

Young Lives: Vietnam Round 2 Survey

September 2008

Le Thuc Duc
Nguyen Phuong Ngoc
Tran Minh Chau
Nguyen Van Tien
Vo Thanh Son



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Available from:

Young Lives

Department of International Development

University of Oxford

3 Mansfield Road

Oxford OX1 3TB, UK

Tel: +44 (0)1865 289966

E-mail: younglives@younglives.org.uk

Web: www.younglives.org.uk

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The authors

Le Thuc Duc is Principal Investigator for Young Lives in Vietnam and is a section head at the Centre for Analyses and Forecasting of the Vietnam Academy of Social Science. Before joining Young Lives, his work focused on issues related to development in general, poverty, and investment.

Nguyen Phuong Ngoc is currently a DPhil student in Economics at the University of Oxford. Her areas of interest include childhood poverty, migration, remittances and poverty and applied micro-econometric techniques using household survey data.

Tran Minh Chau is the Deputy Director of the Department of Social and Environmental Statistics at GSO, which is responsible for household data surveys including Young Lives.

Nguyen Van Tien is the Data Manager for Young Lives and provided research assistance for this report. Before joining Young Lives he was a senior researcher at CAF-VASS, where he worked on issues surrounding the finance of state-owned enterprises and industrial transitions

Vo Thanh Son is a researcher based within the Department of Social and Environmental Statistics at GSO.

Abbreviations and acronyms

CAF-VASS	Centre for Analyses and Forecasting of the Vietnam Academy of Social Sciences
CEM	Committee for Ethnic Minorities
CPCPC	Committee on the Protection, Care, and Education of Children
CPFC	Committee for Population, Families and Children
CPRGS	Comprehensive Poverty Reduction and Growth Strategy (Vietnam)
CRC	(International) Convention on the Rights of the Child
CSC	Central Steering Committee
DFID	Department for International Development, UK
GSO	General Statistics Office
HAZ	Height-for-Age standardised score
HCFP	Health Care for the Poor
HEPR	Hunger Eradication and Poverty Reduction
MOET	Ministry of Education and Training
MOH	Ministry of Health
MOLISA	Ministry of Labour, Invalids and Social Affairs
MPI	Ministry of Planning and Investment
NIN	National Institute of Nutrition (Vietnam)
NPA	National Plan of Action for Children
PAC	Policy Advisory Committee
PCPFC	Provincial Committee for Population, Family, and Children
PDCED	Programme for Socio-economic Development in Communes Faced with Extreme Difficulties
RTCCD	Research and Training Centre for Community Development
SC-UK	Save the Children UK
SC-UK VN	Save Children UK, Vietnam Office
SED	Social and Environmental Department (General Statistics Office)
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
VLSS	Vietnam Living Standards Survey (1992/3 and 1997/8)
VHLSS	Vietnam Household Living Standards Survey (2002, 2004 and 2006)
WAZ	Weight-for-Age standardised score
WI	Wealth Index
VND	Vietnamese Dong
WHZ	Weight-for-Height standardised score
WHO	World Health Organization

Summary

Young Lives is a long-term international research project investigating the changing nature of childhood poverty in four developing countries – Ethiopia, Peru, India (state of Andhra Pradesh) and Vietnam – over 15 years. This is the time frame set by the UN to assess progress towards the Millennium Development Goals (MDGs). Through interviews, group work and case studies with children, their parents, teachers, community representatives and others, we are collecting a wealth of information not only about their material and social circumstances, but also perspectives on their lives and aspirations for the future, set against the environmental and social realities of their communities.

We are following two groups of children in each country: 2000 children who were born in 2001-2 and 1000 children who were born in 1994-5. These groups provide insights into every phase of childhood. The younger children are being tracked from infancy to their mid-teens and the older children to adulthood, when some will become parents themselves. When this is matched with information gathered about their parents, we will be able to reveal much about the intergenerational transfer of poverty, how families on the margins move in and out of poverty, and the policies that can make a real difference to their lives.

This report presents initial findings from the second round of data collection which was carried out in Vietnam in late 2006 to early 2007. It does not aim to give a comprehensive overview of all the findings from Young Lives, rather it gives a broad outline of some of the key indicators of childhood poverty and changes that have taken place in the children's lives between the first round of data collection in 2002 and this second round. Data are mainly presented for the entire age group cohort, in most cases separated into wealth groups or by rural/urban location. The full richness of the data is not reflected in this preliminary report, but we hope that it contains enough information to prompt other researchers, policymakers and stakeholders to start to engage with the data.

Vietnam is a low-income country but the conditions of children have been improving and are generally much better than when their parents were children, during the war with the USA or the decade of economic failures following the country's reunification in 1975. After a period of slow growth with rampant inflation in the mid-1980s the Government launched the Doi Moi or 'renovation' programme of comprehensive socio-economic reforms in 1986. The reforms emphasised a shift from a centrally-planned economy based on government ownership to a multi-sector economy based on market principles. They also promoted the opening up of the economy to foreign investment and trade. Economic growth averaged 7.5 per cent between 1990 and 2004 and poverty fell rapidly.

As a result Vietnam has achieved impressive progress in improving child outcomes. Poverty levels and maternal health figures already meet the standards set by the MDGs, and progress towards achieving the education goal is well underway. However, child malnutrition and access to sanitation and safe water remain a concern, as do stark disparities in outcomes between ethnic groups and rural and urban areas. The discussion and analysis presented in this report, although preliminary, give important insights into trends between the two rounds of research, key factors affecting children in Vietnam and the extent of inequalities between children of different groups. The analysis enables us to pinpoint policy implications for tackling childhood poverty in Vietnam as well as important and interesting avenues for future research.

The data reflect the growth and poverty reduction witnessed in recent years and there is evidence that the Young Lives households have become better off over the four years of the survey. However, national inequalities in wealth, consumption expenditure and the incidence of poverty between urban and rural areas and between ethnic minorities and the majority group are reflected in the sample. These disparities fell slightly between the two rounds but remained prominent in 2006.

Levels of absolute and relative poverty

Although we see poverty as a multidimensional phenomenon, the material aspects are captured in this report by two measures of deprivation. Absolute poverty is defined as the Vietnamese general poverty line of VND2,559,850 per year, including food and non-food expenditure. Relative poverty is defined as the proportion of households with per capita consumption below 50 per cent of median consumption. Using these measures, we found that 19 per cent of 5-year-old Young Lives children and 16 per cent of the 12-year-olds lived below the absolute poverty line in 2006. Most of these poor children live in rural areas: the absolute poverty rate for the urban sector is 4 per cent for the younger cohort, while that of rural areas is nearly 23 per cent. Kinh and Chinese households had an absolute poverty rate of 12 per cent, which is much lower than the 57 per cent rate for minority households. Relative poverty is also strongly related to location and ethnicity: 13 per cent of the younger cohort and 9 per cent of the older children live in households with expenditure less than half the median.

Our data reveal stark inequalities in wealth and consumption. Using a wealth index (based on household's access to a basket of standard goods), we can see that the average wealth index in urban areas was 1.5 times that of rural areas and the average urban household's expenditure on consumption was more than twice that of a rural household. The wealth index of the ethnic majority group (the Kinh and Chinese) was nearly double that of the ethnic minorities. Among the H'Mong (the largest ethnic group in Young Lives), 90 per cent of households belong to the poorest quarter of the sample.

Household factors that contribute to poverty

The report presents analysis that is used to construct a profile of child poverty, showing who and where the poor children are, and the factors which keep them in poverty or may offer a route out for some. We found that household and community characteristics are important factors that contribute to poverty, particularly ethnicity, the rural-urban divide (which affects access to services) and parents' levels of education.

Household wealth is an important determinant of child outcomes. Children from poorer households are significantly more likely to be stunted and less likely to be enrolled in pre-school. Primary school enrolment is high for poor and non-poor groups but disparities in performance on literacy tests suggest that the quality of education received in the poorest areas may be low. Finally, material well-being is a strong determinant of child and household subjective well-being. However, the findings demonstrate that household resources are not the only, and perhaps not even the most important, determinants of subjective well-being.

The importance of parental education

It is not only income poverty that impacts on child well-being. Our analysis reveals that parents' levels of education significantly affect nutritional outcomes and enrolment in school. Interestingly, maternal education has a stronger impact on nutrition, while the

father's education is a more important determinant of enrolment. Furthermore the education of both parents significantly affects the child's subjective well-being.

The significance of parental education as a factor in the intergenerational transmission of poverty is clearly demonstrated, with deprivations experienced by parents during childhood impacting upon their children and their children's children. Poverty is more likely to persist in families with poorly educated parents, and households with better educated parents were more likely to escape poverty. We find that in 2006, two-thirds of families with maternal education below primary school were in the bottom 20%, compared to only 47% in 2002. We also find that even if economic growth allows households to escape from income poverty, poor parental education will continue to have a negative impact on other child outcomes, such as nutrition. Most strikingly, controlling for a wide variety of other factors, learning outcomes are strongly associated with material poverty and malnutrition in early childhood as well as parental education, for both the current 5-year-olds and the 12-year-old cohort. This predicts that the effects of childhood poverty will continue to be felt over time and into adulthood.

Ill-health and poverty

A finding of particular importance is that short-term health shocks can have a devastating effect on household resources in the long term. Households affected by severe illness or injury need support to prevent them falling into poverty, with disastrous impacts for child well-being. The event of any severe illness or injury in the family in the three years prior to the first round of data gathering in 2002 strongly influenced whether a household was poor in Round 2. As yet, it is too early to measure the impact of illness reported in 2006, but it will be interesting – in the third round of data collection in 2009 – to follow and assess the consequences of family illness in earlier years.

Crop failure and other shocks

As may be expected, the occurrence of crop failure between the rounds of data collection has a stronger relationship with poverty than other shocks such as natural disasters, livestock dying, or unfavourable changes in the prices of inputs or outputs of household production. Again, Round 3 data collection in 2009 will allow us to assess the impact of the failed rice harvest in early 2008 and the substantial price increases which followed around that time.

Access to services

The community a child is born into is one of the most important determinants of their subsequent well-being. The greatest gap is between rural and urban areas. Inequalities between urban and rural sectors are significant and persistent in nearly all the major child poverty related indicators. Lower material wealth in rural areas is compounded by poorer access to electricity, safe water and sanitation.

These factors impact on child outcomes. Rural children suffer from significantly poorer nutritional outcomes, even when levels of household resources are taken into account. This indicates that access to services such as sanitation and safe water, and other community-level effects strongly influence child health. Access to sanitation is also a contributing factor to malnutrition. Although school enrolment is high in both rural and urban areas, slight gaps in performance on literacy tests suggest gaps in quality of education.

Although access to services has increased over time, the data permit us to look beyond average statistics and see how poverty, location and ethnicity prevent children benefiting from public services. For all services, rates of access differ significantly: 20 per cent of the poorest households lacked access to electricity and almost 50 per cent lacked access to safe water, while only 7 per cent had access to their own toilet. Access to services increases substantially for families higher up the wealth index: 40 per cent of households in the second quartile and 97 per cent of the richest households have access to sanitation.

Vietnam has a nationwide public health care network, however, the availability and quality of health services depends on community characteristics. Although all Young Lives communes have some access to health care, quality of local services is a concern. A significant change over the study period has been in the proportion of communes with private health clinics. The increased prevalence of private health care may increase choice and quality, but it is unclear whether these centres will be affordable for children from the poorest households.

Nutrition

Stunting, low height-for-age, is a measure of chronic malnutrition. The incidence of stunting is strongly related to household resources, residential location and ethnicity. Poorer children, ethnic minorities and rural children are more likely to become stunted during the critical period after they finish breastfeeding when they may not receive adequate nutrition: stunting among younger cohort increased from 12 to 25 per cent between 2002 and 2006 (and from 23 to 41 per cent in the poorest households). This pattern of stunting is present in most countries around the world, but the Young Lives data allow us some insights into factors that may contribute to or alleviate it. Regression analysis demonstrates that maternal education has a significant positive effect on child nutrition, even when controlling for the significant effect of household resources. Although evidence is weak that access to services influences nutrition, urban children do have better nutritional outcomes. Part of the explanation could be that they have superior access to services such as water and sanitation.

Malnutrition affects child well-being in itself and as a determinant of other child outcomes. Young Lives Policy Brief 4 finds that poor nutrition is affecting the academic performance of the poorest children. As the children grow older, Young Lives will be able to assess the impact of poor nutrition in early years on their health, education and labour market outcomes.

Education

School enrolment rates in Vietnam are high for a low-income country, and this is reflected in the Young Lives sample. Relatively few of the 12-year-old children have dropped out of school, and enrolment rates are largely unchanged since 2002 at over 96 per cent. This masks inequalities, however, with only 77 per cent of H'Mong minority children still at school by this age. Moreover, of the H'Mong Young Lives girls, only 72 per cent go to school.

This difference is mirrored in the younger age group with 89 per cent of all children attending nursery school but only 77 per cent of ethnic minority children doing so. This puts them at a disadvantage when it comes to transition to primary school.

Because enrolment rates are so high, the quality of education received is of interest. Overall literacy is high in Vietnam: by Round 2, 96 per cent of the older children and 93 per cent of the younger children could read and write whole sentences in the test administered. However, the evidence suggests that disparities in quality of education has an effect on learning outcomes with only 82 per cent of the poorest 12-year-olds able to complete the test, and 7 per cent not being able to write a coherent sentence.

Again, this has implications for children's future prospects and well-being, with the strong likelihood that the poorest children will be unable to escape the poverty trap in which their own parents were caught.

Ethnicity and gender

Inequalities between ethnic groups are stark. Consumption expenditure of majority households is more than double that of the ethnic minority group. The biggest ethnic group in the sample is the H'Mong whose average monthly expenditure was one third of the sample average. Minority households have poor access to safe water and in particular to sanitation.

Economic disparities are echoed by those in multidimensional poverty indicators. Ethnic minority children are more likely to be stunted and less likely to enrol in school and pre-school, even after controlling for lower parental education, consumption expenditure and other household characteristics.

There is no significant evidence of disparities by gender. Differences in the occurrence of stunting are likely to be driven by differences in growth patterns rather than gender bias. However, there may be gender biases within some ethnic groups. Furthermore the impact of child work and differences by gender in the likelihood of working and type of tasks performed deserve further exploration.

Subjective well-being

An important and innovative element of the Young Lives study is the data it captures on children's perceptions of well-being. The qualitative research with smaller groups of children goes into much greater detail in this area. But survey questions are asked of both children and their caregivers which provide some interesting results, especially when combined with the other data about livelihoods and absolute poverty levels.

Although household wealth is a strong determinant of well-being, it is not the only factor of importance. In fact urban children, who are better off in terms of material goods, have lower subjective well-being than rural children. This suggests that focusing on material indicators of poverty alone may not be sufficient to fully understand child well-being. Parental education, even controlling for household resources, also increases child well-being.

1. Introduction

About Young Lives

Young Lives is a long-term international research project investigating the changing nature of childhood poverty in four developing countries – Ethiopia, Peru, India (state of Andhra Pradesh) and Vietnam – over 15 years. This is the time frame set by the UN to assess progress towards the Millennium Development Goals (MDGs). Through interviews, group work and case studies with children, their parents, teachers, community representatives and others, we are collecting a wealth of information not only about their material and social circumstances, but also perspectives on their lives and aspirations for the future, set against the environmental and social realities of their communities.

We are following two groups of children in each country: 2000 children who were born in 2001-2 and 1000 children who were born in 1994-5. These groups provide insights into every phase of childhood. The younger children are being tracked from infancy to their mid-teens and the older children to adulthood, when some will become parents themselves. When this is matched with information gathered about their parents, we will be able to reveal much about the intergenerational transfer of poverty, how families on the margins move in and out of poverty, and the policies that can make a real difference to their lives.

The longitudinal nature of the survey and our multidimensional conceptualisation of poverty are key features of Young Lives research. Much existing knowledge about childhood poverty is based on cross-sectional data that reflect a specific point in children's lives, or relate to only one dimension of children's welfare. Children's own views on poverty and well-being are seldom explored. Research is rarely tied in a systematic way to investigation of broader societal trends or policy changes.

The potential of the project lies in its focus on tracking children's progress throughout childhood – over 15 years. We collect quantitative and qualitative data at the individual, household and community level. Quantitative data is gathered through comprehensive surveys that include interviews with the children once they are old enough to participate directly, with their parents and caregivers, and with key community members (such as teachers, village elders or elected council representatives). Data are collected in each round on households' economic circumstances, livelihoods, assets and social capital. The questionnaires also collect evidence related to coping strategies such as migration, parental education and other experiences, child outcomes and the extent to which children and their parents and carers use services (e.g. health care, pre-school care or education programmes). In this way we can create a detailed picture of children's experiences and well-being linked to information about their households and communities and set within the national context. This provides us with data suitable for in-depth analysis of children's poverty and the effectiveness of government policies that concern their lives and well-being.

Young Lives is a collaboration between key government and research institutions in each of the study countries with the University of Oxford, the Open University, and the Institute of Education (London) in the UK, alongside the international NGO, Save the Children-UK. The partners in Vietnam are the Centre for Analysis and Forecast of the Vietnam Academy of Social Sciences (CAF-VASS) who are responsible for data management and quantitative

research; a team from Vietnam's General Statistics Office (GSO) are in charge of data gathering and quantitative research; and the first round of qualitative research in 2007 was led by Ton Nu Ai-Phuong, based in Ho-Chi-Minh City. A team based at Save the Children-UK in Hanoi carry out the policy research and policy influencing.

About this report

This report presents initial findings from the second round of data collection which was carried out in Vietnam in late 2006 to early 2007. It does not aim to give a comprehensive overview of all the findings from Young Lives, rather it gives a broad outline of some of the key indicators of childhood poverty and changes that have taken place in the children's lives between the first round of data collection in 2002 and this second round. Data are mainly presented for the entire age group cohort, in most cases separated into wealth groups or by rural/urban location. The full richness of the data is not reflected in this preliminary report, but we hope that it contains enough information to prompt other researchers, policymakers and stakeholders to start to engage with the data.

The report also gives an overview of further work in progress by the Young Lives team. This work all serves to highlight various aspects of the broad research questions that Young Lives seeks to answer:

1. What are the factors that act on children's lives to either increase or reduce poverty and its effects?
2. What effects does poverty have on children, during childhood and into adulthood?
3. To what extent are current international and national policies effective in reducing childhood poverty in the study countries?

Young Lives uses an innovative methodology, with multi- and interdisciplinary research and a mix of qualitative and quantitative methods. While this report focuses on the quantitative data from the second survey round, it is important to note that its interpretation will be strengthened and complemented by analysis of the qualitative data.

Report structure

The next section of the report introduces the socio-economic context of Vietnam and the policies that have affected children and childhood poverty over the past 15 years. The third section gives an overview of the methodology used by Young Lives to collect quantitative data for Rounds 1 and 2 respectively. Greater detail is provided on the preparation and implementation of the Round 2 data collection. Post-fieldwork operations such as data entering, cleaning, and archiving are also outlined.

The fourth section presents some preliminary analysis of data from the two survey rounds – both descriptive statistics and regression analysis – on several issues of interest. Indicators of child well-being including household wealth and consumption, health, education and subjective well-being are examined. The factors behind these outcomes include a range of child, household and commune characteristics.

Although the analysis is preliminary it gives important insights into trends between the two rounds, key factors affecting children in Vietnam and the extent of inequalities between children of different groups. The analysis enables us to pinpoint policy implications for tackling childhood poverty in Vietnam as well as important and interesting avenues for future research.

2. Childhood poverty in Vietnam

2.1 Social and economic context

The population of Vietnam in 2007 was an estimated 85 million divided almost equally between males and females. The population is predominantly rural: about 75 per cent. However, this picture is changing, as rates of migration towards the cities are high.¹ Rural areas have substantially higher rates of poverty and poorer access to services than urban areas.

The largest ethnic group in Vietnam is the Kinh who make up around 86 per cent of the population (1999 Census). The Hoa, a group considered to be ethnically Chinese, make up 1.1 per cent of the population. They are commonly considered alongside the Kinh as part of the 'majority' group, as they have high rates of intermarriage with the Kinh (Baulch et al. 2002) and tend to be relatively affluent and well educated. There are an estimated 53 ethnic minority groups in the country with a population of more than 10 million who historically have been somewhat marginalised from Vietnamese society. The ethnic minority groups reside primarily in the remote mountainous regions in the North and the Southern Highlands. Many of the same ethnic minorities in the North can be found in surrounding countries such as Thailand, Laos and southern China. Although they look similar to the Kinh, they have distinct languages, cultures and traditional dress. In the South, the biggest ethnic minority is the Khmer, with an estimated population of more than one million. They tend to look quite distinct from the Kinh, living in somewhat segregated, often isolated rice-growing communities in delta areas, with their own language, religion, schools and temples.

Baulch et al. (2002) find that the gap in living standards between the Kinh and Hoa majority and the other ethnic minorities grew between 1993 and 1998 (the years when comparable Vietnam Living Standards Surveys were undertaken). They conclude that although the Kinh, Hoa, Khmer and Northern Highlands minority groups benefited from economic growth during the 1990s, other minority groups (notably the H'Mong, who are the largest minority group in the Young Lives sample) have been left behind.

2.2 Economic system and economic reforms

Vietnam is a low-income country, but the children's conditions have been improving and are generally much better than when their parents were children, during the war with the USA or the decade of economic failures following the country's reunification in 1975. After a period of slow growth with rampant inflation in the mid-1980s the Government launched the Doi Moi or 'renovation' programme of comprehensive socio-economic reforms in 1986. The reforms emphasised a shift from a centrally-planned economy based on government ownership to a multi-sector economy based on market principles. They also promoted the opening up of the economy to foreign investment and trade. Economic growth averaged 7.5 per cent between 1990 and 2004 and poverty fell rapidly. This section reviews the economic reforms relevant to Young Lives children, while their impact on growth, poverty and inequality is outlined in Section 2.4.

¹ According to the 1999 Census, 2.9 per cent of people over 5 years of age in 1999 lived in a different province in 1994. More than half of these were under 25 years old.

De-collectivisation of agriculture, in April 1987, had a profound effect on the poor. Cultivated land was distributed more or less equitably according to household size. As a result food production increased from 19.5 million tonnes in 1998 to 39.5 million by 2005. The 1993 Land Law allowed land use rights (LUR) to be legally transferred, exchanged, mortgaged and inherited.²

The changes to land rights reduced poverty in rural areas, but opportunities were also created in urban areas. The Enterprise Law of 2000 is believed to have led to massive registration of new enterprises, increasing employment opportunities. According to Ministry of Planning and Investment (MPI) statistics around 102,000 new enterprises were registered between 2001 and 2004. Foreign Direct Investment (FDI) enterprises also created employment. According to General Statistics Office (GSO) data, the number of employees in enterprises with foreign investment increased from 407,500 in 2000 to 1,445,000 in 2006, which accounts for 21.5 per cent of Vietnam's total enterprise workforce for that year. Calculations based on the Vietnam Household Living Standards Survey (VHLSS) demonstrate that in 2002, the average earnings by employees in enterprises with FDI was 169 per cent of that of staff in wholly domestic owned enterprises.³

The United States lifted its trade embargo on Vietnam in 1994. The implementation of the Vietnam-US Bilateral Trade Agreement in December 2001 and the accession to World Trade Organization membership in 2006 have further enhanced the momentum of the Vietnam's expanding of Vietnam. Trade integration has created opportunities for the poor, who engage in export-oriented production such as rice, fruit, seafood and garments, but also created risks, including price volatility.

2.3 Poverty reduction policies

In addition to policies aimed at promoting economic growth and trade, the Government of Vietnam has applied a number of targeted programmes addressing poverty and social deprivation.

In 1998, the Hunger Eradication and Poverty Reduction Programme (HEPR) was launched by the Ministry of Labour, Invalids and Social Affairs (MOLISA). The programme is targeted at poor households, as defined by the MOLISA poverty line and poor communes. One aspect of the programme consists of support policies, such as low cost medical care and education and special support for ethnic minorities. The other aspect includes projects, such as credit provision, business guidance, agricultural and forestry extension, infrastructure development and training of HEPR cadres. Between 2001 and 2005, the programme provided VND750 billion as interest-rate subsidies for concessional loans, 1.5 million health insurance cards to poor households, and more than VND120 million to support education of the poor (ADB 2006).

Programme 135, or the Programme for Socio-economic Development in Communes Faced with Extreme Difficulties (PDCED), was approved in July 1998 and is implemented by the Committee for Ethnic Minorities (CEM). Using criteria such as remoteness, weak infrastructure, poor and weak health and education services, agricultural production constraints, and over 60 per cent of the households being under the poverty line, the CEM identified 1,715 targeted communes. By 2003 the programme covered around 25 per cent of all communes and about 15 per cent of the population, of whom over half lived below the poverty line (ADB 2006). The programme comprised four components: (i) development of infrastructure such as roads, health clinics and markets, irrigation and water supply at

² Ravallion and van de Walle (2006) find evidence that land allocation has become more efficient since the 1993 Land Law.

³ This is likely in part to represent selection of higher quality workers in these enterprises. However, even if this is the case, the provision of jobs that reward productive skills and education can in itself be viewed as a positive impact of foreign investment.

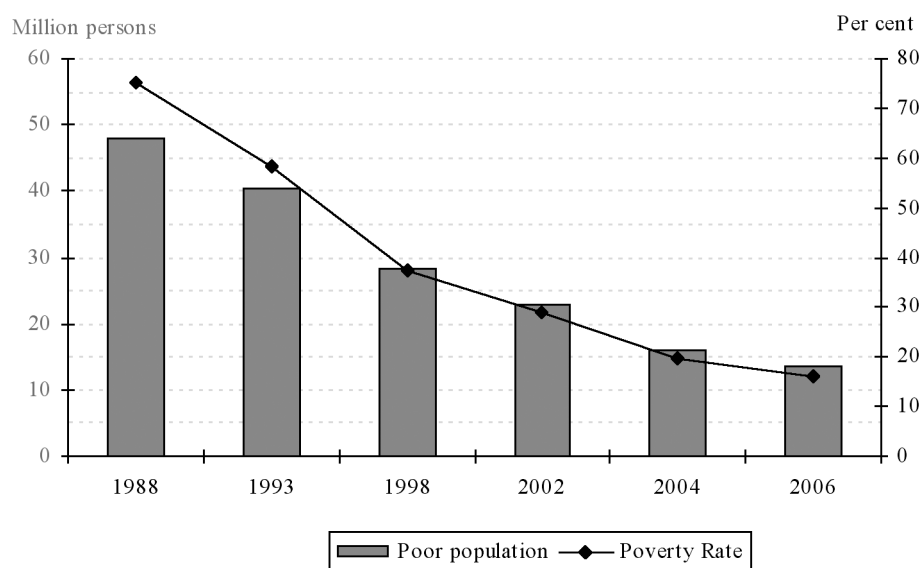
communal and inter-communal levels, (ii) settlement and sedentarisation of ethnic minorities, (iii) support to production development such as agricultural and forestry extension, and (iv) training of local cadres. The largest part of the VND6,795 billion spent during 1999–2004 was used for local infrastructure projects, with only 3.5 per cent going to resettlement and agricultural extension, and 1 per cent for training of local officials.

Vietnam has also benefited from significant foreign aid inflows, many of which have been targeted at poverty reduction. Total overseas development assistance (ODA) committed to Vietnam by all donors from 1993 to 2004 is nearly US\$29 billion, of which, over US\$14 billion was already implemented by 2004. The ODA funds have been helping not only in developing infrastructure, including rural roads, rural electricity networks, schools, hospitals and markets, but also in upgrading soft infrastructure, which is essential for poverty reduction.

2.4 Economic growth, poverty and inequality

Together with the policies for economic growth, the national targeted programmes have made a significant contribution to the achievements of Vietnam. The average rate of GDP growth was 7.5 per cent between 2001 and 2005 and the Gini coefficient, a general measure of inequality, stayed relatively stable between 1993 and 2004, increasing from 0.33 to 0.37. That has led to a rapid reduction in poverty, as is demonstrated in Figure 1.

Figure 1 *General trend of poverty in Vietnam*



Source: Authors' calculations, based on VLSS, VHLSS and Dollar (2004)

Despite this impressive progress, however, income poverty remains a problem. Gaps in poverty rates by rural-urban residence, by region and by ethnic groups have widened over time. The Northern mountainous areas, the Northern Central Coast and the Central Highlands all have poverty incidences over 30 per cent and are home to 57 per cent of the poor population. Poverty is increasingly concentrated among ethnic minority groups. Between 1993 and 2004 the poverty rate of ethnic minorities fell from 86 per cent to 61 per cent, compared to a drop from 54 per cent to 14 per cent for the Kinh/Chinese group. Ethnic minorities account for 39.3 per cent of all poor people, despite representing only 12.6 per cent of the total population.⁴

⁴ Information from Vietnam Living Standard Survey (1992/3, 1997/8) and Vietnam Household Living Standard Survey (2002, 2004).

The number of children living in poor households remains large although declining over time.⁵ Using data from the four household surveys from 1993 to 2004 in Vietnam, Nguyen and Nguyen (2007) show that the number of children living in poor households has been declining over the last decade and a half. They show that 65.2 per cent of Vietnamese children were living in poor households in 1993, but this had fallen to 46.4 per cent by 1998 and 26.7 per cent by 2004 respectively. The child poverty rate was always higher than that of the population as a whole.

Childhood poverty statistics reflect patterns in the country as a whole. Most poor children are in the rural sector: 32.6 per cent of rural children lived in households classified as poor in 2004, in contrast to only 5.5 per cent of urban children. Ethnic minority children are disproportionately likely to live in poor households. In the mid-1990s over 90 per cent, or nearly every ethnic minority child, lived in a poor household. Even after Vietnam's impressive overall progress over the past decade, 68 per cent of ethnic minority children remained in poverty in 2004. Despite generally rapid development, the inequality between rural and urban sectors and between ethnic groups remains an issue of concern for Vietnam.

2.5 Care for and protection of children in Vietnam

Vietnam's children have benefited from economic growth and supportive government policies. The country has either met or is on track to meet the Millennium Development Goals in children's health and education. Enrolment rates are high and under-5 and infant mortality rates have fallen significantly over the past two decades. However, challenges remain, particularly in relation to malnutrition, access to sanitation and disparities between groups.

Vietnam ratified the International Convention on the Rights of the Child (CRC) in 1990. Following ratification, Vietnam adopted a number of domestic laws and amendments in which the contents of CRC are incorporated. In addition to these laws, long-term programmes are carried out by government branches working on child-related issues.

The focus on reducing childhood poverty is reflected in the overall increase in budget allocations for programmes related to children. Public spending on education has increased steadily as a proportion of government expenditure, reaching 18 per cent of the budget in 2005 (World Bank 2007). The National Institute of Nutrition indicates that funding for their programme increased steadily from VND22.3 billion in 1994 to VND45 billion in 2004. In 1994 the government established the Committee on the Protection, Care, and Education of Children (CPCC) and charged it with monitoring and coordinating government agencies and social organisations concerned with children's welfare and education.

2.5.1 Education

Access to education in Vietnam has expanded rapidly. Around 97 per cent of eligible children are enrolled in primary school, although disparities between ethnic groups remain visible. Gender disparities are small at such high levels of enrolment, although disparities within ethnic minority groups are often more pronounced. Policy has therefore focused on expanding educational opportunities for disadvantaged groups and increasing access to early childhood education. Concerns about the quality of education have also become increasingly relevant to policy debates in recent years. Vietnam has adopted the Dakar

⁵ The incidence of children living in households under the poverty line is not exactly the same as child poverty. In particular it ignores differences in intra-household allocations as well as differences between child needs and those of adults. These factors often have a large impact on child well-being, and are particularly important for a multidimensional view of poverty such as the Young Lives conception. This report will help to shed some light on these issues but they cannot easily be addressed in the national statistics presented in this section.

Education for All (EFA) Framework for Action, an initiative with greater focus on quality than those set out in the MDGs. Vietnam's National EFA Action Plan sets out a pathway to advance key components of the education system by 2015: early childhood care and pre-school, primary, lower-secondary and non-formal education.

The Education Law (in effect since January 1999 and amended in 2005) made early childhood education part of the formal national system of education. The law stipulates that early childhood education consists of daycare centres and kindergarten schools which should perform the function of caring for and educating children from three months to six years old. The Education Law defines the objective of early childhood education as helping children develop physically, emotionally, intellectually and aesthetically. The National Strategy on Education 2001–2010 and Decision 161 by the Prime Minister on early childhood education (161/2002/QD-TTg) address early childhood education at commune level in remote areas and areas with difficulties.

2.5.2 *Health*

The Law on the Protection, Care, and Education of Children was introduced in 1992 and replaced by a revised version in 2004. This law identifies the responsibilities of the Government, line ministries and organisations on the protection, care and education of children. One of the law's most important implications is that health care services for children younger than six are all free of charge at public health care institutions.

The National Nutrition Strategy 2001–2010 aims to improve nutrition, especially for children and mothers. Furthermore, the National Programme of Action for Children 2001–2010 establishes quantitative targets and goals for children, covering both health and education. The responsibilities of the related government branches and the budgeting are included in these government documents.

Since the end of 2002 the Health Care for the Poor (HCFP), or 'Decision 139', programme has been implemented to improve medical examination and treatment of the poor. Under the programme poor individuals and households in communes classified as poor are provided with health care cards worth VND50,000 per person per annum, or actual reimbursement of costs up to a capped limit under health insurance. About 23 per cent of poor individuals were provided with a health care card. In 2003, a total of 11.3 million people received benefits under the system at a total cost of VND522 billion (ADB 2006).

Vietnam has also cooperated with international organisations, such as UNICEF and others to deliver essential services to children. 'Between 1985 and 2004, an estimated 25 million Vietnamese children were vaccinated against diphtheria, pertussis and tetanus with many more vaccinated against polio, tuberculosis, hepatitis and other diseases. Thanks to this, the country eradicated polio in 2000, and maternal and neo-natal tetanus in 2005' (UNICEF n.d.).

The infant mortality rate and the under-5 mortality rate are an important reflection of conditions for the early age development of children in a country, in particular the development of health care services, and demonstrate impressive progress over the past 15 years. The figures in Table 1 are drawn from different issues of the Ministry of Health's (MOH) book on health data. Both the rates of infant and under-5 mortality decreased

between 1993 and 2003. The trend in the MOH's data is further supported by UNICEF (n.d.) who found that the under-5 mortality rate fell from 53 per thousand in 1990 to 17 per thousand in 2006. Infant mortality fell from 38 per thousand to 15 per thousand over the same period. In 2006 Vietnam ranked 122 in the world with respect to infant mortality.⁶

Table 1 *Rates of infant and under-5 mortality (cases per thousand)*

	1993	1995	1999	2002	2003
Infant mortality rate	44.2	43.3	36.7	26.0	21.0
Under-5 mortality rate	55.4	50	42	35	32.8

Source: MOH 1999 and 2004

Despite this progress, problems remain. According to ADB (2006) data, in 2004 there were still some 16 million undernourished people. Vietnam has a high incidence of child malnutrition (26.6%). Ethnic minority and rural women are especially likely to be malnourished.

Furthermore, economic change has brought new challenges. HIV/AIDS, drug abuse, homelessness and sexual and economic exploitation, trafficking and violence may be increasingly affecting the well-being of young people in Vietnam.

2.5.3 *Access to electricity, safe water and sanitation*

Although electricity has been successfully rolled out to rural areas, progress in providing access to safe water and sanitation has been slower. UNICEF (2008) estimate that 51.5 per cent of the population lack access to clean water and 74.7 per cent have no access to hygienic latrines. Access to sanitation and safe water is much lower in rural than urban areas, and for ethnic minorities than national averages. For example, access to clean water for the majority Kinh and Chinese stood at 52.6 per cent in 2002, compared to 12.8 per cent for other ethnic groups (UNICEF 2008).

⁶ Number 1 represents the country with the highest under-5 mortality rate. In 2006 China was ranked at 101, above Vietnam, with a child mortality rate of 24 per thousand. Thailand performed better than Vietnam, at 8 per thousand and was ranked number 151. Vietnam was the leader among the Young Lives countries. Peru was ranked 97, India 49 and Ethiopia 30, with under-5 mortality rates of 25, 57 and 123 respectively.

3. Methodology

Young Lives is designed as a panel study that will follow 3,000 children in each country over 15 years. The sample consists of two cohorts: a younger cohort of 2000 children who were aged between 6 and 18 months when the first survey round was carried out (in 2002) and an older cohort of 1,000 children then aged between 7.5 and 8.5.

The children were selected from 20 sentinel sites that were defined specifically in each country. The concept of a sentinel site comes from health surveillance studies and is a form of purposeful sampling where the site (or cluster, in sampling language) is deemed to represent a certain type of population or area, and is expected to show early signs of trends affecting those particular people or areas. For example, monitoring a typical slum area of in a given city may detect events and trends which will have an impact on most slums in that city.

The first round of data collection took place in 2002, and this report gives an initial analysis from the second round of data collection in 2006. In each case, the child's caregiver was interviewed as well as the older cohort of children (the younger children were still too young in 2006, being aged 5). The height and weight of each child was measured and a community-level questionnaire was completed for each sentinel site to give contextual information about the children's lives and facilities available to them.

3.1 Young Lives sampling strategy

Young Lives was set up in Vietnam in 2001, when the research team selected the study sites using a sentinel site sampling approach. In Vietnam, a sentinel site was defined as a commune. A commune has a local government, primary school, commune health centre, post office, and a market. In the event that a commune selected as a sentinel site had insufficient numbers of one-year-old children at the time of the survey, a neighbouring commune with similar socio-economic conditions was also selected in order to reach the quota of children. Therefore, with 20 sentinel sites, Vietnam had 31 communes involved in the study sample.

Vietnam followed a five-step process in its sampling strategy:

1. Selection of five regions out of nine in Vietnam.
2. Selection of one province out of all provinces in each chosen region.
3. Selection of four sentinel sites in each province with oversampling of poor sites.
4. Screening of all households in each sentinel site and listing of eligible children. Families with twins and triplets were excluded. Where there was more than one eligible child present in the household one of those children was selected using a random sampling technique.
5. Selection of a sample of 100 children who were born between January 2001 and May 2002 and 50 children who were born between January 1994 and June 1995⁷ in each sentinel site using simple random sampling. Non-response rate (refusals by caregivers) was less than two per cent and replacement sampling was used.

⁷ With a couple of late outliers.

3.1.1 Selection of provinces

In 2001, Vietnam had 61 provinces and cities, which were divided into 600 districts and 10,321 communes.⁸ In terms of socio-economic development, Vietnam can be stratified into eight socio-economic regions: North-West, North-East, Red River Delta, North Central Coast, South Central Coast, South-East, Central Highlands, and Mekong River Delta. Additionally, the Young Lives team in Vietnam categorised all major urban centres (Hanoi, Ho Chi Minh City, Da Nang, Hai Phong, and Ba Ria-Vung Tau) as a new region – the Cities region.

Out of these nine regions, five regions were selected through a process of iterative consultation with many different parties using various methods such as individual interviews and group meetings.⁹ From each region, one province was selected. The provinces selected were Lao Cai (North-East region), Hung Yen (Red River Delta), Da Nang (City), Phu Yen (South Central Coast), and Ben Tre (Mekong River Delta).

3.1.2 Selection of sentinel sites

The selection of four sentinel sites in each province was carried out by the provincial governments. For this purpose, provincial working groups were established. The groups ranked all communes in the province by poverty level: poor, average, better off and rich. Criteria used for ranking included: (1) development of infrastructure, (2) percentage of poor households in the commune, (3) child malnutrition status.

Four sentinel sites were selected using an over-poor sampling strategy: two communes from the poor group, one from the average, and one from the above average group (combined better off and rich). Other criteria used in the selection were: (1) represent common provincial/regional features, (2) commitment from the local government for the research, (3) feasibility conditions for the research logistics, (4) population size. Among the 31 communes selected, 15 were from the poor group (48 per cent), nine from the average group (29 per cent), and seven (23 per cent) from the above average group.

3.2 Data collection in Round 1

Field data collection was conducted by two teams: the GSO survey team which conducted the household and community surveys, and the RTCCD survey team which administered the cognitive development tests (Ravens tests) and anthropometric measurements.¹⁰ The teams worked together in the first four sentinel sites in Hung Yen province under the supervision and technical guidance of the Principal Investigator, RTCCD and GSO staff. After finishing the first four sentinel sites, a debriefing workshop was organised by RTCCD, GSO, and Save the Children UK. Given experience in the first province, a strategy of launching the next 16 sentinel sites within the remaining four provinces was designed, in which all GSO and RTCCD fieldworkers were organised into two teams who worked simultaneously for two months. For interviews with ethnic minority groups, GSO selected local interpreters who had previous experience working with GSO in the Living Standards Surveys. GSO staff conducted training for interpreters.

⁸ The current figure for Vietnam is 64 provinces and cities (Vietnam Government Website 2008).

⁹ Including Principal Investigator (PI), National Coordinator (NC), Technical Advisory Committee (TAC) and Policy Advisory Committee (PAC) members who represent 29 government institutions, international donors, and local NGOs.

¹⁰ In the first phase of Young Lives in Vietnam, the Principal Investigator was based at the Research and Training Centre for Development (RTCCD) and was responsible for Round 1 data collection and analysis. The project passed to the Centre for Analysis and Forecast of the Vietnam Academy of Social Sciences (CAF-VASS) in 2006.

In each survey team, two RTCCD staff members were responsible for the quality control of household surveys. Completed questionnaires were checked by a GSO supervisor and team leaders, and then checked again by an RTCCD quality controller. Successfully completed questionnaires were sent to the GSO in Hanoi and re-checked there to ensure completeness. Finally the questionnaires were grouped by province and sent to the RTCCD. The Central Data Processing Centre at GSO conducted data entry and cleaning. The data entry programmes were written by the Statistical Services Centre at the University of Reading (UK) and translated into Vietnamese by the Information Technology Unit of the RTCCD. Data entry was continuously supervised by the RTCCD.

3.3 Representativeness of Young Lives sample in Vietnam

Due to the non-random sampling procedure and the purposive over-sampling of poor sites, the Young Lives sample in Vietnam is not nationally representative. Furthermore, the urban sector is under-represented with regards to both the total population share and the level of development. The chosen city region Da Nang is less socially, culturally and economically developed than other city regions in Vietnam such as Hanoi and Ho Chi Minh City. However, the Young Lives sample represents the national distribution of different ethnic groups and gender.¹²

To assess the representativeness of the Young Lives sample, it was compared with two nationally representative comparison samples: the Vietnam Household Living Standards Survey 2002 and the Demographic and Health Survey 2002. Examination of the common variables in the different surveys – child and household characteristics, access to electricity and drinking water – indicates that the Young Lives sample typically includes households with on average less access to basic services. A comparison of wealth index scores reveals that Young Lives households are on average slightly poorer than the average Vietnamese household. These differences reflect the pro-poor sampling approach chosen by Young Lives in Vietnam. Despite these biases in terms of the average characteristics of the children in the sample, it is shown that the Young Lives sample in Vietnam covers the diversity of children in the country: a careful analysis of the distribution of child characteristics included in the sample suggested that the data represent a wide variety of children in terms of wealth, consumption, health, nutrition, education and access to education, similar to nationally representative data sets. Therefore, while not suited for simple monitoring of child outcome indicators (as the mean characteristics will be different), the Young Lives sample will be an appropriate and valuable instrument for analysing correlates and causal relations, and for modelling child welfare and its longitudinal dynamics in Vietnam.

3.4 Round 1 reports and archiving

A preliminary country report was published in 2003 (Tuan et al. 2003), giving an outline of the explanatory and outcome variables. As with this report, the intention was not to provide comprehensive interpretation of the data but to give enough information for other researchers and policymakers to gain an overview of the opportunity Young Lives offers and the possibilities for further analysis. The cleaned data sets were archived in Vietnam and in the UK with the Economic and Social Data Service.¹¹ Hard and electronic copies of the questionnaires are kept at CAF-VASS.

¹¹ ESDS project ref: SN5307: <http://www.data-archive.ac.uk/findingData/snDescription.asp?sn=5307&key=Young+Lives#doc>.

¹² The resources do not allow us to achieve absolutely proportional representation of over 50 ethnic minority groups, none of which constitute over two per cent of the population. In Young Lives sample, the second biggest ethnic group is the H'Mong with 156 children in the project, representing over five per cent in Young Lives. The next largest ethnic group is the Dao with 64 children. All the others amount to fewer than 50 in the total 3000 Young Lives children. Nationally, neither the H'Mong nor Dao is among the five largest ethnic groups.

3.5 Data collection in Round 2

Data collection of the Young Lives Survey Round 2 started in December 2006 and was completed in April 2007. More than 98 per cent of Round 1 households were interviewed in Round 2. Of the other households 13 children had died, 6 decided not to continue with the study, 4 had moved abroad and 17 could not be located. A total of 48 households had moved to other provinces but 31 of them were traced and interviewed. Due to administrative adjustments in the City of Da Nang the number of communes in the Young Lives sample increased from 31 to 35 in 2006. Table 2 presents the sample in Round 2.

Table 2 *Young Lives sample in Rounds 1 and 2*

		Round 1		Round 2		Change	
		Number	%	Number	%	(Number; %)	
Cohort	Total	3000	100.00	2960	100.00	-40	(-1.3)
	Younger	2000	66.67	1970	66.55	-30	(-1.5)
	Older	1000	33.33	990	33.45	-10	(-1.0)
Area	Urban	600	20.00	594	20.07	-6	(-1.0)
	Rural	2400	80.00	2366	79.93	-34	(-1.4)
Ethnicity	Majority	2587	86.23	2551	86.18	-36	(-1.4)
	Minorities	413	13.77	409	13.82	-4	(-1.0)
Gender	Male	1532	51.07	1504	50.81	-28	(-1.8)
	Female	1468	48.93	1456	49.19	-12	(-0.8)

The sample attrition was higher in the younger cohort (1.5 per cent) than in the older cohort (1 per cent). The sample structure changed only slightly and insignificantly with regards to area of residence, ethnic groups and gender.

3.6 Round 2 questionnaires

As in Round 1, Young Lives used four questionnaires in all four study countries for the data collection:

- Child questionnaire for interviewing the children from the older cohort
- Household questionnaire for caregivers of children born in 2001-2
- Household questionnaire for caregivers of children born in 1994-5
- Community questionnaires.

Table 3 describes topics covered by the Round 2 core questionnaires.

Table 3 *Content of Young Lives Round 2 core questionnaires*

Child questionnaire	
Section 1	School and activities
	1a Child's schooling
	1b Child's time use
Section 2	Child health
Section 3	Social networks, social skills and social support
Section 4	Feelings and attitudes
Section 5	Parental and household issues
Section 6	Perceptions of future, environment and household wealth
Section 7	Child development
Household questionnaire	
Section 1	Parental background
Section 2	Household education
Section 3	Livelihoods and asset framework
	3a Land and crop agriculture
	3b Time allocation of adults and children
	3c Productive assets
	3d Income from agricultural and non-agricultural activities
	3e Transfers, remittances and debts
Section 4	Household food and non-food consumption and expenditure
	4a Expenditure on foods bought, supplied from own sources
	4b Other expenditure – non-food items
	4c Food security
Section 5	Social capital
	5a Support networks
	5b Family, group and political capital
	5c Collective action and exclusion
	5d Information networks
Section 6	Economic changes and recent life history
Section 7	Socio-economic status
Section 8	Child care, education and activities
Section 9	Child health
Section 10	Anthropometry
Section 11	Caregiver perceptions and attitudes
	11a General
	11b Maternal health
	11c Child perceptions about own development

Community questionnaire	
Module 1	General module
Section 1	General community characteristics
Section 2	Social environment
Section 3	Access to services
Section 4	Economy
Section 5	Local prices
Module 2	Child-specific module
Section 1	Educational services (general)
Section 2	Child day care services
Section 3	Educational services (pre-school, primary, secondary)
Section 4	Health services
Section 5	Child protection services

Several new research topics were added to the Round 2 questionnaires to accommodate the fact that as children get older several new aspects become important and relevant. For example, questions on schooling and child's time were added for the younger cohort. Some questions were no longer relevant for either cohort and could be removed, for example questions on maternity and breastfeeding practices.

As presented in Table 4 the Young Lives research team in Vietnam included several country-specific research areas in the core modules. These additional questions or modules related to areas of particular policy interest in Vietnam.

Table 4 *Country-specific topics in Young Lives in Vietnam*

Child questionnaire	
Section 1	School and activities
	1b Extra classes (Q1.15- Q1.21)

Household questionnaire

Younger cohort and older cohort

Section 1 Parental background

Section 2b (Q2.3–2.9) Education aid: from government or educational organisations for child education, exemption or reduced tuition

Section 3 (Q3.23–Q3.30) Receipt of preferable loans for the poor under ‘Hunger Eradication and Poverty Reduction’ Programme and receipt of formal loans

Section 5 (Q5.13–Q5.18) Infrastructure projects funded by external sources for poor communes

Younger cohort only

Section 9 (Q9.10–Q9.15) Health care cards: a form of subsidies for the poor and for children under-6

Older cohort only

Section 2 (Q2.10–Q2.19) Extra schooling

Community questionnaire

Module 1 Country specific policy monitoring:

Free health insurance for the poor

Loans for the poor and the financial institution of the poor (Social Policy Bank)

Land Use Rights Certificates and women’s access to credit

Programme for poverty alleviation and infrastructure initiatives:

Implementation of government targeted programmes in the communes with extremely difficult socio-economic conditions (Q6.1–Q6.7)

Module 2

Section 1 Extra classes

Section 3 The local conditions for entertainment and recreation for children (Q1.7.1 – Q1.7.5)

Section 4 Free health insurance for children under 6 years old (Q4.33–Q4.34)

Section 5 Local system of child support and protection from being abused (Q5.5–Q5.9)

3.7 Piloting, translation and fieldworker training

The child and household questionnaires were tested in a six-day pilot survey in the province of Ha Tay in April 2006. The findings from the piloting were used to revise and modify the questionnaires in two workshops with representatives from CAF, GSO, SC-UK, the University of Oxford and related institutions.

The community questionnaires were assessed in a pilot study in September 2006 in the Province of Bac Giang.

The translation of the questionnaire was an iterative process including translation, back translation, re-visiting details and wording and standardisation of Vietnamese terms.

Seventy staff members and associates from the GSO were selected by the Young Lives Central Steering Committee (CSC) and participated in training courses. The training consisted of an eight-day training programme for interviewers and team leaders, a seven-day course for anthropometry staff and two days of training for team leaders. From the participants, 58 were employed as Round 2 interviewers, team leaders and anthropometry staff. Criteria for selection included: experience in working with household surveys and statistical skills. Priority was given to interviewers who produced good data in Round 1. Team leaders were selected based on test results from the training course, proven ability to manage a team, and communication and language skills relevant to local people in the enumeration areas.

As a result of evaluations of the Round 1 fieldwork, the research team in Vietnam decided to form smaller field teams of interviewers including one group leader, three interviewers and one anthropometry staff member. In Round 1, each group consisted of 14 people. These groups were considered too large for effective organisation. Six additional interviewers were contracted in case replacements were necessary.

3.8 Data collection

Data collection for Round 2 was carried out in two phases:

Phase 1 (December 2006 to February 2007): Households which were still located in the same study site as in Round 1 were interviewed. A natural disaster (Durian Storm) badly affected one site shortly before the planned data collection. To allow time for the site to recover the CSC decided to merge two survey teams and to start data collection in a less-affected area before surveying the affected site.

Phase 2 (March to April 2007): Households and children who had migrated to other provinces were traced and interviewed.

Each field team was supervised by at least two monitoring teams from the GSO with two to three members. All interviewers worked under direct supervision on at least four randomly chosen occasions during the survey. The monitoring team continuously reported back to the CSC about the performance of the surveying. Moreover, there were independent supervisors from CAF and SC-UK.

3.9 Data quality

Once the questionnaires were collected from the field, several levels of data quality checks at various stages of the programme were carried out in an effort to reduce error rates. The first level was a verification of the questionnaire manually by GSO staff based on a specially developed check list to identify common mistakes and infrequencies. Second, data entry was carried out by the Computing Centre of GSO. Each questionnaire was entered twice independently. Staff from both GSO and CAF supervised the process of data entry. Data cleaning was carried out by the Young Lives data manager in Vietnam and CAF staff with support from GSO staff. Inconsistencies were corrected based on the hard copies. Then logical relationships were checked based on a set of logical rules developed by the Young Lives data manager in Oxford and the data manager at CAF independently. Lastly, extraordinary outliers in the data set were managed based on consultation with the Young Lives quantitative team and field teams.

4. Aspects of poverty for Young Lives children

Young Lives seeks to improve understanding of the causes and consequences of childhood poverty. Preliminary analysis of the data from Rounds 1 and 2 addresses the following questions:

- How has child well-being changed over time?
- What are the determinants of child outcomes such as nutrition, school enrolment, child labour and subjective well-being?
- Are characteristics such as parental poverty, rural location, ethnicity and gender important determinants of child outcomes and therefore causes of inequality?

These three questions are the basis for this section, which proceeds thematically. Firstly, trends and patterns in indicators of household wealth, expenditure and poverty are examined. Then patterns in and determinants of nutrition, education, child labour and subjective well-being are analysed.

The section presents descriptive statistics, for both cohorts, from both rounds. These statistics illustrate the prominent changes and trends in the sample as well as disparities by income, location, ethnicity and gender. Econometric results from Ordinary Least Squares (OLS)¹³ and Probit¹⁴ regressions for child outcomes are also presented. Regression analysis has the benefit of incorporating multiple relevant variables at the same time, giving a better understanding of the processes at work. For example, a regression analysis makes it possible to consider whether parental education has an impact on child nutrition separately from its indirect effect via household income.

It is important to note that no causality is claimed in this report. This requires more careful in-depth study, which is already in progress as Young Lives moves forward.¹⁵ However, this preliminary work highlights interesting trends and correlations that will be a basis for future investigation.

Both cohorts of children are analysed in this section. We discuss wealth and consumption for both cohorts together because there are no significant differences in the wealth index, per capita expenditure of parental education between the cohorts.¹⁶ However, differences in

¹³ A regression (equation) is an equation representing the relation between values of one variable (x) and observed values of the other (y). A regression equation permits the prediction of the most probable values of y given the observed values of x. A commonly used form of regression is 'Ordinary Least Squares', which is suitable for use when the outcome variable, y, is continuous, such as a child's height or weight. The coefficients from an OLS regression can be interpreted as the marginal effects of the corresponding variables.

¹⁴ OLS is not suitable when the outcome variable can only be one or zero, such as whether or not a household is in poverty. In this case a probit or logit model is usually preferred. A coefficient from a probit regression cannot be interpreted as the marginal effect of the corresponding variable because the marginal effect depends on the value of the dependent variable. But it can be calculated for a particular value of the dependent variable. In this report marginal effects are calculated and reported at the mean value of the dependent variable.

¹⁵ For example, a working paper under Young Lives attempts to establish a causal relationship from socio-economic condition to stunting and from early-age stunting to child cognitive development in the following year. Using the econometric technique of instrument variables, Le Thuc (forthcoming) finds a statistically significant effect of stunting in early childhood on child performance (at the age of five) on the Peabody Picture Vocabulary Test, which is a standard measure of child cognitive development (Paxson and Schady 2005).

¹⁶ Note that life-cycle effects observed in other countries in the Young Lives study such as Peru, where older families appear wealthier, are not apparent in Vietnam.

parental age and household size are as would be expected given the gap in ages between the two cohorts.

4.1 Wealth, consumption expenditure and poverty

There is evidence that the Young Lives households have become better off over the four years of the survey. However, national inequalities in wealth, consumption expenditure and the incidence of poverty between urban and rural areas and between ethnic minorities and the majority group are reflected in the Young Lives sample. These disparities fell slightly between the two rounds but remained prominent in 2006. Parental education, ethnicity and household size were important determinants of poverty. Households afflicted by serious illness before Round 1 data collection were also more likely to fall by the time of Round 2 data collection.

4.1.1 Wealth and consumption expenditure

In both rounds a wealth index was calculated as a measure of household prosperity. The wealth index (see Appendix for precise description of the method for calculation) takes a value between zero and one, with a higher value reflecting higher household wealth. The index reflects the welfare of household members in terms of housing-related comfort (the number of rooms and the materials the wall, roof and floor of the house are made of) and their use of durable goods (such as radio, fridge, bicycle, TV, motorbike/scooter, motorcar/truck, electric fan, mobile phone, landline phone, modern bed, table or chair and sofa). The wealth index, as demonstrated in Table 5, averaged 0.52 in Round 2, an increase of 0.09 from the average value in Round 1. The wealth index, by its nature, is the result of a relatively long process of accumulation and can be expected to be relatively static across time.¹⁷

Table 5 *Levels and changes of wealth index and consumption expenditure*

	Round 1	Round 2	Significance of change
Wealth Index	0.43	0.52	***
Consumption (‘000 VND/head/month)	NA	510.2	NA

*** Indicates the change is statistically significantly different from zero at the 1 per cent level,

** at the 5 per cent level and * at the 10 per cent level.

Consumption expenditure is available only for Round 2. It is calculated using an adult household member’s estimation of itemised consumption of food and non-food items (excluding gold jewellery), including items bought, home production and gifts.¹⁸ The total monetary value is then converted into a monthly basis and divided by the household size. The per capita value is used for analysis. Consumption is usually regarded as a more reliable measure of household welfare than income: it is generally better measured and because households are able to smooth consumption over time is less affected by seasonal or other fluctuations. The figure on consumption in Table 5 implies that the households in the sample spent only slightly over one dollar per day, using the official

¹⁷ An asset index, including the livestock, land, dwelling, consumer durables, and productive assets owned by the household (see the Appendix for more details) was also calculated for both rounds. The asset index rose significantly from 0.3 to 0.33 between the two rounds. The asset index was originally designed for assessing the prosperity of households in a rural, agricultural setting. In a sample including urban and non-agricultural workers, its use as a reflection of household prosperity is questionable. Furthermore, the difficulty of selecting weights to reflect land value makes the interpretation of the asset index problematic even within rural areas. It is therefore excluded from the analysis in this report.

¹⁸ The recall period varies from 15 days for food to 12 months for clothing.

exchange rate in September 2006. In terms of Purchasing Power Parity (PPP) dollars, however, the average expenditure is between US\$3–4.¹⁹

Table 6 indicates stark inequalities in wealth and consumption expenditure. The average wealth index in urban areas was 1.5 times that of rural areas in 2006 and the average urban household's consumption expenditure was more than twice that of a rural household. The wealth index of the ethnic majority group (the Kinh and Chinese) in Round 2 was nearly double that of the ethnic minorities.²⁰ Over the four years the wealth gaps have fallen slightly, as the wealth index has increased more slowly among the urban and majority groups, but remain pronounced.

Table 6 *Wealth index and consumption expenditure between ethnic groups*

	Wealth index				Consumption			
	Majority	Minority	Urban	Rural	Majority	Minority	Urban	Rural
Round 1	0.48	0.18	0.70	0.35	–	–	–	–
Round 2	0.56	0.30	0.70	0.48	554.2	236.0	918.2	407.6

4.1.2 *Measures of childhood poverty*

Two measures of poverty have been calculated for this report. Absolute poverty is defined as the proportion of households with per capita consumption expenditure below the Vietnamese general poverty line, which includes food and non-food expenditure.²¹ This poverty line was VND2,559,850 per year at the time of Round 2. Relative poverty is defined as the proportion of households with per capita consumption below 50 per cent of median consumption. These poverty measures are available in Round 2 only. Because of life-cycle effects,²² and because younger children will consume less food,²³ statistics for the two cohorts are presented separately. Children in the younger cohort are more likely to be in poverty based on these measures.

Table 7 indicates that 19 per cent of the 5-year-old children and 15 per cent of the 12-year-olds lived below the absolute poverty line in 2006. Most of the poor children live in rural areas. The absolute poverty rate for the urban sector is four per cent for the younger cohort, while that of the rural areas is nearly 23 per cent. Kinh and Chinese households had an absolute poverty rate of 12 per cent, which is much lower than the 57 per cent rate of minority households. Thirteen per cent of the younger cohort and nine per cent of the older cohort live in households with expenditure less than half the median. Relative poverty is also strongly related to location and ethnicity.

¹⁹ Unlike the official exchange rate, the PPP values are estimates for which there are multiple values available.

²⁰ The gap is even larger for particular ethnic groups. The H'Mong are the biggest ethnic minority group in the Young Lives sample, with 156 Young Lives children in Round 1. The average wealth index of the H'Mong households was 0.10 in Round 1 and 0.20 in Round 2. All the H'Mong households belong to the poorest two wealth index quartiles in Round 2, with over 90 per cent in the poorest quartile. Average expenditure among the H'Mong was VND165,800 – one third of the sample average.

²¹ The World Bank provides a general (food and non-food) poverty line and a food poverty line for Vietnam. The food poverty line is based on the basket of foods consumed by an average person whose total consumption is in the third quintile of the population. Quantities of each item in the food basket are scaled up to yield 2,100 calories per person per day and then priced using regional and monthly price indices to give a food poverty line. For 2006 the food poverty line was VND1,915,373. The general poverty line incorporates non-food expenditure and is based on the average non-food expenditure of the third quintile, adjusted by regional and monthly prices. The consumption data have been adjusted to January 2006 prices to reflect regional price differences using monthly regional Consumer Price Index (CPI) data from GSO.

²² The older cohort's parents are older than those of the younger cohort. Older household heads have better household conditions. This is part of the explanation for the finding of lower poverty among the older cohort.

²³ It is possible to control for these effects by adjusting household size using an equivalence scale in order to reflect differing household compositions. The adjusted household size can then be used to adjust consumption expenditure. An equivalence scale has been estimated for Vietnam (White and Masset 2005) but has not been used here. This could be an area for future work.

Table 7 *Poverty rates (Round 2 only)*

	Absolute poverty (%)		Relative poverty (%)	
	Older cohort	Younger cohort	Older cohort	Younger cohort
Overall	15.4	18.7	9.5	13.1
By sector:				
Urban	4.1	3.8	2.5	1.8
Rural	18.2	22.5	11.2	16.0
By ethnic group:				
Majority	10.1	12.4	5.1	7.6
Minorities	50.8	56.7	39.1	46.4

The absolute and relative poverty measures can only be used for analysis of Round 2 data, as Round 1 does not have comparable measures of consumption expenditure. Therefore the households are also classified into wealth quartile based on their value on the wealth index. By design 25 per cent of households are placed in the bottom group. We define these households as 'poor'. The next quartile of households are classified as 'near poor', the next as 'near wealthy' and the top quartile as 'the wealthiest'.

When comparing between rich and poor households in Round 2, however, the household's wealth quartile based on Round 2 data is used. However, when comparing across time it is important to compare the same group of households. Some households have moved between quartiles, for example moving from the poor group to the near poor. Therefore, when examining changes across time, the wealth quartile in the first period is used.

4.1.3 *Factors explaining childhood poverty*

Regression analysis is used to construct a profile of childhood poverty showing who and where the poor children are. A probit model is used.²⁴ The dependent variable takes the value of one if the child's household lives under the general poverty line and zero otherwise. The results in Table 8 illustrate the characteristics of poor households.

Household characteristics are important determinants of poverty. Parental education levels are strongly statistically significant factors explaining poverty. The mother's ethnicity is also significant, even controlling for site and parental education. This finding is widely reported in the literature on poverty in Vietnam (see, for example, Glewwe, Gragnolati and Zaman 2002).

The size of the household is another important factor behind household poverty. The more members in a household, the more likely they are to be (absolutely) poor. Children in the older cohort are less likely to be in poverty. This could be due to the older age of their parents or to lower consumption by younger children.

The event of any severe illness or injury in the family in three years prior to data gathering in 2002 had a strong impact on the probability of the household being in poverty in Round 2. However, there is no significant effect yet of an illness reported in Round 2. The regression provides no evidence that environmental shocks affected absolute poverty. The

²⁴ The dependent variable takes the value of one if the household lives under the general poverty line and zero otherwise. A probit model is used because an OLS model is not appropriate when the dependent variable can only take values of one or zero. In a probit model the marginal effects can vary according to the value of the dependent variable. Here they are calculated and reported at the mean value.

occurrence of crop failure between the rounds of data gathering has a stronger relationship with poverty than other shocks such as natural disasters, livestock dying, or unfavourable changes in prices of inputs or outputs of household production but is nonetheless insignificant in the regression. The analysis of shocks may require different methodologies than the preliminary specification used here and is an area for future research.

Table 8 *What explains absolute poverty? A probit regression analysis*

	Marginal Effect ²⁵
Household Characteristics	
Mother's education	-0.258***
Father's education	-0.328***
Mother ethnic minority	0.324*
Household size	0.205***
Older cohort	-0.235***
Severe illness or injury in family R1	0.182*
Illness in family R2	-0.0822
Environmental shocks	
Natural disaster R1	0.00942
Death of livestock R1	0.172
Crop failure R1	0.0510
Experience of drought R2	0.104
Experience of flooding R2	-0.128
Death of livestock R1	-0.00559
Crop failure R2	0.0477
Large increase in input prices R2	0.108
Large decrease in output prices R2	-0.0401
Site dummies not displayed	
Constant	-1.571***
Number of observations	2748
LR chi2(35)	798.8
Pseudo R2	0.312

Dependent variable: Household with consumption expenditure below the absolute poverty line (1=poor, 0=non-poor).

*** Indicates a coefficient is statistically significantly different from zero at the 1 per cent level, ** at the 5 per cent level and * at the 10 per cent level.

Standard errors are adjusted for clustering at the site level.

²⁵ For probit models the coefficient cannot be directly interpreted as a marginal effect as the marginal effect varies depending on the value of the variable. Therefore marginal effects are calculated at the mean value of each variable and reported in the table in the place of coefficients.

Community characteristics clearly matter for poverty incidence. Site dummies were included but are not displayed here.²⁵ The most prosperous site was used as a baseline. The coefficients on all the other site dummies are positive. They are significant for all the sites in Lao Cai. Even in the urban commune of Da Nang, there is at least one site with poverty likelihood significantly higher than the baseline. Thus, the aggregate conditions in certain communes do make a difference to poverty. This preliminary analysis does not allow us to further probe the mechanisms behind this finding. However, the importance of the site dummies suggests that the impact of community characteristics such as infrastructure and access to services on poverty may be a fruitful area for future research and policy implications.

4.2 Access to services

Lack of access to or poor quality of public services is an aspect of a multidimensional conception of poverty. It is believed to perpetuate the poverty circle. The availability of public services depends on community characteristics, but the actual utilisation of the public service also depends on individual resources. The analysis therefore reviews data from the community survey as well as household level data. Because the children live in the same communities, it is appropriate to pool younger and older cohorts.

Public services under consideration include health services, access to electricity, access to safe drinking water, and access to sanitation facilities. All communes have access to some form of health facility, although it is unclear how quality varies between communities. Further research into this issue in the Round 3 survey should be possible. Most households have access to electricity, and there has been an impressive increase in the proportion of households with access to safe water. Progress in access to sanitation has been slower. Poverty, location and ethnicity still prevent children benefiting from public services.

4.2.1 Access to health services

Vietnam has a nationwide public health care network. However, the availability and quality of health services depends on the characteristics of the community. Although all Young Lives communes have some access to health care, quality of the local health services is a concern. There are, on average, three different types of health establishment per commune, which are detailed in Table 9. Six communes have only one type of health establishment while ten have five or six types. The most significant increase over the period has been in the proportion of communes with private health establishments, while the proportion with family planning units and government dispensaries has declined. The increased prevalence of private health centres may indicate increased choice and quality, but it is unclear whether these centres will be accessible to children from the poorest households. Assessing the impact of these changes requires further research.

²⁶ In order to maintain the anonymity of Young Lives children the site names cannot be given.

Table 9 *Access to types of health services (all Young Lives communes)*

Type of health establishment	Round 1 (%)	Round 2 (%)
Public hospital	61.3	64.7
Public health centre	100	97.1 ²⁷
Government dispensary	64.5	50
Private hospital/health centre/dispensary	35.5	64.7
Private maternity home	12.9	14.7
Family planning clinic	77.4	29.4
Number of Communes	31	35

4.2.2 *Access to other services*

The national electricity network has spread across Vietnam over the past decade and a half. Although access to the network depends on community characteristics, utilisation also varies between households, so data collected at the household level is used.

For all households in the Young Lives sample, the proportion with access to electricity increased from 85.9 per cent in 2002 to 94.8 per cent in 2006 (see Table 10). The change was attributed mainly to the increase in access to electricity in rural areas from 82.5 to 93.5 per cent (see Table 11), because virtually all the urban households already had access to electricity by 2002.

Table 10 *Percentage of children with access to selected public services (both cohorts)*

	Round 1	Round 2	Change and its significance
Whole sample			
Access to electricity	85.9	94.8	8.9 ***
Access to safe water	51.4	80.4	28.9 ***
Access to sanitation facilities	49.0	55.8	6.8 ***

*** Indicates the change is statistically significantly different from zero at the 1 per cent level, ** at the 5 per cent level and * at the 10 per cent level.

The definition of safe water used here includes (in addition to water piped into dwellings): bottled, protected well, and clean rain-water (from non pro-cement roof).²⁸ There has been an impressive increase in access to safe water which has also been seen in rural areas of Vietnam over recent years. In the sample the proportion of households with access to safe water increased significantly from 51 to 80 per cent in 2006.

Far fewer households have access to sanitation facilities than to electricity or safe water. Sanitation facilities improved only slightly between rounds: the percentage of households with access to good sanitation facilities increased from 49 to 56.

²⁷ One of the newly established commune-equivalent administrative units is temporarily without a public health centre.

²⁸ This is based on the Vietnamese definition of safe water. There is a significant difference between assessment based on this standard and that based on the international standard, which includes only water piped directly into the household. For instance, in 2002, only 10 per cent of the households in the project had water piped into the dwelling, but under the Vietnamese definition, half of the households had access to safe water; the corresponding figures are 12.7 and 80 per cent in 2006.

Although access to services has increased over time, poverty, location and ethnicity prevent children benefiting from public services. For all the services under consideration, the rates of access differ significantly between the poor and the non-poor and by location and ethnicity, as demonstrated in Table 11.

Table 11 *Percentage of children with access to services by group (both cohorts, Round 2 only)*

	Electricity	Safe water	Sanitation
By quartile of the wealth index			
Poorest	80.0	51.8	7.0
Near poor	99.5	81.9	40.5
Near wealthy	99.9	93.2	79.4
Wealthiest	99.9	94.8	97.0
By residence			
Urban households	99.8	99.5	96.3
Rural households	93.5	75.6	45.6
By ethnicity			
Majority households	97.6	83.4	62.3
Minority households	77.3	61.7	15.6

Twenty per cent of households in the poorest quartile of the wealth index lacked access to electricity in Round 2. Almost 50 per cent lacked access to safe water. The biggest disparity is visible in access to sanitation: only seven per cent of the poorest households had their own toilet. By contrast almost all of the households in the second quartile had access to electricity, and over 80 per cent had access to safe water. Access to sanitation increased less dramatically between quartiles: only 41 per cent of the second quartile had their own toilet, but 97 per cent of the richest households did.

Similar disparities are seen between urban and rural areas and between majority and minority households: 76 per cent of rural households and 62 per cent of minorities benefited from safe drinking water. Only 46 per cent of rural households and just 16 per cent of minorities had access to good sanitation. For all services, the gaps in access between the wealth quartiles, location and ethnicity are found to be statistically significant.

Table 12 *Change in access to services by group (both cohorts, percentage points)*

	Electricity	Safe water	Sanitation
By quartile of the wealth index in Round 1			
Poorest ²⁹	29.4	27.2	8.0
Near poor	10.6	42.1	10.3
Near wealthy	-0.5	45.1	6.7
Wealthiest	-0.2	13.7	3.6
By residence			
Urban households	0.1	12.6	12.2
Rural households	0.9	32.7	5.7
By ethnicity			
Majority households	6.7	24.1	8.8
Minority households	21.9	57.8	-3.7

The pattern of changes has differed by service. The poor and minority households have benefited most from increased access to electricity: most of the richer households already had access in 2002. Increases in access to safe water, however, appear to have benefited the middle-income groups: the rich already had access in 2002, and the poorest may have been too poor to afford new water facilities even where they were made available at community level. Increases in access to sanitation have been most pronounced among urban households but overall the increases have been small and a slight decrease was even seen for minority households.

4.3 Nutrition

Malnutrition is another dimension of childhood poverty. For analysis of nutrition, we look at height-for-age z-scores for both cohorts.³⁰ Deficit in the height-for-age measure (stunting) corresponds to linear growth retardation, i.e. the inability to reach genetic potential in terms of height. This is viewed as a longer term measure of deprivation than weight-for-height (wasting) which is more sensitive to short-term or seasonal variations in food availability. Height, and by extension height-for-age, is also said to have a strong relationship with mental function and mortality (Gopalan 1992). In addition we examine weight-for-age for the younger cohort and BMI-for-age for the older cohort as measures of short-term nutritional status.

The incidence of stunting is strongly related to household resources, residential location and ethnicity. Poorer children, ethnic minorities and rural children are more likely to become stunted during the critical period after they finish breastfeeding. Regression analysis demonstrates that maternal education has a significant effect on child nutrition even when controlling for the significant effect of household resources.

²⁹ Changes between Rounds are calculated defining households by their wealth quartile in Round 1 in order to make the comparison between the two Rounds appropriate.

³⁰ The z-scores were computed using the 2006 WHO standards. Under the new standards, weight-for-height z-scores (indicating wasting) can only be computed until the age of 60 months. Since a large proportion of children in the younger cohort, and all children in the older cohort, are above this age we do not report analysis of wasting here.

Although evidence is weak that access to services influences nutrition, urban children do have better nutritional outcomes. Part of the explanation could be that they have superior access to services such as water and sanitation.

4.3.1 Stunting

Stunting, or low height-for-age, is a measure of chronic malnutrition. The definition of stunting is the incidence of child height-for-age z-scores more than two standard deviations below the median of the WHO reference population.

Table 13 *Stunting, both cohorts, Round 1 and Round 2*

	Overall (%)	Boys (%)	Girls (%)
Older Cohort			
Round 1	28.3	31.3	25.4
Round 2	31.4	34.5	28.5
Change	3.1	3.0	3.1
Younger Cohort			
Round 1	12.9	14.9	10.8
Round 2	25.1	26.9	23.2
Change	12.1	12.0	12.4

The rate of child stunting increased from 12 per cent in Round 1 to 25 per cent in Round 2 in the younger cohort.³¹ This does not imply a deterioration in the state of child nutrition in Vietnam as it refers to the same children, but at different ages. Generally, when the children were breastfed, they were provided with a decent source of nutrients, and therefore were less likely to be malnourished. After this period, however, children (especially those in rural, poor, and ethnic minority households) are less likely to receive sufficient and regular nutrition. The likelihood of being malnourished therefore increases for the poor as they get older. The increase between the two rounds was small for the older cohort, as would be expected, as most stunting occurs before the age of seven (i.e. the age of the older cohort when first surveyed in 2002). This pattern (of stunting increasing for a cohort of children between the ages of two and six) is present in most countries around the world. Nevertheless, it would be of interest and important to study to whom this increase happens (i.e. which children) and the factors that might contribute to or alleviate stunting.

³¹ The incidence of stunting reported here is comparable to findings for the country as a whole. Multiple Indicator Cluster Survey data indicate that the prevalence of stunting was 33.1 per cent in 2000.

Table 14 *Stunting by location, ethnicity and wealth index, both cohorts, Round 1 and Round 2*

	Urban	Rural	Majority	Minority	Poorest ³²	Near Poor	Wealthy	Wealthiest
Older Cohort								
(% stunted)								
Round 1	17.9	30.9	23.1	63.3	41.4	29.6	30.8	16.0
Round 2	16.4	35.1	26.6	63.3	42.4	33.3	33.8	15.5
Change	-1.5	4.2	3.5	0.0	1.0	3.7	3.0	-0.5
Younger Cohort								
(% stunted)								
Round 1	5.53	14.7	9.28	34.7	22.7	13.9	11.7	4.1
Round 2	8.68	29.1	19.3	59.9	40.9	27.1	25.1	9.4
Change	3.15	14.4	10.02	25.2	18.2	13.2	13.4	5.3

The sample is broken into four groups, depending on their wealth quartile in Round 1. Similarly children who have migrated are defined by their location of residence in Round 1. This means that these groups contain the same children in both rounds, so it is possible to analyse whether children who were not previously stunted have become stunted between rounds. Furthermore, we would expect initial, not current, household conditions to affect a long-term indicator such as stunting. In practice, there is likely to have been little change over the period. Relatively few households have migrated between the two rounds and the wealth index, as it represents a long-term process of accumulation, is likely to have changed only slowly over time.

The incidence of stunting is strongly associated with the wealth index quartile. While 42 per cent of children in the poorest quartile in the older cohort were stunted in Round 2, only 16 per cent of children in the richest households were. Rural children are significantly more likely to suffer from stunting. A disparity in child stunting is observed with respect to division into ethnic groups. Almost two thirds of the 5-year-old and 12-year-old ethnic minority children were malnourished in Round 2. For the H'Mong, the stunting rate for the younger cohort increased from 15.2 per cent in 2002 to 54.6 per cent in 2006.

There is strong association between the wealth index quartiles, location and ethnicity, and the percentage changes in stunting. During the initial period of breastfeeding, rates of stunting were low for all groups. After this time, children from the lower wealth quartiles, from rural areas and from minority households are more likely than other children to become stunted.

³² Sample split into groups on the basis of wealth index quartile in Round 1. 'Poorest' are households in the lowest wealth quartile, 'near poor' the households in the next wealth quartile etc.

4.3.2 *Factors explaining malnutrition*

We first apply a cross section analysis (of Round 2 data) to indicators of child nutrition. The childhood poverty dimensions analysed in Table 15 are the height-for-age z-score for both cohorts, the weight-for-age z-score for the younger cohort and the BMI-for-age z-score for the older cohort. We model nutrition as a function of child, household and commune characteristics.

Boys in the older cohort have a slightly lower height-for-age z-score than girls. Girls begin their growth spurt earlier than boys, which may explain this finding. In the younger cohort boys have a slightly higher weight-for-age z-score, but the significance level is low. Overall the results provide little evidence of gender bias in nutrition.

Even after controlling for education and household consumption, ethnic minority children have significantly lower height-for-age scores than their Kinh or Chinese peers. For the shorter term measures however, minority ethnicity has a positive effect once controls are added for household resources and community characteristics, suggesting that being from an ethnic minority within a community dominated by other groups is actually beneficial. This effect is significant for the older cohort. The reasons behind this finding are unclear and merit further analysis.³³

The mother's characteristics are an important factor behind height-for-age scores. Mother's education has a positive effect on both height-for-age and weight-for-age for the younger cohort, but the effect is insignificant for the older cohort once the control for household consumption is added. Father's education has a much smaller and less significant effect. Mother's BMI is added as a control but has no significant effect. The number of siblings has a weakly significant effect on height-for-age for the younger cohort, but no significant effects on the shorter term indicators.

The log of consumption expenditure³⁴ in Round 2 is included as an indicator of household resources. It has a significant positive effect on the nutrition indicators for both cohorts. An indicator of living under the poverty line is also included, but has no additional effect. This indicates that household resources matter for nutrition even if households are above the poverty line.

Access to sanitation facilities has a small positive effect, significant for the older cohort, on all three nutritional indicators.³⁵ Access to services is strongly correlated to other aspects of prosperity, and particularly to urban residence, which explains why its role appears to be small. Urban children have significantly higher z-scores on all three indicators.

³³ This may reflect that those from minorities who successfully settle in communities dominated by other ethnic groups have unobserved characteristics that make them more successful (e.g. higher ability, more knowledgeable in general).

³⁴ Log consumption expenditure is the natural log of consumption expenditure. This is a transformation of consumption expenditure commonly used when consumption expenditure is included in regressions.

³⁵ As access to sanitation, access to safe water and access to electricity are highly collinear only one is included here.

Table 15 *Determinants of height-for-age, weight-for-age and BMI-for-age in Round 2*

	Height-for-age z-score		Weight-for-age z-score	BMI-for-age z-score
	Younger cohort	Older cohort	Younger cohort	Older cohort
Individual and household characteristics				
Male	0.002	-0.134*	0.138*	-0.090
Mother's education	0.121***	0.050	0.171***	-0.013
Father's education	0.080*	0.067	0.059*	0.014
Mother ethnic minority	-0.266***	-0.384***	0.144	0.443***
Mother's BMI	0.001	0.001	0.002	0.004*
Siblings	-0.056*	-0.047	-0.045	-0.035
Log consumption expenditure	0.219***	0.151*	0.330***	0.180*
Below poverty line	0.025	-0.135	0.176*	0.090
Community characteristics				
Access to sanitation facilities	0.065	0.171*	0.117	0.114*
Urban	0.399***	0.370*	0.726***	0.733***
Northern Uplands ³⁶	-0.692***	-0.524***	-0.323*	-0.276*
Red River Delta	-0.584***	-0.573***	-0.429*	-0.323*
Central Coastal	-0.485***	-0.548***	-0.395*	-0.439***
Constant	-2.814***	-2.202***	-3.680***	-2.030***
Number of obs	1799	930	1806	930
F(12,19)	118.937	305.393	26.552	22.046
Pseudo R2	0.296	0.193	0.254	0.082

*** Indicates a coefficient is statistically significantly different from zero at the 1 per cent level, ** at the 5 per cent level and * at the 10 per cent level.

Standard errors are adjusted for clustering at the site level.

³⁶ Excluded region: Mekong River Delta.

The analysis is extended in Table 16 to examine the incidence of stunting, which represents particularly severe nutritional deprivation. A probit specification is used, with the dependent variable equal to one if the child is stunted.³⁷ The results confirm the findings of the linear analysis of height-for-age.

Table 16 *What explains stunting? A probit regression analysis*³⁸

	Younger cohort	Older cohort
Household and individual characteristics		
Male	0.114*	0.142*
Mother's education	-0.181***	-0.037
Father's education	-0.082	-0.039
Mother ethnic minority	0.321*	0.451***
Mother's BMI	-0.001	-0.002
Siblings	0.083***	0.074*
Log consumption expenditure	-0.224***	-0.260*
Below poverty line	-0.024	0.055
Community characteristics		
Access to Sanitation Facilities	0.060	-0.151*
Urban	-0.586***	-0.363*
Northern Uplands ³⁹	0.560***	0.394***
Red River Delta	0.386*	0.506***
Central Coastal	0.501***	0.459***
Constant	0.815	0.775
Number of obs	1799	930
LR chi2(35)	1013.030	503.054
Pseudo R2	0.153	0.107

Dependent variable = 1 if stunted; = 0 otherwise.

*** Indicates a coefficient is statistically significantly different from zero at the 1 per cent level, ** at the 5 per cent level and * at the 10 per cent level.

Standard errors are adjusted for clustering at the site level.

Table 17 analyses the determinants of changes in height-for-age, weight-for-age and BMI-for-age. Many of the included characteristics affect the indicators in both rounds, so when the change is used as a dependent variable their impact is no longer significant.

Boys in the younger cohort had significantly larger increases in height-for-age and weight-for-age z-scores between rounds. In the older cohort boys had a significantly smaller increase in BMI-for-age. This is probably due to differences in growth patterns.

³⁷ Children are defined as stunted if their height-for-age z-score is more than two standard deviations below the mean for the reference population.

³⁸ Marginal effects from probit regression are displayed.

³⁹ Excluded region: Mekong River Delta.

Mother's education had a weakly significant effect only for weight-for-age in the younger cohort, and father's education was not significant. Younger cohort ethnic minority children saw larger increases in weight-for-age, probably because their weight-for-age scores were low in Round 1 (i.e. this shows some catching up, at least in terms of weight).

Consumption expenditure had a positive effect only on weight-for-age in the younger cohort. Here the effect was non-linear: the increase in weight-for-age was larger for richer households, but children from households with consumption expenditure below the poverty line also saw bigger increases in weight-for-age. Changes in weight-for-age depend on two factors. The richer households saw high growth because the level of weight-for-age was high in Round 2, but the poorest households saw a large change because the level had been low in Round 1. As well as having higher Round 2 z-scores, urban children saw a bigger increase between the two rounds for all three indicators.

Table 17 *Determinants of change in height-for-age, weight-for-age and BMI-for-age between Round 1 and Round 2*

	Change in height- for-age z-score	Change in weight- for-age z-score	Change in BMI- for-age z-score	
	Younger cohort	Older cohort	Younger cohort	Older cohort
Individual and household characteristics				
Male	0.138***	-0.028	0.226***	-0.115*
Mother's education	0.034	-0.003	0.065*	-0.045
Father's education	0.022	-0.009	0.044	0.033
Mother ethnic minority	0.062	-0.021	0.335***	0.008
Mother's BMI	0.000	0.000	-0.002	0.001
Siblings	-0.051*	-0.022*	-0.011	-0.035
Log consumption expenditure	0.045	0.004	0.232***	0.071
Below poverty line	-0.019	-0.030	0.226***	-0.188*

	Change in height- for-age z-score	Change in weight- for-age z-score	Change in BMI- for-age z-score	
	Younger cohort	Older cohort	Younger cohort	Older cohort
Community characteristics				
Access to sanitation facilities	-0.079	-0.015	-0.016	0.062
Urban	0.217***	0.120*	0.541***	0.239***
Northern Uplands ⁴⁰	-0.080	0.044	-0.188*	-0.205*
Red River Delta	-0.102	-0.080	-0.147	-0.091
Central Coastal	-0.121*	0.031	-0.202*	-0.231***
Constant	-0.954***	0.059	-1.926***	-0.074
Number of obs	1793	930	1801	930
F(12,19)	14.846	8.787	11.586	48.649
Pseudo R2	0.028	0.006	0.126	0.057

*** Indicates a coefficient is statistically significantly different from zero at the 1 per cent level, ** at the 5 per cent level and * at the 10 per cent level.

Standard errors are adjusted for clustering at the site level.

4.4 Education and child labour

Enrolment is high, both in pre-school for the younger cohort and in school for the older. Child labour is uncommon and, where it occurs, is often combined with enrolment.⁴¹ Disparities between rural and urban areas and minorities and the majority group are relatively small. However regression analysis indicates that minority children are significantly less likely to go to school even controlling for household resources. Furthermore, results on literacy tests indicate that disparities in school quality or parental involvement between groups also affect child achievement.

⁴⁰ Excluded region: Mekong River Delta.

⁴¹ Child labour can affect children's achievement and well-being even if they are enrolled in school. For example, households may pull children out of school at certain times of the year to help with harvesting. Further research into the impact of child labour will be possible using both the quantitative and qualitative data. The Young Lives Vietnam qualitative team is currently pursuing research focused on education, in particular education for ethnic minority children, that we hope will shed further light on the issue. A sub-study commissioned from an independent researcher will look at access and quality of education and the interaction between work and schooling in two highland sites, with large minority populations, and will hopefully provide more evidence of the impact of child work.

Table 18 *Pre-school enrolment, younger cohort, Round 2*

	Pre-school enrolment (%)
Whole sample	88.9
Urban	93.9
Rural	87.6
Male	88.8
Female	88.8
Kinh or Chinese	90.9
Minority	77.0
Poorest (by quartile of wealth index)	78.9
Near poor	90.0
Near wealthy	93.7
Wealthiest	94.1

Pre-school enrolment is high at 88.9 per cent. The difference in pre-school enrolment between rural and urban areas is relatively small, but larger gaps exist between minority and Kinh or Chinese households, and between wealth index quartiles. In the lowest wealth index quartile over 20 per cent of children do not receive pre-school education. This signals the disadvantage of poor children in the early stage of education.

The enrolment rate in the older cohort remains high and largely unchanged between the two rounds of data gathering. The overall enrolment rate of over 96 per cent is high for a low-income country. The gap between urban and rural areas is small, and the gap between the minority and majority ethnic groups is also insignificant. For the largest among the ethnic minorities, the H'Mong, however, the enrolment rate in 2006 was only 76.9 per cent. Moreover, of the H'Mong Young Lives girls, only 72.2 per cent go to school.

The highest grades completed⁴² by the children in the older cohort are 1.66 in Round 1 and 5.59 in Round 2. In Vietnam the children of this cohort were expected to be in Grades 2 or 3 in Round 1 and Grades 5 or 6 in Round 2, if they are of the correct age at the time of enrolment and do not repeat classes. Overall the children are at the expected level. Ethnic minorities and children from the poorest households, however, have reached significantly lower grades. The highest grade completed was already substantially lower than the overall sample in Round 1, which indicates that this disparity is due primarily to late enrolment.

⁴² Highest grade completed was computed as current grade minus one for children in school or highest grade completed for the few children who have already dropped out of school, using the grade reported by the child

The rate of child labour of the older cohort changed significantly between 2002 and 2006. There is no simple explanation for how the rate of 11.5 per cent in Round 1 –when the children were about 7–8 years of age – dropped to 5.3 per cent in Round 2 when they were 11- or 12-years-old. In order to find a meaningful explanation of the changes in the rate, it is necessary to have information on the type of child work and whether it is rightly considered as an incidence of child labour. Significant gaps are visible between rural and urban areas, between ethnic minorities and majorities and between the richest and poorest households. However, most children who report working for money are also enrolled in school, so the impact of child labour on child well-being is unclear. Further work, particularly from the qualitative team, will complement these findings and give a deeper understanding of the impact of work on child welfare.

Table 19 *Education and child labour (older cohort, Round 2)*

	Overall	Urban	Rural	Majority	Minority	Poorest	Wealthiest	Male	Female
Enrolment (%)									
Round1	99.70	100.00	99.60	99.80	99.10	98.40	100.00	99.60	99.80
Round2	96.90	100.00	96.20	98.30	87.10	90.10	99.50	96.90	96.90
Highest grade completed									
Round1	1.66	1.86	1.61	1.74	1.08	1.18	1.90	1.65	1.66
Round2	5.59	5.79	5.54	5.68	4.95	4.98	5.87	5.59	5.60
Change	3.94	3.93	3.94	3.95	3.87	3.81	3.97	3.94	3.93
Child labour (%)									
Round1	11.40	5.15	12.90	10.80	15.50	12.60	5.94	11.20	11.50
Round2	5.33	1.55	6.27	4.89	8.62	8.38	1.37	4.09	6.58
Change	-6.07	-3.60	-6.63	-5.91	-6.88	-4.22	-4.57	-7.11	-4.92

Table 20 presents a regression analysis of the determinants of enrolment in pre-school and in school. Although enrolment is high in both cohorts, several important findings emerge.

There is no evidence of gender bias in enrolment. Parental education has a positive effect on enrolment, with father's level of education significant for the older cohort. Children from the minority groups are significantly less likely to enrol in school and pre-school than Kinh or Chinese children, even when their lower household resources are controlled for. Household consumption expenditure is significantly related to enrolment for the younger cohort, but the effect is insignificant for the older children. Once other characteristics are controlled for, urban residence has no significant effect on the probability of enrolment in the younger cohort. It is not possible to include this variable for the older cohort as all urban children are enrolled.

Table 20 *Determinants of enrolment, older cohort and younger cohort*

	Younger cohort: pre-school	Older cohort: school
Male	-0.004	0.140
Mother's education	0.072	0.066
Father's education	0.062	0.505***
Mother ethnic minority	-0.199*	-0.718***
Siblings	-0.193***	-0.194*
Log consumption expenditure	0.200*	-0.186
Below poverty line	-0.265*	-0.122
Urban	-0.091	
Northern Uplands	0.789***	0.899***
Red River Delta	1.076***	0.438
Central Coastal	0.621***	0.047
Constant	-0.475	1.801
Number of obs	1816	750
LR chi2(35)	165.615	892.154
Pseudo R2	0.137	0.257

Dependent variable: 1=enrolled, 0=not enrolled

*** Indicates a coefficient is statistically significantly different from zero at the 1 per cent level, ** at the 5 per cent level and * at the 10 per cent level.

Standard errors are adjusted for clustering at the site level.

Because enrolment rates are already so high, the quality of education received is a subject of interest. In both rounds children were asked to read and write two simple sentences. Table 21 gives the percentage of children who could not read or write any part of the sentences, and those who could read or write the whole example, broken down into sub-samples. Overall literacy is high in Vietnam. By Round 2 96 and 93 per cent respectively could read and write the whole sentence. Gaps are visible, however, particularly between minority and majority groups and between the poorest and wealthiest groups. The gaps have closed between the two rounds as the test has become very easy for most children. However the evidence suggests that disparities in the quality of education, or perhaps differences in parental inputs, impact on learning outcomes. This could be an interesting area for future research.

Table 21 *Literacy tests (older cohort, Round 1 and Round 2)*⁴³

	Overall	Urban	Rural	Majority	Minority	Poorest	Wealthiest	Male	Female
Can't read any (%)									
Round1	4.34	0.00	5.41	0.70	28.90	18.20	1.41	1.26	0.00
Round2	0.91	0.51	1.01	0.35	4.69	3.94	0.00	0.00	0.46
Can read all (%)									
Round1	87.20	95.40	85.20	94.00	41.40	62.10	89.20	92.90	97.70
Round2	96.00	98.50	95.30	98.10	81.30	88.70	98.10	97.90	98.20
Can't write any (%)									
Round1	8.18	2.56	9.56	2.55	46.10	30.00	0.91	8.87	7.49
Round2	2.02	0.51	2.39	0.46	12.50	7.39	0.46	1.61	2.43
Can write all (%)									
Round1	73.90	85.10	71.20	79.60	35.90	48.80	88.60	71.60	76.30
Round2	93.00	96.90	92.10	95.40	77.30	82.30	95.90	91.70	94.30

4.5 Subjective well-being

Under the multidimensional approach to childhood poverty, an individual's subjective assessment of their well-being, as well as their material well-being as defined, for example, by living below the poverty line, is of interest. Young Lives is one of the few projects to collect measures of subjective well-being for children in a developing country.

The preliminary results indicate that the households' perceptions of well-being have improved between the two rounds. Although household wealth is a strong determinant of well-being, it is not the only factor of importance. In fact urban children, who are better off in terms of material goods, have lower subjective well-being than rural children. Parental education, even controlling for household resources, also increases child well-being.

4.5.1 Measures comparable between rounds

In Round 1 the household respondent was asked to choose the category to which their household belonged in relation to other households. A comparable question was asked in Round 2, and the answers have been converted into three categories: 'Bad', 'Average' and 'Good' for comparison across the two rounds.⁴⁴

⁴³ Verbal and mathematic skills and achievement were measured using tests we developed or adapted from standardised international tests, such as the Peabody Picture Vocabulary Test (PPVT). We acknowledge that bias may arise when testing children with different languages and cultures using the same instruments, although measures were taken to adapt them to local contexts and languages and in no case were original standard scores used. Bias is an especially important consideration in testing children who speak minority languages. Reliability and validity results for our test administrations and concerns are presented and discussed in Young Lives Technical Note 15. In particular, the authors of this document recommend that results should not be compared across countries, or across groups with different maternal languages within countries.

⁴⁴ For Round 1, the choices included: hungry, poor, average, better off, and rich. For Round 2, they included: the richest, among the richest, richer than most households, about average, a little poorer than most households, among the poorest, and the poorest. The choices are converted into one of the categories: 'Bad', 'Average' and 'Good' following the rule described in Appendix.

Most households (635 in Round 1 and 659 in Round 2 from a total of nearly 1000 households) are in the 'Average' category, and few report well-being at either extreme; 334 and 263 are in the 'Bad' group and 31 and 68 in 'Good' in Round 1 and Round 2 respectively. Reports of 'Average' dominate, except for the poorest quartile in Round 1 where more households chose answers in the 'Bad' category.

The household's perception of well-being is strongly related to its material well-being as measured by the wealth index. The percentage in the 'Bad' category falls as wealth increases, and the percentage reporting 'Average' or 'Good' rises. In the lowest quartile 55.4 per cent rated their well-being in the 'Bad' group in Round 1. The percentage in 'Bad' remained high in Round 2, although lower than the percentage in 'Average'. However, it is clear that it is not only material wealth that determines a household's subjective perception of well-being. Even in the highest quartile of the wealth index less than 5 per cent and 10 per cent of households fell into the 'Good' category, while 16.8 per cent and 13.5 per cent were in the 'Bad' group, in Round 1 and Round 2 respectively.

Table 22 *Household subjective well-being (or perception of fairness) by wealth index quartiles*

	Round 1			Round 2		
	Bad (%)	Average (%)	Good (%)	Bad (%)	Average (%)	Good (%)
Wealth index quartile						
Poorest	55.4	42.4	2.2	43.0	54.1	2.9
Near poor	37.8	59.1	3.1	31.8	64.7	3.6
Near wealthy	21.7	75.9	2.4	16.9	72.8	10.3
Wealthiest	16.8	78.6	4.6	13.5	76.4	10.1

Despite the dominance of reports of 'Average', the figures in Table 23 suggest a favourable trend between 2002 and 2006. The number reporting 'Good' increased while the numbers reporting 'Bad' decreased, with a slight exception in the urban sector. Overall households perceiving own well-being as 'Bad' decreased to 26.6 per cent from one third in the older cohort. The percentage of households rating their well-being as 'Good' rose from 3.1 to 6.9 per cent.

The gap between rural and urban areas does not follow such a clear pattern. In Round 1 rural households were more likely to report 'Bad' but in Round 2 the gap between the percentages reporting 'Bad' was insignificant, and rural households were more likely than urban households to report 'Good'. The gap between minority and majority groups is also small. In both rounds, the percentages of ethnic minorities reporting 'Good' were higher than those of the ethnic majority. This is surprising given that the incidence of material poverty among ethnic minorities is higher than that of the majority. Once again the results suggest that material well-being is not the only determinant of subjective well-being.

Table 23 *Subjective well-being (or perception of fairness)*

Subjective well-being	Round 1 (%)			Round 2 (%)		
	Bad	Average	Good	Bad	Average	Good
Overall	33.4	63.5	3.1	26.6	66.7	6.9
By Sector						
Urban	27.0	70.5	2.5	29.4	67.5	3.1
Rural	35.0	61.8	3.3	25.9	66.3	7.8
By ethnic group						
Majority	32.5	64.7	2.9	26.5	66.7	6.8
Minority	39.8	55.5	4.7	27.3	65.6	7.0

4.5.2 Measures from Round 2

In Round 2 the child (in the older cohort) and the caregiver were asked where on a ladder from 0 to 9 (with 9 representing the highest level of well-being) they would place themselves. This section uses this question to compare children's perception to that of their parents. The responses are again converted into three groups using the rule described in the Appendix.

Table 24 *Subjective well-being of parents and children by wealth index quartile (Round 2 only)*

	Parent's perception (%)			Child's perception (%)		
	Bad	Average	Good	Bad	Average	Good
Overall	28.5	66.5	5.0	20.0	64.5	15.5
Poorest	44.0	55.1	0.8	35.3	59.0	5.7
Near poor	33.3	65.1	1.6	27.9	62.6	9.6
Near wealthy	20.2	69.1	10.7	11.1	63.4	25.5
Wealthiest	16.5	76.3	7.2	6.3	71.7	21.9

Children are more likely to report 'Good' and less likely to report 'Bad' than their parents, even though they also tend to choose 'Average'. Overall, the percentage of children feeling 'Good' is over three times higher than that of the adults. Nearly half of the children from the wealthy quartiles reported 'Good', while less than 20 per cent of their parents did.

As with the measure of subjective well-being discussed in the previous section, responses are strongly related to wealth for both adults and children. This is a striking finding as, unlike the previous question, this question did not refer to the material well-being of the household. Very few children from the wealthiest quartiles choose 'Bad', while over one third of the children from the poorest quartile do so.

There is no clear evidence in Table 25 of a gender gap in the children's perception of well-being. Slight optimism is observed among girls as fewer reported 'Bad' and more reported 'Good' than boys. The differences are not statistically significant.

Table 25 *Subjective well-being of the child, by gender (Round 2 only)*

	Child's perception (%)		
	Bad (%)	Average (%)	Good (%)
Male	20.2	65.1	14.7
Female	19.9	63.9	16.2

Between the groups by access to public services, the subjective perception of well-being differs substantially. Very few parents and children who have no access to safe drinking water report 'Good' well-being (see Table 26), while over 40 per cent of parents and nearly one third of children perceived it as 'Bad'. Among the children, who have access to safe drinking water, the percentages saying 'Good' and 'Bad' are almost identical.

Table 26 *Subjective well-being by access to safe water (Round 2 only)*

	Parent's perception (%)			Child's perception (%)		
	Bad	Average	Good	Bad	Average	Good
Have access to safe drinking water	25.0	69.2	5.8	17.0	65.8	17.2
No access to safe drinking water	42.3	56.2	1.5	31.7	59.4	8.9

A regression analysis was then used to investigate the determinants of child well-being, measured by where they rate their place on the ladder. An ordered probit regression is used for this analysis since the dependent variable has ordinal values. This makes it possible to analyse whether variables such as the household's access to sanitation affect child well-being after controlling for the household's wealth and other characteristics.⁴⁵

⁴⁵ Two separate regressions are run: one for children enrolled in school and another for all children in the sample. Two of the social capital variables are excluded when the regression is run for the whole sample. The question about whether the child was included in games was only asked to children enrolled in school. The question about the number of friends a child has was asked to all children, but is likely to be highly dependent on whether or not they attend school.

Table 27 *Determinants of child subjective well-being: ordered probit regression*

	Children enrolled in school	All children
Child characteristics		
Male	0.061	0.045
Urban	-0.540***	-0.489***
Height-for-age z-score	0.008	0.013
BMI-for-age z-score	0.053	0.060
Child works	-0.001	0.092
Child is in school		0.533***
Household characteristics		
Mother's education	0.107*	0.119*
Father's education	0.111***	0.100***
Mother ethnic minority	0.110	0.158
Siblings	0.052*	0.050*
Log consumption expenditure	0.432***	0.393***
Below poverty line	-0.145	-0.187
Access to sanitation	0.287*	0.294*
Northern Uplands	-0.450***	-0.421***
Red River Delta	0.239	0.233
Central Coastal	-0.281	-0.299
Child social network		
Number of friends	-0.003	
Looked up to as leader	0.141	0.118
Feels included in games	-0.320	
Constant	4.974***	5.609***
Number of obs	903	939
LR chi2	14069.285	3814.371
Pseudo R2	0.071	0.076

Dependent variable: Child life satisfaction (1-9 scale).

*** Indicates a coefficient is statistically significantly different from zero at the 1 per cent level, ** at the 5 per cent level and * at the 10 per cent level.

Standard errors are adjusted for clustering at the site level.

The results in Table 27 show that gender does not make any significant difference to the way the child feels about where he or she is on the ladder of well-being. The urban children tend to feel less well-off. This may reflect the fact that they see more prosperity than their rural counterparts. Neither height-for-age nor BMI-for-age has significant effects on child well-being, although the coefficients are positive. Child labour has a negligible effect on the child's perception of well-being. However, being enrolled in school has a significant positive effect on child well-being.

Both father's and mother's educational levels have significant positive effects on the child's perception of well-being. These effects are significant even controlling for household resources by including household consumption expenditure.

Log consumption expenditure, included as an indicator of household resources, has a significant positive effect on well-being. Being below the poverty line has an additional negative effect: household resources have a stronger effect on well-being at low levels of consumption. The number of siblings has a small positive effect on the child's subjective well-being. Access to sanitation has a significant positive effect on well-being.

None of the child social capital variables, even 'being looked up to as a leader', affects the child's perception of well-being.

5. Policy implications and directions for future research

The previous section attempted to understand the processes governing the many aspects of childhood poverty and well-being. Looking at the factors that determine child malnutrition, school and pre-school enrolment, and subjective well-being is crucial to understanding what policy interventions are needed in these areas, and how they would be best carried out. This section briefly reviews the implications of this report for child-focused policy in Vietnam. Because the analysis in this report is preliminary, more in-depth analysis is necessary for clearer prescriptions. This section therefore discusses further work produced or in progress by Young Lives researchers, and gaps that need to be filled.

The results presented in this report show that Vietnam's educational policies have been successful in achieving near-universal access to primary education. Gaps in enrolment between rural and urban areas and by wealth are insignificant. Gaps between ethnic groups remain. Policies to address these gaps will benefit from a deeper understanding of the reasons for dropping out and non-enrolment by minority children. Several researchers are currently planning to use Young Lives data, both qualitative and quantitative, to fill this research gap.⁴⁶

Educational policy, directed by Vietnam's commitment to Education for All (EFA), is beginning to focus on the quality of education, particularly in disadvantaged areas. A policy brief produced by the Young Lives team in Vietnam highlights problems including low basic skills acquisition and a narrow focus on scholastic achievement using traditional teaching methods, at the expense of interactive teaching.⁴⁷ The report identifies under-investment in education 'software' such as curricula, teacher training, classroom resources and educational materials as an important factor behind these failings. Further analysis of the Round 2 data may be able to identify the consequences of gaps in educational quality for child achievement.

The importance of parental education for child outcomes, even controlling for household income and community characteristics, suggests it is a key factor in the intergenerational transmission of poverty. Parental education impacts not only on poverty and consumption but also, independently, on education and nutritional outcomes and on subjective well-being. Current gaps in education will affect the well-being not only of the current generation but also of their children. It is essential that policies to reduce income poverty are complemented by access to quality education for all, if intergenerational poverty traps are to be broken.

The forthcoming paper by Le Thuc, 'On the Effect of Early Age Stunting on Cognitive Development: The Case of Young Lives Children in Vietnam', will provide insights into such issues. The Round 3 quantitative survey, planned for summer 2009, presents an opportunity to collect further evidence to inform and support policy analysis. It may be possible to investigate the impact of school resources, teacher quality, methods, language of instruction and curricula on student achievement. In Round 3 the intergenerational effects of education will also become clearer as children begin to move into the labour market, or even to start their own families.

⁴⁶ Ngoc Phuong Nguyen, an Oxford student, is planning a paper 'Primary School Dropouts in Vietnam: Evidence from Selected Provinces'. Chi Truong, a Vietnam Research Associate, is planning a paper specifically addressing the educational performance of ethnic minority children, and plans to draw on findings from both the quantitative and qualitative data.

⁴⁷ Young Lives Policy Brief 4.

Another subject of policy importance for Vietnam is the impact of extra classes and after-school tuition on child achievement and well-being. An increasing number of children in Vietnam attend private classes. Almost half of the Young Lives older cohort was attending extra classes by Round 1. However using the Round 1 data, Ha et al. (2005) found no evidence that extra classes increase the writing and multiplication abilities of 8-year-old children: it is the relative wealth of households that enrol their children, not the extra classes themselves, that confers an advantage. It may therefore be important to investigate the impact of extra classes and other forms of household academic pressure on child well-being.

Pre-school enrolment is significantly lower for disadvantaged groups. As part of Vietnam's commitment to pre-school education under EFA, addressing early childhood education in remote and disadvantaged areas is already a key theme of government policy. Young Lives will be able to make an important contribution to analysis of this policy. As the children grow older it will be possible to analyse the impact of pre-school education on their cognitive development and progress through school. This will enable us to assess whether children who enrol later miss out. Further analysis may also give insights into why minority and rural children fail to enrol in pre-school.

Although all communities have some access to health care, its quality, price and impact on child well-being is unclear from this preliminary report. Research to estimate the impacts of and interactions between individual, household and community characteristics in determining child health is already planned.⁴⁸ Further data collection on the cost and quality of health care could complement the analysis already possible with the Round 2 data.

A finding of particular importance in this report is that short-term health shocks can have a devastating effect on household resources in the long term. Households affected by severe illness or injury need support to prevent them falling into poverty with disastrous impacts for child well-being. Further research into the reasons behind that finding will help to identify the most effective way to support households. If households fall into poverty because of the burden of health expenses, the HCFP programme may need to be expanded to cover more households, or the cap on expenses made more generous. On the other hand, if the illness of a household member affects resources mainly through the loss of wages, it is important for health insurance to cover absence from work as well as out-of-pocket expenses. These issues will become increasingly important for policy as processes of privatisation and decentralisation progress.

This report finds no evidence that short-term environmental shocks, such as crop failure, have a significant effect on the likelihood that a household will enter poverty. However, given the importance of this topic for policy, this issue merits more detailed research. Work in progress by Le Thuc finds that shocks such as natural disasters (e.g. crop damage or collapse of dwellings) and health hazards (e.g. expenditure on the illness of household members and livestock death through disease) do have significant impacts on the household wealth index. Furthermore, the research reveals that households in particular localities are vulnerable, while those in other areas are largely able to protect themselves against the adverse effects of shocks. Social policy mechanisms could focus on extending coverage to households in vulnerable regions. Research showing how households in the other regions mitigate the effects of shocks and the role of social protection interventions would also be informative.

⁴⁸ By Ngoc Phuong Nguyen, an Oxford DPhil student.

The report finds that malnutrition remains a problem, especially among minority groups. Malnutrition affects child well-being in itself and as a determinant of other child outcomes. Young Lives Policy Brief 4 finds that poor nutrition is affecting the academic performance of the poorest children. As the children grow older, Young Lives will be able to assess the impact of poor nutrition in the early years on their health, education and labour market outcomes.

The report demonstrates that access to safe water and sanitation is limited for the disadvantaged groups, with harmful impacts on child health and nutrition. Although access to services has been rolled out to more remote and rural areas over the past decade and a half, poor households are still unable to access amenities due to cost.

The report also has implications for broader economic policy. Vietnam's focus on market-led, export-oriented growth has clearly benefited many of the children in the sample. However, some children and households have been left behind by economic growth. This is leading to inequalities that are only likely to widen in the future. Even as Vietnam's growth continues, pro-poor policies and policies targeted at poor children must be maintained and strengthened.

6. Concluding remarks

Vietnam is a low-income country but has benefited from rapid economic growth and poverty reduction since the policy renovation of Doi Moi in 1986. Vietnam has also applied a number of Laws and programmes aimed at improving care and protection of children. As a result the country has achieved impressive progress in improving child outcomes. Poverty levels and maternal health figures already meet the standards set by the MDGs, and progress towards achieving the education goal is well underway. Enrolment in primary school in the sample was close to 100 per cent, and pre-school enrolment almost 90 per cent.

However, child malnutrition and access to sanitation and safe water remain a concern, as do stark disparities in outcomes between ethnic groups and rural and urban areas. The discussion and analysis presented in this report, although preliminary, give important insights into the causes and outcomes of childhood poverty in this context.

The quantitative data reflect the growth and poverty reduction witnessed during this period. The wealth index improved, and robust progress was made in access to electricity and safe drinking water. Access to sanitation facilities also improved, although more slowly.

However, the poorest children still have less access to services, and poorer outcomes, than their better-off peers. Material poverty remains a barrier to child well-being. Access to electricity, safe drinking water, and sanitation facilities is strongly correlated to household wealth. Furthermore, for some indicators such as access to safe water, improvements over time have not benefited the poor but the middle-income groups, who have sufficient funds to enjoy the increased availability of amenities.

Household wealth is an important determinant of child outcomes. Children from poorer households are significantly more likely to be stunted and less likely to enrol in pre-school. Primary school enrolment is high for poor and non-poor groups but disparities in performance on literacy tests suggest that the quality of education received in the poorest areas may be low. Finally, material well-being is a strong determinant of child and household subjective well-being. However, the findings demonstrate that household resources are not the only, and perhaps not even the most important, determinants of subjective well-being.

It is not only income poverty that impacts on child well-being. Regression analyses reveal that parental education, even controlling for household material resources, significantly affects nutritional outcomes and enrolment in school. Interestingly, maternal education has a stronger impact on nutrition, while the father's education is a more important determinant of enrolment. Furthermore the education of both parents significantly affects the child's subjective well-being.

The importance of parental education is evident in the intergenerational transmission of poverty. Deprivations experienced by current parents during childhood impact upon Young Lives children. The resulting deprivations that the children themselves experience will impact on the next generation. Furthermore, even if economic growth allows households

to escape from income poverty, poor parental education will continue to have a negative intergenerational impact on multidimensional aspects of poverty. Policies to ensure that all households have access to quality services, particularly education, are needed to break these intergenerational poverty traps.

The community a child is born into is one of the most important determinants of their subsequent well-being. The most important gap is between rural and urban areas.⁴⁹ Inequalities between urban and rural sectors are significant and persistent in nearly all the major child poverty related indicators. Lower material wealth in rural areas is compounded by poorer access to electricity, safe water and sanitation.

These factors impact on child outcomes. Rural children suffer from significantly poorer nutritional outcomes, even controlling for household resources. This indicates that access to services such as sanitation and safe water, and other community-level effects strongly influence child health. Access to sanitation, which depends strongly on community characteristics, proves to be a weakly significant determinant of malnutrition even after controlling for location of residence. Although school enrolment is high in both rural and urban areas, slight gaps in performance on literacy tests suggest gaps in the quality of education. However it is worth noting that rural children, despite their lower material well-being, have higher levels of subjective well-being. This suggests that focusing on material indicators of poverty may not be sufficient to fully understand child well-being.

Inequalities between ethnic groups are also stark. Consumption expenditure of majority households is more than double that of the ethnic minority group. The biggest ethnic group in Young Lives, the H'Mong, had monthly expenditure only one third of the overall average. Minority households have poor access to safe water and, in particular, to sanitation.

Economic disparities are echoed by disparities in multidimensional poverty indicators. Ethnic minority children are more likely to be stunted and less likely to enrol in school and pre-school, even after controlling for lower parental education, consumption expenditure and other household characteristics.

There is no significant evidence of disparities by gender. Differences in the likelihood of stunting are likely to be driven by differences in growth patterns rather than gender bias. However, there may be gender biases within some ethnic groups. Furthermore the impact of child work and differences by gender in the likelihood of working and types of task performed deserve further exploration.

The findings in this report have important implications for policies aimed at tackling childhood poverty in Vietnam. They also highlight areas in which further research will be necessary to identify the most worthwhile and effective interventions. Finally, they demonstrate the importance of longitudinal and multidisciplinary research in understanding childhood poverty.

⁴⁹ Evidence such as the importance of the site dummies in determining household poverty suggests that other community characteristics may matter for child outcomes. The mechanisms through which community characteristics, especially rural or urban residence, affect children clearly deserve further analysis.

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Young Lives papers in progress

Chi, Truong 'Qualitative-Quantitative Paper on Ethnic Minority Children and Education'

Ko, Ivy and Xing, Jing 'Education and Welfare in Vietnamese Children'

Le Thuc, Duc 'Household Wealth Dynamics: the Evidence of Vulnerability in Vietnam'

Nguyen, Ngoc Danh 'Determinants of Child Health in Vietnam: Individual, Household, Community Variables and their Interaction'

Nguyen, Ngoc P. 'Primary School Dropouts in Vietnam: Evidence from Selected Provinces'

Appendix: Definitions of key outcome variables

Outcome Variable	Description	How to calculate using R1 data	How to calculate using R2 data
Expenditure per capita	Expenditure per capita		Sum the estimated value of food and non-food (excluding gold jewellery), over the past 30 days, divided by household size
Absolute poverty	Percentage of children living in households under the national poverty line		There are 2 indicators: general poverty and food poverty: – The general poverty rate is the percentage of households with consumption per capita under VND2,559,850/year – The food poverty rate is the percentage of households with consumption per capita under VND1,915,373/year
Relative poverty	Percentage of children living in households under the relative poverty line		Number of households below 50% of the median consumption for all households
Wealth-index based poverty	Percentage of children living in households below 0.2 of the wealth index	Percentage of children living in households below wealth index threshold 0.2	Percentage of children living in households below wealth index threshold 0.2

Outcome Variable	Description	How to calculate using R1 data	How to calculate using R2 data
Subjective well-being (perception of fairness – available for both rounds)	Self assessment of household's living condition	<p>To what category does your household belong? [V10920] for 1YO cohort and [V20920] for 8 YO cohort. It takes three values:</p> <p>1 - Bad well-being if the HH is categorised as hungry or poor</p> <p>2 - Average well-being if the HH is categorised as average</p> <p>3 - Good well-being if the HH is categorised as better off or rich</p>	<p>Compared to other households in this village/suburb how would you describe your household at the moment? [RELCIRC]. It takes three values:</p> <p>1 - Bad well-being if the HH compared to other as 'the poorest', 'among the poorest' or 'a little poorer than most households'</p> <p>2 - Average well-being if the HH compared to others as 'about average'</p> <p>3 - Good well-being if the HH compared to others as 'the richest', 'among the richest', or 'richer than most households'</p>
Subjective well-being (Household)			<p>Question on 'ladder' in Section 11 of household questionnaire for older and younger cohorts. Where on the ladder do you stand at this present time? LADDER</p> <p>Where do you think you will be in 4 years time? FARLAD.</p>

Outcome Variable	Description	How to calculate using R1 data	How to calculate using R2 data
			<p>It takes three values:</p> <p>1 - Bad well-being if LADDER = 1 or 2 or 3</p> <p>2 - Average well-being if LADDER = 4 or 5 or 6</p> <p>3 - Good well-being if LADDER = 7 or 8 or 9</p>
Subjective well-being (Child)			<p>Question on 'ladder' in Section 4 of child questionnaire for older cohorts. Where on the ladder do you stand at this present time? Question 4.2 (CLADDER) Where do you think you will be in 4 years time? Question 4.3 (CFARLAD)</p> <p>1 - Bad well-being if CLADDER = 1 or 2 or 3</p> <p>2 - Average well-being if CLADDER = 4 or 5 or 6</p> <p>3 - Good well-being if CLADDER = 7 or 8 or 9</p>
Wealth index	Changes to wealth index (between R1 and R2)	<p>Wealth Index= H+CD+S</p> <p>H=housing quality calculated as scaled values (0 to 1) of rooms per person, wall, roof and floor durability divided by 4</p> <p>CD=consumer durables</p> <p>Calculated as scaled values (0 to 1) of radio, fridge, bicycle, TV, motorbike/scooter, motor car/truck, mobile phone, landline phone, modern bed, table or chair and sofa divided by 11</p>	<p>Wealth Index= H+CD+S</p> <p>H=housing quality calculated as scaled values (0 to 1) of rooms per person, wall, roof and floor durability divided by 4</p> <p>CD=consumer durables</p> <p>Calculated as scaled values (0 to 1) of radio, fridge, bicycle, TV, motorbike/scooter, motor car/truck, mobile phone, landline phone, modern bed,</p>

Outcome Variable	Description	How to calculate using R1 data	How to calculate using R2 data
		S=services Calculated as scaled values (0 to 1) of electricity, water, sanitation and cooking fuel divided by 4	table or chair and sofa divided by 11 S=services Calculated as scaled values (0 to 1) of electricity, water, sanitation and cooking fuel divided by 4
Asset Index – not used in this report	Changes to asset index (between R1 and R2)	Asset Index = (LSW + LDW + HW + CDW + PAW)/5 AI would value from 0 to 1 LSW: Livestock owned LDW: Land owned HW: Dwelling owned CDW: Consumer Durables owned PAW: Productive Assets owned	Asset Index = (LSW + LDW + HW + CDW + PAW)/5 AI would value from 0 to 1 LSW: Livestock owned LDW: Land owned HW: Dwelling owned CDW: Consumer Durables owned PAW: Productive Assets owned
Access to electricity		Proportion of households with electricity – ELEC=1 (Do you have electricity? HH Questionnaire, Q9.2.1)	Proportion of households with electricity – ELEC=1 (Do you have electricity? HH Questionnaire, Q7.4)
Access to safe drinking water (YL standard)		Proportion of households with water piped into dwelling DRWATER=1 (What is the main source of drinking water for members of your household? HH Questionnaire, Q9.3)	Proportion of households with water piped into dwelling DRWATER=1 (What is the main source of drinking water for members of your household? HH Questionnaire, Q7.8)

Outcome Variable	Description	How to calculate using R1 data	How to calculate using R2 data
Access to safe drinking water (Vietnamese standard)		Piped water, bottled, protected well, clean rain water (from non pro-cement roof)	Piped water, bottled, protected well, clean rain water (from non pro-cement roof)
Sanitation facilities		Proportion of households using flush toilet or household pit latrine (TOILET=1 or TOILET=2 What kind of toilet do you use? HH Questionnaire, Q9.4)	Proportion of households using flush toilet or household pit latrine (TOILET=1 or TOILET=6 What kind of toilet do you use? HH Questionnaire, Q7.9)
Malnutrition calculated based on HAZ, WAZ, WHZ, BMI	Percentage of malnutrition of younger cohort by HAZ	<p>– Use variables: sex, dob, dint, chwght, chheight. These variables are gender, date of birth, date of interviewing, weight and height of these children. The WHO macro computed the age of the child in months using the age in days.</p> <p>- Produce z-score of HAZ, WAZ, WHZ and BMI. By using Anthro software, the most recent software provided by WHO.</p> <p>- Malnutrition rate is the percentage of the children who have z-score<-2 (for HAZ, WAZ and WHZ)</p>	Using similar method to that used for R1 to calculate malnutrition rate.

Outcome Variable	Description	How to calculate using R1 data	How to calculate using R2 data
		<p>- For BMI, malnutrition rate is the children who have:</p> <p>month==72&sex==2&BMI<12.7 month==72&sex==1 & BMI<13 month==84&sex==2&BMI<12.7 month==84&sex==1&BMI<13.1 month==96&sex==2&BMI<12.9 month==96&sex==1&BMI<13.3 month==132&sex==2&BMI<13.9 month==132&sex==1&BMI<14.1 month==144&sex==2&BMI<14.4 month==144&sex==1&BMI<14.5 month==156&sex==2&BMI<14.9 month==156&sex==1&BMI<14.9</p>	
Enrolment of child	Percentage of children enrolled in school	Calculated based on ENRSCH; if ENRSCH=1 (Yes); (Are you currently enrolled in school? Ques-5yrHH, Q8.9)	Calculated 5-year-old mean of GRADCOMP. Average of grade completed before dropping out of school Ques-12yrchild, Q1.22
Enrolment of 12-year-old child	Percentage of children enrolled in school	Percentage of children who are in school now. ENRSCH=1 (Are you currently enrolled in school? Ques-12yrchild, Q1.2)	Percentage of children who are in school in this school year. SCHOOL=1 (Did you attend school last year? Ques-8yrchild, 4.1)
Highest grade of child	Highest grade completed before dropping out of school	<p>Calculated mean of SCHIGH Average of SCHIGH if SCHOOL==2 (What is the highest grade 'NAME' has achieved in formal school? SCHIGH, Ques-8yrHH, Q4.1.3)</p>	

Outcome Variable	Description	How to calculate using R1 data	How to calculate using R2 data
Dropping out	Dropping out rate of child	DROP OUT = 1 (Yes) if (eversch==1 & schnow==2) Ques-8yrHH: 4.1: Has 'NAME' ever attended formal school? EVERSCH 4.2 Is NAME currently attending school? SCHNOW	DROP OUT = 1(Yes) if (eversch==1 & enrsch==0) Ques-12yrchild: 1.1. Have you ever attended formal school? EVERSCH 1.2. Are you currently enrolled in school? ENRSCH
Child labour	Percentage of child labour of older cohort	-Use file named: vnsubsec2householdroster8 - Use variable: chldwork - Children considered to work when chldwork=1	-Use file named: childschoolandwork12 - Use variable: chldwork - Children considered to work when chldwork=1

Young Lives is an innovative long-term international research project investigating the changing nature of childhood poverty.

The project seeks to:

- improve understanding of the causes and consequences of childhood poverty and to examine how policies affect children's well-being
- inform the development and implementation of future policies and practices that will reduce childhood poverty.

Young Lives is tracking the development of 12,000 children in Ethiopia, India (Andhra Pradesh), Peru and Vietnam through quantitative and qualitative research over a 15-year period.

Young Lives Partners

Young Lives is coordinated by a small team based at the University of Oxford, led by Jo Boyden.

Ethiopian Development Research Institute, Ethiopia

Centre for Economic and Social Sciences, Andhra Pradesh, India

Save the Children – Bal Raksha Bharat, India

Sri Padmavathi Mahila Visvavidyalayam (Women's University), Andhra Pradesh, India

Grupo de Análisis para el Desarrollo (Group for the Analysis of Development), Peru

Instituto de Investigación Nutricional (Institute for Nutritional Research), Peru

Centre for Analysis and Forecast, Vietnamese Academy of Social Sciences, Vietnam

General Statistics Office, Vietnam

The Institute of Education, University of London, UK

Child and Youth Studies Group (CREET), The Open University, UK

Department of International Development University of Oxford, UK

Statistical Services Centre, University of Reading, UK

Save the Children UK (staff from the Rights and Economic Justice team in London as well as staff in India, Ethiopia and Vietnam).



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An International Study of Childhood Poverty

Department of International Development
University of Oxford,
3 Mansfield Road, Oxford OX1 3TB, UK
Tel: +44 (0)1865 289966
Email: younglives@younglives.org.uk

www.younglives.org.uk