Child poverty in Vietnam and the response from social protection

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-Abstract-

Despite a rapid increase in economic growth accompanied by the rise of living standards over the last two decades in Vietnam, there is still a considerable proportion of the population that lives in poor and vulnerable conditions. The country employs a broad range of social protection programs that tend to be regressive in impact rather than supportive of the poor. Within the debate on pro-poor impacts of social policies, child poverty is currently a hidden element of overall poverty and under-prioritized. Findings in this study indicate that children are affected differently by poverty and social policy than the overall population and therefore deserve a special focus. The paper evaluates the social protection scheme in Vietnam in terms of child poverty, comparing the analysis to overall poverty. One of such social protection programs, the National Target Program for Poverty Reduction (NTPPR) is considered in more detail, looking at targeting efficiency and into factors contributing to in- or exclusion from the program. We use the Vietnam Household Living Standards Survey (VHLSS) 2006 to identify and quantify poverty and child poverty in monetary as well as multidimensional terms, consider the link between poverty and welfare receipt and evaluate coverage and inputs of the program in relation to both the incidence and depth of poverty. Findings indicate that monetary and multidimensional poverty measures capture different groups of children, having important implications for targeting practices. Furthermore, the NTPPR program suffers considerable in- and exclusion errors, calling for the need to revise or rethink the existing scheme.

Keywords: social protection; child poverty; targeting; Vietnam

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Introduction

In the late 1980's, Vietnam experienced rapid economic growth as a result of far reaching economic reforms, the so-called Doi Moi policies, which were accompanied by a steep decrease in poverty rates (Balisacan et al. 2004). Average economic growth rates amounted to 6.9 percent from 1988 to 1994 and 7.4 percent from 1994 to 2000 (Glewwe 2004). Central planning was replaced by free-market oriented economic policies, bringing about great changes in the agricultural sector, private business and employment development, foreign trade and social sector policies and creating business and entrepreneurial opportunities for Vietnamese as well as foreigners (Glewwe 2004). Further, it resulted in a sharp decrease in poverty with monetary rates dropping from 29 percent in 2002 to 20 percent in 2004 (VASS 2006). However, there is ample research suggesting that the economic success and the drop in poverty was not shared by all groups in society (Taylor 2004) and that Vietnam struggles to ensure ongoing reduction in the levels of poverty and promote equality (Evans and Harkness 2008).

Vietnam employs a wide range of social policy and protection programs, which are in part the result from the country's post-colonial war and post-war social government (Evans and Harkness 2008, Van de Walle 2004). Vietnam's social protection scheme consists of social insurance and social assistance schemes, the latter including targeted benefit programs and special schemes for war veterans and invalids among others (Justino 2005). However, the system does not include a specific program that is targeted towards children. Several studies have investigated the impact of social protection on the poor or specific groups in society (eg. Evans et al. 2007a, 2007b, UNDP 2004, Van de Walle 2004) and evidence suggests that these are widely regressive in nature (Evans and Harkness 2008) and thus can not be considered to be pro-poor (Van de Walle 2004). The issue of child poverty remains a hidden element and under-prioritized. The need for a child focused perspective in the development and poverty reduction process has been widely recognized over the last decade (e.g. Gordon et al. 2003a, 2003b, Minujin et al. 2005, Roelen et al. 2009) for a number of reasons. Children hold a special position within the household structure due to their high dependency on others for the distribution of basic needs (e.g. White, Leavy and Masters 2003), which are in turn different from the basic needs of adults (e.g. Waddington 2004). Moreover, poverty often manifests itself as a vicious circle, causing children to be trapped in poverty from birth onwards (e.g. Corak 2006). Child-focused poverty approaches are crucial to account for these issues. To our knowledge, no evaluation of any kind has been undertaken to assess Vietnam's social protection system or specific programs with respect to children.

This study examines the relationship between social protection and child poverty, using both a monetary and multidimensional poverty approach. The household poverty situation serves as a reference to assess the special position of children. Throughout the paper, the analysis for children is compared to that for overall poverty and based on monetary and multidimensional measurement, allowing for a more diversified poverty analysis. We start by providing and extensive poverty profile of the overall and child population. A second issue addressed is the association of poverty with different types of cash welfare receipt. Thirdly, the performance of a specific in-kind social assistance program targeted to poor families is investigated

with respect to child poverty. Main issues under consideration are targeting efficiency and factors contributing to the in- or exclusion from the program.

The remainder of the paper is structured as follows: first, we briefly outline the data and methods of analysis employed for this study. Second, an overview of poverty and child poverty is provided, also providing an explanation of the poverty measures used. Next, the social protection scheme in Vietnam is described with a specific focus on the question of its pro-poor impact. In the following section, we analyze the relationship between poverty and child poverty and the receipt of different types of welfare. This is followed by a more detailed analysis of the targeted program for poor families in relation to child poverty. The paper concludes with a discussion of the main findings.

Data and Methods of Analysis

VHLSS 2006

The data source used for this study is the Vietnam Households Living Standards Survey (VHLSS) from 2006. This household survey is based on the former Vietnam Living Standards Survey (VLSS) but employs a bigger sample size and is to be conducted every other year. The VLSS was conducted in 1993 and 1998 and the VHLSS from 2002 onwards every second year by the Government Statistical Office (GSO), following the World Bank's Living Standards Measurement Survey (LSMS) methodology. The VHLSS survey samples from 2002 to 2010 are drawn from a master sample, which is a random sample of the 1999 Population Census enumeration areas. The VHLSS 2006 contains 9.189 households with 39.071 individuals, including 10.696 children under the age of 16.

Household surveys like the VHLSS provide micro-data at the level of the household and their individual members on a range of issues related to children's well-being and poverty as well as social protection. A number of limitations are also inherent to the use of the VHLSS and similar household surveys. A first limitation is that the sampling method causes a substantial group in the society to be omitted from the sample and subsequent data (Evans and Harkness 2008). The sample for the survey is constructed on the basis of the official lists of registered households in communes and urban wards in Vietnam that have lived in the enumeration area for at least six months (Pincus and Sender 2006). This implies that households or individuals that have recently migrated are not included in the sampling frame (Edmond and Turk 2004). Further, due to the strict the household registration system, or *ho khau* system, many households and individuals do not satisfy the necessary criteria to newly register and stay unregistered (Pincus and Sender 2006). But also migrants that have temporary forms of registration appear to be under represented in the sampling frame (VDR 2008). The omission of these groups in society is not only an important issue to point out because of its suspected significant size but even more so because of the denial of social and public services they experience due to their status. The structural exclusion of the unregistered migrant group from the data will most likely present us with underestimations for (child) poverty. Second, the micro-data available from the survey is not collected for individuals of all ages, which has consequences for the multidimensional poverty method. For example, while information on health is only collected for children up to five years of age, educational information is only collected

for children aged five and upwards. These differences in observable indicators for children of different age groups limit the multidimensional analysis to the use of a poverty headcount only. A final limitation of the data is that it is only representative when broken down to regional level but does not permit us to consider indicators at a lower level of disaggregation such as the province or district.

Methods of Analysis

A combination of descriptive and more parametric methods is used in this paper to investigate the research questions at hand. Simple cross-tabulations are used to provide limited poverty profiles and display the simple association between poverty and social protection receipt. For a more in-depth analysis, regression models are used at different stages throughout the study. Venn diagrams prove a useful tool to illustrate cross-tabulations with respect to mutually exclusive groups in an intuitive manner. The relationships between poverty headcounts and different vectors of micro-determinants are investigated using logistic regression. Linear regression models are used in case of the poverty gaps. The association between vectors of micro-determinants and membership in one of the mutually exclusive groups is investigated with multinomial logistic regression.

A limitation of the data and methods used in this study refer to the fact that we only incorporate micro-determinants into the analysis. In other words, we only consider characteristics of individuals within the household or the household itself and whether these have an impact on poverty or the probability to be in- or excluded from receiving targeted social assistance. Especially with respect to the latter issue, this limits the analysis. It is widely acknowledged in the literature that coverage, exclusion or leakage is also impacted by macro-determinants related to the supply and availability of social assistance (see Van de Walle 2004, VDR 2008). However, little information and data is available to assess and incorporate this issue into more detail. Hence, further research efforts are required to take these macro-aspects into consideration and provide a more holistic picture of poverty in association with social protection. Despite this limitation, the current study with its available data and methods at hand provides valuable insights into the relationship between poverty, in- and exclusion from targeted programs in relation to vectors of micro-determinants.

Poverty and Child Poverty in Vietnam

As a clear understanding of the poverty approach at hand is crucial for a sound and solid poverty analysis and interpretation of results (Ravallion 2004, Roelen et al. 2009), this section outlines the poverty measures used in this paper and presents conditional poverty profiles. In order to gain an understanding of the specific issues for social protection with respect to child poverty, we use the overall poverty situation as reference. With respect to households, the monetary and food poverty measurement is used. In reference to child poverty, the monetary and food poverty measures are complemented by a multidimensional measure that is especially designed to capture child poverty in Vietnam.

The measure of monetary poverty refers to poverty calculated on the basis of the poverty line as used by the General Statistical Office (GSO) and generally referred to as the official poverty line. The monetary poverty line captures the cost of a food and

non-food consumption basket, while the food poverty line only captures the cost of the food basket. The cost component of the food basket is based on a daily intake of 2100 calories per person per day (VDR 2008). Both poverty measures are based on per capita consumption expenditures as welfare measure. The poverty headcount presents the share of the population living in households not meeting the poverty line while the poverty gap indicates the average normalized distance from the poverty line.

A concern raised in the literature with respect to the use of per capita consumption expenditure as welfare measure for monetary and food poverty in relation to social protection is that public and private transfers are still included (Van de Walle 2004). As a consequence, we can not draw any inferences about an individual or household's poverty status in the counterfactual situation, meaning a situation without transfers. However, as we do not attempt to do an impact analysis or simulate the welfare effects of social protection, this concern can be left out of consideration within the context of this study.

The multidimensional method can only be used for the identification of child poverty and not for the measurement of overall poverty. The approach is especially developed to be a child-specific and outcome-focused approach that considers non-monetary aspects of deprivation that are especially relevant for children in Vietnam. Included items consist of education, health, child labor and water and sanitation, among others. A total of seven domains and twelve indicators within domains are chosen on the basis of stakeholder discussions, previous research and data availability, are considered to appropriately reflect the poverty status of children in Vietnam (Roelen et al. 2009). The overall poverty headcount is determined by deprivation in at least two domains, also known as the dual cut-off identification strategy (Alkire and Foster 2008). Domain deprivation is constituted by not meeting the threshold of at least one of the indicators within the specific domain, also known as the union approach (Atkinson 2003). Due to the data limitations and methodology used to aggregate individual indicator and domain results into a composite poverty estimate, it is only possible to present a poverty headcount but not a poverty gap[3].

Poverty incidence rates and gap ratios are presented in Tables 1 and 2.

Table 1 Overall and adult poverty

	Monetary poverty		Food poverty	
	headcount	gap	headcount	gap
total	15.8	3.8	6.6	1.3
elderly (>59)	15.0	3.0	6.0	1.0
individuals in working age (16-59)	13.1	3.5	5.1	1.1

Source: Authors' calculations from VHLSS 2006

Estimates in Table 1 indicate that 16 percent of the population is identified to be monetary poor while 7 percent does not meet the food poverty threshold. The average poverty gap for all individuals is 3.8. When considering the various age groups, it can be observed that those individuals of working age (between 16 and 59) are least likely

[3] The calculation of a poverty gap on the basis of a multidimensional count approach builds on the total count of indicator or domain deprivations (see Alkire and Foster 2008). A larger count of total number of deprivations would present a larger poverty gap. However, as the total number of observable deprivations differs by age group, poverty figures will experience an up- or downwards bias.

to be poor and also experience the smallest distance to the poverty line. Results in Table 2 suggest that children, however, face the highest poverty risk and depth in terms of monetary and food poverty. The prevalence of poverty is higher compared to the other age groups with 23 percent of all children being monetary poor and 10 percent living in food poverty. Poverty gaps are more similar to those of other age groups with a monetary poverty gap of 5.8 and food poverty gap of 2.3.

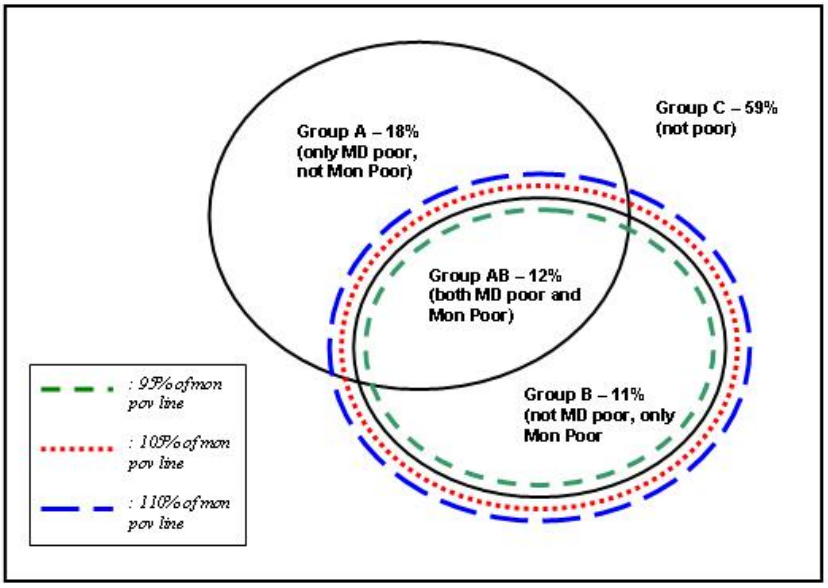
Table 2 Child poverty

	Monetary poverty		Food poverty		Multidimensional poverty
	headcount (% of population)	gap (% of poverty line)	headcount (% of population	gap (% of poverty line)	headcount (% of population)
total	15.8	3.8	6.61	1.3	na
children (0<16)	22.6	5.8	10.3	2.3	30.7

Source: Authors' calculations from VHLSS 2006

Multidimensional child poverty figures underline the disadvantaged position of children in Vietnam with almost one out of three children below 16 years of age suffering deprivation with respect to at least two non-monetary aspects. Multidimensional poverty incidence among children is 8 percentage points higher than monetary poverty incidence. An analysis of the overlap of poverty indicates that the two poverty measures do not only point to different size of poverty but that they also capture different groups of children as being poor. Figure 1 displays a Venn diagram, which illustrates the four different mutually exclusive poverty groups into which children can be categorized. They are either not poor at all (group C), they are identified as poor by both the monetary and multidimensional approach (group AB), they are identified as poor by the multidimensional approach only (group A) or they are identified as poor exclusively by the monetary approach (group B).

Figure 1 Venn diagram monetary and multidimensional poverty



Source: Authors' calculations from VHLSS 2006

The Venn diagram in Figure 1 clearly illustrates that the different approaches capture different groups of children. Although the overall child poverty rates range from 23 to 31 percent, only 12 percent of all children are identified as poor by both approaches.

An estimated 18 percent of all children are identified as poor exclusively by the multidimensional approach, whilst 11 percent of all children are estimated to be poor exclusively by the monetary approach. The degree of overlap or mismatch of poverty approaches is not a matter of statistical uncertainty, as indicated by the alternative figures on the basis of different values for the monetary poverty line. Raising or lowering the monetary poverty line by 5 percentage point increments does not significantly change the proportions of children in the various poverty groups. In other words, complementing monetary child poverty figures with multidimensional estimates diversifies the poverty analysis and gives a broader understanding of the issues under consideration.

The use of logistic and OLS regression modeling allows us to draw inferences about micro-determinants[4] for overall and child poverty (see Annex 1). Estimation results suggest that the micro-determinants increasing poverty risks for the overall population, all else being equal, include the presence of a single household head, an uneducated household head, being of ethnic minority, the presence of young children and a large proportion of children in the household and living in rural areas or the North Central Coast region. Households headed by females, individuals with post-primary education or skilled jobs and living in urban areas or the South East or Mekong River Delta regions experience a reduced poverty risk. Characteristics having no significant impact on the poverty risk are the age of the household head and the presence of elderly in the household. The analysis of predictive characteristics for poverty risk is repeated for child poverty, considering monetary and food poverty headcount as well as multidimensional poverty headcount. The characteristics included in the child poverty models are largely the same as those for overall household poverty with a few additions[5]. Regression results are presented in Annex 1. Effects of household head and household characteristics are generally larger on the monetary and food poverty risks for children than for the overall population. The impact of especially the gender, educational attainment and occupational status of household heads, marital status, ethnicity and area and region of residence is larger with respect to child poverty compared to overall poverty, although mostly with the same effect sign. The presence of older versus younger children increases the risk to food poverty. A number of micro-determinants can be seen to have a different effect on child poverty than overall poverty, especially when considering multidimensional poverty. Whilst regional effects on the poverty risk compared to the reference region of South Central Coast can differ by region in case of monetary poverty, the probability to be multidimensionally poor is higher for children living in any other region than the Red River Delta region. Children living in the South East and Mekong River Delta regions experience a decreased risk to monetary and food poverty but increased risk to multidimensional poverty. The inclusion of monetary poverty status in the multidimensional poverty model suggests that there is increased risk for a child to be poor in multidimensional terms when identified as monetary poor. In sum, not only do

[4] Vectors of characteristics of the household head, household characteristics and locational characteristics are included in the models. With respect to the models for overall household poverty, characteristics of the household head include gender, age, marital status, educational attainment and occupational status. Household characteristics include ethnicity, the presence of elderly and children of specific age groups in the household and the proportion of children in the household. Finally, the locational factors include the area and region of residence.

[5] A vector of characteristics of the individual child is included as well as a variable on the presence of a household member of working age that is of ill-health. Furthermore, the monetary poverty status is considered as an explanatory factor for multidimensional poverty.

poverty outcomes differ for children and the overall population but also do its impacting factors. These diverging outcomes further call for a specific focus on children in the analysis of their poverty outcomes in relation to social protection and social assistance.

Social Protection in Vietnam

This section provides a broad overview of the social protection scheme and programs in place in Vietnam. Despite the increase of living standards in the last decade, the country still employs an extensive social protection and safety net system. This broad system, especially in relation to other developing countries is considered a heritage of the socialist period and strong commitment to the combat of poverty and inequality (Evans and Harkness 2008, Van de Walle 2004). Formal social protection in Vietnam can be subdivided into two different pillars, namely social insurance and social assistance, the latter of which includes schemes for veterans and war invalids and targeted benefit programs that have cash and in-kind components (Justino 2005). Although the range of formal social protection measures in Vietnam is of considerable size, it represents a modest share in aggregate household income (Cox 2004). Evans and Harkness (2008) estimated that the share of formal social security income in overall household income is 4 percent. In addition to the formal schemes, many households are supported by informal transfers from those living outside of the household. This flow of remittances is caused by international and booming domestic migration in the recent decade (Niimi, Pham and Reilly 2008) and is considerably more substantial in size than the flow of formal transfers. An estimated 10 percent of aggregate household income consists of informal remittances (Evans and Harkness 2008). Notwithstanding the existing range of programs in Vietnam, there are no special provisions for children.

Formal Transfers - Social Insurance

Social insurance schemes in Vietnam primarily consist of social insurance pensions on a pay-as-you-go basis but also include short-term sickness benefits, unemployment allowances, maternity and disability benefits (Evans and Harkness 2008). The social insurance schemes primarily covered workers in the public sector but was expanded to the private sector in 1995 (Van de Walle 2004). Participation in these schemes is biased towards those in formal employment and the public sector. As a result, Evans and Harkness (2008) show that three-quarters of the pensions are distributed to the top two riches percentiles rather than to the poor. Effects of social insurance schemes on children remain undocumented.

Formal Transfer - Social Assistance

Social assistance in Vietnam includes a variety of cash and in-kind schemes such as targeted benefits, benefits for war veterans and invalids but also relief for homeless elderly, orphans and disabled and disaster relief (Justino 2005). Benefits for Veterans and War Invalids are paid by the Social Guarantee Fund for Veterans and War Invalids, which distributes transfers to those who have contributed in the war or suffered consequences resulting from the war (including family members) (Van de Walle 2004). As the program is politically motivated rather than poverty focused, it is less likely to function progressively (Evans and Harkness 2008). Support to homeless elderly, orphans and seriously disabled poor receive benefits from the Social

Guarantee Fund for Regular Relief. Street children are also covered under through this fund. Resulting from scarce local resources (Van de Walle 2004), coverage is low with an estimated 0.3 percent of the total population receiving benefits (Justino 2005) and the amount of assistance is generally too low to have any substantial impact on poverty (Evans and Harkness 2008). Short-term assistance for disaster-struck areas is provided through the Contingency Fund for Pre-Harvest Starvation and Disaster Relief (Justino 2005). The program is considered to suffer serious shortcomings with a diversion of funds to those not suffering from disaster, leaving those in need when a disaster does occur (Justino 2005). Subsidies within the targeted benefit programs are administered through the National Target Program for Poverty Reduction (NTPPR), which was formerly known under the Hunger Eradication and Poverty Reduction program (HEPR) (VDR 2008). There is a wide variation among the targeted programs, using different rules for eligibility, different targeting mechanisms and different types of benefits. Cash transfers are primarily processed and provided by the Social Guarantee Fund. Assistance to poor households within NTPPR targets households that are identified to be poor. Issues related to targeting, coverage and leakage are discussed in detail in the next section.

Informal Transfers

Informal transfers resulting from migration, including a steady flow of remittances as well as one-time cash or in-kind gifts, experienced a steep increase after organized migration moved to more spontaneous migration in the mid 90's. This increase can be accredited to both a booming young population and economic reforms (Niimi et al.2008). Niimi et al.(2008) find that the three main ways in which the reforms affected internal migration in Vietnam are 1) decollectivization of land in the agricultural sector, 2) the marketization of the economy and 3) the inflow of Foreign Direct Investment (FDI) focused on specific industries and regions. Data from 2004 on internal remittances shows that more than half of the internal migrants sent a transfer home with an average amount that reflects 17 percent of the migrant's earnings (Niimi et al. 2008). Cox (2004) also finds that there is high prevalence of informal transfers with higher incidence and value than formal social security. Nevertheless, Evans and Harkness (2008) find that there is a strong association between the receipt of formal social security and informal transfers.

Many of the formal social security schemes are shown to have a regressive rather than progressive impact (Evans and Harkness 2008) on the basis of panel estimations and micro-simulations (eg. Evans and Harkness 2008, Van de Walle 2004). The lack of pro-poor impacts of the social security scheme is largely due to the design of the system (Evans and Harkness 2008), motivated by other issues than merely support to the poor. Such issues include the focus on formal employment and socialist state employment and politically induced distribution of benefits (Evans and Harkness 2008). Howevery, the impact of informal transfers is found to be more progressive and supportive of the poor (Evans and Harkness 2008). Although an impact analysis of this kind has not been undertaken for children in specific, it is safe to assume that the overall system is not progressive with respect to this specific group. We do not attempt to replicate such impact analyses for child poverty in this study but address the relation between social welfare receipt and poverty for the overall population and children in the following section. Is social welfare receipt associated with a higher or smaller poverty incidence or gaps and are these effects different for children?

Social Welfare Receipt and Poverty

After having provided a background of the social schemes in place, we now examine the association between poverty and the receipt of social welfare cash benefits. It highlights differences between children and the overall population and the use of a monetary versus multidimensional poverty perspective through cross-tabulations and regression modeling. The use of regression modeling allows for the control of factors that might explain the simple association and provide a more robust insight. The division of types of welfare receipt is subject to the data used and includes not receiving any type of social protection receipt, receiving informal overseas and domestic remittances, pension, sickness, job loss and retirement allowances, war veteran and invalid allowances and other social welfare allowances including disaster relief. The data does not allow for an exact breakdown of types of social welfare receipt as it conflates a number of benefits. Table 3 displays the associated overall poverty headcount rates and gaps for the different types of welfare receipt.

Table 3 Poverty by social welfare receipt

			Monetary poverty		Food poverty	
		coverage	headcount	gap	headcount	gap
	Total		15.8	3.8	6.6	1.3
No transfers	Individuals in households not receiving social protection benefits	8.3	20.1	5.3	9.2	1.9
Informal transfers	Individuals in households receiving informal remittances	89.7	15.3	3.6	6.2	1.2
Formal transfers – social insurance	Individuals in households receiving pensions	9.1	4.1	1.0	1.8	0.3
Formal transfers – social assistance	Individuals in households receiving war veteran benefits	8.9	22.4	6.5	11.9	3.1
Formal transfers – social assistance	Individuals in households receiving other social welfare	1.9	20.1	5.9	11.8	2.5

Source: Authors' calculations from VHLSS 2006

It can be observed that almost 9 out of 10 individuals live in a household that receives remittances from non-household members living in either Vietnam or abroad. The proportion of the population receiving no social benefits, pensions or war veteran benefits is around 9 percent while only a small percentage receives other social welfare allowances. Individuals living in households without any social protection receipt as well as individual living in households receiving war veteran benefits or other social welfare allowances generally face higher poverty incidence and deeper poverty than average. Whilst the average monetary poverty rate is 16 percent, monetary poverty incidence in these three categories amounts to at least 20 percent. Recipients of war veteran benefits experience the largest poverty risk and deepest poverty. An estimated 22 percent of all individuals in household receiving this type of benefit are monetary poor and 12 percent of them face food poverty. Poverty gaps are about twice as high than average. The relatively disadvantaged situation of this group

can be attributed to the fact that recipients of these types of benefits primarily include persons disabled, widowed or experiencing another negative effect of the war and might not be able to earn an income as a result. Poverty is generally less prevalent among those receiving pensions. Poverty incidence rates are considerably lower at respectively 4 percent for monetary poverty and 2 percent for food poverty. The relatively fortunate situation of this group can be attributed to the nature of the pension scheme and its focus on formal and public employment. Recipients of pensions have received a steady flow of income over their working life and therefore been able to secure their livelihood over their life-cycle.

Table 4 presents cross-tabulations for children living in households with different types of welfare receipt and child poverty.

Table 4 Child poverty by social welfare receipt

			Monetary poverty		Food poverty		Multi-dimensional poverty
		coverage	headcount	gap	headcount	gap	headcount
	Total		22.6	5.8	10.3	2.3	30.7
No transfers	Children in households not receiving social protection benefits	9.5	27.8	7.8	13.9	3.2	33.9
Informal transfers	Children in households receiving informal remittances	89.1	21.8	5.4	9.6	2.0	30.1
Formal transfers – social insurance	Children in households receiving pensions	4.8	8.4	2.0	3.5	0.5	16.6
Formal transfers – social assistance	Children in households receiving war veteran benefits	7.5	38.5	12.1	22.8	6.0	47.6
Formal transfers – social assistance	Children in households receiving other social welfare	1.8	34.7	10.5	21.1	4.4	32.0

Source: Authors' calculations from VHLSS 2006

Estimates suggest that the proportion of children living in households without any type of welfare receipt, households receiving informal remittances and households receiving other types of welfare are similar to that of the overall population. However, the proportions of children living in households with pension or war veteran recipients are lower compared to the overall population. As already observed for the average poverty figures, poverty headcount rates for children are higher than they are for the overall population. A similar pattern can also be observed with respect to the association between poverty and types of welfare receipt for children as well as the overall population. Children in households receiving remittances experience poverty risks and gaps slightly below the average while children in households without social protection beneficiaries or with recipients of war veteran or other social welfare allowances face greater poverty risks and gaps than average. In contrast to the overall

poverty situation, however, discrepancies are considerably more pronounced. Poverty incidence in the category of receipt of other social welfare allowances is 12 percentage points higher in terms of monetary poverty and 11 percentage points with respect to food poverty. In comparison, this amounts to 5 and 6 percent in the similar situation for overall poverty. The additional perspective of multidimensional poverty provides a more diversified picture as it suggests that poverty incidence is only considerably higher than the average for children in households with war veteran recipients. The multidimensional poverty measure does not capture a higher degree of poverty among those receiving other types of social welfare allowances, despite higher levels of monetary poverty incidence for those groups.

Simple cross-tabulations indicate that patterns of monetary and food poverty associated with different types of social welfare receipt are similar for children compared to the overall population. The use of a multidimensional versus monetary approach exclusively captures a higher prevalence of poverty compared to the average for children living in households with war veteran benefit recipients. The association between poverty, both household and child poverty, and welfare receipt is examined further by controlling for household characteristics in linear and logistic regression models (see Annex 2). When controlling for a range of factors, results indicate that not receiving any social protection benefits decreases the poverty risks and gaps for overall monetary and food poverty but does not have significant impacts on the prevalence and depth of poverty among children. The receipt of informal transfers shows to have a large impact on all forms of poverty, for overall as well as child poverty. All else equal, poverty risks decrease by 54 to 89 percentage points, suggesting a progressive impact of informal transfers. The receipt of pensions largely affects the overall poverty situation, reducing the poverty risks to monetary and food poverty and decreasing the food poverty gap. Children living in households with pension receipt, however, also experience a smaller probability to monetary poverty and strongly decreased poverty gap when in food poverty. In line with the findings of the cross-tabulations, pensions are found to be important in reducing the depth of extreme poverty of children. Results for households receiving war veteran or invalid benefits are also in line with the findings from the cross-tabulations, suggesting that receipt of these types of benefits is highly associated with both the size and depth of poverty. This holds for both overall and child poverty and also with respect to monetary, food and multidimensional poverty. The receipt of other social welfare transfers did not display strong conclusive associations with poverty.

Support for poor families and child poverty

This section specifically focuses on the support to poor families within the NTPPR program in relation to monetary and multidimensional child poverty. Issues under investigation include targeting efficiency and factors contributing to in- or exclusion errors. Targeted programs are a component of the extensive Vietnamese social welfare scheme and aim to, directly or indirectly, relieve and alleviate poverty (VDR 2008). Generally, NTPPR activities can be categorized in three different areas. Firstly, the program aims to create favorable conditions for the poor to be able to develop productive activities, primarily by providing preferential credit. Secondly, the program supports access to basic services including healthcare, education, accommodation and water supply. Capacity building of poverty program officials

represents the final program area. This section specifically focuses on the program providing in-kind assistance to poor families. Officially, targeting within this program is based on the formal monetary poverty line. However, the actual identification of household being poor or not is based on a combination of survey and community discussions, resulting in in- and exclusion errors. In the remainder of this paper, we will refer to the support to poor families within the NTPPR program as simply the NTPPR program.

The overall poverty and program coverage estimates are presented in Table 5. Note that these figures can not be directly compared to the figures presented in Table 4 with respect to coverage of other social welfare programs as those figures only related to cash transfers.

Table 5 Poverty and program coverage for children<16

	# children	Monetary poverty (%)	Multidimensional poverty (%)	Coverage of child population 2006 (%)
Total	10696	22.6	30.7	17.7
Gender				
Male	5441	22.4	30.5	17.6
Female	5255	22.9	31.0	17.8
Area		***	***	
Urban	2147	5.4	11.3	7.8
Rural	8549	27.6	36.3	20.5
Region		***	***	
Red River Delta	1755	13.2	9.7	8.9
North East	1533	34.1	36.2	24.3
North West	742	58.9	63.1	29.0
North Central Coast	1322	38.0	25.8	28.6
South Central Coast	1010	16.7	18.5	16.3
Central Highlands	1063	37.2	39.3	26.7
South East	1339	9.1	20.2	9.5
Mekong River Delta	1932	12.6	56.3	14.5
Ethnicity		***	***	
Kinh/Chinese	8257	14.5	24.1	13.2
Other	2439	61.3	62.3	39.2
Age groups		***	***	
0-2	1416	27.1	27.9	16.6
3-4	954	27.5	41.6	16.7
5	526	26.5	38.4	18.3
6-10	3146	25.2	25.8	19.4
11-14	3656	19.4	29.5	17.2
15	998	13.5	40.4	16.3

Source: Authors' calculations from VHLSS 2006
Notes: the percentage present incidence rates for the respective demographic groups

Figures in Table 5 indicate that a larger proportion of children is poor than covered by the NTPPR program. While the coverage rate of the NTPPR program is 18 percent of all children, 23 percent of all children suffer monetary poverty and 31 percent multidimensionally poor. By definition, at least 5 percent of all children, who are monetary poor, are not covered by the program and 13 percent of all children, who are multidimensionally poor, are not program beneficiaries. However, next to exclusion,

or Type I, errors, the program might also suffer from leakage, or Type II errors, and include children as program beneficiaries that are not monetary or multidimensionally poor. Results in Table 6 indicate that 7 percent of all children are program beneficiary while they are not poor. The net result is that only half of those children that are monetary poor are also covered by the NTPPR program.

Table 6 Coverage and leakage – monetary child poverty

		Monetary poor?					
Program beneficiary?		*Yes*	*No*				
	Yes	**11.0**	**6.7**				
	No	**11.6**	70.7				
		Monetary poor – alternative poverty lines?					
		Yes (95 percent)	*No (95 percent)*	*Yes (105 percent)*	*No (105 percent)*	*Yes (110 percent)*	*No (110 percent)*
Program beneficiary?	*Yes*	10 (*AB*)	8 (*B*)	12 (*AB*)	6 (*B*)	13 (*AB*)	5 (*B*)
	No	10 (*A*)	72 (*C*)	14 (*A*)	68 (*C*)	16 (*A*)	66 (*C*)

Source: Authors' calculations from VHLSS 2006

Results for different levels of the monetary poverty line further indicate that the lack of overlap is not a matter of statistical coincidence. Raising or lowering the monetary poverty line by 5 percentage point increments does not disproportionately change the coverage rate and size of in- and exclusion errors. Table 7 shows an even more exclusive situation with respect to multidimensional poverty. The percentage of leakage is comparable to that for the monetary poverty figures, namely 8 percent, but the exclusion error is twice as large. Only one thirds of all children that are identified to be multidimensionally poor benefit from the program while two thirds are not covered. Unfortunately the method used for the calculation of multidimensional child poverty does not allow for an analysis with alternative poverty lines.

Table 7 Coverage and leakage – multidimensional child poverty

		Multidimensionally poor?	
Program beneficiary?		*Yes*	*No*
	Yes	**10.1**	**7.6**
	No	**20.6**	61.7

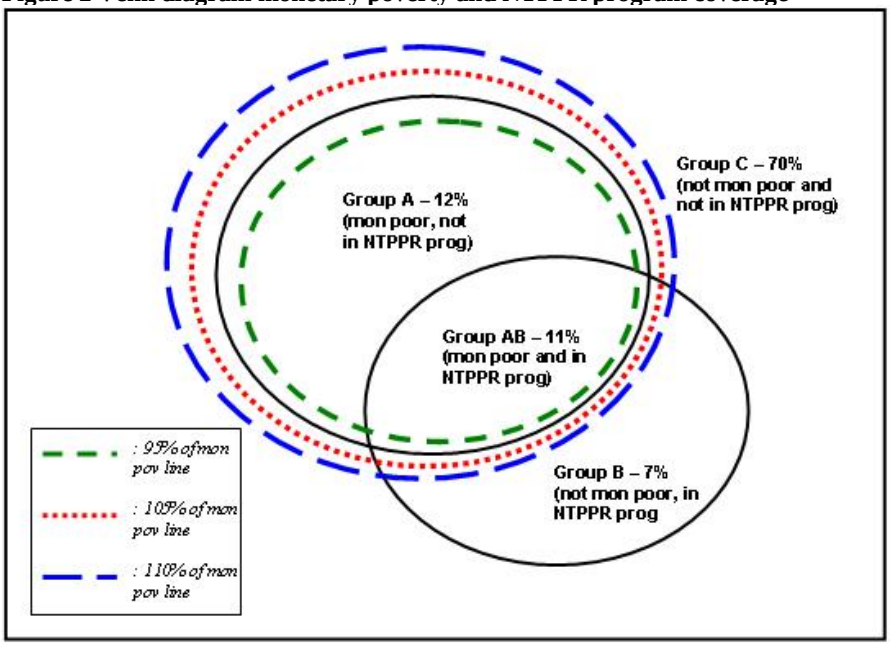
Source: Authors' calculations from VHLSS 2006

These findings suggest limited targeting efficiency in terms of monetary poverty and considerable exclusion of children that are multidimensionally poor. A general feature of the targeted programs is that eligibility criteria, guidelines and norms are predominantly decided upon at the central level but administration and implementation happens at the decentralized level (Van de Walle 2004). Due to a lack of resources and different sets of priorities at the regional level, there might be unequal spatial coverage (Van de Walle 2004) and participation in the program becomes highly dependent on available budget leadership (VDR 2008) Furthermore, poverty and needs are formulated differently throughout the country according to local norms and meanings, leading to an inconsistency with respect to eligibility criteria and coverage.

To gain a more in-depth understanding of those groups of children that are in- or excluded from the program, the coverage rate, exclusion and leakage errors are graphically represented by Venn diagrams in Figures 2 and 3. Four different groups can be identified in the overall child population, varying in their poverty and program

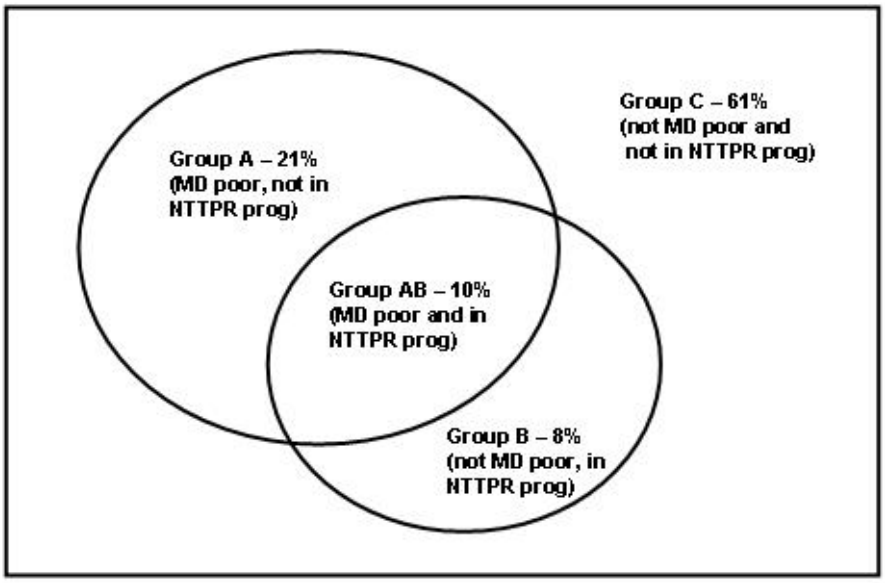
status. Group AB represents the group of children that are poor ánd covered by the program and the share of this group in the overall population can be interpreted as the coverage rate. Group A can be interpreted as the exclusion rate as it refers to the share of children that are poor but not covered by the program. Group B presents the leakage error, namely those children that are covered by the program but not poor. We will refer to the collection of these groups as poverty groups in the remainder of the paper. Group C are those not poor and not in the program and will not be further considered in this analysis.

Figure 2 Venn diagram monetary poverty and NTPPR program coverage



Source: Authors' calculations from VHLSS 2006

Figure 3 Venn diagram multidimensional poverty and NTPPR program coverage



Source: Authors' calculations from VHLSS 2006

As the poverty groups are mutually exclusive (each child can only belong to one group), we can use multinomial logistic regression to investigate whether there are factors that in- or decrease the probabilities of belonging to a specific poverty group. As these different poverty groups can be interpreted to be the coverage group (group AB), the exclusion group (A) and leakage group (B), it allows us to analyze whether certain factors contribute to a child's probability of coverage, exclusion or leakage.

Coverage and exclusion - Type I errors

The estimation results in Table 8 present relative risks of belonging to group A or AB in comparison to the respective reference groups AB or A, all else equal. The results in the first and third column, using group AB as reference group, can be interpreted as factors of exclusion. Group A presents children who are monetary/multidimensionally poor but not in the program and group AB includes children who are monetary/multidimensionally poor ánd in the program. The relative risk of belonging to group A rather than group AB associated with the characteristics included in the models can thus be interpreted as factors of exclusion. Factors with a relative risk larger than 1 increase the probability of a child to belong to the group under consideration rather than the reference group AB. By the same token, results in the second and fourth column can be interpreted as factors of inclusion. When the relative risks are greater than one, the probability of being poor ánd in the program (group AB) is higher than being poor but being excluded from the program (reference group A).

Table 8 Multinomial logistic regression results for coverage and exclusion of children

	Multinomial Model Monetary Poverty		**Multinomial Model MD Poverty**	
	factors for exclusion	factors for inclusion	factors for exclusion	factors for inclusion
	A- monetary and not in prog	***AB- monetary and in prog***	***A - MD poor and not in prog***	***AB - MD poor and in prog***
	b/se	b/se	b/se	b/se
	Characteristics of Child			
Child is female	10.754	0.9299	0.9227	10.837
	(0.0838)	(0.0725)	(0.0670)	(0.0786)
Age of child	10.315	0.9695	10.246	0.9760
	(0.0368)	(0.0346)	(0.0346)	(0.0330)
Age of child^2	0.9981	10.019	0.9999	10.001
	(0.0023)	(0.0023)	(0.0021)	(0.0021)
	Characteristics of Household Head			
Hh head is female	0.6718*	1.4886*	0.7698	12.990
	(0.1164)	(0.2579)	(0.1152)	(0.1943)
Age of hh head	0.9887	10.114	0.9499*	1.0527*
	(0.0239)	(0.0244)	(0.0203)	(0.0225)
Age of hh head^2	10.003	0.9997	1.0006**	0.9994**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Marital status hh head (omitted category is married)				
Hh head is single	0.8626	11.593	0.4744*	2.1079*
	(0.3259)	(0.4380)	(0.1690)	(0.7510)
Hh head is widowed	0.6814	14.677	0.6959	14.370
	(0.1510)	(0.3252)	(0.1296)	(0.2677)
Hh head is divorced	0.2672	37.429	0.4879	20.495
	(0.1804)	-25.272	(0.2113)	(0.8877)
Hh head is separated	0.0782***	12.7841***	12.463	0.8024
	(0.0597)	-97.544	(0.7271)	(0.4681)

Educational attainment hh head (omitted category is primary educ				
Hh head has no educ	0.6498***	1.5389***	0.5101***	1.9602***
	(0.0629)	(0.1490)	(0.0461)	(0.1772)
Hh head has secondary educ	10.355	0.9657	11.301	0.8849
	(0.1281)	(0.1195)	(0.1318)	(0.1032)
Hh head has post sec educ	0.7976	12.538	1.8758*	0.5331*
	(0.2623)	(0.4124)	(0.5065)	(0.1440)
Occupational status hh head (omitted category is unskilled labor)				
Hh head is unemployed or retired	12.813	0.7805	1.5289*	0.6540*
	(0.2621)	(0.1596)	(0.2573)	(0.1101)
Hh head is gov/defense staff	0.7838	12.758	14.922	0.6702
	(0.3687)	(0.6002)	(0.5846)	(0.2625)
Hh head is skilled professional	1.4029*	0.7128*	1.9007***	0.5261***
	(0.2240)	(0.1138)	(0.2764)	(0.0765)
	Characteristics of Household			
Hh belongs to ethnic minority	1.6845***	0.5937***	1.8799***	0.5319***
	(0.1891)	(0.0667)	(0.1951)	(0.0552)
Presence of hh members in ill-health in working age (16-59)	0.8920	11.211	0.9823	10.180
	(0.0533)	(0.0671)	(0.0503)	(0.0521)
Presence of children of specific age groups (omitted category is presence of children <5 years)				
Presence of children 5-11 years	0.7550	13.246	0.6635*	1.5071*
	(0.1403)	(0.2462)	(0.1170)	(0.2657)
Presence of children >11 years	0.7292	13.713	0.6625*	1.5095*
	(0.1420)	(0.2671)	(0.1233)	(0.2811)
Prop of children as share of total number of hh members (omitted category is 25-39%)				
<25%	10.570	0.9461	0.9431	10.603
	(0.2230)	(0.1996)	(0.1615)	(0.1816)
40-50%	0.9020	11.086	0.8462	11.817
	(0.1261)	(0.1550)	(0.1081)	(0.1509)
>50%	0.6604***	1.5142***	0.6284***	1.5914***
	(0.0766)	(0.1756)	(0.0651)	(0.1648)
	Locational characteristics			
Household is located in rural area	0.7646	13.078	0.8025	12.460
	(0.1474)	(0.2521)	(0.1281)	(0.1989)
Region (omitted category is South Central Coast)				
Red River Delta	2.3443***	0.4266***	11.436	0.8744
	(0.5161)	(0.0939)	(0.2716)	(0.2077)
North East	2.0245***	0.4939***	14.055	0.7115
	(0.3993)	(0.0974)	(0.2674)	(0.1354)
North West	2.4457***	0.4089***	1.7597**	0.5683**
	(0.5019)	(0.0839)	(0.3494)	(0.1128)
North Central Coast	10.790	0.9268	0.5575**	1.7936**
	(0.2076)	(0.1783)	(0.1094)	(0.3518)
Central Highlands	1.7112**	0.5844**	11.553	0.8656
	(0.3458)	(0.1181)	(0.2245)	(0.1682)
South East	2.7847***	0.3591***	3.0247***	0.3306***
	(0.6579)	(0.0848)	(0.6446)	(0.0705)
Mekong River Delta	12.934	0.7732	1.9492***	0.5130***

	(0.2704)	(0.1617)	(0.3424)	(0.0901)
Pseudo R-Square	0.2184	0.2184	0.2009	0.2009
chi2	4.5e+03	4.5e+03	4.7e+03	4.7e+03
p	0.0000	0.0000	0.0000	0.0000

Source: Authors' calculations from VHLSS 2006

*Notes: Notes: * p<0.05, ** p<0.01, *** p<0.001*

Results for the factors of exclusion represent relative risks of belonging to group A in comparison to reference group AB. Results for the factors of inclusion represent relative risks of belonging to group AB in comparison to reference group A.

Findings in Table 8 suggest that factors that are associated with exclusion from the NTPPR program in case of monetary poverty are employment status, ethnicity and region of residence. Being of ethnic minority increases the risk of exclusion by 69 percent whilst living in a household headed by a skilled professional rather than unskilled worker does so by 40 percent. Children living in the Red River Delta, North East, North West, Central Highlands and South East regions are also more likely to be excluded in comparison to children living in the reference region South Central Coast. The higher risks of exclusion associated with employment status, ethnic minority and region of residence can also be observed with respect to children that are multidimensionally poor. In addition, we also find that children living in households headed by unemployed workers, skilled professionals and those having received post-secondary education have a greater probability to be excluded when multidimensionally poor.

The results in Table 8 also allow us to identify factors that are associated with a higher chance of being covered by the NTPPR program for children that are either monetary or multidimensionally poor. The chance for monetary poor children living in households whose head is separated to be included in the program is 12 times larger compared to children in households with married heads. Children living in female-headed households, uneducated heads or large proportions of children are also more likely be covered by the program in case of monetary poverty. Factors to be associated with a higher probability of coverage in terms of multidimensional poverty are household heads being single in comparison to being married. Furthermore, the presence of an uneducated household head, older children in the household and a large proportion of children in the household also contribute to a greater chance of coverage under the NTPPR program. The results for the regional effects suggest that children living in any other region than the reference South Central Coast region face a higher relative risk to be excluded from the program. These exclusion effects are generally stronger for monetary poverty than food poverty.

Leakage and inclusion – Type II errors

Table 9 presents relative risks of belonging to group B in comparison to the respective reference group AB, all else equal. The results can also be interpreted as factors of leakage. Group B presents children who are not monetary or multidimensionally poor but do benefit from the program. Factors with a relative risk larger than 1 repersent an increase in the probability of a child to belong to group B rather than the reference group AB.

Table 9 Multinomial logistic regression results for leakage

	Multinomial Model Monetary Poverty - Group AB is basis	Multinomial Model MD Poverty – Group AB is basis
	factors of leakage	factors of leakage
	B - in prog but not monetary poor	***B- in prog but not MD poor***
	b/se	b/se
	Characteristics of Child	
Child is female	10.821	0.8373
	(0.1077)	(0.0796)
Age of child	1.1126*	1.2113***
	(0.0570)	(0.0562)
Age of child^2	0.9987	0.9858***
	(0.0030)	(0.0028)
Hh head is female	0.9821	12.434
	(0.1853)	(0.2313)
Age of hh head	0.9500	0.9729
	(0.0301)	(0.0299)
Age of hh head^2	10.004	10.003
	(0.0003)	(0.0003)
Marital status hh head (omitted category is married)		
Hh head is single	10.605	0.6500
	(0.4376)	(0.2699)
Hh head is widowed	2.8285***	14.755
	(0.6665)	(0.3412)
Hh head is divorced	10.774	0.6230
	(0.5733)	(0.3386)
Hh head is separated	0.3835	5.3482**
	(0.2086)	-31.755
Educational attainment hh head (omitted category is primary educ)		
Hh head has no educ	0.5971***	0.6137***
	(0.0782)	(0.0759)
Hh head has secondary educ	2.0631***	11.292
	(0.2946)	(0.1565)
Hh head has post sec educ	13.709	0.7632
	(0.4862)	(0.2686)
Occupational status hh head (omitted category is unskilled labor)		
Hh head is unemployed or retired	11.164	0.2154***
	(0.2719)	(0.0566)
Hh head is gov/defense staff	13.784	11.608
	(0.7495)	(0.6031)
Hh head is skilled professional	1.9557***	1.8429***
	(0.3305)	(0.3130)
Hh belongs to ethnic minority	5.3543***	2.5463***
	(0.8039)	(0.3471)
Presence of hh members in ill-health in working age (16-59)	1.3879***	11.074
	(0.0944)	(0.0730)
Presence of children of specific age groups (omitted category is presence of children <5 years)		
Presence of children 5-11 years	0.8767	0.8571
	(0.2278)	(0.2091)
Presence of children >11 years	0.9551	13.096

	(0.2608)	(0.3327)
Prop of children as share of total number of hh members (omitted category is 25-39%)		
<25%	1.9702**	14.316
	(0.4557)	(0.3225)
40-50%	0.7984	0.9616
	(0.1390)	(0.1646)
>50%	0.4896***	0.6906**
	(0.0700)	(0.0964)
Household is located in rural area	0.3355***	0.3069***
	(0.0634)	(0.0554)
Region (omitted category is South Central Coast)		
Red River Delta	0.8847	15.385
	(0.2142)	(0.3824)
North East	1.5842*	0.9587
	(0.3583)	(0.2057)
North West	0.7556	0.4329**
	(0.2331)	(0.1117)
North Central Coast	0.5454**	10.492
	(0.1163)	(0.2131)
Central Highlands	11.050	0.5918*
	(0.2577)	(0.1305)
South East	2.2274**	0.7998
	(0.5729)	(0.2000)
Mekong River Delta	2.1171***	0.1150***
	(0.4529)	(0.0278)
Pseudo R-Square	0.2184	0.2009
chi2	4.5e+03	4.7e+03
p	0.0000	0.0000

Source: Authors' calculations from VHLSS 2006

*Notes: Notes: * p<0.05, ** p<0.01, *** p<0.001*

Results for the factors of exclusion represent relative risks of belonging to group B in comparison to reference group AB.

Findings for the monetary poverty model suggest that children living in households with widowed heads of household are relatively 3 times more likely to be included in the NTPPR program whilst not being monetary poor in comparison to married heads of household. The relative chances of being a program recipient without being multidimensionally poor increase by a degree of 5 for children with separated heads of household. Relative chances of being included in the program are smaller for children living in households with heads having received no education when compared to those having obtained primary education. Secondary school attainment of household heads, however, increases the relative chances of inclusion for children that are not monetary poor. Skilled employment of household heads has the same effect in terms of both monetary and multidimensional poverty when compared to children living in households whose heads are in unskilled labor as well as being of ethnic minority. The relative prevalence of leakage in terms of children that are not monetary poor is also higher where there is a household member of working age in ill-health or a small proportion of children. These findings do not hold in case of multidimensional poverty. The diversified picture of poverty using a monetary and multidimensional approach is further exemplified when considering the results for the regional dummies. Children that are not monetary poor and living in the Mekong River Delta region are more likely to receive NTPPR benefits when compared to

children living in the reference region South Central Coast. However, children living in the Mekong River Delta that are not multidimensionally poor have a smaller relative chance to be included in the program.

Targeting Efficiency

Previous findings on the targeting of poor support to families within the NTPPR program with respect to monetary and multidimensionally poor children are schematically summarized in Table 10. The table displays the set of factors contributing to either exclusion from the program when children are monetary or multidimensionally poor or leakage to children that are not identified to be monetary or multidimensionally poor in comparison the various reference categories.

Table 10 Overview of factors associated with Type I and Type II errors

	Type I errors - exclusion		**Type II errors - leakage**	
	Monetary poverty	*Multi-dimensional poverty*	*Monetary poverty*	*Multi-dimensional poverty*
Child characteristics				
Household head characteristics				
Hh head is widowed			x	
Hh head is separated				x
Hh head is unemployed		x		
Hh head has secondary education		x	x	
Hh head has post-secondary education		x		
Hh head is unemployed		x		
Hh head has skilled job	x	x	x	x
Household characteristics				
Household is of ethnic minority	x	x	x	x
Member of household of working age is in ill-health			x	
Household has small proportion of children			x	
Locational characteristics				
Household living in Red River Delta	x			
North East	x		x	
North West	x	x		
Central Highlands	x			
South East	x	x	x	
Mekong River Delta		x	x	

Source: Authors' calculations from VHLSS 2006

Findings suggest that factors associated with exclusion and inclusion errors, include marital status, educational attainment and occupational status of the household head. Also ethnic minority and regional factors are highly associated with inefficient targeting of the program. Children living in households of ethnic minority have relatively higher chances to be excluded or wrongly included in the NTPPR program. The same holds for, for example, living in the North East and South East regions in terms of monetary poverty. Results further indicate that the risks of Type I errors are larger in case of multidimensional poverty. The monetary and multidimensional models also identify different factors contributing to targeting inefficiency. Children living in the Mekong River Delta region, for example, face a larger relative risk to be excluded from the program in the multidimensional model but a higher chance of being included in terms of monetary poverty. This section clearly indicates that the program suffers considerably from inefficiency when it comes to reaching the

monetary and multidimensionally poor. A substantial amount of resources is not distributed to those children in need but leaked to those that are not poor. The specific factors associated with in- and exclusion errors should be considered in the design and implementation of the policy.

Conclusion

This study assessed the relationship between social protection and child poverty in Vietnam, using both a monetary and multidimensional poverty approach. Despite a wide range of existing research and literature on poverty and social protection in Vietnam, children remain under-prioritized as a special focus group. Although previous studies have shown that social protection in Vietnam is largely regressive in nature, no such study has been undertaken to assess the situation of children. Findings in this study indicate that children are a disadvantaged group in society in terms of overall poverty as well as in relation to the receipt of social welfare and therefore require a special analytical focus. Monetary and food poverty is more prevalent among children accompanied by a slightly larger poverty gap in comparison to the general poverty situation. Furthermore, multidimensional child poverty estimates suggest that poverty incidence is even higher when considering non-monetary aspects rather than monetary aspects of deprivation. Multidimensional child poverty estimates do not only diversify the child poverty picture in terms of poverty incidence but an analysis of overlap between monetary and multidimensional poverty estimates also suggests that different groups of children are captured. In other words, children identified as poor according to the widely-used monetary poverty approach are not necessarily identified as poor by the multidimensional approach. This finding provides strong support for the use of both a monetary and multidimensional perspective for a sound poverty analysis. The analysis of micro-determinants explaining individual and child poverty indicates that especially the marital status, educational attainment and occupational status of the household, ethnic minority and residence in rural areas or disadvantaged regions have a large impact on poverty risk and depth. Generally, these effects appear to be stronger for child poverty and even more so in the case of multidimensional poverty. As such, children and their specific situation in terms of both monetary and multidimensional poverty are to be taken into consideration in future social policy evaluations as well as policy design and implementation.

An assessment of the association between social welfare receipt and poverty indicates that the probability to be poor or to experience deep poverty is smallest for those with pension beneficiaries as part of the household. All else equal, the receipt of no social transfer, informal remittances and pensions is negatively associated with poverty, indicating a decreased poverty risk for recipients of those types of welfare. Among the recipients of social welfare, individuals and children living in households receiving war veteran or invalids benefits are by far the most disadvantaged group with high poverty incidence rates and depth of poverty. These high levels and gaps of poverty call for the need to revise the existing benefit scheme and support to this vulnerable group in society. Children prove to be an especially vulnerable group as trends and patterns found for children are similar to those for the overall population but more pronounced.

Finally, the in-depth assessment of targeting performance suggests that the support for poor families within the National Target Program for Poverty Reduction has limited coverage with considerable inclusion and exclusion errors. In case of both monetary and multidimensional poverty, a considerable number of poor children are not benefiting from the program. By the same token, a considerable amount of benefits leak to children not considered to be poor in either monetary or multidimensional terms. Factors playing a role in the inefficiency of targeting include marital status, educational attainment and occupational status of the household head, ethnic minority and regional factors. The strong association of these factors with exclusion and inclusion errors implies that there are underlying dynamics causing a child to be included when not poor or excluded despite being poor. Further research is needed to investigate these underlying mechanisms to be able to improve the program's targeting performance. Furthermore, alternative policy options and their potential to have a poverty-reducing effect, especially with respect to children, should be investigated.

References

Alkire, S. and J. Foster (2008). Counting and Multidimensional Poverty Measurement, Oxford Poverty & Human Development Initiative, OPHI.

Atkinson, A. B. (2003). Multidimensional deprivation: contrasting social welfare and counting approaches. Journal of Economic Inequality 1: 51-65.

Balisacan, A., E. Pernia, et al. (2004). Economic Growth and Poverty Reduction in Vietnam. Poverty, Growth and Institutions in Developing Asia. E. Pernia and A. Deolalikar, Palgrave Macmillan.

Corak, M. (2006). Do Poor Children become Poor Adults? Lessons from a Cross Country Comparison of Generational Earnings Mobility, Institute for the Study of Labor (IZA).

Cox, D. (2004). Private interhousehold transfers in Vietnam. Economic Growth, Poverty and Household Welfare in Vietnam. P. Glewwe, N. Agrawal and D. Dollar. Washington DC, World Bank.

Edmonds, E. and C. Turk (2004). Child labor in transition in Vietnam. Economic Growth, Poverty and Household Welfare in Vietnam. P. Glewwe, N. Agrawal and D. Dollar, World Bank.

Evans, M., I. Gough, et al. (2007). How Progressive is Social Security in Vietnam. UNDP. Hanoi.

Evans, M., I. Gough, et al. (2007). The Relationship between Old Age and Poverty in Vietnam. UNDP. Hanoi.

Evans, M. and S. Harkness (2008). "Social Protection in Vietnam and Obstacles to Progressivity." Asian Social Work and Policy Review 2: 30-52.

Glewwe, P. (2004). An Overview of Economic Growth and Household Welfare in Vietnam in the 1990's. Economic Growth, Poverty and Household Welfare in Vietnam. P. Glewwe, N. Agrawal and D. Dollar. Washington DC, World Bank

Gordon, D., S. Nandy, et al. (2003). The Distribution of Child Poverty in the Developing World. Bristol, UK, Centre for International Poverty Research.

Gordon, D., Nandy, S., Pantazis, C., Pemberton, S., and P. Townsend (2003). Child Poverty in the Developing World. Bristol, Policy Press.

Justino, P. (2005). Beyond HEPR: A framework for an integrated national system of social insurance in Vietnam. UNDP Policy Dialogue Paper 2005/1. UNDP. Hanoi.

Minujin, A., Delamonica, E., Gonzalez, E. and Al Davidziuk (2005). Children Living in Poverty: a review of child poverty definitions, measurements and policies. Unicef Conference Children and Poverty: Global Context, Local Solutions New York Unicef, New School University

Niimi, Y., T. H. Pham, et al. (2008). Determinants of Remittances: Recent Evidence Using Data on Internal Migrants in Vietnam. Policy Research Working Paper 4586. W. Bank.

Pincus, J. and J. Sender (2006). Quantifying Poverty in Vietnam, UNDP, School of Oriental and African Studies.

Ravallion, M. (1994). Poverty Comparisons, Harwood Academic Publishers.

Roelen, K., F. Gassmann, et al. (2009). "The Importance of Choice and Definition for the Measurement of Child Poverty- the case of Vietnam." Child Indicators Research, DOI: 10.1007/s12187-008-9028-0

Taylor, P. (2004). Social Inequality in Vietnam and the Challenges to Reform, Institute of South East Asian Studies.

UNDP and MOLISA (2004). Taking Stock, Planning Ahead: Evaluation of the National Targeted Program on Hunger Eradication and Poverty Reducation and Program 135. UNDP. Hanoi.
Van de Walle, D. (2004). The Static and Dynamic Incidence of Vietnam's Public Safety Net. Economic Growth, Poverty, and Household Welfare in Vietnam. P. Glewwe, N. Agrawal and D. Dollar. Washington DC, World Bank.
VASS (2006). Vietnam Poverty Update Report: Poverty and Poverty Reduction in Vietnam 1993-2004, Vietnamese Academy of Social Sciences, Hanoi.
VDR (2008). Vietnam Development Report 2008: Social Protection. Hanoi, Joint Donor Report to the Consultative Group Meeting.
Waddington, H. (2004). Linking Economic Policy to Childhood Poverty: a review of the evidence on growth, trade reform and macroeconomic policy. CHIP Report. CHIP.
White, H., J. Leavy, et al. (2003). "Comparative Perspectives on Child Poverty: A review of poverty measures " Journal of Human Development 4(3): 379-396.

Annex 1

Tables 11 and 12 present logistic and linear regression results for household poverty headcounts and gaps based on the monetary and food poverty line. Marginal probabilities and standard errors are presented for the poverty headcount models, reflecting the percentage point changes in the household poverty risks in terms of the reference category. Beta coefficients and standard errors are reported for the poverty gap models, indicating the percentage change in poverty gap for those households that are poor.

Table 11 Logistic regression models for household monetary and food poverty

	Monetary poverty	**Food poverty**
	Poverty headcount	Poverty headcount
	Marginal effect/standard error	Marginal effect/standard error
	Characteristics of Household Head	
Hh head is female	-0.021*	-0.002
	(0.010)	(0.004)
Age of hh head	0.002	0.001
	(0.002)	(0.001)
Age of hh head^2	-0.000	-0.000
	(0.000)	(0.000)
Marital status hh head (omitted category is married)		
Hh head is single	0.111***	0.024***
	(0.032)	(0.007)
Hh head is widowed	-0.001	-0.004
	(0.013)	(0.005)
Hh head is divorced	-0.006	-0.021
	(0.032)	(0.014)
Hh head is separated	0.023	-0.010
	(0.031)	(0.018)
Education attainment hh head (omitted category is primary educ)		
Hh head has no educ	0.050***	0.015***
	(0.007)	(0.003)
Hh head has secondary educ	-0.063***	-0.013***
	(0.009)	(0.003)
Hh head has post sec educ	-0.128***	-0.033***
	(0.017)	(0.008)
Occupational status hh head (omitted category is unskilled labor)		
Hh head is unemployed or retired	-0.011	-0.001
	(0.011)	(0.004)
Hh head is gov/defense staff	-0.088**	-0.018
	(0.034)	(0.014)
Hh head is skilled professional	-0.045***	-0.019***
	(0.010)	(0.005)
	Characteristics of Household	
Hh belongs to ethnic minority	0.121***	0.030***
	(0.010)	(0.004)
Presence of elderly	-0.004	0.003
	(0.014)	(0.005)
Presence of children of specific age groups (omitted category is no children)		
Presence of children <5	0.053***	0.017***
	(0.013)	(0.005)

Presence of children 5-11	0.024	0.008
	(0.013)	(0.004)
Presence of children >11	0.010	0.004
	(0.012)	(0.004)
Prop of children as share of total number of hh members (omitted category is 25-39%)		
<25%	-0.040***	-0.009*
	(0.011)	(0.004)
40-50%	0.027*	0.011**
	(0.011)	(0.003)
>50%	0.060***	0.014***
	(0.009)	(0.003)
	Locational Characteristics	
Household is located in rural area	0.072***	0.016***
	(0.010)	(0.004)
Region (omitted category is South Central Coast)		
Red River Delta	0.021	0.000
	(0.012)	(0.005)
North East	0.020	-0.003
	(0.013)	(0.004)
North West	0.038*	0.008
	(0.016)	(0.005)
North Central Coast	0.090***	0.022***
	(0.013)	(0.005)
Central Highlands	0.026	0.007
	(0.013)	(0.005)
South East	-0.056***	-0.011*
	(0.015)	(0.005)
Mekong River Delta	-0.038**	-0.014**
	(0.012)	(0.005)
	Model Specifications	
Number of observations	9189	9189
P-value	0.0000	0.0000
Pseudo R-Square	0.2916	0.3418
BIC	5.958.778	3.216.981

Source: Authors' calculations from VHLSS 2006
*Notes: * p<0.05, ** p<0.01, *** p<0.001*

Table 12 Logistic regression models for child monetary, food and multidimensional poverty

	Monetary child poverty	**Food child poverty**	**Multidimensional child poverty**
	Poverty headcount	Poverty headcount	Poverty headcount
	Marginal effect/standard error	Marginal effect/standard error	Marginal effect/standard error
	Characteristics of Child		
Child is female	0.006	0.004	0.002
	(0.007)	(0.003)	(0.009)
Age of child	-0.003	-0.002	-0.021***
	(0.003)	(0.001)	(0.005)
Age of child^2	-0.000	-0.000	0.002***
	(0.000)	(0.000)	(0.000)
	Characteristics of Household Head		
Hh head is female	-0.038**	-0.002	-0.094***
	(0.013)	(0.005)	(0.017)
Age of hh head	0.010***	0.003***	0.002
	(0.002)	(0.001)	(0.003)
Age of hh head^2	-0.000***	-0.000***	-0.000
	(0.000)	(0.000)	(0.000)
Marital status hh head (omitted category is married)			
Hh head is single	0.183***	0.036**	0.180***
	(0.044)	(0.013)	(0.051)
Hh head is widowed	-0.017	-0.012	0.072**
	(0.017)	(0.007)	(0.024)
Hh head is divorced	-0.041	-0.056*	0.014
	(0.045)	(0.025)	(0.062)
Hh head is separated	0.108**	-0.018	0.053
	(0.038)	(0.027)	(0.060)
Educational attainment hh head (omitted category is primary educ)			
Hh head has no educ	0.082***	0.029***	0.051***
	(0.009)	(0.004)	(0.012)
Hh head has secondary educ	-0.109***	-0.026***	-0.049***
	(0.010)	(0.004)	(0.013)
Hh head has post sec educ	-0.211***	-0.074***	-0.137***
	(0.021)	(0.011)	(0.022)
Occupational status hh head (omitted category is unskilled labor)			
Hh head is unemployed or retired	0.001	-0.001	0.288***
	(0.016)	(0.006)	(0.023)
Hh head is gov/defense staff	-0.135***	-0.040**	-0.024
	(0.034)	(0.015)	(0.038)
Hh head is skilled professional	-0.071***	-0.034***	-0.045***
	(0.011)	(0.006)	(0.014)
	Household Characteristics		
Hh belongs to ethnic minority	0.191***	0.058***	0.188***
	(0.011)	(0.005)	(0.015)
Presence of hh members in ill-health in working age (16-59)	-0.018***	-0.005*	0.034***
	(0.005)	(0.002)	(0.007)
Presence of elderly			

Presence of children of specific age groups (omitted category is presence of children <5 years)			
Presence of children 5-11 years	-0.010	-0.002	-0.022
	(0.016)	(0.006)	(0.023)
Presence of children >11 years	-0.000	-0.001	-0.053*
	(0.017)	(0.006)	(0.024)
Prop of children as share of total number of hh members (omitted category is 25-39%)			
<25%	-0.066***	-0.019**	-0.065***
	(0.016)	(0.007)	(0.019)
40-50%	0.030*	0.017***	0.005
	(0.012)	(0.004)	(0.016)
>50%	0.081***	0.024***	0.062***
	(0.010)	(0.004)	(0.013)
Household is monetary poor			0.170***
			(0.012)
	Locational Characteristics		
Household is located in rural area	0.131***	0.034***	0.231***
	(0.012)	(0.005)	(0.015)
Region (omitted category is South Central Coast)			
Red River Delta	0.030*	0.005	-0.124***
	(0.015)	(0.007)	(0.022)
North East	0.029	-0.003	0.047*
	(0.016)	(0.006)	(0.022)
North West	0.043*	0.009	0.133***
	(0.019)	(0.006)	(0.027)
North Central Coast	0.145***	0.044***	-0.006
	(0.015)	(0.006)	(0.022)
Central Highlands	0.044**	0.013*	0.089***
	(0.015)	(0.006)	(0.024)
South East	-0.099***	-0.023***	0.055*
	(0.017)	(0.007)	(0.022)
Mekong River Delta	-0.083***	-0.032***	0.332***
	(0.015)	(0.007)	(0.020)
	Model Specifications		
Number of observations	10696	10696	10696
P-value	0.0000	0.0000	0.0000
Pseudo R-Square	0.2970	0.3235	0.2672
BIC	8.337.655	5.104.019	9.975.877

Source: Authors' calculations from VHLSS 2006
*Notes: * p<0.05, ** p<0.01, *** p<0.001*

Annex 2

Table 13 Logistic regression models for (child) monetary, food and multidimensional poverty including receipt of social welfare receipt

	Monetary poverty	**Food poverty**	**Monetary child poverty**	**Food child poverty**	**Multidimensional child poverty**
	Poverty headcount	Poverty headcount	Poverty headcount	Poverty headcount	Poverty headcount
	Marginal effect/standard error	Marginal effect/standard error	Marginal effect/standard error	Marginal effect/standard error	Marginal effect/standard error
	Characteristics of Child				
Child is female			0.004	0.004	0.007
			(0.008)	(0.003)	(0.010)
Age of child			-0.006	-0.003*	-0.026***
			(0.004)	(0.001)	(0.005)
Age of child^2			-0.000	-0.000	0.002***
			(0.000)	(0.000)	(0.000)
	Characteristics of Household Head				
Hh head is female	-0.018	-0.001	-0.043**	0.002	-0.100***
	(0.010)	(0.004)	(0.015)	(0.006)	(0.019)
Age of hh head	0.002	0.001	0.012***	0.004***	0.002
	(0.002)	(0.001)	(0.002)	(0.001)	(0.003)
Age of hh head^2	-0.000	-0.000	-0.000***	-0.000***	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Marital status hh head (omitted category is married)					
Hh head is single	0.109***	0.024***	0.170***	0.037**	0.214***
	(0.031)	(0.007)	(0.038)	(0.014)	(0.054)
Hh head is widowed	-0.006	-0.005	-0.032	-0.022**	0.084***
	(0.013)	(0.004)	(0.020)	(0.008)	(0.025)
Hh head is divorced	-0.009	-0.022	-0.034	-0.064*	0.056
	(0.032)	(0.014)	(0.048)	(0.027)	(0.059)
Hh head is separated	0.022	-0.011	0.128**	-0.034	0.053
	(0.031)	(0.018)	(0.046)	(0.030)	(0.067)

Educational attainment hh head (omitted category is primary educ)					
Hh head has no educ	0.048***	0.015***	0.098***	0.040***	0.059***
	(0.007)	(0.003)	(0.010)	(0.004)	(0.013)
Hh head has secondary educ	-0.061***	-0.013***	-0.114***	-0.027***	-0.059***
	(0.008)	(0.003)	(0.011)	(0.005)	(0.014)
Hh head has post sec educ	-0.115***	-0.032***	-0.241***	-0.077***	-0.132***
	(0.017)	(0.007)	(0.023)	(0.013)	(0.024)
Occupational status hh head (omitted category is unskilled labor)					
Hh head is unemployed or retired	-0.008	-0.001	-0.006	-0.003	0.303***
	(0.011)	(0.004)	(0.018)	(0.007)	(0.023)
Hh head is gov/defense staff	-0.088**	-0.018	-0.141***	-0.049**	-0.055
	(0.034)	(0.013)	(0.040)	(0.018)	(0.041)
Hh head is skilled professional	-0.045***	-0.018***	-0.092***	-0.041***	-0.050***
	(0.010)	(0.004)	(0.012)	(0.007)	(0.015)
	Household Characteristics				
Hh belongs to ethnic minority	0.118***	0.030***	0.228***	0.070***	0.197***
	(0.010)	(0.004)	(0.012)	(0.005)	(0.016)
Presence of elderly	-0.005	0.002			
	(0.014)	(0.005)	Dropped	Dropped	dropped
Presence of individuals in working age of ill health	-0.009*	-0.003	-0.020***	-0.006*	0.029***
	(0.005)	(0.001)	(0.006)	(0.002)	(0.007)
Presence of children of specific age groups (omitted category is no children for hh poverty and presence of children <5 years for child poverty)					
Presence of children <5	0.054***	0.018***			
	(0.013)	(0.005)			

Presence of children 5-11 years	0.024	0.009*	-0.004	-0.000	-0.029
	(0.013)	(0.004)	(0.018)	(0.007)	(0.023)
Presence of children >11 years	0.009	0.004	0.002	-0.001	-0.070**
	(0.012)	(0.004)	(0.019)	(0.007)	(0.025)
Prop of children as share of total number of hh members (omitted category is 25-39%)					
<25%	-0.040***	-0.009*	-0.071***	-0.024**	-0.072***
	(0.011)	(0.004)	(0.018)	(0.008)	(0.020)
40-50%	0.024*	0.009**	0.039**	0.017***	0.005
	(0.010)	(0.003)	(0.013)	(0.005)	(0.017)
>50%	0.057***	0.013***	0.096***	0.023***	0.069***
	(0.008)	(0.003)	(0.011)	(0.004)	(0.014)
Household is monetary poor					0.180***
					(0.013)
Social welfare receipt					
No social protection	-0.036	-0.013	-0.021	-0.021	-0.049
	(0.024)	(0.007)	(0.035)	(0.011)	(0.046)
Informal remittances	-0.040	-0.016**	-0.048	-0.036***	-0.103*
	(0.022)	(0.006)	(0.033)	(0.011)	(0.043)
Pensions	-0.066***	-0.008	-0.077**	-0.010	-0.008
	(0.017)	(0.005)	(0.025)	(0.010)	(0.029)
War veteran/invalids benefits	0.013	0.003	0.058***	0.017***	0.086***
	(0.009)	(0.003)	(0.015)	(0.005)	(0.020)
Other social welfare	-0.049	0.008	0.062*	0.039***	0.032
	(0.045)	(0.012)	(0.026)	(0.009)	(0.037)
	Locational Characteristics				
Household is	0.069***	0.016***	0.147***	0.044***	0.229***

located in rural area	(0.010)	(0.004)	(0.014)	(0.007)	(0.016)
Region (omitted category is South Central Coast)					
Red River Delta	0.022	-0.000	0.053**	0.008	-0.134***
	(0.012)	(0.005)	(0.017)	(0.008)	(0.025)
North East	0.023	-0.003	0.046*	0.002	0.075**
	(0.013)	(0.004)	(0.018)	(0.007)	(0.024)
North West	0.040*	0.007	0.088***	0.023**	0.186***
	(0.016)	(0.005)	(0.021)	(0.008)	(0.029)
North Central Coast	0.092***	0.022***	0.168***	0.054***	0.004
	(0.013)	(0.005)	(0.017)	(0.007)	(0.024)
Central Highlands	0.029*	0.008	0.058**	0.014	0.109***
	(0.013)	(0.005)	(0.018)	(0.007)	(0.024)
South East	-0.054***	-0.011*	-0.090***	-0.015	0.094***
	(0.015)	(0.005)	(0.019)	(0.008)	(0.023)
Mekong River Delta	-0.037**	-0.014**	-0.078***	-0.031***	0.380***
	(0.012)	(0.004)	(0.017)	(0.008)	(0.021)
	Model Specifications				
Number of observations	39.071	39071	10696	10696	10696
P-value	0.0000	0.0000	0.0000	0.0000	0.0000
R-squared					
Adjusted R-squared					
Pseudo R-Square	0.315	0.358	0.319	0.343	0.257
BIC	25.919.190	14.482.447	8.662.857	5.577.482	10.569.607

Source: Authors' calculations from VHLSS 2006
*Notes: * p<0.05, ** p<0.01, *** p<0.001*