

The Factors Analysis Of Affecting Labor On Interregional Migration

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Abstract — the phenomenon of interregional transmigration of labor in Indonesia can help solve not only labor problems but also economic problems of migrant families. In the disequilibrium migration model, migration occurs due to the push and pull factors, while the Haris-Todaro model related between actual and expected wage. The purpose of this study was to determine the effect of minimum wage in regencies/ cities, number of establishments, and the number of job seekers on the level of migration. To analyze the data, this study applied a panel data regression with the number of transmigration in Central Java as the research object. The results showed that there was no statistical proof that the number of industries affected the level of transmigration while minimum wage decreased and the number of job seekers increased the level of transmigration in Central Java.

Keywords — *interregional ; migration ; labor ; panel regression*

I. INTRODUCTION

Development practices particularly in developing countries are closely related to population mobility or migration, in terms of rural to urban, interurban or interregional migration. In modern industrial society, migration occurs due to an intrinsic labor demand. Based on dual labor market theory, one inclines to migrate to another region or country with specific employment needs. Migration therefore, is not only due to push factors in the homeland but also some pull factors of the target regions [1].

Inclining rural-to-urban migration brought about consequences to urban economy in terms of a booming job seekers of both formal and informal sectors [2]. The rural-to-urban migration in developing countries is eventually exceeding work field creation, work

acceptance in industry and social service provision in cities. Migration to big cities in developing countries is however seen as contributing factor to work labor surplus which increases unemployment problems in urban regions. This might create adverse gap between rural and urban regions in terms of work force supply and demand.

As a middle income country, Indonesia faces problems of employment and work field availability i.e. raising numbers of open unemployment, shortage of formal jobs in rural and urban areas, labors work in unproductive fields, widening wage gap between formal and informal labor, a tendency of declining productivity in processing industry, and increasing open unemployment of younger work labor [3]. Thanks to the increasing work force and uneven distribution of population accross Indonesian archipelago, transmigration programs were conducted. This program however, seemed similar to kinds of migration in common.

Todaro argued that one's decision to migrate was determined by economic consideration which described the migrant response toward different expected income possibly earned in homeland and other regions [2]. The decision to migrate was therefore rational one. Larger job market in the target area and possibility of greater benefits made the migrating decision [3]. People would logically move to another region with greater benefits than their homeland.

Interregional migration can also be viewed from regional economic analysis where difference between equilibrium and disequilibrium models is significant. Disequilibrium migration model is generally assumed on the occurrence of migration driven by benefits and loss incurred in different regions. Whereas equilibrium model argues that migration could only occur provided that wage rate across different regions remains the same (equilibrium) [4].

In the disequilibrium model, labor wage gap becomes the main factor which drives the interregional migration. In this case, migration is frequently analysed based on the push and pull factors. Potential income raise in the target region is seen as prominent factor which influences individual decision to move to another region. This generally means that population and labor migration can be described through price equalization factor model [4].

Haris-Todaro model argued that interregional migration occurred when actual wage of homeland was lower than expected wage of the aimed region. The expected wage was calculated i.e. actual wage by probability to get a job [4]. Whereas industry in economy could be seen as job field provider.

Work force availability, migration and industry in Central Java Province depicted different characteristics. They were closely related to diverse conditions of regencies and cities in the province.

Table1. Growth Percentage of Transmigration, Minimum Wage, Work Seekers and Industry in Central Java Province.

Year	2012	2013	2014
Transmigration	0.06	0.32	0.73
Minimum Wage	0.07	0.09	0.17
Work Seekers	0.04	0.06	0.03
industries	0.03	0.02	0.05

Source: Statistic Indonesia, 2018

Results on empirical studies on wage indicated that minimum wage regime caused migration flow [5]. Migration was driven by the wage gap [6]. The influence of wage and work toward migration depended upon skill structure of migrant workers [7]. Workers' mobility and minimum wage change are reciprosensitive [8]. Mariyanti stated that first, contribution of industry to the employment statistically and substantially influenced the interprovince migration [9]. Secondly, average minimum wage statistically and substantially influenced the migration. Similar argument by Basker stated that industry raised work opportunity [10].

Concerning unemployment and migration, a study by Khotijah indicated that unemployment in homeland significantly impacted on numbers of people migration [11]. The unemployment could effect on people's mobility in three levels i.e. workers' status, regional unemployment gap, and higher overall unemployment [12]. The effect of regional unemployment on migration was positive for unlisted jobless, yet positive for the listed unemployed persons [13]. Based on that background, this research attempted to analyse the effect of minimum wage, industry and work seekers on interregional migration in regencies or municipals of Central Java Province.

II. METHODOLOGY

This research employed secondary data in the form of yearly data panel 2011 – 2014. These data comprised number of transmigration (Trans), minimum wage in regencies or cities (UMK), number of industry (ind) and

work seekers (Wseek). The data were obtained from third party source i.e, Board of Central Statistics.

The data were then analysed with the use of panel data regression analysis model. This regression analysis signified one variable dependence on one or more other variables [14]. Generally, the research used the following model:

$$Trans_{it} = \beta_0 + \beta_1 ind_{it} + \beta_2 umk_{it} + \beta_3 wseek_{it} + u_{it} \quad (1)$$

The panel data models generally comprised of Common Model approach, Fixed Effect Model approach (FEM) and Random Effect Model (REM) approach. The models were then selected. The selection of common and fixed effect models used chow test. When value F was found positive, then the fixed effect model was selected. Hausman test approach was used to choose between fixed effect model and random effect model. When the statistical Hausman value was found positive, then the selected model would be fixed effect one [15].

III. DISCUSSION

Overall description of data and their distribution was presented as Table 1.

Table 2. Description of analysed data.

	Transmigration	industries	UMK wage	Work seekers
Mean	49.47857	107.8786	901865.2	28436.25
Median	41.00000	81.50000	874000.0	25576.00
Maximum	182.0000	328.0000	1423500.	86562.00
Minimum	0.000000	11.00000	717000.0	4119.000
Std. Dev.	37.54469	86.73929	131522.6	15356.75

Results of the research model estimation was presented as Table 3.

Table 3. Estimation of panel data.

Variabel	Common Model		Fixed Effects Model		Random Effects Model	
	Coefficient	Std. Errot	Coefficient	Std. Errot	Coefficient	Std. Errot
C	180.4918	18.36879	212.4223	28.91365	198.5073	17.28276
Ind	-0.052332***	0.030770	0.035134	0.218655	-0.043735	0.041166
Umk	-0.000155	2.00E-05	-0.000187*	1.89E-05	-0.000174*	1.79E-05
Wweek	0.000499*	0.000170	6.49E-05	0.000443	0.000431**	0.000215
R-square	0.360649		0.676905		0.423172	
Adj. R-Square	0.346545		0.559704		0.410448	
F-statistic	25.57186*		5.775590*		33.25742*	
Prob F-statistic	0.000000		0.000000		0.000000	

Note: * significant at level 0.01, **signifincat at level 0.05, ***signifincat at level 0.1

Table 4. Results of model selection.

Test	Effects Test/ summary	Statistic/ Chi-Sq. Statistic	d.f./ Chi-Sq. d.f.	Prob.	Results
<i>Chow test</i>	Cross-section F	2.936506	(34, 102)	0.0000*	<i>FEM</i>
<i>Hausman Test</i>	Cross-section random	6.250789	3	0.1000	<i>REM****</i>

Note: * significant at level 0.01, **** the best model

Based on the Table 3 estimation and Table 4 model selection, an equation of random effect model can be drawned as follows:

$$Trans_{it} = 198.5073 - 0.043735ind_{it} - 0.000174umk_{it} + 0.000431wweek_{it}$$

Results of this study were irrelevant to Hanafie whose argument stated one of employent problems was declining productivity of industry [3]. These were neither in line with the study of Mariyanti claimed that industri gave contribution to employment [9]. Similarly, Basker argued that the existence of industry increased work opportunity [10]. On the contrary, this study revealed that number of industry in the homeland did not effect on the less intensity of migration or transmigration. This matter needs a more comprehensive treatment both in short and long terms. Should growth in industry fail to impact on labor market (migration), then the tendency of transmigration keeps increasing. When there is no adequate response of the industry, there will be excessive supply of employment. The target regions in turn will face problems of employment as well. Open unemployment will sharply raise. Otherwise, when there is excessive demand of employment in the target regions, equilibrium of employment shall come out.

Wage turns out to be important variable in which established expected income will give impact on migration. This is economically logical regarding the wage earned by migrant workers should be higher than the cost. Similarly, the results of this study showed the effect of wage on migration, in negative direction. Theoretically, these results were in line with Todaro model on migration that wage difference became a prominent factor which determined ones to migrate [4]. Empirically, this research was also consistent to studies of Mariyanti, Giulietti, Basu, and Boffy-Ramirez, regarding that wage give influence to migration [5,6,8,9]. This matter should gain more attention in terms of economy. This also implies that should wage not effect on migration, other factors need to be searched further.

Work seekers as well as unemployed men in labor market should gain serious attention. This because their problems give close impact on development and economic growth of a region. The tendency of unemployment to effect on migration inclines along with inadequate quality of work force. A phenomenon of excessive supply of employment often occurs in a region, and this makes a bigger possibility of migration. In other words, more unemployment will drive more migration or transmigration. These findings were

relevant to Todaro model on migration which described migration phenomenon in developing countries where there was a tendency of migration from rural to urban regions although unemployment rate had been higher in the urban areas [4]. Empirically, these results were relevant to the studies of Khotijah, Pissarides and Wadsworth, and Antolin and Bover, which described unemployment gave significant effect on migration [11,12,13]. With regard to effort to cutback the employment, this matter should be considered systematically. Nonetheless, migration solely may not be an effective mechanism in lowering unemployment rate [16].

IV. CONCLUSION

As a conclusion, industry did not give influence to transmigration, meaning that increase in the industry would not decrease the migration. Minimum wage of regencies or cities influenced transmigration, in negative direction, which implies that increase in minimum wage would decrease migration. Work seekers influenced transmigration, in positive direction, which implies that increase of work seekers would increase migration.

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