The Impact of Domestic Remittances on Left-Behind Older People in Vietnam

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Abstract

In the context of an insufficient social protection system the economic lives of older people, especially those living in rural areas, are greatly changed with socio-economic risks that are associated with the strong rural-urban mobility of younger generations. This paper aims to investigate the impacts on the economic well-being of old-age parents of domestic remittances, sent by their children who have migrated from rural to urban areas. Using data from the Vietnam Household Living Standard Survey (VHLSS) in 2004, 2008 and 2012 with logistic regression models, we found that domestic remittances played an essential role in improving income/expenditure per capita and reducing poverty rates of older people's households. Domestic remittances also contributed to reduce Gini coefficients, which were calculated using both income and expenditure per capita.

Keywords: Aging; migration; domestic remittances; older people; Vietnam.

1. Introduction

Due to rapid declining fertility rates and improved life expectancies, Vietnam is moving towards the end of the 'demographic transition' with a higher proportion of the population being older (aged 60 and over). Vietnam has been considered one of the most aging populations in the world, given its low-middle income status (UNFPA and HAI, 2012). It will only take Vietnam less than 20 years to move from an 'aging' to an 'aged' population, while it took Western and developed countries from 50 to more than 100 years (UNFPA, 2011).

In addition, along with economic growth and development since 'Doi moi', industrialization and urbanization have made various changes in the socio-economic lives of older people, especially those living in rural areas, because their living arrangements have changed rapidly from traditional multi-generational to nuclear families. The question is: how does the migration of children in households impact on older people's economic lives, in terms of domestic remittances?

This paper aims to evaluate the impacts of domestic remittances on older people's economic lives using various well-being indicators, such as poverty rate and Gini coefficients. It is structured as follows. In Section 2, we will provide an overview of the literature. Data and methodology will be described in Section 3. Key findings and implications are analyzed in Section 4, while Section 5 will provide some concluding remarks.

2. Literature review

There have been a number of studies showing the great impacts of domestic remittances sent by their migrated children on left-behind old-aged parents. Stark and Lucas (1988) proved that domestic remittances from the migrants helped rural elderly households in Botswana to cope with the farming risks caused by natural calamities. Cameron and Cobb-Clark (2005), examining the case of Indonesia, showed that mobile workers contribute partly to their family members through remittances and such remittances helped to improve the income and health of their old-age parents, particularly helping to reduce the farming time of female older people in rural Indonesia. However, the authors emphasized that, as domestic remittances could not provide sufficient full income for older people, they did not stop their farming activities. For the case of Cambodian older people, Chandore (2010) also found that remittances from migrating children were economically significant for their left-behind parents, who were in shortage of farming land and thus income from cultivation. A number of other studies also provided the same findings (see, for instance, Burholt et al., 2003; Evandrou et al., 2009; and HelpAge International and UNICEF, 2010).

In contrast, there have been other studies showing that migrating children – as key laborers in the families – left significant negative effects on their old-aged parents in rural areas. For instance, Gibson et al. (2009) indicated that the income of families with migrated laborers in Tonga decreased greatly in the short term due to the fact that they did not have any surplus money and remittances were used to pay for loans to fund themigration costs of the child(ren). In the case of Mexico, Antman (2011) found that there was no difference in the total finance contribution to the parents from

all children between the time before and after the migration of one or more children. More importantly, the study added that the assistance time given to the parents reduced after the child(ren) migrated. Sochanny Hak et al. (2011), exploring the case of Cambodia, also found that internal migration children did not support their left-behind parents very much in rural areas in terms of finance.

Given an increasing number of studies on the impacts of domestic remittances on the well-being of households in Vietnam, there have been few researches discussing such impacts on older people. Barbieri (2006), for example, using data from the 1999 Population and Housing Census and Vietnam Living Standard Survey (VLSS) 1998, showed that more than 20 percent of older people left behind received remittances from their migrated children, and older women tended to receive more than did older men. The author further insisted that the migrated children were expected to contribute significantly to their parents in terms of finance, but their parents actually still worked for further income. Giang and Pfau (2010) used logistic models with VLSS 1993 and 1998 and VHLSS 2002 and 2004 and found that female-headed elderly households got higher remittances than did their male-headed counterparts. However,

the study indicated that remittances in general played an important role in reducing poverty and improving income equality for elderly families. Le Bach Duong and Nguyen Thanh Liem (2011) made a survey of the impact of rural-urban migration on the home and host communities and also discovered that the remittance from migrated children played an important role in mitigating the poverty and improving the living standard of the poor elderly left behind in the rural areas.

3. Data and methodology

3.1. Data

In this study, we will use data from VHLSS 2004, 2008, and 2012. With a 4-year interval, we hope to provide the trends of domestic remittances sent to older people over time. These surveys were conducted by the General Statistics Office of Vietnam (GSO). They were organized at a household level but still provide various individual information about household members such as age, sex, relationship to the households' head, marital status, working status, and the highest education qualification. As such, we could identify older people (those aged 60 and over) and households with at least one older person. The data were representative at both national and area (urban and rural) levels.

Table 1: Samples for analysis from VHLSS

| Year | Number of households | Number of individuals | Number of households with at least one elderly person | Number of the elderly |
|------|----------------------|-----------------------|---|-----------------------|
| 2004 | 9.189 | 39.696 | 2.785 | 3.806 |
| 2008 | 9.189 | 38.253 | 2.974 | 3.972 |
| 2012 | 9.399 | 36.655 | 2.922 | 3.978 |

Source: Own calculations, using VHLSS 2004, 2008 and 2012

Table 1 presents information about samples in the studied VHLSS.

In regard to migration and remittances, there were questions related to the amount of domestic and international remittances which a household received over a year. A remittance is defined as the amount of money and/or the monetary value of in-kind transfers received by the households from family members or relatives who were not living in the households without any requirement for being repaid. Therefore, we could identify households receiving either only domestic or international remittances or both. In this paper, we used only households receiving domestic remittances for our analysis. The main limitation in these three surveys is that we could not know who received remittances or how they were spent.

3.2. Methodology

Following the research objectives, we will first explore the time trends of remittance flows (with a focus on internal remittances) to the households with at least one older person in three surveys.

To discuss how these remittance flows had impacts on expenditure (in)equality, we will estimate Gini coefficients for both income and expenditure in two cases: (i) without internal remittances; and (ii) with internal remittances. For the former, we will simply deduct the total amount of internal remittances received by each household from its total expenditure or total income, and then calculate respective Gini coefficients using this estimated total expenditure or total income. For the latter, we will use the data as they were in the surveys. If Gini coefficients of the former are greater than that of the latter, we will conclude that internal re-

mittances contributed to reducing expenditure and income inequality.

To show how internal remittances had impact on poverty situation of the households with at least one older person, we will apply a logistic regression model as follows. Please note that, in all calculations, individual and household weights are used to show the results which are as representative as possible for the entire Vietnamese population as well as Vietnamese older people.

An older person i (i = 1, 2,, N, in which N is the total number of the older population) is considered to live in a poor household and is considered to be poor ($p_i = 1$) if his/her household's average per-capita expenditure is below the poverty line. The probability of being poor can be estimated with a logistic model as follows:

$$P(p_i=1) = \beta_i X_i + \varepsilon_i, \quad (1)$$

low normal distribution.

In which:

 X_i represents a variety of individual and household characteristics of the older persons, in which receiving internal remittances is one character;

 β_i is respective coefficient for each X_i ; and ε_i is the error term, and it is assumed to fol-

From the model, we can calculate the odds ratio (i.e., $\frac{P_i}{1-P_i}$). For each variable, we have a group as the reference group, and thus the odds ratio being greater than 1 means that the studied group was more likely to be poor than was the reference group, and vice versa.

In the logistic model, we will have the following explanatory variables:

Age: This variable could impact on the in-

dividual receiving the internal remittance, because the older the individual, the more likely the individual receives the internal remittance or is not in poverty (Giang and Pfau, 2010). This proves that the elderly tend to be dependent as they grow older. In the logistics model, age is measured as a continuous variable.

Gender: this variable is used to identify the potential gap in the probability of receiving remittance between elderly males and females. Females are chosen to be the reference group. The estimated odd ratio for females is expected to be larger than 1 because the female elderly are considered to be less positive than their counterparts and as a result they are more likely to receive are mittance from their migrating children. This idea was illustrated in Giang and Pfau (2010), who concluded that female household heads were more likely to be given the remittance and less likely to be poor than male household heads.

Marital status: the elderly are divided into three groups, which include a married group, widows and 'other' (consisting of divorced, separated and single elderly). The married group is considered the reference group. The estimated odds ratios for the other two groups are expected to be larger than 1 because the widow group or single elderly are considered to be less positive than their counterparts and as a result they are more likely to receive remittances from their migrating children. Giang and Pfau (2010) also concluded that the married elderly were less likely to be given a remittance; however, the other two groups were more likely to be poor than the married group.

Education: the elderly are divided into two sub-groups: (i) the first is the elderly who have

not completed lower secondary school level or who have finished education at this level only and (ii) the second sub-group is the elderly who have completed high school education level or more. The first group is selected as the reference group. In the logistics model used to determine the aspects impacting on elderly poverty, the estimated odds ratio is expected to be less than 1 for the second group. This can be explained in that the elderly with a high-school educational level are likely to have had a higher-paid job previously, therefore they tend to be paid a higher retirement pension upon their retirement. This view was also illustrated by Giang and Pfau (2010).

Working status: according to UNFPA (2011), approximately 40% of the elderly are working, in which the working elderly aged from 60 to 69 accounted for 60%. The elderly mainly work for themselves or for their families without being paid; nearly 29% of the elderly said that their main income came from their working. Giang and Pfau (2010) proved that the majority of the elderly, who are working, are less likely to receive the internal remittance and less to be in poverty. If the elderly who are not working are selected as the reference group, the estimated odds ratio is expected to be less than 1 for the comparative group.

Having retirement benefits: based on UN-FPA (2011), about 16% of the elderly derive their main income from the retirement pension. Giang and Pfau (2010) also illustrated that the elderly with retirement pensions would be less likely to be poor than their counterparts. If the elderly with retirement pensions are chosen to be the reference group in the model defining the determinants of the elderly's poverty, the

estimated odds ratio is expected to be more than 1 for the comparative group (the elderly without retirement pensions).

Residential regions: in Vietnam, the residential location (urban or rural) is often significantly related to poverty, therefore this variable may have a positive effect on the elderly receiving remittances. Giang and Pfau (2010) discovered that urban households are more likely to receive an international remittance than rural households. However, rural households are more likely to receive an internal remittance than urban households. If the urban elderly are selected to be the reference group, the estimated odds ratio is expected to be larger than 1 for the comparative group (the rural elderly) in the internal remittance receiving model.

Household size: this variable is used as an explanatory variable. Large households with more than one child, in which one or more children migrate from the rural setting to an urban one, while the other(s) co-reside with or live nearby the parents, are more likely to be given

financial support from their children than those without the migrating children (Chandore, 2010). However, Antman (2011) argued that households with more than one child, in which one or more child(ren) migrated while other(s) were left behind, the left-behind parents were given the same financial support from their children in both cases — both before and after their child(ren) migrated. If the elderly without migrating child(ren) are chosen to be the reference group, the estimated odds ratio is expected to be less than 1 for the comparative group (the elderly with migrating child(ren)) in the model determining the aspects impacts on the elderly's poverty.

4. Findings and discussion

4.1. Characteristics of remittances in Vietnam

Table 2 shows the percentage of households in Vietnam receiving remittances by source (i.e., international and internal remittances).

Internal remittances account for the largest part of all remittances and play a more import-

Table 2: Percentage of households receiving remittances by source

| | 2004 | 2008 | 2012 |
|--|--------|--------|--------|
| For all households | | | |
| Not receiving the remittance | 12.28% | 12.94% | 14.56% |
| Receiving the internal remittance | 80.47% | 80.65% | 80.87% |
| Receiving both the internal and international remittance | 5.58% | 4.38% | 3.35% |
| For households with at least one older person | | | |
| Not receiving the remittance | 9.67% | 11.91% | 12.11% |
| Receiving the internal remittance | 80.75% | 80.21% | 82.1% |
| Receiving both the internal and international remittance | 7.86% | 5.28% | 5.11% |

Note: the total value of each column may be not equal to 100% because there are a number of households receiving both the internal and international remittance, so they are doubly calculated.

Source: Own calculations, using VHLSS 2004; VHLSS 2008; VHLSS 2012.

Table 3: Percentage of remittance values, by source

| | 2004 | 2008 | 2012 |
|--|-------|-------|-------|
| For all households | | | |
| The internal remittance | 63.2% | 65.3% | 71.6% |
| The international remittance | 36.8% | 34.7% | 28.4% |
| The total remittance | 100% | 100% | 100% |
| For the households with at least one elderly | | | |
| The internal remittance | 56.8% | 64.8% | 75.9% |
| The international remittance | 43.2% | 35.2% | 24.1% |
| The total remittance | 100% | 100% | 100% |

Source: Own calculations, using VHLSS 2004; VHLSS 2008; VHLSS 2012.

ant role in the economy of Vietnam. Particularly, Table 2 shows that out of the households receiving remittances, households receiving an internal remittance accounted for the major part of - over 80% with the rate increasing from 80.47% in 2004 to 80.65% in 2008 and reaching 80.87% in 2012. In general, households with at least one elderly person receiving the internal remittance are the largest part of the total households receiving remittances. Actually, the households with at least one elderly person receiving an internal remittance accounted for more than 80% in the two years 2004 and 2008, but the rate went up to 82.1% in 2012.

Table 3 presents the remittance values by source. It shows that internal remittances account for the largest part and have been increasing over time. For all households, there was a rapid increase in internal remittances, from 63.2% in 2004 to 65.3% in 2008 and to 71.6% in 2012 out of the total remittance value. For households with at least one elderly person, received internal remittances increased over time and accounted for the highest part of the total remittances. Particularly, these households received internal remittances accounted for 56.8% of the total remittances in 2004,

which increased to 64.8% in 2008 and reached 75.9% in 2012.

Table 4 shows the internal remittances play a positive role in mitigating poverty for the total number of households in general, and this is especially much more significant for the households with at least one elderly person in the mitigation of poverty. Particularly, the mean value of the internal remittances given to each household in general and to each household with at least one elderly person was 13% higher than the poverty line in 2004. However, due to the fact that the poverty line in 2008 was 6.2% higher than in 2004, the domestic remittance value sent to each household in general was only 6% higher than the poverty line, but the value of remittances sent to each household with at least one elderly person was 27% higher than the poverty line. Remarkably, the poverty line in 2012 was even 21% higher than that in 2008, therefore the average internal remittance value given to each general household was equal to 49% of the new poverty line, while this money given to each household with at least one elderly person was equal to 66% of the poverty line. Generally, the internal remittance amount given, from the first poor group to the

Table 4: Distribution of internal remittances among households

| | 2004 | 2008 | 2012 |
|---|--------|--------|----------|
| For all households | | | |
| Poverty line (expenditure per capita, VND 1,000 per year) | 2.070 | 3.358 | 10.455,7 |
| Average value of internal remittances | 2.329 | 3.561 | 5.088 |
| Average internal remittances as % of poverty line | 113% | 106% | 49% |
| Value of internal remittances received by income percentile (VND 1,000) | 10 | 19 | 50 |
| 1 st percentile | 10 | 19 | 50 |
| 5 th percentile | 23 | 35 | 60 |
| 10 th percentile | 60 | 85 | 200 |
| 25 th percentile | 200 | 223 | 500 |
| 50 th percentile | 501 | 754 | 1.600 |
| 75 th percentile | 2.010 | 2,997 | 5.000 |
| 90 th percentile | 6.000 | 8.544 | 12.050 |
| 95 th percentile | 10.000 | 15.000 | 20.460 |
| 99 th percentile | 23.750 | 42.677 | 50.000 |
| For the households with at least one elderly | | | |
| Poverty line (expenditure per capita, VND 1,000 per year) | 2.070 | 3.358 | 10.455,7 |
| Average value of internal remittances | 2.329 | 4.257 | 6.907 |
| Average internal remittances as % of poverty line | 113% | 127% | 66% |
| Value of internal remittances received by income percentile (VND 1,000) | 10 | 19 | 50 |
| 1 st percentile | 10 | 19 | 50 |
| 5 th percentile | 30 | 53 | 110 |
| 10 th percentile | 100 | 114 | 300 |
| 25 th percentile | 270 | 292 | 910 |
| 50 th percentile | 820 | 1.023 | 2.770 |
| 75 th percentile | 2.800 | 3.478 | 7.200 |
| 90 th percentile | 7.015 | 10.174 | 17.000 |
| 95 th percentile | 12.020 | 18.552 | 30.000 |
| 99 th percentile | 25.200 | 52.322 | 59.000 |

Source: Own calculations, using VHLSS 2004; VHLSS 2008; VHLSS 2012.

Table 5: Impact of internal remittances income/expenditure inequality

| | Without internal remittances | With internal remittances | |
|---|------------------------------|---------------------------|--|
| Income and expenditure per capita in 2004 | | | |
| Income per capita | 0.5059 | 0.5059 | |
| Expenditure per capita | 0.4176 | 0.3868 | |
| Income and expenditure per capita in 2008 | | | |
| Income per capita | 0.5838 | 0.5833 | |
| Expenditure per capita | 0.4107 | 0.3763 | |
| Income and expenditure per capita in 2012 | | | |
| Income per capita | 0.4135 | 0.4126 | |
| Expenditure per capita | 0.3712 | 0.3588 | |

Source: Own calculations, using VHLSS 2004; VHLSS 2008; VHLSS 2012.

99th poor group, has been increasing rapidly for all households, especially much more rapidly over the years for households with at least one

elderly person.

4.2. Impact of internal remittances on elderly households' income/expenditure and on

inequality and poverty of Vietnam

Table 5 shows the relationship between internal remittances and the income inequality of Vietnam through Gini coefficients, with the assumption that internal remittances are considered to be exogenous to households. The co-

efficients measure the impact of internal remittances on income distribution, which consists of expenditure per capita and income per capita. The Gini coefficient expresses the inequality level in the expenditure and income distribution. The Gini coefficient equal to 0 means absolute equal distribution; the coefficient equal

Table 6: Determinants of elderly households' poverty

| | 2004 | | 20 | 008 | 2012 | |
|---|-----------|-------|-----------|-------|-----------|-------|
| | OR | P | OR | P | OR | P |
| Region | | | | | | |
| Red River Delta | 6.167 | 0.000 | 2.758 | 0.000 | 1.603 | 0.000 |
| North East | 9.441 | 0.000 | 7.637 | 0.000 | 3.956 | 0.000 |
| North West | 29.514 | 0.000 | 7.111 | 0.000 | 8.933 | 0.000 |
| North Central Coast | 12.134 | 0.000 | 5.896 | 0.000 | 3.757 | 0.000 |
| South Central Coast | 5.653 | 0.000 | 3.829 | 0.000 | 2.294 | 0.000 |
| Central Highlands | 8.662 | 0.000 | 5.394 | 0.000 | 2.675 | 0.000 |
| South East (reference) | 1.000 | | 1.000 | | 1.000 | |
| Mekong River Delta | 2.827 | 0.000 | 1.685 | 0.000 | 1.882 | 0.000 |
| Rural-Urban | | | | | | |
| Rural (reference) | 1.000 | | 1.000 | | 1.000 | |
| Urban | 0.253 | 0.000 | 0.298 | 0.000 | 3.231 | 0.000 |
| Marital status of households' head | | | | | | |
| Married (reference) | 1.000 | | 1.000 | | 1.000 | |
| Widowed | 1.316 | 0.000 | 1.096 | 0.000 | 0.716 | 0.000 |
| Otherwise or single | 3.133 | 0.000 | 1.723 | 0.000 | 1.836 | 0.000 |
| Gender of households' head | | | | | | |
| Male (reference) | 1.000 | | 1.000 | | 1.000 | |
| Female | 0.678 | 0.000 | 0.770 | 0.000 | 1.329 | 0.000 |
| Age of households' head | | | | | | |
| Age | 0.976 | 0.000 | 0.934 | 0.000 | 0.910 | 0.000 |
| $(Age)^2$ | 1.000 | 0.000 | 1.001 | 0.000 | 1.001 | 0.000 |
| Working status of the households' head | | | | | | |
| Not working (reference) | 1.000 | | 1.000 | | 1.000 | |
| Working | 0.999 | 0.841 | 0.809 | 0.000 | 0.986 | 0.000 |
| Education | | | | | | |
| Not or only completed the secondary level (reference) | 1.000 | | 1.000 | | 1.000 | |
| Completed from the secondary level onwards | 1.190 | 0.000 | 1.172 | 0.000 | 0.714 | 0.000 |
| Percentage of family members at the working age | 0.818 | 0.000 | 0.908 | 0.000 | 0.920 | 0.000 |
| Percentage of family members at the age of under 15 | 34.852 | 0.000 | 12.573 | 0.000 | 10.059 | 0.000 |
| Log of household size | 0.756 | 0.000 | 1.053 | 0.000 | 1.001 | 0.593 |
| Retirement pension | | | | | | |
| Without retirement benefits (reference) | 1.000 | | 1.000 | | 1.000 | |
| With retirement benefits | 0.233 | 0.000 | 0.134 | 0.000 | 0.178 | 0.000 |
| Internal remittances | | | | | | |
| Not receiving (reference) | 1.000 | | 1.000 | | 1.000 | |
| Receiving | 0.936 | 0.000 | 0.645 | 0.000 | 0.903 | 0.000 |
| Sample size (weighted) | 5,75 | 4,575 | 6,922 | 2,641 | 7,340, | 011 |
| Log likelihood | -2.21E+06 | | -2.28E+06 | | -3.66E+06 | |
| Pseudo R ² | 0.195 | | 0.1674 | | 0.1556 | |

Source: Own calculations, using VHLSS 2004; VHLSS 2008; VHLSS 2012.

to 1 means absolute unequal distribution (i.e. all resources in the society are distributed to one household).

It is shown in Table 5 that internal remittances play an important role in making the expenditure and income distribution equal among the households of Vietnam. The result proves that the Gini coefficient is smaller upon adding internal remittances to the total income per capita. Actually, in 2004, having added the internal remittances, although the Gini coefficient for income per capita is unchanged, the Gini coefficient for expenditure per capita reduces from 0.4176 to 0.3868. For the years of 2008 and 2012, the Gini coefficients go down slightly for income per capita but significantly for expenditure per capita.

Table 6 shows the results estimated from the logistics regression models which are used to explain the determinants of household poverty in Vietnam. In this Table, we only consider those households receiving internal remittances upon controlling other aspects. The results both show that internal remittances play an important role in mitigating household poverty and are significant for the three surveys.

5. Concluding remarks and policy implications

Internal remittances play an essential role in the economy of Vietnam, especially in the living standard of elderly people. The above analysis illustrates that more than 80% of the households of Vietnam receive internal remittances over the years; especially more than 80% of households with at least one elderly person out of the total households receive an internal remittance. The internal remittance value for both all households and households with at least one elderly person has been increasing through the

years. The money is significant for poverty mitigation and elimination for all households and much more valuable for the households with at least one elderly person. Red River Delta and Mekong River Delta regions with the highest population rates are two destinations for the largest domestic remittances nationwide. In general, rural areas send the greatest number of working-age people to urban areas to earn a living. Households with female elderly household heads are more likely to receive a larger internal remittance amount than others. The older the households' heads are, the more the internal remittance they are given. The above investigations prove that internal remittances play an important role in reducing the income and expenditure inequality of both households in general and those households with at least one elderly person in Vietnam.

On the other hand, due to the fact that the pension system for the Vietnamese elderly has a small coverage, internal remittances are one remarkable financial support for the Vietnamese elderly persons'living standard. This argument also confirms that one of the main motivations for the working-age people to migrate from the rural to urban areas to find a job is to improve the living standard for their family members, especially for their parents left behind.

Therefore, some recommendations have been drawn from the above findings as follows: (1) a comprehensive social pension system will play an essential role in promoting the living standard of elderly citizens; (2) children who migrate should be highly aware of their responsibility in taking care of their parents, especially their elderly parents left behind; (3) working opportunities should be created for the elderly, especially the elderly aged from 60 to 70.

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