central Statistical Office of Indonesia. The open unemployment rate in 2018 was only 5,30% and in 2019 was only 5,23%. However, Indonesia's open unemployment ratee in 2020 is 7,07%. Particulary in Indonesia on of the efforts to cope with this is the issuance of pre-empoyment cards as a policy initiative of the goverment to nurture the workforce with the expection of minmizing the unemployment rate (Permata, 2020).

In Presidental Rule number 76 of 2020 on Workforce Development by the Pre-employment Card Program, the purpose of the pre-employment card is set out in article 2, where it is written: Enterpreneurship is nurtured by enhancing the capabilities of the workforce, productivity and competiveness of the workforce.

Pre-employment card registrants come form all provinces of Indonesia and run until wave 11 of 2020. Wave 1-11 have 5.987.674 million job card recipients and show the total number of pre-employment card recipients that members did not acquire. 5.509.055 million terminations, including 478.619 million beneficiaries whose affiliations were withdrawn under the rules. Among these figures, 3.310.883 million (55,29%) of work card beneficiaries were, and 2.676.737 million (44,70%) about of female qork card beneficiaries. Meanwhile, 54 pre-employment card recipients from offline registrants are due to incomplete management files that cannot be automatically calssified by gender.

The covid-19 pandemic that broke out in 2020 has changed and affected the achievement of human development, especially in Indonesia itself. As can be seen from the data from the central bureau of statistics, the human development index for 2020 slowed by 0,03% or increased by 0,02 points, from 71,92 in 2019 to 71,94 in 2020. Human development index or HDI growth achievement slows growth nevertheless continues to recover.

Indonesia, one of developing countries on the Asian continent, has a population density of 270,2 million, making it the fourth most populous country in the word after China, the second most populous India, and the third the united States. Indonesia's annual growth rate wase 1,25%a slowdown of 0,24% from 1,49% from 2000 to 2010.

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Breaking down the demographics by age, Indonesia is in the age of populaton bonuses. The population increased from 53,39% to 70,72% of the population in 2020.

Based on the above problem, the researcher is interested in futher investigating the unemployment problem in 34 Indonesian provinces for research purposes.

- Total population expressed in pre-employment card, humn development index and number of labor force in Indonesia's open unemployment rate, partially and simultaneously.
- The most dominant influence on Indonesia's open unemployment rate in 2020 is analyzedby pre-employment card, HDI and population as survey variables.

## II. LITERATURE REVIEW

*A. Basic Theory*

- *Definition of unemployment and Open unemploymnet*
  Unemployment is a state in which a person with the labor force wants to find a job, but is unable to get a job. The open unemployment rate itself is the ratio expressed as a percentage of the number of unemployed and the number of workers at a point in time (Sukirno, 2013:28).
- *Pre-Employment Card*
  Pre-employment card as part of the vocational skills development program for job seekers, laid-off workers, job workers and/or workers with a need to improve their skills.
- *Human Development Index*
  It is an effort to find indicators to measure development progress to improve the well-being of populations around the world, focussing on human development and focussing on three measurable dimensions. A further evolution of the result. Develpment, including
  - *Live a long and healthy life*
  - *Be courteous*
  - *Have a decent standard of living* (Rusli, 2012)
- *Population expressed in number of labor force*
  The labor force is part of the productive activity. That is workers who actually participate or plan to participate in a product or service. The labor force in question here is the population of working age (15-64 years old), or the number of residents goods or services whn needed,if they wish to participate in these activities (Subri, 2017:71).

## III. RESEARCH METHOD

This study uses a quantitative analysis method by a series of associative causal studies. the data type used in this survey is a secondary data type. The secondary data are panel data using 34 Indonesian Provinces, based on the male, female and totals in 2020obatained from the official website of the issuing authority such as the Central Statistical Office of the Republic of Indonesia, Employment and Pre-employment Card.

Once all data has been collected, data analysis techniwues are performed. rating:

*A. Multiple Regression Analysis Method*

Multiple regression analysis technique using SPSS version 26 program tools using the following formlulas (Supranto, 2005:149) and (Supranto, 2004):

$$\boldsymbol{Y = \beta 0 + \beta 1 X1 + \beta 2 X2 + \beta 3 X3 + e}$$

Explanation:
Y = Open unemployment rate (OUR)
β = Constant multiple regression coefficients
e = error
X1 = Pre-employment card beneficiaries
X2 = Human Development Index (HDI)
X3 = Population proxied of the number of labor force

*B. Classic Assumption Test*

Multiple linear regression models (middle regression) can be said to be excellent models, and are known to excellent if the modelmeets the BLUE criterion (Best Linear Unbiased Estimator). BLUE is achievable if the classic assumptions are met. In this study using four tests, namely :normality test, multicollinearity test, heteroscedasticity test, and linearity test (F test, t test, R square).

The dcision criteria for decison making in this study, namely:

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| No | Classic Assumption Test | How to use | Standard or Criteria | Decision |
|---|---|---|---|---|
| 1 | Normality test | JB Test | The swekness ratio and kurtosis ratio are at -2 to +2. | Normal |
| | | One Sample Kormogorov Smirnov Test | Sig >0.05 | Normal |
| | | PP plot | Plot data as dots along a diagonal | Normal |
| | | Residual Histogram | bell type | Normal |
| 2 | Multicollinearity test | Tolerance value | >0.10 | no symptoms |
| | | VIF value | <10.00 | no symptoms |
| 3 | Heteroscedasticity test | Glacier Test | sig value >a=5% | No problem |
| | | Scatter Plot | The image pattern stretches above or below the number 0 on the y-axis. | no symptoms |
| 4 | Linearity test | | | |
| | F test | | sig <0.05 | Use |
| | | | F Account > F Table | Use |
| | t test | | sig <0.05 | Use |
| | | | t count > t table | Use |
| | Coefficient Of Determination | | R2<=0 | limited description |

## IV. RESULTS AND DISCUSSION

### A. *Multiple Linear Regression Data Analysis*

| No. | Model | Unstandarized Coefficients | |
|---|---|---|---|
| | | Beta | Standard Error |
| 1 | Constant | -2,264 | 0.743 |
| 2 | Pre-Employment Card | 0.062 | 0.56 |
| 3 | Human Development Index | 1,381 | 0.417 |
| 4 | Number Of Labor Force | 0.027 | 0.050 |

Table 1: Multiple Linear egression Analysis SPSS Version 26

Based on the results of multiple linear regression analysis in the table above, an equation can be written as follows:

$$\boldsymbol{Y = -2,264 + 0,062X1 + 1,381X2 + 0,027X3 + e}$$

### B. *Classic Assumption Test*

a) Normality Test

| Descriptive Statistics | N | Swekness | | Kurtosis | |
|---|---|---|---|---|---|
| | Statistics | Statistics | Standard Error | Statistics | Standard Error |
| Residuals Are Not Standardized | 102 | 0.319 | 0.239 | -0.691 | 0.474 |
| Valid N | 102 | | | | |
| Ratio | | 1,335 | | -1,458 | |

Table 2: Method of JB test program SPSS version 26

| One Sample Kormogorov Smilnov | Residuals Are Not Standardized |
|---|---|
| North | 102 |
| Test Statistic | 0.074 |
| Asymptomatic Sig (2 Tails) | 0.191 |

Table 3: Method of One Sample Kolmogorov Smirnov Test Program SPSS version 26

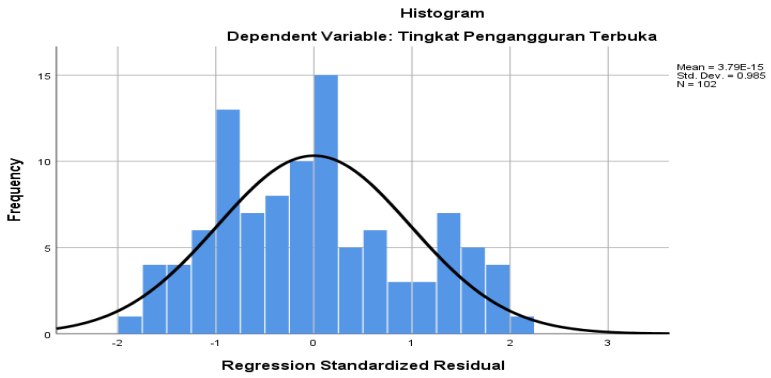


Fig. 1: Histogram Residual of the SPSS program version 26

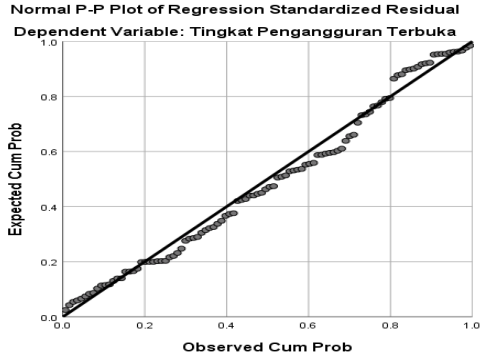


Fig. 2: Normal PP Plot Graph of SPSS program version 26

*b) Multicollinearity Test*

| No. | Model | Collinearity Statistics | |
|---|---|---|---|
| | | Tolerance | Variance Inflation Factor |
| 1 | Pre-Employment Card | 0.220 | 4.554 |
| 2 | Human Development Index | 0.795 | 1,258 |
| 3 | Number of Labor Force | 0.246 | 4.072 |

Table 4: Multicollinearity test for SPSS program version 26

*c) Heteroscedasticity Test*

| No. | Model | Unstandardized Coefficients | | T | Sig. |
|---|---|---|---|---|---|
| | | B | Std. Error | | |
| 1 | (Constant) | -0.173 | 0.423 | -0.408 | 0.684 |
| 2 | Pre-Employment Card | 0.027 | 0.032 | 0.864 | 0.390 |
| 3 | Human Development Index | 0.202 | 0.237 | 0.849 | 0.398 |
| 4 | Number of Labor Force | -0.039 | 0.028 | -1.372 | 0.173 |

Table 5: Statistical Glacier Test Method of SPSS program version 26

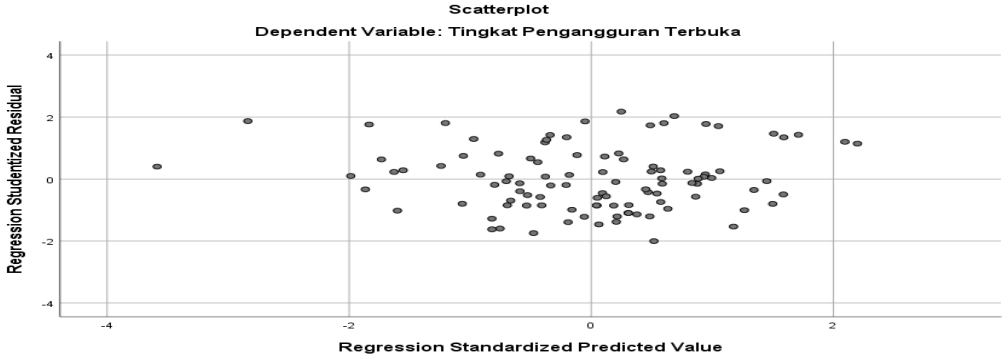


Fig. 3: Scatterplot of SPSS program version 26

d) Linearity Test

- *F Test*

| No. | Model | F count | F table | Sig. |
|---|---|---|---|---|
| 1 | Regression | 11.572 | 2.70 | 0.0000 |

Table 6: F Test count and F Table of SPSS program version 26

- *t test*

| No. | Model | T | Sig. | Correlations | | |
|---|---|---|---|---|---|---|
| | | | | Zero-order | Partial | Part |
| 1 | (Constant) | -3.047 | 0.003 | | | |
| 2 | Pre-Employment Card | 1.107 | 0.271 | 0.423 | 0.111 | 0.096 |
| 3 | Human Development Index | 3.313 | 0.001 | 0.437 | 0.317 | 0.288 |
| 4 | Number of Labor Force | 0.534 | 0.594 | 0.364 | 0.054 | 0.046 |

Table 7: t test of SPSS program verssion 26

From the data intable above ,the magnitude of the partial impact by each variable on the unemployment rate in Indonesia's 34 provinces can be calcuated by examining thhe value of the partial correlation raised by 100% in the power of two. Therefore, the magnitude of the impact off pre-employment cardis 1,2321%, HDI is 1,0489%, and the labor of force is 0,2916%.

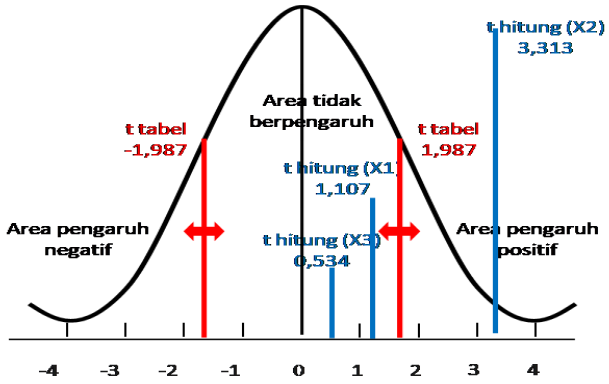


Fig. 4: Comparision of t-cunt and t-table

The previous figure shows that the variable with a significant influence is the human development index. There is no significant effect on the open unemployment rate for the pre-employment card variable and the population proxied by the number of labor force.

*e) Coefficient of Determination ($R^2$)*

| Model | R | R square | r-squared adjusted |
|---|---|---|---|
| 1 | 0.511 | 0.262 | 0.239 |

Table 8: The coefficient of determination of the SPSS program version 26

The above table can be interpreted that the independent variable description of this study can display or provide almost all the information needed to predict the dependent variable. Expressed as a percentage, it is:

$$\boldsymbol{R2 \times 100\% = 0,262 \times 100\% = 2,62\%}$$

This means that the open unemployment rate in this study is infleunced and determined by variables of pre-employment card, human development index and number of labor force in 34 Indonesia's provinces is 26,2%, 73,8% other variable not accounted for in the this study are affected.

## V. CONCLUSION

Based on the results of the data analysis and the discussion of the research described, the following conclusions can be drawn:

- The given effect is only 1,2321%, the significance is 0,271, and since it is the results of calculating the value of the t account (1,107) < t table (1,987), its means the pre-employment card has not effect on the open unemployment rate. Yes, according on the decisoion rules, H0 is accepted and Ha is rejected. Therefore, pre-employment cards do not have a significant impact on the open unemployment rate.
- The human development index has a significant positive effect on the open unemployment rate by giving an effect of 100489% with a significance value of 0,001. tcount value (3,313) > t table (1,987). According to the decision rules, H0 is rejected and Ha is allowed. it can be said that the human development index has a positive effect on the open unemployment rate. And the human index is the most dominant variable.
- The population or number of people proxied by the number of labor force has no effect on the open unemployment rate. In this case, the given effect is only 0,2916%, the significance is 0,594, and it is the comparison result of the t-count value (0,534) < t table (1,987). According to the decission rule, H0 is accepted and Ha is rejected. Therefore, the number of people estimated by the number of labor force does not have a significant effect on the open unemployment rate.
- Collectively or simultaneously, the population estimated by the labor force, the pre-employment card and human development index has a significant and significant impact on the open unemployment rate with an effect of 26,2%. Calculation results from 0,000 and F counts (11,671) > F table (2,70). Where the decision-making rules are then H0 is rejected Ha is accepted. This means that simultaneously the pre-employment card, the human development index and the population proxied by the number of labor force in Indonesia have a positive and significant effect on the open unemployment rate.

## VI. SUGGESTION

Suggestons that can be given from the results of this research are:

- The goverment is expected to establish regulations and policies to ovecome the unemployment problem more efffectively and efficiently. This is because the government's policy to skill-up th elabor force in the form of a pre-employment card is still deemed unable to overcome unemployment in Indonesia.
- Can consider and mak this research and otherr previous studies as future evaluations of the government and the general public, because one of the variables used is the pre-employment card with one year's research data, which has not been able to reduce the open unemployment rate in Indonesia. It's hoped that with the passage of approximately 5 years, this pre-employment card will be able to minimize unemployment in indonesia.

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