AN ANALYSIS OF FACTORS AFFECTING RECENT OUT-MIGRATION IN EAST JAVA PROVINCE

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ABSTRACT

This study aims to analyze the effect of the variables of age, gender, marital status, education level, employment status, and income on recent out-migration of East Java Province. The analytical method used in this study is to use binary logistic regression. Based on the results of the analysis, it is known that the gender variable has a positive and significant effect on a person's decision to make out recent migration of East Java Province. Furthermore, the variables of marital status, education level, employment status, and income have a negative and significant effect on a person's decision to make out recent migration of East Java Province.

Keywords: Recent-out migration, age, gender, marital status, education, employment status, income, Logistic Regression Model

INTRODUCTION

Economic development is defined as various activities carried out by a country or region to develop economic activities and the quality of life of its people (Arsyad, 2005). Inequality of economic development between regions in Indonesia will lead to economic inequality between one region and another. This condition triggers labor mobility from areas with minimal development facilities to areas with better development facilities (Saefullah, 1994).

Mantra (2000) said that, in principle, population mobility (migration) is a reflection of differences in growth and inequality in development facilities between one region and another. Socio-economic conditions in the area of origin that make it impossible to meet one's needs cause the person to want to go to another area to meet those needs. Meanwhile, each individual has different needs, so the decision-making process to move from each individual is also different.

Tijiptoherjanto in Dina (2008) shows that migration is mainly due to economic factors, namely the opportunity to get a better job or a higher income. The difference in the level of wages between the area of origin and destination encourages people to migrate to meet their increasingly diverse needs. Sulistiawati's research (2015) on the effect of the minimum wage on labor absorption and community welfare in provinces in Indonesia shows that the minimum wage received by workers is lower than the need for a decent living. The minimum wage received by workers is below the limit of Non-Taxable Income. It indicates that the wages received by workers have not been able to improve welfare.

Each province's pattern and recent migration flows vary widely, and the magnitude is not always the same from one province to another. According to Nugroho (2017), the dynamics of recent migration in Indonesia in 1980 - 2010 was influenced by the condition of economic development in Indonesia, which continued to increase. The more the population, the better the economy itself. Recent migration patterns are divided into two: provinces that always have a positive net migration rate and provinces that always have a negative net migration rate. Java's Island is still a destination for migrants both from Java itself and from the outside.

Table 1 The Provinces With the Highest Positive and Negative Net Risen Migration in Indonesia

Tahun	Migrasi Risen Neto Positif	Migrasi Risen Neto Negatif
1980	Jakarta, West Java	Central Java, East Java
1990	West Java, Special Region of Yogyakarta	Central Java, East Java
2000	West Java, Special Region of Yogyakarta	Central Java, East Java
2010	West Java, Special Region of Yogyakarta	Central Java, East Java

Source: BPS, 2019

In the last two decades, East Java's population has more recent out-migration than recent in-migration. Based on the results of research by Daliyo and Widodo (2005) who conducted a permanent migration survey in East Java, it was found that 45% of male migrants migrated out for economic reasons. The number of recent migrants leaving East Java Province in 2015 was 421,349 people. The area that became the favorite destination of the migrants was Bali with 68,447 people (16.24%), Central Java Province 49,373 people (11.72%), East Java Province (10.26%) (SUPAS, 2015).

From the economic aspect, East Java province is one of the provinces with the most significant proportion that contributes to economic growth in Java, apart from DKI Jakarta and West Java (Bappenas, 2015). This province also has a high rate of recent out-migration. Therefore, it is crucial to know what factors influence a person's intention to do out recent -migration in East Java Province.

THEORITICAL CONTEXT

Rozy Munir, in the book Basics of Demographics, said that migration is the movement of people to settle from one place to another beyond political or state boundaries or administrative boundaries, or internal boundaries of a country. Meanwhile, the concept used by Statistics Indonesia (BPS) related to migration is the movement of people to settle from one place to another across administrative boundaries (internal migration) or political/country boundaries (international migration). It can be interpreted that migration is a relatively permanent population movement from one region (country) to another (country). Thus, migration is the movement of people from one administrative area to another to live or settle in a new place.

Based on Lee's theory, the factors that influence the decision of migrants to migrate and the migration process are:
a)   Factors found in the area of origin of the migrant
b)   Factors found at the destination
c)   Intervening obstacles between origin and destination
d)   Migrant individual factors

These factors can be seen schematically in Figure 1.

Figure 1. **Factors of Origin, Destination, and Intervening Obstacles**
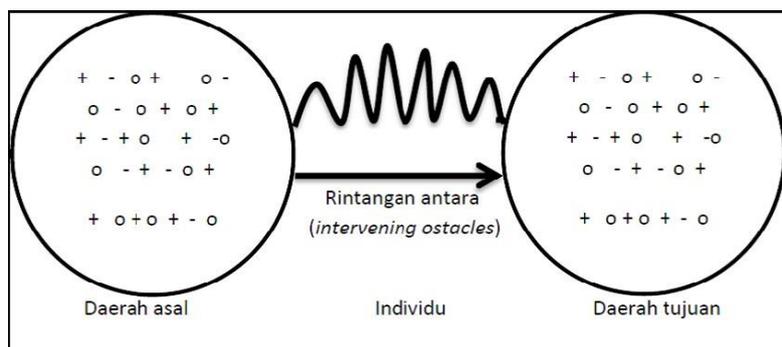
Source: Mantra, 2000

The difference in attitude between each migrant and prospective migrant is positive and negative factors, whether from the place of origin or destination area. The positive factor (+) of the origin area means having someone leave the area. Otherwise, the positive factor in the destination area means attracting someone to come to the area. The negative factor (-) in the area of origin will serve as a barrier for a person to move. Such is the negative factor (-) in the destination area is a factor that a person does not like, which will hinder the entry of a person into the area. The neutral factor (0) does not affect a person migrating.

A person's assessment of a particular factor can be positive (+), negative (-), or neutral (0). This depends on the person's circumstances affected by education, experience, needs, and personal attributes. Similarly, a person's perception of barrier factors in each individual will differ. Some types of barriers are distance, a natural barrier, travel costs, immigration regulations or laws, and the size of family members.

Each individual has several needs in the form of economic, social, cultural, and psychological needs. If these needs cannot be met in the area where they live, it can cause pressure that encourages the onset of the desire to meet those needs elsewhere. The small amount of pressure experienced is inversely proportional to the fulfillment of the need. This theory of need and stress is one of the theories that reveal why a person is doing the exercise. Someone who experiences stress outside the limits of tolerability will move away from a place with a higher probability value (Mantra I.B., 2015). Thus, it can also be said that an individual's move is a driving factor in the area of origin and a pull factor in the destination area.

RECENT MIGRATION

The Statistics Indonesia (BPS) divides internal migration data into two parts: lifetime migration and recent migration.
a.   Life Time Migration
The concept of lifetime migration is obtained from the data of the respondent's current place of birth and place of residence. If the two pieces of information are different, then including lifetime migration.
b.   Recent Migration
Recent migration is a migration for those who moved within the last five years (starting five years before enumeration). This information is derived from where to live five years ago and where to live now. If the two are not the same or different places, they can be categorized as rising migration (Wahyuni & Nuraini, 2012).

Several studies on internal migration in Indonesia, among others, were conducted by Leni (2016), who found that migration flows in Indonesia were still concentrated in the western and central parts of Indonesia. The pattern shows significant dynamics, both in terms of the pattern of regional order with the number of population with recent migrant status during the period 1971 to 2010, which is always different and the pattern of recent migration rates in, out and net.

East Java is the third-largest recipient of recent migration in Indonesia, with a population of 315,543. In addition to recipients of recent migration, East Java Province is also the fourth largest sender of recent migration nationally, amounting to 421,349 inhabitants (SUPAS, 2015). The number of recent in and out-migration of East Java Province in 1985, 1995, 2005, and 2015 can be seen in Table 2 below.

Table 2 Number of Recent Migration In and Out of East Java Province

Recent Migration	1985	1995	2005	2015
Total	501.900	849.000	594.500	736.800
Recent in-migration	165.731	438.446	250.155	315.543
Recent out-migration	336.177	410.609	344.266	421.349

Migration increases the population when the number of people entering East Java is higher than those who leave East Java. On the other hand, migration can reduce the population if the number of people entering East Java is lower than those who leave the area. Continuously, the population will be affected by the number of babies born (increasing the population). On the other hand, the number of deaths that occur in all age groups will be diminished. Migration, meanwhile, also plays a role in influencing population numbers. In other words, migration is used as a balance of population when population growth and fertilization are decreased.

REASON WHY TO MIGRATE

Regarding why someone decides to migrate, there is a need and stress theory that explains that every individual needs to be fulfilled, both in economic, social, and psychological. When these needs cannot be met, pressure or stress arises. If the stress level is still within the tolerance limit, then the individual does not move. However, if the level of stress experienced is beyond the limits of tolerance, the individual begins to think about moving to another area (Ida Bagoes, 2000).

The concept of choice theory, as proposed by Becker (1968) in Waridin (2002), is also used to determine a person's motivation in deciding to migrate, wherein making a choice, an individual will choose one of several available alternatives that can provide utility (utility).) is the maximum for him. Migration intention is influenced by: socio-economic factors including age, marital status, employment status in the area of origin, formal education, number of dependents in the area of origin, length of work, land ownership in the area of origin, income; And structural factors, which include the variables of job availability in the area of origin and work experience in the area of destination (Waridin, 2002).

Hossain (2001) specifically said that recent out-migration tends to be influenced by variables such as land ownership, position, education, adult male gender, and family size. Zhao (1998) also said that the variables of age, education, number of children who have attended and not attending school, land area in the village, the amount of taxes that migrants have to pay in a year, asphalt road facilities, and telephone facilities to the village also affect On migration decisions. Likewise, Zhu (2006) uses independent variables, including age, education level, marital status before migrating, family size, land planted, employment status, and the monthly income that affect individual decisions to migrate.

DATA AND MODEL PARAMETERS

This study uses a quantitative approach using data from the National Labor Force Survey (SAKERNAS). The subjects in this study are recent migrants in East Java Province. With the number of observers, as many as 15,693 people have migrant characteristics consisting of age, gender, marital status, education, employment status, and income. Recent out-migration data is data where a person was enumerated in his/her province of residence five years ago. If there is a difference between the province of residence five years ago and the time of enumeration, it is called a recent migrant.

In this study, the variables used were classified into 2 (two), namely, the dependent and independent variables. The dependent variable used in this study is migrating out of East Java Province in 2019. The decision to migrate in question is if the place of residence of the migrant at the time of enumeration is different from 5 years ago. The population calculated in this recent out-migration is the population aged five years and over. The independent variables are age, gender, marital status, education level, employment status, monthly income, which is also associated with the amount of non-taxable income by the Regulation of the Minister of Finance.

The data analysis method used in this study uses the binary logistic regression analysis method with the test instrument using Stata, 2013. Logistic regression is part of the regression analysis if the dependent variable or response is binary. In binary logistic regression, the dependent variable data is denoted as Y, and the independent variable is denoted by X. The regression equation model can be written as follows:

$$Y_I = \beta_0 + \beta_1 AGE + \beta_2 SEX + \beta_3 MAR + \beta_4 EDU + \beta_5 INC + \beta_6 JOB + \beta_7 REG + \beta_8 FORM + u_I$$

where

Y : recent out migration
AGE : age
SEX : gender
MAR : marital status
EDU : education
INC : income
JOB : employment status
REG : region
$FORM$: formal sector

To test whether or not the model is significant by:

1. Simultaneous Significance Test Result
    Simultaneous test is performed to test whether the independent variables together affect the dependent variable. The test used to test the significance of the model simultaneously uses the Log Likelihood function without independent variables. Log-likelihood value with independent variables without independent variables is obtained through iteration of processed results. With the significance level α = 0.05 the hypothesis are :

    H_0 : Independent variables do not have a significant effect on the model
    H_1 : There is at least one independent variable that has a significant effect on the model

    If p-value > (0.05) then H_0 is accepted and H_1 is rejected otherwise if p-value < α (0.05) then H_0 is rejected and H_1 is accepted..

2. Partial Test
    A partial test is carried out to find out whether there is an effect of the independent variable on the dependent variable partially, which can be done through the Wald Test. The Wald test works by testing the null hypothesis that a set of parameters is equal to some value. In the model being tested here, the null hypothesis is that the two coefficients of interest are simultaneously equal to zero. If for a particular explanatory variable, or group of explanatory variables, the Wald test is significant, then we would conclude that the parameters associated with these variables are not zero, so that the variables should be included in the model. If the Wald test is not significant then these explanatory variables can be omitted from the model. When considering a single explanatory variable, Altman (1991) uses a *t*-test to check whether the parameter is significant. For a single parameter the Wald statistic is just the square of the *t*-statistic and so will give exactly equivalent results.

RESEARCH RESULTS

Logistics Regression

We can use the Likelihood Ratio Test to determine the effect of the independent variables on the non-independent variables together (overall) in the model. From the output, it is known that the omnibus test table has a value α = 0.0000, which means that the value of α is less than 0.05, so the decision H_0 is rejected.

Table 3. Coefficient Estimates of the Variables

Variabel	Coeffisient	P-Value
Constant	-1.408929	0.004
Age	0.1135002	0.000
Age^2	-0.003071	0.000
Sex	0.2843528	0.000
Marital	0.6125474	0.000
Education	-0.2817058	0.000
Income	-0.1042127	0.000
Job status	-0.1703736	0.000
Region	-5.815418	0.000
Formal Sector	-1.704011	0.000

Formally, Table 3 can be rewritten as follows:

$$Y = -1.408929 + 0.1135002 Age - 0.003071 Age^2 + 0.2843528 Sex - 0.6125474 Mar - 0,2817058 Edu - 0,1042127 Inc - 0.1703736 Job - 5.815418 Reg - 1.704011 Form + u_i$$

DISCUSSION

The age variable shows a positive relationship, so it can be said that the older a person is, the higher the tendency to migrate out of East Java. However, the variable age squared shows a negative relationship, which means that the opportunity to migrate will decrease as it increases at a certain age. A turning point is obtained at the age of 54 years. This variable indicates that the opportunity for recent-out migration will increase at the age of 15 to 54 years. Then, the opportunity for recent out-migration will decrease, while at the age of 55 years and over.

In other words, the older the individual and approaching the non-productive age, the lower the interest in moving or moving from their original position. Therefore, Physical endurance is an essential factor for individuals to decide whether the individual can migrate or not.

The coefficient of the gender variable is 0.2843528 and significant (significant value <0.05). It means that there is a significant effect positively, so it can be interpreted that a person with a male gender tends to migrate than the female gender. It is also in line with the research (Sudibia, 2012), which said that men tend to be more mobile than women because, in society's cultural system or habits, men must be responsible for their families. Therefore, as a consequence of this situation, men generally become the primary breadwinners in the family. In addition to family responsibilities, the proportion of men who migrate to women is due

to distance. Following the migration law stated by Ravenstain, where women migrate with closer distances or vice, versa men tend to migrate with farther distances.

Education variable tends to influence a person's decision to do recent out-migration of East Java Province. The test results on Stata where the education variable, in this case, the length of education or a person's education level, has a coefficient of -0.2817058 with a significance value of 0.000 (<0.05). This result shows that the higher one's education level, the lower the desire to carry recent out-migration of East Java Province. In theory, this research is not in line with the theory (Todaro, 2006), which states a positive correlation between education and migration. By having higher education, the opportunity to get a job is considerable and higher income in the modern sector. However, in this study, education has a negative effect, so it is possible that what happens is that people who migrate are not people with higher education levels to find work, but people with low levels of education who want to take higher education elsewhere.

The income variable partially significantly influences a person's decision to make recent out-migration of East Java Province. The coefficient value of the variable is -0.1042127, and the p-value is 0.000. It shows that the greater a person's income and above the stipulated non-taxable income, the more reluctant that person is to make recent out-migration of East Java. It also means that someone who migrates is a person who has a low income in the area of origin so that the individual migrates to look for a better income elsewhere. The results also align with Neysa's research (2014), which states that economic reasons, namely looking for a better income, influence someone to move.

The employment status variable in the area of origin has a coefficient of -0.1703736 and a significant value of 0.000 (< 0.05). It shows that individuals whose status is already working at the time of the enumeration will tend not to migrate. On the contrary, individuals whose status is not yet working intend to do recent migration out of East Java Province. The incentive to look for better job opportunities in other areas than in the area of origin is motivating for someone to migrate out. The result of this study is also relevant to the theory put forward by Ravenstain in Mantra (2015).

The analysis also shows that people who come from rural areas have a greater chance of recent out-migration. Zelinsky (1971) formulated that population mobility follows a unique pattern following the development process, which is in line with changes in developed societies. In line with the increasing progress of society, (1) migration from rural areas to urban areas will continue to increase up to a certain point, then migration from rural areas to urban areas will decrease while (2) migration from urban areas to other urban areas will increase.

CONCLUSION

The analysis results show that all independent variables have a significant effect on a person's intention to make recent migration out of East Java province. The results of the binary logistic test show that the variables of gender and marital status have a positive and significant effect on a person's intention to make recent migration out of East Java province. Meanwhile, the variables of education level, income, working status, region, and formal sector have a negative and significant effect on a person's intention to do recent migration out of East Java province. For the age variable, by applying a non-linear relationship, it can be concluded that migration is mainly found in the productive age, namely between 15-54 years, and will decrease at the age above 55 years.

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