JIET (Jurnal Ilmu Ekonomi Terapan)
https://e-journal.unair.ac.id/JIET/index

THE EFFECT OF REMITTANCE ON CONSUMPTION AND HOUSEHOLD ASSETS IN INDONESIA

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ABSTRACT

International migration is the process of moving people from one country to another. There is a close relationship between migration and consumption behavior. Migration can be considered as an alternative to improve consumption patterns. The impact of international migration is quite large for the area of origin, one of which is the flow of remittances for the area of origin. Remittance also increases the welfare of recipient households that can increase their income and consumption. This study uses panel data sourced from Indonesian Family life Survey (IFLS) 4 and 5 in 2007 and 2014. using the Ordinary Least Square (OLS) method. results show Ordinary Least Square (OLS) that remittances are significant and have a positive relationship with food consumption, non-food and total food and ownership of assets.

Keywords: *Migration; Remmitances; Consumption; Ordinary Least Square* (OLS)

ABSTRAK

Migrasi internasional merupakan proses perpindahan penduduk suatu negara ke negara lain. Terdapat kaitan erat antara migrasi dan perilaku konsumsi.Migrasi bisa dianggap sebagai sebuah alternatif untuk memperbaiki pola konsumsi.Dampak migrasi internasional cukup besar bagi daerah asal salah satunya yaitu mengalirnya remitansi untuk daerah asal.Remitansi juga meningkatkan kesejahteraan rumah tangga penerima yang mampu meningkatkan pendapatan dan konsumsi mereka. Penelitian ini menggunakan data panel yang bersumber dari Indonesian Family life Survey (IFLS) 4 dan 5 tahun 2007 dan tahun 2014. dengan metode Ordinary Least Square (OLS). Hasil estimasi OLS menunjukan bahwa remitansi signifikan dan memiliki hubungan yang positif dengan konsumsi pangan, non pangan dan total pangan serta terhadap kepemilikan aset.

Kata Kunci: *Migrasi; Remitansi; Konsumsi; Ordinary Least Square (OLS)*

JEL :F22; F24; D12

ARTICLE INFO

Received:
August 10th, 2021
Revised:
November 22nd,2021
Accepted:
December 22nd, 2021
Online*:*
June 15th 2022

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Introduction

International migration is the process of moving from one country to another. In general, a person migrates abroad to obtain better economic welfare for his family. He said that low excitement and risk of investing in the country are the factors that encourage someone to migrate abroad. The migration of Indonesian workers (TKI) began in the 1970s with a small number. However, from 1979 to 1994, the number of Indonesian workers increased up to five times the previous immigrant figure (Sukamdi, 2008). Over time, the number of migrant workers is increasing.

JIET (Jurnal Ilmu Ekonomi Terapan) p-ISSN: 2541-1470; e-ISSN: 2528-1879
DOI: 10.20473/jiet.v7i1.29096

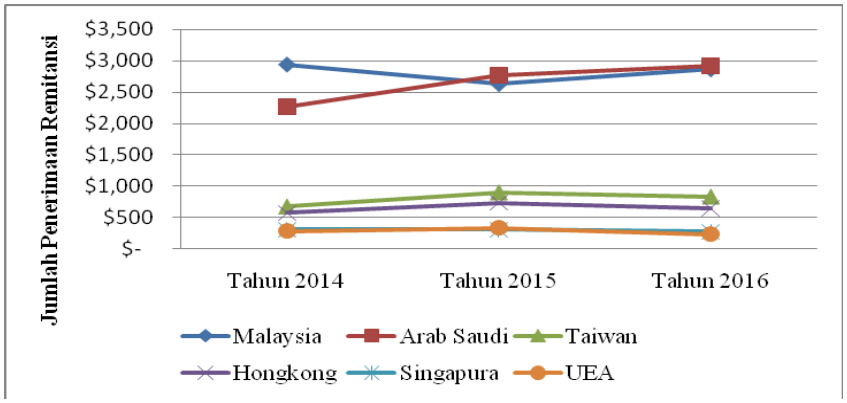
There is a close link between migration and consumption behavior. Migration can be considered as an alternative to improve consumption patterns. Migration with income earned, such as remittances, also has a role in improving consumption, at least at the place of origin of the migrants. Migration is considered a way to maximize family income and avoid risks from work in the area of origin of migrants and the difference in salaries in Indonesia and the destination country (Stark, 1991). Table 1 is a table of the most significant number of TKI absorption. The largest destination countries for TKI are Malaysia, Taiwan, Hong Kong, Singapore, Saudi Arabia, and Brunei Darussalam. The average placement of TKI each year is quite volatile.

Table 1: The Largest Destination Country for Indonesian Migrant Workers (in thousand of inhabitants)

Country	Year		
	2016	**2017**	**2018**
Malaysia	87.623	88.991	90.671
Taiwan	77.087	62.823	72.373
Hong Kong	14.434	69.182	56.033
Singapura	17.700	13.279	16.600
Saudi Arabia	13.379	6.471	5.894
UEA	8.152	6.623	5.70

Source: BNP2TKI 2018

Table 1 presents the number of TKI in the top six destination countries, namely from 2016 to 2018. The highest number of TKI was in 2018. In previous years the number of TKI was quite fluctuating and reached its peak in 2018. The largest destination country for TKI is Malaysia, and every year, there is always an increase in the number of TKI shipments. The second is Taiwan, but the delivery of TKI to countries to Taiwan, Hong Kong, and Singapore in 2017 has decreased. While in 2018, it has increased again, and for countries to Saudi Arabia and the UAE each year, the number of shipments has decreased. TKI. The impact of international migration is quite significant for the area of origin, one of which is the flow of remittances to the area of origin. Remittance itself refers to money and goods sent to households by workers outside the area of origin, either outside the city of origin or abroad. Remittances also contribute significantly to the lives of migrant workers and their families. In theory, remittances can settle household expenses in a variety of ways, depending on how the transfer money is used and considered by family members. In developing countries, remittances make a direct contribution to increasing the income of families left behind (Hongsakhone, 2019).



Source: Bank Indonesia & BNP2TKI 2018

Figure 1: Remittances of Indonesian Migrant Workers (TKI) According to the Big Six Placement Countries

Remittances in Indonesia have increased every year. The most significant remittances received in 2016 amounted to US$ 7,763, and the lowest was in 2014 amounted to US$ 7,030. The most significant remittances came from Malaysia, amounting to US$ 8,430 because the number of placements for Indonesian workers was the largest in Malaysia. The role of TKI remittances is very strategic for Indonesia. Remittances also improve long-term life for migrants and their families, as migrant workers earn higher incomes when working abroad—basic needs including food, housing, education, and health. In general, remittances are used for daily needs to ease the financial burden on households, especially for low-income families (Adams & Cuecuecha, 2010).

Remittances also improve the welfare of beneficiary households which can increase their income and consumption. Apart from being used for consumption purposes, remittances are also used for household business investment and to improve family education quality (Edwards & Ureta, 2003). Remittances generally affect household welfare. There are at least two views on how remittances are spent, namely the view that remittances are received and spent like income from other sources. Second, receipt of remittances can cause behavioral changes in households, and receipts of remittances tend to be spent on consumption. However, remittances can also have a negative impact by reducing work effort and, in the long term, can reduce economic growth. The decrease in work effort occurs because there is a tendency to migrate abroad so that the level of employment in the area of origin of migrants will decrease in the long term. The impact of remittances on the standard of living of families left by migrants has increased their welfare. It shows that remittances have direct and indirect income effects. So it can potentially affect production, income inequality, and poverty at the local level.

Based on the background description above in conducting research on the impact of remittances on household consumption and asset ownership, the researchers are interested in taking the title “Impact of remittances on household consumption and assets in Indonesia”. The dependent variable is food consumption, non-food consumption, total food consumption, and non-food and assets owned by the household. Control variables are individual characteristics, including the age of the head of the household, gender of the household, the last education of the head of the household, and status wedding. This study uses the Ordinary least Square (OLS) method. This study uses data from IFLS 5 (Indonesia Family Life Survey), IFLS 4, and IFLS 5.

Literature Review

Consumption expenditure in real terms is in the form of activities aimed at maintaining a standard of living, such as the purchase of goods and services. According to Mankiw (2007), consumption is the expenditure or purchase of goods and services made by households to meet their daily needs. People’s expenditures on food, clothing, services, and other goods for their needs are classified as spending or consumption. In comparison, the goods produced by the community used to meet their needs are called consumer goods (Dumairy, 1998). Individuals who do consumption are called consumers. This desire to consume will lead to a demand for goods and services. Consumer demand is a person’s desire to make purchases or purchases with various alternative prices. Besides being influenced by the asking price, it is also influenced by income, tastes, the number of consumers who want these goods, expectations of future goods, advertisements, etc.

International migration is migration that crosses political boundaries between countries. These political boundaries are very dynamic depending on the existing global political constellation. Literature studies on international migration are still minimal. Some literature

shows that a country will experience a transition in international mobility from a labor-exporting country to a labor-importing country. Fields (1993) in Ananta & Arifin (2014) conclude that the turning point in the global mobility transition in several countries (Hong Kong, South Korea, Singapore, and Taiwan) is closely related to the stage of their economic development. Their economic development stems from the existence of an export industry that utilizes a lot of labor. Syahriani (2007) in Safrida (2008) states that many factors motivate Indonesian workers to choose to work abroad, including limited job opportunities, low wages, and poverty which encourages someone to leave their country to seek a better life in another country. These migrants go-to destination countries with a higher economic growth rate than their home country.

Workers' remittances are an essential part of international capital flows. They play a significant role in the economy and the welfare of society, especially in labor-exporting countries. Remittances are money transfers made by foreign workers to recipients in their home countries. Remittances are transfers of funds by workers who live and work in developed countries to their families in their countries of origin (Karagoz Kadir, 2009). According to Ratha and Mahopatra (2007), remittances are transfers of personal funds from domestic workers who work abroad to families in their home country. Naturally, remittances have an essential role in encouraging the economic development of remittance recipient countries (Acosta et al., 2006). Rapoport and Docquier (2006) in Banga and Sahu (2010) show how families of workers who work abroad use remittances or remittances. Remittances are used to pay debts from financial institutions past migration and for children's education, insurance, and strategic plans. Remittances also directly contribute to household finances, such as buying household equipment to develop a business and education and health costs.

Adams & Cuecuecha (2010) conducted a study on the impact of remittances on household welfare using Guatemalan survey-level data. The results of this study indicate that remittances positively impact the welfare of migrant households. Households receiving remittances spent more on education and housing than households that did not receive remittances. Research conducted by Wolde (2018) examines the impact of remittances on household welfare in rural areas using the Instrumental Variable 2 SLS estimation method. This study aimed to estimate the impact of remittance income on the welfare of rural households. The results of this study indicate that remittances positively and significantly affect household-level consumption expenditures.

Okodua et al. (2015) conducted a study on remittance and human development spending patterns in Nigeria using survey data from the world bank. The results show that 25.96% of surveyed households across the country spend their remittances received on food. Expenditure on education was 19.97% of all surveyed households, 9.12% for health, and 8.72% for business purposes. Meanwhile, Funkhouser (1992) examined the impact of remittances on household welfare. The study results indicate that remittances from migrants have little impact on household welfare and accelerated economic development. It is felt that remittances by migrants are only a substitute for household income and transaction costs abroad are also relatively large. The wages earned by migrants can only offset household life at the subsistence level.

Research Method

The research approach used in this study is quantitative. This research approach focuses on proving the hypothesis that has been formed since the beginning of the study. The quantitative research approach is carried out to obtain an overview of mathematical, statistical,

and economic theory. Quantitative analysis in this study was conducted using data processed using the Ordinary Least Square (OLS) method. The dependent variable is the dependent variable that is influenced by the independent variables, including ln food consumption, ln non-food consumption, total food, and household property (assets) dummy. In contrast, the independent variables are independent variables that affect the dependent variable, including the remittance dummy, age, marital status dummy, gender dummy, and education level.

The data source used in this study is the Indonesia family life survey (IFLS) or the Indonesian household life aspect survey (SAKERTI), which is the most comprehensive longitudinal household survey ever conducted in Indonesia (SurveyMETER, 2017). This survey is a panel study of households and individuals. The survey was conducted in 5 waves, namely, (IFLS-1) 1997, (IFLS-2) 1998, (IFLS-3) 2000, (IFLS-4) 2007, (IFLS-5) 2014 in 13 provinces in Indonesia (all provinces in Java, Bali, NTB, South Sulawesi, South Kalimantan, South Sumatra, Lampung, West Sumatra, and North Sumatra) (SurveyMETER, 2017). The household panel survey re-interviewed and split them from within each wave and their success in maintaining a high squared rate between 93 and 96 percent (SurveyMETER, 2017). The analysis used in this study used the Ordinary Least Square (OLS) regression method. The OLS method was first introduced by Carl Friedreich Gauss, a German mathematician. This method is a least-squares method with exciting statistical properties and is the most powerful method in regression analysis (Gujarati et al., 2007). The OLS regression method was carried out separately to determine the results of the coefficient of education level in 2015 and 2018. The econometric tools used in this study used the STATA13 software.

Classic Assumption Test

The multicollinearity test is used to test whether there is a correlation between the independent variables (independent) in the model in the regression model. If there is multicollinearity, healing will be carried out if proven. To detect the presence or absence of multicollinearity, informal detection can be done by looking at the high R2 (R-Square) value with a maximum limit of 0.8. Pairwise correlation test among regressions and looking at the amount of Variance Inflation Factor (VIF) and Tolerance (TOL), the VIF limit is 10. If the VIF value is below ten, then there is no multicollinearity symptom, while the tolerance limit is close to 1 (Gujarati et al., 2007).

The heteroscedasticity test aims to test whether there is an inequality of variance or residuals from one observation to another in a regression model. If the residual variance from one observation to another remains, it is called homoscedasticity. To detect the symptoms of the heteroscedasticity test, the Breusch-Pagan test was carried out. The hypothesis of heteroscedasticity testing is carried out as follows:

Breusch-Pagan test
H_0 : No heteroscedasticity (Homoscedasticity)
H_1 : Heteroscedasticity

The t-statistical test is a statistical test used to see the effect of the independent (independent) variable on the dependent (dependent) variable. The hypothesis of the t-statistical test is as follows:

$H_0 : \beta_1 = 0$ (independent variable does not affect the dependent variable).

$H_1 : \beta_1 \neq 0$ (independent variable affect the dependent variable).

The F-Statistics test is a joint model test. This test was conducted to determine the effect of all independent variables on the dependent variable by simultaneously testing the

regression coefficients. The hypothesis of the F-statistical test is as follows:

$H_0 : \beta_1 : \beta_2 : \ldots : \beta_n = 0$ (independent variables together do not affect the dependent variable).

$H_1 :$ there are at least $\beta \neq 0$ (independent variables jointly affect the dependent variable).

Result and Discussion

Table 2: Percentage of Household Consumption and Asset Ownership

Total		Food		Non-Food		Asset Ownership	
Type	**%**	**Type**	**%**	**Type**	**%**	**Type**	**%**
Food	55%	Staple food	13%	Household operations	40%	Residential	15%
Non-Food	45%	Vegetables	5 %	Body care	10%	Other houses	5%
		Dried food	5%	Household goods	15 %	Other land	10%
		Meat/fish	11%	Leisure	10%	Poultry	18%
		Side dishes	5%	Transportation fee	15%	Fish cattle	8 %
		Egg milk	5%	Health costs	14%	Perennials	7%
		Seasoning	22%			Motor vehicles	6%
		Drink etc.	30%			Electronic Equipment	6%
						Savings	6%
						Receivables	3%
						Jewelery	9%
						Other	3%

Source: Indonesia Family Life Survey (IFLS) 4 and 5, processed

According to Mankiw (2007), consumption is the expenditure or purchase of goods and services made by households to meet their daily needs. Consumption in this study is divided into two, namely total food and non-food consumption. Food consumption consists of staple foods (rice, corn, sago, cassava, etc.). Vegetables consist of vegetables that are usually consumed daily, such as (kangkung, cucumber, spinach, mustard greens, tomatoes, cabbage, katuk, green beans, long beans, and the like), and various nuts (peanuts, green beans, kidney beans, soybeans and the like). Fruits such as (papaya, mango, banana, and the like), then there are various side dishes such as meat, fish, eggs, and finally milk and various spices.

Non-food consumption consists of consumption or expenditure of needs other than food, such as household operational needs consisting of electricity, water, household fuel needs, telephone costs, and the like. The second is the need for body care (soap, shaving equipment, cosmetics, etc.) the third is household goods, clothing, and health costs. The last is spending on recreation. Household assets are owned by households in this study in the form of physical and non-physical assets. Physical assets consist of houses and land occupied, houses and other buildings including land, land/land not used for business, and poultry. On the other hand, consist of livestock fish, hard plants that are not used by farming and non-farming businesses, motor vehicles, jewelry, and electronic equipment). And non-physical assets in the form of (savings, deposits, shares, and receivables).

This study aims to analyze the effect of remittances, age, gender, marital status, and education level on food and non-food consumption and their impact on asset ownership in Indonesia. Variable descriptive statistics describe the sample data used in the study. Descriptive statistics are displayed to facilitate the depiction of sample data. Descriptive statistics consist

of the mean (mean), standard deviation, and minimum and maximum values: table 3, shows the results of descriptive statistics. The descriptive statistical table in this study is presented in one section consisting of the results of the append or a combination of the 2007 and 2014 IFLS data.

Table 3: Descriptive Statistics of Remittance Recipient Households Quantitative Variables in Indonesia in 2007 and 2014

Tahun 2007 dan tahun 2014				
Variabel	**Mean**	**Sdt. Dev**	**Min**	**Max**
Food	334658	304958.4	5000	2942500
Non-Food	2746079	1.81e+07	5000	9.04e+08
Total Food	3079229	1.82e+07	15500	9.04e+08
Age	33.40371	12.90883	15	65
Education	2.398624	1.238772	1	7

Source :Indonesian Family Life Survey (IFLS) 4 and 5, processed

Table 3 summarizes household statistics on receiving remittances in Indonesia based on this study's dependent, independent, and control variables. Remittance recipient households are 52 percent. In demographic characteristics, the age of the head of the household is 33 years, with a standard deviation of 13 percent. Furthermore, to know the statistics of descriptive variables in more detail can be seen in table 4.

Table 4: Descriptive Statistics of Qualitative Variables of Remittance Recipient Households in Indonesia

Variable		**Percentage %**
Dummy Gender	(1) Boy	49%
	(2) Girl	51%
Dummy Marital Status	(1) Married	56%
	(2) Other	43%
Dummy Remittance	(1) Receive Remittance	52%
	(2) Not Receive	47%
Dummy Total Assets	(1) Own Assets	98 %
	(2) Doesn't have	2 %

Source: Indonesia Family Life Survey (IFLS) 4 and 5, processed

Table 4 describes the results of the description of qualitative variables on household consumption and total asset ownership in Indonesia in 2007 and 2014. The descriptive statistics above are the combined results of the two years. The table shows the percentage for each dummy variable. It can see that the head of the household receiving the largest remittance is the head of the female household. In contrast, the marital status of the largest remittance recipient is married. Others in this study are not married and become the backbone of their family. As for the ownership of household assets, the remittance recipients are quite large. It shows that during two waves of research, migrant families collected various assets ranging from physical assets and non-physical assets.

Regresi Ordinary Least Square (OLS)

This study aims to examine, calculate, and analyze the impact of remittances on food consumption, non-food consumption, total consumption, and ownership of household assets receiving remittances in Indonesia in 2007 and 2014. By using the Ordinary Least Square (OLS) method.

Table 5: Ordinary Least Square Regression Test in 2007 and 2014

Variables	(1)	(2)	(3)	(4)
	logfood	lognonfood	logtotalfood	harta_rt
Remittances	0.0240***	0.0155***	0.0382***	0.000419***
	(0.00269)	(0.00446)	(0.00626)	(8.18e-05)
Age	0.00685***	0.0171***	0.0238***	1.90e-05***
	(0.000122)	(0.000202)	(0.000284)	(3.70e-06)
Gender	-0.0197***	-0.108***	-0.127***	8.22e-05
	(0.00270)	(0.00447)	(0.00627)	(8.19e-05)
Marital status	-0.111***	-0.161***	-0.270***	-0.000172*
	(0.00311)	(0.00517)	(0.00725)	(9.46e-05)
Education	0.160***	0.411***	0.571***	-1.68e-05
	(0.00115)	(0.00191)	(0.00268)	(3.50e-05)
Constant	11.82***	11.73***	23.56***	0.999***
	(0.00555)	(0.00918)	(0.0129)	(0.000168)
Observations	278,337	277,832	277,832	278,337
R-squared	0.073	0.152	0.151	0.000

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Source: Indonesia Family Life Survey (IFLS) 4 and 5, processed

In the OLS method's estimation results, remittances affect consumption expenditures and ownership of household assets receiving remittances following the theory proposed by (Lucas & Stark, 1985). Based on the results of the OLS regression estimation in 2015 and 2018, the following equation can be written:

$$LogFood_{it} = 11.82 + 0.024DRemit\tan ces_{it} + 0.00685Age_{it} + 0.0197DGender_{it} - 0.111DMarital\ status_{it} + 0.16Educ_{it} + \varepsilon \quad (1)$$

$$LogNonFood_{it} = 11.73 + 0.0155DRemit\tan ces_{it} + 0.0171Age_{it} + 0.108DGender_{it} - 0.161DMarital\ status_{it} + 0.411Educ_{it} + \varepsilon \quad (2)$$

$$LogTotalFood_{it} = 23.56 + 0.0382DRemit\tan ces_{it} + 0.0238Age_{it} + 0.127DGender_{it} - 0.270DMarital\ status_{it} + 23.56Educ_{it} + \varepsilon \quad (3)$$

$$Asset_{it} = 0.999 + 1.90e^{-05}DRemit\tan ces_{it} + 1.90e^{-05}Age_{it} + 8.22e^{-05}DGender_{it} - 0.000172DMarital\ status_{it} + 1.68e^{-05}Educ_{it} + \varepsilon \quad (4)$$

Classic Assumption Test

The multicollinearity test is used to test whether there is a correlation between independent variables (independent) in the model in the regression model. Table 6 shows the variance inflation factor (VIF) test. If the VIF value is below 10, it is said that the equation does not contain multicollinearity. In the above equation, all VIF values are below 10, which indicates that the equation does not contain multicollinearity. Table 6 shows the multicollinearity test in 2007 and 2014 as follows:

Table 6: Inflation Factor Variance Test Results

Variable	Food	Non-Food	Total	Assets
Dummy Remittance	1.00	1.00	1.00	1.00
Age	1.33	1.33	1.33	1.33
Gender	1.01	1.01	1.01	1.01
Marital Status	1.30	1.31	1.31	1.30
Education Level	1.09	1.09	1.09	1.09

Source: Indonesia Family Life Survey (IFLS) 4 and 5, processed

Overcoming can do the heteroscedasticity problem with robust regression treatment on the food consumption model, non-food consumption, total consumption, and assets. The heteroscedasticity test is carried out to test whether there is an inequality of variance or residuals from one observation to another in a regression model. Heteroscedasticity occurs because of an error learning situation and discretionary decision selection of each individual. Furthermore, in techniques in selecting outlier data and types of cross-section data where there is indeed heteroscedasticity in the data. In this study, the method for testing heteroscedasticity in econometrics uses the Breusch-Pagan test (Table 7). Based on table 7, the results of the heteroscedasticity test show that the models of food consumption, non-food consumption, total consumption, and assets generate a $p - value < \alpha$, so the regression results indicated the problem of heteroscedasticity needed special treatment to overcome.

Table 7: Heteroscedasticity Test Results

Hasil Regresi	Konsumsi Pangan	Non pangan	Total	Aset
Chi2 (1)	69.84	9.25	7.59	61201.7
Prob > chi2	0.0000	0.0024	0.0059	0.0000

Source: Data processed

Robustness Test

The Breusch-Pagan test on the analysis model of food consumption, non-food consumption, total consumption, and assets indicated a heteroscedasticity problem. It is necessary to cure it by conducting a robust regression test to eliminate the heteroscedasticity problem through weighting. A robust standard error can free the model from heteroscedasticity problems and be used as estimation results. Table 8 shows the results of robust regression on models of food consumption, non-food consumption, total consumption, and assets:

Table 8: Robust Regression Results in 2007 and 2014

Variables	(1)	(2)	(3)	(4)
	logfood	lognonfood	logtotalfood	harta_rt
Remittances	0.0240***	0.0155***	0.0382***	0.000419***
	(0.00269)	(0.00446)	(0.00626)	(8.18e-05)
Age	0.00685***	0.0171***	0.0238***	1.90e-05***
	(0.000122)	(0.000202)	(0.000284)	(3.70e-06)
Gender	-0.0197***	-0.108***	-0.127***	8.22e-05
	(0.00270)	(0.00447)	(0.00627)	(8.19e-05)

Variables	(1)	(2)	(3)	(4)
	logfood	lognonfood	logtotalfood	harta_rt
Marital status	-0.111***	-0.161***	-0.270***	-0.000172*
	(0.00311)	(0.00517)	(0.00725)	(9.46e-05)
Education	0.160***	0.411***	0.571***	-1.68e-05
	(0.00115)	(0.00191)	(0.00268)	(3.50e-05)
Constant	11.82***	11.73***	23.56***	0.999***
	(0.00555)	(0.00918)	(0.0129)	(0.000168)
Observations	278,337	277,832	277,832	278,337
R-squared	0.073	0.152	0.151	0.000

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Source: Indonesia Family Life Survey (IFLS) 4 and 5, processed

Model Interpretation

The interpretation of the coefficients in the 2007 and 2014 models is carried out to see the direction of the influence of the independent variable on the dependent variable. The independent variables consist of remittance variables, age, gender, marital status, and education level on food consumption, non-food consumption, total consumption, and assets.

The Effect of Remittances on Food Consumption

Based on the estimation results in table 5, remittances significantly affect food consumption in a positive direction. The age variable also significantly affects food consumption positively, whereas Gender (Gender) has a significant negative relationship. Furthermore, the variables of marital status and education level are significant and positively affect food consumption. More specifically, the results of the interpretation of the coefficients of each variable are as follows:

The remittance coefficient value is 0.0240. It shows a positive relationship, which means that the receipt of remittances tends to increase household food expenditure by two units compared to households that do not receive remittances. The age coefficient value (age) is 0.00685. It shows the direction of a positive relationship, which means increasing age will increase food consumption by constant six units of other variables. The coefficient of Gender (Gender) (Dummy) is -0.0197. It shows that male household heads have a negative or inverse relationship, which means that male household heads can reduce food consumption by 19 units compared to female household heads. The coefficient value of marital status (Dummy) is -0.111. It shows that marital status negatively affects food consumption, which means that marital status can reduce food consumption by 1 unit compared to unmarried household heads. Unmarried households here are someone who is the backbone of the family. The coefficient value for the level of education is 0.160, which shows a positive relationship with food consumption, which means that the higher the education taken, the greater the consumption of food by 1 unit.

The Effect of Remittances on Non-Food Consumption

Based on the estimation results in table 5, remittances significantly affect non-food consumption with a positive relationship direction. The age variable also significantly affects non-food consumption with a positive relationship direction, whereas Gender (Gender) has a significant negative relationship direction. Furthermore, the variables of marital status and

education level are significant and positively correlate to non-food consumption. More specifically, the results of the The remittance coefficient value is 0.0155. It shows a positive relationship, which means that receipts of remittances tend to increase household non-food expenditures by 1 unit compared to households that do not receive remittances. The age coefficient value (age) is 0.0171. It shows the direction of a positive relationship which means that increasing age will increase non-food consumption by 1 unit. Other variables are constant. The coefficient of Gender (Gender) (Dummy) is -0.108. It indicates that the male household head has a negative or inverse relationship, which means that the male household head can reduce non-food consumption by 1 unit compared with a female head of household. The coefficient value of marital status (Dummy) is -0.161. It shows that marital status has a negative relationship with food consumption which means that marital status can reduce non-food consumption by 1 unit compared to unmarried household heads. Unmarried households here are someone who is the backbone of the family. The coefficient value for the education level is 0.411, which shows a positive relationship with non-food consumption—the higher education, the greater the food consumption by four units.

Effect of Remittances on Total Consumption

Based on the estimation results in table 5, remittances significantly affect total consumption in a positive direction. The age variable also significantly affects total consumption positively, whereas Gender (Gender) has a significant negative relationship. Furthermore, the variables of marital status and education level are significant and have a positive relationship to total consumption. More specifically, the results of the interpretation of the coefficients of each variable are as follows:

The remittance coefficient value is 0.0382. It shows a positive relationship, which means that remittance receipts tend to increase total household consumption expenditures by three units compared to households that do not receive remittances. The age coefficient value (age) is 0.0238. It shows the direction of a positive relationship which means increasing age will increase the total consumption by two units of other constant variables. The value of the coefficient of Gender (Gender) (Dummy) is -0.127. It shows that male household heads have a negative or inverse relationship, which means that male household heads can reduce total consumption by 1 unit compared to female household heads. The coefficient value of marital status (Dummy) is -0.270. It shows that marital status has a negative relationship with food consumption which means that marital status can reduce total consumption by two units compared to unmarried household heads. Unmarried households here are someone who is the backbone of the family. The education level is 0.571, which shows a positive relationship with total consumption, which means that the higher the education taken, the greater the consumption of food by five units.

Effect of Remittances on Assets

Based on the estimation results in table 5, remittances significantly affect asset ownership in a positive direction. The age variable also significantly affects asset ownership positively, whereas Gender (Gender) has a significant negative relationship direction. Furthermore, marital status and education level variables are significant and have a positive relationship to asset ownership. More specifically, the results of the interpretation of the coefficients of each variable are as follows:

The remittance coefficient value is 0.000419. It shows a positive relationship, which means that receipts of remittances tend to increase household asset ownership by four units compared to households that do not receive remittances. Age coefficient value (age) is 1.90e-

05. it shows the direction of a positive relationship which means that increasing age will increase asset ownership by 1 unit. Other variables are constant. The value of the coefficient of Gender (Gender) (Dummy) is 8.22e.05. It shows that male household heads have a negative or inverse relationship, which means that male household heads can reduce asset ownership by eight units compared to female household heads. The coefficient value of marital status (Dummy) is -0.000172. It shows that marital status negatively affects food consumption, which means that marital status can reduce asset ownership by 1 unit compared to unmarried household heads. Unmarried households here are someone who is the backbone of the family. The coefficient value for the level of education is -1.68e05, which shows a positive relationship with asset ownership, which means that the higher the education is taken, the lower the asset ownership by 1 unit.

T-statistics Test and F-statistics Test

The results of the t-statistical test in table 5 show that the independent variables consisting of remittance dummy variables, gender dummy, and age have a probability value of 0.000. However, the dummy marital status has a probability value of 0.005, while the level of education is not significant because the probability is more than 10%. So it can conclude that the independent variables, except for the level of education, are significant to the dependent variable with a significance level of 1 percent. Therefore, the hypothesis in both analytical models is at ($H_0 : \beta_1 = 0$). It shows that all independent variables can be used as estimators because the results of the t-statistical test produce significant results in influencing the ownership of household assets receiving remittances.

The results of the F-statistics test on the OLS regression estimation in 2007 and 2014 in table 4.4 show the probability F with a p-value of 0.000 at the 5 percent significance level. So that the decision criteria at H0 are rejected because p.value < alpha can be concluded that the remittance dummy variable, age variable, gender dummy variable, marital status dummy variable, and education level together significantly affect the dependent variable.

Impact of Remittances on Food Consumption

The results of research carried out using the Ordinary Least Square (OLS) method on the remittance variable in table 5 show that the remittance variable has a significant effect on food consumption in Indonesia. A positive coefficient value on remittances indicates that the greater the receipt of remittances, the greater food consumption. It agrees with the theory of Lucas & Stark (1985), which explains that the utility of migrants comes from the utility of the family in the country of origin. The family's utility in the country of origin is influenced by per capita consumption. Therefore, migrants can maximize their utility by sending remittances to increase the consumption per capita of families in the country of origin.

In addition to the remittance variable, the age variable is also significant. It has a positive relationship with food consumption, meaning that the increasing age of a person will increase food consumption. It agrees with Barro (2001), who explains that age is the first demographic characteristic variable that affects food consumption. The marital status variable in this study is also significant. It has a positive direction on food consumption because the portion of food expenditure for married households is more significant than for unmarried households due to differences in the number of family members. This is by research conducted by Okodua et al. (2015) in Nigeria. The level of education in this study also has a positive and significant relationship with affecting food consumption. The higher the education taken by the head of the household, the higher the food expenditure. It follows Haider et al. (2016) research in Bangladesh. It happens because adequate food consumption will help increase self-actualization in

work skills and social skills so that competent and superior human resources are achieved to increase competitiveness.

The Gender determinant is significant and negatively affects food consumption, which means that female household heads spend more on food consumption than male households. It agrees with the research conducted by Adams and Chuachea, which also gender has a negative relationship with food expenditure because the share of food expenditure for male household heads is less than for female households. Food consumption has a positive relationship with remittances because food is the basic need of every individual. The fulfillment of individual food sufficiency is the essence of food security. It is reflected by the availability of sufficient food, both in quantity and quality, safe, diverse, nutritious, equitable, and affordable. The price and do not conflict with the community's religion, beliefs, and culture to live a healthy, active, and productive life in a sustainable manner.

Impact of Remittances on Non-Food Consumption

The research results that have been carried out using the Ordinary Least Square (OLS) method on the remittance variable in table 5 show that the remittance variable has a significant effect on food consumption in Indonesia. A positive coefficient value on remittances indicates that the greater the receipt of remittances, the greater the consumption of non-food items. It agrees with the theory in (Blanchard, 2011). Actions taken every day by anyone, the goal is to obtain the highest satisfaction and achieve a level of prosperity in the sense of meeting various needs, both needs and secondary needs, luxury goods, and physical and spiritual needs. The level of consumption gives the prosperity of a person or society. The meaning of prosperity here is that the higher a person's consumption, the more prosperous his level of welfare. In this case, remittances also bring income as income.

This study's characteristics, including age, gender, and marital status, have a positive and significant relationship to non-food expenditures. According to research conducted by Alvin P.ang in the Philippines, individual characteristics affect household non-food items.

In this study, remittances significantly affect food and non-food expenditures. It shows that families receiving remittances maximize their utility in consumption. If their consumption increases, their welfare, and level of satisfaction will also increase with additional receipts of remittances. In this study, the level of education positively affects non-food expenditures because after food expenditures are well fulfilled. Expenditures for non-food consumption begin to increase, such as household operational needs, household needs, body care, recreation, health costs, and clothing costs. The increase in income in remittance research increases, and the level of utility for food and non-food consumption will increase. It also shows an increase in the welfare of both households and individuals, which means the margin for consuming non-food will continue to move forward according to the indifference curve. The indifference curve will shift to the right as the utility rate increases.

Impact of Remittances on Total Households in Indonesia

The results of research carried out using the Ordinary Least Square (OLS) method on the remittance variable in table 5 show that the remittance variable has a significant effect on food consumption in Indonesia. A positive coefficient value on remittances indicates that the greater the receipt of remittances, the greater the consumption of food and non-food. In his research, Keynes put forward three essential opinions. First, Keynes suspected that the marginal propensity to consume (MPC) was between zero and one. Keynes said that humans would naturally increase the amount of consumption when there is an increase in income.

Following Keynes's opinion, consumption is a positive function of income, and consumption is influenced by disposable income.

This study's characteristics, including age, gender, marital status, and education level, have a positive and significant relationship to non-food expenditures. According to Alvin P.ang in the Philippines, individual characteristics affect household food and non-food expenditures. It reflects an increase in the quality of consumption after receiving remittances. Total food in this study is the combined total of food and non-food consumption. In this study, the proportion of food expenditure is relatively more significant than non-food expenditure, but the difference is not too significant. If further examined, although income or remittances tend to increase, consumption of food is still increased because good food adequacy will impact increasing self-actualization, which will improve welfare.

Impact of Remittances on Household Assets in Indonesia

The remittances in this study are significant and have a positive direction toward the assets owned by the remittance recipient households, both physical and non-physical assets. It is in accordance with Lucas and Stark's pure self-interest theory explaining three reasons migrants send remittances. First, sending remittances can increase wealth in the country of origin. Through this motivation, remittances will be positively related to the wealth received by the household. Second, migrants send money to maintain assets in their home country, which aims to increase asset ownership as one of their investments in the future.

Several studies have found that remittances can increase savings and investment in physical capital. Receiving households often consider remittances to be temporary income. Therefore, they keep a more significant proportion of the receipt of remittances in investments such as housing and other physical investments. In addition, remittances reduce liquidity constraints for many remittance-receiving households and encourage them to invest in business ventures and entrepreneurship. Individual characteristics in this study include gender and marital status, which has a positive and significant relationship to household assets in Indonesia. Brown and Suha (2007) found that in Fiji and Tonga, remittance recipient households keep their assets in investments such as entrepreneurship and deviate in the form of savings and fixed assets. In this study, it can conclude that during the two waves of research, remittances increased the assets owned by households in the form of physical and non-physical assets. In addition to receiving remittances, it increased food and non-food consumption, which meant increasing the welfare of families receiving remittances or migrant households.

In research on the impact of remittances and assets, education level negatively affects asset ownership because well-earned households will tend to invest for future needs such as health insurance, education, and old-age insurance. It is because they are oriented toward meeting long-term needs. So they prepare it. They hope that the next generation of children will receive proper education in terms of education insurance. They have a good income and maintain all household needs from this income and improve the quality of human capital, especially for migrant families. In this study, age also has a significant relationship. Negative with asset ownership, because as they get older, the head of the household tends to enjoy old age with the old-age insurance they have, or the pension funds received or enjoyed the assets or wealth accumulated when they were young.

Conclusion

Based on the estimation results that have gone through the analysis and discussion process, it can be concluded that, in general, remittances positively impact food, non-food

consumption, and the total consumption of TKI households (households receiving remittances). As well as, the increasing age of the household head receiving remittances will increase the consumption of food and non-food and the total consumption of the household head receiving remittances in Indonesia. The higher the education level completed by the household head receiving remittances, the higher the consumption of food, non-food, and total consumption. Remittances have a positive impact on asset ownership of households receiving remittances. The higher the level of education completed by the household head receiving remittances, the smaller the expenditure on household assets. As well as, the increasing age of the household head receiving remittances will reduce the asset ownership of the household head receiving remittances in Indonesia.

Based on the conclusions above, the following are recommendations or suggestions related to further research and policies that can take. The government needs more attention regarding the ease of licensing the TKI bureaucracy and socialization related to licensing TKI so that there are no illegal TKIs and increased protection for TKI, considering that some TKI jobs are jobs, which is clerical. Suggestions for further research are for the remittance variable to use nominal data to observe the ratio of consumption expenditure and asset ownership of remittance recipient households.

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