

The Impact of International Migration and Remittances on Household Income in Vietnam: An Analysis of the Application of a New Data Set on "Vietnam Household Survey on International Migration in 2009"

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The Impact of International Migration and Remittances on Household Income in Vietnam: An Analysis of the Application of a New Data Set on “Vietnam Household Survey on International Migration in 2009”

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Abstract

Migration to and from Vietnam has increased considerably in recent years and now attracts a great deal of attention from both policymakers and researchers. However, there is still a lack of comprehensive quantitative information on international migration and its impacts on development. This paper provides an investigation of the economic impacts of international migration from Vietnam, focusing particularly on the effects of migration and remittances on household income. Empirical findings from this paper are consistent with a substantial number of international studies showing that international migration and remittances have a significantly positive impact on household income. Specifically, after controlling for other factors, households that have migration experience or receive remittances have a per capita income of about 50% higher than households with no migration experience. Households in urban and rural areas that are home to migrants or receive remittances have a significantly positive impact on household income compared to households without any migrants. The results also show that there is a difference in income levels between households living in rural areas and those living in urban areas. These findings confirm that international migration and remittances do have an important role in the economic development and poverty reduction of Vietnam. Policy-wise, the government should push further its policy on promoting international migration and more effectively utilizing the benefits brought about by overseas Vietnamese..

Keyword

International migration, remittances, economic development, Vietnam

ベトナムにおける世帯収入に及ぼす国際移動と送金の影響：
新しい統計データ

「ベトナム・国際移動に関する世帯調査（2009年）」を適用した分析

人間社会環境研究科 人間社会環境学専攻
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要旨

近年、ベトナムから及びベトナムへの国際移動が大幅に増加しており、政策立案者と研究者の双方から多くの注目を集めているが、国際移動とその発展に関する包括的な量的情報は依然として不足している。本稿は、移動や送金が世帯収入に及ぼす影響に焦点を当て、ベトナムからの国際移動の経済的影響を分析するものである。本稿の分析結果は、国際移動と送金が世帯収入に有意にプラスの影響を及ぼしていることを示す既存研究と一致していた。具体的には、他の要因をコントロールしたうえで、移動経験を有し送金を受けている世帯は移民経験のない世帯よりも一人当たり収入が約50%高い。移民を抱える世帯や送金を受けている世帯は都市部と農村部いずれにおいても、移動者がいない世帯に比べて世帯収入に大きくプラスの影響を与えている。都市部に住む世帯に比べて農村部に住む世帯の収入水準に差があることも示している。これらの調査結果が示すことは、国際移動と送金がベトナムの経済発展と貧困削減に重要な役割を果たしているという点である。政策の観点から、政府は国際移動に関する促進政策を推進し、海外に居住するベトナム人の利益をより有効に活用すべきである。

キーワード

国際移動, 送金, 経済発展, ベトナム

I. Introduction

International migration is attracting increasing attention from both governments and international agencies. Many studies have examined different effects of international migration on economic development. In Vietnam, international migration has expanded at a fast pace recently with various means of migration, becoming one of the important determinants to the change of economic and social context in the country.

There are four major movements of emigrant from Vietnam: refugee and asylum seekers to developed countries during the year 1975 to 1995, Vietnamese labour migration, study migration and marriage migration (International Organization for Migration). Its large population coupled with a history of wars creates significant pressures of labour migration. Overall, the “demand-pull” factor of income differentials and the “supply-push” factor of excess labour supply interact to induce labour

migration from Vietnam.

Since the year 2000, the government has announced that sending labourers to work abroad is one of Vietnam’s major efforts to settle issues of employment, especially for young people. Recently, the government has issued Decision No. 71/2009/QĐ-TTg on 29 April 2009 approving the Project to Support Poor Districts in Promoting Labor Export for Sustainable Poverty Elimination – Period 2009-2020 (the objective of this project is to improve the quality of workforce and increase the number of laborers in poor districts participating in labor export, contributing to job creation, increase income and sustainable poverty reduction). Along with recently improved policies toward Vietnam Diasporas, it shows the government’s serious commitment toward international migration as an important way to address the problem of poverty and unemployment, improving living standard in Vietnam.

However, little is known whether international migration actually contributes to the improvement

of living standard in Vietnam. Various studies in different countries have shown that international migration has played an important economic and social role. Remittances from international migrants can provide adequate incomes to improve the living standard of the migrants' families, to use on consumer goods, better housing and education of children (Huguet, 2005; Lucas, 1998; Rodriguez, 1998). Still, no assessment has been made on the impact of international migration and remittances on household income in Vietnam. Limited information and data paucity also add to the difficulty in assessing the expected positive impact of international migration on improving the living standard. Further, the lack of research and study on international migration in Vietnam make it more challenged for the government to have adequate and efficient policies regarding migration.

II. Objective and Research Question

It is believed that international migration may have both positive and negative impacts on the original country. International migration helps reduce unemployment pressures. This is especially helpful for labourers in agriculture and rural areas, as most migrant workers are not required to have high skills. International migration helps reduce poverty when migrant workers can obtain higher salaries than they can when working domestically. Remittances can be an important source of income. Remittances are not only used for purchasing household goods but also for education and investment. Remittances can also improve communities where there are many migrants.

Besides, many problems related to international migration as high costs of migration: Migration

costs a lot of money and can put a burden of debt on the migrants themselves or on their families. There are also many migration agencies that exploit migrant workers. Many migrant workers have a difficult time abroad. They do not often receive adequate training before leaving and tend to have little or no protection when working abroad. Returned migrant workers have problems re-entering the domestic labour market, particularly since few of them gained significantly in terms of skills. For those who returned with skills, it is difficult for them to find suitable jobs that match their skills. Remittances are not used properly, in many families, remittances are used for gambling; while in others, remittances are used for investment in securities markets (Maria and Carlos, 2002; McKenzie et al, 2007; Nguyen et al, 2009). It is said that the economic impact of international migration is considerable, and outweighs the negative impacts of migration. However, this study only investigates the positive impact of migration.

This research is therefore to provide an investigation of the economic impacts of international migration and remittances, focuses particularly on the effects of migration and remittances on household income by using the new data set on Vietnamese migration patterns and impacts through implementation of a new nation-wide household survey. The findings of this paper will provide evidence on whether international migration and remittances actually have a positive impact on living standards in Vietnam as expected.

This paper aims to answer the following question: What is the impact of international migration, remittances and household shock on household income, assuming that higher income increases living standard?

III. Literature Review

The potential country-level poverty-reduction, income-distribution impact of migration and remittances have been widely discussed in the developing countries, but until now empirical evidence on the effect of migration and remittances on the individual- and household-level has been scarce, especially in Vietnam.

Among those, Rodriguez (1998) used two different approaches to measure these effects. The first uses actual and counterfactual scenarios with and without migration to isolate the impact of an increase in emigration. The second assumes only very small changes in emigration. Rodriguez found out that first approach shows an increase of 6.3% for the country's average per capita household income. The second approach represents an increase of only 0.06% in total household income (because of a 1% rise in emigration). While increases in incomes tend to raise resident households' welfare, inequality would tend to reduce it. Both methods suggest that inequality rises with emigration.

Regarding the impact of international migration and remittances on poverty in the developing countries, Adams and John (2005) found that both international migration and remittances significantly reduce the level, depth, and severity of poverty in the developing world. After instrumenting for the possible endogeneity of international migration, and controlling for various factors, results suggest that, on average, a 10% increase in the share of international migrants in a country's population will lead to a 2.1% decline in the share of people living on less than \$1.00 per person per day. After instrumenting for the possible endogeneity of international remittances, a similar 10% increase

in per capita official international remittances will lead to a 3.5% decline in the share of people living in poverty.

Later on, Adams (2011) demonstrated in his paper, review covers 50 recent empirical studies on the economic impact of international remittances on the developing world that are based on household survey data. It begins by reviewing the considerable methodological problems confronting economic work on international remittances, and then examines the strengths and weaknesses of various economic studies of the impact of remittances in the developing world on such outcomes as: poverty and inequality, health and education, investment and savings, labour supply and participation, and economic growth. It finds that while international remittances generally have a positive impact on poverty and health in the developing world, remittances can have negative effects on labour supply, education and economic growth.

The Situation in Vietnam

In Vietnam, remittances, especially international remittances have been increasing overtime. It is often argued that remittances have contributed to economic development and welfare improvement. Although there are large numbers of studies on the impacts of migration but there are only a few ones on the impacts of remittances in Vietnam.

Dang (2008) examines the emerging issues that will help improve the management of labour migration from Vietnam in the context of long-standing policies. More precisely, it focuses on emerging issues of policy and practice related to labour export from Vietnam to place its manpower and workers overseas.

Using data from the Vietnam household living standard surveys (VHLSS) of 2002 and

2004, Nguyen (2009) measures the impact of international and internal remittances on the household welfare of remittance-receiving households. He finds that both the income and the consumption expenditures of the recipients increased as a result of international and internal remittances. The impact of remittances on non-food expenditures tended to be greater than the impact on food expenditures. For international remittances, the impact on income was much greater than the impact on consumption expenditures, meaning that a large proportion of international remittances were used for savings and investment. The impact of internal remittances on income was slightly greater than the impact on consumption expenditures. In other words, most of the internal remittances were used for consumption expenditures.

Niimi et al. (2008) examine the determinants of remittance behaviour for Vietnam using data from the 2004 Vietnam Migration Survey on internal migrants. It considers how, among other things, the vulnerability of a migrant's life at the destination, their link to relatives back home, and the time spent at the destination affect remittances. The paper finds that migrants act as risk-averse economic agents and send remittances back to the household of origin as part of an insurance exercise in the face of economic uncertainty. Remittances are also found to be driven by a migrant's labour market earnings level. The paper highlights the important role of remittances in providing an effective means of risk-coping and mutual support within the family.

Compared to other previous studies on remittances in Vietnam, this study has three special features. Firstly, it focuses on the direct welfare indicator is household income which is considered to be the most important

indicator for assessing the economic well-being of Vietnamese households. It does not estimate the impacts of remittances on poverty and inequality, which is addressed by Nguyen (2009). Secondly, it compares the effects of both international migration and remittances on household income - This combination will give us a multi-dimensional perspective on the dual impact of migration and remittances on households; while other studies focus only on one type of remittances or international or internal migration. Finally, it applies new data set (Vietnam Household Survey on International Migration in 2009) on Vietnamese migration patterns and impacts through implementation of a new nation-wide household survey and will provide empirical evidence on the effect of migration and remittances on the individual-level and household-level.

IV. Theoretical and Empirical Methodology

Data

Information and data from the Vietnam Household Survey on International Migration in 2009 is used to assess the impact of migration and remittances on household income. The survey was conducted in 6 provinces across regions in Vietnam to build a national representative dataset on international migration in Vietnam. Initially, a sample of 1508 households was taken in 90 communes/wards (the lowest administrative units), which were evenly distributed, in selected provinces. Sampled households include households with returned migrant member (s), households with absent migrant member (s) and non-migrant households in rural and urban areas.

The surveys collected a wide range of information on household demographic structure,

household members (both migrants and non-migrants), education, health, employment, work activities as well as details on household income and consumption. Household opinions and opinions of returned migrants on migration were also gathered, providing evidence for

qualitative analysis.

Descriptive statistics of the data are presented in Table 2. Households are grouped into urban and rural households for an urban-rural comparison.

Table 1: Distribution of the households

Sample structure					
Province	Non-migrant HH	Absent-migrant HH	Returned migrant HH	Mix-migrant HH	Total
North	159	147	162	36	504
Hanoi	77	67	84	26	254
Hung Yen	82	80	78	10	250
Centre	165	186	124	30	505
Nghe An	82	78	77	16	253
Da Nang	83	108	47	14	252
South	160	180	124	35	499
Ho Chi Minh City	80	82	68	19	249
Can Tho	80	98	56	16	250
Total	484	513	410	101	1508

Source: Authors' Calculations based on survey database

Table 2: Descriptive statistics of the data

	All areas		Urban		Rural	
	Freq.	Per. (%)	Freq.	Per. (%)	Freq.	Per. (%)
Household type (All)	1.508		831		677	
Household with no migrants	484	32.10	274	32.97	210	31.03
Household with returned migrant only	410	27.19	210	25.28	200	29.54
Household with absent migrant only	513	34.01	279	33.57	234	34.56
Household with both types of migrants	101	6.70	68	8.18	33	4.87
Migration status of surveyed individuals (All)	7.266		4.100		3.166	
Non-migrant	5.862	80.68	3.277	79.93	2.585	81.65
Returned migrant	618	8.50	361	8.80	257	8.12
Absent migrant	786	10.82	462	11.27	324	10.23
Gender profile of surveyed individuals	Female	Male	Female	Male	Female	Male
Total	3.777	3.489	2.177	1.923	1.600	1.566
Non-migrant	3.114	2.748	1.731	1.546	1.383	1.202
Returned migrant	215	403	155	206	60	197
Absent migrant	448	338	291	171	157	167
Number of household by remittance receiving status	Freq.	Per. (%)	Freq.	Per. (%)	Freq.	Per. (%)
Total	1.508		831		677	
Households received no remittance	940	62.33	516	62.09	424	62.63
Households received remittance	568	37.67	315	37.91	253	37.37

Remittance rate and frequency

Sample: 568 receiving households (315 in urban, 253 in rural)

Rate: 1,000 Vietnam Dong last 12 months. Frequency: times last 12 months

	All receiving households	Urban receiving households	Rural receiving households
Rate	128,932.40	186,762.40	56,930.91
Freq.	4.95	4.94	4.95

Source: Authors' Calculations based on survey database

Definition of Migration

In this survey, the following definitions were used:

• **Migrant:** Someone who has spent three months or more living continuously in a country other than that of their birth.

Within this, the survey examines three different kinds of migrants:

• **Immigrant:** A person who was born in another country but has come to live in the country of study.

• **Absent migrant:** A person who was born in the country of study but who, within the last years, left to go and live in another country. Absent migrants are still living abroad.

• **Returned migrant:** A person who was born in the country of study and who lives there now but who at some point has lived in another country for three months or more.

A three-month definition of migration differs from the usual definition used in official data sources, which only includes people who moved for a year or more. This definition is more useful as it allows capturing short-term, irregular and seasonal movement, as well as more permanent emigration.

Methodology

To deal with the endogeneity problem, this analysis relied on Ordinary Least Squares (OLS) and fixed-effect regressions.

The common approach is to regress the outcome of interest on a migration variable and

a set of control variables, that is:

$$\text{Outcome} = a + \beta * \text{migration} + \gamma * X + \varepsilon$$

This assumes that some households just happen to migrate or receive remittances. Hence, ignoring endogeneity, so the coefficient β is (most likely) biased. However, if one has grounds to believe this bias is small, OLS method might be satisfactory.

Base on the basic model, hence the following regression Ordinary Least Squares (OLS) model was used to estimate the coefficients:

$$Y_i = \alpha_0 + \alpha_1 m_i + \alpha_2 s_i + \alpha_3 d_c + \alpha_4 m_r + \alpha_5 H_i + e_i \quad (1)$$

$$Y_i = \beta_0 + \beta_1 r_i + \beta_2 s_i + \beta_3 d_c + \beta_4 m_r + \beta_5 H_i + u_i \quad (2)$$

In which :

- y is income per capita of household i
- H is the vector of household characteristics that might have effects on households' income (the number of working adults, number of children in households, the location of households (urban or rural), and household heads' characteristics (age, gender, marital status, health status, education).
- s_i is household shock.
- d_c is distance from commune to province centre.
- m_r is migration rate at the district level (including both internal and external migration).

Equation (1) is used to examine the impact of migration, household shock, distance and migration rate in which m_i is/are the dummy

variables representing if households have migrants/absent or returned migrants.

Equation (2) is used to estimate the impact of remittances, household shock, distance and migration rate in which r_i is the dummy variable representing if households received remittance.

Because the correlation between migration dummy and remittances dummy is at a high level (72.6%) that why we did separately for each those variables into two equations.

In the second part, a data analysis applying a Conditional fixed Effect Linear model at commune level to control for the provincial - specific characteristics of households:

$$Y_i = \alpha_0 + \alpha_1 m_i + \alpha_2 s_i + \alpha_3 d_c + \alpha_4 m_r + \alpha_5 H_i + C + ei \quad (3)$$

$$Y_i = \beta_0 + \beta_1 r_i + \beta_2 s_i + \beta_3 d_c + \beta_4 m_r + \beta_5 H_i + C + u_i \quad (4)$$

The factors to be controlled in Fixed Effect model could be household shock, distance to post-office, migration rate, financial crisis or wage rate. Three set of new dummy variables including household shock, distance from commune to province centre, migration rate.

V. Empirical Results

This section presents empirical findings on impacts of the receipts of international migration and remittances. Remittances and migration are expected to increase per capita income. Thus, the outcome selected in this paper is per capita

income of household.

The explanatory variables in regressions consist of characteristics of households, migration dummy, remittances dummy, household shock, migration rate and geographic variables. The household variables include household demography as number of children less than 15 years in household, number of working adults more than 15 years in household, head's of household gender, marital status, head's of household age and education. The migration dummy variable is number of households, which have migrant. The remittances dummy variable is number of households, which received remittance. The household shock variable is shocks to the household. The migration rate variable is the proportion of migration at the district level. Geographic variables are distance from villages/communes to the centre of province and urbanity variables.

The estimation results of the impact of migration on household per capita income are presented in Table 3. In the first 2 columns, the estimates show that having migrants has a statistically positive impact on household income per capita. Averagely, households that have migrants have their per capita income of 50% higher than that of households, which have no migrants, after other factors have been controlled for. Note that the results are very close in both OLS and Fixed Effect estimates (52.8% and 50.2%, respectively). (Table 3)

Table 3 : Impacts of migration on household income per capita

Dependent Variable	Log of per capital income over last 12 months			
	Independent Variable	OLS (Model 1)	OLS (Model 2)	Fixed Effect
		Coeff. (SE)	Coeff. (SE)	Coeff. (SE)
migration_dum		0.528*** (0.0540)	0.528*** (0.0535)	0.502*** (0.0414)

hh_shock	-0.0899* (0.0539)	-0.0952* (0.0530)	-0.0713 (0.0521)
distance	-0.00530* (0.00267)		
mig_rate	0.603 (0.464)		
urban	-0.0194 (0.0845)	0.136* (0.0700)	0.0821 (0.195)
head_kinh	-0.0626 (0.227)	-0.151 (0.221)	-0.0525 (0.236)
no_child	-0.137*** (0.0217)	-0.140*** (0.0218)	-0.119*** (0.0231)
w_adult	0.0193 (0.0176)	0.0266 (0.0176)	0.00366 (0.0156)
h_male	0.0193 (0.0549)	-0.00593 (0.0554)	0.0775 (0.0473)
gender_eq	0.0784 (0.0548)	0.0925* (0.0554)	0.0776 (0.0486)
h_edulev2	0.127* (0.0745)	0.117 (0.0735)	0.143** (0.0602)
h_edulev3	0.225** (0.0981)	0.235** (0.0980)	0.255*** (0.0836)
h_edulev4	0.575*** (0.110)	0.590*** (0.109)	0.419*** (0.0955)
h_agegroup2	-0.00460 (0.0580)	0.00889 (0.0589)	-0.0527 (0.0637)
h_agegroup3	-0.0625 (0.0608)	-0.0464 (0.0610)	-0.100 (0.0670)
h_agegroup4	-0.200*** (0.0758)	-0.163** (0.0728)	-0.280*** (0.0688)
h_mstat2	-0.137 (0.123)	-0.173 (0.121)	-0.118 (0.122)
h_mstat3	0.230 (0.254)	0.184 (0.250)	-0.0553 (0.306)
h_mstat4	-0.232 (0.194)	-0.274 (0.190)	-0.247 (0.181)
h_mstat5	-0.0655 (0.133)	-0.134 (0.132)	-0.0724 (0.139)
_cons	9.406*** (0.315)	9.403*** (0.295)	9.354*** (0.285)
N	1461	1461	1461
R-sq	0.197	0.188	0.152

Standard errors in parentheses

Note: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

Source: Authors' Calculations based on survey database

Among other variables, which are also included in regressions, the number of children

and number of old people in the household have a significantly negative impact on household

income per capita (14% and 28% in fixed effect in both cases). It means that the opportunity of households having large ratios of children and old people will lead to having lower income per capita. Other variables, which also have significantly positive impacts on income, are household head's school grade and a dummy variable for household head having a bachelor degree.

In Table 4, a dummy variable is used to represent if a household received remittance or not. The results also confirm the positive impact of remittance on household income per capita. Specifically, having remittance will averagely

increase household income per capita by about 51%, holding other factors constant. Remittances, therefore, seem to be a larger source of family income for households that receive them. The significance of other factors is very similar to the previous estimates with migration dummies. The gender equality dummy variable is positive and statistically significant. It means that based on the finding of the analysis, people believe that remittances seem to bring about more gender equality in Vietnam.

In OLS model for both cases, shocks to the household and distance also are factors, which reduce household income. Give the fact that,

Table 4 : Impacts of remittances on household income per capita

Independent Variable	Log of per capita income over lats 12 month		
	OLS (Model 1)	OLS (Model 2)	Fixed Effect
	Coeff. (SE)	Coeff. (SE)	Coeff. (SE)
remittance_dum	0.531*** (0.0609)	0.529*** (0.0606)	0.510*** (0.0424)
hh_shock	-0.0936* (0.0532)	-0.0985* (0.0524)	-0.0699 (0.0521)
distance	-0.00511* (0.00265)		
mig_rate	0.726 (0.445)		
urban	-0.0379 (0.0827)	0.124* (0.0697)	0.166 (0.196)
head_kinh	0.0675 (0.250)	-0.0301 (0.255)	0.0206 (0.236)
no_child	-0.133*** (0.0215)	-0.135*** (0.0215)	-0.118*** (0.0231)
w_adult	0.0130 (0.0169)	0.0209 (0.0169)	-0.000460 (0.0156)
h_male	0.00542 (0.0531)	-0.0227 (0.0543)	0.0622 (0.0472)
gender_eq	0.0837 (0.0536)	0.0989* (0.0543)	0.0846* (0.0486)
h_edulev2	0.118 (0.0717)	0.108 (0.0710)	0.130** (0.0602)
h_edulev3	0.231** (0.0948)	0.244** (0.0948)	0.251*** (0.0837)
h_edulev4	0.675*** (0.112)	0.691*** (0.112)	0.503*** (0.0958)

h_agegroup2	0.0152 (0.0556)	0.0296 (0.0566)	-0.0385 (0.0636)
h_agegroup3	-0.0258 (0.0571)	-0.00872 (0.0569)	-0.0785 (0.0667)
h_agegroup4	-0.202*** (0.0756)	-0.162** (0.0727)	-0.289*** (0.0689)
h_mstat2	-0.0899 (0.113)	-0.129 (0.111)	-0.0764 (0.123)
h_mstat3	0.183 (0.189)	0.131 (0.188)	-0.0482 (0.306)
h_mstat4	-0.142 (0.180)	-0.187 (0.177)	-0.172 (0.181)
h_mstat5	-0.0437 (0.128)	-0.118 (0.127)	-0.0544 (0.139)
_cons	9.239*** (0.338)	9.261*** (0.328)	9.215*** (0.286)
N	1461	1461	1461
R-sq	0.196	0.186	0.151

Standard errors in parentheses

Note: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

Source: Authors' Calculations based on survey database

if some shocks happen to the household than they will facing with difficulties and households located far away from centre areas/big city will suffer a lot from lacking of information, supporting and transportation. Migration rate, ethnicity (Vietnam have over 50 ethnic groups living in the country and the Kinh people are the predominant Ethnic group in Vietnam, with 85% of the population in the country being Kinh), number of adult people, household age, and marital status have shown no significant impacts in all regressions. Except for old people (above 61 years old) have a negative impact on household income, some reasons can be explained by illness, lost ability to work and have no income.

Households are living in urban and rural areas that having migrant people or receiving remittances have a significantly positive impact in both OLS and Fixed Effect estimates (tables 6, 7 in Appendix). The results also show that there is a differential in levels of income among

households where live in rural areas compare with whom live in urban areas. It is surprising that in both cases, almost second times higher for household come from rural than urban areas (64.5% with 37.5% and 74.5% with 31.2%). Household shock, number of children and old people in household are factors that have a strong negative impact on household income.

This paper also tests whether there is difference in the impact of migration and remittance receipts on household welfare between male and female household head. The regression results are presented in tables 8, 9 in the appendix. It indicates that the difference in the impact of migration and remittances between male and female household head is statistically significant in outcome equations. They increased per capita income by 40.8% for female and 56.8% for male in terms of having migrant people and by 42% for female and 54.6% for male in the context of receiving remittance, respectively. It should be noted that the impact

h_agegroup2	0.0152 (0.0556)	0.0296 (0.0566)	-0.0385 (0.0636)
h_agegroup3	-0.0258 (0.0571)	-0.00872 (0.0569)	-0.0785 (0.0667)
h_agegroup4	-0.202*** (0.0756)	-0.162** (0.0727)	-0.289*** (0.0689)
h_mstat2	-0.0899 (0.113)	-0.129 (0.111)	-0.0764 (0.123)
h_mstat3	0.183 (0.189)	0.131 (0.188)	-0.0482 (0.306)
h_mstat4	-0.142 (0.180)	-0.187 (0.177)	-0.172 (0.181)
h_mstat5	-0.0437 (0.128)	-0.118 (0.127)	-0.0544 (0.139)
_cons	9.239*** (0.338)	9.261*** (0.328)	9.215*** (0.286)
N	1461	1461	1461
R-sq	0.196	0.186	0.151

Standard errors in parentheses

Note: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

Source: Authors' Calculations based on survey database

if some shocks happen to the household than they will facing with difficulties and households located far away from centre areas/big city will suffer a lot from lacking of information, supporting and transportation. Migration rate, ethnicity (Vietnam have over 50 ethnic groups living in the country and the Kinh people are the predominant Ethnic group in Vietnam, with 85% of the population in the country being Kinh), number of adult people, household age, and marital status have shown no significant impacts in all regressions. Except for old people (above 61 years old) have a negative impact on household income, some reasons can be explained by illness, lost ability to work and have no income.

Households are living in urban and rural areas that having migrant people or receiving remittances have a significantly positive impact in both OLS and Fixed Effect estimates (tables 6, 7 in Appendix). The results also show that there is a differential in levels of income among

households where live in rural areas compare with whom live in urban areas. It is surprising that in both cases, almost second times higher for household come from rural than urban areas (64.5% with 37.5% and 74.5% with 31.2%). Household shock, number of children and old people in household are factors that have a strong negative impact on household income.

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of international migration and remittances on income was much higher for male household head than household head is women.

VI. Summary and Conclusions

This study attempted to investigate the impact of international migration and remittances on household income in Vietnam. It is known that household income is an important indicator of the wellbeing of a society. Assuming that income is one of the factors measuring the living standard.

Therefore, this research focuses on the direct welfare indicator is household income that is taken into account to be the foremost necessary indicator for assessing the economic well-being of Vietnamese households. Besides, it compares the effects of both international migration and remittances on family financial gain - this mixture can offer a multi-dimensional perspective on the twin impact of migration and remittances on households; moreover, it applies new database set (Vietnam Household Survey on International Migration in 2009) on Vietnamese migration patterns and provide empirical proof on the impact of migration and remittances on the individual-level and household-level.

Based on the survey data, migration and remittance have positive impacts on household income. Households with migration experience or received remittance have higher average income than households with no migration or remittance. Households are living in urban and rural areas that having migrant people or receiving remittances have a significantly positive impact on household income compare with household without any migrant family member. Male's and female's head

in the households are also beneficial from receiving remittance contrast with households don't have any migrants or getting remittance. Furthermore, the impact of international migration and remittances on income was much higher for male household head than household head is women. Another result from this empirical finding is that migration and remittances seem to bring about more gender equality in Vietnam. And people with high education will benefit more from migration and remittances.

All those findings confirm that international migration and remittances do have an important role in the economic development and poverty reduction of Vietnam. Policy-wise, the Government should push further its policy on promoting international migration and more effectively utilizing the benefits brought about by overseas Vietnamese.

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APPENDIX: Tables

Table 5 : Description of Variables

ln_income	Log of per capital income
migration_dum	Number of households which have migrant
remittance_dum	Number of households which received remittance
hh_shock	Shocks to the household
distance	Distance from communes to the province Centre
mig_rate	Proportion of migration at the district level
urban	Urban dummy variable=1 if urban and variable=0 if rural
head_kinh	Ethnicity of household head=1 if kinh and variable=0 if chinese
no_child	Number of children less than 15 years in household
w_adult	Number of working adults more than 15 years in household
h_male	Gender dummy variable=1 if household head=1 and variable=0 if female
gender_eq	Gender equality dummy variable=1 if yes and variable=0 if no
h_edulev1	Education dummy variable=1 if household head education is none
h_edulev2	Education dummy variable=1 if household head education is primary to upper second
h_edulev3	Education dummy variable=1 if household head education is short-term to junior
h_edulev4	Education dummy variable=1 if household head education is bachelor and above

h_mstat1	Marital status dummy variable=1 if household head is never married
h_mstat2	Marital status dummy variable=1 if household head is married
h_mstat3	Marital status dummy variable=1 if household head is separated
h_mstat4	Marital status dummy variable=1 if household head is divorced
h_mstat5	Marital status dummy variable=1 if household head is widowed
h_agegroup1	Head's of household age from 11 to 40
h_agegroup2	Head's of household age from 41 to 50
h_agegroup3	Head's of household age from 51 to 60
h_agegroup4	Head's of household age from 61 to above

Table 6: Impacts of migration on household income per capita
by rural - urban.

Independent variable	Log of per capita income			
	OLS		Fixed Effect	
	Rural	Urban	Rural	Urban
	<i>Coeff. (SE)</i>	<i>Coeff. (SE)</i>	<i>Coeff. (SE)</i>	<i>Coeff. (SE)</i>
migration_dum	0.718*** (0.0770)	0.364*** (0.0639)	0.645*** (0.0625)	0.375*** (0.0556)
hh_shock	-0.0494 (0.0754)	-0.133* (0.0689)	0.00166 (0.0757)	-0.142** (0.0720)
head_kinh	-0.274*** (0.0617)	0.00456 (0.303)	0.00343 (0.426)	-0.0664 (0.282)
no_child	-0.118*** (0.0385)	-0.164*** (0.0267)	-0.115*** (0.0345)	-0.127*** (0.0309)
w_adult	0.0231 (0.0281)	0.0328 (0.0238)	-0.0139 (0.0249)	0.0249 (0.0203)
h_male	-0.0885 (0.0865)	0.0558 (0.0664)	-0.0248 (0.0773)	0.158*** (0.0603)
gender_eq	0.163** (0.0633)	-0.0197 (0.0927)	0.120* (0.0644)	0.00482 (0.0743)
h_edulev2	0.101 (0.106)	0.128 (0.108)	0.199** (0.0865)	0.0466 (0.0849)
h_edulev3	0.170 (0.155)	0.289** (0.135)	0.206 (0.134)	0.251** (0.109)
h_edulev4	0.325 (0.231)	0.636*** (0.138)	0.255 (0.214)	0.380*** (0.116)
h_agegroup2	-0.00335 (0.0932)	0.0276 (0.0810)	-0.0546 (0.0911)	-0.0537 (0.0910)
h_agegroup3	0.00206 (0.0901)	-0.0831 (0.0846)	-0.0701 (0.0979)	-0.144 (0.0935)
h_agegroup4	-0.176 (0.126)	-0.158* (0.0850)	-0.286*** (0.0994)	-0.285*** (0.0963)
h_mstat2	-0.0599 (0.191)	-0.193 (0.156)	0.0156 (0.237)	-0.109 (0.146)

h_mstat3	0.343 (0.229)	0.204 (0.324)	0.386 (0.577)	-0.117 (0.360)
h_mstat4	0.0842 (0.468)	-0.303 (0.209)	0.178 (0.381)	-0.266 (0.208)
h_mstat5	-0.0719 (0.239)	-0.0782 (0.161)	0.0350 (0.258)	-0.0286 (0.170)
_cons	9.356*** (0.266)	9.513*** (0.379)	9.083*** (0.492)	9.593*** (0.314)
N	664	797	664	797
R-sq	0.219	0.159	0.200	0.141

Standard errors in parentheses

Note: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

Source: Authors' Calculations based on survey database

Table 7 : Impacts of remittances on household income per capita by rural – urban.

Independent variable	Log of per capita income			
	OLS		Fixed Effect	
	Rural	Urban	Rural	Urban
remittance_dum	<i>Coeff. (SE)</i>	<i>Coeff. (SE)</i>	<i>Coeff. (SE)</i>	<i>Coeff. (SE)</i>
	0.780*** -0.0844	0.312*** -0.073	0.745*** -0.0622	0.312*** -0.0578
hh_shock	-0.0292 -0.0742	-0.148** -0.0688	0.0326 -0.0738	-0.157** -0.0727
	head_kinh	-0.260*** -0.0646	0.132 -0.325	0.0978 -0.415
no_child	-0.123*** -0.0359	-0.159*** -0.0278	-0.120*** -0.0337	-0.126*** -0.0312
	w_adult	0.0211 -0.0278	0.027 -0.023	-0.0149 -0.0242
h_male	-0.104 -0.0804	0.0461 -0.0669	-0.028 -0.0752	0.145** -0.0609
	gender_eq	0.167** -0.0624	-0.0146 -0.0906	0.121* -0.0627
h_edulev2	0.0952 -0.102	0.118 -0.106	0.199** -0.0843	0.0305 -0.0858
	h_edulev3	0.204 -0.146	0.285** -0.134	0.256* -0.131
h_edulev4	0.406 -0.252	0.690*** -0.145	0.332 -0.209	0.426*** -0.117
	h_agegroup2	-0.0277 -0.0942	0.0663 -0.0777	-0.0876 -0.089
h_agegroup3		-0.0166 -0.088	-0.0271 -0.0783	-0.102 -0.0955
	h_agegroup4	-0.187 -0.128	-0.140* -0.0819	-0.304*** -0.0969

h_mstat2	-0.0841	-0.17	0.0198	-0.0827
	-0.23	-0.142	-0.231	-0.148
h_mstat3	-0.0537	0.207	0.0925	-0.0606
	-0.37	-0.252	-0.561	-0.365
h_mstat4	0.0321	-0.234	0.157	-0.197
	-0.483	-0.194	-0.371	-0.21
h_mstat5	-0.123	-0.0703	0.0398	-0.015
	-0.27	-0.154	-0.251	-0.172
_cons	9.387***	9.382***	8.979***	9.539***
	-0.291	-0.403	-0.48	-0.318
N	664	797	664	797
R-sq	0.246	0.146	0.24	0.122

Standard errors in parentheses

Note: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

Source: Authors' Calculations based on survey database

Table 8 : Impacts of migration on household income per capita
by gender

Independent Variable	Log of per capita income			
	OLS		Fixed Effect	
	Female	Male	Female	Male
	<i>Coeff. (SE)</i>	<i>Coeff. (SE)</i>	<i>Coeff. (SE)</i>	<i>Coeff. (SE)</i>
migration_dum	0.433*** (0.0787)	0.589*** (0.0654)	0.408*** (0.0776)	0.568*** (0.0513)
hh_shock	-0.0723 (0.0761)	-0.106 (0.0672)	-0.150 (0.0952)	-0.0188 (0.0633)
urban	0.0339 (0.109)	0.175** (0.0714)	0.0508 (0.377)	0.206 (0.234)
head_kinh	0.527*** (0.0958)	-0.371*** (0.106)	0.128 (0.475)	-0.306 (0.291)
no_child	-0.176*** (0.0368)	-0.110*** (0.0278)	-0.140*** (0.0421)	-0.0876*** (0.0286)
w_adult	0.0450 (0.0315)	0.0146 (0.0215)	0.0203 (0.0287)	-0.00139 (0.0194)
gender_eq	-0.0275 (0.106)	0.154*** (0.0571)	-0.0307 (0.0935)	0.153*** (0.0577)
h_edulev2	-0.0156 (0.118)	0.164* (0.0906)	-0.0706 (0.110)	0.262*** (0.0763)
h_edulev3	0.364** (0.157)	0.143 (0.118)	0.351** (0.148)	0.191* (0.105)
h_edulev4	0.522*** (0.170)	0.590*** (0.129)	0.214 (0.177)	0.471*** (0.121)
h_agegroup2	0.0157 (0.0913)	0.00838 (0.0800)	-0.0225 (0.113)	-0.0585 (0.0801)
h_agegroup3	-0.190* (0.108)	0.0468 (0.0794)	-0.208* (0.122)	-0.0272 (0.0847)

h_agegroup4	-0.200* (0.105)	-0.168* (0.0870)	-0.366*** (0.133)	-0.262*** (0.0844)
h_mstat2	0.0442 (0.150)	-0.444*** (0.157)	0.00139 (0.168)	-0.396* (0.212)
h_mstat3	0.619*** (0.221)	-0.688* (0.397)	0.250 (0.420)	-0.492 (0.536)
h_mstat4	-0.119 (0.230)	-0.433 (0.275)	-0.229 (0.239)	-0.424 (0.342)
h_mstat5	0.0516 (0.162)	-0.204 (0.236)	0.0249 (0.191)	-0.254 (0.260)
_cons	8.826*** (0.259)	9.758*** (0.183)	9.437*** (0.590)	9.661*** (0.352)
N	539	922	539	922
R-sq	0.155	0.242	0.146	0.197

Standard errors in parentheses

Note: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

Source: Authors' Calculations based on survey database

Table 9 : Impacts of remittances on household income per capita
by gender

Independent Variable	Log of per capita income			
	OLS		Fixed Effect	
	Female	Male	Female	Male
	<i>Coeff. (SE)</i>	<i>Coeff. (SE)</i>	<i>Coeff. (SE)</i>	<i>Coeff. (SE)</i>
remittance_dum	0.464*** (0.0756)	0.574*** (0.0734)	0.420*** (0.0796)	0.546*** (0.0518)
hh_shock	-0.0897 (0.0727)	-0.0976 (0.0698)	-0.161* (0.0952)	-0.0126 (0.0638)
urban	0.0138 (0.108)	0.169** (0.0722)	0.145 (0.377)	0.284 (0.236)
head_kinh	0.667*** (0.127)	-0.250* (0.133)	0.209 (0.475)	-0.236 (0.293)
no_child	-0.167*** (0.0369)	-0.109*** (0.0270)	-0.131*** (0.0421)	-0.0902*** (0.0288)
w_adult	0.0470 (0.0305)	0.00541 (0.0213)	0.0218 (0.0287)	-0.00721 (0.0194)
gender_eq	-0.0144 (0.105)	0.161*** (0.0557)	-0.0133 (0.0935)	0.153*** (0.0580)
h_edulev2	-0.0115 (0.118)	0.142 (0.0866)	-0.0712 (0.110)	0.237*** (0.0768)
h_edulev3	0.407** (0.156)	0.119 (0.114)	0.385*** (0.148)	0.145 (0.105)
h_edulev4	0.648*** (0.187)	0.676*** (0.127)	0.315* (0.179)	0.535*** (0.122)
h_agegroup2	0.0265 (0.0922)	0.0368 (0.0805)	-0.0138 (0.113)	-0.0251 (0.0803)

h_agegroup3	-0.161 (0.105)	0.0909 (0.0777)	-0.194 (0.122)	0.0191 (0.0846)
h_agegroup4	-0.185* (0.105)	-0.172* (0.0888)	-0.354*** (0.133)	-0.266*** (0.0850)
h_mstat2	0.0901 (0.150)	-0.419*** (0.128)	0.0444 (0.169)	-0.382* (0.213)
h_mstat3	0.456* (0.247)	-0.385* (0.205)	0.139 (0.418)	-0.153 (0.540)
h_mstat4	-0.0304 (0.218)	-0.392 (0.271)	-0.158 (0.240)	-0.357 (0.344)
h_mstat5	0.0668 (0.167)	-0.182 (0.223)	0.0376 (0.191)	-0.241 (0.262)
_cons	8.616*** (0.303)	9.642*** (0.178)	9.224*** (0.595)	9.574*** (0.355)
N	539	922	539	922
R-sq	0.161	0.235	0.146	0.187

Standard errors in parentheses

Note: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

Source: Authors' Calculations based on survey database