The Determinants of Labor Decisions to Do Commuter Migration from Gowa Regency to Makassar City

Nurlaela[1], Anas Iswanto Anwar[2], and Retno Fitrianti[3]
Economic resources department,Business and Economic Faculty, Hasanuddin University
Email: nurlaela.basirnb@gmail.com

Abstract — This study aims to find out: (1) a description of how income, age, number of dependents, and living costs affect the decision of workers to directly migrate from Gowa Regency to Makassar City and (2) describe whether or not there are differences in education level., gender, marital status, home ownership on the decision of workers to re-migrate from Gowa Regency to Makassar City. The results of the probit regression analysis explain the significant factors and there is an opportunity for workers to migrate from Gowa Regency to Makassar City, including income variables, education level, gender, marital status and home ownership. While the variables of age, number of dependents, cost of living are not significant and there is no opportunity for workers to re-migrate from Gowa Regency to Makassar City. Overall, the probit regression model used to explain the determinants of the workforce's decision to do shuttle migration from Gowa Regency to Makassar City has a predictive reliability of 84%. This shows that the respondents in this study have a great opportunity to migrate back and forth for economic and non-economic reasons.

Keywords— Migration, commuter, education, economic, wage.

I. INTRODUCTION

The rapid economic growth in big cities as well as the rapid population growth with an uneven distribution have forced most of the population to move to larger cities. According to Mantra (2015), daily migration (ngelaju) or shuttle is if someone who works in one day, i.e. leaves in the morning and returns in the afternoon or on the same day, is carried out continuously every day.

Todaro (2003) thinks that migration flows occur in response to the difference in income between cities and villages. They will decide to migrate to migrate if the net income in the city exceeds the net income available in the village.

Population growth that occurs not only in cities, but also in rural areas. This has made some houses that were previously used as agricultural land, turned into settlements. With the narrowness of agricultural land in the village, the community is limited in doing work, thus encouraging the community to migrate. In the end, they hope that by migrating, they can increase their income and work according to their field of interest.

In addition to the economic problems that occur, namely the narrowness of the available settlements and the high cost of living in the destination area, the community decides to do shuttle migration. This is confirmed by Zhao (1999), that so far, very few urban areas are able to accommodate migrants. In contrast, many cities have enacted policies that make it more difficult for migrants to rent housing. As a result, the migrants are concentrated in several suburbs.

Todaro (2003) also revealed that migration is a process that selectively affects each individual with certain economic, social, educational and demographic characteristics, so each relative effect on economic and non-economic factors of each individual will varies greatly.

In line with the research of Kunal Keshri (2013) explaining that low economic, educational and social status significantly causes non-permanent labor migration to be different from permanent labor migration. Thus, non-permanent labor migration appears to be a survival strategy for the rural poor in India.

The large number of residents in Gowa Regency do roundtrip migration which is driven by various conditions, both social conditions and economic conditions. The existence of a link between the hope to get a greater income than in the area of origin is a community goal. As well as the increasing number of family responsibilities, as well as adequate education to compete in urban areas, the reasons for the people of Gowa Regency to migrate to Makassar City. So in this case, the researcher intends to examine the Determinants of the Decision of Workers to Migrate from Gowa Regency to Makassar City.

II. LITERATURE RIVIEW

Lewis-Fei-Ranis Theory

With regard to the study of the economics of internal migration, by Lewis (1954), which is about the process of moving rural workers to cities, the model developed by Lewis in 1954 was expanded by Fei and Ranis in 1961 and is a general theory that is accepted and known as the Model. Lewis-Fei-Ranis (LFR). The main focus

of this model is on the process of labor migration and the growth of job opportunities in the modern sector. They divide the economic sector into the traditional sector and the modern sector, from the agricultural sector to the industrial sector.

There is a shift of labor from the traditional sector (agriculture) to the modern sector (industrial sector) because the modern sector in urban areas always requires labor, with the assumption that the traditional sector (agriculture) has a surplus of labor.

Todaro's Migration Theory

According to Todaro (2003) the migration model has four basic thoughts, namely:

a. Rural-urban migration is stimulated, primarily by rational and direct economic considerations relating to the advantages or benefits and relative costs of migration itself (mostly manifest in other forms or measures, such as psychological satisfaction).
b. The decision to migrate depends on the difference between the expected level of income in the city and the actual level of income in the countryside (expected income is the amount of income that can reasonably be expected to be achieved in the future). The size of the difference between the actual wages in the city and the village, as well as the possibility of getting a job in urban areas that offer the expected level of income.
c. The probability of finding a job in an urban area is inversely proportional to the unemployment rate in a city.
d. Rural-urban migration may continue even though unemployment in urban areas is already quite high. This fact has a rational basis, namely that migrants go to cities to achieve higher wages that are real (which are available). Thus, the increase in unemployment in urban areas is an inevitable result of a very severe imbalance of economic opportunity between urban and rural areas (among other things the wage gap gap), and such inequalities are very easy to find in most countries. in the third world.

E.G Ravenstein and Everett S. Lee's migration theory

E.G Ravenstein (1885) explains the migration behavior of how people tend to have the closest distance and go to centers of economic growth. Furthermore, the distance factor is one of the main factors causing population migration.

Effect of Income on commuter migration

The worker's decision to accept remote work is if the wages earned have taken into account the time and distance of commuting, known as a reservation strategy. The reservation strategy in the case of commutation is a strategy that relates the commuting distance to wages. Workers will accept remote work if workers receive higher wages than the reservation strategy (Ruppert, 2009). Therefore, workers with high wages are able to finance themselves for commuting (Ruppert, 2009). And the long-distance shuttle decision was made because of the adjustment of additional wages obtained as a result of commuting (Preston, 1992).

Effect of Age on Commutation Migration

The addition of a person's age has an effect on commutation (Ruppert, 2009). Age has a positive effect on commutation to a certain age, age becomes a negative impact because it is related to human productivity and the life cycle. One empirical study shows that the peak of commutation opportunities is in workers aged 20-44 years who have a higher chance of commuting than young workers and elderly workers (Artis, 2000).

Effect of Number of Dependents on Migration

The number of dependents in the family increases, the needs of the family also increase. It takes a lot of money to meet these needs. This can be an incentive for someone to migrate to earn income. The increased income will then affect the social status and quality of life of the household (Refiani in Kaisar, 2013).

Effect of Cost of Living on Commutation Migration Decisions

According to Renas (1978), the results of his research show that the differences in the cost of living between regions make workers' considerations in deciding to migrate. From the results of research Richard (1971) explains that the cost of living is an important determinant of migration between regions. It can be said that, labor will migrate or will stay in areas that have a lower cost of living.

Effect of Education Level on Commutation Migration

The results of empirical studies show that increasing the length of education increases the possibility of workers to commute and work outside the agricultural sector. Workers who have high skills are more likely to have commutation than workers with medium and low skills (Rapino, 2000)

Effect of Gender on Commutation Migration

The difference in commutation probability between women and men is generally related to the role of women in the family which according to the traditional approach is to take care of the household while men are responsible for earning a living. The traditional role of women in this family causes women to tend to choose work in the area where they live and women do short commutes. On the other hand, men have a higher

tendency to commute compared to women so that women are limited by a certain scope (Rapino, 2008).

Effect of Marital Status on Commutation Migration

Marital status has a positive effect on the intention to migrate. Siagian's (1995) findings show that married people are more likely to migrate because of the greater incentive to earn a better income. However, this is especially relevant for migrants whose nature is not permanent (commuting or circular migrants). This is influenced because people who are already married will have an increased cost burden than before.

Effect of Home Ownership on Commutation Migration

Keban (1994) explained that the individual background factors include age, marital status, length of stay in the city, employment status in the village, land ownership in the village, education level, type of work in the city and the amount of income in the city; the structural background factors include the characteristics of the city where migrants work and the location of the city to the village of origin, while the place utility factor includes the variables of the type of expected value, satisfaction, and preference for living in the city rather than in the village. Hossain (2001) specifically also revealed that the decision to migrate or the occurrence of out-migration tends to be influenced by variables such as home ownership, position, education, number of adult male sex members and family size.

III. METHODS

The data analysis used aims to analyze the data variables according to the problem formulation using statistical data tabulation with the following description: From what was stated (Widarjono, 2010) this study uses logistic regression because the dependent variable is qualitative and has two classes/categories (binary).

$$y = \frac{p}{p-1} = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5D1 + \beta 6D2 + \beta 7D3 + \beta 8D4 + e$$

Information:

Y = migrants who decide to do roundtrip migration

P = Probability of shuttle labor for economic reasons

1-p = probability of shuttle labor for non-economic reasons

= Regression coefficient

X1 = income

X2 = age

X3 = number of dependents

X4 = Cost of living

D1 = Dummy Education level

D = 1 = Bachelor

D = 0 = SD, SMP, SMA

D2 = Dummy gender

D = 1 = Male

D = 0 = Female

D3 = Dummy marital status

D = 1 = Married

D = 0 = Not Married

D4 = Dummy of house ownership

D = 1 = Own a house

D = 0 = Does not have a house

E = error terms (to the house of the bully)

IV. ANALYSIS AND DISCUSSION OF RESULT

The results of the calculation between the dependent variable (the decision of labor to migrate commutation) with the independent variables income, age, number of dependents, cost of living, education level, gender, marital status and home ownership using logistic regression method.

Table: Logistics Regression Analysis Results: The Effect of Independent Variables on Commuting Labor from Gowa Regency to Makassar City

B	Koef	Exp (B)	Z-Statistic	Prob
LNX1	7.027564	2.384646	2.947005	0.0032
X2	-0.074297	0.058666	-1.266442	0.2054
X3	0.361052	0.292934	1.232538	0.2177
LNX4	-0.170770	1.344508	-0.127013	0.8989
D1	-2.000888	0.931165	-2.148800	0.0317
D2	-1.847183	0.803714	-2.298310	0.0215
D3	4.118615	1.307465	3.150077	0.0016
D4	3.981870	1.218115	3.268880	0.0011

C	-105.3188	35.02909	-3.006610	0.0026
Likelihood Ratio (LR)	0.000	172.4959		
McFadden R^2		0.838258		
Model of Fit		0.9965		

Sumber: Data Olah Eviews (2021)

Some decisions that can be taken from the table of estimation results of the logistics model of workers who do roundtrip migration in the table above are:

Logistics Regression Model

The model found from the calculation of the logistic regression model is the determinant of the workforce's decision to do roundtrip migration. Then the logistic regression equation obtained is as follows:

y=ln[p/(1-p)]=-105.318+7.027LNX1-0.074X2+0.361X3-0.17LNX4+4.614D1+4.432D2-1.955D3-2.276D4+e

Furthermore, to determine the determinants of labor deciding to migrate from Gowa Regency to Makassar City, it is necessary to pay attention to the estimator value from the above equation.

Explanation of the Logistics Model

Constant

The equation of the logistic regression model of the workforce who decided to migrate from Gowa to Makassar City shows the constant values are:

-105.318 means ln (p/1-p) = -105.318 on all independent variables with a value of 0. Thus, the magnitude: ln (p/1-p) = e-105.318 or the magnitude of the proportion or probability p = e-105.318/1 + e-105.318 = 1.7/2.7= 1.7

Income Regression Coefficient (LNX1)

Y= P/(1-P)=-105.318+7.027 (1)=98.291

Y=exp.-98.291/(1+exp.-95.132)=1.931/2.931=1.931

The odd ratio value is 1.931, meaning that respondents with 1% higher income are estimated to have 1,931 round-trip migrations compared to respondents with 1% lower income. The value of the regression coefficient LNX1 = 2.384, the value is positive, meaning that the higher the income, the higher the probability of workers doing roundtrip migration.

Age Regression Coefficient (X2)

Y= P/(1-P)=-105.318-0.074 (1)=-105.393

Y=exp.-(-103.17)/(1+exp.-103.17)=1.582/2.582=1.582

The odd ratio value is 1,582, meaning that respondents with 1% age are estimated to have round-trip migration 1,582 times compared to respondents with 1% lower age. The value of the regression coefficient LNX2 = 0.058, the value is positive, meaning that the higher the age of the workforce, the higher the probability of re-migrating.

Number of Dependents Regression Coefficient (X3)

Y= P/(1-P)=-105.318+0.361 (1)=-104.957

Y=exp.-(-104.957)/(1+exp.-104.957)=2.448/3.448=2.448

The odd ratio value of 2,448 means that respondents with 1% more dependents are estimated to have commuted migration as much as 2,448 times compared to respondents with 1% lower dependents. The value of the regression coefficient LNX3 = 0.292, the value is positive, meaning that the higher the number of dependents, the higher the probability of workers doing commutation migration.

Regression Coefficient ln Cost of Living (LNX4)

Y= P/(1-P)=-105.318-0.17(1)=-105.489

Y=exp.-(-105.489)/(1+exp.-105.489)=1.438/2.438=1.438

The odd ratio value of 1,438 means that respondents with 1% higher cost of living, are estimated to have commuted migration 1,438 times compared to respondents with 1% lower cost of living. The value of the regression coefficient LNX4 = 1.344, the value is positive, meaning that the higher the cost of living, the higher the probability of commuting migration.

Educational Regression Coefficient (D1)

Y= P/(1-P)=-105.318-2.001(1)=-107.319

Y=exp.-(-107.319)/(1+exp.-107.319)=2.304/3.304=3.304

The odd ratio value of 2.304 means that respondents with 1% higher education are estimated to have done commutation migration as much as 2,304 times compared to respondents with 1% lower high school education. The regression coefficient value D1 = 0.931, meaning that there is a difference between higher education and lower high school education in the probability of commuting migration.

Gender Regression Coefficient (D2)

Y= P/(1-P)=-105.318-1.847(1)=-107.165

Y=exp.-(-107.165)/(1+exp.-107.165)=2.687/3.687=2.687

The odd ratio value of 2.687 means that respondents with male sex are 1% higher, it is estimated that commutation migration is 2.687 times compared to 1% lower female respondents. The regression coefficient value D2 = 0.803, meaning that there is a difference between men and women in the probability of commuting migration.

Marital Status Regression Coefficient (D3)

Y= P/(1-P)=-105.318+4.118(1)=-101.2

Y=exp.-(-101.2)/(1+exp.-101.2)=1.051/2.051=1.051

The odd ratio value of 1,051 means that respondents with 1% higher marital status are estimated to have commuted migration 1,051 times compared to respondents with 1% lower unmarried status. The regression coefficient value is D3=1.307, meaning that there is a difference between married and unmarried workers in the probability of commuting migration.

Home Ownership Regression Coefficient (D4)

Y= P/(1-P)=-105.318+3.981(1)=-101.336

Y=exp.-(-101.336)/(1+exp.-101.336)=9.173/10.173=9.173

The odd ratio value of 9,173 means that respondents with 1% higher house ownership, are estimated to have commuted migration of 9,173 times compared to respondents with 1% less house ownership. The value of the regression coefficient D4 = 1.218, meaning that there is a difference between workers who own a house and do not own a house in the probability of commuting migration.

V. CONCLUSION AND RECOMMENDATION

Based on the results of research and analysis that has been done, it can be concluded as follows: Based on the results of the study, it shows a number of variables that have an effect or do not have an effect, namely: Income variable has a positive and significant effect on the decision of workers to do roundtrip migration. Variables of age, number of dependents and cost of living do not affect the decision of workers to do roundtrip migration. Based on the results of the study showed a number of variables that have differences or no differences, namely: From the results of data analysis and discussion of research, it shows that there is a difference between workers with higher education and lower high school education on the decision of workers to do roundtrip migration. From the results of data analysis and research discussion, it is shown that there are differences between male and female workers in the decision of workers to do roundtrip migration. From the results of data analysis and research discussion, it is shown that there is a difference between workers who are married and not yet on the decision of workers to do shuttle migration. From the results of data analysis and research discussion, it is shown that there is a difference between workers who have a home and do not have a home on the decision of workers to do roundtrip migration.

Based on the results of the study, the researchers suggest the following: The Gowa Regency Government needs to develop potential in various regions so that there is no high-income inequality between villages and cities so that workers do not need to do roundtrip migration. Local governments can provide equal employment opportunities so that productive workers do not leave their areas of origin to look for work. There are still many shortcomings in this study, it is hoped that further researchers will develop research models using variables outside of this study and use more samples.

REFERENCES

[1] Artis, M., Romani, J., & Surinach, J. (2000). Determinants of Individual Commuting in Catalonia, 1986: 91: Theory and Empirical Evidence. Urban Studies, 37 (8), 1431-1450.

[2] Hossain, M.Z., 2001., Rural-Urban Migration in Bangladesh: A Micro-Level Study,Research Presentation in The Brazil IUSSP Conference, August 20-24, 2001.

[3] Kaisar, Hasudungan. 2013. Analysis of the Effect of Income, Education, Occupation, Area of Origin, Number of Dependents and Marital Status on Circular Migration Decisions to Semarang City (Case Study: Tembalang and Pedurungan Districts). Journal Vol.2, No. 3, 2013. Semarang: Faculty of Economics, Diponegoro University

[4] Kunal Keshri dan Ram B. Bhagat (2013), Socioeconomic Determinants of Temporary Labour Migration in India. Vol. 9, No. 2, 175-195

[5] Lewis, W.A. 1954. *Economy Development with Unlimited Supplies of Labour.* Manchester School of Economics and Social Studie. 22:139-91

[6] Mantra, Ida Bagoes. 2015. General Demographics. Eighteenth Edition. Yogyakarta: Learning Library

[7] McLa_erty, S. & Preston, V. (1992). Spatial Mismatch and Labor Market Segmentation for African-American and Latina Woman. Economic Geography, 68 (4), 406-431.

[8] Todaro, M.P. and Smith Stephens. C. 2003. Economic Development in the Third World. Eighth edition. Volume 2. Jakarta: Erlangga

[9] Rapino, M. A. (2008). Gender Roles and Spatial Entrapment. Doctoral Dissertation. United States:University of Connecticut.

[10] Ravenstein, E. G.1885. *The Laws of Migration. Journal of the Royal Statistical Society*,48:167-235.

[11] Richard J. Cebula. 1971. Labor Migration and The Cost of Living. Journal.

[12] Ruppert, P., Stancanelli, E., & Wasmer, E. (2009). Commuting, Wages and Bargaining Power. Annals of Economics and Statistics, 95/96, 201-220.

[13] Siagian. 1995. Cross-Border Population Mobility (Case of West Kalimantan-Sarawak) Prisma journal, No.1 Januarypa 1995. LP3ES: Jakarta.

[14] Stephen M. Renas dan Rishi Kumar. 1978. The Cost of Living, Laborn Market Opportunities, and The Migtation Decision: A Case of Misspectification? Journal.

[15] Widarjono, Agus. 2010. Applied Multivariate Statistical Analysis. Yogyakarta: UPP STIM YKPN.

[16] Yeremias T. Keban, 1994, Studi Niat Bermigrasi di Tiga Kota: Determinan dan Intervensi Kebijaksanaan, Jurnal Prisma No.7 Juli 1994, Yogyakarta

[17] Zhao, Yaohui. 1999. Labor Migration and Earnings Differences: The Case of Rural China, Economic Development and Cultural Change.