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Factors affecting labor migration abroad in Indonesia

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Abstract

Labor migration abroad is one of the alternatives to solve unemployment. However, overseas migration does not just happen, many factors influence it. This research aims to determine the effect of GRDP per capita, open unemployment rate, poverty, and provincial minimum wage on overseas labor migration in Indonesia at 2017-2022. This research aims to determine the influence of GRDP per Capita, Open Unemployment Rate, Poverty, and Provincial Minimum Wage on Overseas Labor Migration in Indonesia. The type of data used in this research is quantitative data and the data used is data in the form of numbers, namely secondary. This data is then processed using eviews 12 and analyzed using panel data analysis techniques with REM (random effect model) which is selected based on the results of the chow test, hausman test and lagrange multiplier. The estimation results show that the GRDP per capita variable has a positive and significant effect on overseas labor migration in Indonesia. The open unemployment rate variable and provincial minimum wage variable have a negative and significant effect on overseas labor migration in Indonesia. The poverty variable has a negative and insignificant effect on overseas labor migration in Indonesia.

Keywords: GRDP per Capita; Open Unemployment Rate; Poverty; Provincial Minimum Wage; Labor Migration.

1. Introduction

Poverty is a major problem for many countries in the world, especially in developing countries. Poverty is a condition in which a person is unable to meet basic needs such as food, clothing, medicine and shelter[1]. Poverty is a problem facing all countries, especially in developing and lagging behind countries. Poverty has a multidimensional nature caused by many factors not only in the economic sphere, but also in the political, social, cultural and other social systems [2]. The goal of national development is to improve the performance of the economy so that they can create jobs and organise a decent life for everyone, which in turn will realise the welfare of the Indonesian population. One one of the goals of national development is to reducing poverty. Poverty is one of disease in the economy, so it must be cured or at least reduced. The problem of poverty is indeed a complex and multidimensional problem. Therefore, efforts to reduce poverty must be done comprehensively, covering various aspects of community life, and carried out in an integrated integrated manner [3].

Poverty can also be studied further as a multidimensional problem because it is related to the inability to access social, economic, cultural, political and community activities. In principle, the standard of living of a community is not only food needs, but also health and education needs. Poverty is also a problem as a manifestation of the problems of a country's development caused by the negative impact of a country's economic growth over a period of time, this also results in income differences that will widen the news that occurs between communities, causing income inequality. can lead to social conflicts that occur can lead to crime.

Table 1 shows the percentage of poor people by province in Indonesia in 2022. North Sumatra Province is ranked 18th out of 34 provinces in Indonesia with a percentage of poor people of 8.42 per cent. This shows that the percentage level of the poor in North Sumatra is classified as high**.** The variables used as factors that affect poverty in this study are economic growth, population, open unemployment rate and health level.

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Table 1. Percentage of Poor Population by Province in Indonesia in 2022

Papua	26,80	1
Papua Barat	21,43	2
Nusa Tenggara Timur	20,23	3
Maluku	16,23	4
Gorontalo	15,51	5
Aceh	14,75	6
Bengkulu	14,34	7
Nusa Tenggara Barat	13,82	8
Sulawesi Tengah	12,30	9
Sumatera Selatan	11,95	10
Sulawesi Barat	11,92	11
DI Yogyakarta	11,49	12
Lampung	11,44	13
Sulawesi Tenggara	11,27	14
Jawa Tengah	10,98	15
Jawa Timur	10,49	16
Sulawesi Selatan	8,66	17
Sumatera Utara	**8,42**	**18**
Jawa Barat	7,98	19
Jambi	7,70	20
Sulawesi Utara	7,34	21
Kalimantan Utara	6,86	22
Riau	6,84	23
Kalimantan Barat	6,81	24
Kalimantan Timur	6,44	25
Maluku Utara	6,37	26
Banten	6,24	27
Sumatera Barat	6,04	28
Kepulauan Riau	6,03	29
Kalimanatan Tengah	5,22	30
Kepulauan Bangka Belitung	4,61	31
DKI Jakarta	4,61	32
Kalimantan Selatan	4,61	33
Bali	4,53	34
INDONESIA	9,57	

Source: Badan Pusat Statistik

Table 2. Economic Growth, Population, Open Unemployment Rate, Health Rate (Life Expectancy), Number of Poor People and Poverty Percentage in Regency/City of North Sumatra Province in 2018-2022

Tahun	Pertumbuhan Ekonomi (%)	Jumlah Penduduk (Jiwa)	Tingkat Pengangguran Terbuka (%)	Angka Harapan Hidup (Tahun)	Jumlah Penduduk Miskin (jiwa)	Persentase Kemiskinan (%)
2018	5,18	14.415.391	5,56	68,61	1291990	8,94
2019	5,22	14.562.549	5,41	68,95	1282040	8,83
2020	-1,07	14.703.532	6,91	69,10	1283290	8,75
2021	2,61	14.936.148	6,33	69,23	1343860	9,01
2022	4,73	15.115.206	6,16	69,61	1268190	8,42

Source: Badan Pusat Statistik North Sumatera (2019-2023)

Table 2 shows that the number of poor people in North Sumatra has fluctuated from 2018 to 2022. The highest percentage rate of poverty in North Sumatra Province is in 2021 at 1,343,860 people with a poverty percentage of 9.01 per cent. Table 1.2 shows that economic growth has fluctuated from 2018-2022. In 2018 economic growth of 5.18 per cent increased in 2019 by 5.22 per cent. In 2020 economic growth greatly decreased due to the increase in the covid-19 rate which destroyed the economy of North Sumatra. In 2021-2022 the North Sumatra economy experienced an increase.

However, the increase in economic growth did not reduce the poverty rate. Table 1.2 shows that the population data has increased from 2018-2022. The highest population is in 2022, which is 15,115,206 people. The increase in population causes the need for natural resources to increase and increases the dependents of family members, thereby reducing community welfare and causing poverty. In addition, the open unemployment rate in 2018 to 2022 experienced fluctuations. However, in 2020 to 2022 the unemployment rate decreased but could not reduce the poverty rate. The level of health is an important aspect in supporting

success in development, especially to improve social welfare. Based on table 1.2, life expectancy from 2018 to 2022 has fluctuated. Life expectancy in 2018 of 68.61 years fluctuated until in 2022 it was 69.61 years. Health in general is all the efforts and actions of a person to maintain, maintain, and improve their own health status in order to have maximum labour. People who have a good level of health will have a high level of work productivity, high income levels, high education levels and a number of other positive things. Based on the description that has been explained, the author is interested in examining *"Analysis of Poverty Determinants in North Sumatra Province"*.

2. Literature Review

2.1. Migration

Migration is the movement of people from one place to another with the aim of settling and crossing administrative boundaries. Migration can increase or decrease the population of an area. There are positive, negative and neutral factors in the origin and destination regions. According to Everett Lee (Mantra, 2000), the population migration process is influenced by push and pull factors. Meanwhile, according to Todaro's theory (2006), it is explained that migration occurs due to economic motives, namely because it is influenced by the difference in income between one region and another. between one region and another. The existence of income inequality between one region and another region makes migrants think of mobility. to do mobility. If the income level of the destination area is the same as the income of the origin area, it will stop the flow of migration or labor mobility (Todaro, 2000).

2.2. GRDP per capita

GRDP is the market value of all finished goods and services produced in a region in a given period (Mankiw, 2013:6). The production side of the economy transforms inputs such as labor and capital into outputs. Inputs such as labor, and capital are called factors of production, while payments to these factors such as wages and interest are called factor payments. such as wages and interest are called factor payments. GRDP data is not only used to measure how much output is produced, but also as a measure of the welfare of a region's population. produced, but also as a measurement of the welfare of a region's population. An increase in GRDP will cause local revenues from the tax and levy sectors to increase. retribution increases. GRDP per capita can be used as an illustration of the average income received by each resident as a result of the production of economic sectors in a region or area (Kuncoro, 2003: 24). The value of GRDP per capita is used to determine the level of community welfare in a region in general. When per capita income increases, the structure of employment according to employment, status and type will change. If the growth rate of gross domestic product product growth rate is equal to or lower than the rate of population growth, then per capita income will remain the same or fall.

2.3. Open Unemployment Rate

Unemployment is the condition of someone who has not gotten a job who enters the labor force and is looking for and wants to have a job (Sukirno, 2004:28). Open Unemployment Rate (TPT) is the percentage of the number of unemployed people out of the total labor force. The causes of open unemployment are the occurrence of sluggishness in economic activities, a reduction in the number of workers due to advances in the economy. economic activities, a reduction in the number of workers due to technological advances, and a reduction in industrial development. reduced industrial development. The picture of a high open unemployment rate is that in the labor market there are many people of productive age who are not in the labor force. There are many people of productive age who are not absorbed.

Unemployment According to the Central Bureau of Statistics, open unemployment is classified as follows: The labor force that does not have a job and is looking for work. Labor force that is preparing a business. Labor force that does not have a job and is not looking for work because they feel hopeless but if there is an opportunity, they are willing to work. Labor force that already has a job but has not yet started working. According to Sadono Sukirno in Sukmaraga (2011) unemployment based on its cause can be divided into 3 types, namely: Frictional, Structural, and Conjunctural Unemployment.

2.4. Open Unemployment Rate

Poverty is a condition in which deprivation does not occur due to the will of the poor or economically weak population. due to the will of the economically weak or poor population but rather because it is inevitable due to the circumstances of the population in the area, so that causes the limited capital they have and cannot participate in development (Masjkuri, 2007). The problem of poverty is something that is never finished discussed, because Indonesia's poverty rate is still high from year to year. year to year is still relatively high. This poverty is caused by one of the educational factors, where the level of education of the Indonesian people is still classified as low education. in low education.

The link between the number of poor people and migration is that the higher the poverty rate, the higher the migration rate. Because the population will look for solutions on how to get out of poverty, one of the ways that can be used is by migrating to get a job, salary, or a better life in the destination area.

2.5. Provincial Minimum Wage

According to Edwin B. Flippo, wages are the price paid for services that a person has provided to others. Meanwhile, the provincial minimum wage is a wage set as the minimum wage that a company must pay to workers within the province. The minimum wage is set by the government and is the lowest limit in determining wages in a region and it is unlikely that the minimum wage will decrease. Wages received by labor can be divided into 2 types, namely: Nominal wages and real wages. Wages are one of the things that are looked at and considered in deciding the choice to work. Usually a high wage will invite someone to join a company. Likewise, with low wages, a person's desire to work will decrease and will choose a new area or migrate to a place that has a higher wage level than the initial area.

3. Research Method

The type of data used in this research is quantitative data and the data used is numerical data, namely secondary. The secondary data used in this study are time series data from 2017-2022 and cross section of 34 provincies in Indonesia. This study aims to analyse the effect of independent variables, namely GRDP per capita, open unemployment rate, poverty, and provincial minimum wage whether they have an interrelated relationship with the dependent variable, namely Labor Migration. The data sources in this study were taken from the Central Bureau of Statistics, books, journals and sites related to the title of this study. This research was conducted in Indonesia of 34 provincies with the research time from 2017 to 2022.

This study uses one dependent variable four independent variables. The dependent variables in this study are Labor Migration (Y), GRDP per Capita (X_1), Open Unemployment Rate (X_2), Poverty (X_3), Provincial Minimum Wage (X_4). The data analysis technique used in this research is panel data analysis. Panel data is a combination analysis of time series data and cross section data. The difference between ordinary regression and panel regression is that in panel data regression there is a random effect, there is a fixed effect, meaning that there is an effect on time and region, while if ordinary regression, if it is a time series, it only sees changes in the effect at each time and if it is a cross-section time series, it sees differences in each region. Panel data in addition to looking between time also sees how changes between regions. In addition, the panel in eviews has a fixxed effect / random effect menu. There is a regression form for panel data in this study, which is as follows:

$$Yit = \beta 0 + \beta 1PDRBit + \beta 2TPTit + \beta 3POit + \beta 4UMPit\ \varepsilon it$$

Descriptions

Y	: Dependent variable
X	: Independent variable
N	: Number of observations
T	: Number of time
β1- β4	: Coefficient
PDRB	: GRDP per Capita
TPT	: Open Unemployment Rate
PO	: Poverty
UMP	: Provincial Minimum Wage
NxT	: Number of Panel data

Determination of Estimation Model

1. Common Effect Model, The Common Effect model is a combination of time series and cross-section data using the ordinary least square method to estimate the panel data model.
2. Fixed Effect Model, the fixed effect model is a model that assumes the existence of intercept differences in the equation. The fixed effect model technique is a technique that estimates panel data using dummies to capture differences in intercepts.
3. Random Effect Model, the random effect model is a model that will estimate panel data where the disturbance variables are interconnected between time and between individuals.

Selection of Estimation Method

1. Chow test, the chow test is to determine which of the two methods, the common effect method and the fixed effect method, should be used in panel data modelling.
2. Hausman test, The Hausman test is to determine which of the two methods, the fixed effect method or the random effect method, should be used in panel data modelling.
3. Lagrange Multipler test, Lagrange Multipler is a test to determine whether the most appropriate Random effect or Common Effect model is used. The LM test is not used if the Chow test and Hausman test show that the most appropriate model is the Fixed Effect model.

Classical Assumption Test

1. Normality test aims to test whether in regression the independent variable and the dependent variable or both have normally distributed data or not. A good regression model is residuals that are normally distributed or close to normal. The normality test in panel data can be seen by comparing the probability values.
2. Multicollinearity test aims to test whether the regression model found a correlation between independent variables (independent). A good regression model should not have a correlation between the independent variables.

4. Results and Discussion

Table 3. Result of Chow Test

Effect Test	*Statistic*	*Df*	*Prob*
Cross-section F	*11.812286*	*(33,166)*	*0.0000*

Source: E-views processed

The probability value is < 0.05, this means that H1 is accepted and H0 is rejected, namely the Fix Effect model is better than the common effect model. Because, the fix effect model is selected, the test continues to the Hausman Test. Where Hausman testing is used to compare the Fix effect model (FEM) with Random effect (REM).

Table 4. Result of Hausman Test

Test Summary	*Chi-Sq. Statistic*	*Chi-Sq. d.f.*	*Prob*
Cross-Section Random	*0.528343*	*4*	*0.9797*

Source: E-views processed

The table above shows the magnitude of the random cross-section probability value of 0.9707 which is bigger than α = 5%. This means that H0 is accepted and H1 is rejected. Because, the random effect is selected, the test continues to the Lagrange Multiplier. Where Lagrange Multiplier testing is used to compare the Common effect model (CEM) with Random effect model (REM).

Table 4. Result of Lagrange Multiplier Test

	Cross-section	*Test Hypothesis Time*	*Both*
Breusch-Pagan	*208.0069 (0.0000)*	*31.40472 (0.0000)*	*239.4116 (0.0000)*

Source: E-views processed

The Breusch-Pagan value of both is < 0.05, this means that H0 is accepted and H1 is rejected, which means that the model used in the Random Effect Model.

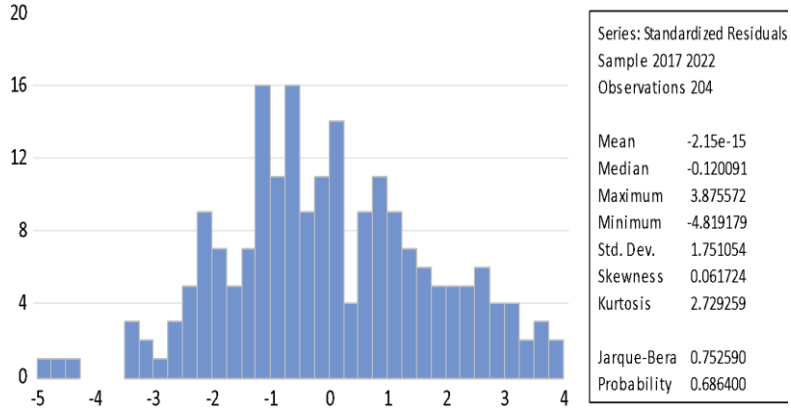

Figure 1. Result of Normality Test Source: E-views processed

The table above, the probability value of 0. is greater than the significance value of 0.05, meaning that the data in the study

are normally distributed.

Table 5. Result of Multicollinearity test

	PDRB	*TPT*	*PO*	*UMP*
PDRB	*1.000000*	*0.418291*	*-0.326097*	*-0.056206*
TPT	*0.418291*	*1.000000*	*-0.274610*	*0.211169*
PO	*-0.326097*	*-0.274610*	*1.000000*	*-0.112476*
UMP	*-0.056206*	*0.211169*	*-0.112476*	*1.000000*

Source: E-views processed

The Multicollinearity Test results in the table above show that there is no high correlation value between the independent variables not exceeding 0.90 so it is concluded that there is no multicollinearity between the independent variables.

Table 6. Estimation Result of Random Effect Model

Variabel	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob*
C	*83.50491*	*8.210962*	*10.16993*	*0.0000*
LOG(PDRB)	*1.442163*	*0.202363*	*7.126610*	*0.0000*
TPT	*-0.168428*	*0.076114*	*-2.212828*	*0.0280*
PO	*-0.040387*	*0.042538*	*-0.949443*	*0.3435*
LOG(UMP)	*-6.404014*	*0.557013*	*-11.49707*	*0.0000*
		Weighted Statistics		
R-Squared		*0.479451*		
Adjusted R-Squared		*0.468987*		
Prob (F-statistic)		*0.000000*		

Source: E-views processed

Panel data analysis in this study aims to determine the effect of GRDP per capita, open unemployment rate, poverty, and provincial minimum wage in Indonesia at 2017-2022. From the results of panel data processing with the Random effect method, the regression equation is obtained as follows:

$$Y= 83.50491+1.442163PDRB-0.168428TPT-0.040387PO-6.404014UMP$$

Description:
Y = Labor Migration
X1 = GRDP per Capita (PDRB)
X2 = Open Unemployment Rate (TPT)
X3 = Poverty (PO)
X4 = Provincial Minimum Wage (UMP)

Based on the regression results, the R-Squared coefficient value is 0.479451 or 47.9451%. This shows that the independent variables namely GRDP per Capita, Open Unemployment Rate, Poverty, and Provincial Minimum Wage have a relationship with the labor migration variable by 47.9451%. Based on the regression results, the Adjusted R-Squared value is 0.468987 or 46.8987%. This shows that the independent variables namely GRDP per Capita, Open Unemployment Rate, Poverty, and Provincial Minimum Wage can explain the labor migration variable by 46.8987% with the remaining 53.1013% explained by other variables not included in this study. Based on the regression results, the Prob (F-Statistic) value of 0.000000 is smaller than the significance value of 0.05, which means that the independent variables, namely GRDP per Capita, Open Unemployment Rate, Poverty, and Provincial Minimum Wage together have a significant effect on the variable labor migration in Indonesia.

Analysis of the Relationship Results of Independent Variables to Dependent Variables

- The Effect of GRDP per Capita on Labor Migration Abroad in Indonesia in 2017-2022

From the regression results of the random effect model, the GRDP per capita variable has a positive and significant effect on labor migration abroad in Indonesia. The higher the level of GRDP per capita, the higher the impact on labor migration abroad in Indonesia. This is not in accordance with the hypothesis which states that GRDP per capita has a negative effect. The above results are in accordance with research conducted by [11] entitled "Determinants of International Migration in

Indonesia" which in the study states that GRDP per capita is positively and significantly related to labor migration abroad in Indonesia. When GRDP per capita increases, it has a significant effect on the number of labor migration. Because the motivation of each individual in migrating is very varied apart from the economic side, the social and cultural side can also support the motivation to migrate.

- The Effect of Open Unemployment Rate on Labor Migration Abroad in Indonesia in 2017 -2022

From the regression results using the random effect model, the open unemployment rate variable has a negative and significant effect on labor migration abroad in Indonesia. The open unemployment rate variable has a coefficient value of -0.168428 with a significance value less than the significance level used (0.05), this means that the open unemployment rate variable has a negative and significant effect on labor migration abroad in Indonesia. The result of this study shows that in the long run the open unemployment rate has a negative effect on labor migration abroad in Indonesia. Several things make the open unemployment rate an obstacle to migration and have a negative impact on labor migration abroad in Indonesia. This can be seen when the number of unemployment increases, it will reduce the level of migration. This is because when the number of jobs cannot keep up with the number of job seekers, it makes it difficult for people to migrate. The results of this study are the same as previous research by [12] with the research title "The effect of education, unemployment, and poverty on Indonesian labor migration abroad" where the study states that the variable open unemployment rate has a negative and significant effect on labor migration abroad in Indonesia.

- The Effect of Poverty on Labor Migration Abroad in Indonesia in 2017 -2022

From the processed data, the regression coefficient of the poverty variable has a negative and insignificant effect on labor migration abroad in Indonesia with a probability value of 0.3435 greater than the significance value of 0.05 and negative as indicated by the coefficient value of -0.040387. This means that the poverty variable has an insignificant effect and has a negative relationship to labor migration abroad in Indonesia in 2017-2022. The results of this study are in line with the research of Mutia Adinda (2021), entitled "Analysis of Factors Affecting the Level of Overseas Migrant Worker Migration" which states that poverty has a negative effect on migration. This is because there are inhibiting factors in the form of pre-departure costs or fees to take care of the necessary documents and take a long time. The costs incurred are quite expensive so that the various obstacles constraints will make it difficult for the poor to migrate.

- The Effect of Povincial Minimum Wage on Labor Migration Abroad in Indonesia in 2017-2022

From the regression results using the random effect model, the provincial minimum wage variable has a negative and significant effect on labor migration abroad in Indonesia. The provincial minimum wage variable has a coefficient value of -6.404014 with a significance value less than the significance level used (0.05), this means that the provincial minimum wage variable has a negative and significant effect on labor migration abroad in Indonesia. The results of this study indicate that the level of provincial minimum wage is negative towards labor migration abroad in Indonesia. The results of this study are the same as previous research by [12] with the research title "Analysis of Determinants of Migrant Workers to work abroad" where the study states that the provincial minimum wage variable has a negative and significant effect on labor migration abroad in Indonesia. Provincial minimum wage which increases every year causes a decrease in the number of labor migration, because the fulfillment of needs has been met without requiring themselves to return to work abroad to obtain high income.

5. Conclusions

Based on the results obtained from research on the factors affecting labor migration abroad in Indonesia at 2017-2022 using panel data regression and classical assumptions, it can be concluded as follows:

1. GRDP per capita variables have a positive and significant effect on labor migration.
2. Open unemployment rate variables have a negative and significant effect on labor migration.
3. Poverty variables have a negative and insignificant effect on labor migration.
4. Provincial minimum wage variables have a negative and significant effect on labor migration.

References

[1] Adams Jr, R. H., & Page, J. (2005). Do international migration and remittances reduce poverty in developing countries?.World development, 33(10), 1645-1669.Agisty, M. D. (2013).
[2] Analisis Faktor-Faktor Yang Mempengaruhi Migrasi Internasional dan Implikasinya Terhadap Pemberantasan Kemiskinan [Skripsi]. Institut Pertanian Bogor.Brojonegoro, P. S. B. (2000).
[3] Pemulihan Ekonomi, Otonomi Daerah dan Kesempatan Kerja di Indonesia. Warta Demografi, 30(3), 21-27.Boubtane,
[4] E., Coulibaly, D., & Rault, C. (2013). Immigration, unemployment and GDP in the host country: Bootstrap panel Granger causality analysis on OECD countries. Economic Modelling, 33, 261-269.
[5] Agung, Kurniawan. 2005. Transformasi Pelayanan Publik. Yogyakarta. Penerbit Pembaharuan
[6] Arikunto, S. 2006. Prosedur Penelitian Suatu Pendekata Praktik. Jakarta : PT Rineka Cipta
[7] Bastian, I. (2011). Akuntansi Sektor Publik Di Indonesia. Yogyakarta: BPFE Drucker, Peter. (1964). Managing for result. New York: Harper & Row
[8] Ellen Christina dkk. 2011. Anggaran Perusahaan : Suatu Pendekatan Praktis. Jakarta : PT Gramedia Pustaka.
[9] Ekuivalensi : Jurnal Ekonomi Bisnis, 239-257.
[10] Sukirno, Sadono., (1997). "Pengantar Teori Makroekonomi", *Raja Grafindo Persada*, Jakarta.
[11] Widarjono, Agus. 2009. *Ekonometrika Pengantar dan Aplikasinya, Edisi Ketiga*.Yogyakarta: Ekonesia.

[12] Yunianto, Dwi. "Analisis Pertumbuhan Dan Kepadatan Penduduk Terhadap Pertumbuhan Ekonomi." *Forum Ekonomi*. Vol. 23. No. 4. 2021