Income Inequality and Migration in Vietnam[1)]

NGUYEN Tien Dung

In this paper, we have analyzed the recent trends in income inequality, internal and international migrations and investigated the impact of migration on income distribution in Vietnam. Our analysis shows that the effects of migration on income inequality vary with different types of migration, depending on who migrate and where they migrate. Foreign remittances tend to flow toward more affluent households, and they increase income inequality. By contrast, domestic remittances accrue more to low-income groups and this source of income has equalizing effects on income distribution. The major policy implication of our analysis is that migration can serve as a channel to distribute the benefits of economic growth to the poor and low-income groups.

Ⅰ. Introduction

Migration can have profound effects on the economy and household welfare. The movement of labor from surplus areas to the shortage areas improves the allocation of resources and promotes economic growth. The remittance flows sent by international migrant workers are a direct contribution to the national income and an important source of foreign exchange. Domestic and foreign remittances are also an additional source of income, and contribute to household consumption and investment. When remittances are used for investment, they can have a long-lasting effect on household welfare. Migration not only generates higher income, but also offers opportunities for migrants to improve their skills and become more productive after returning home.

Vietnam has achieved a high economic growth during the last two decades of rapid transformation from a centrally planned economy to a market one. The broad-based economic growth has significantly improved the living standard for the majority of Vietnamese people, including those from the poorest segment of the population. Together with the high economic growth, the last two decades have witnessed a substantial increase in the flows of migration. The expansion of manufactures and services has attracted surplus agricultural labor and resulted in a large flow of rural migrants toward urban centres. At the same time, Vietnam has promoted the export of workers to the neighboring Asian countries, Europe and Middle East.

However, concern has increased over the large flows of rural migrants into urban areas and the pressures they have on urban economic and social infrastructures. As a result, the government has adopted a cautious policy approach toward internal migration. Barriers and restrictions of different types have remained in the registration system to control the migration flows, especially the flows of rural migrants to urban areas. Besides that, the inadequate management of labor export activities has increased the cost and risks of international migration and restricted the access to international labor markets of workers from low-income households. Despite the increasing migration flows and the profound impacts they have on economic development, limited attention has been given to study the effect of migration on the economy and its effect on poverty and income distribution in particular.

In this paper, we analyze the link between migration and income distribution in Vietnam, making use of different information sources from household and migration surveys and the population census. We take into account different types of domestic and foreign migration and employ the decomposition technique to investigate their impacts on income inequality. The paper continues with a brief overview of economic growth and inequality in Vietnam in Section II. It is followed with a discussion of the recent trends in domestic and international migration in Section III. Section IV gives a brief literature review of the theoretical and empirical research on the relationship between migration and inequality. The decomposition analysis of the impacts of migration on income distribution is conducted in Section V. Section VI summarizes the findings and gives some policy implications.

Ⅱ. Growth and Inequality

Vietnam has achieved an impressive economic growth, averaging around 7% per year over the last two decades. The high economic growth has been brought about by the comprehensive economic reforms, which have been conducted since the late 1980s to transform Vietnam's economy to a market one. The reforming and restructuring of state-owned enterprises and the encouragement of the private sector have improved the efficiency of the state sector and provided dynamism to the economy. At the same time, the implementation of open-door policies through the progressive liberalization of trade and investment regimes has spurred exports and attracted a large amount of foreign direct investment. Exports and foreign investment have been the major engines of growth and significantly contributed to the overall economic growth.

Vietnam started its economic growth from a very low level of development. In the early 1990s, Vietnam was among the poorest countries in the world with per capita GDP of around $200. A large part of population then was living in poverty with the poverty incidence reaching nearly 60% of the population. The high economic growth achieved over the last two decades has substantially improved the living standard for the majority of Vietnamese people and sharply reduced the poverty incidence. Income per capita has increased more than five times since the early 1990s and reached over $1300 in 2010, and the proportion of the population living under the poverty line dropped sharply to 14.7% in 2008.

In addition to the rapid poverty reduction, Vietnam has been able to avoid a sharp deterioration in income distribution during the period of high economic growth. All the inequality indices indicate a relatively equal income distribution. The expenditures-based Gini coefficients ranged between 0.37 and 0.38 during the period between 2002 and 2008. A greater degree of inequality is observed in the distribution of income with the income-based Gini coefficients ranging between 0.40 and 0.45[2]. The relatively low level of inequality observed in Vietnam is largely in line with the hypothesis of the inverted-U curve. Vietnam is more equitable than Thailand and China, which have income per capita of three times higher than Vietnam. However, it is less equitable compared to lower income countries, such as Laos and Bangladesh.

The Gini coefficients have remained quite stable over the last decade, and the expenditure-based Gini coefficients even slightly declined between 2002 and 2008. Income distribution follows different trends in rural and urban areas.

Table 1 Income Inequality in Vietnam

	2002	2004	2006	2008
Expenditure-based Gini Coefficient	0.38	0.38	0.37	0.37
Urban	0.37	0.35	0.34	0.37
Rural	0.31	0.32	0.33	0.33
Income-based Gini Coefficient	0.42	0.41	0.41	0.45
Urban	0.40	0.39	0.38	0.43
Rural	0.36	0.36	0.38	0.40
Per capita Income (1000 VND)	4585	6464	8473	12658
By Areas of Residence				
Urban	7831	10642	13302	20413
Rural	3470	5012	6712	9695
By Quintile Groups				
1	1736	2372	3113	4484
2	2591	3683	4891	7115
3	3463	4933	6780	9720
4	4831	6932	9527	13896
5	9794	14025	18058	28078

Source: Author's calculation based on Vietnam Household Living Standards Surveys 2002-2008

Inequality is low in rural areas compared to urban areas, and this is partly attributable to the relatively equitable land distribution in rural areas. Income distribution deteriorated quickly in rural areas with the income based Gini coefficients increasing from 0.36 in 2002 to 0.40 in 2008. In urban areas, income distribution improved slightly until 2006, but it worsened between 2006 and 2008. The urban Gini index declined from 0.40 to 0.38 between 2002 and 2006, and then it increased to 0.43 in 2008.

The other noticeable trend in inequality is the declining regional disparities, both between economic regions and rural and urban areas. The rural-urban gap has been considerably narrowed in recent years after rising in the 1990s. The gap in per capita income between urban and rural areas amounted to 2.25 in 2002 but declined to 2.10 in 2008. One possible explanation for the declining rural-urban gap is the rising international food prices during this period that made many rural households better off. The diversification of rural economy and the migration flows to urban areas also contributed to rising rural incomes and narrowed the rural-urban gap. The decline in rural-urban gap partly compensated for the rising inequality within regions and helped to maintain a relatively stable income distribution.

There are several possible explanations for the relatively equal and stable income distribution observed in Vietnam. Firstly, the relatively equal land distribution allows rural people, especially poor rural people, to benefit from the growth of agriculture. Secondly, the expansion of informal services and small-scale manufactures also provides jobs and income opportunities to unskilled workers from poor households and allows the poor to share the fruits of the economic growth. Since agriculture and small business are the major sources of income for rural households and other low-income groups, the growth of these sectors has significantly contributed to poverty reduction and income equality.

In addition to the land distribution and the expansion of informal and small business, the relative wage equality also contributes to the equal income distribution. The experiences of Vietnam are different from other countries such as China where the wage gaps increased substantially during the process of economic development. In the case of Vietnam, the wage gaps by economic sectors and skills are not large, and have remained relatively stable over the last decade. According to the decomposition analysis conducted in Nguyen (2011), the falling wage gap largely contributed to the improvement in income distribution between 2002 and 2006.

Ⅲ. Migration Trends

Information on migration is available from different sources, including the population census, migration surveys and living standard surveys. However, none of these surveys provides a comprehensive picture of migration trends. The population census is conducted every ten years, and it provides the most comprehensive information on Vietnam's population. The Vietnam Living Standard Surveys (VHLSS) are the large-scale multi-purpose household surveys, which collect information on the living of Vietnamese people every two years. Vietnam Migration Survey (VMS) conducted in 2004 is the only specialized survey on migration that has been conducted so far. This survey contains rich information on migration, but it is not nationally representative and covers only domestic migration[3].

Each survey, however, adopts its own definition of migration, thus is able to capture only certain types of migration. Moreover, the population census and migration survey provide only limited information on household consumption and income, thus making it difficult to analyze the impacts of migration on poverty and inequality. By contrast, the household living standard surveys provide rich information on household welfare, but they offer very limited information on the characteristics of migrants. In this section, we will make use of the latest information from different sources to give an overview of the recent trends and patterns of migration in Vietnam.

1. Trends in Internal Migration

The last two decades have witnessed a sharp increase in internal migration. According to the latest population census conducted in 2009, around 6.7 million persons or 8.5% of total population were recorded as migrants during the period. Around half of total migrants moved between provinces, while another half moved between districts and communes within provinces. The migration flows have substantially accelerated in the 2000s as compared to the 1990s. For example, the number of migrants, who moved between districts and provinces, increased by 60% between 2009 and 1999, which is two times higher than the increase of 30% observed between 1999 and 1989.

Young people constitute a large part of migration flows, especially for long-distance migration. According to the 2009 population census, the age of migrants averaged around 28 for within-province migrants, but declined to 26.5 for between-province migrants. Female migrants accounted for more than half of total migration flows. The share of female migrants in total migrants increased substantially from 47% in 1989 to 53% in 1999, and further rose to 56% in 2009. Female migrants tend to participate

Table 2 Trends in Internal Migration

Units: 1000 persons

	1989[a]	1999	2009
Total	2416.6	4481.7	6725.0
Within-district migration		1342.5	1618.2
Between-district migration	1067.3	1137.9	1708.8
Between-province migration	1349.3	2001.3	3398.0
Male	1287.4	2076.7	2927.0
Within-district migration		561.1	589.7
Between-district migration	513.9	514.4	742.0
Between-province migration	773.5	1001.2	1595.3
Female	1129.2	2405.0	3798.0
Within-district migration		781.4	1028.5
Between-district migration	553.4	623.5	966.8
Between-province migration	575.8	1000.1	1802.7
By type of migration[b]			
Rural to urban		855.9	2062.2
Rural to rural		760.9	2204.4
Urban to urban		971.5	1719.1
Urban to rural		219.7	547.6

Sources: GSO (2010)

Notes: (a) The 1989 population census does not record the within-district migration

(b) Covering only persons of over 5 years old

more in short-distance movement such as movement between districts or within districts. For instances, more than 60% of between district migrants were female, but the share of female migrants declined to 53% for between province migration.

More than 50% of migrants moved to cities from either rural areas or other cities, and the migration flows to cities accounted for a large part of the total migration flows in the last decade. Around one-third of migrants moved within rural areas, while only a small portion of migrants moved to rural areas from urban areas, consisting of mostly adult persons. The migration flows are highly concentrated in the urban centres such as Hanoi in the North and Ho Chi Minh City in the South.

However, the information from the population census does not reflect well the real picture of migration in Vietnam. In the population census, migrants are defined as those persons who were residing in a place different from the place they previously resided in the five years prior to the survey. Thus, the population census does not take into account temporary migrants who moved to other places but returned home during the last five years prior to the survey. The information from the household surveys can be used as a complementary source for evaluating the scope and extent of migration flows. Studies using household surveys often define migration using the information on household member status and the number of months individuals were living with their families[4]. The problem with using the household surveys for measuring migration is that, as households are the sampling unit, the household surveys cannot cover those persons who migrate with the household[5].

Empirical studies using the VHLSS also indicate a large and increasing internal migration in Vietnam. Based on VHLSS in 2002 and 2004, Phuong et al. (2008) reported that temporary or short-term migrants accounted for 2.6% of individuals of age 15 or above, whereas long-term migrants constituted around 10.7% of total individuals. This study considers as short-term migrants any individual who lived away from home for at least one month but no more than six month. Long-term migrants are those individuals who are household members in 2002 but are no longer a member of the household in 2004.

In the VHLSS conducted in 2008, a sub-section was added to collect information on work migrants. The 2008 VHLSS asked information for individuals who are away from home for more than six months, but can return home in the future and still contribute to household income (GSO 2008). This section covers both internal and overseas migrant workers, who leave household in the last years or many years ago. Based on this definition, the number of work migrants totaled to around 2.8 millions or around 4.2% of people aged 15 or over.

The increasing migration flows have been driven by both the push and pull factors. The economic growth has been highly concentrated in the urban centres and nearby provinces. These urban centres, including Hanoi and Ho Chi Minh City, have enjoyed higher economic growth compared to the national average, and have created job and income opportunities to attract large flows of immigrants. If the expanding economic activities in the urban areas serve as a pull factor, the high level of underemployment and unemployment in rural areas acts as a push factor for migration. Due to limited arable land and the lack of off-farm jobs, the underemployment rates are high in rural areas and create a large supply of rural migrants[6]. The majority of migrants leave their home in search for better economic opportunities in cities and industrial areas. The 2004 VMS shows that nearly 70% of migrants cited economic motives for their movement, and this figure was as high as 80% in Ho Chi Minh City.

The reforms of the labor market and household registration system have further contributed to the recent increase in internal migration. In the past, Vietnam adopted a restrictive registration system to control and limit internal migration partly for security purposes and partly for reducing excessive concentration in urban areas[7]. The Law on Residence promulgated in 2007 has made an important step in liberalizing the household registration system through the removal and relaxation of many restrictions on registration[8]. However, the Law on Residence has not been effectively applied in practice. Large migration flows have created increasing pressures on social and economic infrastructures in big cities. Local governments are increasingly concerned with the negative effects of internal migration, and some have been seeking new measures to restrict migration flows. The conditions for obtaining permanent status and the requirement of the permanent status for administration procedures are the most common forms of restrictions. Some local governments require migrants to have permanent jobs or houses to be eligible for the permanent status[9]. At the same time, the permanent status is required for buying houses, registering motorcycles, or accessing educational services.

These requirements and restrictions create costs and difficulties for migrants, especially for temporary and unregistered migrants. The 2004 VMS shows that accommodation, jobs and the limited access to education services are among the difficulties frequently reported by migrants. According to the 2004 VMS, around 60% of migrants reported problems with housing, and only one third of migrants reported that they have a better accommodation than their origin place. At the same time, nearly 20% of migrants reported that the educational conditions become worse at the new destination. There is still a lack of supporting policies for internal migrants. The 2004 VMS shows that most of migrants received support from friends and relatives, and only a small proportion reported that they received assistance from the local government at the destination[10].

2. Characteristics of Internal Migrants

Most of migrants are unskilled or semiskilled workers. The 2004 VMS also shows that most of them were able to obtain a job at the destination, but with the exception of Hanoi. Most of work migrants looked for job in the private sector. On average, more than 30% of migrants work in the private firms or foreign invested firms, and more than half of work migrants engaged in the informal sector with probably low pays and poor working conditions. On average, migrant workers earned 20% less compared to non-migrants, and the wage gap between migrants and non-migrants was wider for female workers.

Table 4 presents the information on the propensity to migrate, the composition of migrants and remittances broken down by quintile groups. We distinguish two types of internal migration: the migration flows to the urban centres and

Table 3 Monthly Income of Migrants and Non-migrants

	Total		Male		Female	
	Migrants	Non-migrants	Migrants	Non-migrants	Migrants	Non-migrants
Total	957	1212	1105	1280	839	1141
By destination of migrants						
Hanoi	1136	1276	1364	1410	958	1147
North Eastern Economic Zones	1017	1184	1236	1251	836	1120
Central Highland	504	669	531	671	477	665
Ho Chi Minh City	1064	1489	1228	1713	939	1264
South Eastern Economic Zones	1098	1522	1300	1681	960	1404

Sources: Vietnam Migration Survey 2004, GSO (2004)

other domestic migration. The migration to the urban centres consists of work migrants to Hanoi and Ho Chi Minh City, which are the largest cities in Vietnam. Other domestic migration includes the workers moving between rural areas and those moving to small urban areas. As shown in Table 4, the propensity to migrate varies considerably with the income level. The propensity to migrate is low for the poorest segment of the population. Then it increases and reaches the highest level for the middle-income group and starts to decline for high-income groups. This pattern of migration is similar to what is observed

Table 4 Internal Migration and Income Distribution

	Unit	Total	Quintile Groups[a]				
			1	2	3	4	5
Share of migrants in the population of working ages	%	4.2	3.7	5.0	5.0	4.4	3.3
Within-province migrants	%	0.5	0.3	0.4	0.4	0.7	0.5
Migrants to urban centres[b]	%	2.2	2.0	2.7	2.3	2.4	1.6
Other domestic migrants	%	1.6	1.3	1.9	2.2	1.3	1.2
Composition of migrants by quintile groups							
Within-province migrants	%	100.0	12.0	14.5	18.9	30.6	24.1
Migrants to the urban centres[b]	%	100.0	16.5	24.0	21.2	22.9	15.4
Other domestic migrants	%	100.0	14.6	23.0	28.5	17.6	16.3
Remittances per migrants							
Within-province migrants	1000 VND	4052.8	2039.7	2783.4	5023.3	5183.2	3624.1
Migrants to the urban centres[b]	1000 VND	3738.3	3219.3	3304.2	3854.7	4356.0	3850.4
Other domestic migrants	1000 VND	4470.4	3374.3	3339.0	3493.5	5620.9	7520.3
Composition of remittances by destination							
Within-province migrants	%	100.0	6.1	9.9	23.4	39.1	21.5
Migrants to the urban centres[b]	%	100.0	14.2	21.2	21.9	26.7	15.9
Other domestic migrants	%	100.0	11.0	17.2	22.3	22.1	27.4

Source: Author's calculation based on Vietnam Household Living Standards Surveys 2008

Notes: (a) Group 1 is the poorest quintile; Group 5 is the richest quintile

(b) The urban centres are Hanoi and Ho Chi Minh city in other developing countries. Poor households migrate less because they cannot afford the cost and risk associated with migration, but rich households have less economic motives to migrate. According the 2008 VHLSS, the share of migrant workers in total household members of working age increased from 3.7% for the poorest quintile, reached 5% for the second and third quintiles, and then declined to 3.3% for the richest quintile.

There is also a difference on the destination among income groups. Workers from low-income groups tend to migrate more to the urban centres than those from affluent households. This is largely caused by the flows of poor migrants, who reside in the nearby areas and take the advantage of geographical proximity to look for economic opportunities in the urban centres[11]. Poor workers with low skill levels tend to engage more in the informal sector. By contrast, migrants from better-off households are more likely to take jobs as the professionals or skilled workers in the formal sector. The 2008 VHLSS shows that nearly half of poor migrants had unskilled jobs in the destination, and only a small share of poor migrants (around 2%) worked as professional or managers. By contrast, nearly 20% of migrants from the richest households work as professionals and managers at the destination. Migrants from high-income households tend to remit more compared to those from low-income households, but the differences in the average remittances per migrants are not large, especially for the migration flows to the urban centres.

3. International Migration

Vietnam started to export workers to former Soviet Union and Eastern European countries in the 1980s, but it was interrupted in the early 1990s due to the collapse of the Soviet bloc. In the mid 1990s, Vietnam resumed the export of labor and redirected it toward Asian economies with Korea, Taiwan and Malaysia being the main destination. In recent years, Vietnam has managed to diversify the market for its workers toward Middle East and European countries. The number of exported workers has substantially increased over the last decades, from 36,000 workers in 2001 to 87,000 workers in 2008. It is estimated that between 300,000 to 500,000 Vietnamese workers are currently working abroad[12].

Young and unskilled labors constitute the majority of Vietnam's overseas workers. They engage in different industries including manufactures, construction, shipping and house services. Salaries and working conditions for overseas workers vary considerably with the destination. The monthly salary can reach as much as $1500 in high-income countries such as Japan or United Kingdom, but it ranges between $150 to $500 in middle-income countries like Malaysia and Taiwan. The working tenure usually lasts for two to three years and it can be extended up to 6 to 7 years in Malaysia and Taiwan[13].

The cost of international migration appears to be much higher than domestic migration. Currently, qualified enterprises with the license from the government are responsible in recruiting and monitoring overseas workers. Workers are required to pay for recruitment, training, passport and visa. Financial support for training is provided by the government through the Promotion Fund for Overseas Labors, targeting at migrant workers from poor households and ethnic minorities. The government also imposes the ceiling on the brokerage fees to prevent placement enterprises from charging excessive costs. However, these policies are not very effective in reducing the financial burden for international migrants. Overseas workers and rural workers in particular often have to go through brokers, and in such cases, they have to pay substantial additional fees[14].

The export of labor has significantly contributed to Vietnam's economy by creating jobs for unskilled and underemployed workers in both rural and urban areas, and generating additional incomes for the workers and their families. Remittances from overseas workers constitute a major source of foreign exchange for the economy. There is no official statistics on the amount of money sent by overseas workers, but the balance of payment statistics shows a substantial increase in the remittance flows during the last decade. The annual remittance flows increased from around $1 billion in the late 1990s to $7.9 billion in 2010. In 2010, the receipt of remittances was roughly the same as the amount of FDI disbursements, and was around two times higher than the amount of ODA disbursements.

It should be noted that, on the one hand, a considerable amount of remittances does not go through the banking system, and thus it is not counted in the official statistics. On the other hand, not all the recorded remittance flows are sent by migrant workers. The large part of remittances is flowed from overseas Vietnamese residents and refugees to their relatives and families in Vietnam[15]. It is estimated that only around one-fourth of the recorded remittances, or around $2 billion, are linked to overseas workers. The low level of remittances from migrant workers largely reflects the fact that most of Vietnamese workers engage in low-pay jobs in middle-income countries.

The high cost and risk associated with international migration prevent rural and poor workers from accessing overseas labor markets. Better-off households show much higher propensity to migrate and work in foreign countries.

Table 5 International Migration and Income Distribution

	Unit	Total	Quintile Groups[a]				
			1	2	3	4	5
Share of migrants in the population of working ages	%	0.53	0.30	0.52	0.51	0.57	0.71
Composition of migrants	%	100.0	10.1	18.8	19.5	22.8	28.9
Remittances per migrants	1000 VND	42386.5	10848.2	31638.4	28870.7	52802.5	61418.2
Composition of remittances	%	100.0	2.6	14.0	13.3	28.4	41.8

Source: Author's calculation based on Vietnam Living Standards Surveys 2008
Notes: (a) Group 1 is the poorest quintile; Group 5 is the richest quintile

According to the 2008 VHLSS, just 10% of overseas workers were from the first quintile group, whereas the richest quintile accounted for nearly 30% of international migrant workers. Furthermore, poor households with limited ability to finance the cost of migration do not have opportunities to access well-paid labor markets in high-income countries, which are apparently associated with high costs and risks. Poor workers tend to engage in low-pay jobs, and thus they earn less and remit less compared to workers from rich households. On average, a migrant worker from the poorest quintile remits about one-sixth of the amount remitted by a migrant worker from the richest quintile. Only 16% of total remittance flows accrued to the first two quintile groups, and less than 3% of total remittances flowed to the poorest quintile group. By contrast, rich households engage more in international migration and gain much more than poor ones. According to the 2008 VHLSS, more than 40% of total remittances flowed to the richest quintile, and nearly 30% of total remittances accrued to the upper-middle income groups. There are, however, no considerable differences between the second and third quintile groups in terms of the access to international labor markets. These two groups have similar propensities to migrate and the level of remittances per workers.

Ⅳ. Migration and Inequality: A Review of Literature

Migration can affect poverty and income distribution through its effect on household income and consumption. While empirical studies have consistently shown that migration increases income for the poor and reduces poverty, the relationship between migration and inequality is both theoretically and empirically ambiguous. The effect of migration on income distribution depends on the composition of migrants. If workers from poor households have greater access to migration, they would be able to create more income and remittances for their families. Migrants to a high-income destination can be better paid compared to those migrating to a low-income destination, and they can save and remit more.

Empirical studies often find contradicting evidence on the relationship between migration and inequality. Some studies find the increasing effect of migration on income inequality, and other studies show the decreasing effect of migration. Portes (2009) conducted a cross-country analysis to quantify the effect of remittances on income inequality. He finds that remittances have the strongest positive effects on low-income groups. The effect of remittances declines with the income level and becomes negative for the two richest decile groups. Furthermore, remittances have a stronger positive impact on the poor in low-income countries than rich countries. The finding by Portes (2009) suggests that migration reduces poverty and inequality in developing countries.

In an empirical study for Latin American countries, Acosta (2007) finds mixed evidence on the relationship between international migration and inequality. The distributional effect of migration varies with countries and the estimation techniques. International remittances have increasing effects on income inequality in some countries but decreasing effects in other countries. The Gini decomposition by income sources conducted for each countries shows that remittances have an unequalizing effect on income distribution in six out of ten countries covered in the study[16].

Using a cross-country analysis, Ebeke and Le Goff (2009) analyze the ambiguous relationship between migration and inequality and find that the effect of international migration on income distribution depends on the cost of migration, the level of economic development and the level of brain drain in sending economies. The high cost of migration restricts the poor's participation into international migration and migration is likely to increase income inequality. At a high level of income, liquidity constraints are less binding and people can afford the risk and costs associated with international migration. The empirical results from Ebeke and Le Goff (2009) suggest that international migration improves income distribution in the sending countries where the level of income is relatively high, the cost of migration is low, and unskilled workers engage more in the migration flows.

Empirical studies also take into account the role of migration networks and its effect on the relationship between migration and inequality. The expansion of migration networks reduces the cost of migration and spreads the benefit to low-income groups. McKenzie and Rapoport (2004) find suggestive evidence on the inverted-U relationship between migration and inequality. Migration initially increases inequality when the migration network is low and migrants are more likely come from middle-income and high-income households. At the high level of migration prevalence, the cost of migration becomes relatively low compared to income, and wealth constraints become less binding. More poor people can engage in migration, and this enhances the equalizing effect of migration.

In a study for rural Mexico, Taylor et al. (2005) shows that international migration increases inequality in the regions with a low propensity to migrate, but it has a decreasing effect on inequality in the regions with the high proportion of international migration. In the region with a high propensity to migrate, the network of migrants and the information flows reduce the risks and costs of migration and increase the opportunities of finding jobs in the new destination, and thereby allowing more poor people to migrate. The network effect of migration suggests that migration may initially increase inequality, but it improves the income distribution in later stages as the network of migrants expands.

The effect of migration on inequality also varies with the forms of migration. International migration generates higher remittance flows but it also involves higher costs and risks compared to internal migration. As a result, the poor's access to international migration is limited, and poor households largely engage in low-return domestic migration. International migrants largely come from better-off households, which can afford the high costs and risks of international migration. As such, the flow of international remittances largely accrues to more wealthy households and worsens income distribution. In rural Burkina Faso, Wouterse (2008) shows that long-distance international migration and within-Africa migration have different distributional effects. Although long-distance international migration raises income of the poor, but it brings more benefits to the rich and increases income inequality. By contrast, internal migration shows a decreasing effect on income inequality. In rural Nigeria, Olowa et al. (2012) also find that international remittances flow more to affluent households with higher number of educated adults and land holdings, and thus they have a negative effect on income distribution. Meanwhile, domestic remittances have equalizing effects on income distribution.

V. The Effect of Migration on Inequality in Vietnam: A Decomposition Analysis

1. Gini Decomposition by Income Sources

Following Taylor et al. (2005), we employ the decomposition technique, which is widely used in the empirical literature on income distribution, to analyze the impact of migration on income inequality. The decomposition analysis by income sources allows for the assessment of the impacts of different income components on total inequality. This method takes remittances as exogenous sources of income and does not account for any changes in other income components that may be caused by migration. We use the Gini coefficient to measure the income inequality since this index can be decomposed by income sources.

Suppose there are I income components y_1, y_2, ... y_I, and the total income Y equals to the sum of these income components. The Gini index can be written in the covariance form as follows:

$$G_Y = 2\frac{cov(y_i, F(Y))}{\bar{Y}} \tag{1}$$

Gini coefficients from each income source can be written as:

$$G_i = 2\frac{cov(y_i, F(y_i))}{\bar{y_i}} \tag{2}$$

Here G_Y is Gini index for total income distribution, and F(Y) is the cumulative distribution function of per capita income; $F(y_i)$ is the cumulative distribution function for income source i. Gini index can be rewritten as follows:

$$G_Y = \Sigma_i S_i R_i G_i \tag{3}$$

Here S_i is the share of source i in total income; G_i is Gini index for income source i; and R_i is the correlation between income source i with distribution of total income. The correlation coefficient R_i runs from -1 to 1. The negative R_i means that income source i is distributed in favor of poor households. A positive and large R_i means that income source i is allocated in favor of rich households.

Equation (3) makes clear that the contribution of each income source to total income inequality depends on three factors: the share of each income source in total income, the degree of inequality of each sources, and the correlation of each income sources with total income. The higher the proportion of source i in total income, the larger the effect this source has on total income inequality. The source Gini G_i measures the distribution of income from source i. A high G_i means that the income component i is unequally distributed, but this does not necessarily increase total equality. How the source Gini affects income distribution also depends on the correlation between the income component and total income. If the income component i is unequally distributed toward low-income groups, the high source Gini will reduce income inequality. However, if the income source i is distributed toward high-income groups, the high source Gini will increase income inequality.

In Equation (3), $S_iR_iG_i$ measures the absolute contribution of source i to total Gini. Raising income from source i by $(1+e_i)$, one can derive the marginal contribution of each income source as follows:

$$\frac{\partial G_Y}{\partial e_i} = S_i(R_iG_i - G_Y) \tag{4}$$

Dividing by G_Y, we have:

$$\frac{\partial G_Y/\partial e_i}{G_Y} = S_i\left(\frac{R_i G_i}{G_Y} - 1\right) \tag{5}$$

Equation (5) measures the change in total inequality due to an increase in income source i in the term of percentage changes. The term ($R_i G_i/G_Y$) is often referred to as the Gini elasticity of income. This elasticity shows the effect of each sources on income inequality. If the Gini elasticity for source i is less than one, a uniform increase in the source i would reduce total income inequality. In this case, the source i would have an equalizing effect on income distribution. By contrast, if the Gini elasticity is greater than one, the income source would have an unequalizing effect on income distribution.

2. Empirical Results

Empirical studies on migration and income distribution often use total domestic and foreign remittances to assess the impact of migration on income inequality. However, using this information has one disadvantage that domestic and foreign remittances have a broad scope and they are not necessarily linked to migration. In the case of Vietnam, domestic remittances also include the money sent by relatives and friends of the households. Similarly, as noted in the previous section, remittances from overseas workers only account for a small share in total remittance flows, and the large part of the remittance flows are from overseas Vietnamese residing in foreign countries.

In this section, we make use of Vietnam Household Living Standard Survey (VHLSS) conducted in 2008 for the decomposition exercise. The 2008 survey has a sub-section on work-related migration, which contains information on migrant workers, the destination of migration and remittance flows. This allows us to analyze the impact of migration-linked remittances on income inequality. We take into account three types of migration: international migration, the migration flow to the urban centres and other internal migration. We distinguish the migration flow to urban centres from other internal migration since the former has constituted a large proportion of total internal migration flows and it has been the subject of different restricting and controlling policies.

In our decomposition exercise, total household income consists of self-employed agricultural income, self-employed non-agricultural income, wage income, income from rents and profits, government subsidies, and remittances from work migrants. Government subsidies consist of retirement payments, educational and health subsidies, cash transfers and other direct support from the government. Remittances are further divided into foreign remittances, remittance flows from the urban centres (Hanoi and Ho Chi Minh City), and other domestic remittances.

Table 6 reports the result of the decomposition analysis. For each income components, we report the share of each income source in total income, the concentration index, the source Gini, and the correlation ratio. We also calculate the absolute contribution to total income inequality, the Gini income elasticity, and the marginal contribution of each income sources to total inequality.

As can be seen from Table 6, income from agriculture, wage income and income from self-employed non-agricultural activities are the major sources of household income. These income sources contribute to nearly 90% of total incomes and have a strong impact on overall income distribution. Income from non-agricultural activities is distributed in favor of high-income groups, and this income component has a strong unequalizing effect on income distribution. By contrast, agricultural income is distributed more toward low-income groups, and this source has a decreasing effect on total income inequality. The effect of wage income on inequality is largely neutral, with the Gini elasticity for wage income slightly exceeding one. Among other sources of income, rents and profits show a large unequalizing effect on income distribution. By contrast, the government subsidy improves income distribution but its equalizing effect is rather limited. This is because retirement payments, which constitute a large proportion of government subsidies, largely flow to middle income groups.

All the three types of remittances have high source Gini coefficients, but the correlation ratios vary considerably with different types of remittances. Foreign

Table 6 Decomposition of the Gini Coefficient by Income Sources

	Income Share	Concentration Index	Source Gini	Absolute Contribution To Total Inequality	Relative Contribution To Total Inequality	Correlation Ratios	Gini Income Elasticity	Percentage Change[b]
Self-employed agriculture	0.270	0.252	0.673	0.068	0.152	0.375	0.562	-0.118
Wage Income	0.364	0.465	0.689	0.169	0.377	0.675	1.036	0.013
Self-employed non-agricultural activities	0.252	0.611	0.847	0.154	0.343	0.722	1.360	0.091
Foreign remittances	0.011	0.747	0.994	0.008	0.019	0.752	1.664	0.008
Domestic remittances from the urban centres	0.004	0.001	0.981	0.000	0.000	0.001	0.001	-0.004
Other domestic remittances	0.005	0.150	0.985	0.001	0.002	0.152	0.334	-0.003
Government subsidies[a]	0.055	0.391	0.880	0.022	0.048	0.445	0.871	-0.007
Income from rents, profits and interest earnings	0.022	0.776	0.982	0.017	0.037	0.790	1.727	0.016
Other incomes	0.018	0.591	0.967	0.010	0.023	0.611	1.317	0.006
Total household income	1.000	0.449	0.449	0.449	1.000		1.000	

Sources: Author's calculation based on Vietnam Household Living Standard survey 2008

Note: (a) Government subsidies consist of retirement payments, cash transfers and other direct support.

(b) The column shows the percentage change in total Gini caused by a one-percent increase in income source i.

remittances have a high correlation ratio, suggesting that the distribution of foreign remittances is strongly biased toward high-income households. By contrast, remittance flows from the urban centres and other domestic remittances have relatively low correlation ratios. As a result, domestic and foreign remittances show different impacts on income inequality. Foreign remittances have a strong unequalizing effect, while domestic remittances show an equalizing effect on income distribution. Furthermore, the migration flows to the urban centres have a stronger equalizing effect compared to other internal migration. The strong equalizing effect observed for the remittance flows from the urban centres largely reflects the fact that poor migrants constitute a large part of the migration flows into the urban centres.

The Gini income elasticity of foreign remittances is 1.66, which is only slightly lower than the Gini elasticity of income from rents and profits. The Gini income elasticities for domestic remittance flows are low, especially for remittances from the urban centres. As seen in Table 6, domestic remittances are the most equalizing income sources. For example, the Gini income elasticities for remittances flows from the urban centres and other domestic migration, which are 0.001 and 0.334 correspondingly, are much lower than the Gini elasticity observed for government subsidies (0.871) and income from self-employed agriculture (0.562).

However, remittance flows only account for a small share in total income, and they have limited effects on overall income inequality. Foreign remittances account for 1.1% of total household income, while domestic remittances account for less than 1% of total income. A uniform increase in foreign remittances by one percent raises total Gini by only 0.8%. By contrast, total Gini declines by 0.4% and 0.3% for a one-percent increase in domestic remittances from the migration flow to the urban centres and other internal migration respectively.

Ⅳ. Conclusions

Together with the economic growth and the integration with the regional and global economy, the last two decades have witnessed a substantial increase in migration flows in Vietnam. In this paper, we have analyzed the trends in income inequality, domestic and international migration and investigated the impacts of migration on income distribution. Our analysis shows that different types of migration have different effects on income distribution. International migration offers much higher returns than internal migration, but the high cost and risk associated with international migration restrict the access of the poor to international labor markets. Thus foreign remittances tend to flow toward affluent households and increase income inequality. By contrast, remittances from internal migrants accrue more to low-income groups and these sources of income have equalizing effects on income distribution. The main implication of our analysis is that migration and internal migration in particular can serve as a channel to distribute the fruit of economic growth to the poor and low-income groups.

In order to enhance the equalizing effect of migration, adequate policies must be in place to further reduce the cost and risks of migration and increase the access to domestic and international migration for the poor and other low-income households. Instead of controlling and restricting the flows of rural migrants to urban areas, restrictions and barriers on the movement of labor should be further relaxed, and supporting programs should be introduced to provide training and increase jobs and income opportunities for rural migrants. In the long-run, the excessive concentration in the urban centres should be dealt with by promoting a more balanced growth between regions.

Vietnam needs to diversify further the overseas labor markets toward high-income countries. Improving workers' skills is important to expand the export of labor and improve income for migrant workers. The misconducts and wrongdoings by placement enterprises have caused excessive costs and burdens on the migrant workers, especially those from poor and rural households. A proper management of labor export activities is necessary to reduce cost and risks and increase the access of the poor to international labor markets. Support from the government through training or credit programs targeting at the poor and other low-income groups should be extended to facilitate their participation into international migration.

Acknowledgement: I am grateful to Professor Naoko Shinkai, the Graduate School of International Development, Nagoya University, for useful comments and suggestions on the earlier version of this paper.

Notes

1) This paper is published in the special issue for the Economic Research Center after reviewed by referee invited by the Center.

2) The higher degree of inequality observed for the distribution of per capita income partly reflects the fact that affluent households save more than poor ones, and thus the income gap is larger than the gap in expenditure. Furthermore, only a portion of spending on houses and durable goods are counted for in per capita expenditure, and this likely underestimates the actual consumption of durable goods and houses by rich households and the expenditure gap between household groups.

3) The Vietnam Migration Survey collected information in five areas with a high concentration of immigrants. These areas are

Hanoi, Ho Chi Minh City, Central Highlands, and economic zones in the South East and North East.

4) The Vietnam Household Living Standard Surveys define as household members all individuals who live in the same house and share expenditures and collective funds. These surveys consider as non-household members any person who lives with their family for less than 6 months over the 12 months prior to the survey. At the same time, the persons who are away from home for less than six months are still considered as members of the household. See, for example, GSO (2008) for further discussion on the matter.

5) See Phuong et al. (2008) and Marx and Fleischer (2010) for further discussion of the shortcomings of different data sources on migration.

6) According to 2008 VHLSS, an average rural laborer worked around 1600 hours a year. Given the annual working hours of 2100 hours, this implies an effective unemployment rate of 20% in rural areas.

7) See Marx and Fleischer (2010) and Abella and Ducannes (2011) for further discussion on Vietnam's household registration system.

8) The Law on Residence guarantees the freedom movement of people. It does not require migrants to have a house and a job to apply for permanent status. The only requirement for temporary residents to obtain permanent status is that they have to live continuously for at least one year in the place they want to register.

9) Some of the measures adopted by local governments are not consistent with the Law on Residence. For example, the city of Da nang recently required the applicants for the permanent status to have a stable job. In Hanoi, the capital city, having a house has remained a de facto condition for obtaining the permanent status.

10) More than 60% of migrants received support from friends, and more than 80% received support from relatives. Meanwhile, only 10% of migrants reported that they received support from the local government, and the proportion of migrants receiving support from companies and associations is negligible.

11) According to 2004 VMS, more than 70% of migrants to Hanoi are from the Red River Delta, and around 45% of migrants to Ho Chi Minh City are from the nearby provinces in the South East and Mekong Delta.

12) See Abella and Ducannes (2011) and Dang (2008) for further discussion of the trend in international migration.

13) MOLISA (2006), cited from Dang (2008).

14) As reported in Dang (2008, p.13), it is almost impossible for a worker to get an overseas job without brokers. Placement agencies often let brokers decide about fees and make prices to workers. There are concerns that some agencies and brokers have charged excessive fees. Some workers had to pay no less than $10,000 per person to go to Japan. For a given monthly salary of $1000, workers may need to save for one year to cover the initial spending.

15) Furthermore, it is reported elsewhere that a considerable part of foreign remittances is a disguised investment, which is conducted by overseas Vietnamese through their relatives and friends in Vietnam.

16) Acosta (2007) finds that international remittances improve income distribution in Mexico, El Salvador, Guatemala and Paraguay. However, remittances increase total Gini in other countries and large

unequalizing effects are found in Haiti, Peru and Nicaragua.

References

Abella, M. and G. Ducannes (2011), "The Economic Prospect of Vietnam and What It Means for Migration Policy", International Labour Organization.

Acosta, P. (2007), "What Is the Impact of International Remittances on Poverty and Inequality in Latin American?", *World Bank Working Paper series, WPS 4249*.

Dang, N. A. (2008), "Labor Migration from Vietnam: Issues of Policies and Practices", Regional Offices for Asia and Pacific, ILO Asian Regional Programme on Governance of Labour Migration Working Paper No. 4

Ebeke, C. and M. Le Goff (2009), "Why Migrants' Remittances Reduce Income Inequality in Some Countries And Not in Others", *Document de Traveil de la Serie, Etudes et Documents, E 2009:19.*

General Statistics Office (GSO) (2004), "Vietnam Migration Survey 2004", General Statistics Office, http://www.gso.org.vn/

General Statistics Office (GSO) (2008), "Operational Handbook: Vietnam Household Living Standard Survey 2008", General Statistics Office, Mimeo.

General Statistics Office (GSO) (2010), *Migration and Urbanization in Vietnam: Facts and Trends*, The Statistical Publishing House, Hanoi. (In Vietnamese).

Marx, V. and K. Fleischer (2010), "Internal Migration: Opportunities and Challenges for Socio-economic Development in Vietnam", Paper Prepared for the Programme Coordination Group on Social and Economic Development Policies of The United Nation in Vietnam.

McKenzie, D. and H. Rapoport (2004), "Network Effects and the Dynamics of Migration and Inequality: Theory and Evidence from Mexico", *Bureau for Research in Economic Analysis of Development, BREAD Working Paper No. 063.*

Ministry of Labours, War Invalids and Social Affairs (MOLISA) (2006), "Cumulated Data on Overseas Laborers by Countries of Destination", Department for Administration of Overseas Employed Labour Force, MOLISA.

Nguyen, T. D. (2011), "Vietnam Country Report: Growth, Poverty and Income Distribution in Vietnam", Paper Presented at the Workshop "Controlling the Impact of Globalization on the Poverty-Growth-Inequality Triangle: An International Comparative Study", Graduate School of International Development, Nagoya University, November 2011.

Olowa, O. W. and A. M. Shitu (2012), "Remittances and Income Inequality in Rural Nigeria", *Journal of Business Management and Economics, Vol. 3(5), pp. 210−221, May 2012.*

Phuong, N. T, N. T. M. T. Tran, T. N. Nguyen and R. Oostendorp (2008), "Determinants and Impacts of Migration in Vietnam", *DEPOCEN Working Paper Series, No. 2008/01.*

Portes, L. S. V. (2009), "Remittances, poverty and Inequality", *Journal of Economic Development, Volume 34, Number 1, June 2009.*

Taylor J. E., J. Mora, R. Adams and A. Lopez-Feldman (2005), "Remittance, Inequality and Poverty: Evidence from Rural Mexico", Department of Agricultural Resource Economics, University of California, Davis, Working Paper No.05-003.

Wouterse F. S. (2008), "Migration, Poverty and Inequality", International Food Policy Research Institute, IFPRI Discussion Papers 00786.

(Faculty of International Economics and Business, University of Economics and Business, Vietnam National University, Hanoi)