ASSOCIATION BETWEEN MIGRATION, EDUCATION, AND RE-EMPLOYMENT DURING THE COVID-19 PANDEMIC IN KALIMANTAN SELATAN PROVINCE

HUBUNGAN ANTARA MIGRASI, PENDIDIKAN, DAN RE-EMPLOYMENT PADA MASA PANDEMI COVID-19 DI PROVINSI KALIMANTAN SELATAN

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Abstract

The Covid-19 pandemic has spread in Indonesia and caused an increase in unemployment, including in the Kalimantan Selatan Province. This research aims to analyze the relationship between migration, education, and the re-employment status of workers affected by layoffs in the early part of the Covid-19 pandemic using Sakernas August 2021 data. The analysis used was a multinomial logit model. The findings are that the labor force's migration and education status significantly impacted re-employment. High-education natives are more likely to be re-employed in formal employment than high-education migrants. On the other hand, low-education natives are more likely to be unemployed or less likely to be re-employed in formal employment than high-education migrants. In addition, low-education natives are more likely to be re-employed in informal employment than high-education migrants. These findings show that education is essential in increasing the chances of the native labor force getting better labor market outcomes.

Keywords: Formal Employment, Informal Employment, Internal Migration, Low-Education Native

Abstrak

Pandemi Covid-19 telah menyebar dan menyebabkan angka pengangguran meningkat di Indonesia, termasuk di Provinsi Kalimantan Selatan. Penelitian ini bertujuan untuk menganalisis hubungan antara migrasi, pendidikan, dan status ketenagakerjaan pada pekerja yang kehilangan pekerjaan pada awal pandemi Covid-19 dengan menggunakan data Sakernas Agustus 2021. Analisis yang digunakan yaitu model multinomial logit. Hasil Penelitian meliputi status migrasi dan pendidikan angkatan kerja berdampak signifikan terhadap status ketenagakerjaan. Penduduk lokal berpendidikan tinggi lebih mungkin untuk dipekerjakan kembali di sektor formal daripada migran berpendidikan tinggi. Di sisi lain, penduduk lokal berpendidikan rendah lebih berpeluang untuk menganggur atau lebih kecil kemungkinannya untuk dipekerjakan kembali di sektor formal daripada migran berpendidikan tinggi. Selain itu, penduduk lokal berpendidikan rendah lebih berpeluang untuk dipekerjakan kembali di sektor informal daripada migran berpendidikan tinggi. Temuan ini menunjukkan bahwa pendidikan sangat penting dalam meningkatkan peluang penduduk lokal untuk mendapatkan hasil yang lebih baik di pasar tenaga kerja.

Kata Kunci: Sektor Formal, Sektor Informal, Migrasi Internal, Penduduk Lokal Berpendidikan Rendah

INTRODUCTION

The Covid-19 pandemic has brought about unprecedented impacts on the global labor market and is estimated to have had an effect four times greater than the global financial crisis in 2009 (ILO 2021). Since the Covid-19 pandemic was declared in early 2020, most governments worldwide have implemented interventions to deal with the spread of Covid-19, impacting the economy and employment. This impact is due to social distancing and mobility restrictions, so governments, private offices, and companies implemented work-from-home (WFH) policies. This significantly disrupts the labor market, leading to job losses and unemployment as many workers struggle to find new employment opportunities (Brodeur et al. 2020; Lemieux et al. 2020; Dartanto et al. 2023; Prates and Barbosa 2020).

In Indonesia, the National Labor Force Survey (Sakernas) shows an increase in the unemployment rate when the Covid-19 pandemic occurred in 2020. The unemployment rate increased by 1.84 percentage points from 5.23 percent in August 2019 to 7.07 percent in August 2020. Besides that, around 24 million workers experienced a decline in working hours. At the same time, the share of those working in informal employment increased by 4.59 percentage points from 55.88 percent in August 2019 to 60.47 percent in August 2020. That increases because some workers who lose jobs switch to informal employment to meet their living needs.

There are signs of gradual economic recovery in 2021, aligned with Sakernas data showing a decline in the national unemployment rate from 7.07 percent in August 2020 to 6.49 percent in August 2021. At the same time, it also shows that the share of those working in informal employment decreased by around one percentage point in August 2021 (which remains higher than pre-pandemic levels). Even though the national unemployment rate has begun to decline, several provinces have experienced an increase in unemployment rates in August 2021, including Kalimantan Selatan Province. In August 2021, Kalimantan Selatan's unemployment rate still did not show any recovery, reaching 4.95 percent. This percentage is higher than in August 2020, which reached 4.74 percent. In addition, the proportion of informal employment in August 2021 reached 59.63 percent, which remains higher than pre-pandemic levels. These two conditions indicate that workers laid off during the Covid-19 pandemic still have difficulty re-employed in Kalimantan Selatan Province. Therefore, research related to re-employment in Kalimantan Selatan Province is very essential.

Re-employment is a primary concern for governments worldwide. Re-employment is essential in improving household welfare and promoting the nation's economic recovery. In Indonesia and Kalimantan Selatan mainly, where there is no unemployment insurance, people who have lost their jobs must be re-employed as soon as possible to survive. However, the re-employment process during the pandemic is challenging. Job seekers must have the skills required by employers so that their chances of getting a job will increase (Voogt and Roblin 2012).

Education, often considered a tool for acquiring skills, plays an important role. The positive impacts of higher education levels on labor market outcomes are well-documented and include a lower unemployment rate and a shorter length of unemployment (Hanushek and Woessmann 2008). During the pandemic and the resulting recession, workers with lower levels of education have generally been the most impacted by the economic crisis. However, evidence suggests that demand for higher education increases after a recession. That is reflected in history: during the recovery from the Great Recession, the demand for college and bachelor's degrees in the job market reached nearly 67 percent, and the need for those with a high school degree or less fell to just one percent (Carnevale, Jayasundera, and Gulish 2016).

Another problem regarding re-employment is related to competition between native and migrant labor forces looking for work (Card and Peri 2016), including Kalimantan

Selatan Province. Sakernas August 2021 shows that the labor force's internal migration percentage in Kalimantan Selatan Province was quite large, reaching 27.05 percent. This percentage was greater than the national level, at only 19.70 percent. One of the impacts of labor force migration in a region is increased job competition (Card and Peri 2016). The migration of the labor force from other regions will increase the number of labor forces in the destination area; this will cause competition to find work to become tighter, and unemployment will increase (Cahuc and Zylberberg 2004). Empirical studies have supported this theory, having found evidence that labor migration can increase regional unemployment rates in America and Europe (McArthur, Thorsen, and Ubøe 2010), Turkey (Berker 2011), Germany (Niebuhr et al. 2012), Uganda (Strobl and Valfort 2015), and Brazil (Corbi, Ferraz, and Narita 2022). This increase is because migrant workers can take jobs from local workers (substitution effect), thereby increasing competition in the labor market and increasing the unemployment rate (Glitz 2012).

Research on re-employment, which is linked to education and internal migration in the early part of the Covid-19 pandemic, has never been studied in Kalimantan Selatan Province. Therefore, this research attempts to fill this gap. This research aims to analyze the relationship between migration, education, and the re-employment status of workers affected by layoffs in the early part of the Covid-19 pandemic. In addition, this research also tries to classify re-employment into formal and informal employment to deepen the analysis.

The classification into formal and informal employment is because the concept of working according to Sakernas is not good enough to describe individual welfare. The small percentage of the unemployed among the working-age population perhaps reflects that there are no unemployment benefits in Indonesia, including Kalimantan Selatan Province. The jobless need to rely on their savings or others such as family, community, or government resources for financial support. In other words, almost all the working-age population had to work, and some might have had to work to survive (Arifin and Ananta 2023). Therefore, other measures are needed to see the quality of work, such as formal and informal employment classifications (Majid 2012; Tadjoeddin 2015). The categorization of formal and informal employment in this research refers to the ICLS-17 concept, which combines employment status with financial bookkeeping, employment guarantees, leave provisions, and work contracts.

There are at least two novelties in this study. First, this study is the first research on re-employment that is linked to education and internal migration in the early part of the COVID-19 pandemic in Kalimantan Selatan Province. Second, this study classifies re-employment into formal and informal employment using the ICLS-17 concept, which is still rarely used in existing studies in Kalimantan Selatan Province.

RESEARCH METHODS

Source of Data

The data source in this study uses the Sakernas August 2021 data in Kalimantan Selatan Province. Sakernas August 2021, in general, provides employment data and has a specific objective to obtain information on the impact of Covid-19 on employment. The number of Sakernas samples in August 2021 in South Kalimantan was 17,808 persons. Based on Figure 1, the labor force comprised 12,545 persons, while 5,263 were not in the labor force. The analysis unit used in this study was the labor force that experienced job loss from February 2020 to August 2021. Of the labor force, 988 persons lost their jobs from February 2020 to August 2021. Then, the analysis unit was divided into re-employed and still unemployed. To deepen the analysis, the re-employed group was divided again into formal and informal employment using ICLS-17, one of this study's novelties. Formal and informal employment were measured based on employment status combined with the

provision of social security and leave by the company/business/workplace. The labor force re-employed in formal employment comprised 106 persons. Those re-employed in informal employment numbered 743 persons, while those still unemployed numbered 139 persons.
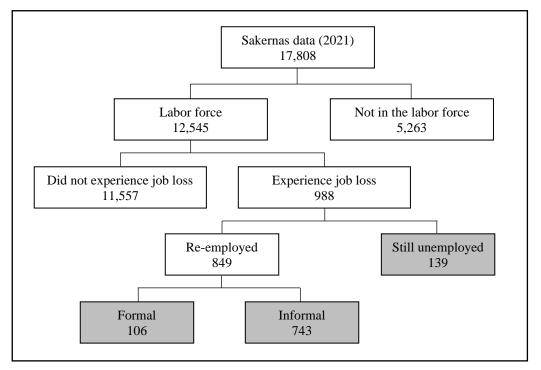

Figure 1. Unit Selection Chart of Research Analysis
Resource: National Labor Force Survey (SAKERNAS) August 2021

Analysis Method

The analytical methods used in this research were descriptive analysis and inferential analysis. The descriptive analysis method determines the general description and characteristics of the labor force. The inferential analysis used was multinomial logistic regression to analyze the relationship between more than two categorical dependent variables with one or more explanatory variables (Hosmer Jr et al., 2013). The multinomial logistic model with k independent variables and j categories is as follows:

$$g_j(x) = ln\left(\frac{P(Y = j|x)}{P(Y = 0|x)}\right) = \beta_j + \sum_{k=1}^{K} \beta_{jk} x_k + \varepsilon_i \tag{1}$$

The significance of the model is tested by comparing all independent variables using the likelihood ratio test to ensure that the model formed is meaningful (Hosmer Jr et al., 2013). The test was carried out by comparing the model without independent variables (model B) to the model using all independent variables (model A). The null hypothesis used is that the coefficient is zero, with the test statistic $-2ln\left[\frac{likelihood\ (Model\ B)}{likelohood\ (Model\ A)}\right]$ which follows the chi-square distribution of degrees of freedom k. The null hypothesis is rejected if the test statistic value$> X^2_{\alpha,k}$ or *p-value*<α, which means that there is at least one X variable that influences Y variable or model A is significant at the α significance level.

Table 1. Operational Definition and Formation of Dependent Variables and Independent Variables

Variable	Notation	Category
Dependent Variable (Y)		
Re-employment	re-employ	1, re-employ in formal employment 2, re-employ in informal employment 0, still unemployed*
Independent Variables (X)		
The Main Independent Variables		
Education and Migration Status	EducMig	1, internal migrant with high education (university) 2, internal migrant with low education (below university) 3, native with low education (below university) 0, native with high education (university)*
Control Variable		
Head of Household Status	HH	1, Head of Household 0, Household Member*
Marital Status	Marital	1, Widow or Widower 2, Married 0, Single or Not Married Yet*
Age Group	Agegr	1, Young (<24 years old) 2 Mature (≥24 years old)*
Place of Residence	Urban	1, Urban 0, Rural*

Resource: National Labor Force Survey (SAKERNAS) August 2021
*Notes: *) Reference Category*

Furthermore, tests were carried out on the migration and education variable using the Wald test with the equation $W_j = \frac{\hat{\beta}_j}{SE(\hat{\beta}_j)}$, if the null hypothesis is rejected, then migration and education significantly affect re-employment. Interpretation of the logistic regression model was carried out using the relative risk ratio (Hosmer Jr et al., 2013), which shows how much the tendency of a particular dependent variable is toward the reference category compared between categories on the primary independent variable. The variables used in the study are shown in Table 1.

RESULTS AND DISCUSSION

Overview of Education, Migration, and Re-employment in Kalimantan Selatan Province

This study focuses on workers affected by job losses due to the Covid-19 pandemic. It examines their transition, whether they return to work in the formal employment or informal sector or are still unemployed, as seen from the migrant and education status of the labor force. Classification of formal and informal employment using ICLS-17 is one of this study's novelties. Formal and informal employment is measured based on employment status combined with the provision of social security and leave by the company/business/workplace. By using ICLS-17, the determination of formal and informal employment is more appropriate than just comparing the employment status of workers.

This article chose to focus on migration and education because one of the characteristics of the migrant labor force in Indonesia is that they have higher education or are more skilled than the native labor force (Vidyattama 2014). This difference is because

the skilled labor force tends to take advantage of wage differences between regions by moving to areas that offer higher wages and obtain better job opportunities than in their home areas (Borjas, Bronars, and Trejo 1992). This pattern is also seen in Kalimantan Selatan Province. The mean year of school for the migrant labor force was 9.01 in 2021 (Table 2). This number means that the migrant labor force attended school until the ninth grade or had just graduated from junior high school.

On the other hand, the mean year of school for the native labor force was lower, 8.34 in 2021. This number means that the native labor force attended school only until the eighth grade or had not graduated from junior high school. In addition, Table 2 also shows the test results of the mean differences test in the mean year school for migrants and the native labor force. In general, the difference in the mean year of school between migrants and the native labor force in Kalimantan Selatan is around one year. The difference is significant because it has a p-value of 0.0205 which is below the five percent significance level. It can be concluded that the migrant labor force in Kalimantan Selatan is more educated than the native labor force.

Table 2. Mean Difference Test of Mean Years School of migrants and natives in Kalimantan Selatan Province, 2021

	Migrants	Native
(1)	(2)	(3)
Mean Years School	9.0092	8.3428
Observation	13	
t-statistics	2.6665	
p-value	0.0205	

Resource: National Labor Force Survey (SAKERNAS) August 2021 (processed by researchers)

In addition to having higher education, the proportion of the formal re-employment of migrants is higher than that of the native labor force in Kalimantan Selatan (Table 3). This finding is supported by previous empirical research in Indonesia, which shows that migrants have more opportunities to enter formal employment than natives (Amini et al. 2020; Pardede and Listya 2013). This tendency indicates that the migrant labor force is more risk-averse because they prefer to obtain stable jobs at their destination. Formal employment is more promising than informal employment in terms of job stability because it has clear work contracts, social security for workers, and better salaries (Lehmann and Pignatti 2018).

Table 3. Proportion of Re-employment by Migrant and Education Status in Kalimantan Selatan Province, 2021

Variables	Re-employed		Still Unemployed	Total
	Formal	Informal		
(1)	(2)	(3)	(4)	(5)
Migrant Status				
Native Labor force	11.8310	72.0327	16.1363	**100.0000**
Migrant Labor force	12.3528	70.7116	16.9356	**100.0000**
Education Status				
Low Education	8.8098	75.3480	15.8422	**100.0000**
High Education	42.1632	37.0261	20.8108	**100.0000**

Resource: National Labor Force Survey (SAKERNAS) August 2021 (processed by researchers)

Table 3 also shows that the labor force's education positively correlates with the proportion of formal re-employment. This finding aligns with previous research findings in Indonesia, which show that the higher the education of the migrant and native labor force, the greater their chances of entering formal employment (Manning and Pratomo 2013; Prastiwi 2013; Amini et al. 2020). A more educated labor force is more likely to get decent jobs than a less educated one (Cairo and Cajner 2016). It can be concluded that when laid off due to the Covid-19 pandemic, the high-education labor force in Kalimantan Selatan was more likely to be re-employed in formal employment compared to the low-education labor force, which was more likely to be re-employed in informal employment. This finding shows the importance of education in the re-employment of the labour force laid off during the crisis in Kalimantan Selatan.

The Relationship Between Migration, Education, and Re-employment in Kalimantan Selatan Province

The results of the multinomial regression analysis show that the likelihood ratio test on the model formed has a p-value <0.001 (Table 4), from which it can be concluded that the multinomial logit model used is suitable for explaining the effect of migration and education on the re-employment in Kalimantan Selatan Province. Table 4 Column 2 shows the relative risk ratio of being re-employed in formal employment—the ratio between the probability of being re-employed in formal employment in each category of the primary independent variable. The relative risk ratio explains the likelihood of being re-employed in formal employment compared to high-education migrants (the reference category in the primary independent variable).

Table 4 Column 2 indicates that high-education natives are more likely to be re-employed in formal employment than high-education migrants. The relative opportunity for high-education natives to be re-employed in formal employment is 3.10 times higher than that of high education migrants. However, low-education natives are more likely to be unemployed than high-education migrants. The relative opportunity for low-education natives to be re-employed in formal employment is 0.50 times lower than that of high-education migrants. This result shows that the opportunity for low-education natives to get formal work after being hit by a layoff during the early days of the Covid-19 pandemic decreased due to the presence of high-education migrants.

High-education migrants will increase the number of job seekers in Kalimantan Selatan Province (destination region). Assuming that the available formal job vacancies in Kalimantan Selatan do not change or even decrease during the crisis, the increase in job seekers due to migration to Kalimantan Selatan will make it increasingly difficult for low-education natives to find formal employment. In addition, the migrant labor force, which is generally more educated or skilled, can substitute low-education natives in formal employment, making it more difficult for them to be re-employed during the crisis.

Then, Table 4 Column 3 shows the relative risk ratio of being re-employed in informal employment—the ratio between the probability of being re-employed in informal employment in each category of the primary independent variable. The relative risk ratio explains the probability of being re-employed in informal employment compared to high-education migrants. The table shows no significant difference in the opportunities for highly educated natives and migrants to obtain informal employment after being laid off during the crisis. However, the table indicates that low-education natives are more likely to be re-employed in informal employment than high-education migrants.

The presence of high-education migrants in a region makes it difficult for the low-education natives to compete in formal employment, so they decide to enter informal employment. This result aligns with previous empirical studies by Corbi et al. (2022), which showed that labor migration could reduce the native formal employment and increase the native informal employment in Brazil. The study shows that the increase in

informal employment is due to the reallocation of the native labor force from formal to informal employment due to being substituted by highly educated migrants.

Table 4. Multinomial Logistic Regression Results The Effect of Education and Migration Status on Re-employment, Relative Risk Ratio

Variables	Formal Employment vs. Still Unemployed	Informal Employment vs. Still Unemployed
(1)	(2)	(3)
Intercept	0.1203*	0.5447
EducMig		
High Education Migrant	**1.0000**	**1.0000**
Low Education Migrant	**0.3136***	**2.2493**
Low Education Native	**0.4994**	**3.4859****
High Education Native	**3.0971***	**1.3290**
Head of Household Status		
Household Member	1.0000	1.0000
Head of Household	2.3577**	1.3301
Marital Status		
Widow or Widower	1.0000	1.0000
Married	15.8546***	1.4668
Single	5.4820	0.6003
Age Group		
Young	1.0000	1.0000
Mature	0.6500	2.6088***
Place of Residence		
Urban	1.0000	1.0000
Rural	1.2441	2.0812***
Likelihood Ratio Test	207.42***	

Resource: National Labor Force Survey (SAKERNAS) August 2021 (processed by researchers)
Notes: $p < 0.01^{***}, p < 0.05^{**}, p < 0.10^{*}$

In general, Table 4 shows that the low-education native labor force in Kalimantan Selatan is more adversely affected by the high-education migrant labor force from other regions. The high-education migrant labor force has better skills than low-education natives, so it is easier for them to be re-employed in formal employment when laid off during the crisis. On the other hand, low-education natives are more easily substituted by high-education migrants, mainly from formal to informal employment. Therefore, the low-education native labor force in Kalimantan Selatan, which has low education, chose to be re-employed in informal employment because of the difficulty of competing in formal employment.

Based on Statistics of Kalimantan Selatan Province, the mining and quarrying sector has the largest economic share in Kalimantan Selatan. The large number of mining companies, most of which offer job vacancies in formal employment, is one of the demand-pull migrations in South Kalimantan. Formal employment is quite attractive for job seekers. After all, it is more promising than informal employment in terms of job stability because it has clear work contracts, social security for workers, and better salaries (Lehmann and Pignatti 2018). Some regions often the destinations for migrant labor forces are Tanah Bumbu, Tabalong, Balangan, Tanah Laut, and Tapin Regencies.

During the Covid-19 pandemic, mining and quarrying were among the sectors that were greatly affected. Many mining companies laid off their employees. Table 5 column 4

shows that most mining sector workers in South Kalimantan affected by the Covid-19 pandemic switched to informal employment, the percentage reaching 52.47 percent. The remaining 27.95 percent were successfully re-employed in the formal sector, and 18.58 percent were still unemployed.

Table 5. Percentage of Re-employment of Mining and Quarrying Sector in Native and Migrant Labor Force in Kalimantan Selatan Province

Variables	Native Labor Force	Migrant Labor Force	Total
(1)	(2)	(3)	(4)
Layoff	100.0000	100.0000	100.0000
Formal Re-employment	21.8503	37.9443	27.9507
Informal Re-employment	61.8839	39.6804	53.4677
Still Unemployed	16.2658	22.3753	18.5816

Resource: National Labor Force Survey (Sakernas) August 2021 (processed by researchers)

Table 5 also compares re-employment between native and migrant labor forces in the Mining and Quarrying sector. The percentage of the native labor force re-employed in formal employment is only 21.85 percent or smaller than the migrant labor force, which reaches 37.94 percent. Meanwhile, the migrant labor force prefers to be unemployed rather than work in informal employment. That is why the percentage of unemployment in the migrant labor force is higher than in the native labor force. As a characteristic of higher education, they prefer formal to informal employment because of stability, more social protection, regular pay, and other benefits. On the other hand, the percentage of the native labor force re-employed in informal employment is 61.88 percent or greater than the migrant labor force, which is only 39.68 percent. It can be concluded that after being laid off during the Covid-19 pandemic, many native labor forces in Kalimantan Selatan had difficulty competing in formal employment, so they choose to switch to informal employment. That can be explained by previous studies, which state that a more educated labor force finds jobs faster than a less-educated labor force. That is because the less-educated labor force has low productivity, so they often lose the competition to find formal employment compared to educated workers (Cairo and Cajner 2016).

This finding is in line with several findings from previous studies in Indonesia. In their studies, Hohberg and Lay (2015) and Tridiana and Widyawati (2018) found evidence that low-education workers have a greater chance of leaving formal employment than high-education workers. The potential for getting a job in formal employment will increase along with a higher level of education. On the other hand, the labor force with low levels of education will have a greater probability of being unemployed or working in the informal sector than workers with higher education levels. From the employer's side, they will also prefer to recruit individuals with higher levels of education. The higher a person's education, the more skilled and productive they will be, so the employer will retain them relatively, and vice versa.

Some previous explanations show the importance of education in increasing the chances of the native labor force getting better labor market outcomes. This finding needs to be a concern for the Kalimantan Selatan Government to improve access to education for their labor force. Labor forces with higher levels of education are associated with better access to formal employment and lower probabilities of working in informal employment. Improved educational qualifications might unlock many formal-sector jobs, especially if

employers raise educational requirements in response to an increased supply of more educated manpower (Manning and Pratomo 2013).

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

The objective to analyze the relationship between migration, education, and the re-employment status of workers affected by layoffs in the early part of the Covid-19 pandemic in South Kalimantan Province was achieved in this study. In addition, this study also uses ICLS-17 to classify formal and informal employment, which is one of the novelties in this study. By using ICLS-17, the determination of the formal and informal employment in this study can be more precise than simply comparing the employment status of workers.

This study shows that during the Covid-19 pandemic, the labor force's migration and education status significantly impacted re-employment. High-education natives are more likely to be re-employed in formal employment than high-education migrants. On the other hand, low-education natives are more likely to be unemployed or less likely to be re-employed in formal employment than high-education migrants. In addition, low-education natives are more likely to be re-employed in informal employment than high-education migrants. This finding shows that high-education migrants can replace low-education natives, especially in formal employment. The substituted native labor force then shifts to informal employment or remains unemployed. This finding shows that education is essential in increasing the chances of the native labor force getting better labor market outcomes. This finding needs to be a concern for the government because the difficulty of low-education natives in getting jobs, especially in formal employment, can have negative implications. One of them is that increased inequality can cause jealousy among the most disadvantaged parties, namely low-education natives.

RECOMMENDATIONS

The government needs to improve the education and skills of the native labor force, especially in areas with large labor migration. Based on the estimation results, this recommendation must be made because the group most affected by high-education migrants is low-education natives (senior high school education and below). One effort that can be made to prevent the substitution of the native labor force is to improve their quality through education. That is because the higher the native labor force education level, the more excellent the opportunity to re-employ in formal employment. Governments can expand social protection assistance, especially in education, to stimulate the participation rate of natives in schools up to the university level.

REFERENCES

Amini, Ary Fauziah, Lilik Sugiharti, Neny Aditina, and Yefin Amandri Meidika. 2020. "Analisis Migran Risen di Sektor Formal dan Informal: Hasil Sakernas 2018." *Jurnal Ekonomi dan Bisnis* 23 (1): 37–52. https://doi.org/10.24914/jeb.v23i1.2697.

Arifin, Evi Nurvidya, and Aris Ananta. 2023. "Employment of Highly-Skilled Migrants during the Pandemic: Focus on Internal Migration in Indonesia." *Asian and Pacific Migration Journal* 32 (1): 60–82. https://doi.org/10.1177/01171968231169474.

Berker, Ali. 2011. "Labor-Market Consequences of Internal Migration in Turkey." *Economic Development and Cultural Change* 60 (1): 197–239. https://doi.org/10.1086/661217.

Borjas, George J., Stephen G. Bronars, and Stephen J. Trejo. 1992. "Self-Selection and Internal Migration in the United States." *Journal of Urban Economics* 32 (2): 159–85. https://doi.org/10.1016/0094-1190(92)90003-4.

Brodeur, Abel, David Gray, Anik Islam, and Suraiya Jabeen Bhuiyan. 2020. "A Literature Review of the Economics of Covid-19." *Discussion Paper Series IZA DP*, no. 13411: 0–61.

Cahuc, Pierre, and Andre Zylberberg. 2004. *Labor Economics*. The MIT Press, Cambridge, MA.

Cairo, Isabel, and Tomaz Cajner. 2016. "Human Capital and Unemployment Dynamics: Why More Educated Workers Enjoy Greater Employment Stability." *The Economic Journal* 128: 652–82. https://doi.org/10.1111/ecoj.12441.

Card, David, and Giovanni Peri. 2016. "Immigration Economics by George J . Borjas: A Review Essay." *Journal of Economic Literature* 54 (4): 1333–49.

Carnevale, Anthony P., Tamara Jayasundera, and Artem Gulish. 2016. "America's Divided Recovery: College Haves and Have-Nots." *Georgetown University*, 44. https://eric.ed.gov/?id=ED574377%0A.

Corbi, Raphael, Tiago Ferraz, and Renata Narita. 2022. "Internal Migration and Labor Market Adjustments in the Presence of Nonwage Compensation." In *Annals of 44th Meeting of the Brazilian Econometric Society*.

Dartanto, Teguh, Hera Susanti, Eldest Augustin, and Kania Fitriani. 2023. "Reemployment during the Covid-19 Pandemic in Indonesia: What Kinds of Skill Sets Are Needed?" *Cogent Economics and Finance* 11 (2). https://doi.org/10.1080/23322039.2023.2210382.

Glitz, Albrecht. 2012. "The Labor Market Impact of Immigration: A Quasi-Experiment Exploiting Immigrant Location Rules in Germany." *Journal of Labor Economics* 30 (1): 175–213. https://doi.org/10.1086/662143.

Hanushek, Eric A., and Ludger Woessmann. 2008. "The Role of Cognitive Skills in Economic Development." *Journal of Economic Literature* 46 (3): 607–68. https://doi.org/10.1257/jel.46.3.607.

Hohberg, Maike, and Jann Lay. 2015. "The Impact of Minimum Wages on Informal and Formal Labor Market Outcomes: Evidence from Indonesia." *IZA Journal of Labor and Development* 4 (14). https://doi.org/10.1186/s40175-015-0036-4.

Hosmer, David W., and Stanley Lemeshow. n.d. "Applied Logistic Regression SEcond Edition."

ILO. 2021. "Pemantauan ILO: Covid-19 dan Dunia Kerja. Edisi Ke-Tujuh." https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-jakarta/documents/publication/wcms_770140.pdf.

Lehmann, Hartmut, and Norberto Pignatti. 2018. "Informal Employment Relationships and the Labor Market: Is There Segmentation in Ukraine?" *Journal of Comparative Economics* 46 (3): 838–57. https://doi.org/10.1016/j.jce.2018.07.011.

Lemieux, Thomas, Kevin Milligan, Tammy Schirle, and Mikal Skuterud. 2020. "Initial Impacts of the Covid-19 Pandemic." *Canadian Public Policy*, no. Juli: S55–65. https://doi.org/10.3138/cpp.2020-049.

Majid, Nomaan. 2012. "How Not to Count the Employed in Developing Countries." *Employment Working Paper 136*, no. 136.

Manning, Chris, and Devanto S Pratomo. 2013. "Do Migrants Get Stuck in the Informal Sector ? Findings from a Household Survey in Four Indonesian Cities." *Bulletin of Indonesian Economic Studies* 49 (2): 167–92. https://doi.org/10.1080/00074918.2013.772940.

McArthur, David Philip, Inge Thorsen, and Jan Ubøe. 2010. "A Micro-Simulation Approach to Modelling Spatial Unemployment Disparities." *Growth and Change* 41 (3): 374–402. https://doi.org/10.1111/j.1468-2257.2010.00530.x.

Niebuhr, Annekatrin, Nadia Granato, Anette Haas, and Silke Hamann. 2012. "Does Labour Mobility Reduce Disparities between Regional Labour Markets in Germany?" *Regional Studies* 46 (7): 841–58. https://doi.org/10.1080/00343404.2010.532118.

Pardede, Elda L., and Rachmanina Listya. 2013. "Do They Look for Informal Jobs? Migration of the Working Age in Indonesia." *IUSSP International Population Conference* III (8): 26–31. http://econ.feb.ui.ac.id/wp-content/uploads/2015/10/201308.pdf.

Prastiwi, Lustina Fajar. 2013. "Analisis Pekerja Migran Dan Nonmigran Perkotaan Pada Sektor Formal Dan Sektor Informal Di Indonesia." *Jurnal Ilmiah Mahasiswa FEB, Universitas Brawijaya* 4 (1): 1–22.

Prates, Ian, and Rogério J Barbosa. 2020. "The Impact of Covid - 19 in Brazil : Labour Market and Social." *The Indian Journal of Labour Economics*. https://doi.org/10.1007/s41027-020-00252-3.

Strobl, Eric, and Marie Anne Valfort. 2015. "The Effect of Weather-Induced Internal Migration on Local Labor Markets. Evidence from Uganda." *World Bank Economic Review* 29 (2): 385–412. https://doi.org/10.1093/wber/lht029.

Tadjoeddin, Mohammad Zulfan. 2015. "Spatial Dimensions of Key Employment Outcomes in Indonesia." *Journal of Comparative Asian Development* 14 (3): 466–509. https://doi.org/10.1080/15339114.2015.1096552.

Tridiana, Clara, and Diah Widyawati. 2018. "Dampak Upah Minimum Terhadap Probabilitas Keluar dari Sektor Formal Minimum Wage." *Jurnal Ekonomi Dan Pembangunan Indonesia* 18 (3): Article 8. https://doi.org/10.21002/jepi.2018.19.

Vidyattama, Yogi. 2014. "Inter-Provincial Migration and 1975-2005 Regional Growth in Indonesia." *Papers in Regional Science* 95 (1): S87–105. https://doi.org/10.1111/pirs.12120.

Voogt, Joke, and Natalie Pareja Roblin. 2012. "A Comparative Analysis of International Frameworks for 21 St Century Competences: Implications for National Curriculum Policies." *Journal of Curriculum Studies* 44 (3): 299–321. https://doi.org/10.1080/00220272.2012.668938.