The Relationship Between Old Age and Poverty in Viet Nam

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Foreword

Research in both developing and industrialized countries has shown that more open economies tend to have more developed social security systems. Contrary to the popular misconception that economic globalization has led to a 'race to the bottom' in terms of social protection, trade openness is in fact closely associated with the presence of programmes to reduce income risks such as old age, illness, unemployment and the cost of raising children.

It is easy to see why open economies have more comprehensive social security systems. Closed economies use trade protection and subsidies to preserve jobs, even jobs in non-competitive industries. This strategy imposes massive costs on the economy but reduces demand for public social security programmes. By way of contrast, open economies cannot afford to protect uncompetitive industries. They tend to protect workers and households from income risks rather than protect enterprises or entire industries.

Viet Nam is presently putting in place new social security structures more suited to an open, competitive economy. Old age pensions are an important part of the social security system. This UNDP Policy Dialogue Paper presents a careful analysis of the relationship between old age and poverty in Viet Nam, and identifies the central issues that policy makers must consider as they redesign the pension system.

Like the other papers in this series, this UNDP Policy Dialogue Paper seeks to contribute to key policy debates in Viet Nam through an impartial consideration of the country's development situation and potential implications for the future. Our aim is to encourage informed discussion and debate through the presentation of information and evidence collected and presented in a clear and objective manner.

We are grateful to the University of Bath research team for their rigorous and insightful analysis of the economic position of the elderly in present-day Viet Nam. The material presented in this Policy Dialogue Paper was first discussed in November 2006 at an international workshop in Ha Noi co-organized by the Viet Nam Academy of Social Sciences, the Ministry of Labour, Invalids and Social Affairs, and UNDP.

While the views expressed in the paper do not necessarily reflect the official view of UNDP, we hope that the paper's publication will stimulate further research and analysis on this vital issue.

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The authors also acknowledge and welcome the comments and discussion of participants in the Social Security Workshop held jointly with the Ministry of Labour, Invalids and Social Affairs and the Viet Nam Academy of Social Sciences on 30th November 2006 in Ha Noi. Particular thanks go to the comments and contributions of Dr Nguyen Hai Huu, Ministry of Labour, Invalids and Social Affairs, Prof. Trinh Duy Luan, Viet Nam Academy of Social Sciences, Dr. Bui Quang Dung, Viet Nam Academy of Social Sciences, Dr. Pham Do Nhat Tan, Ministry of Labour, Invalids and Social Affairs, Prof Ian Gough, University of Bath, Dr. Felix Schmidt, Friedrich Ebert Stiftung and Rose Marie Greve, ILO Representative.

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Introduction

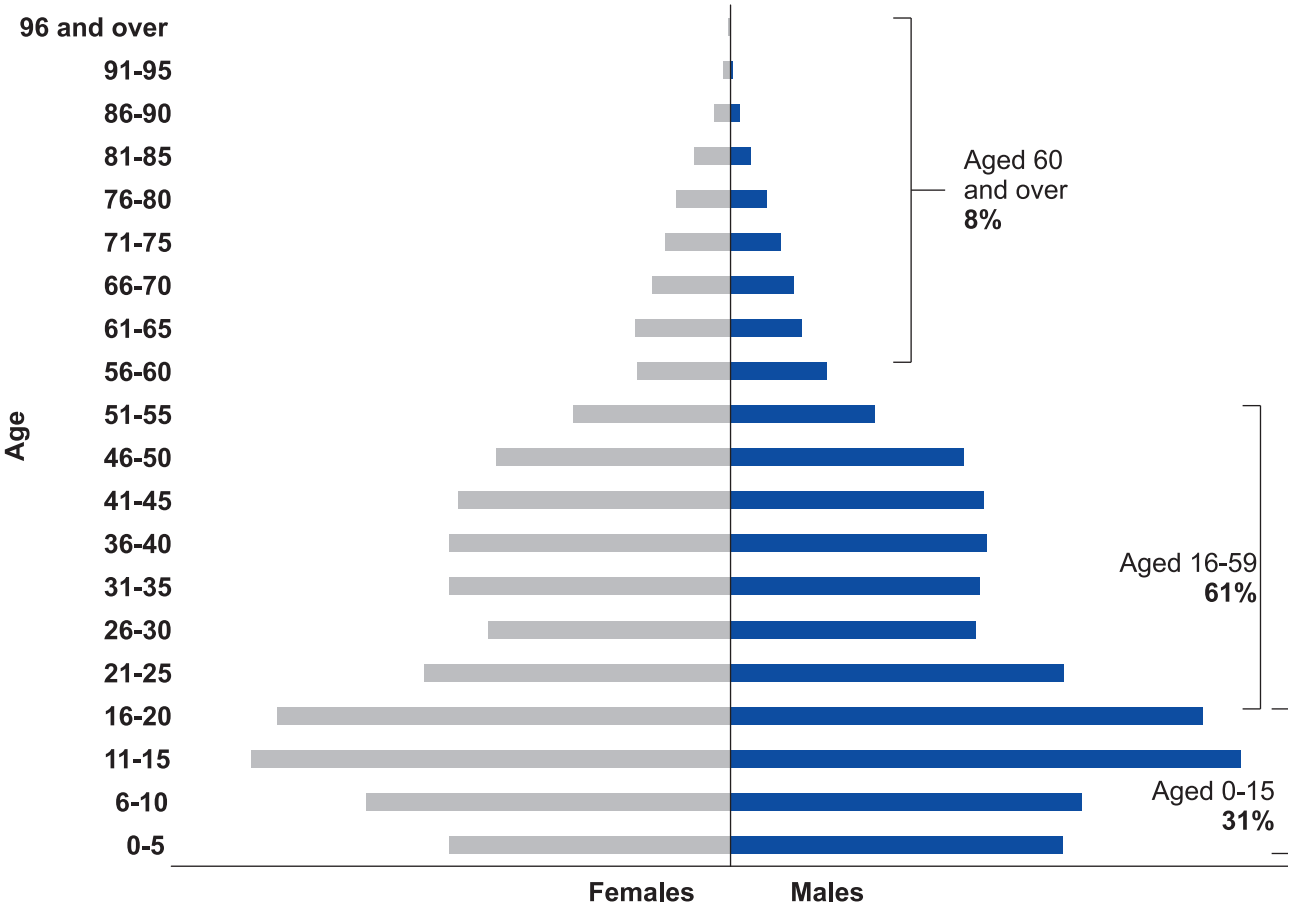
This is the second of two reports written for the United Nations Development Programme in Viet Nam to explore the issues of income, poverty and social security in Viet Nam and which follow on from the Policy Dialogue Paper entitled Beyond HEPR: A Framework for an Integrated National System of Social Security in Viet Nam published in 2005, which put forward general principles for comprehensive social security programmes in Viet Nam (Justino 2005). In this report we look exclusively at the position of the elderly in Viet Nam and answer several key questions about their circumstances as found in the 2004 Viet Nam Household Living Standards Survey (VHLSS).

The approach of this report is empirical and descriptive and Part 1 continues by outlining how elderly Vietnamese fit into the overall demographic structures of Viet Nam. Part 2 then looks at elderly economic activity while Part 3 that describes their health profile. Part 4 describes incomes of the elderly and then focuses on social security and remittances, which are particularly important sources of income. Part 5 then describes the poverty profile and Part 6 brings together the papers findings and draws some conclusions.

1. The Elderly Population

Figure 1 shows the age distribution of the Vietnamese population using VHLSS data in five-year bands. Defining the elderly as a distinct group solely by their age is not straightforward but we use those aged 60 and over to describe the elderly group in most instances in this paper [1]. This accounts for around eight per cent of the private household population compared to 61 per cent that can be described as the peak "working age" group, aged 16 to 59, and a further 31 per cent who are children aged less than 16. Only four per cent of the population are aged over 70 and the over-eighties represent just over one per cent.

Figure 1: Vietnamese Population by Age and Gender



Source: Authors' calculations from VHLSS 2004

The elderly are more likely to be women, as they have greater longevity, and the proportion of the elderly who are female rises with age. This means that 58 per cent of all over 60s are women, 60 per cent of the over seventies and 66 per cent of the over eighties.

The overall age distribution of the population varies across regions, as shown by Table 1. The Red River Delta and South Central Coast have the highest proportions of over-60s while the North West and North East Mountain regions and Central Highlands have the lowest proportion, six per cent. However, these regional differences reflect both economic and social factors that determine longevity, especially poverty levels and ethnic minority status. We discuss poverty in Part 4 below but Table 2 shows the differences in population structure by ethnic minority status, with ethnic minorities having both lower proportions of elderly and higher proportions of children. There are also considerable differences in population structure between urban and rural areas, with urban populations having fewer children and having a slightly higher proportion of elderly, as shown in Table 3.

[1] The small minority of women who are entitled to retirement pensions have a pension age of 55, this lower age is used later in discussion of employment later in Part 2..

Table 1: Regional Differences in Population Composition

	Red River Delta	North East Mountains	North West Mountains	North Central Coast	South Central Coast	Central Highlands	South East	Mekong Delta
Children 0-15	28%	31%	37%	35%	33%	41%	29%	28%
Working age 16-59	63%	61%	57%	58%	59%	53%	63%	64%
Elderly 60 and over	9%	8%	6%	7%	9%	6%	8%	8%

Source: Authors' calculations from VHLSS 2004

Table 2: Ethnic Minority Differences in Population Composition

	Ethnic Minority	Vietnamese & Chinese
Children 0-15	38%	30%
Working age 16-59	56%	62%
Elderly 60 and over	6%	8%

Source: Authors' calculations from VHLSS

Table 3: Urban - Rural Differences in Population Composition

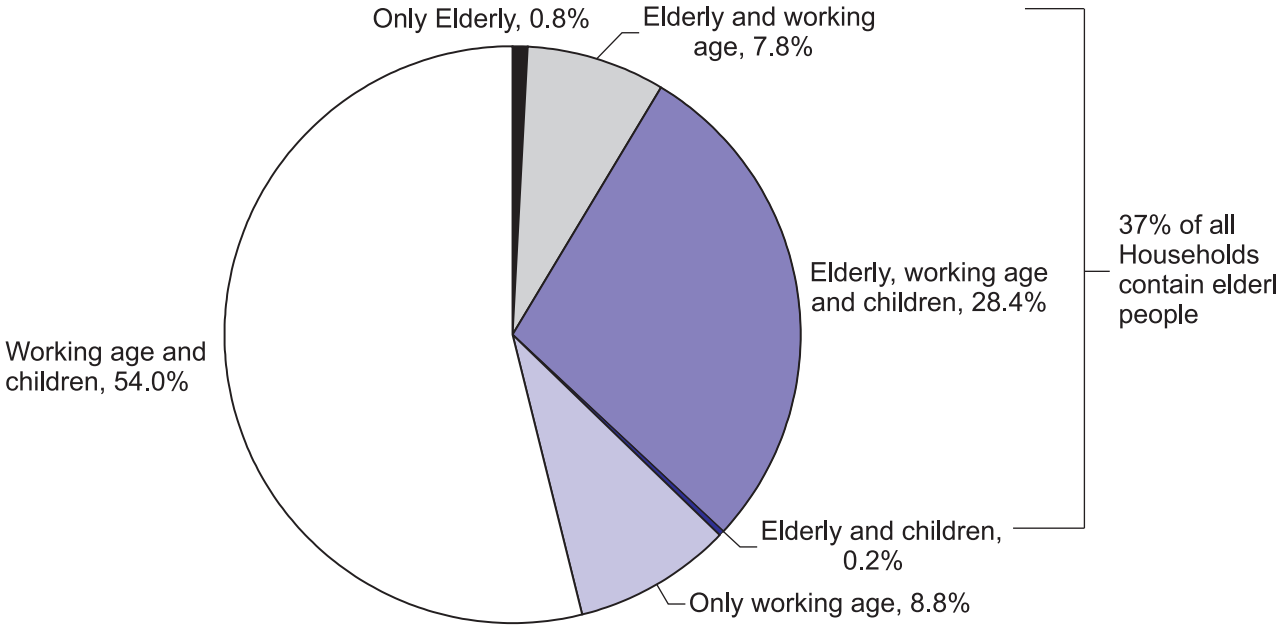
	Rural	Urban
Children 0-15	33%	25%
Working age 16-59	60%	66%
Elderly 60 and over	8%	9%

Source: Authors' calculations from VHLSS

With whom do elderly people reside? Figure 2 shows Vietnamese households according to their age composition and whether there are elderly (aged 60 and over), working age (aged 16-59) and children (aged under 16) present. The largest proportion of households are those with working age adults and children, who represent 54 per cent of all households. Almost nine per cent of households are those with solely working age people. This leaves 37 per cent of households containing elderly people. There are a tiny number of households that contain elderly adults and children, but the majority of elderly people live in three-generation households. When we put to one side those households without elderly people, Table 4 shows that two thirds (62.6 per cent) of the elderly live in three generation households, and a further 28 per cent live with working age people, their adult children in the vast majority of cases. Only eight per cent of elderly live solely in households composed of elderly people and there is only one per cent who live only with (grand)children.

Single elderly people are more likely to live in three generation households with their adult children and grandchildren, 72 per cent of single elderly do so and single elderly people rarely live alone (under three per cent). But elderly couples are more likely to live in only elderly households. Even so, this only accounts for less than an eighth of elderly couples; 58 per cent live in three generation households. The effect of this is that co-residence of children and elderly people is common in Viet Nam. Indeed, focussing on children aged less than 16, Table 5 shows that almost 29 per cent of all children live with elderly people.

Figure 2: Household Composition in Viet Nam



Source: Authors' calculations from VHLSS 2004

Table 4: The Composition of Households with Elderly

	All	Single elderly	Other elderly
Only Elderly	8.0%	2.7%	11.5%
Elderly and working age	28.2%	24.8%	29.2%
Elderly, working age and children	62.6%	72.0%	57.5%
Elderly and children	1.2%	0.6%	1.8%

Source: Authors' calculations from VHLSS

Table 5: Children Living with Elderly

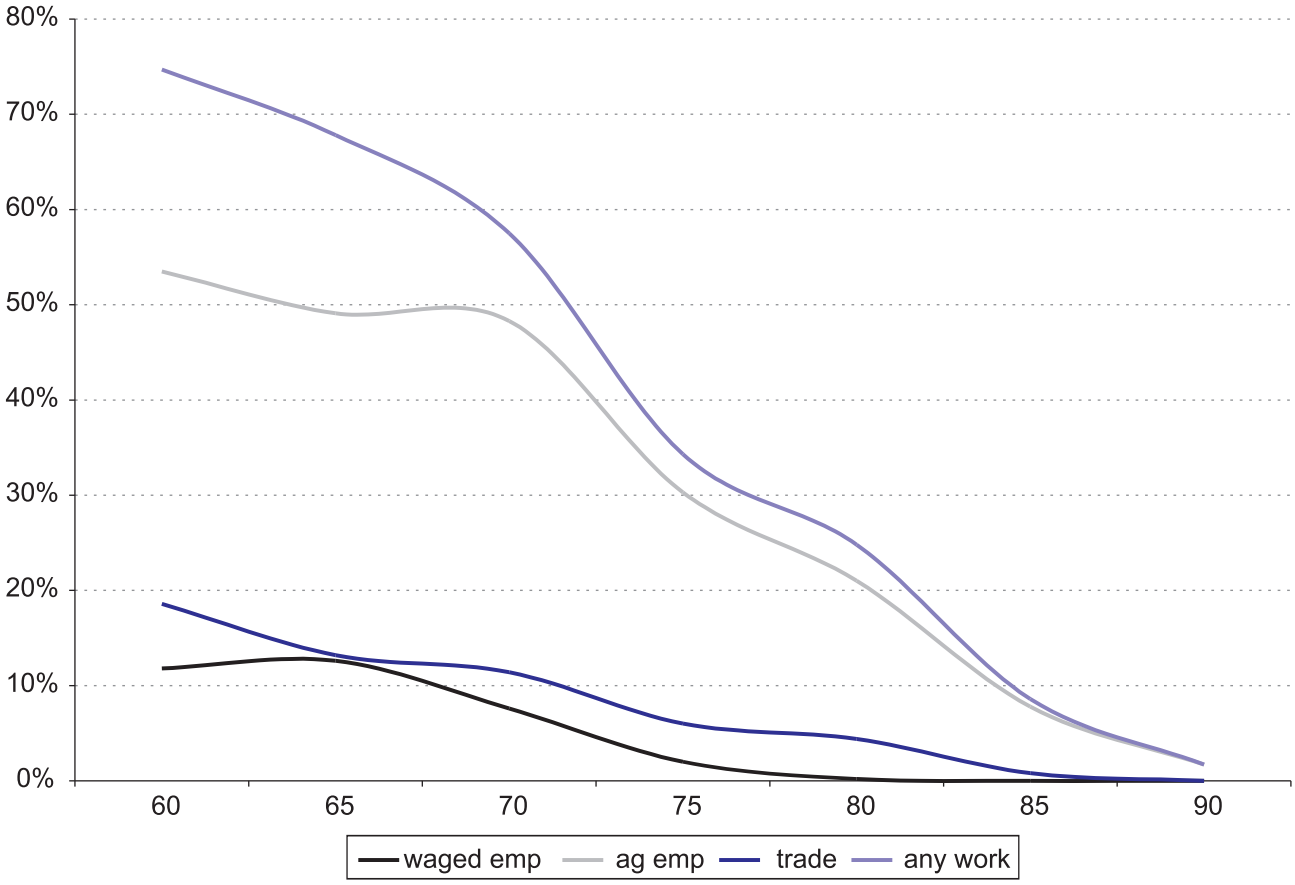
Elderly, working age and children	28.7%
Elderly and children	0.3%
Working age and children	71.2%

Source: Authors' calculations from VHLSS

2. Economic Activity

One of the difficulties in clearly identifying and defining an elderly population lies in the potential for confusion between pensionable age and actual economic activity. Pension age for the minority of the elderly who qualify for pensions is 55 for women and 60 for men, and at that point these pensioners will retire from their employment that gave rise to their entitlement to a pension. However, both these and other elders continue to work. Figures 3 and 4 show economic activity rates for men age 60 and over and for women aged 55 and over, respectively.

Figure 3: Men Aged 60 and over Economic Activity

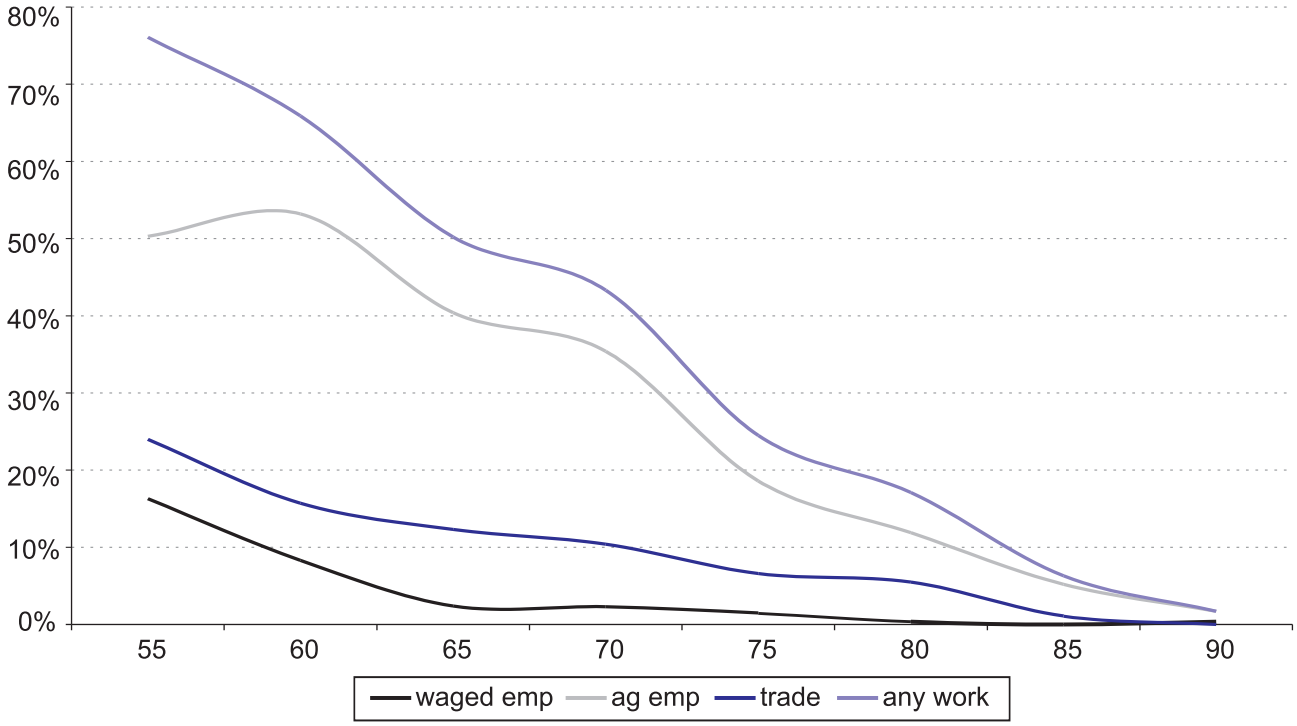


Source: Authors' calculations from VHLSS 2004

The solid black line in Figure 3 shows the overall rate of economic activity for men according to their age. Three quarters of men are still economically active at ages of 60 to 65 and this rate declines with age. Fifty-eight per cent of men are economically active at age 70 to 75, and 25 per cent at ages 80 to 85. Waged employment is very much a minority activity among elderly men, with only 12 per cent of 60 to 65 year olds being employed, as against 54 per cent working in agriculture and 19 per cent in self-trading and business. Agricultural activity seems to steepen its rate of decline after the age of seventy for men while trade and business taper off more gradually with age.

Figure 4 repeats the analysis for women, but begins at the age of 55-59 to reflect the lower pension age for women. Overall economic activity rate, shown by the solid black line in Figure 4, is 76 per cent for the 55-59 year olds and then declines to 43 per cent for 70-74 age-group and 17 per cent for the 80-84 age group. As with men, waged work is in the minority and falls off rapidly before age 60. Agricultural work has a 50 per cent activity rate for the 55-59 year olds, falling to 35 per cent for the 70-74 year-olds and 12 per cent for the 80-84 age group. As with men, trade and business activity declines more gradually with age.

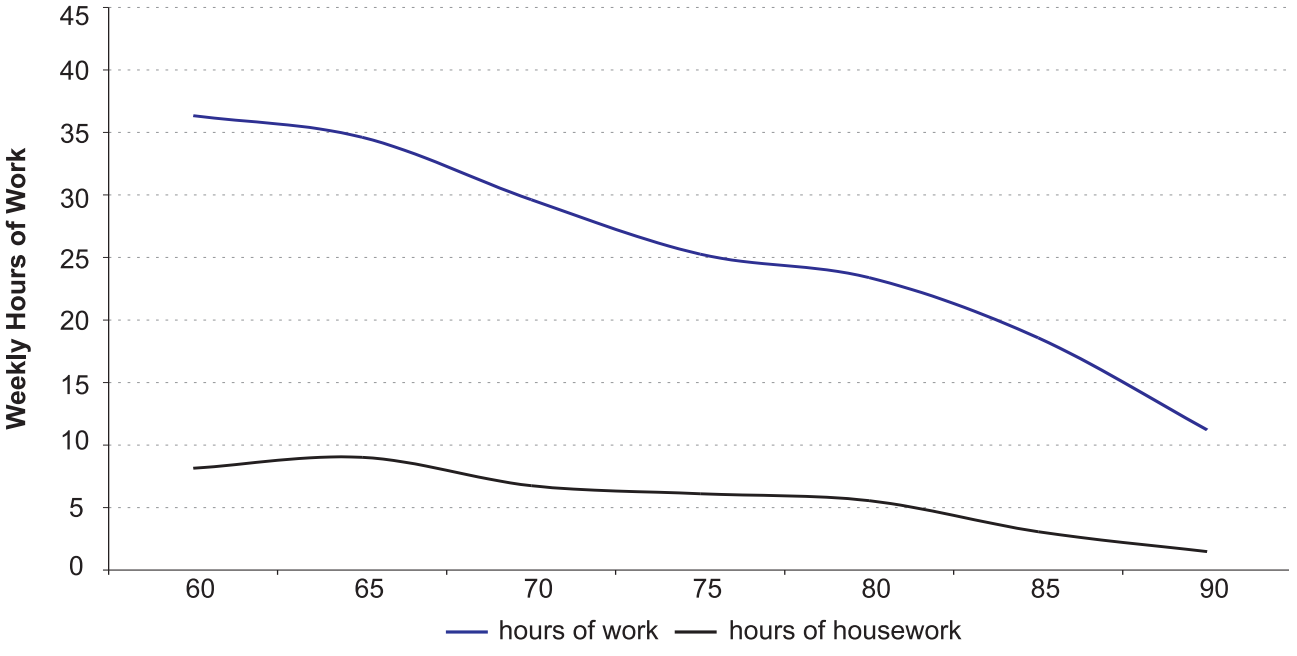
Figure 4: Women Aged 55 and over Economic Activity



Source: Authors' calculations from VHLSS 2004

However, assessing economic activity purely by "any work" can be misleading as the elderly may continue to work but reduce their hours as they age rather than abandon work altogether. Figures, 5 and 6 show the weekly hours of work for men and women and additionally shows the hours of housework undertaken alongside economic activity ("work"). The average hours worked by men decline with age beyond 60. Weekly hours of economic work on average are 36 for the 60-64 age-group but then decline to 25 by the age of 70 and then to 19 at the age of 90. Male hours of housework, which are defined to include maintenance work, also decline as men age but appear to decline after the age of 70 from around 9 hours a week.

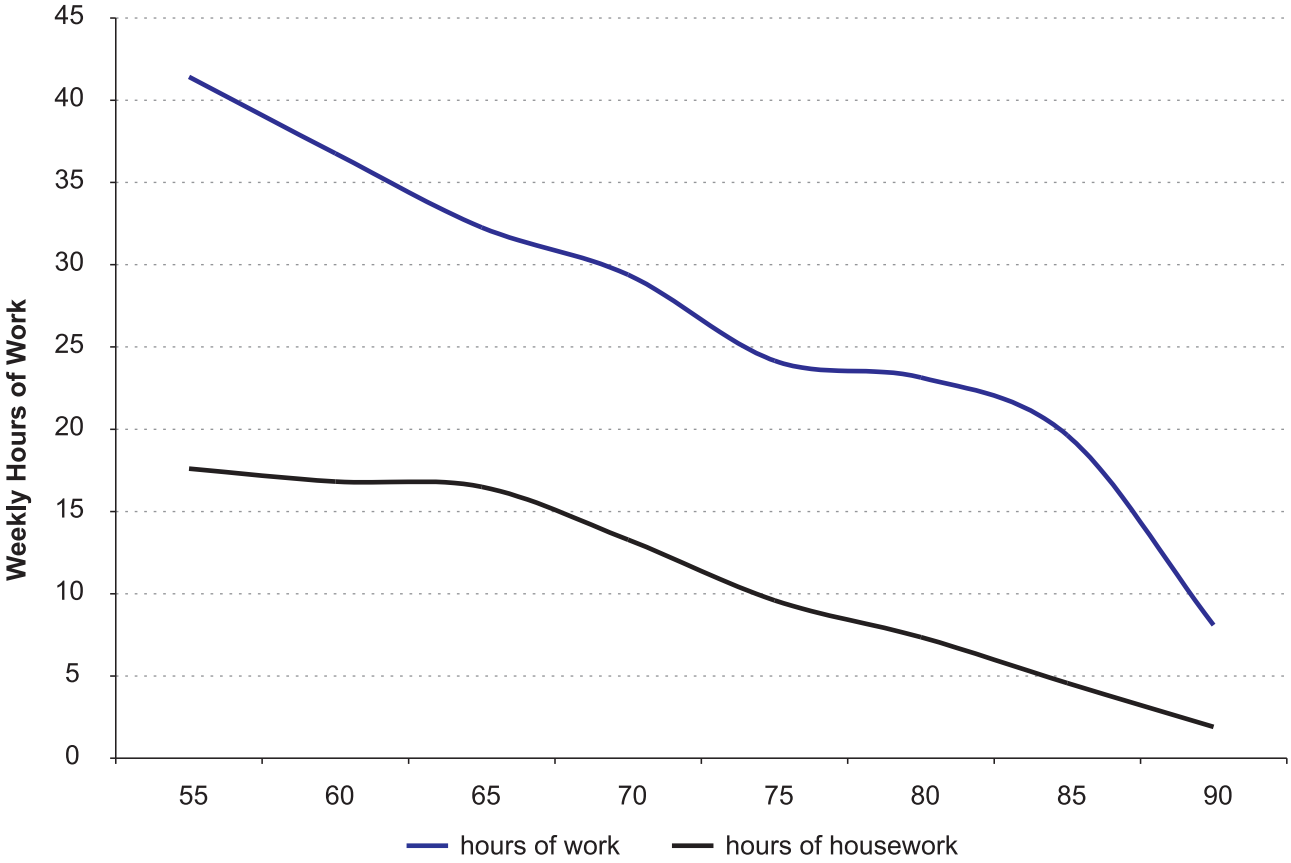
Figure 5: Weekly Hours of Work for Men Aged 60 and Over



Source: Authors' calculations from VHLSS 2004

Working elderly women, again defined as those aged over 55, also reduce their working hours as they get older. The 55-59 age group work an average of 41 hours a week and declines to 29 at 70 and to 23 at 80 - slightly higher on average than men of the same age-group. Women do far more hours of housework than men, 16 to 17 hours on average up to the age of 70-74 after which they decline to seven hours a week for the 80-84 age group.

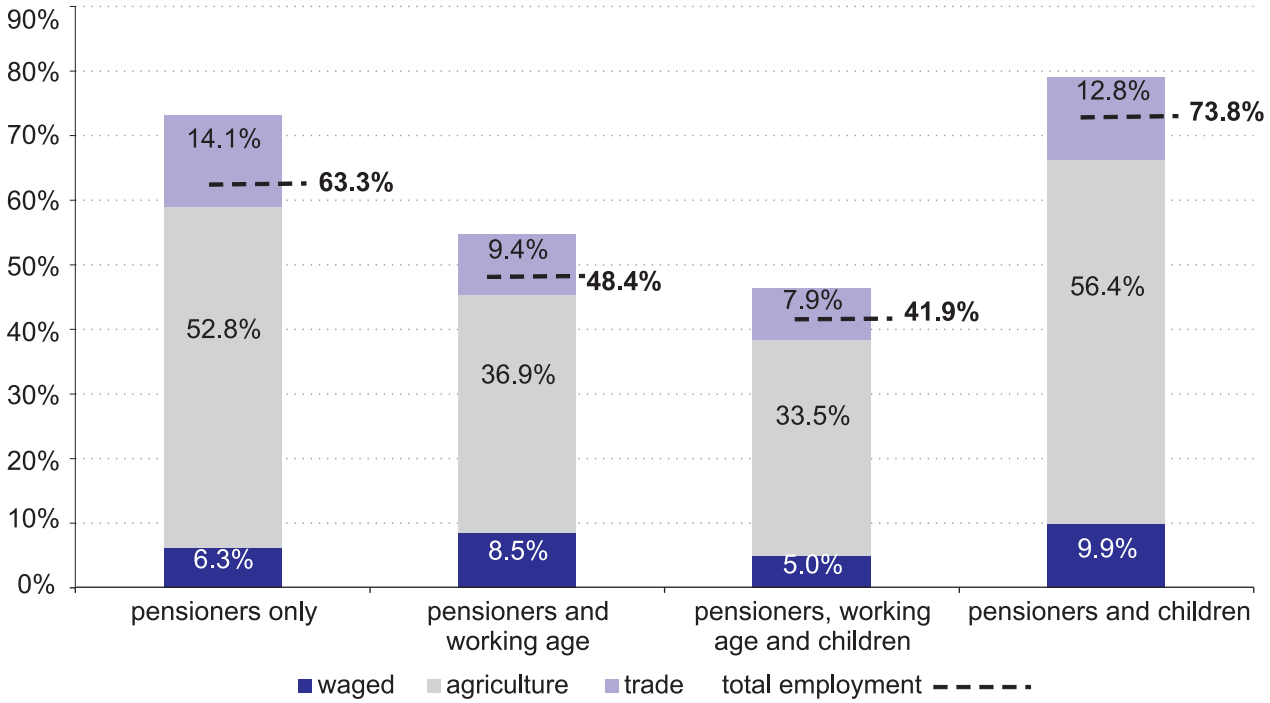
Figure 6: Weekly Hours of Work for Women Aged 55 and Over



Source: Authors' calculations from VHLSS 2004

But these average rates of economic activity and hours hide differences between the elderly that is in part reflected by their health, co-residence within households and other factors. Figures 7 and 8 show how average rates of economic activity differ according to the types of pensioner household we discussed earlier in Section 2, whether they live with their adult children and grandchildren. Figure 7 shows that elderly men's economic activity rates are highest in those households where there are no working age co-residents. This is obviously a reflection of the need for an independent income for these households and is probably also, in part, an outcome of age and health as older and/or more ill elderly people may be selected into living with their adult children. Only 42 per cent of the elderly living in three-generation households with adult children and grandchildren work, compared with 63 per cent who live households solely composed of elderly people. There is also likely to be a selection effect according to earnings level and type over the lifetime of today's elderly with professional and public sector employees, now with pensions continuing to live in separate households that were established earlier and their adult children living separately. Further research is needed on this point if the effect of pensions and earnings over the lifetime on elderly co-residence is to be understood fully.

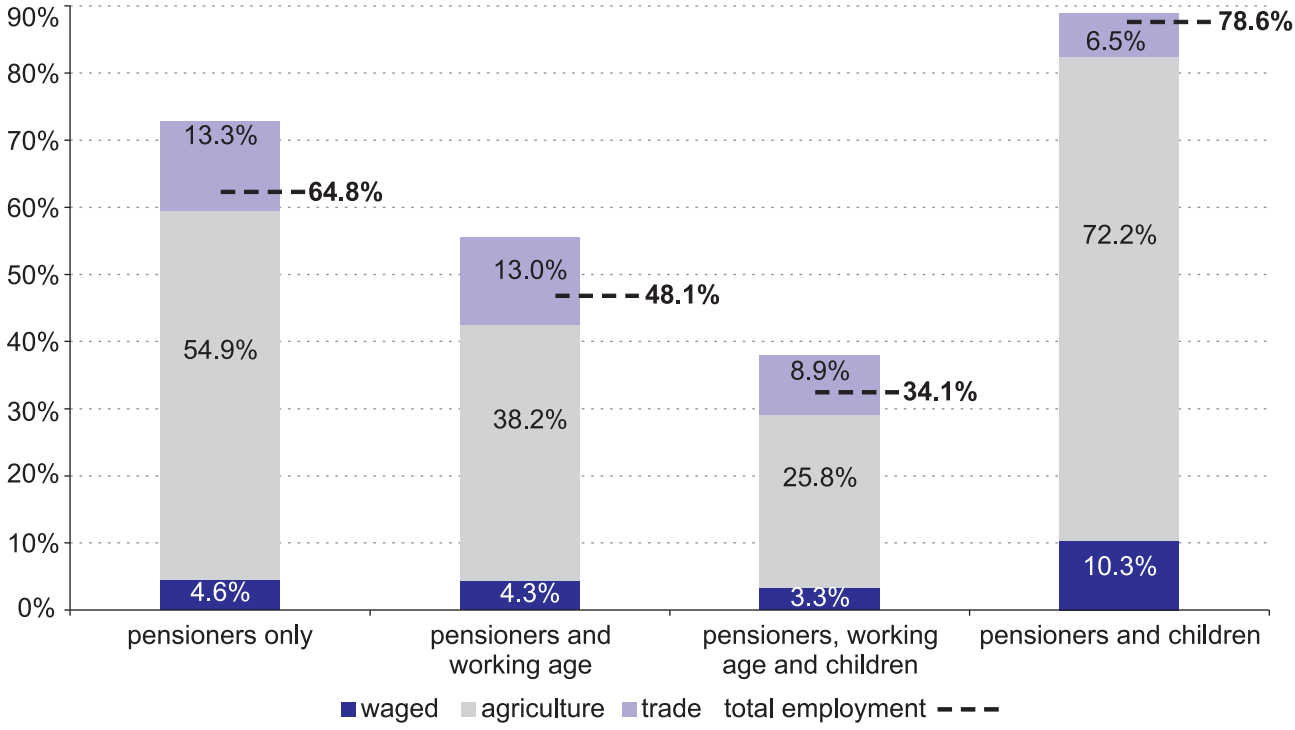
Figure 7: Household Composition and Economic Activity for Men Aged 60 and Over



Source: Authors' calculations from VHLSS 2004

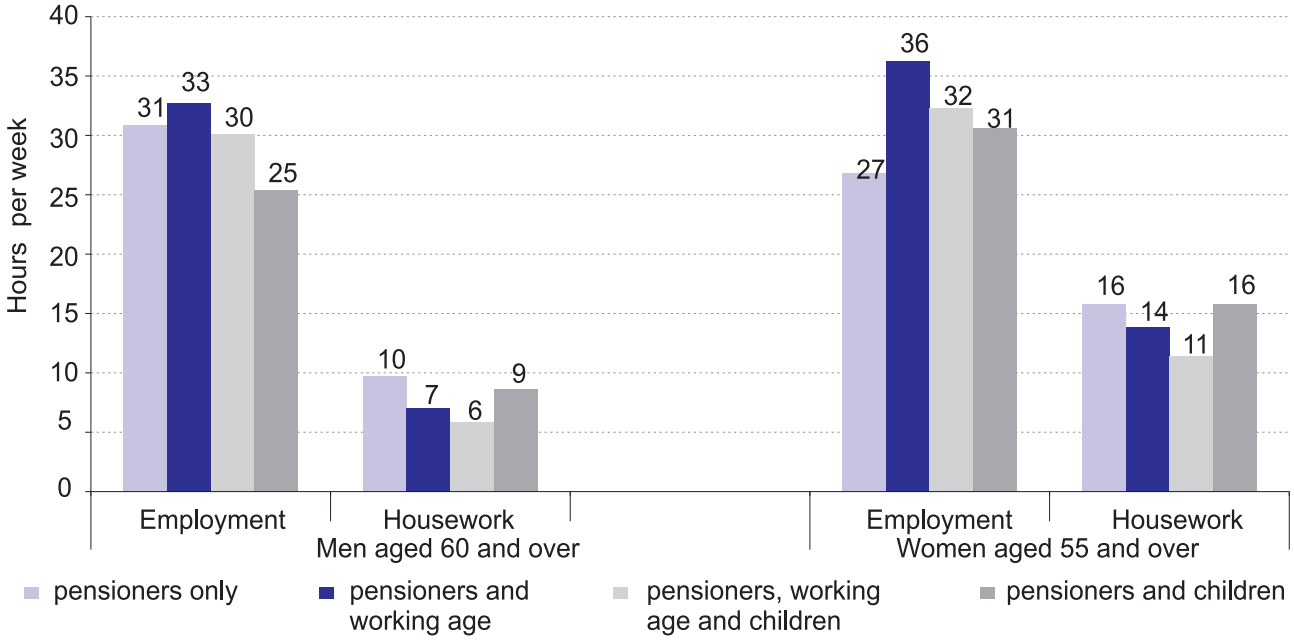
Figure 8 shows the same set of results for elderly women and confirms the same general pattern, with lowest levels of economic activity in three generation households and highest in households where all adults are elderly. Of course, what is not known is how far different rates of economic activity are a result of an encouragement to retire because earned income by others in the household isshared and replaces the earnings of elderly people, or whether this is a reflection of the characteristics of the elderly person being less ble to work per-se.

Figure 8: Household Composition and Economic Activity for Women Aged 55 and Over



Source: Authors' calculations from VHLSS 2004

Figure 9: Household Type and Elders' Hours of Work



Source: Authors' calculations from VHLSS 2004

Figure 9 confirms the overall picture gained from the profiles of economic activity by showing hours of work for both elderly men and women by household type and confirms that lower economic activity in three-generation households is accompanied by shorter hours. Hours of housework also show the same overall pattern, and this may also be a reflection of the lower per-capita share of housework required when pooled across larger households rather than a reflection of lower capacity to do housework per se.

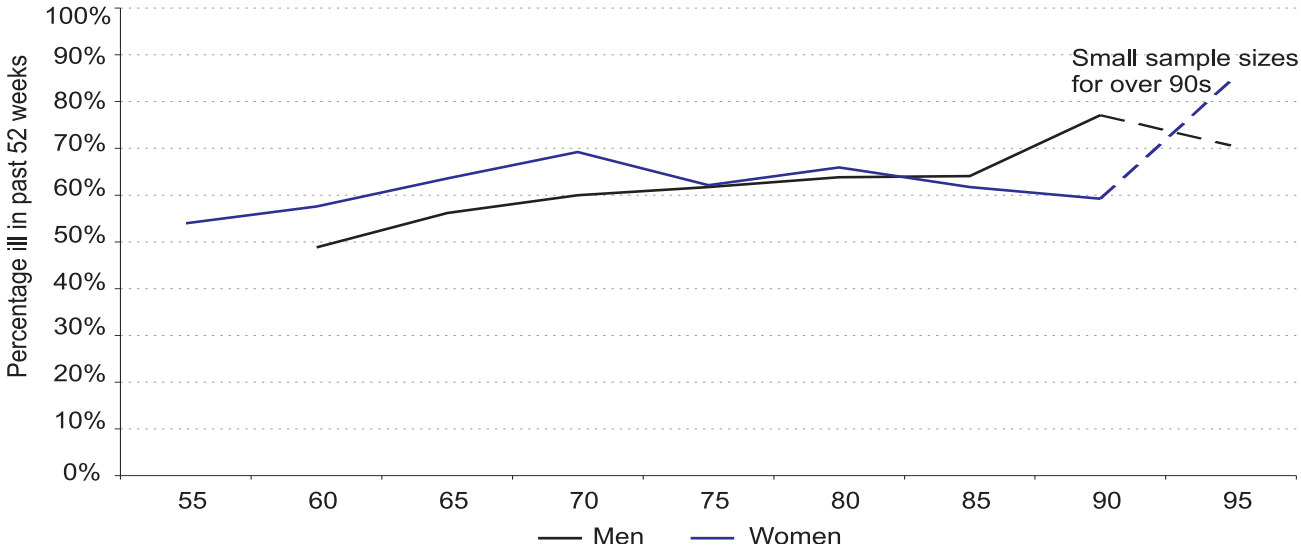
Table 6 gives a summary of elderly people's contribution to total overall household hours of work and housework. In households where only the elderly live they contribute 100% of total household hours across, on average, two persons. When living with working age people the elderly make up on average 1.5 people in an average household size of five (29 per cent of the household population) and contribute 20 per cent of economic work hours and 42 per cent of housework hours. In three generation households they are on average 1.4 elderly people in a household with an average size of seven (20 per cent of the population) with the elderly providing 10 per cent of total working hours and 26 per cent of total household housework hours. These averages are the outcome of a variety of trade-offs between earning and household production strategies, where elderly people can contribute directly to earnings or contribute indirectly by allowing others to work more hours by taking-up more housework hours. This is a complex pattern of household labour supply that requires further research and modelling.

Table 6: Elders' Hours Contribution to Household Employment

Household Type	Average number of people in household	Average number of elderly In household	% Elderly contribution to household working hours	% contribution to all hours of housework
Elderly Only	1.9	1.9	100	100
Elderly and Working Age	5.0	1.5	20.4	41.9
Elderly Working Age and Children	7.0	1.4	10.0	26.1
Elderly and Children	3.0	1.8	93.2	79.3
All households with elderly*	6.1	1.4	15.0	35.4

Source: Authors' calculations from VHLSS 2004

Figure 10: Reported Ill Health of Elderly

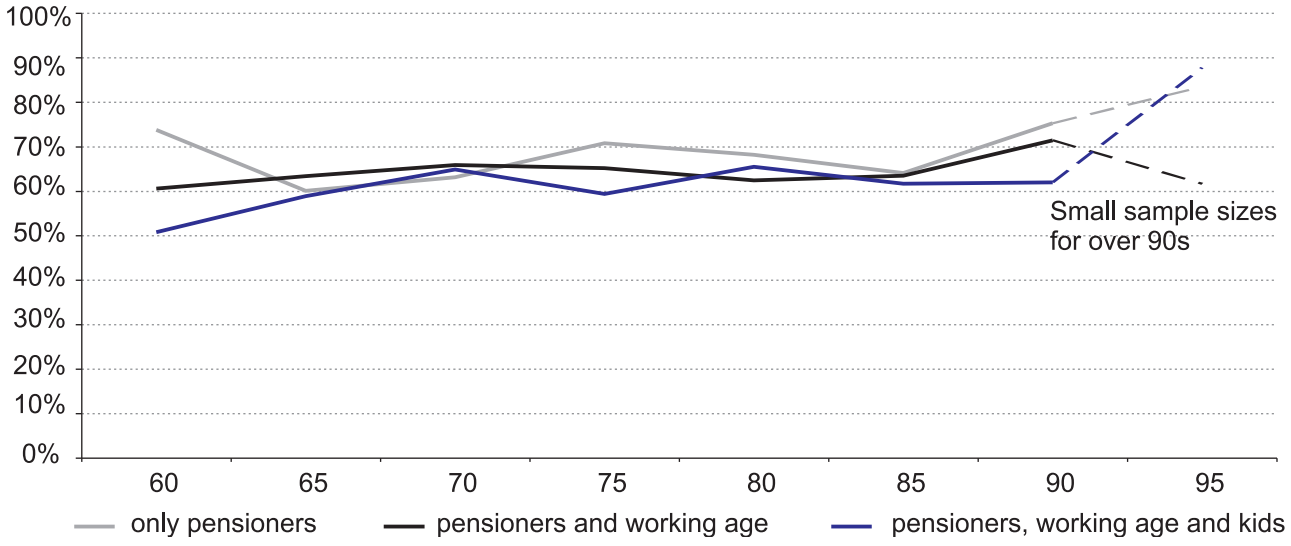


Source: Authors' calculations from VHLSS 2004

How healthy are the elderly Vietnamese and how does health alter as they age? Figure 10 shows a crude measure of ill-health, those reporting an illness in the past 52 weeks, and shows the proportions of elderly men (green solid line) and women (ochre solid line) reporting illness by age. There is a clear overall gradient with age but this is difficult to interpret from simple cross-sectional data as there is selection over time as only the healthiest survive to be reported in the survey. Actual incidence of ill health is therefore likely to be more marked than this response suggests because the data is censored as no questions are asked about those who have died in the previous 52 weeks and their incidence of ill health.

Earlier in the previous section we saw differences in levels of economic activity and hours for elderly people living in different household circumstances and one reason for this may have been that those with poorer health were more likely to co-reside. Figure 11 shows the same age and ill-health profile for the elderly (men and women from the age of 60) according to their household composition. There is no clear and obvious difference, and these differences are unlikely to be statistically robust.

Figure 11: Reported Ill-Health of Elderly and Household Composition

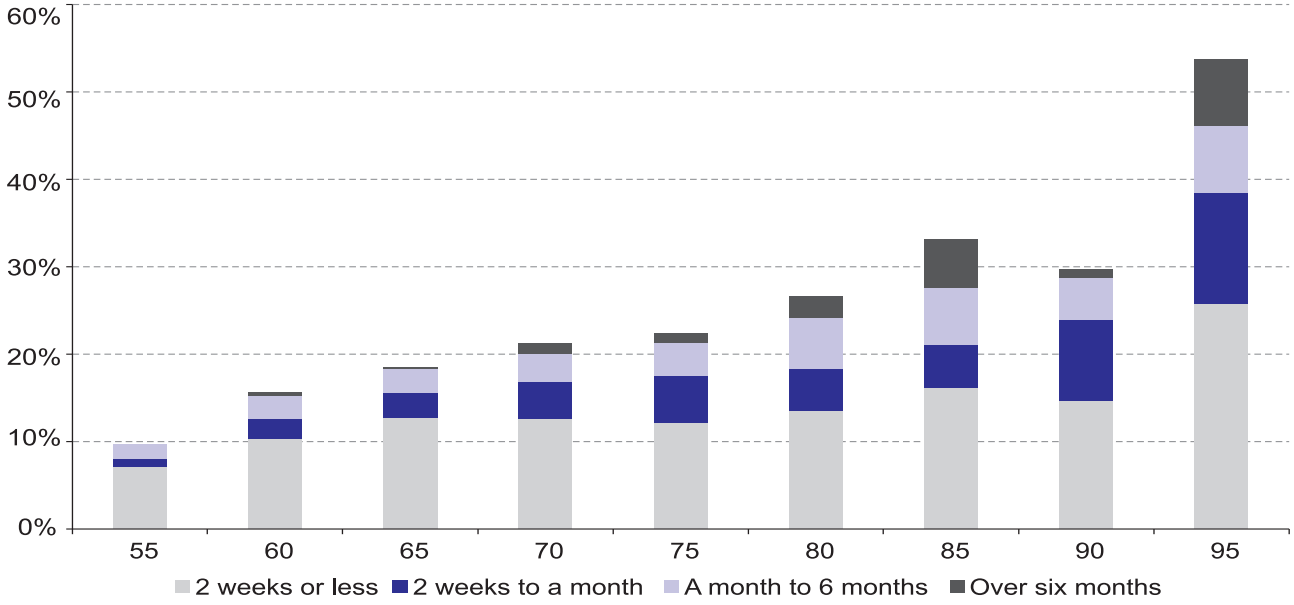


Source: Authors' calculations from VHLSS 2004

VHLSS also collects data on the number of days in bed from illness and disability over the past year and this is a clearer indicator of severity of ill health and disability. Figure 12 shows that the overall number of bed-bound days increases with age for elderly people, with both the incidence of illness resulting in short-periods of less than two weeks and long-periods in bed of over 6 months increasing for the older elderly.

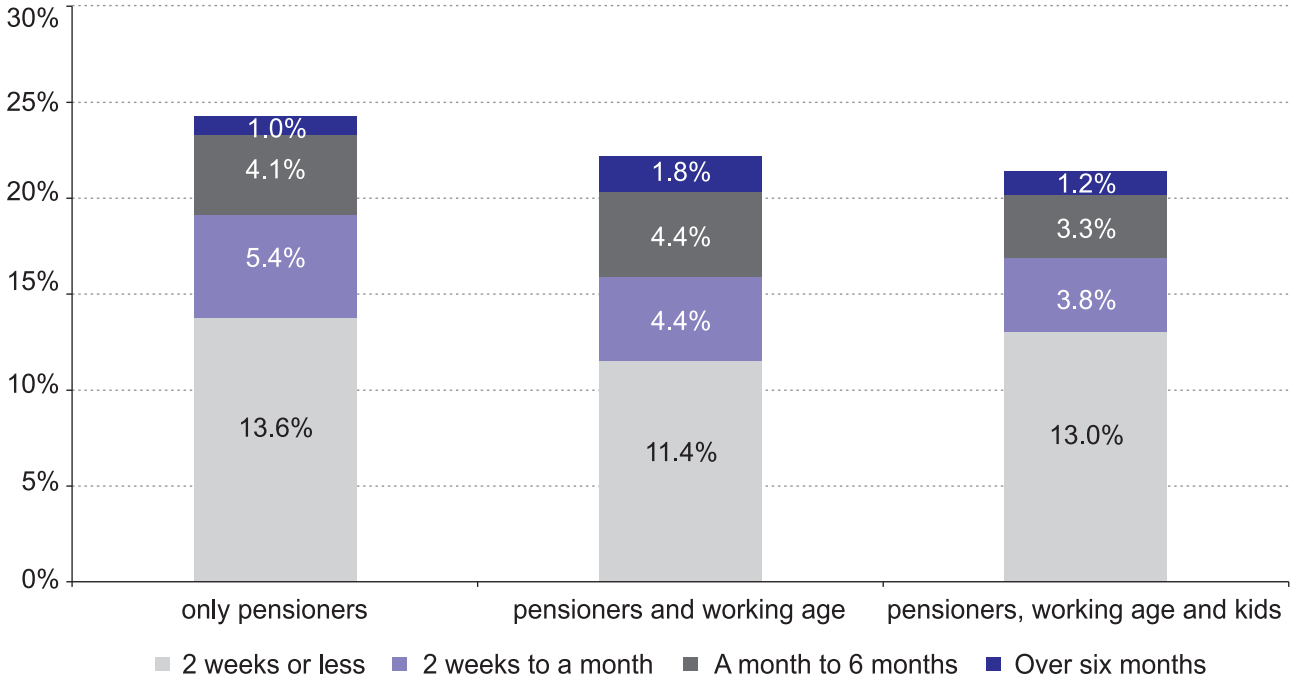
This data on days incapacitated in bed allows us to more clearly see if incapacity and disability are more concentrated in certain household types. Figure 13, however, shows that there is no clear difference between household types in periods spent incapacitated in bed although elderly only households appear to have slightly higher overall days in bed on average.

Figure 12: Days Incapacitated in Bed Caused by Illness and Disability



Source: Authors' calculations from VHLSS 2004

Figure 13: Elderly People's Days Incapacitated in Bed by Household Type



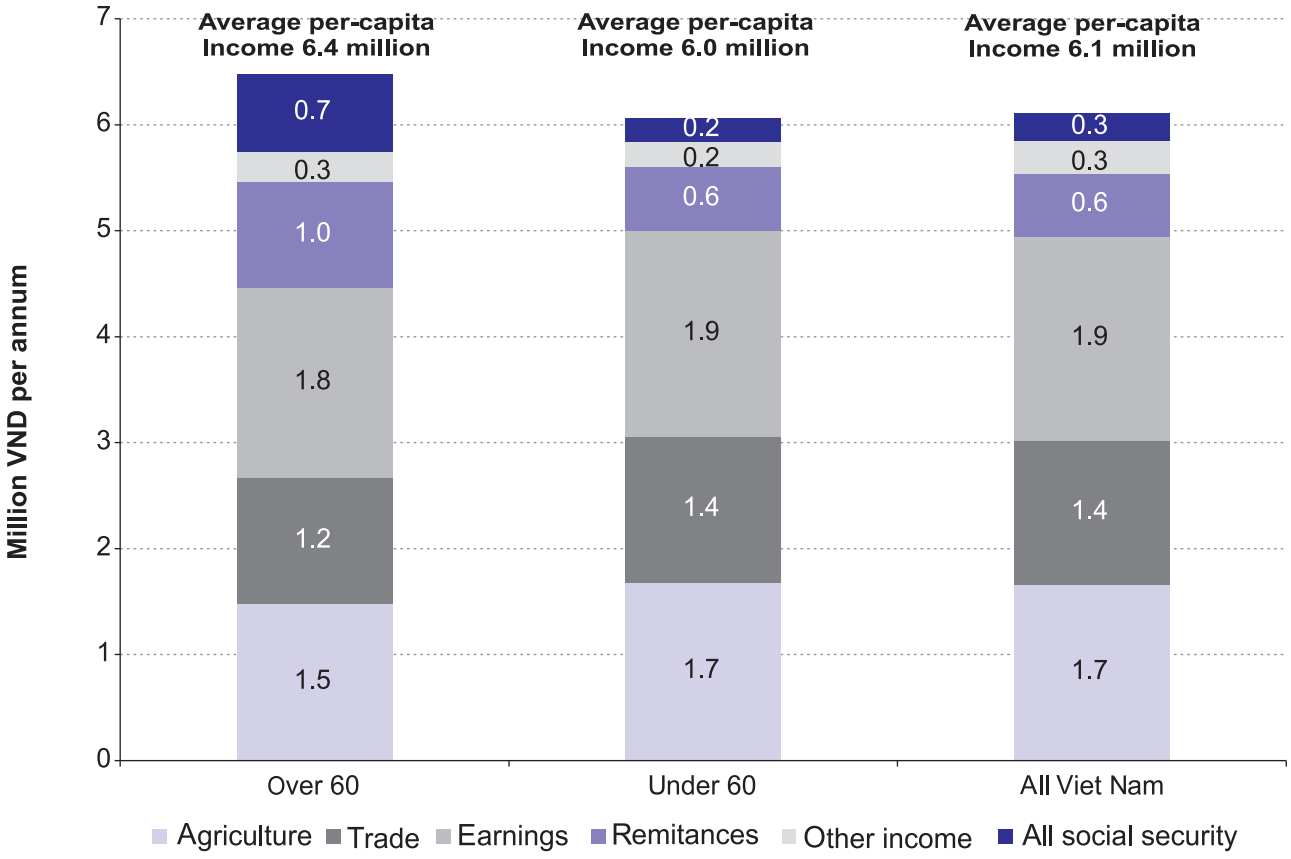
Source: Authors' calculations from VHLSS 2004

4. Incomes

Data on income is collected mostly at the household level in VHLSS and this means that the incomes of individual elderly people are not identifiable. Those with waged employment have individual earnings reported but all other forms of income are reported as part of pooled household income, including pensions and remittances. The income of the elderly thus can only be expressed as an elderly person's per-capita share of household income. This can make interpretation difficult without some care: first, specific incomes given to elderly people such as retirement pensions and some remittances are shared across all household members, even if they do not individually receive them, conversely, income sources from non-elderly are given to elderly people on a per-capita share basis. Figure 14 shows per-capita income levels and sources for elderly people (aged 60 and over) and for the non-elderly and compares these to the Vietnamese average. The official income definition developed by GSO is used.

On average, the elderly have higher than average incomes, a total of 6.4 million VND compared with 6.1 million VND for the whole population and 6.0 million for non-elderly. On average the elderly group's lower per-capita income from earnings, trade and business is 0.5 million below average. But this shortfall in "market income" is made up for by additional remittances, that are 0.4 million VND higher than average, and social security which is 0.4 million VND above average.

Figure 14: Average Per Capita Income for Elderly 2004



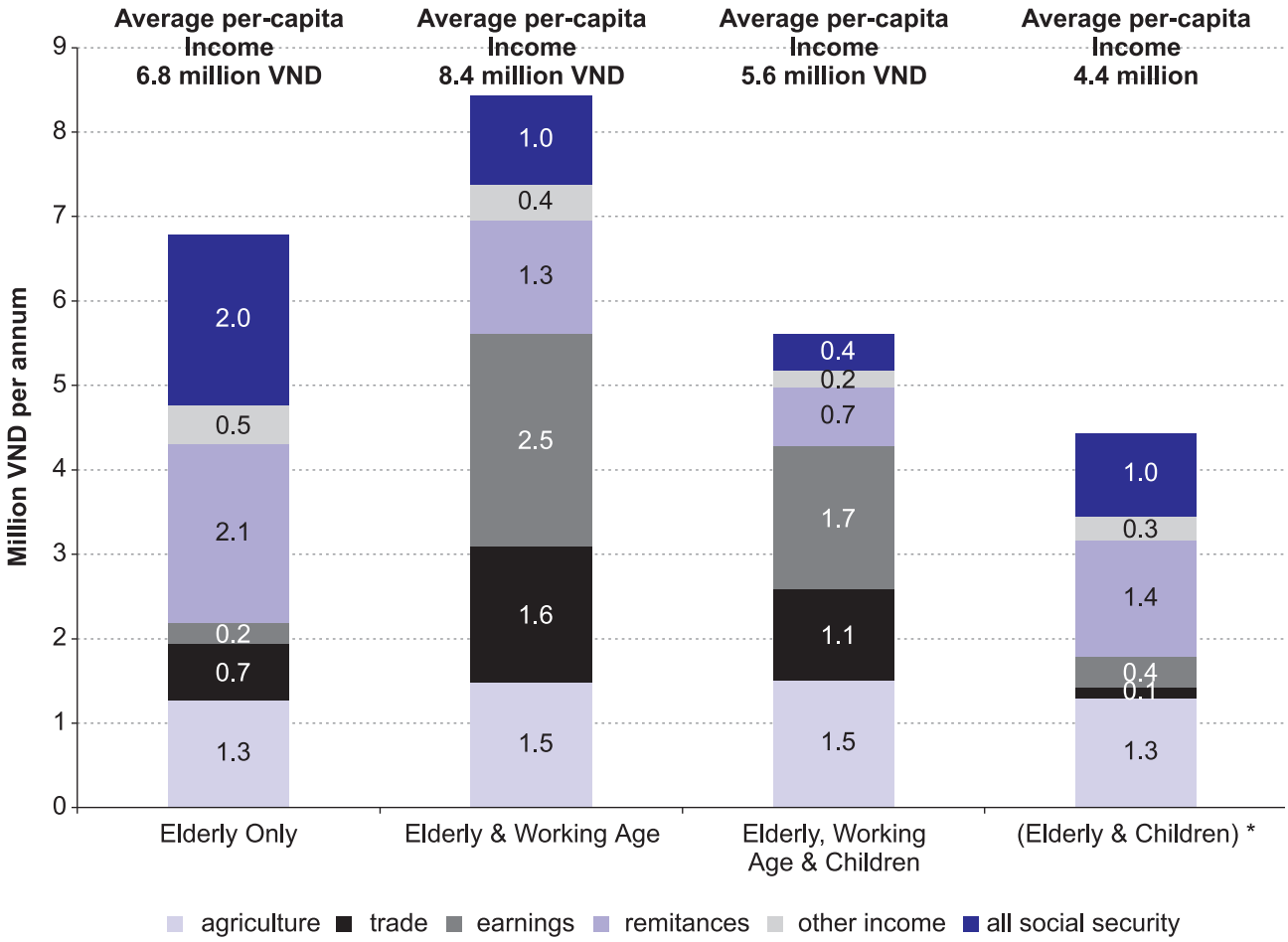
Source: Authors' calculations from VHLSS 2004

Figure 14 summarises a position where lower market income for the elderly is compensated by transfers, either between households as remittances or as formal social security transfers. However, transferring income between households is only one way of providing the elderly with resources. An alternative is co-residence and income pooling. Figure 15 shows the income profiles of the elderly according to their household composition, using the same approach and definitions used above in previous sections. On average those elderly who live in two generation households with their adult children have the highest incomes, on average an annual income of 8.4 million VND. This is due to higher per-capita market income from wages and agricultural production and trade. Those elderly who live in single generation households

have the highest levels of transfers, both remittances and social security, and have average incomes of 6.8 million VND per annum. Three generation households are poorer, with on average 5.6 million VND per annum, because they have both lower per-capita market income and lower per-capita transfers. However, these households have more people and thus a bigger pool in which shares are divided. The small number of households where elderly people live with children are the poorest, although small sample sizes hinder firm conclusions.

The sharing of income within households is thus a crucial factor in elderly incomes but the economies of scale that result from co-residence and which are one of the real benefits of pooling within households are not reflected in a simple per-capita measure of income. We therefore use a different assumption about income pooling and employ an equivalence scale to take into account economies of scale. Now we see a different set of relative income differences by household type. The equivalence scale we employ is a simple one, the square root of the number of co-residents in the household, as used by OECD and others. This approach makes no attempt to weight different needs of children and adults

Figure 15: Elderly Per-capita Income by Household Type



Source: Authors' calculations from VHLSS 2004

Table 7: Comparing Equivalised and Per-capita Incomes of Elderly Households

	Elderly & Working Age	Elderly Only	Elderly, Working Age & Children	(Elderly & Children) *
Non-equivalised results				
Per-capita Income	8.4	6.8	5.6	4.4
rank	1	2	3	4
% difference from Highest Ranked	-	19.5%	33.5%	47.3%
Equivalised results				
Equivalent income	(16.90)	(9.19)	(13.95)	(7.93)
Rank	1	3	2	4
% difference from Highest Ranked	-	45.6%	17.5%	53.1%

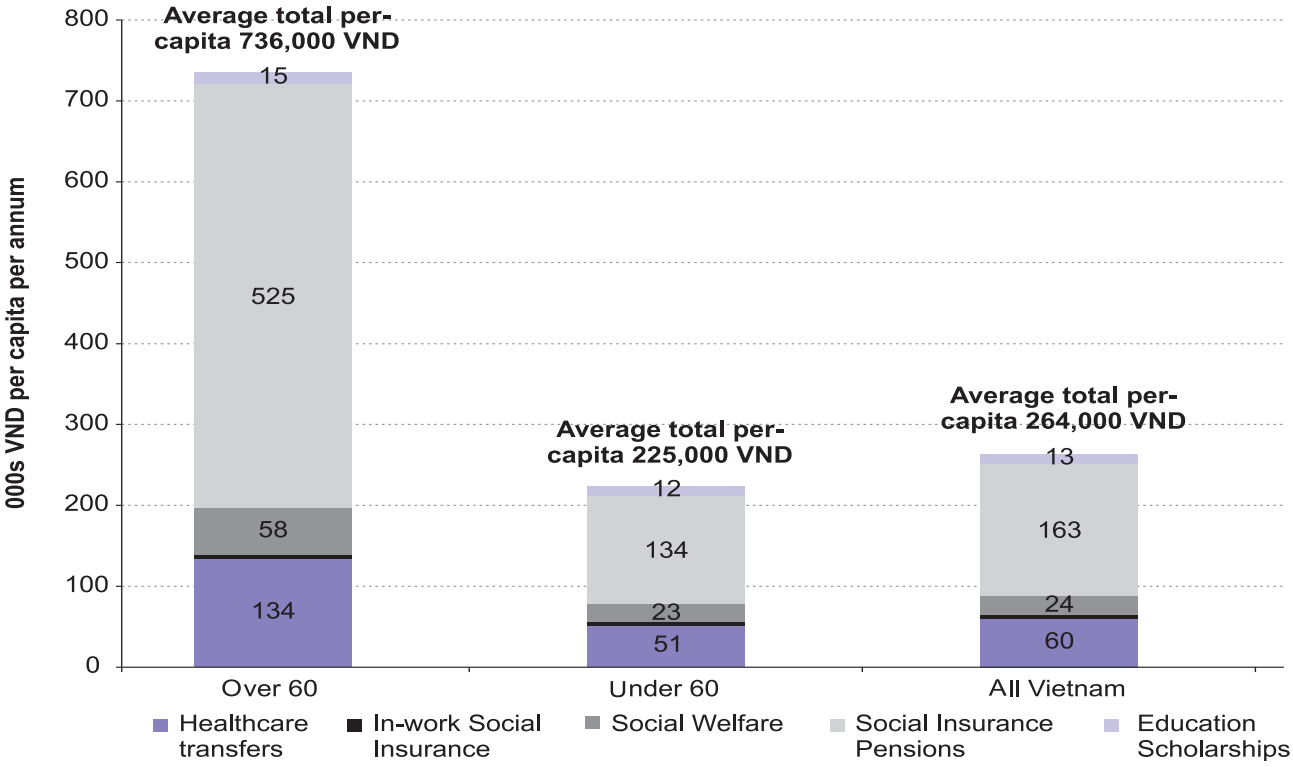
Source: Authors' calculations from VHLSS 2004

Table 7 shows the impact of using an equivalence scale alongside the simple GSO per-capita income measure when comparing income levels across elderly people's households. First it summarises the same data as shown in Figure 15 but adds a ranking that orders the types of households according to per-capita income. This shows, as previously discussed, those two generation households are the richest followed by elderly only single generation households and then the three generation households. The impact of using an equivalence scale is both to move away from a real nominal cash income when reporting income amounts, which can be ignored for the sake of argument, but also and more importantly to change the ranking of elderly households. The larger three generation households are now ranked second by income, richer than the elderly only households, when incomes are equivalised. The importance of different academic approaches to measuring income has applied policy ramifications for accurately assessing needs and targeting programmes on the basis of need as measured by incomes or resources. However, for the remainder of our discussion of elderly people's incomes we return to the standard Vietnamese practice in policy discussion of using (non-equivalised) per-capita income.

4.1 Income from Social Security

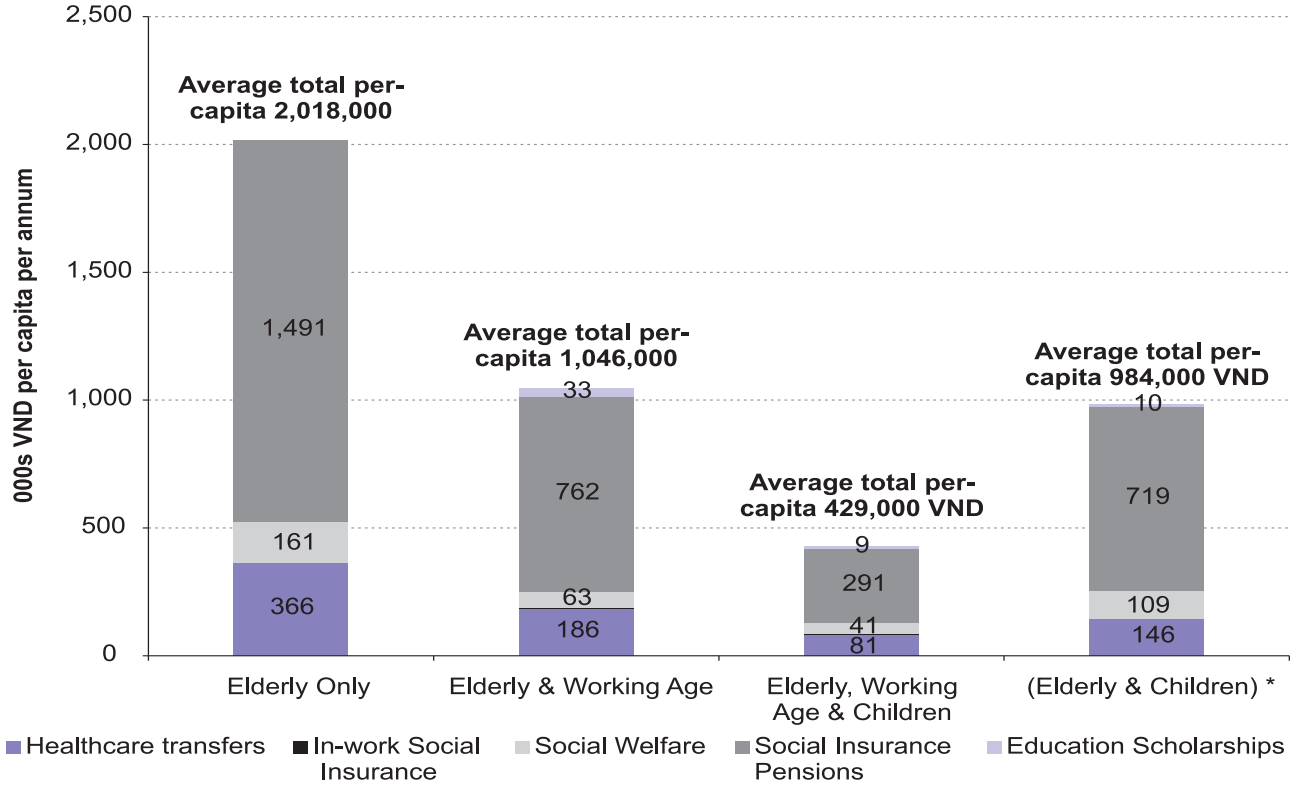
Formal state transfers play an important aggregate role in elderly households. The GSO income definition, which we adopt, has five main kinds of income from social transfers, which we term collectively "social security". These five forms of income transfer are Social Insurance Pensions, short-term in work Social Insurance for maternity and sickness, Social Welfare allowances, transfers to assist with healthcare and education scholarships and awards. Figure 16 shows the position for all elderly people and compares this to the non-elderly and all Vietnamese. Clearly, the elderly receive a major share of formal state transfers - in all approximately three times the average and for non-elderly. There major difference is, of course, the far higher amounts of long-term social insurance pensions, half a million VND per annum on average compared to 134,000 VND for non-elderly (where the 60 age definition means that some women pensioners aged 55 to 59 are included as non-elderly).and 163,000 VND for all Vietnamese. However, elderly people also receive higher social welfare payments, over double the average and higher healthcare transfers presumably reflect higher usage of healthcare.

Figure 16: Average Per-capita Receipts from Formal State Transfers



Source: Authors' calculations from VHLSS 2004

Figure 17: Per-capita Formal State Transfers by Elderly Household Type



Source: Authors' calculations from VHLSS 2004

Figure 17 shows how the pattern of social security income differs across household type and that single or two generation households receive higher amounts of pensions than three generation households. Data on average receipt hides significant differences in coverage. Those that obtain pensions tend to receive large amounts while many others receive nothing. Table 8 shows rates of coverage, the proportion of individual elderly who live in households where there formal social transfers are received. Taking all forms of formal transfer together, then social security covers around two thirds of pensioners, 64 per cent. Overall coverage from all transfers is higher in households where there are only elderly people, in urban areas and in ethnic minority households.

The majority of this coverage is from specific transfers designed to meet healthcare needs, and which is a partial reimbursement of costs incurred, and thus, while enabling take-up of healthcare, leads to little net difference in household resources or welfare once expenditure on healthcare is considered (see our accompanying paper Evans et al 2007).

Table 8: Coverage of Social Security

	All elderly	Household Type				Rural/Urban		Ethnicity	
		Elderly only	Elderly & Working Age	Elderly, Working Age & Children	(Elderly & Children) *	rural	urban	Ethnic minority	Vietnamese / Chinese
Any transfer	64.2%	71.9%	62.3%	63.8%	72.0%	62.7%	67.9%	74.3%	62.7%
Social Welfare	13.9%	13.5%	12.3%	14.6%	24.9%	16.1%	8.6%	20.7%	13.0%
Social Insurance Pension	22.3%	30.6%	27.8%	18.8%	23.4%	17.6%	34.3%	13.8%	23.5%

Source: Authors' calculations from VHLSS 2004

If we turn to concentrate on income transfers in their purest sense, those which are not related to expenditure, then the two major formal transfers are Social Welfare and Social Insurance Pensions. Only 22 per cent of the elderly live in households where a pension is received, and this is highest in elderly only households. Twice as many urban pensioner households receive a pension as those in rural areas, 34 per cent and 18 per cent respectively. Similarly, Vietnamese / Chinese are almost twice as likely to receive pensions as those from ethnic minorities. Social welfare payments are either targeted according to war-time activity related needs of survivors, disability or to smaller categorical schemes for designated poor households. On average Social Welfare is received by 14 per cent of the elderly, with little difference across household types but double the coverage in rural rather than urban areas and higher percentage coverage in ethnic minority elderly households.

However, it is not straightforward to think of coverage of these transfers as independent entitlements and Table 9 shows that around three per cent of elderly live in households where both Social Welfare and Pensions are received. This is probably a joint entitlement to both war-related social welfare and pension as other social welfare entitlements are means-tested and would only rarely be paid alongside pension. Additionally, eleven per cent of elderly households receive only social welfare payments and 19 per cent receive only a social insurance pension. This means that almost 67 per cent of the elderly receive no regular formal transfers.

Table 9: Entitlement to Social Welfare and Pensions

Social Welfare Only	10.9%
Social Welfare and Pension	3.0%
Pension only	19.4%
None	66.7%

Source: Authors' calculations from VHLSS 2004

Interpreting these differences in coverage is difficult without some idea of how the factors that determine entitlement interact. To explore entitlement a regression model was estimated solely for elderly people to establish what factors stood out in multi-variate analysis of entitlement for both Social Insurance pension and Social Welfare. Of course, cross-sectional evidence from the VHLSS is not an ideal source of data on entitlement because many of the reasons for entitlement, an employment record or war injury, for instance, are past events that are not recorded. This means that these regression models only "explain" currently identified characteristics of those who receive transfers rather than describe underlying entitlements.

Table 10 shows the results from the two regression models. First, we discuss social insurance pension. The most significant indicator of current entitlement to Social Insurance pensions is having a post-secondary education. This probably reflects the current cohort of pensioners who were public service employees in the past. Post-secondary education raises the probability of receiving a pension by a huge 44 per cent while those aged 75-84 are significantly less likely to receive pension. Those living in two generation households with their adult children are around four per cent more likely to receive pensions than three-generation households. Ethic minority elderly people are nine per cent less likely to receive pensions than Vietnamese and Chinese. Higher current original market income, that is income from employment, trading and agriculture, is associated with a lower probability of entitlement. However, this is difficult to interpret because many elderly with pensions will "retire" on the promise of a pension and earn less because the pension replaces potential earnings. Pensions are also six per cent less likely to go to those in households who report difficulties over the past year because of ill health. The urban elderly are 13 per cent more likely to receive a pension than rural elderly. There is also a clear regional differences with those living in northern Vietnamese regions being significantly more likely to receive pensions, with the exception of the North Western Region. Indeed, the elderly living in the Mekong Delta have a substantially lower chance of receiving a pension; they are 22 per cent less likely to receive a pension when compared to the omitted North Central Coastal region. All in all the evidence points to an educated, urban, Northern, educated elite dominating current pension receipt.

Individual level characteristics associated with the probability of receiving Social Welfare exactly replicate those for Social Insurance Pensions - post-secondary educated and aged other than 75 to 84. However, the probability of receiving Social Welfare is higher for those households where elderly live with children and in ethnic minority households. Overseas remittances reduce the probability of receiving social welfare. Reported difficulties due to health increase probability of receipt as does the presence of a waged earner. In contrast to social insurance pensions, rural elderly are associated with an increased probability of receipt. There is however some consistency in regional skews to receipt across pensions and social welfare with the two southern regions being associated with a nine to seven per cent reduced probability of receipt. The North Western region is also associated with a reduced probability of receipt - even when ethnic minority status is taken into account.

4.2 Remittances

The other major source of income that benefits the elderly more than others is remittances, private inter-household transfers, often from adult children to their parents (Cox 2004). Figure 18 shows average receipt of remittances for elderly people, the non-elderly and the overall average for all Vietnamese. On average elderly people receive just less than one million VND per annum from remittances, of which around 60 per cent (617,000) is domestic remittances from others in Viet Nam. The non-elderly receive a total of just over 600,000, of which 63 per cent, 378,000 VND, is from domestic remittances. This leads to an average across all households in Viet Nam of around 650,000 VND.

Table 10: Marginal Probability of Elderly Person Living in a Household Where Receipt of Social Insurance Pension and Social Welfare is Recorded.

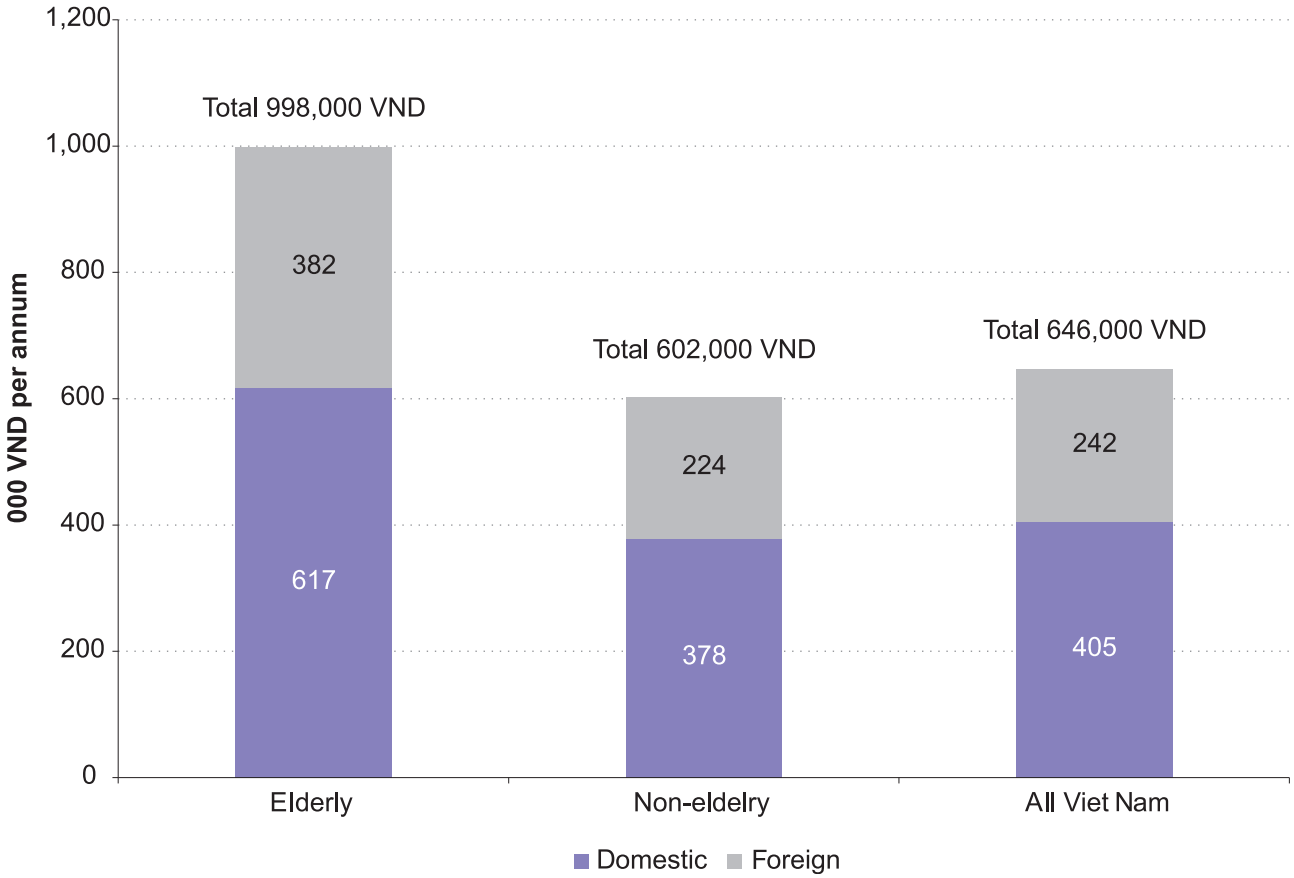
Probit with Marginal Effects

Model 1	Model 2
Number of obs = 4494	Number of obs = 4494
Prob > chi2 = 0.0000	Prob > chi2 = 0.0000
Pseudo R2 = 0.2781	Pseudo R2 = 0.0787

	Model 1 Social Insurance Pension				Model 2 Social Welfare			
	Marginal Probability	Robust Std Err	Significance		Marginal Probability	Robust Std Err	Significance	
Individual characteristics								
Marital Status (omitted category married)								
single	-0.031	0.083	0.707		-0.072	0.046	0.097	
divorced	-0.032	0.082	0.715		-0.094	0.021	0.014	
widowed	-0.104	0.072	0.179		-0.048	0.039	0.229	
female	-0.008	0.014	0.555		0.010	0.009	0.245	
Age group (60-64 omitted)								
55-59	-0.037	0.033	0.305		0.030	0.033	0.305	
65-69	-0.013	0.022	0.555		0.005	0.022	0.555	
70-74	-0.032	0.024	0.207		0.023	0.024	0.207	
75-79	-0.054	0.023	0.035	**	0.034	0.023	0.035	**
80-84	-0.064	0.025	0.025	**	0.060	0.025	0.025	**
85-89	0.007	0.035	0.839		0.095	0.035	0.839	
90-94	0.016	0.053	0.752		0.068	0.053	0.752	
95-99	0.070	0.076	0.310		0.092	0.076	0.310	
100 & over	-0.034	0.123	0.799		0.148	0.123	0.799	
post 2ndry education	0.441	0.037	0.000	***	-0.002	0.037	0.000	***
Household Characteristics								
household type (omitted category Elderly Working Age and Children)								
Elderly Only	0.009	0.028	0.737		-0.020	0.021	0.348	
Elderly & Working Age	0.037	0.021	0.073	*	-0.017	0.015	0.266	
Elderly & Children	0.045	0.074	0.513		0.099	0.062	0.058	*
Ethnic Minority	-0.090	0.021	0.000	***	0.051	0.031	0.072	*
Income before social security, tax and remittances	-0.015	0.004	0.000	***	-0.003	0.003	0.304	
Remittance Income Received from within Vietnam	-0.038	0.032	0.205		-0.008	0.024	0.731	
Overseas Remittance Income Received	0.051	0.043	0.197		-0.040	0.022	0.097	*
Social Welfare also received in Household	-0.008	0.0249	0.76		--	--	--	
Social Insurance Pension also received in Household	--	--	--		0.000	0.020	0.996	
Difficulty experienced because of ill-health	-0.060	0.019	0.003	***	0.093	0.020	0.000	***
Presence of formal waged employment in household	0.014	0.018	0.444		0.029	0.015	0.055	*
Locational Characteristics								
Urban	0.133	0.024	0.000	***	-0.042	0.016	0.016	**
Region (North Central Coast omitted)								
Red River Delta	0.040	0.028	0.133		0.019	0.025	0.453	
North Eastern Mountain	0.029	0.032	0.343		-0.030	0.025	0.262	
North Western Mountain	-0.002	0.048	0.966	***	-0.084	0.023	0.019	***
South Central Coast	-0.151	0.014	0.000	***	-0.025	0.025	0.346	
Central Highlands	-0.104	0.027	0.006	***	0.028	0.043	0.482	
South East	-0.160	0.017	0.000	***	-0.093	0.018	0.000	***
Mekong Delta	-0.214	0.016	0.000	***	-0.071	0.019	0.001	***

Source: Authors' calculations from VHLSS 2004
Notes: *significance at 90%; ** 95% and ***99%

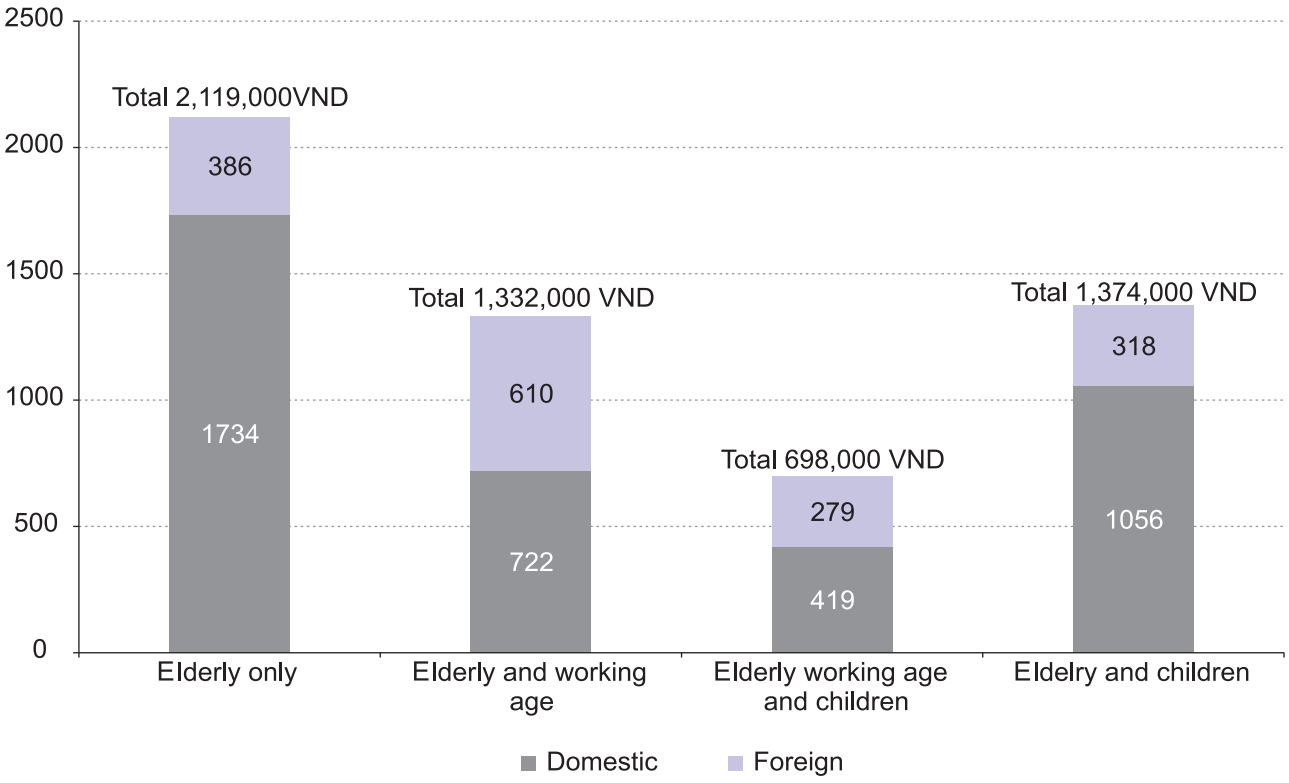
Figure 18: Remittance Income



Source: Authors' calculations from VHLSS 2004

Figure 19 shows how remittance income differs by type of household. As remittances are private inter-household transfers and primarily occur as transfers between adult children and their parents one would expect such remittances to be highest in elderly only households, and we find this to be the case with an average of 2.2 million VND per annum, of which 82 per cent are domestic remittances averaging of 1.7 million VND. Elderly people living in two generation households, where the elderly live with adults of working age, receive on average 1.3 million VND but only 54% of this is in the form of domestic remittances. The elderly living in three generation households receive on average 700,000 VND, 60 per cent of which, 420,000 VND is domestic. Last, the elderly who live with children receive on average 1.4 million VND and over 70 per cent of this, 1 million VND, is domestic remittances.

Figure 19: Remittance Income for Elderly People by Household Type



Source: Authors' calculations from VHLSS 2004

But data on average remittance income hides significant differences in coverage because while some receive large amounts other pensioners receive nothing. Table 11 shows coverage rates. Overall 90 per cent of the elderly live in households where remittances are received. There is higher coverage in households where elderly either live alone, 96 per cent, or with children, 95 per cent. A lower percentage of elderly living in three generation households receive remittances, 89 per cent. Foreign remittances are most likely to be received in those households where the elderly and children live together, 4.2 per cent receive them, and this presumably reflects payments from the absent adult of working age living abroad. The difference in coverage between rural and urban elderly is primarily one of different sources of remittances, with urban elderly people more likely to receive foreign remittances, either on their own, 2.8 per cent, or combined with domestic remittances, 14.6 per cent. Far fewer urban elderly people receive solely domestic remittances, 74 per cent compared with 80 per cent of rural elderly people. The elderly from ethnic minorities are less likely to receive remittances, 82 per cent do compared with 92 per cent of Vietnamese and Chinese. They are also less likely to receive foreign remittances, either on their own or together with domestic remittances.

Table 11: Coverage of Remittances

	All Elderly	Household Type				Rural/Urban		Ethnicity	
		Elderly only	Elderly and working age	Elderly working age and childreny	Elderly and children	Rural	Urban	Ethnic Minority	Vietnamese /Chinese
Foreign Remittance alone	1.6	0.8	2.1	1.5	4.2	1.1	2.8	0.9	1.7
Domestic Remittance alone	81.0	89.6	82.2	79.3	84.9	84.0	73.5	80.1	81.1
Both Domestic and Foreign	7.7	5.3	6.7	8.5	5.4	4.9	14.6	0.9	8.63
Total Coverage	90.3	95.7	91.0	89.3	94.5	90.1	90.0	81.9	91.5

Source: Authors' calculations from VHLSS 2004

Interpreting these differences in coverage is difficult without some idea of how all the factors that determine receipt of remittances interact. We therefore run regression models to estimate the likelihood of receipt of domestic and foreign remittances for elderly people. Table 12 shows the results from these models.

Domestic remittances are ubiquitous and few individual characteristics are statistically associated with receipt, apart from the 80-84 age group being somewhat more likely to receive remittances overall – around 5 per cent more than the reference 60-64 age group. Living in a household that only consists of elderly people significantly increased the probability of receiving domestic remittance by around six per cent compared to the elderly living in the reference group of three generation households. Being an ethnic minority reduces the probability of receipt as does, additionally, living in the Central Highlands and North Western Mountain regions.

Foreign remittances affect a far smaller share of the population and the relatively small sample sizes mean that it is hard to detect significant correlations while the predictive power of the model is more limited. However, in spite of sample size constraints, we find that the elderly aged 90-94 have a nine per cent increased probability of receiving international remittances compared to the 60-64 age group while living in elderly only households reduces the probability of receipt as does living solely with working age adults. Elderly people from ethnic minorities are around five per cent less likely to receive international remittances. The level of resources in the household also seems to affect the probability of receipt, with a falling probability linked to higher original market income and the presence of a waged earner. Elderly people living in urban areas have a higher probability of receipt together with those living in the South East, North Eastern Mountains and Central Highlands. Overall the probability of receiving an international remittance is dependent on having kin living abroad (which is not recorded in the survey) and this is linked to location and the history of emigration from certain locations in Vietnam during and immediately after the war.

On average social security and remittances not only make up the shortfall in market income for elderly people in Viet Nam but raise their incomes above average levels. What effect does this have on the distribution of elderly people's incomes? The answer is not simple because there is no clearly established way of measuring the starting position that would occur without state and private transfers for many reasons. One reason is that those who retire or lessen their work when they receive a pension would probably continue to work or have higher earnings in the absence of a pension. Another reason is that without pensions and remittances the patterns of household composition would change, as more elderly people would co-reside with their children - although it is important to see this as children remaining in their parents home as well as the elderly moving to live with their adult children.

Given these limitations, we do not attempt to define a precise "counterfactual" position and instead profile different versions of income before and after transfers. Our approach is to compare a notional "original market income" that removes private and state transfers from current income and the final outcome current income that results after market income and transfers. We show how transfers relate to both. As we rank elderly people by income we also show these profiles using equivalised income, which allows for economies of scale in larger households.

Table 12: Marginal Probability of Elderly Person Living in a Household Where Receipt of Remittances is Recorded.

Probit with Marginal Effects

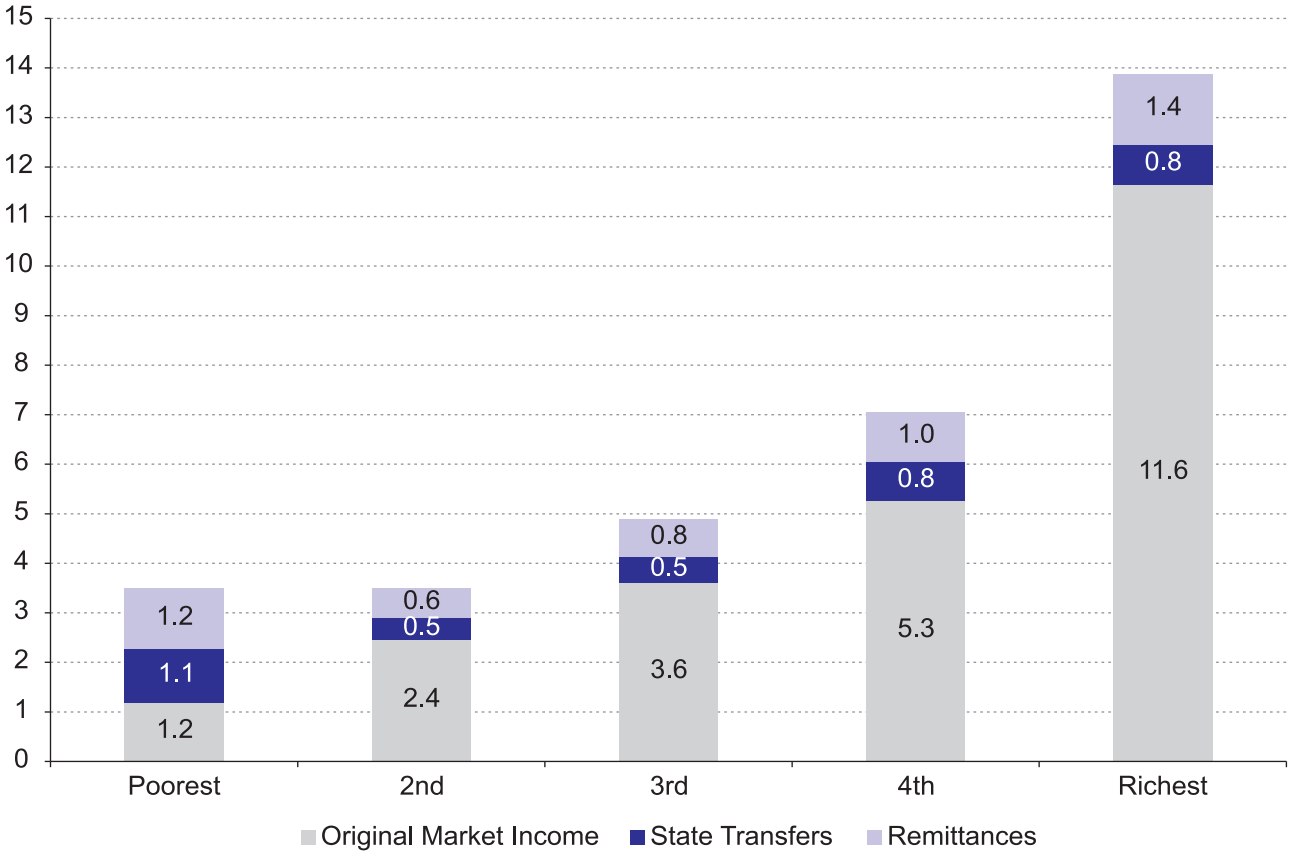
Model 1	Model 2
Number of obs = 4494	Number of obs = 4494
Prob > chi2 = 0.0000	Prob > chi2 = 0.0000
Pseudo R2 = 0.0421	Pseudo R2 = 0.1127

	Model 1 Domestic Remittance				Model 2 Foreign Remittance			
	Marginal probability	Robust Std Err	Significance		Marginal probability	Robust Std Err	Significance	
Individual characteristics								
Marital Status (omitted category married)								
single	-0.032	0.043	0.460		-0.043	0.046	0.328	
divorced	0.033	0.054	0.600		0.006	0.056	0.906	
widowed	-0.057	0.051	0.232		-0.026	0.038	0.521	
Female	0.004	0.009	0.691		0.005	0.008	0.506	
Age group (60-64 omitted)								
55-59	0.024	0.023	0.353		0.033	0.034	0.277	
65-69	0.014	0.016	0.418		0.011	0.017	0.510	
70-74	0.016	0.019	0.429		0.008	0.019	0.668	
75-79	0.016	0.019	0.434		0.006	0.020	0.773	
80-84	0.045	0.017	0.024	**	0.011	0.023	0.616	
85-89	0.038	0.021	0.129		0.033	0.028	0.172	
90-94	0.037	0.026	0.227		0.088	0.048	0.018	**
95-99	0.044	0.034	0.300		0.015	0.055	0.766	
100 & over	0.051	0.049	0.425		-0.007	0.067	0.923	
post 2ndry education	0.008	0.022	0.710		0.020	0.022	0.315	
Household Characteristics								
Household type (omitted category Elderly Working Age and Children)								
Elderly Only	0.061	0.015	0.001	***	-0.043	0.012	0.005	***
Elderly & Working Age	0.006	0.014	0.690		-0.021	0.012	0.096	*
Elderly & Children	0.017	0.042	0.696		0.025	0.054	0.611	
Ethnic Minority	-0.053	0.030	0.045	**	-0.046	0.015	0.019	**
Income before social security, tax and remittances	-0.004	0.004	0.264		-0.005	0.002	0.015	**
Social Welfare received in Household	-0.007	0.021	0.740		-0.019	0.015	0.261	
Social Insurance Pension received in Household	-0.025	0.023	0.242		0.023	0.021	0.234	
Difficulty experienced because of ill-health	0.020	0.016	0.244		-0.022	0.013	0.125	
Presence of formal waged employment in household	0.023	0.015	0.116		-0.021	0.012	0.081	*
Locational Characteristics								
Urban	-0.015	0.016	0.348		0.056	0.016	0.000	***
Region (North Central Coast omitted)								
Red River Delta	0.022	0.022	0.339		-0.002	0.020	0.934	
North Eastern Mountain	-0.017	0.028	0.539		-0.039	0.017	0.062	*
North Western Mountain	-0.152	0.066	0.004	***	-0.020	0.030	0.554	
South Central Coast	-0.024	0.032	0.438		0.003	0.024	0.898	
Central Highlands	0.082	0.018	0.006	***	-0.053	0.016	0.055	*
South East	-0.001	0.029	0.976		0.101	0.037	0.000	***
Mekong Delta	0.021	0.022	0.369		0.022	0.022	0.307	

Source: Authors' calculations from VHLSS 2004
Notes: *significance at 90%; ** 95% and ***99%

Figure 20 shows original per-capita market income for elderly people divided into quintiles, the poorest quintile (20 per cent) have around 1.2 million VND per annum and the richest quintile ten times this amount, 11.7 million VND. Additionally shown are the transfers they receive, the poorest quintile of elderly people receive 1.1 million VND in state transfers and a further 1.2 million VND in remittances. The 2nd to 4th quintiles receive less than the poorest quintiles per-capita in both state and private transfers, from 0.5 rising to 0.8 million VND in state transfers and from 0.5 rising to 0.8 million VND in private remittances. The richest quintile however, receive the highest per-capita amount in private remittances, 1.4 million VND and 0.8 million in state transfers.

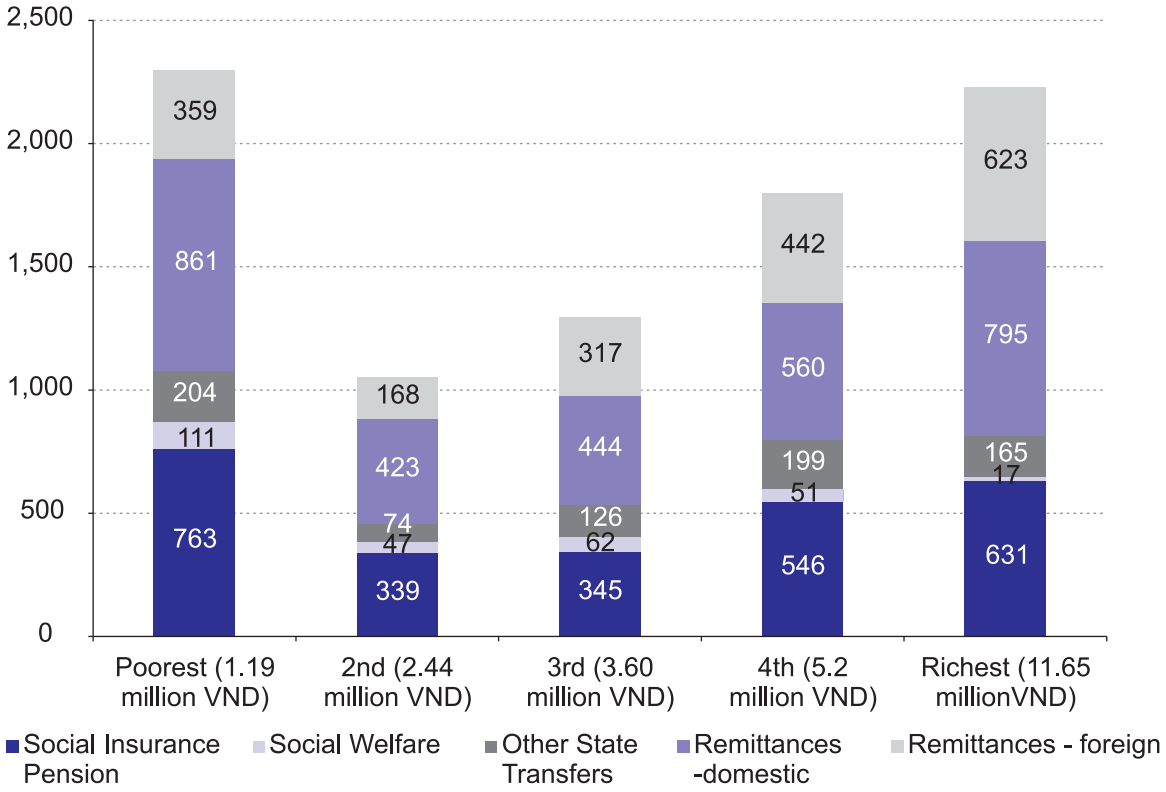
Figure 20: Quintiles of Elderly People's Original Market Income and Private and State Transfers



Source: Authors' calculations from VHLSS 2004

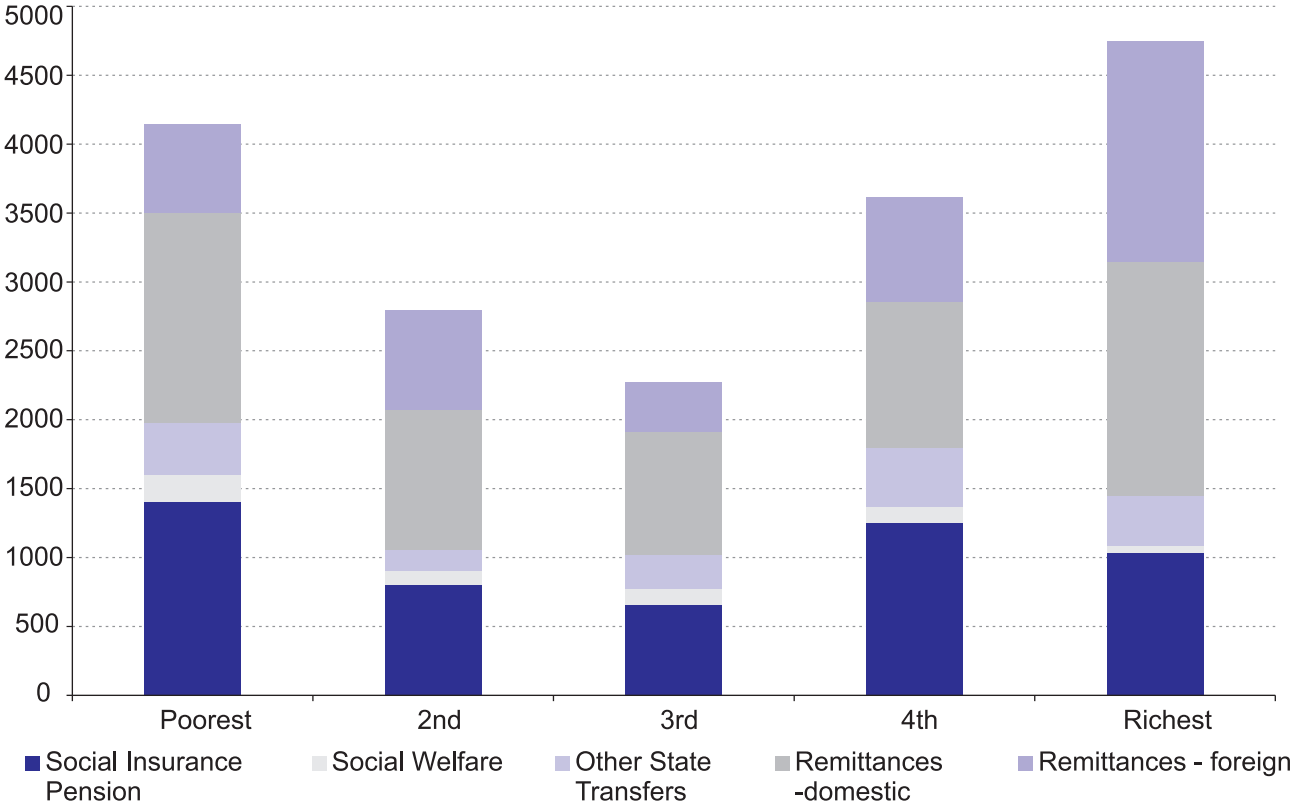
Figure 21 shows only the transfers for the same quintiles of original market income and clearly shows that per-capita the richest quintile gets almost the same as the poorest from total transfers. The greatest difference is in international remittances, that amount to an average of 0.6 million VND for the richest quintile. In addition domestic remittances are higher in the richest quintile than the 2nd to 4th quintiles and, at just under 0.8 million VND capita, are almost at the same level as for the poorest quintile, 0.86 million. State transfers are dominated by social insurance pensions, which are on average 760,000 VND for the poorest quintile, fall to around 340,000 per capita for the 2nd and 3rd quintiles before rising again for the richest two quintiles, with the richest quintile receiving 631,000 VND on average.

Figure 21: Private and State Transfers by Quintiles of Elderly People's Original Market Income



Source: Authors' calculations from VHLSS 2004

Figure 22: Private and State Transfers by Quintiles of Equivalised Elderly People's Original Market Income



Source: Authors' calculations from VHLSS 2004

As we have previously mentioned, there are two main areas of caution when interpreting these results across quintiles of original income. First, they relate to an "original market income" that may overstate progressiveness for the lowest income quintiles if a low market income equates with previously relatively high incomes from work prior to retirement. A civil servant on a high salary yesterday who retires today and only has their pension can, in theory have an original market income of zero today, but this is highly misleading. We address this point later by examining final income profiles. The second area of concern is that household size and income pooling is not constant across the quintiles, with lower per-capita income associated with larger numbers of people living together. Equivalisation of income and production of quintiles based on per-capita equivalised income allows us to take household size into account. When we do this we can assess whether equivalisation makes any difference to how transfers differ across the new distribution. Figure 22 shows the distribution of transfers by equivalised quintiles. The underlying equivalised amounts are not easily interpretable as they related to "equivalent VND". Of more concern is whether the pattern of transfers now differs across the newly defined quintiles. The poorest quintile now has a lower total level of transfers compared to the richest,. Table 13 shows more clearly these changing relative values of transfers (compared to the richest quintile) and confirms that the poorest quintile falls from having 1.03 times the level of transfers of the richest quintile to 0.87 after equivalisation, and the second quintile rises from 0.47 to 0.59 of the richest quintile's total, the third quintile falls from 0.58 to 0.48 and the fourth quintile falls from 0.81 to 0.76.

Table 13: Comparing Cash and Equivalised Transfers Across Quintiles

Relative position to richest quintile					
Cash	1.03	0.47	0.58	0.81	1.00
Equivalised	0.87	0.59	0.48	0.76	1.00

Source: Authors' calculations from VHLSS 2004

When we also look at the quintile shares of all transfer income across the whole elderly population it is also clear that equivalisation reduces the poorest quintile's share of all forms of transfer, reduces the richest quintile's shares of state transfers but increases it for private transfers, and increases the 2nd quintile's share across the board.

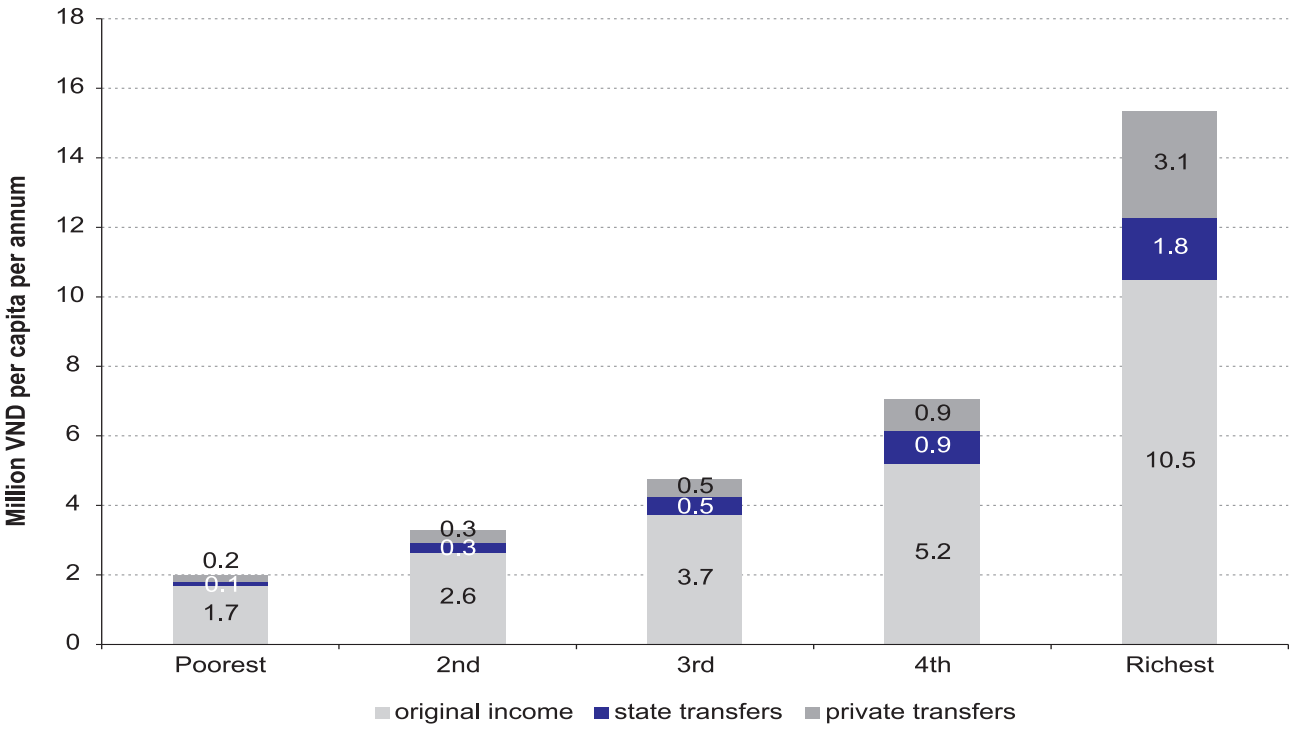
Table 14: Quintile Shares of Transfer Income and Changes Using Equivalisation on Original Market Income

% share	Poorest	2nd	3rd	4th	Richest
State Transfers					
All					
cash	29.3	12.5	14.5	21.7	22.1
equivalised	27.1	14.5	14.0	24.6	19.9
difference	*-2.2*	*2.0*	*-0.5*	*3.0*	*-2.2*
Pensions and Social Welfare					
cash	30.0	13.2	14.0	20.5	22.3
equivalised	28.0	15.8	13.5	23.8	18.9
difference	*-2.0*	*2.6*	*-0.5*	*3.3*	*-3.4*
Private Remittances					
Domestic					
cash	27.9	13.7	14.4	18.2	25.8
equivalised	24.6	16.5	14.4	17.1	27.4
difference	*-3.3*	*2.8*	*0.0*	*-1.0*	*1.6*
Foreign					
cash	18.8	8.8	16.6	23.2	32.6
equivalised	15.8	17.6	8.8	18.6	39.2
difference	*-3.1*	*8.8*	*-7.8*	*-4.6*	*6.6*

Source: Authors' calculations from VHLSS 2004

Finally, we turn to consider the resulting income distribution for the elderly. Figure 23 shows the quintiles of final income for the elderly. The inclusion of transfers in the income reflects the final incomes of the elderly households in Vietnam. Again we see that transfers remain unequally distributed across quintiles. This means that those with both low original income and low transfers are shifted down the distribution, and vice-versa. This leads to a much clearer regressive incidence of both state and private transfers. In cash terms, the poorest elderly quintile in Viet Nam, with an average income of 2 million VND only received 100,000 VND in state transfers and 200,000 in private transfers. From this point up the elderly income distribution there is a clear and linear regressive pattern, with the richest quintile of the elderly receiving 3.1 million VND in private transfers and 1.8 million VND in state transfers on average.

Figure 23: Quintiles of Elderly People's Final Income and Receipt of State and Private Transfers



Source: Authors' calculations from VHLSS 2004

Table 15 shows the composition of transfers and their amounts by final income quintile, which in many instance are too small for the poorest quintiles to show graphically. The richest quintile group of the elderly receive on average 1.3 million VND per annum in social insurance pensions which decline monotonically across quintiles as income falls. The poorest quintile group receive on average only 42,000 VND in pensions. Social Welfare payments are roughly equal for the poorest and richest quintiles, but double these amounts in the 3rd and 4th quintiles. Private transfers are also highly regressive, with the richest quintile of elderly people receiving 1.3 million VND on average in domestic remittances compared to 188,000 for the poorest elderly. Overseas remittances make up an additional 1.6 million for the richest quintile of the elderly.

Table 15: State and Private Transfers by Quintile of Final Income

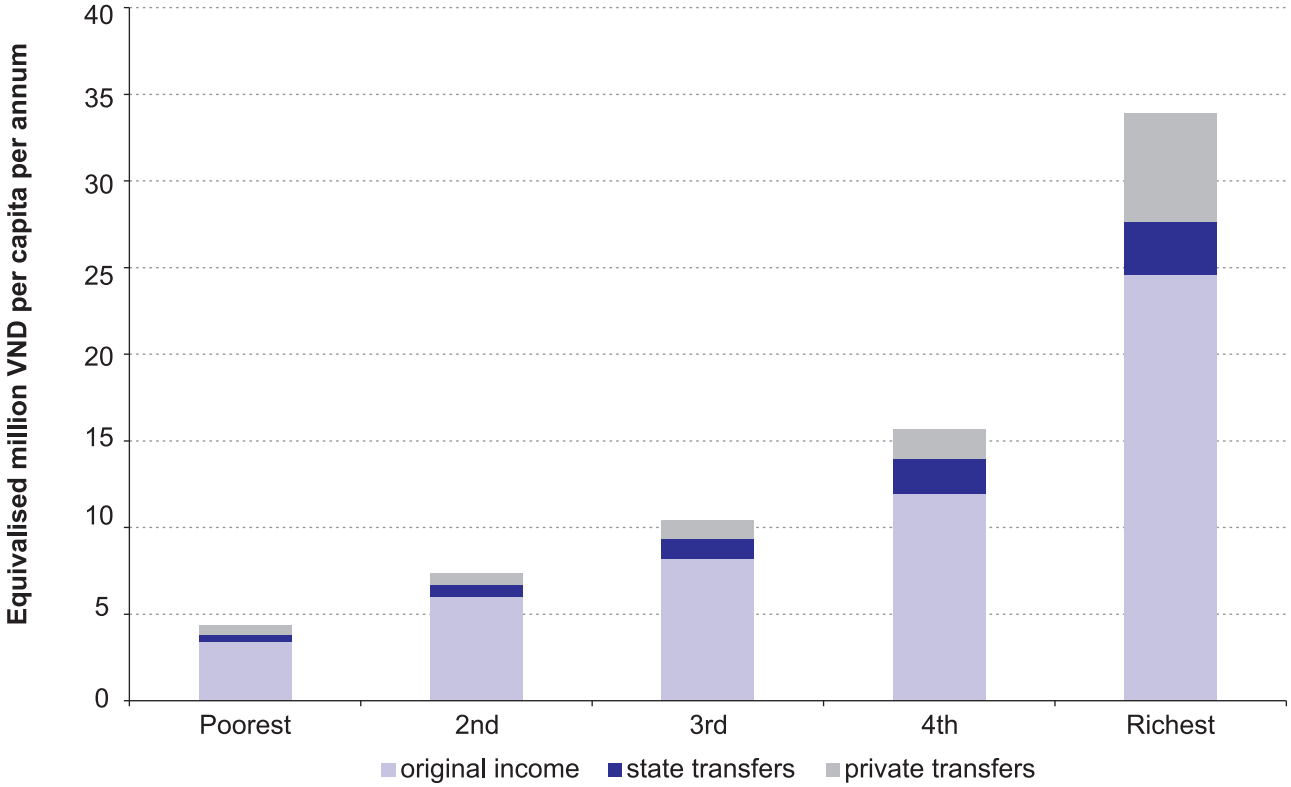
	Poorest	2nd	3rd	4th	Richest
Social Insurance Pension	42	167	352	733	1330
Social Welfare	38	68	71	77	35
Other State Transfers	34	67	92	135	440
Remittances -domestic	188	311	438	677	1469
Remittances - foreign	5	36	60	221	1587

Source: Authors' calculations from VHLSS 2004

The addition of transfers thus further skews an already skewed elderly income distribution further towards the richer elderly population. Does equivalisation make a difference; do the poor gain more when their large household are taken into account?

Figure 24 gives a graphical summary of equivalised incomes to match that of Figure 22, but the amounts are hard to interpret as they are equivalised VND. Table 16 shows the relative income levels compared to the richest quintile, both for total overall income and for total private and state transfers. Equivalisation hardly affects the relative differences in overall income - the poorest quintile's average income is 0.13 to 1 of the richest under both assumptions. There are some small changes in the relative size of transfer incomes, with the poorest quintile rising slightly on equivalisation from 0.06 to 0.1 to 1, and small increases in the relative proportion across the 2nd to 4th quintiles relative to the richest.

Figure 24: Quintiles of Equivalised Elderly People's Final Income and Receipt of State and Private Transfers



Source: Authors' calculations from VHLSS 2004

Table 16: Average Income Levels Relative to Richest Quintile

Overall Income relative position to richest quintile					
cash	0.13	0.21	0.31	0.46	1.00
equivalised	0.13	0.22	0.31	0.46	1.00
Overall Transfer Income relative to Richest Quintile's Transfer income					
cash	0.06	0.13	0.21	0.38	1.00
equivalised	0.10	0.15	0.24	0.40	1.00

Source: Authors' calculations from VHLSS 2004

Table 17 shows the change in shares of all transfer incomes across the income distribution when equivalisation is used. Generally, the poorest quintile does gain shares when equivalisation is used, but the underlying nature and extent of the bias towards the richest quintile means that any gains in share are small.

Table 17: Quintile Shares of Transfer Income and Changes Using Equivalisation on Final Income After Transfers

% share	Poorest	2nd	3rd	4th	Richest
State Transfers					
All					
cash	3.1	8.2	14.0	25.7	49.0
equivalised	5.2	9.1	15.8	27.7	42.2
difference	*2.1*	*1.0*	*1.8*	*2.0*	*-6.8*
Pensions and Social Welfare					
cash	2.7	8.0	14.5	27.8	46.9
equivalised	4.6	9.4	17.1	30.9	38.1
difference	*1.8*	*1.3*	*2.6*	*3.1*	*-8.8*
Private Remittances					
Domestic					
cash	6.1	10.1	14.2	22.0	47.7
equivalised	8.4	10.4	14.3	20.8	46.0
difference	*2.3*	*0.4*	*0.1*	*-1.1*	*-1.6*
Foreign					
cash	0.3	1.9	3.1	11.6	83.1
equivalised	0.3	1.2	4.8	10.2	83.5
difference	*0.1*	*-0.7*	*1.6*	*-1.4*	*0.4*

Source: Authors' calculations from VHLSS 2004

These results for incomes and social and private transfers point to structural inequality in both original incomes and in allocations of transfers. However, income measures for the elderly are only proxies to actually established measures of need and poverty, and it is to these that we now turn.

5.Poverty

Table 18 shows the difference in poverty incidence and depth of poverty for households headed by an elderly person aged 60 and above and for other households[2]. Three poverty measures are used. First, using the standard poverty measure from VHLSS 2004 developed by Glewwe and GSO (Glewwe 2005) headcounts of poverty show similar rates, with a 1.6 percentage point lower rate for elderly headed households at 18.2 percent compared to 19.8 per cent for non-elderly headed households. The depth of poverty, that is, the percentage that consumption is below the poverty line for those household that are poor is also around one percentage point smaller for elderly headed households. The second measure, of extreme or food poverty (Glewwe 2005), shows once again a one percentage point lower poverty rate for elderly headed households at 6.6 percent compared to 7.6 percent. The third measure is one specifically computed to show the potential effect of housing costs on consumption levels and poverty (Evans et al 2007). In our accompanying analysis this showed considerable differences in profiles of urban and rural poverty compared to the standard measure. The effect of using this measure is to raise poverty headcounts overall but also to make a real difference to the relative position of elderly-headed households, who shift to being one percent poorer overall, at 26 per cent compared to just under 25 percent for the non-elderly headed households.

Table 18: Poverty Headcounts and Depth of Poverty for Elderly-headed Households

	Standard Poverty Measure		Extreme poverty	Standard poverty with Housing Costs excluded*	
	Headcount	Depth of poverty for the poor	Headcount	Headcount;	depth of poverty for the poor
	(% of population)	(% of poverty line)	(% of population)	(% of population)	(% of poverty line)
age of head					
less than 60 years	19.8	24.4	7.6	24.8	36.6
60 years or above	18.2	23.4	6.6	26.0	46.3

Source: Authors' calculations from VHLSS 2004
Notes: *using unadjusted standard poverty line

Additionally, the depth of poverty increases relative to non-elderly headed households as the poor elderly are now over 46 per cent below poverty, some ten percentage points more poor than their poor non-elderly peers. However, these last results that adjust consumption measurement to take out housing costs should be treated with care as they are indicative and not definitive. The main lesson intended is the sensitivity of poverty measures to the housing cost assumption and the need for further research and sensitivity testing of poverty measures to ensure robust profiling.

Table 19 shows our estimates on the crude effect of social transfers on elderly poverty headcounts and depth. We call these crude effects because we have not attempted to estimate any "counterfactual" position that would reflect the position of elderly headed households if social transfers did not exist. Indeed, as we have argued before (above and Evans et al 2007), establishing a counterfactual for lifetime income smoothing transfers like pensions for the group of current pensioners is likely to be plagued by dubious assumptions on household co-residence and lifetime saving patterns that are both unobservable and counter-intuitive for Viet Nam, where the current cohort of entitled pensioners are mostly ex-public servants from the period before *doi moi.*

Table 19 shows the headline averages for the standard measure of poverty previously shown in Table 18 and then looks at the effect of deduction elements of consumption expenditure proportional to income from social transfers. The impact of social transfers on poverty headcounts for elderly headed households is clearly much higher than for their non-elderly peers and pensions make the biggest impact - lowering poverty incidence from 25 per cent to 18.2 per cent. Social welfare and health assistance make smaller but sizable impacts of between one and two percentage points. Overall, the impact of social transfers can be seen to lower poverty headcounts a full 10 percentage points for elderly headed households, from 28 to 18 percent, compared to only 3 percentage points for the non-elderly.

[2] Our analysis of poverty was on household level data and for technical reasons we are unable to report either individual level poverty counts or those of households that contain elderly people. We employ a definition of elderly that therefore uses the age of the head of household

Table 19: Impact of Social Transfers on Poverty in Elderly-headed Households

	Standard Poverty Original	without education assistance	without health assistance	without social insurance in work	without social welfare payments	without pensions	without any social security payments
Impact on Headcount							
age of head less than 60 years	19.8	20.0	20.3	19.9	20.4	21.8	23.0
60 years and above	18.2	18.2	19.3	18.2	20.0	25.0	28.3
Impact on Poverty Depth							
age of head less than 60 years	24.4	24.7	24.7	24.4	25.2	27.8	29.1
60 years and above	23.4	23.6	23.9	23.4	25.7	38.7	41.7

Source: Authors' calculations from VHLSS 2004

Table 20: Probability of Being Poor - All Households
Probit Regression Model - marginal effects

Number of obs = 9188 Log likelihood = -3275.71
Prob > chi2 = 0.0000 Pseudo R2 = 0.2772

		Marginal probability	std error	significance	
Head of Household Characteristics					
Marital Status (Omitted variable Married)					
	single	-0.165	0.041	0.000	***
	divorced	-0.045	0.025	0.135	
	widowed	-0.052	0.020	0.027	**
Female		-0.033	0.012	0.011	**
age		-0.005	0.002	0.004	***
age^2		0.000	0.000	0.010	***
Post 2ndry education		-0.096	0.008	0.000	***
Household Characteristics					
Ethnic Minority		0.315	0.022	0.000	***
Presence of worker in public sector		-0.078	0.011	0.000	***
Presence of someone aged over 60		**0.039**	**0.012**	**0.001**	***
Presence of private wage earner		0.054	0.010	0.000	***
Presence of household trade		-0.068	0.008	0.000	***
Presence of under 16 year old		0.103	0.007	0.000	***
Foreign remittance received		-0.091	0.010	0.000	***
Domestic remittance received		-0.016	0.011	0.151	
Locational Characteristics					
Urban		-0.109	0.008	0.000	***
Region (omitted variable North Central Coast)					
Red River Delta		-0.084	0.009	0.000	***
North Eastern Mountain		-0.078	0.009	0.000	***
North Western Mountain		-0.037	0.015	0.037	**
South Central Coast		-0.060	0.010	0.000	***
Central Highlands		-0.050	0.012	0.001	***
South East		-0.128	0.007	0.000	***
Mekong Delta		-0.092	0.008	0.000	***

Source: Evans et al 2007 Table 3.6
Notes: *significance at 90%; ** 95% and ***99%

Table 21: Probability of Being Poor for Households that Contain Elderly People
Probit regression on 4 poverty thresholds - marginal effects

	Model 1 50% poverty				Model 2 Poverty				Model 3 Poverty +20%				Model 4 Twice Poverty Level			
	Number of obs = 2771 Prob > chi2 = 0.0000 Log likelihood = -183.76 Pseudo R2 = 0.3494				Number of obs = 2822 Prob > chi2 = 0.0000 Log likelihood =-1031.87 Pseudo R2 = 0.2784				Number of obs = 2822 Prob > chi2 = 0.0000 Log likelihood =-1260.05 Pseudo R2 = 0.2754				Number of obs = 2822 Prob > chi2 = 0.0000 Log likelihood = -1322.33 Pseudo R2 = 0.2986			
	Marginal probability	std err	significance		Marginal probability	std err	significance		Marginal probability	std err	significance		Marginal probability	std err	significance	
Head of Household Characteristics																
Marital Status (Omitted variable Married)																
single	-0.010	0.009	0.090	*	-0.215	0.073	0.001	***	-0.166	0.082	0.033	**	-0.048	0.083	0.566	
divorced#	--	--	--		-0.066	0.045	0.289		0.012	0.103	0.902		-0.087	0.117	0.449	
widowed	-0.005	0.002	0.035	**	-0.091	0.037	0.038	**	-0.088	0.065	0.200		0.053	0.081	0.521	
Female	0.006	0.004	0.012	**	-0.057	0.019	0.006	***	-0.066	0.028	0.023	**	-0.104	0.041	0.009	***
age	0.000	0.000	0.716		-0.004	0.003	0.269		-0.006	0.005	0.206		-0.007	0.006	0.245	
age^2	0.000	0.000	0.634		0.000	0.000	0.206		0.000	0.000	0.171		0.000	0.000	0.343	
Post 2ndry education	-0.002	0.001	0.344		-0.135	0.012	0.000	***	-0.181	0.021	0.000	***	-0.297	0.034	0.000	***
Household Characteristics																
Ethnic Minority	0.057	0.020	0.000	***	0.320	0.042	0.000		0.394	0.040	0.000	***	0.224	0.036	0.000	***
Presence of worker in public sector	0.003	0.007	0.550		-0.049	0.033	0.222		-0.116	0.042	0.028	**	-0.107	0.065	0.089	*
Presence of private wage earner	0.006	0.005	0.043	**	0.084	0.031	0.002	***	0.134	0.041	0.000	***	0.095	0.040	0.025	**
Presence of household trade	0.000	0.002	0.838		-0.037	0.018	0.057	*	-0.061	0.028	0.040	**	-0.101	0.034	0.003	***
Presence of under 16 year old	0.002	0.001	0.031	**	0.103	0.013	0.000	***	0.182	0.018	0.000	***	0.214	0.025	0.000	***
Foreign remittance received	-0.001	0.002	0.652		-0.111	0.015	0.000	***	-0.181	0.026	0.000	***	-0.279	0.047	0.000	***
Domestic remittance received	-0.008	0.004	0.004	***	-0.027	0.024	0.235		-0.063	0.033	0.045	**	-0.103	0.035	0.005	***
Locational Characteristics																
Urban	-0.007	0.002	0.000	***	-0.113	0.014	0.000	***	-0.221	0.020	0.000	***	-0.376	0.027	0.000	***
Region (omitted variable North Central Coast)																
Red River Delta	-0.003	0.001	0.008	***	-0.067	0.018	0.001	***	-0.115	0.027	0.000	***	-0.145	0.044	0.001	***
North Eastern Mountain	-0.004	0.001	0.000	***	-0.087	0.016	0.000	***	-0.142	0.026	0.000	***	-0.075	0.052	0.139	
North Western Mountain	-0.003	0.001	0.005	***	-0.030	0.035	0.437	***	-0.057	0.055	0.343		-0.027	0.093	0.770	
South Central Coast	0.000	0.002	0.884		-0.055	0.019	0.014	**	-0.090	0.031	0.010	***	-0.045	0.051	0.369	
Central Highlands	0.000	0.002	0.824		-0.059	0.025	0.068	*	-0.060	0.044	0.206		-0.032	0.061	0.592	
South East	-0.003	0.001	0.125		-0.149	0.012	0.000	***	-0.249	0.020	0.000	***	-0.418	0.045	0.000	***
Mekong Delta	-0.004	0.002	0.006	***	-0.112	0.015	0.000	***	-0.176	0.024	0.000	***	-0.165	0.046	0.000	***

Source: Authors' calculations from VHLSS 2004
Notes: *significance at 90%; ** 95% and ***99%
Divorce predicted non-poverty perfectly in Model 1 and was dropped

What effect does the presence of elderly people in a household have on overall poverty risk? Table 20 repeats analysis from our accompanying paper (Evans et al 2007) to show the results of a regression model that shows the overall probability of being poor, using the standard poverty measurement. The results clearly show that having someone aged over 60 living in the household increases the risk of being in poverty by around four percent, compared to not having elderly people present and independent of other factors that determine probability of poverty.

What factors make households with elderly poor? Table 21 repeats the regression analysis but only for those households that contain elderly people. In this analysis we use several thresholds for poverty to enables us to assess how far factors are association with differing levels of consumption either side of the poverty line. This approach avoids reliance on a single line and thus the some of the dangers of estimating incidence of poverty at the margins of the line due to rounding and other measurement errors. Table 21 gives regression results for four different poverty thresholds, all of which are based on the standard poverty line. The first is 50 percent of poverty, the second is the actual poverty line, the third is 20 per cent above the standard poverty line - to indicate levels of consumption that are close to poverty- and the last threshold is twice poverty levels to indicate levels of consumption that are not likely to fall below poverty.

Households with elderly that are headed by a woman are significantly more likely to be extremely poor but have lower probabilities of poverty at the three higher thresholds. Age of head of household is not significant, but the presence of children in households alongside elderly people significantly raises the probability of being poor across all four poverty thresholds. Otherwise the results across the four thresholds are to the results for all population poverty. Ethnic minority households with elderly have very much higher probability of poverty and this probability increases across the first three poverty thresholds and then falls at the 20 per cent poverty level, suggesting some compression of consumption near to the poverty line. Economic activity from trade and having someone working in the public sector are both protective factors against poverty, but the presence of someone working for wages increases poverty risk, taking into account education level , and thus earnings levels by proxy, which is a protective factor overall. Receipt of remittances is a protective factor against poverty. The lower probability of being poor in urban areas is marked, but we repeat our earlier warning about the sensitivity of this result in particular to the inclusion of housing costs (above and Evans et al 2007). Regional variations in probability of poverty follow that for the whole population.

6. Summary and Conclusions

The Vietnamese population is young on average. Indeed, while over 30 percent are under the age of 16, only 8 percent are aged 60 and over according to the 2004 VHLSS. This population structure should easily enable today's elderly to share equally in the growth in national prosperity as the dependency ratio of elderly population to those of working age, approximately 1:8, gives Viet Nam a real opportunity to ensure that today's elderly need not be poor.

This definition of being elderly at the age of 60 is a crude one. Our analysis shows that 75 per cent of men and 66 percent of women aged 60 are economically active and working an average or around 36 hours a week. When we raise the age of the elderly definition to 70, then the dependency ratio (without altering the working age assumption) is 1:15 and at that age, 58 percent of men and 43 percent of women continue to be economically active, working an average of 35 and 32 hours a week respectively. Raising the age definition to 80, the dependency ratio (once more holding working age assumptions constant) rises to 1:49 but rates of economic activity fall to 9 percent and 6 percent for men and women respectively. Overall, this is very good news for policy makers who are concerned about the economic welfare of elderly people as they not only have a low population share but also contribute to the economy and to their own and their households' welfare. Indeed, the term "dependency ratio", while ubiquitous in international discussion on pension provision seems particularly inapt for Vietnam - dependency exists certainly, but alongside very high levels of independence and employment.

This age population profile is fairly constant across regions in Viet Nam but is more differentiated by ethnic and by urban-rural differences. Ethnic minorities in Vietnam have a lower proportion of elderly people, in part both through lower life-expectancy and through higher fertility. Urban households have fewer children but a similar proportion of elderly making overall dependency ratios more favourable in cities.

However, such static profiles miss much of the dynamic position of the elderly and the flows of income and reciprocity in which they participate. Further analysis of how the panel of elderly people in 2002 VHLSS fared in 2004 is suggested for the future alongside more careful consideration of the current elderly population as an age cohort, particularly when it comes to considering the position of claimants of state social insurance pensions and of social welfare payments from injury or bereavement in the war. Additionally, it will be crucial in future planning for the elderly to consider changes in life-expectancy that have occurred to date and that can be reasonably forecast. Higher levels of survivorship may worsen dependency ratios not only in the numeric sense, but also in a change of composition of the elderly population with lower levels of economic activity for a higher proportion of elderly who are less able to work.

Our approach in this paper has been to see the elderly as a group who are able to command resources to ensure their welfare in a number of ways:

- first, they can continue to be economically active themselves,
- second, they can share pooled resources in a household with others and in so doing provide other forms of active participation, in the form of housework, child care and other activity that is not counted as formally "economic" but which contributes to household welfare and may underpin economic activity of other household members
- third, they can receive private inter-household transfers from family members living elsewhere, either in Viet Nam or abroad
- fourth, they can receive public transfers
- fifth, but mostly unobservable in the VHLSS data and rare in Viet Nam currently, they can rely on personal lifetime investment in savings or private pension provision.

This approach largely mirrors the mixture of types of provision now central to World Bank considerations of pension provision (Holzman and Hinz 2005) but it is crucial to see these as mixed strategies in other terms too. They are mixed in terms of their overlapping and interdependent nature as the majority of the elderly will rely on a strategy that incorporates more than one of these approaches. They are also mixed in terms of the interdependence between individual and social redistribution. Put simply, looking after the elderly is a mixture of them looking after themselves, sharing their costs through co-residence, giving them money and receiving back both nominal and in kind resources from the elderly in the process.

The importance of co-residence as a means of support for the elderly cannot be understated in Viet Nam. Only 8 percent of the elderly aged 60 and above live on their own or with other elderly people. Twenty nine percent of the elderly share a household with working age people and a further two thirds of the elderly live in three-generation households meaning that support for the elderly will often indirectly also support children; indeed, some 29 per cent of all children co-reside with elderly people. The remaining tiny fraction (around one percent) of elderly people live of households where they live solely with children. Thus co-residence, or 'resource pooling' is crucial alongside 'resource sharing' from informal and formal transfers.

However, it is important to realise that selection maybe occurring in decisions to co-reside and that certain characteristics may be associated with the decision to co-reside - for reasons of income sharing, support for care of children or for reasons of ill-health, for instance. Our analysis looked for obvious differences between co-residence and elders' health and found no obvious or conclusive evidence. Income differences across the varying forms of co-residence were apparent but the major conclusion from measuring these was methodological. This was that the current assumption in income measurement in Viet Nam of using per-capita rather than equivalent income definitions produced results that did not adequately reflect the gains to welfare from co-residence. This means that one of our conclusions from this analysis is that further discussion on the use of equivalence scales should be taken forward into future research in Viet Nam.

Overall, elderly people, when their income is measured on a per-capita basis, have higher than average incomes in Viet Nam. However, much of this arises from household pooling of all income resources in multi-generational households. This means that not only that equivalence scales matter but also that being able to attribute incomes to elderly and non-elderly people within households is important. VHLSS, however, does not distinguish between individual level and household level incomes for the majority of income sources. This is especially problematic in the area of public transfers, where social insurance pensions and social welfare can not be attributed to individual entitlement where that occurs. We recommend that income questions be changed to improve data collection in this regard in future surveys.

The importance of public and private transfers, and in particular of social insurance pensions in raising elderly people's per-capita income, is crucial to their relative position. They have lower income from economic activity overall but this shortfall is more than made up for by transfers and raises them above average Vietnamese income. Additionally, the higher average incomes of elderly come in part from their share of pooled income from economic activity from others in the household and the highest income elderly people live solely with working age sons and/or daughters. Public transfers however also appear to be highest in elderly only households.

The distribution of public transfers to elderly people is complex. The majority of elderly people, 72 percent, live in households where some transfers are received. Research in our accompanying paper (Evans et al 2007) however, shows that many such transfers relate to payment or part-payment of user-charges and other spending on healthcare and that, if user-charges and expenditure are deducted to establish net income effects, such transfers contribute little to net disposable income. The two main forms of 'pure' transfer, pensions and social welfare payments only go to one third of pensioners. Indeed, there are three percent of elderly who get both forms of transfer. Regression models established that higher educated, urban household where elderly and working age people co-resided were associated with receiving these pure transfers and that ethnic minority status, ill-health and regional factors, especially southern regions, are associated with non-receipt. These findings support a profile of receipt associated with a cohort of ex-public servants and war-veterans from the pre doi moi period.

On the other hand private inter-household transfers are the norm, and over 90 percent of elderly live in households that receive informal transfers and remittances. On average, this provides around one million VND per capita per year to households with elderly people in 2004 as compared to only 0.6 million in households where there are no elderly. The receipt of remittances from others within Vietnam differs from those from overseas, with only two percent of elderly receiving only such overseas remittances but a further eight percent receiving both overseas and domestic remittances. Regression models established that elderly only households and households where elderly people and children co-reside with no working age adults were both more likely to receive both forms of remittances and ethnic minority elderly and those in Central Highlands region were less likely. Urban living elderly and those living in the South East region were more likely to receive foreign remittances.

The combination of public and private transfers makes up for lower sources of income from economic activity for the elderly but they are not distributed equally across the elderly population. Dividing the pre-transfer incomes of the elderly into quintiles, the richest quintile of elderly receives an additional 2.2 million VND per annum and the poorest quintile around the same. Foreign remittances are higher for richer elderly and domestic remittances are higher for the poorer, on average. Public transfers tend to be more redistributive, with higher levels of support for education and health going to the poorest elderly; however the net effect of this on living standards after charges and spending on education and health is not considered (see Evans et al 2007 for discussion). There is however a problem in using an assumption about the progressive incidence of transfers using a simple analysis of pre-transfer income. This approach sets state pension levels to zero when they are disproportionately received by a highly educated ex-public servant elite and thus overstates their progressive incidence. Using final incomes including transfers gives a clearer picture of actual incidence and coverage and shows that the poorest quintile of elderly with incomes of one million VND per capita per annum receive 0.1 million in public and 0.2 million in private transfers while the richest quintile, with incomes of over 15 million VND per capita per annum, receive 1.8 million in public transfers and 3.1 million in private transfers. These overall profiles of progressivity are not greatly changed by using equivalised incomes.

All the proceeding discussion helps to understand the relationship between poverty and elderly people. In general elderly people are less poor using the standard Vietnamese consumption measure of poverty employed by the World Bank and General Statistical Office. Eighteen percent of households headed by elderly are poor with an average poverty gap of 23 percent, compared to 19 percent of non-elderly headed households who have a poverty gap of 24 percent. However, these measures appear to be sensitive to the treatment of housing expenditure, and if housing costs are taken from the consumption expenditure elderly headed households have higher poverty headcounts, 26 percent compared to 25 percent; and larger poverty gaps when poor, 46 percent compared to 37 percent.

The presence of an elderly person raises the risk of poverty for Vietnamese households by around 4 percent, holding other factors constant. When we look solely at households that contain elderly people, then regression models show that the factors associated with poverty are ethnic minority status, which raises the probability of being extremely poor by 6 percent and of being below the standard poverty line by 32 percent. Additionally, the presence of children aged under 16 raises the probability of being poor by 10 percent. The presence of waged earner also raised the probability of poverty (compared to agricultural income). Protective factors against poverty are post secondary education, the receipt of remittances, household business and trade (compared to agricultural income) and living in the Northern provinces and in the Mekong Delta and in urban areas, however the association with urban areas is known to be sensitive to assumptions on housing cost expenditure.

What do these results suggest for the future of poverty for the elderly? Firstly, current problems with poverty measurement linked to undercounting migrants and underestimating the effect of housing costs require careful consideration for future profiles. Demographic changes from ageing are likely not to have great impacts for the next ten years with the pear-shaped aged distribution shown in Figure 1. However, there is obviously a need to assess the relative profiles of children and the elderly in relation to poverty as the presence of either is linked to higher risk of poverty and the presence of both is both common and additionally associated with poverty.

Our analysis must be seen as preliminary and not definitive. Further research is needed to establish a variety of changed profiles of demographic composition with a full set of assumptions on migration and income sources and flows. Increased migration by working age people should lead to increased incidence of private transfers to elderly people who are more likely to live alone. Currently, these elderly are more likely to be non-poor, but it is unwise to continue this assumption if the composition of elderly only households also changes in the future and more low income elderly are left to live in their own households and rely on remittances.

The appropriate policy responses to the needs of elderly people are also currently uncertain for several reasons. First, our accompanying paper points out the lack of transparency in expenditure profiles (Evans et al 2007) and there is an urgent need to establish how much of public spending goes to elderly people under what circumstances. Second, the future profile of spending on the elderly needs to be assessed carefully, how far will existing commitments to the current and upcoming cohorts of elderly people continue over time? Will

the current levels of spending on social welfare for war disablement and survivorship peak and then decline allowing budgets to be realigned in the future to other needs? Third, there needs to be careful consideration of the overall fiscal position for services and transfers for the elderly - how much should be raised through taxation of what kind and how much should be raised by charges and by voluntary levies? With these matters clarified and with better and improved quality of data the ability to forecast and simulate the costs and outcomes of a range of policy options becomes clearer. Micro-simulation is an obvious way forward and serious attention should be given to the development of policy simulation models of this kind - both cross-sectional and, eventually, longitudinal.

What is clear, however, is that many elderly are poor and that the presence of elderly people increases the incidence of poverty. Policy choices are thus, in the first instance, likely to promote targeting in some way as current public transfers are perversely targeted and go disproportionately to the non-poor. A simple universal demogrant, payable to all elderly people on grounds of age, would go to those who are rich and poor and there is little to justify such an approach unless it could be recovered through taxation from those on higher incomes or could be made as an alternative entitlement to current transfers and thus conditional on non-receipt of social insurance pensions or other categorical social welfare payments. Targeting through a purer income test of any additional transfers to the elderly has significant disadvantages in terms of both work incentives and in effective up-take up and administrative costs (both formal and informal). However, we strongly warn against turning the debate on the future of support for the elderly solely into a debate on principles of policy design and delivery. These are important to shape future policy direction but what is needed in the immediate future is more and better information to plan with and a range of costed scenarios. There are a range of important applied questions that require properly setting up and answering: for instance, how much would poverty fall if the over-80s had a demogrant for those not entitled to other provision and how could this be paid for? How much additional poverty reduction at what costs is achieved if the age requirement is lowered to 70 and to 65? How do the costs and coverage of these compare with extending means-tested social welfare to these groups on the account of age and income level? What are the likely behavioural outcomes for recipients and others in their households of this approach compared to the demogrant approach? The list of questions is of course much longer than this, but of this flavour.

We began these conclusions by saying that the current population structure and "dependency ratio" made provision for the elderly affordable in theory. But this presumes redistribution between those that work and those that do not. This latter presumption is not the case for the majority of elderly in Vietnam and one clear over-riding principle of policy for the elderly must be to continue to value and support this activity - both paid and unpaid. Additionally, it is important to recognise that income and resources are pooled and shared; that what is given in transfers, both public and private, encourages reciprocity. Our accompanying paper (ibid) shows the positive association of both remittance receipt and giving with public transfers - supporting elderly supports reciprocity by resourcing household income pooling and inter-household exchange. But paying for this through contributions, taxation, or charges has to additionally to aim not to undermine a complex mix of private and public arrangements that operate interdependently. Formal fiscal rules and informal conventions have to go hand in hand and attempt for both optimal coverage and optimal outcomes. The current mix is not optimal as there are many who benefit less or not at all from this mix of private and public provision and it is their welfare that must be a major driver of future reform.

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