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Tracking Disparities: Who Gets Left Behind? Initial Findings from Peru Round 3 Survey

Santiago Cueto and Javier Escobal and Mary Penny and Patricia Ames

Grupo de Análisis para el Desarrollo (GRADE), Young Lives

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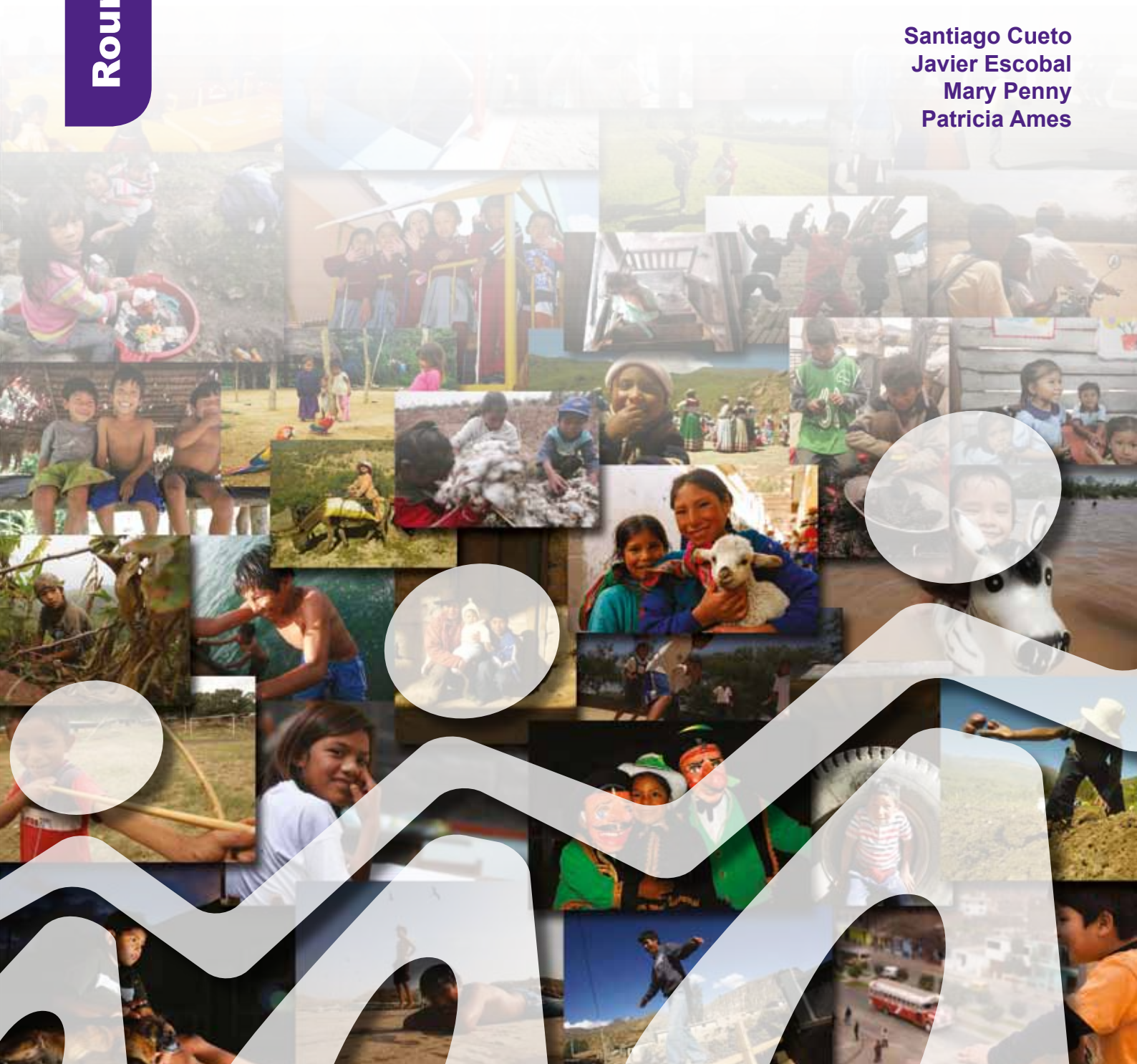
Round 3 Survey Report

Young Lives 
An International Study of Childhood Poverty

Tracking Disparities: Who Gets Left Behind?

Initial findings from PERU

Santiago Cueto
Javier Escobal
Mary Penny
Patricia Ames



SEPTEMBER 2011

Round 3 Survey Report

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Executive summary

This report presents initial findings from the third round of data collection by Young Lives in Peru, carried out from late 2009 to early 2010 with two age cohorts of children. 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 earlier rounds of data collection in 2002 and 2006 and this third round. Data are mainly presented for the entire age group, in most cases separated into gender, wealth groups, rural/urban location, and maternal mother tongue (as a proxy of ethnicity). In particular, we are able to make comparisons between the older children at age 8 in 2002 (in Round 1), and the younger cohort at age 8 in 2009 (Round 3) – to highlight changes that have happened in the study communities over that time. The full richness of the data is not fully 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.

In 2002 Young Lives collected data on 2,052 children who were aged 6 to 18 months (the Younger Cohort) and 714 children aged 7.5 to 8.5 years (the Older Cohort) for the first survey round. The Young Lives sampling strategy was based on randomly selecting 100 children within 20 clusters or geographic sites throughout Peru. Overall attrition by Round 3 was 4.4 per cent over the eight-year period. The Young Lives study has also carried out three rounds of qualitative fieldwork, in 2007, 2008 and 2010, data from the first two of which are used to explain some of the findings in this report.

In recent years Peru has had consistent achievements in the economic, social and political arenas, but still faces important challenges. These achievements are consistent economic growth, the development of programmes and policies to fight poverty, and the maintenance of democracy; the challenges are a large (but decreasing) poor population, a high degree of inequality in social opportunities and outcomes, and a decentralisation process which started in 2002 in the hope that it would bring government closer to people's needs, but still needs to be strengthened. Peru currently faces the enormous challenge of making its impressive economic growth more inclusive, so that the inequalities in opportunities and outcomes that are currently so closely linked to area of residence, ethnicity, maternal education, poverty and in some cases gender diminish over time through concerted policies and programmes.

Levels of wealth, consumption and poverty

Between 2006 and 2009, Young Lives households experienced a reduction in both absolute and relative poverty (per capita expenditure below 50 per cent of the median in the sample) which represents a significant improvement in per capita expenditure of both poor and extremely poor households. The largest reduction in absolute poverty has occurred for those living in urban areas, and within urban areas the largest reductions in poverty come from those households in which the mother's mother tongue is indigenous (mostly Quechua).

Although poverty fell, we find that most households which were poor in Round 2 were also poor in Round 3. Large improvements in consumption (moving up at least two quintiles) is higher in the rural sample (15.6 per cent) than in the urban sample (10.3 per cent). If one takes into account that 74 per cent of households that move up in the per capita expenditure distribution moved from rural to urban areas between 2006 and 2009, it becomes clear that it is in the large cities where growth has been the highest, where income-generating opportunities arise and transition out of monetary poverty is possible.

Comparing the Young Lives households across rounds, wealth was on average about the same between Rounds 1 and 2 but increased sharply from Round 2 to Round 3. These higher growth rates are consistent with the growth acceleration for the economy as a whole and the provision of basic services associated with the increase in public expenditure. Similarly, per capita expenditure also increased, although at a somewhat slower pace, between Rounds 2 and 3.

The urban–rural gap has been widening, especially in the last few years, as expenditure has been growing more rapidly in urban than in rural areas but the Spanish–indigenous gap does not follow the same trend. This is probably to be attributed to the increasing number of mothers of indigenous origin who live in urban areas, which increased by 17 per cent between Round 2 and Round 3. The gap between children with better-educated mothers (who have completed further education) and those with mothers with low education (incomplete primary or less) is also high.

Shocks and adverse events

One of the topics that Young Lives has included in its surveys is sudden changes in the situation families live in, or shocks. About two-thirds of Young Lives households report having experienced at least one shock since Round 2. The most common shocks are those related to changes within the family (illness or death), environmental disasters, abrupt changes in economic conditions (typically changes in employment), and crimes that affected the asset base of the family. It is interesting to note that these adverse shocks have been less frequent in Round 3 than in Round 2, with the exception of natural disasters, which have increased in Round 3 (at least for the Younger Cohort households).

Access to services

Coverage of water, sanitation and electricity has increased sharply among the sample households. The improvement in access to safe drinking water occurred mostly between 2006 and 2009, while the improvements in sanitation and electricity occurred both between 2002 and 2006 as well as between 2006 and 2009. Access to sanitation and to electricity shows a greater improvement for households living in rural areas, those with less educated mothers and those where mothers are of indigenous origin. This reflects the fact that urban areas have almost full coverage and the areas with less coverage are increasingly concentrated in rural areas.

Education

Enrolment in primary school is high but there are gaps in achievement. In primary school, there are significant differences in Younger Cohort children (age 8) reaching the appropriate grade for their age, favouring children from non-poor households in urban areas, with better-educated mothers whose maternal language is Spanish.

For the Older Cohort children (age 15), enrolment has started to go down as children enter secondary school. This may be related to there being fewer secondary schools in rural areas, in comparison with primary schools, together with other non-school factors. In the Young Lives sample, drop-out is particularly high for rural children (almost three times higher than for their urban peers), as well as for children of mothers who did not complete primary school, and for the poorest children, suggesting that education is not achieving its role as an equalising institution. Children who were rural or poor, and children whose mothers speak an indigenous language are more likely to have repeated a year or be over-age for their grade.

Beyond enrolment and children being over-age, however, there are issues of equality of educational opportunities and of quality of education for children from different groups, which remain of central importance for children in Peru. The poorest groups tend to access schools with fewer resources, while non-poor groups are increasingly opting for private education in search of better quality. Also, many children from indigenous groups do not have access to bilingual education and the education services they get are under-resourced.

Health

Stunting and wasting are important dimensions of child poverty because of the recognised link to other outcomes such as cognitive development. Malnutrition is an important issue in Peru, with stunting being more prevalent than wasting. The comparison between the 8-year-olds in 2002 and 2009 (even when corrected for the higher number of urban children in the Older Cohort) shows a significant reduction in stunting (from 33 per cent to 21.9 per cent). Despite these improvements, stunting remains a serious problem in Peru, with the highest rates among children whose mother is an indigenous language speaker or less educated, and who live in rural areas. The association between maternal education and stunting is especially striking, with the prevalence of stunting in Round 3 being seven times as high among Younger Cohort children with mothers who did not complete primary school, compared with the children of mothers who had completed further education. This association with maternal education is seen in both the Younger and Older Cohorts, and remains across the three rounds.

Obesity is also a growing problem with an increase from 7.8 per cent obesity in the Older Cohort when they were aged 8 to 12.3 per cent in the Younger Cohort children at the same age. This is especially marked among the children of better-educated mothers, where the rate has increased fourfold.

Poor families face a number of barriers in accessing healthcare. Almost one in five caregivers of children in the Younger Cohort stated that they had not taken their child to a healthcare facility when they were ill or injured, although they would have liked to have done so. The direct cost of healthcare was the biggest barrier, and not considering the child's illness serious enough to overcome these difficulties was very common in all groups. As might be expected, difficult access and distance together with indirect costs were more common barriers in rural areas. Between 11 and 18 per cent of caregivers reported that lack of trust in the quality of care on offer was a consideration in preventing them accessing the healthcare facility, and this opinion was expressed in urban, rural, poor and non-poor families across the board.

The Round 3 survey also included a set of self-administered questions about at-risk behaviours, including smoking and drinking, for children in the Older Cohort. About 20 per cent of the cohort said they had tried smoking once or more, with boys more likely to do so. For alcohol there were only small differences by gender; instead the differences are marked by mothers' mother tongue (Spanish speakers more likely to drink), area of residence (urban children more likely to drink), and maternal education (children of more educated mothers are more likely to drink). However none of these groups reported drinking often, as most of the responses for drinking were 'only on special occasions' and 'hardly ever'. The levels of smoking and drinking reported here could be considered low, but what is interesting is the evolution of these and other at-risk behaviours over time.

Children's work and time-use

In the Younger Cohort very few children are engaged in paid work. However, most (71 per cent) do household chores, on which they spend on average a bit more than an hour a day. In rural areas a higher percentage of children care for family members, do household chores and engage in unpaid work on the family farm or business. They also spend less time studying than children in urban areas. Similar patterns can be found when one focuses on children whose mothers are of indigenous origin or children of less educated mothers.

In the Older Cohort, about 10 per cent of children are engaged in paid work, with this being higher among boys, children living in rural areas and for children with less educated mothers. Comparing the children from the Younger Cohort in Round 3 with those from the Older Cohort in Round 1, when both cohorts were aged 8, the percentage of children engaged in paid work had decreased. It is very likely that the growth in per capita household income and expenditure, and the improvement in well-being indicators experienced by many, are at least partly responsible for this trend, as improved incomes may be reducing the need for some children to engage in paid work.

Subjective well-being

In keeping with its multidimensional approach to poverty, Young Lives assesses children's subjective well-being. The results are quite different in the Younger and Older Cohorts, suggesting that the developmental stages they are experiencing are linked with their responses. In general, the Younger Cohort reported higher self-evaluations of their own lives. There were almost no differences between boys and girls but a large difference between children from households in the bottom quintile of consumption who were over twice as likely to report having a 'bad life' compared with children from households in the top consumption quintile. There were also differences linked with maternal education and mother's first language, as well as area of residence, favouring better-educated, Spanish-speaking and urban children. For the Older Cohort there were differences favouring girls and children of mothers with higher education.

From the qualitative sub-studies, there is also information showing that family relationships are central to their sense of well-being. The presence or absence of their parents, the actual time they spend with children and the incidence (or not) of violence in family relationships are key to children's well-being, according to the children themselves. The ability of parents to satisfy the basic material needs of their children is also a factor. Younger children also highlight the importance of having time to play with friends and their family on the one hand, and the importance of learning, school and education on the other. Physical punishment at school is frequent and is an indicator of ill-being.

Older children support these views and add assessments of the kind of social environments they live in: rural children especially consider their communities safer and cleaner than urban areas and appreciate that, but they also acknowledge the lack of education services for the upper levels of education and the consequent need to migrate to carry on their education as detrimental to their well-being. Urban children recognise dangerous environments marked by delinquency, drug dealing and crime as threats to their well-being, yet value the access to the more numerous education opportunities.

Policies and programmes

We explored preliminary results for four government programmes which we believe have significant potential for reducing children's poverty:

According to our results, while the Ombudsman services, DEMUNA (aimed at protecting and promoting young people when their rights are being violated), seems to be relatively well-known, it has been less used by relatively poor, indigenous young people, as well as children of less-educated mothers. This suggests that the programme needs to concentrate on work with these populations, as well as expand coverage in rural areas.

The conditional cash transfer programme, *Juntos*, on the other hand, seems to be reaching its target group (the rural poor) more effectively, although it is far from achieving universal coverage in this regard. As suggested in Young Lives data and other studies, improvement in the quality of the services linked to the conditions set by *Juntos* is important (Alcazar 2009).

The National Identity Document programme has reached almost half of the Younger and Older Cohort children, which was a surprise to us and is probably due to the campaigns carried out by successive governments over the past few years. Registering children through the NID programme is the first step towards targeting services to those most in need.

Finally, it was positive to see the relatively high coverage of the universal health insurance programme (*Seguro Integral de Salud*), especially among the indigenous, rural, relatively poor, and less-educated families. We do not have information on the quality of health services under this programme, but reaching children and their families is an important first step in fulfilling their needs.

Conclusion

The main message from Young Lives, as from a few other studies, is that averages hide wide disparities, both in terms of opportunities and of outcomes. Specifically, life is much more difficult in Peru for a child who is poor, lives in a rural area, has a mother with little education or belongs to an indigenous group; gender difference is also relevant in some circumstances. For a country that is showing significant economic growth, it is crucial to ask whether this means that all children will benefit or whether some are indeed being left behind, and if so what the main areas are that would need to be studied further or tackled by policy intervention.

About Young Lives

Young Lives is a long-term international research project investigating the changing nature of childhood poverty in four developing countries – Ethiopia, India (in Andhra Pradesh), Peru and Vietnam – over 15 years, the timeframe set by the UN to assess progress towards the UN Millennium Development Goals. Through interviews, group work and case studies with the children, their parents, teachers and community representatives, we are collecting a wealth of information, not only about their material and social circumstances, but also their 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: 2,000 children who were born in 2001-02 and 1,000 children born in 1994-95. 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 through into 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 Young Lives survey team in Peru is based at GRADE and the data collection team is based at IIN. The team is led by Professor Santiago Cueto. In Peru, Young Lives is known as *Niños del Milenio*. The website gives further information in both English and Spanish: www.ninosdelmilenio.org

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1. Introduction

This report presents initial findings from Round 3 of the Young Lives survey of children and poverty carried out in Peru in late 2009. The main objectives of the report are to describe the key preliminary results obtained from Round 3, analyse the changes in the profile of child poverty among the sample since Round 1 of Young Lives in 2002, and identify the key policy implications for Peru. It does not aim to give a comprehensive overview of all the findings. Rather it gives a broad outline of findings relating to some of the key indicators of childhood poverty and of changes that have taken place in the lives of the children in the sample over the seven years between Round 1 of data collection in 2002 and Round 3 in 2009.

At the end of the first decade of the twenty-first century, Peru can be described as a country that has made significant progress in the economic, social and political arenas, but still faces important challenges. Its achievements are consistent economic growth, the development of programmes and policies to fight poverty, and the maintenance of democracy. The challenges are a large (but decreasing) part of the population living in poverty, a high degree of inequality in social opportunities and outcomes, and a decentralisation process that started in 2002 in the hope that it would bring governments closer to people's needs, but still needs to be strengthened. As in many developing countries, the proportion of children who live in poverty is higher than the proportion of adults who live in poverty. Furthermore, there is little research and systematic evaluation to ascertain which policies and programmes are being effective for children.

In general this report aims to answer the question: How do social indicators for different groups of children evolve as the children grow into adolescence and young adulthood in Peru? Specifically, we present data for children who are indigenous, rural, relatively poor and with less educated mothers, and compare them with their more advantaged peers to test if the gaps we observed in previous rounds of the survey have stayed the same, grown or diminished. In reports from other organisations, as well as in our analysis, these groups of children have shown poorer social indicators. For a country that is showing significant economic growth (see section 2), it is crucial to ask whether this means that all children will benefit or whether some are indeed being left behind, and if so what the main areas are that would need to be studied further or tackled by policy intervention. In the report we present data on the following social indicators:

- Poverty, wealth and per capita expenditure
- Shocks experienced by the households
- Access to services: safe water, improved sanitation and electricity
- Education, including enrolment rates and over-age children (those above the usual age for their grade)
- Health and well-being: including stunting, obesity and access to healthcare
- Work and time use
- Subjective well-being, including children's feelings, perceptions of their own quality of life and consumption of tobacco and alcohol

- Participation in government policies and programmes, including DEMUNA (youth protection services), Juntos (a conditional cash transfer scheme), the National Identity Document scheme and health insurance assistance.

Data are mainly presented for both cohorts, in most cases separated but in some combined across cohorts. The full richness of the data is not reflected in this preliminary report, but we hope that it contains enough information to prompt researchers, policymakers, practitioners and other stakeholders to start to engage with the data and look at our other publications that go into more depth on some of the issues discussed here.

Report structure

The next section of the report introduces the socio-economic context of Peru and some of the issues and policies currently affecting children and childhood poverty. The third section gives an overview of the methodology used by Young Lives to collect this third round of data. The fourth section presents some of the main findings from previous survey rounds, followed by a descriptive analysis of data from Round 3 – both showing changes that have occurred for the children since 2002, and comparing the situation of the Younger Cohort children in 2009 with that of the Older Cohort in 2002, when both were aged 8. Indicators of child development including household wealth and per capita expenditures, health, education and subjective well-being are examined in section five.

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

About Young Lives

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

We are following two groups of children in each country: 2,000 children who were born in 2001–02 and 1,000 children who were born in 1994–95. 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 through into 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 into or 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. Much existing knowledge about childhood poverty is based on cross-sectional data that reflects a specific point in children's lives, or relates 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. We collect quantitative data and qualitative data at the individual, household and community levels. Quantitative data is gathered through comprehensive surveys that include interviews with the children themselves as soon as 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 is collected in each round on households' economic circumstances, livelihoods, assets and social capital. The questionnaires also collect evidence relating to coping strategies such as migration, parental education and other experiences, child outcomes and the extent to which children and their parents and caregivers use services (e.g. healthcare, 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, alongside the international NGO Save the Children UK. It is coordinated by a team based in the Department of International Development at the University of Oxford, UK. In Peru the Instituto de Investigación Nutricional (IIN, the Institute for Nutrition Research) coordinates the survey. The Grupo de Análisis para el Desarrollo (GRADE, the Group for the Analysis of Development) is in charge of data management, and policy research and engagement with government and external stakeholders. Researchers in both institutions are in charge of developing research outputs and publications.

In Peru, Young Lives is known as *Niños del Milenio*. The website gives further information in both English and Spanish: www.ninosdelmilenio.org

2. Country context

At the end of the first decade of the twenty-first century, Peru can be described as a country that has had consistent achievements in the economic, social and political arenas, but still faces important challenges. Its achievements are consistent economic growth, the development of programmes and policies to fight poverty, and the maintenance of democracy; the challenges are a large (but decreasing) part of the population living in poverty, a high degree of inequality in social opportunities and outcomes, and a decentralisation process which started in 2002 in the hope that it would bring governments closer to people's needs, but still needs to be strengthened (see discussion on these topics in section 2.3 below). As in many developing countries, the proportion of children who live in poverty is higher than the proportion of adults who live in poverty (Benavides et al. 2011). Furthermore, there is little research and systematic evaluation to ascertain which policies and programmes are being effective. In this section we present some data and issues related to these topics, as a general context for the Young Lives data that is presented later in this document.

2.1 The economy grows but poverty remains a challenge

As mentioned above, the economy has been growing over the past few years, with a slow-down in GDP growth in 2009 that could be linked with the international economic crisis; however, indicators for 2010 and early 2011 suggest that the economy is returning to its previous growth rate. As shown in Table 2.1, a significant reduction in poverty has been achieved recently, but about a third of the population still lives in poverty. The Gini coefficient, an indicator of inequality, has remained almost unchanged. This would suggest that the benefits of economic growth are not helping to reduce the gaps between groups, although they are reducing the overall rate of poverty.

Table 2.1. Peru: main macro-economic indicators, 1991–2010 (%)

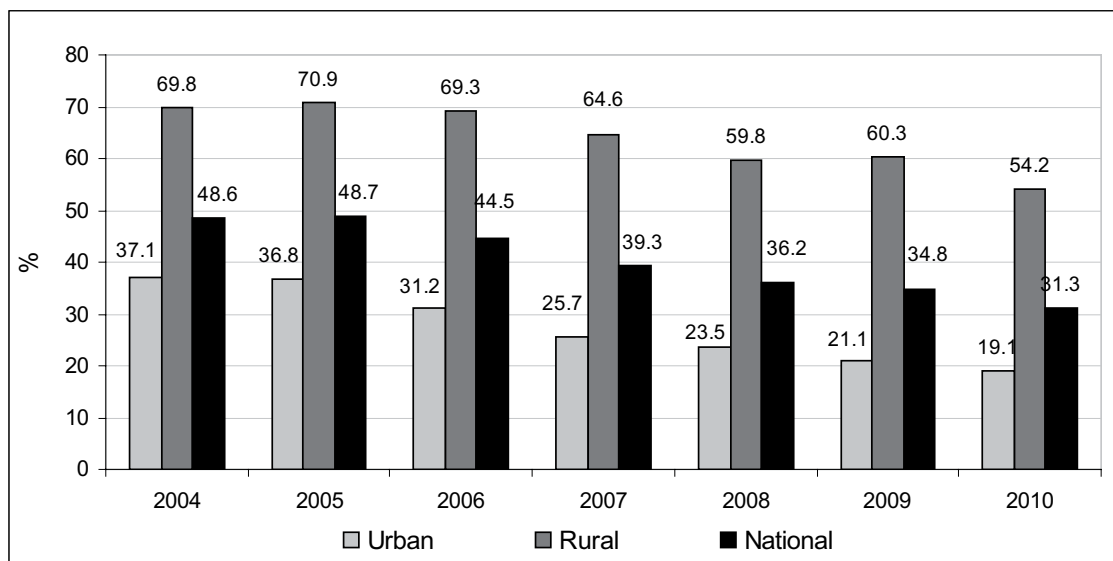
	Year				
	1991	1997	2004	2009	2010
Real GDP growth (per annum)	2.1	6.9	5.0	0.9	8.8
Inflation (% per annum)	139.2	6.5	3.5	0.2	2.2
Overall poverty rate	54.5	42.7	48.6	34.8	31.3
Extreme poverty rate	23.5	18.2	17.1	11.5	9.8
Inequality (Gini coefficient)	0.39	0.39	0.41	0.39	0.37

Note: 1991–97 data on poverty, extreme poverty and inequality are not strictly comparable with 2004–10 data because of the use of different methods.

Source: Central Reserve Bank of Peru (www.bcrp.gob.pe) and National Institute for Statistics and Information (www.inei.gob.pe).

Below are some indicators that link personal and community characteristics with a variety of poverty indicators. As shown in Figure 2.1, poverty has decreased over the past few years, which is perhaps the most significant achievement for the country over the last decade. However, the gaps between the urban and rural populations have increased over time. As shown in other studies (e.g. Trivelli 2000) and other parts of this document, rural populations are also characterised by being more likely to belong to an indigenous group and having fewer public services available (i.e. running water, sewage, electricity, paved roads, and telephone lines), and also poorer services and outcomes in education and health.

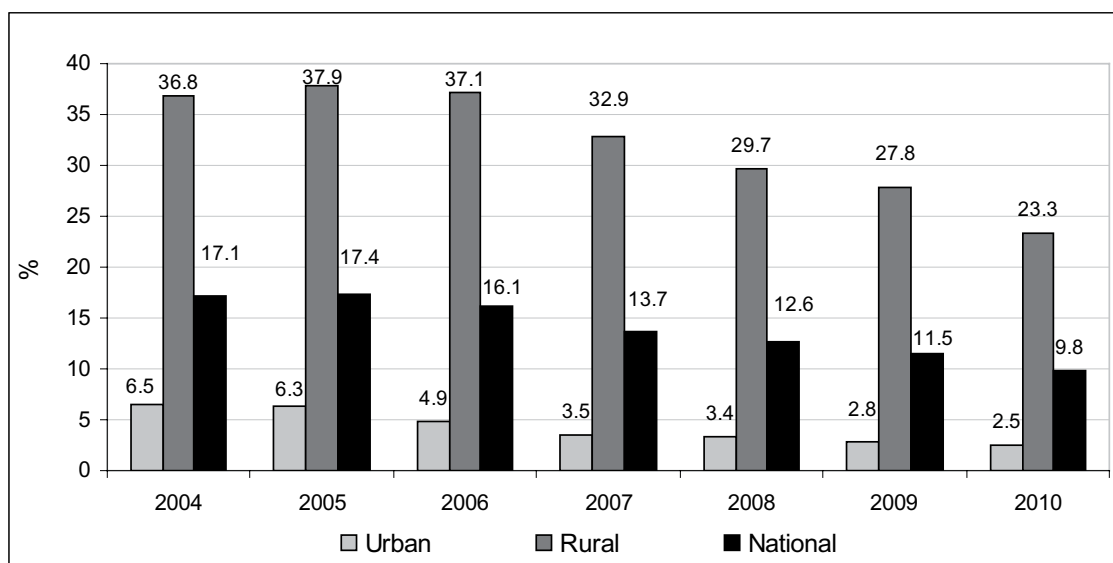
Figure 2.1. Overall poverty rates in Peru, 2004–10 (%)



Source: Data from National Institute for Statistics and Information (www.inei.gob.pe).

The situation for extreme poverty in Peru presents a similar pattern to overall poverty, with a decrease in the overall indicator and a significant gap between urban and rural, favouring the former.

Figure 2.2. Extreme poverty rates in Peru, 2004–10 (%)



Source: Data from National Institute for Statistics and Information (www.inei.gob.pe).

Table 2.2 presents the investments in social areas for the past few years. While the percentage has increased slightly in most areas, the total amount invested has increased significantly in all of them, which can be linked with the growth of the Peruvian economy.

Table 2.2. Social public expenditure (millions of nuevos soles, constant at 2001 rates and percentage of GDP)

	2003		2005		2007		2009	
	Nuevos soles (millions)	(%) GDP	Nuevos soles (millions)	(%) GDP	Nuevos soles (millions)	(%) GDP	Nuevos soles (millions)	(%) GDP
Social expenditure, basic ¹	4,878	(2.22)	6,452	(2.33)	9,531	(2.55)	15,008	(3.23)
Protection and social welfare	724	(0.33)	981	(0.34)	1,589	(0.42)	2,001	(0.43)
Education and culture	2,842	(1.29)	3,536	(1.24)	4,560	(1.17)	6,484	(1.40)
Health and sanitation	1,312	(0.60)	1,935	(0.75)	3,382	(0.96)	6,523	(1.41)
Social expenditure, complementary ²	7,725	(3.51)	9,522	(3.62)	11,329	(3.43)	19,893	(4.29)
Pension expenditure	7,627	(3.47)	9,991	(3.55)	10,484	(2.81)	11,977	(2.58)
Total social expenditure	20,231	(9.20)	25,965	(9.50)	31,343	(8.80)	46,877	(10.10)

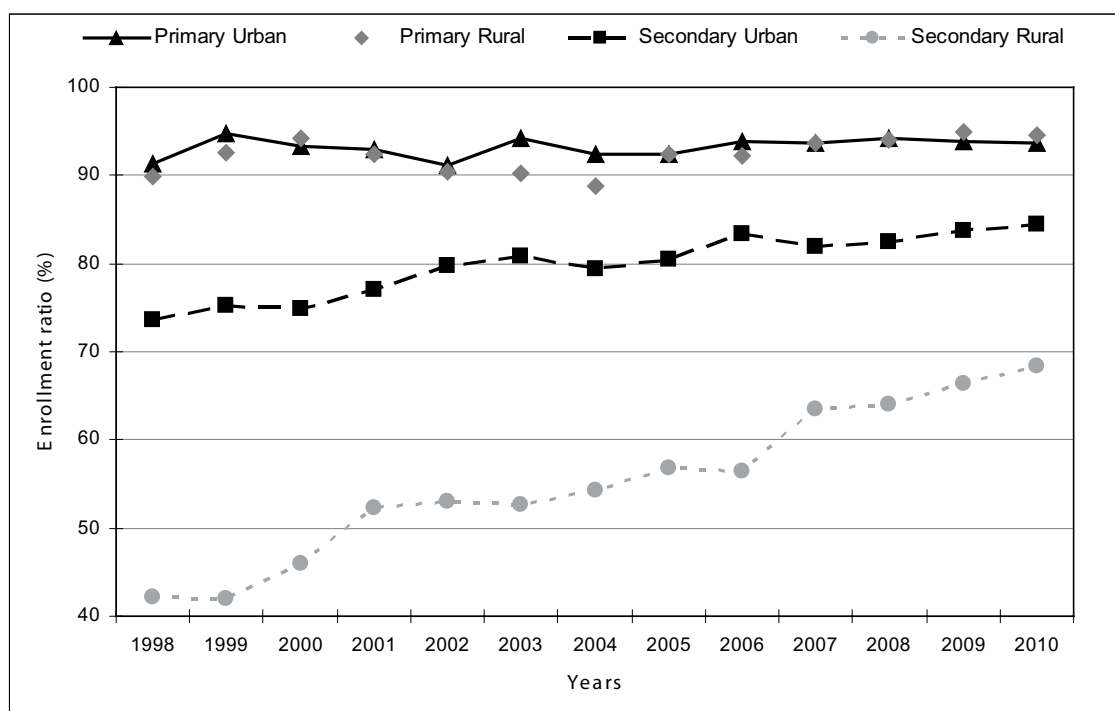
1. As defined by Oslo Consensus: basic education (early and primary), basic health, food, nutrition and water and sanitation.

2. This refers to the activities and social projects that are not considered as basic social expenditure (e.g. secondary and higher education, social and productive infrastructure, rural electrification, rural roads etc.). Source: Director General for Economic and Social Affairs (www.mef.gob.pe).

2.2 Education, health and nutrition indicators

As Figure 2.3 shows, enrolment in primary education has increased over the past few years to the point where coverage of the relevant age group is almost 100 per cent. It is worth mentioning that Peruvians, like many citizens of other developing countries, have high expectations with regard to education (IOP 2010); this has also been documented in Young Lives qualitative sub-studies. Enrolment in secondary school is low compared to primary, but it is growing. Furthermore, urban enrolment rates in secondary education are significantly higher than rates in rural areas.

Figure 2.3. Net enrolment ratio in primary and secondary education, 1998–2010 (%)



Source: Our analysis using data from the Education Statistics Department within the Ministry of Education (www.minedu.gob.pe), Central Bank of Peru (www.bcrp.gob.pe) and National Institute for Statistics and Information (www.inei.gob.pe).

Beyond enrolment however, the question of how much students learn in school has gained importance recently. The Ministry of Education has been evaluating student achievement since 1996; the most recent published evaluations have been of second grade pupils (around age 8) in 2008, 2009 and 2010. As shown below, scores have increased both in mathematics and reading comprehension, although the majority of students are still below Level 2 (indicating sufficient or acceptable given the curriculum). Furthermore, there are wide gaps between students in private and public schools, and those from urban and rural areas. There are some differences between boys and girls, which are smaller than the ones just mentioned.

Table 2.3. Student achievement in reading comprehension and mathematics, second grade; Census of Student Achievement (%)

	National	Gender		Education type		Area of residence	
		Male	Female	Public	Private	Urban	Rural
Reading comprehension							
2010							
Level 2	28.7	26.9	30.7	22.8	48.6	35.5	7.6
Level 1 or below	71.3	73.1	69.3	77.2	51.4	64.5	92.4
2009							
Level 2	23.1	21.0	25.2	17.8	43.0	28.9	11.6
Level 1 or below	76.9	79.0	74.8	82.2	57.0	71.1	88.4
2008							
Level 2	16.9	15.2	18.7	11.9	37.7	22.5	5.5
Level 1 or below	83.1	84.8	81.3	88.1	62.3	77.5	94.5
Mathematics							
2010							
Level 2	13.8	14.8	12.7	11.7	20.9	16.4	5.8
Level 1 or below	86.2	85.2	87.3	88.3	79.1	83.6	94.2
2009							
Level 2	13.5	14.5	12.5	11.0	23.2	16.8	7.1
Level 1 or below	86.5	85.4	87.6	89.0	76.8	83.2	92.9
2008							
Level 2	9.4	9.9	8.9	8.0	15.3	10.9	6.2
Level 1 or below	90.6	90.1	91.1	92.0	84.7	89.1	93.7

Notes: **Students at level 2** are those that reach the expected level of achievement by the end of second grade, given the national curriculum. **Students at level 1 or below** didn't reach the expected level of achievement by the end of the year. The cut-off scores for these are determined by education experts who assess what the students should be able to do by the end of second grade, given the curriculum. The cut-off scores are comparable across years. **Private education** refers to schools where students have to pay a fee, which varies widely among schools. **Rural education** is almost exclusively public; rural children tend to be poorer and with higher concentrations of indigenous populations; 19 per cent of primary students attend private schools nationally. While there is data on achievement for 2010, it is not comparable for the urban–rural classification, and hence not included here. Source: Unidad de Medición de la Calidad del Ministerio de Educación, Evaluación Censal de Estudiantes (www.minedu.gob.pe).

Regarding health indicators, Table 2.4 presents infant mortality, anaemia, and stunting rates by area of residence (urban or rural), region and wealth quintile. The infant mortality rate is used as an indicator of the level of child health, while anaemia and stunting rates are usually considered indicators of malnutrition. In general, the coastal regions, which are richer, more urban and Spanish-speaking, have better indicators. Other relevant health indicators in Peru are acute diarrhoeal disease (ADD) and acute respiratory infections (ARI). In 2008, the percentages of children under 36 months with ADD and ARI were about 18 per cent and 20 per cent respectively (lower rates compared to previous years) and the trends are very similar to those shown in Table 2.4.¹

¹ See (INEI–ENDES 2000, 2005, 2007 and 2008), *Indicadores de Resultados Identificados en los Programas Estratégicos*, available at <http://desa.inei.gob.pe/endes/>.

Table 2.4. Health and nutrition indicators, 2000, 2005, 2008

	Infant mortality ¹			Anaemia ²				Stunting ³		
	2000	2005	2008	2000	2005	2007	2008	2005	2007	2008
Total	23.0	15.0	13.0	60.9	57.7	56.8	57.8	28.0	28.5	27.5
Area of residence										
Urban	15.0	12.0	11.0	60.3	53.2	53.3	56.3	13.5	15.6	16.2
Rural	31.0	19.0	16.0	61.6	64.5	61.0	60.0	47.1	45.7	44.3
Region										
Lima	11.0	10.0	11.3	59.0	40.0	49.1	60.0	6.7	10.5	8.4
Rest of coast (excluding Lima)	16.0	12.0	8.5	61.8	55.0	51.2	54.1	17.1	14.5	21.3
Andes	31.0	19.0	14.9	65.9	66.0	65.7	63.0	41.7	42.4	39.8
Jungle	26.0	20.0	16.9	50.5	62.3	52.4	49.9	32.0	34.1	27.2
Wealth quintiles ⁴										
Quintile 1 (poorest)	N.A.	23.0	20.2	N.A.	66.1	66.2	56.0	55.2	53.5	54.6
Quintile 2	N.A.	18.0	15.5	N.A.	64.7	60.0	62.9	41.1	44.9	41.9
Quintile 3	N.A.	14.0	12.6	N.A.	62.4	58.6	59.2	20.6	24.7	24.8
Quintile 4	N.A.	14.0	13.1	N.A.	53.4	51.5	58.1	7.5	14.3	11.3
Quintile 5 (richest)	N.A.	2.0	5.9	N.A.	38.7	45.7	49.3	4.7	5.9	8.1

N.A.: Not available

1. The infant mortality rate is the number of deaths among children less than one year of age per 1,000 live births during the same year.

2. The anaemia rate is defined as the percentage of children between 6 and 36 months with haemoglobin <11g per DL (grams per decilitre).

3. The stunting rate is the percentage of children under 5 whose height-for-age (stunting) is lower than two standard deviations below the median for the international reference population ages 0–59 months (WHO referenced).

4. The socio-economic index is formed by aggregating possessions, characteristics and services available at home.

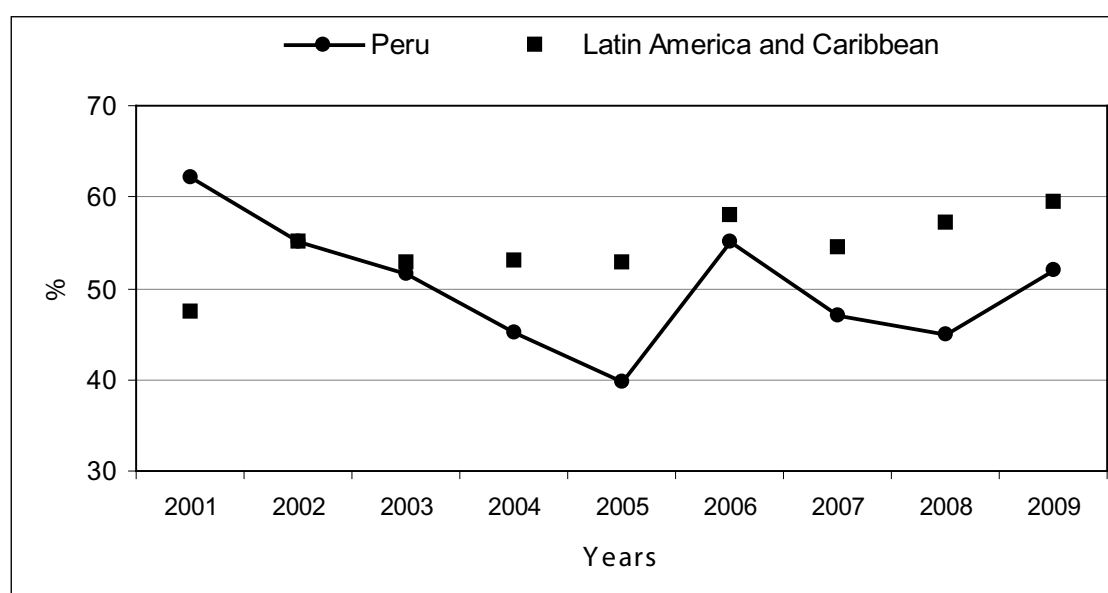
Source: INEI–ENDES 2000, 2005, 2007 and 2008, Indicadores de Resultados identificados en los Programas Estratégicos, available at <http://desa.inei.gob.pe/endes/>.

Overall, it is important to emphasise that the gaps in social indicators between different groups are often related to ethnicity. A recent study (Benavides et al. 2010) documents how indigenous children face important disadvantages in a range of social indicators. The results show also how the indigenous-language-speaking population is decreasing, which is probably an indication of how the population perceives that societal power is linked with speaking Spanish.

2.3 Politics and policies

After the political crisis at the end of the 1990s, caused by the exposure of corruption and violation of human rights during the regime led by President Fujimori, during the past decade Presidents Toledo (2001–06) and García (2006–11), were elected and served democratically. However, trust in democracy is still low, as shown in Figure 2.4. Only in 2001, when the scandals of corruption of President's Fujimori regime were fresh in people's minds and there had been two presidential elections in a year, did more Peruvians prefer democracy than Latin Americans in general. Since then the average for Peru has been lower than for the region, with a peak in 2006 when presidential elections were held. This lack of trust in the system may pose a threat for democracy.

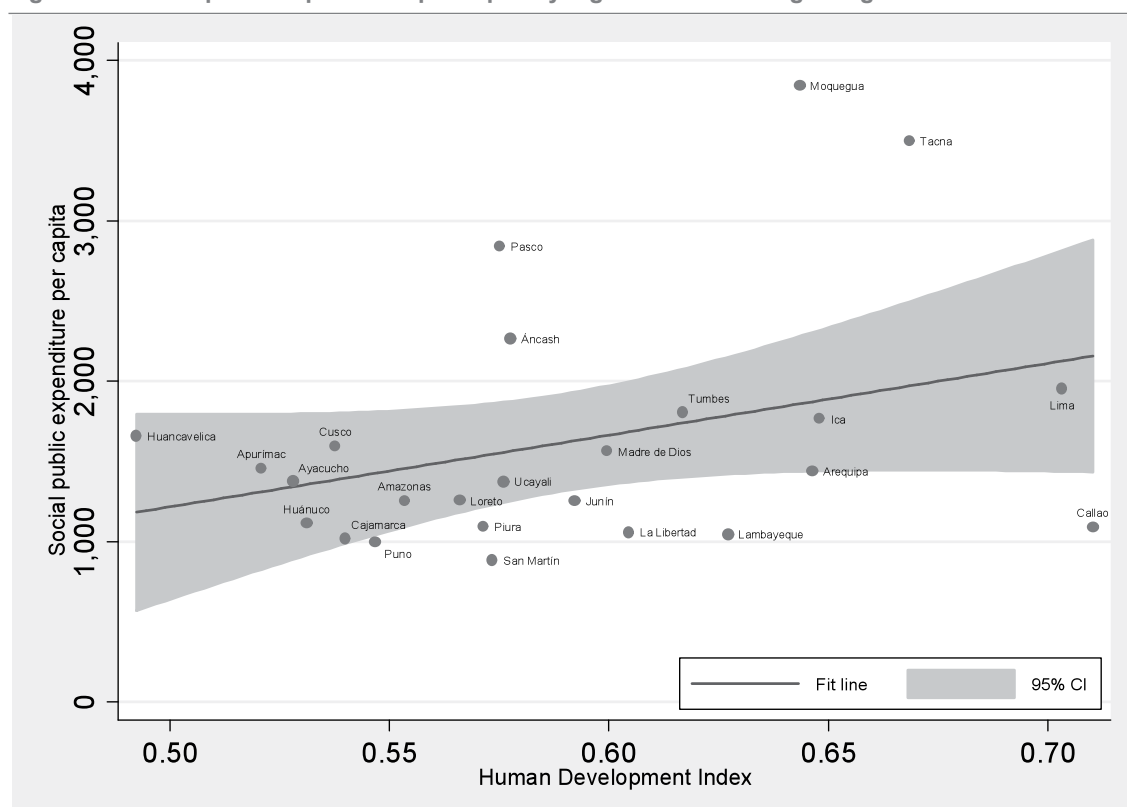
Figure 2.4. Support for democracy in Peru and Latin America, 2001–09



Note: The question was 'Which of the following statements do you agree with most?' The options available were 'Democracy is preferable to any other kind of government', 'In certain situations, an authoritarian government can be preferable to a democratic one' and 'It doesn't matter to people like me whether we have a democratic government or a non-democratic government'. The graph above shows the percentages of respondents giving the first answer. Source: Our analysis using data from Inter-American Development Bank Latinobarometro 2001–09, available at <http://www.iadb.org/datagob>.

During the past decade a programme of decentralisation has begun. Regional presidents have been elected three times already (most recently in 2010). However, while the regional governments have their own budget, assigned by the central government and raised through taxes and other incomes locally, social expenditure is uneven across regions, as shown in Figure 2.5. Contrary to what would be expected if policies were clearly designed to reduce inequalities, investment per capita is higher in regions with higher Human Development Indices (although the correlation, while positive, is low). The regions with investment above what could be expected given the HDI, such as Moquegua and Tacna, are in general the ones where the mining industry contributes a significant amount of taxes. The question then remains how to spread the benefits of the country so that they are felt by all.

Figure 2.5. Social public expenditure per capita by region and according to regional HDI



Note: 25 observations, pearson coefficient of 0.33 and a p-value of 0.10. Source: Our analysis using data from the Ministry of Economy and Finance (Integrated System of Financial Administration) 2008 (<http://www.mef.gob.pe/>) and FONCODES Poverty Map 2007.

Recently the United Nations published a report on the density of services in Peru (PNUD 2009). In the report, density is defined as the availability of services in health, education and sanitation; access to electricity and having an identity card. They found that density was higher for regions in the coast, which are better connected, more urban, and contain a higher proportion of Spanish speakers, as opposed to the andean and amazon areas. Hence it will come as no surprise that about 30 per cent of the population lives in Lima, the capital, and 55 per cent lives on the narrow coast (including Lima) (data from 2007 Census of Population and Housing).

There have been some analyses of the challenges of achieving decentralisation in ways that could facilitate local social policies aimed at poor people. Recently USAID and Perú ProDescentralización (2009) wrote an assessment of the process of decentralisation. They find that there are still significant challenges for decentralisation, including the need for new legislation that clearly specifies the functions of different agencies and the necessity of better coordinating budgets and the roles of regional and central governments. Ballón (2010) also finds several administrative issues that restrict the potential of decentralisation as a route to further democracy. For example, the current regions (main jurisdictions) are the old departments, in spite of the initial aim of having several departments join to form one region in the hope that fewer administrative units across the country would allow more efficiency in public administration and economic growth. Also, Ballón points out the lack of a vision for what regionalisation should be, poor planning and implementation of reforms to accommodate the decentralisation, and insufficient mechanisms for the participation of the population in their

regional governments. Still, this decentralisation process seems irreversible at this point, thus the above is to point out to the need to refine it.

Poverty has been identified as one of Peru's main problems by several governments. In 2007, the national strategy *Crecer* ('to grow') was created to fight poverty and childhood malnutrition.² As such, it coordinates programmes developed by ministries in different social sectors (e.g. Health, Education, and Women and Social Development). One of its key programmes is *Juntos* ('together'), a conditional cash transfer programme aimed at poor families in impoverished, rural areas.³ *Juntos* currently reaches around half a million people in the country, making it the largest poverty reduction programme. While Young Lives has performed some analysis of *Juntos* (Jones et al. 2007; Alcázar 2009; Streuli 2009), evidence of its impact from rigorous evaluations is still lacking. Young Lives has gathered information on children's participation in *Juntos* that should help to get feedback on its implementation and impact. For further details on *Juntos* and its impact on households, see sub-section 5.9. As mentioned above, *Crecer* involves coordination with other programmes as well, for example, the *Wawa Wasi* programme aims to provide day-care, nutrition and health services for poor children aged 6 to 48 months, as well as parenting education.⁴ Our research suggests that, while it is popular among mothers, the children are not showing improved results in motor and cognitive development compared to non-participating children; hence the need to strengthen this quite unique programme (Cueto et al. 2009b),⁵ especially in the context of decentralisation (Guerrero and Sugimaru 2010).

Young Lives has also gathered information on another programme aimed at children, the *DEMUNA* (*Defensoría Municipal del Niño y del Adolescente*). This is a network of drop-in centres that offer services to help protect the rights of children and young people. While the coordination nationally lies with the Ministry of Women and Social Affairs (MIMDES), *DEMUNA* needs to be organised by municipalities at the district level. The variety of services they offer differs depending on the commitment and resources given locally (Boza 2007). Young Lives has also included questions on the Universal Health Insurance Plan (*Seguro Integral de Salud*), an important programme that seems to be increasing its profile (data on all of these is presented in section 5.9).

Another significant and recent policy has been outcome-based budgeting (*presupuesto por resultados*). This initiative, run by the Ministry of Economics, aims to assign budget to programmes that have demonstrable impacts. Currently they are emphasising a few programmes, such as educational achievement by Grade 2, registration of children for national identity cards, and infant nutrition and health. Again, it is expected that the Young Lives surveys will help assess whether or not the goals of reducing inequalities as proposed in this programme are indeed achieved.

2.4 Looking forward

The World Bank has recently developed reports on inequality of opportunities for Latin America (Paes de Barros et al. 2008). Based on notions of social justice, the authors argue that the opportunities individuals have to access services such as education (e.g. finishing

2 See <http://www.creecer.gob.pe/>.

3 See <http://www.juntos.gob.pe/intro.php>.

4 See <http://www.mimdes.gob.pe/programas/wawawasi.html>.

5 The sample size for this study was quite small, around 100 children, while the programme reaches over 50,000 children across Peru. Still, to date it is the most rigorous study carried out on the effectiveness of this programme.

sixth grade in time and attending school when aged 10 to 14) and services at home (e.g. safe water, sewage and electricity) should not be linked to individual 'circumstances' over which children have no control (i.e. gender, race or ethnicity, place of birth, education of the father and the mother, and main occupation of father). Based on this, they produced an index of inequality of opportunities for 19 countries, where Peru is below the regional average. This link between opportunities and personal, family and community characteristics is at the heart of what Young Lives aims to analyse and give feedback on to a variety of audiences interested in promoting policies aimed at the poor children.

In concluding this section, we think that Peru currently faces the enormous challenge of making its impressive economic growth more inclusive, so that the inequalities in opportunities and outcomes that are currently so closely linked to area of residence, ethnicity, maternal education, poverty and in some cases gender diminish over time through concerted policies and programmes.

In the recent presidential elections (2011), the two run-off candidates emphasised social inclusion as a priority. As President Ollanta Humala begins his term (2011–16), many Peruvians have high expectations that this time economic growth will reach poor, rural and indigenous people, among other groups that have traditionally shown the poorest social indicators. This is likely to imply changes in budget priorities, and cancelling, revising or redesigning laws and programmes. We trust that in this reordering of social priorities, social research such as Young Lives (which unfortunately is scarce) will be considered in policy decisions, and that this research will be recognised as a way to target, monitor and evaluate initiatives so that they will accomplish their goals.

3. Study design and methods

Young Lives is designed as a panel study following the lives of 3,000 children in each of the four study countries over 15 years. In Peru the sample consists of two cohorts: a Younger Cohort of 2,052 children who were aged between 6 and 18 months when the first survey round was carried out (in 2002) and an Older Cohort of 714 children then aged between 7.5 and 8.5 years.

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 is expected to show early signs of trends affecting those particular people or areas. For example, monitoring a typical slum in a given city may detect events and trends which will have an impact on most slums in that city.

Round 1 of data collection took place in 2002, Round 2 in 2009, and this report gives initial analysis from Round 3 in 2009. In Round 3, all of the children were interviewed, as well as their primary caregiver. 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 Sampling

The Young Lives sampling strategy was based on randomly selecting 100 children within 20 clusters or geographic sites. This strategy was conceived as a way of looking at 'mini-universes' in which detailed and reliable data could be collected in order to build up a picture of the area covered by the site, as well as tracking changes in these variables over time. Further, it was decided to over-sample poor areas, excluding rich areas from the sampling frame (Wilson et al. 2003: 11).

The idea of looking at the heterogeneity of children living in poverty rather than at national average statistics made the project move away from a random clustered sampling approach. Thus the project was framed in the following terms: 'Young Lives is intended much more as an in-depth study of relationships between pieces of information, rather than an instrument to collect national statistical results, such as is the requirement from the more traditional systems' (Wilson et al. 2003: 13).

The Peru team followed a slightly different sampling approach from the other three countries, which can be summarised in the following three steps:

First the country was divided into equal geographic regions by population size using available data. These clusters were ordered by a poverty index and were systematically sampled, randomising the starting place. The most recent poverty map of the 1,818 districts in Peru at that time (FONCODES 2001) was used to select the 20 sentinel sites. Factors which determined the ranking of districts included infant mortality, housing, schooling, roads and access to services. To achieve the aim of over-sampling poor areas, the highest-ranking 5 per cent of districts were excluded, enabling a systematic selection of the remaining districts, which yielded approximately 75 per cent of sample sites considered to be 'poor' and 25 per cent 'non-poor'. Districts were listed according to population size. A random starting point was then selected and a systematic sample of districts taken using the population list.

Ten selection runs were made by computer and the resulting sample of districts was examined to cover rural, urban, peri-urban and jungle areas and for logistical feasibility, and we selected one of these for the sampling.

Second, a random population centre (i.e. village or hamlet) was chosen within the district. The maps of census tracts for the selected population centres were obtained from the national statistics institute (INEI), after which a census tract was randomly selected. Within each chosen census tract, the number of *manzanas* (street blocks) was counted and, again using random number tables, one was selected as the starting point.

Finally, the selected block was assigned to one fieldworker and neighbouring blocks assigned to the other fieldworkers (one each). All dwellings in each block or cluster of houses were visited to search for children of the right ages. On completion of one block, the next available neighbouring block was visited by the fieldworker until the required number of children was found.

All districts were ranked according to the poverty index. Since all districts were divided into equal population groups before sampling the 20 clusters, we can contend that each district had a probability of being selected that was proportional to its population size.

The project team visited a total of 36,375 dwellings to recruit 2,751 children. Although this may seem high, we estimated (using the Peru population census information) that we would need to visit 13 dwellings to recruit one child of the right age. This is about the same ratio reported for our recruitment process. A more thorough explanation of the sampling methods and the characteristics of the sample can be found in Escobal and Flores (2008).

Figure 3.1. Map of Young Lives study sites in Peru (showing regions)



3.2 Attrition

Sample attrition occurs when children who were surveyed in the first round of a survey are either not found or refuse to participate in later rounds. Young Lives, like all longitudinal surveys, is concerned to minimise the potential of attrition bias, which occurs when attrition is non-random and the variables affecting attrition might be correlated with the outcome variable to be studied. We have taken care to ensure that we can track as many children as possible between the survey rounds to minimise the risk of drop-out.

Attrition rates for Peru are low: 4.4 per cent since the start of the study for both the Younger and Older Cohort. The attrition rate in Peru is low compared to other longitudinal studies but slightly higher than that in the other study countries. Tracking children is especially difficult in Peru because the country is geographically very dispersed and migration is higher in Peru than in the other study countries, making it necessary to follow them wherever possible to maintain these low attrition rates.

Table 3.1. Attrition from Round 1 to Round 3

	Round 1 (n)	Round 2 (n)	Round 3 (n)	Attrition R1 to R2 (%)	Attrition R2 to R3 (%)	Attrition R1 to R3 (%)
Older Cohort	714	685	678	3.7	0.7	4.4
Younger Cohort	2,052	1,963	1,943	3.5	0.9	4.4

There have been a total of five deaths among the Older Cohort children, and 20 among the Younger Cohort (17 between Round 1 and Round 2, i.e. before age 5, and three between Round 2 and Round 3, i.e. between 5 and 8 years).

3.3 Round 3 data collection

Most of the data collection in Round 3 was carried out between July and December 2009, and the remaining about 20 per cent who had migrated were surveyed between January and March 2010. Separate questionnaires with age-appropriate questions were used with the two cohorts of children, while the same questionnaire was used with caregivers for both cohorts and to collect community-level data. The four questionnaires used were therefore:

- Child questionnaire for Younger Cohort children
- Child questionnaire for Older Cohort adolescents
- Household questionnaire for caregivers
- Community questionnaire (context instrument).

Table 3.2. Contents of Round 3 questionnaires**Child questionnaire: Younger Cohort**

- Section 1 School and work activities
- Section 2 Feelings, attitudes and perceptions
- Section 3 Social networks, social skills and social support
- Section 4 Pets
- Section 5 Risk aversion and time discounting tests

Additionally children were administered the following tests: Locally adapted versions of the Peabody Picture Vocabulary Test, adapted version of the Early Grade Reading Assessment and a mathematics test.

Child questionnaire: Older Cohort

- Section 1 Time use and activities (including work)
- Section 2 Feelings, attitudes and perceptions
- Section 3 Schooling and school environment
- Section 4 Child health
- Section 5 Social networks, social skills and social support
- Section 6 Migration
- Section 7 Household issues
- Section 8 Children's offspring
- Section 9 Pets

Additionally children were administered two types of tests: (1) locally adapted versions of the Peabody Picture Vocabulary Test, a cloze reading test and a mathematics test; (2) Confidential self-report on health risk behaviour (i.e. consumption of alcohol, tobacco and illegal drugs, and sexual behaviour, and experience of violence).

Household questionnaire (caregivers of children in both cohorts)

- Section 1 Parental background, including migration
- Section 2 Household education and child education
- Section 3 Livelihoods and asset framework
 - 3a Land and crop agriculture
 - 3b Time allocation of adults and children
 - 3c Productive assets
 - 3d Income (including relative importance of source of income, monetary and non-monetary earnings and income)
- Section 4 Household food and non-food consumption and expenditure
 - 4a Expenditure on food bought and supplied from own sources
 - 4b Non-food expenditure
- Section 5 Social capital
 - 5a Support networks
 - 5b Family, group and political capital
 - 5c Collective action and exclusion
 - 5d Access to key services
- Section 6 Economic changes and recent life history
- Section 7 Socio-economic status
- Section 8 Child activities
- Section 9 Health
 - 9a Child health
 - 9b Healthcare
 - 9c Food security
- Section 10 Anthropometry
- Section 11 Caregiver perceptions and attitudes
- Section 12 Mother's health

Community questionnaire (context instrument) topics for Peru**General module**

Section 1	General community characteristics
Section 2	Social environment
Section 3	Access to services
Section 4	Economy
Section 5	Local prices

Child-specific modules

Section 1	Educational services (general)
Section 2	Educational services (primary and secondary)
Section 3	Educational services – primary
Section 4	Educational services – secondary
Section 5	Health services
Section 6	Child protection services

Several new research topics were added to the Round 3 questionnaires to accommodate the fact that as children get older, several new issues become important and relevant. For example, questions on the schooling and time use of the Younger Cohort were added to the Household questionnaire. And the Young Lives team in Peru added several country-specific research areas to the core modules on account of their relevance to current policy debates and programmes specific to Peru.

An innovative new section that was piloted in Round 3 was a self-administered questionnaire for the Older Cohort covering personal relationships, adolescent health issues, and risky behaviour. Preliminary results are also presented here.

The anonymised data from the household and child survey are archived in the UK with the Economic and Social Data Service (ESDS) (project reference: SN 5307)⁶, and we are currently working to develop a panel to link the three datasets, which we expect to archive with ESDS in early 2012. The data is also available on CD-ROM for users in developing countries.

3.4 Qualitative sub-sample research

The household and child survey is supplemented with in-depth case studies of 50 children (around six Older Cohort and six Younger Cohort children) in four of the 20 study sites in each country. This qualitative research, which was carried out in 2007, 2008 and 2011, is a major feature of Young Lives and focuses on three main research questions, related to (1) the key transitions in children's lives, (2) children's understandings of well-being and poverty, and (3) the policies, programmes and services available to children.

This work draws on a range of qualitative and participatory methods to understand the diverse aspirations and experiences of children from different geographical, socio-economic and cultural locations. It is premised on the notion that children are social actors in their own right, capable of providing essential information about the way in which poverty impacts on their lives and well-being. Children's own understandings and perspectives serve as a major component of the qualitative data, along with the views of key adults in their lives. The aim has been to produce a detailed and grounded description of children's lives and the dynamic processes that underlie their life trajectories in ways that will complement quantitative data analysis and inform policy and communications work. The research investigates the interaction of resources, capabilities, structures and children's agency, and focuses on the

6 <http://www.data-archive.ac.uk/findingData/snDescription.asp?sn=5307>.

meanings children and caregivers give to their actions and experiences in the context of the opportunities and constraints that shape their lives.

Case studies are interwoven throughout the findings section of this report to illustrate further the issues we highlight and the daily reality of children's lives.

4. Previous findings from Young Lives

In this section we briefly present some of the main analysis of Young Lives data from Rounds 1 and 2. Although on many occasions we try to merge all types of data into mixed-methods studies, for the sake of simplicity we present below a summary of the quantitative and qualitative studies (i.e. from the household and child surveys or from the in-depth qualitative sub-sample).

4.1 Summary of quantitative findings

As mentioned above, Peru has enjoyed substantial economic growth during the last decade. This macroeconomic performance has resulted in an increase in social public expenditure, which has almost doubled in real terms between 2002 and 2009. There has also been an increase in awareness of the importance of early childhood among policymakers; for example there has been a big emphasis on reducing rates of stunting through interventions aimed at young children. Although poverty has diminished, most of the reduction in poverty has been concentrated in urban areas around the coastal region, with small reductions in rural areas.

Despite this good economic performance and the positive policy context, profound inequalities persist. While one in every three households are poor, in 2009 more than half of the children under 5 were living in poor households. In addition, inequalities shown by child well-being indicators persist (Benavides et al. 2011). Malnutrition remains high and progress through school remains low in the poorest regions. In this section we report a brief summary of findings from two rounds of household surveys for Peru. First we present a summary of Round 1 and Round 2 country reports (Escobal et al. 2003; Escobal et al. 2008) Next we summarise recent key Young Lives research that has been produced with these two rounds of data. As we show, many of the results resemble national trends. However, there are specificities that can only be identified using longitudinal data like Young Lives.

Summary of Country Reports for Rounds 1 and 2

Between 2002 and 2006/07, years in which Young Lives data were collected, we observed an improvement in household living standards for both the Younger and Older Cohorts across several indicators. Most of these improvements were found in urban areas, thus closely resembling Peru's trends over the same time period, and pointing to the inequalities that persist despite recent economic growth.

We see that household resources have improved in terms of both wealth and assets, and this is reflected in the perceptions of poverty reported by the children's caregivers. While in 2002, 32 per cent of the younger children's families felt they were 'destitute', this had fallen to 22 per cent in 2006/07 and the number of families reporting that they could manage to get by increased from 27 to 37 per cent. In the Older Cohort, the number of families reporting that they felt destitute fell from 36 to 28 per cent, although there was only a small change in the number of families feeling they could get by (up from 25 per cent to 27 per cent). These changes may be associated with significant improvements in access to services and perhaps reductions in poverty, as reported before.

Regarding child-specific well-being indicators, Young Lives is in a unique position to describe and explain how inequality gets reproduced and widens through the children's life cycle. Stunting, which is a major issue for Peru and of great concern to policymakers and planners because it is seen as an indicator of a country's future human capital (Victora et al. 2008), is present in both rounds for both cohorts. Despite a high rate of breastfeeding, stunting was evident even in the youngest members of the Younger Cohort in Round 1, when the children were aged between 6 and 18 months. (We used WHO standards to measure stunting rates.) In this Cohort higher rates of stunting were found in the rural children at both ends of the cohort. Both rural and urban populations showed increased rates of stunting in Round 2, with an overall increase from 31 per cent to 37 per cent. Some increase is expected, as growth retardation leading to stunting mainly occurs in the first two years of life and usually worsens during the period when children are aged between 6 months and 18 months, a time of transition from a predominantly breast milk diet to sharing the family diet. Most of the younger children in this cohort were only at the beginning of this downhill slope. The data document that the difference in malnutrition rates appears to open up between children in urban and rural areas during the first six months of life and remains relatively constant after that, suggesting that the gap itself is linked to conditions affecting children at a very early stage of their life.

These higher rates of stunting in rural areas are a national concern but the data also show that urban children are further favoured in two respects compared to their rural peers. First, albeit relatively short compared with international norms, on average urban children maintain their position on the growth curves after the early period of stunting. Secondly, there is evidence of 'catch-up' growth and the chance of this happening is greater for urban children aged 4 to 5 years old. Although further research is ongoing, current results show that part of the catch-up process is mediated by access to assets such as maternal education and public services such as electricity, safe water and proper sanitation facilities. Young Lives data have been able to show that those children who were once stunted but have recovered have similar cognitive function to those who were of normal height at Round 1 and Round 2 (Crookston et al. 2010).

In Peru 43 per cent of women are overweight or obese and studies in Lima show high overweight rates in schoolchildren (Liria et al. 2008). Young Lives data also contribute to documenting and understanding the extent of the problem of overweight and obesity in Peru. In the Younger Cohort more than half of mothers and 41.5 per cent of fathers were overweight or obese, and between 36.5 per cent and 21.9 per cent, depending on the round, above the 85 percentile for BMI compared with an expected 15 per cent in the reference population. Young Lives will be able to show how these children progress and the extent to which overweight and obesity impact on their lives. Current research is also analysing how increasing health problems affect children in Peru, as the country transitions from a lower-middle-income country to a higher-middle-income country: Round 2 data show that 17 per cent (urban 19 per cent, rural 13 per cent) of children aged 4–5, and 22 per cent of children aged 10–11 are overweight, and is currently researching into the causes and consequences of this problem.

For the Younger Cohort, enrolment in pre-school education was on average high (81 per cent) but affected by inequalities according to rural/urban residence, ethnicity and socio-economic status. Maternal education was found to be a strong factor that determines pre-school enrolment, as expected. In Round 2, the older children were at the stage where they were just completing the transition from primary to secondary school. For this cohort, school enrolment

was almost universal. However, the majority of these children are over-age (above the normal age for their grade, either because they started school late or had been kept back due to poor achievement). Maternal education is a strong predictor of this phenomenon. In addition, the data show evidence of a gender gap, as boys in urban areas are more likely to be over-age for their grade.

Finally, for the Older Cohort, paid work increased substantially between the first two rounds. In Round 2, when the children were aged 11–12, seven children were working and did not attend school but 27 per cent of children combined work and school. As expected, paid work was more common among boys in both urban and rural areas. Rural children were more likely to be working, mainly because of boys doing paid farm work. In addition, evidence of a gender dimension was also found, with boys more likely to be involved in paid activities and girls more likely to undertake unpaid domestic chores. Those households where wealth decreased were found to be more likely to have boys engaged in paid work. Nevertheless the combination of school and work did not adversely affect children's diet or their current nutritional status (BMI), although at 15 years but not at 11 years children who worked seemed to have a more negative perception of their health. There was an excess of accidents among children combining work and school. In Round 3 more than 90 per cent of the injuries associated with work occurred during agricultural work.

For many of the above topics there are data and further explanations of the variables in the results for Round 3 in section 5.

Summary of recent quantitative research

A common thread of most of the studies that are being carried out using Young Lives data is the importance of highlighting how poverty and inequalities are transmitted from parents to children. Inequality is associated with access to services and quality of public services accessed, as well as with outcomes in poverty, health, nutrition and education. Inequality is associated with socio-economic status, mother's mother tongue/ethnicity (with Spanish speakers faring better), and gender; other intersecting criteria could be geographical indicators such as urban/rural area of residence or residence in the coast, Andes and jungle) or maternal education. Thus more than showing changes in child well-being 'on average' as children get older, Young Lives research is interested in showing how well-being gaps evolve and under which circumstances these inequalities may be reduced through policy interventions.

Several studies done within the project have shed light on the potential vulnerabilities that a more open economy may generate in children. As Peru transits into a fast-growing open economy (with trade accounting 38 per cent of GDP, up from 20 per cent just two decades ago) there is wide concern about how children will be affected by the increase in imports that such a path may entail. Young Lives researchers have addressed the distributional impacts for Peru of deepening trade liberalisation through a Free Trade Agreement (FTA) with the United States, focusing on several of the potential impacts that it may have on the welfare of children, especially poor children (Escobal and Ponce 2007). The study shows that although the effect of the FTA may be positive in the long run, it may have a negative short-term impact in sectors that are unable to adjust rapidly enough to the new economic context. The study shows that even if households benefit from trade liberalisation, children may become vulnerable if female labour participation increases and childcare becomes the responsibility of older siblings, thereby reducing their chances of attending school. In this scenario, and considering that Peru

has been signing numerous free trade agreements beyond the FTA with the United States, complementary policies need to be put in place in order to cope with these vulnerabilities. In particular, the study highlights the possibility of increasing the number of childcare centres as the FTA may increase female labour participation, especially in the rural coastal regions as agriculture exports increase. Conditional cash transfers may also help to reduce such vulnerabilities.

Young Lives has also conducted some research around food insecurity, an area of concern that has increased in the last few years, as the international crisis and the increase in food prices have raised awareness of the vulnerability that sharp increases in food prices may generate. Food insecurity is intrinsically related to hunger and poverty and is multidimensional. Young Lives in Peru has studied nutrition through analysis of anthropometry, household acquisition of food including different food groups, and a set of questions that measure families perception of food insecurity. Preliminary results highlight differences in the patterns of food insecurity in urban and rural families. Rural families were more likely to have food supplies secured for the future but variety and quality were limited. Urban families often live from day to day, anxious about whether they will be able to buy food but with access to greater diversity, food quality and assistance (Vargas and Penny 2010).

Another study related to food insecurity is how the pattern of food consumption impacts on children. Almost one in four children under 5 in Peru is stunted, compromising their future health and development. This is thought to be at least in part due to the lack of micronutrients in children's diets during their first months of life. Among other dietary benefits, animal source foods (ASF) are important sources of available micronutrients but limited access to these foods is thought to restrict the feasibility of recommending ASFs in the areas of greatest need. However data on family acquisition of food, including ASFs during infancy, show that only 2.4 per cent of families report acquiring no ASFs, although the median amounts were very small. Urban families spent twice as much per capita on ASFs as rural families. The research related ASF acquisition during infancy to later height (Round 2) and showed that height-for-age at 4 to 5 years had a small but significant association with family per capita expenditure on ASFs during the critical complementary period from 6 to 18 months (Penny et al. 2008).

Research has also focused on how education can narrow or widen the gaps in key dimensions of inequality (socio-economic status, mother's mother tongue/ethnicity and gender). Diaz (2007), for example, studied the impact of preschool (for children aged 3 to 5). He found a positive effect of attending formal preschools, (i.e. with licensed teachers) as children who had attended preschool were more likely to be on the right grade for their age in primary and have higher achievement in simple maths, reading and writing questions by age 8. For those attending non-formal preschools (i.e. with local mothers in charge of classes) there was no significant impact on school achievement compared to those not attending preschool.

Balarín and Cueto (2007) studied parental participation in public schools, and how lack of participation may affect school achievement negatively. Parents often don't know how schools work or how they could promote their children's learning at home. In some cases they didn't know how their children were achieving (e.g. that they needed to repeat a grade). Teachers and headteachers also felt that parents weren't sufficiently involved in their children's education. The study found that the channels of communication tend to be poorer with families with lower socio-economic status, widening the school achievement gap between poor and less poor children.

Although the Peruvian conditional cash transfer programme *Juntos*⁷ is similar to many cash transfer programmes being implemented in Latin America and elsewhere, it has the unique characteristic of being focused solely on rural children. This in itself is a feature that helps reduce child inequality in Peru. Young Lives is committed to developing several research initiatives around this programme as our study is uniquely positioned to evaluate the effects of this intervention. This is so because *Juntos* did not construct a baseline or a control group to evaluate its impact. Initial research suggests that while families greatly appreciated the programme, the quality of the services that families had to agree to use (i.e. health and education) had not been improved, which limited the potential benefits of the programme (Alcazar 2009).

The relationship between migration and child well-being is also a topic of research. Escobal and Flores (2009) have studied how maternal migration in general, and forced migration in particular, can have a strong impact on children's well-being. Maternal migration affects early child-rearing practices through different channels. It can help increase access to improved health services or it can improve the knowledge base available to mothers. However it can also have negative effects if social networks available in the community of origin are lost or if the mother faces discriminatory practices in the community where she raises her child. The study used forced migration episodes (related to displacement through the Peruvian civil war) to identify direct and indirect channels through which child-rearing practices affect key child welfare outcomes (nutritional status – proxied by stunting and global malnutrition scores). The results suggest that maternal migration has had a positive impact on the nutritional outcomes and cognitive achievement of offspring. However, the study also finds that there are heterogeneous impacts, as different types of migration trajectory (rural to rural; or rural to urban – to intermediate cities or to the capital, Lima) can be associated with the prevalence of different channels affecting child well-being. Those channels are the income channel, as migration helps people find new income-generating opportunities; the information channel, as migration enables people to gather information about child care and health-related practices; and the access to services channel, as migration can increase, or in some cases hinder (through exclusion), access to key public services.

4.2 Summary of recent qualitative research

Qualitative sub-studies were conducted in four of the 20 Young Lives sentinel sites, with a sub-sample of 51 children, in two rounds of data collection in 2007 and 2008. The qualitative sub-studies gathered information around three main research questions, related to (1) the key transitions in children's lives, (2) children's understandings of well-being and poverty, and (3) the policies, programmes and services available to children. In all of these topics, several inequalities were revealed.

Regarding the key transitions in children lives, *educational transitions* were important for both cohorts of children during both rounds of data collection. Thus, in Round 2, within the Younger Cohort, children were experiencing the transition from preschool or home to primary school; while among the Older Cohort, children were experiencing the transition from primary to secondary school. Extended case studies built on information gathered in the two rounds allowed us to confirm and illustrate major findings from one round to the next. Special attention was paid to children's perceptions about transitions and the similarities and differences between educational levels, as well as access to each of these services.

⁷ For more information on *Juntos* see section 5.9 below.

Thus for example, although most of the Younger Cohort children in the sub-sample had experience of preschool, three of them had never been into a preschool before starting in first grade. Those three were girls, and two of them were rural. The third one, although living in the city, was from an indigenous background. This confirmed the inequalities identified through the survey data, which show disadvantages according to area of residence, gender and ethnicity, and allowed us to explore them more in depth (Ames et al. 2009). Qualitative research confirmed that lack of pre-school education may be a significant disadvantage in terms of children's experience of first grade, but that family support and personal characteristics may help to foster better adaptation (Ames et al. 2010). Other issues regarding the transition to first grade were common to most schools such as the disconnect between preschool and primary school systems, the importance of the first grade teacher, the stark contrast between play and work (less of the former and more of the latter as children progress to primary school), and the use of physical punishment in schools. The need for greater respect for cultural diversity came up as a central finding in regard to younger children from indigenous backgrounds, both in rural and urban areas. Despite discontinuities and hardships, most of the younger children preferred primary school to preschool because they felt they would learn more and they saw the more serious environment as a sign that they were 'growing up'.

Inequalities and discontinuities were also present in the transition to secondary school: rural children were more likely to migrate to pursue secondary education than their urban peers, because of lack of secondary schools or lower quality of education in their home villages. Also, there were more 'over-age' rural children (children above the usual age for their grade) and they expressed doubt on moving into secondary school because of this delay. Despite these differences in access, most of the older children identified a common set of differences between secondary school and primary school, including, in secondary school, a greater number of subjects and more difficult subjects; more time dedicated to studying; and the need to take more responsibility for their own education as teachers were less attentive to the needs of individual students. Secondary schools were also seen as a more dangerous and violent environment than primary schools, at least in urban areas. Some children from indigenous backgrounds also reported discrimination in urban areas when attending school and urban girls in particular were concerned about issues of sexual abuse. Despite all of this, children in the Older Cohort were positive about this transition, but they identified challenges related to more demanding work and fears of not catching up with academic demands or not having friends. The importance of peer relations emerged as central to ease the transition and adaptation to secondary school (Ames and Rojas 2011).

Regarding children's time use and *social transitions*, the research showed how younger children from rural areas were experiencing changes in their roles and responsibilities within their homes, going from being 'little children' to more 'grown up' children, and thus assuming progressively more responsibility for domestic and productive activities and developing skills that prepared them to be productive members of their households (Ames et al. 2009, 2010). The Older Cohort children, both in urban and rural areas, had already a greater degree of responsibility than the younger children in Round 1, participating in a wide range of family activities and contributing to income generation. By our second visit (2008) however, their involvement in paid and unpaid work had increased, especially in rural areas.

Young children's understandings and experiences of well-being highlighted a range of social, emotional and education-related indicators across sites. Family was central to younger children's understandings of well-being (described in terms of having both parents, being

well cared for by them and having strong and good family relationships). Education was an indicator of well-being, described in terms of going to school regularly, getting good grades and having access to food aid programmes in schools. Older children valued family as an indicator of well-being, and along similar lines. Education was central to their understandings of well-being and was described in terms of doing well at school and having increased opportunities for the future. Work was valued as an indicator of well-being and was seen as a way to learn important new skills and contribute to family income. However, having to work 'too much' and exposure to hazardous work were considered signs of a child or young person not being well. Older girls identified discrimination, sexual abuse and physical changes as signs of ill-being. Physical punishment, at home and at school, was seen by older children as an important indicator of child ill-being. Children's *understandings of poverty* showed a strong association with lack of satisfaction of basic needs, such as food, clothing and housing, and undesirable family circumstances, such as having large families and not being able to support them, or having no family at all. Education was also important in children's understanding of poverty: children wanted education in order to become professionals, and thus to have a better life, as a way out of poverty (Ames and Rojas 2011; Rojas and Portugal 2010).

Generally, access to health and education services was good in all four research communities. However, children and caregivers were critical of the quality of services, especially in rural areas. Education services varied greatly between rural and urban areas, and between public and private provision. In all of the research communities, caregivers felt that their children's education could be better. Caregivers and children highlighted the need for better-trained teachers, more attention for individual students, improved school infrastructure, and better, cleaner facilities. In the urban communities, lack of green spaces and safe places for children to play emerged as a particular problem. Also, health services, were considered of poor quality, particularly in rural areas. There were some changes between rounds related to access to services in the four communities, but rural areas showed more and bigger changes, such as the expansion of electric power supply and the arrival of mobile phone signals in both rural sites. In the urban sites there were some changes aimed at improving the neighbourhoods' streets.

5. Round 3 survey results and discussion

In this section we present some of the main results of the Round 3 survey for Peru, for both the Younger and Older Cohorts. Given that this is a longitudinal study, we present the results whenever possible and relevant across all three rounds of survey data. Changes between rounds are expressed as percentage point differences when we are dealing with rates and as percentage changes when the variable is expressed in levels (monetary values or indices). Furthermore, we take advantage of the fact that in Round 3 our Younger Cohort was approximately the same age as our Older Cohort in Round 1. When relevant we present these two results together, to examine whether the conditions of children have improved. In general, through the longitudinal and cohort comparisons, we explore how has inequality evolved among the children in our sample.

The tables include descriptive statistics only. With them we attempt to show the scale of inequalities in some of the indicators and their evolution across rounds and cohorts. The results are not aimed at providing the reader with a comprehensive picture of childhood poverty or establishing cause-and-effect associations; this would require an analytical framework and methods that go beyond the general purpose of this report. Still, we believe the data provided below are suggestive for both policy action and further research. As noted elsewhere, in-depth research dealing with many of the topics presented below has been published in working papers, technical notes, book chapters and research articles, which are available on our website.⁸ Quantitative surveys and databases from the three rounds can also be accessed through the UK public data archive. Complementary data is presented in the appendices of this report.

It is important to highlight that not all data comes from our quantitative surveys. As mentioned before, since 2007 Young Lives has implemented a qualitative sub-study. For this, data was collected in four of the original 20 Young Lives sites: two in rural areas (one in the Amazon, Rioja, and the other in the Andes, Andahuaylas) and two in urban areas (Lima and San Román in the southern Andes). Below we present analysis and case studies with data from the second round of qualitative data collection, carried out between September and November 2008, with a follow-up to complete fieldwork in San Román in July 2009. Data collection was carried out with both cohorts of Young Lives children, as well as their caregivers, teachers, community representatives and peers. The sub-sample included 49 children. Children's names have been replaced by pseudonyms to protect their identities, as well as the places where they live, which have been named after the province in which they are located.

5.1 Sample size across rounds

Table 5.1 presents information on the number of children initially recruited and those on which Young Lives had information for three rounds of data. Given the overall focus of this country report, in the tables that follow we present data disaggregated by some of the main indicators

⁸ <http://www.younglives.org.uk/our-publications> and www.ninosdelmilenio.org

of inequality in Peru: *gender*, first language of the mother of the child surveyed,⁹ *area of residence* (urban/rural),¹⁰ *maternal education* (divided into children with mothers who did not complete primary school, those whose mothers completed primary school and had at least some secondary education, and those whose mothers had at least some higher education), and *poverty level* (comparing the top and bottom quintiles of the per-capita expenditure distribution). In an egalitarian society these socio-demographic characteristics should not mark differences in access to basic services or education and health outcomes such as those presented below (Paes de Barros et al. 2008).

By definition the groups formed by gender and mother's first language do not vary across rounds, and maternal education changes very little, but area of residence and relative poverty do vary significantly; hence in the latter two cases we present information specific to each round (no data on poverty were available for Round 1). Furthermore, while the number of children surveyed in the study is presented below, the data in the main analysis tables is weighted to take into account the Young Lives sampling framework.¹¹

9 We decided to use the mother's first language as an indicator of the ethnicity of the family. The first language of the mother may coincide or not with the first language of the child. In fact, in our sample, as in the country overall, the use of indigenous languages has decreased over the past few years, with a predominance of Spanish. For more information on the situation of indigenous people in Peru and Latin America see Hall and Patrinos (2006).

10 Urban is defined using the criteria from the National Institute for Statistics and Information (INEI 2009), that is at least 100 contiguous houses forming blocks; rural is the remainder.

11 See Escobal and Flores (2008) for a detailed account of the sampling framework in Peru.

Table 5.1. Sample size across rounds

	Recruited at start of study		Children in all three rounds	
	Younger Cohort	Older Cohort	Younger Cohort	Older Cohort
Whole sample	2,052	714	1,915	670
Gender				
Boys	1,027	386	966	358
Girls	1,025	328	949	312
Mother's first language				
Spanish	1,399	482	1,319	455
Indigenous language	653	230	596	213
Area of residence				
Round 1				
Urban	1,359	509	1,261	476
Rural	693	205	654	194
Round 2				
Urban	1,284	497	1,249	484
Rural	679	188	666	186
Round 3				
Urban	1,357	513	1,336	507
Rural	586	165	579	163
Maternal education				
Primary incomplete or less	611	201	566	191
Primary complete up to complete secondary	1,100	397	1,032	371
Higher education	328	82	305	80
Poverty				
Round 2				
Bottom quintile	360	91	350	90
Top quintile	436	190	424	188
Round 3				
Bottom quintile	373	92	362	91
Top quintile	430	179	428	178

Note: Totals for some categories may not always add up to the total for each cohort due to missing data for some children.

As mentioned before, data for three rounds of surveys was collected at home from the mother (or another relative or person in custody of child) and the child. Round 1 was collected in 2002, Round 2 in 2006 and 2007, and Round 3 in 2009. The age of children by cohort and round is included Table 5.2.

Table 5.2. Age in years (mean and standard deviation) of children by cohort and round of survey

	Younger Cohort			Older Cohort		
	N	Mean	S.D.	N	Mean	S.D.
Round 1	2,052	1.00	0.30	714	7.98	0.38
Round 2	1,963	5.33	0.39	685	12.35	0.48
Round 3	1,943	7.91	0.30	678	14.93	0.39

5.2 Poverty and poverty dynamics

Between 2006 and 2009, Young Lives households experienced a reduction in monetary poverty; in Table 5.3 we present two different indicators of it. The first one captures the percentage of households with per capita expenditure below an adjusted poverty line.¹² The second is a measure of relative poverty, capturing the percentage of households with per capita expenditure below 50 per cent of the median per capita expenditure in the sample. As the implicit poverty lines vary sharply between the two methods (the poverty line used in the first part of the analysis is around 2.4 times higher than the 50 per cent of the median expenditure level of the sample) it is not surprising that the poverty levels vary sharply across these two methods. However it is interesting to note that in both cases, data show that poverty has diminished between 2006 and 2009.¹³

Changes in absolute and relative measures of poverty capture different phenomena. Although some people tend to associate relative poverty with inequality, both indicators do not necessarily move in the same direction. It may be the case that improvements in well-being are sufficiently generalised as to reduce relative poverty and at same time the bulk of the gains may be captured by the wealthiest. What we can say is that the tendency in our absolute and relative poverty measures is consistent with a significant improvement in per capita expenditure of both poor and extremely poor households. We might even say that it is consistent, within our sample, with pro-poor growth. However we should keep in mind the sample excludes the wealthiest 5 per cent of districts.

12 Young Lives data on expenditure on both food and non-food items show some degree of underestimation in comparison to expenditure figures for a comparable sub-population from Encuesta Nacional de Hogares (ENAH). Because of this fact official poverty lines need to be adjusted for the expenditure underreporting estimated.

13 Official poverty statistics for Peru also report a reduction in poverty from 44.5 per cent to 34.8 per cent for the whole population during the same period (INEI 2009); however, poverty rates climb up to 48.8 per cent when considering those that have at least one child of five years of age or less (this rate was 60 per cent in 2006). The main differences in our indicators and INEI include: (a) differences associated with the fact that Young Lives includes only households that have at least one child of the reported age in 2002; (b) a different sampling framework, as Young Lives is pro-poor; and (c) differences in the definition of per capita expenditure, as Young Lives does not include some items of expenditure included in official statistics. See Escobal and Flores (2008).

Table 5.3. Poverty levels and poverty dynamics (both cohorts) (%)

	Absolute poverty			Relative poverty (expenditure is 50% of median or less)		
	Round 2 (2006)	Round 3 (2009)	Change between rounds	Round 2 (2006)	Round 3 (2009)	Change between rounds
Gender						
Boys	61.1	45.6	-15.5 ***	15.5	11.3	-4.2 **
Girls	59.8	43.0	-16.8 ***	16.4	13.1	-3.3
Mother's first language						
Spanish	50.2	37.4	-12.8 ***	10.7	10.5	-0.2
Indigenous language	77.1	55.5	-21.6 ***	24.4	15.0	-9.4 ***
Area of residence						
Urban	53.3	36.9	-16.4 ***	12.7	10.1	-2.6 *
Rural	72.5	58.4	-14.1 ***	21.5	16.2	-5.3 **
Maternal education						
Primary incomplete or less	79.9	59.6	-20.3 ***	27.0	19.2	-7.9 ***
Primary complete up to complete secondary	56.5	41.1	-15.4 ***	10.9	9.2	-1.7
Higher education	19.5	11.1	-8.4 **	2.6	1.2	-1.4
Younger Cohort	60.5	44.0	-16.5 ***	14.3	12.3	-2.0 *
Older Cohort	60.4	44.7	-15.7 ***	18.0	12.1	-5.9 **
Both cohorts average	60.5	44.3	-16.2 ***	16.0	12.2	-3.8 ***

Note: Panel data for R2 and R3. Adjusted for sample design. Change between rounds expressed in percentage points.

Poverty lines produced by INEI and adjusted by the percentage of Young Lives expenditure underestimation. Categories urban/rural are round-specific.

Differences are significant at ***1%, **5%, and *10%.

It is interesting to note that the largest reduction in absolute poverty has occurred for those living in urban areas. However, it seems that within urban areas the largest reductions in poverty come from those households in which the mother's mother tongue is indigenous (mostly Quechua). More than 20 per cent of Young Lives sample is in this category.

Nevertheless, being poor can be conceived not only in terms of income and expenditure. There have been several studies showing the perception of this topic of different actors, suggesting that there are personal and social issues relevant for defining poverty (e.g. Narayan 2000). Box 5.1 presents examples of how children in the qualitative sub-sample understand and define poverty.

Box 5.1. Children's understandings of poverty

The concept of poverty, from the point of view of Older Cohort children, was strongly associated with lack of satisfaction of basic needs, such as food, clothing and housing. Thus, several children mentioned that not having anything to eat, not having a house or having one in poor condition, and having dirty or few clothes were indicators of poverty.

"[Poverty is] when [people] do not have anything to eat, they don't have farmland, or they do not have a house to live in." (Marta, age 12, rural Andahuaylas)

"A poor person does not have any resources, and does not have anything to eat. ... Those people, mostly, here on the edge of town — their houses are made of mud. The children do not have clothes to wear. ... In the house we used to have down there, the old tenants didn't have [anything]. They were poor. They don't even have clothes, I think. My mum used to give them clothes. ... Then a poor person is someone who does not have [anything]." (Carmen, age 14, urban San Román)

Isolation was another factor that came up in urban areas:

"A poor [person is someone] who lives in an isolated place ... where there are not even roads or stairs* ... who wears dirty clothes and sometimes does not have anything to eat." (Fabian, age 13, Lima)

Only in the rural areas did children mention the lack of property (such as land or houses) as part of their understanding of poverty. In the Andes (Andahuaylas), not having land to cultivate was seen as a sign of poverty. In the upper Amazon (Rioja), people who lived in rented houses were considered poor as they have to pay for accommodation and they are always moving, because typically those who rent are usually paid labourers.

Interviewer: OK, so, what is a poor person like, besides not having a house and having a large family?

Luis: He is different, he lives on the land.

Interviewer: Does he work on the land?

Luis: Also.

Interviewer: But does he have his own land?

Luis: Sure.

Interviewer: Or only work as a paid labourer?

Luis: As a paid labourer too and... he also works over there, renting a house.

(Luis, age 13, rural Rioja)

* Stairways have been built to give access to houses in the very hilly areas on the edge of Lima. More recently settled areas do not have stairs (or other services) yet.

Wealth index and consumption

When we compare the Young Lives households across rounds, we find that on average wealth was about the same between Rounds 1 and 2 but increased sharply from Round 2 to Round 3. The higher growth rates between Rounds 2 and 3 are consistent with the growth acceleration for the economy as a whole and the provision of basic services associated with the increase in public expenditure. Similarly, per capita expenditure also increased, although at a somewhat slower pace, between Rounds 2 and 3.

For Table 5.4, the wealth index is a non-weighted average of the following three components: (a) housing quality, which is the average of a scale of rooms per person, floor, roof and wall quality; (b) access to consumer durables (scale); and (c) access to services, being the average of access to improved water, electricity, improved sanitation and fuel for cooking. It is important to note that the wealth improvements identified here, especially between 2006 and 2009, cannot be attributed to only one of these components. The improvements between Round 2 and Round 3 were 9 per cent for the house quality sub-index, 25 per cent for the consumer durables sub-index and 21 per cent for the services sub-index, suggesting most

of the change was driven by families having more consumer durables and better access to services.

Table 5.4. Changes in wealth and per capita expenditure across rounds (both cohorts)

	Average wealth index						Average real expenditure per capita (nuevos soles)		
	R1 (2002)	R2 (2006)	R3 (2009)	Change between R1 and R2 (%)	Change between R2 and R3 (%)	Change between R1 and R3 (%)	R2 (2006)	R3 (2009)	Annual percentage change
Gender									
Boys	0.45	0.45	0.53	1	17 ***	18 ***	177	202	14 ***
Girls	0.44	0.43	0.52	0	20 ***	20 ***	178	205	15 ***
Mother's first language									
Spanish	0.50	0.51	0.59	3	14 ***	17 ***	203	226	11 ***
Indigenous language	0.34	0.33	0.42	-5 *	30 ***	23 ***	135	167	24 ***
Area of residence									
Urban	0.54	0.53	0.61	-1	14 ***	14 ***	192	225	17 ***
Rural	0.29	0.29	0.36	-1	26 ***	24 ***	152	163	7
Maternal education									
Primary incomplete or less	0.31	0.31	0.41	-3	34 ***	30 ***	131	160	22 ***
Primary complete up to complete secondary	0.48	0.49	0.57	1	16 ***	18 ***	178	204	15 ***
Higher education	0.66	0.68	0.71	3	4	7 ***	311	336	8
Poverty									
Bottom quintile	-	0.25	0.36	-	44 ***	-	63	80	28 ***
Top quintile		0.66	0.71		7 ***		388	419	8 *
Younger Cohort	0.44	0.45	0.52	1	16 ***	18 ***	177	202	14 ***
Older Cohort	0.44	0.43	0.53	-1	22 ***	21 ***	177	205	16 ***
Both cohorts average	0.44	0.44	0.53	0	19 ***	19 ***	177	203	15 ***

Note: Panel data for R1-R2-R3. Adjusted for sample design. These figures do not all add up precisely because of rounding.

Differences are significant at ***1%, **5%, and *10%.

As shown above, the urban–rural gap has been widening, especially in the last few years, as expenditure has been growing more rapidly in urban than in rural areas but the Spanish–indigenous gap does not follow the same trend. This is likely to be attributed to the increasing percentage of mothers of indigenous origin who live in urban areas; in fact, the number of mothers of indigenous origin living in urban areas increased by 17 per cent between Round 2 and Round 3. The gap between children with better-educated mothers (with higher education) and those with mothers with low education (incomplete primary or less) is quite high. No major differences arise between boys and girls

Household poverty dynamics

When we explore household poverty mobility between Round 2 and Round 3, we see that for both the Younger and the Older Cohorts there is limited mobility. Among the households of

Younger Cohort children, 42 per cent remain poor, 54 per cent remain non-poor, and less than 4 per cent show some mobility, while among the Older Cohort households 40 per cent remain poor, 50 per cent remain non-poor and 10 per cent show some mobility (see Tables 5.5 and 5.6).

Table 5.5. Household poverty mobility (Younger Cohort)

Whole sample	Poor in Round 3 (2009)	Non-poor in Round 3 (2009)
Poor in Round 2 (2006)	41.8	2.4
Non-poor in Round 2 (2006)	1.4	54.4
Urban	Poor in Round 3 (2009)	Non-poor in Round 3 (2009)
Poor in Round 2 (2006)	21.0	0.4
Non-poor in Round 2 (2006)	1.6	77.1
Rural	Poor in Round 3 (2009)	Non-poor in Round 3 (2009)
Poor in Round 2 (2006)	77.6	5.8
Non-poor in Round 2 (2006)	1.1	15.6

Note: Panel data for R2–R3. Adjusted for sample design. Anchored in area R2 (initial state). As mentioned before, poverty data for R1 could not be estimated.

Table 5.5 shows also that poverty mobility is larger in scale in rural areas than in urban areas for the Younger Cohort. In contrast, Table 5.6 shows that poverty mobility for the Older Cohort has been similar in both urban and rural areas. In general, upward mobility seems to be slightly greater in both samples than downward mobility.

Table 5.6. Household poverty mobility (Older Cohort)

Whole sample	Poor in Round 3 (2009)	Non-poor in Round 3 (2009)
Poor in Round 2 (2006)	40.4	6.2
Non-poor in Round 2 (2006)	3.3	50.1
Urban	Poor in Round 3 (2009)	Non-poor in Round 3 (2009)
Poor in Round 2 (2006)	19.7	5.9
Non-poor in Round 2 (2006)	4.0	70.3
Rural	Poor in Round 3 (2009)	Non-poor in Round 3 (2009)
Poor in Round 2 (2006)	71.2	6.5
Non-poor in Round 2 (2006)	2.3	20.0

Note: Panel data for R2–R3. Adjusted for sample design. Anchored in area R2 (initial state). As mentioned before poverty data for R1 could not be estimated.

Tables 5.7 and 5.8 confirm the finding that upward mobility is somewhat greater than downward mobility. Table 5.7 presents the percentages of children from the Younger Cohort living in households that have stayed in the same expenditure quintile or have moved to a different quintile between Rounds 2 and 3. All the cells sum up to 100 per cent. The well-being distribution is represented as quintiles of real per capita expenditure in each round. If we consider that mobility has occurred if a household has moved two or more quintiles in any direction, we can identify the upper right corner as those moving up, the lower left corner

as those moving down, and those near the diagonal as those staying in the same part of the distribution.

Looking at the transitions that occurred between 2006 and 2009, we see that 11.1 per cent of the Younger Cohort households have moved upward by at least two quintiles. Such upward mobility is higher in the rural sub-sample (15.6 per cent) than in the urban sub-sample (10.3 per cent). If one takes into account that 74 per cent of those living in rural areas in Round 2 that move up in the per capita expenditure distribution moved to urban areas between Round 2 and Round 3 it becomes clear that it is in the large cities where growth has been the highest, where income-generating opportunities arise and transition out of monetary poverty is possible.

Table 5.7. Per capita expenditure dynamics across quintiles (percentage of households moving across quintiles. Real per capita expenditure, Younger Cohort)

Whole sample	Round 3 per capita expenditure				
Round 2 per capita expenditure	Q1 – poorest	Q2	Q3	Q4	Q5 – richest
Q1 – poorest	10.4	6.1	3.6	1.2	0.7
Q2	5.6	6.3	5.0	2.9	0.9
Q3	3.0	5.1	6.0	4.9	1.8
Q4	1.3	2.2	4.1	6.0	5.3
Q5 – richest	0.7	1.4	2.1	4.2	9.5

Urban	Round 3 per capita expenditure				
Round 2 per capita expenditure	Q1 – poorest	Q2	Q3	Q4	Q5 – richest
Q1 – poorest	12.4	5.1	2.8	1.0	0.5
Q2	5.6	6.5	5.0	2.9	1.0
Q3	2.4	5.4	4.8	4.9	2.1
Q4	1.0	2.2	4.9	5.4	5.5
Q5 – richest	0.4	1.7	2.0	4.9	9.6

Rural	Round 3 per capita expenditure				
Round 2 per capita expenditure	Q1 – poorest	Q2	Q3	Q4	Q5 – richest
Q1 – poorest	9.5	4.9	3.1	2.2	1.1
Q2	4.2	4.9	5.1	5.1	1.5
Q3	2.8	5.5	5.1	4.3	2.6
Q4	1.8	3.8	4.9	6.7	3.8
Q5 – richest	1.5	1.8	1.5	3.6	8.7

Note: Panel data for R2–R3. Adjusted for sample design. Figures expressed in percentages. Anchored in area R2 (initial state). Considers real expenditure per capita per month.

In the case of the Older Cohort we see that 12.9 per cent of the sample has moved upward by at least two quintiles. Again, such upward mobility is higher in the rural sub-sample (15.5 per cent) than in the urban sub-sample (13.2 per cent).

Table 5.8. Per capita expenditure dynamics across quintiles (percentage of households moving across quintiles. Real per capita expenditure, Older Cohort)

Whole sample	Round 3 per capita expenditure				
Round 2 per capita expenditure	Q1 – poorest	Q2	Q3	Q4	Q5 – richest
Q1 – poorest	8.2	5.3	3.8	1.3	1.5
Q2	5.4	6.2	4.9	1.5	2.2
Q3	3.4	3.6	4.2	6.0	2.6
Q4	1.9	3.7	4.9	5.6	3.9
Q5 – richest	1.1	1.3	2.3	5.6	9.7

Urban	Round 3 per capita expenditure				
Round 2 per capita expenditure	Q1 – poorest	Q2	Q3	Q4	Q5 – richest
Q1 – poorest	8.0	7.3	3.0	0.6	1.2
Q2	5.6	5.8	3.5	2.4	2.8
Q3	3.9	3.2	4.7	5.0	3.2
Q4	1.3	2.6	6.2	5.9	4.3
Q5 – richest	1.3	1.5	2.4	6.1	8.4

Rural	Round 3 per capita expenditure				
Round 2 per capita expenditure	Q1 - poorest	Q2	Q3	Q4	Q5 – richest
Q1 – poorest	7.6	5.7	4.2	1.1	1.6
Q2	6.1	4.0	4.1	4.5	1.2
Q3	3.0	5.1	5.6	3.4	2.9
Q4	4.0	4.0	2.6	5.9	3.6
Q5 – richest	0.5	0.3	3.6	5.5	9.9

Note: Panel data for R2–R3. Adjusted for sample design. Figures expressed in percentages. Anchored in area R2 (initial state). Considers real expenditure per capita per month.

The change in family circumstances that the move into or out of poverty entails is not overlooked by children, whose conceptions of poverty are closely related to what happens in family life. Issues such as an increase in the number of family members or the sickness or death of one parent seem to worry children, as they may imply a worsening of their situation. Box 5.2 shows children's views on family circumstances and how these also shape what poverty means for them.

Box 5.2. Poverty mobility and family circumstances

Poverty is not a fixed condition and households can move into and out of poverty. Children's understandings of poverty include its dynamic character and they are especially sensitive to the relationship between family circumstances and poverty. In particular, children worry about families being too large (with too many children) and parents not being able to support them. Another concern is having no family at all (orphanhood especially), or being sent away from the family home (because of family conflicts).

Underlying these views, it can be seen that most children consider their families as a resource: having no family is synonymous with being poor. This is consistent with children's perceptions of well-being (Ames et al. 2009), according to which family members are important for providing emotional and material support and security.

Viewing the family as a resource helps us to understand why children are especially concerned with the sickness or death of family members: if a lead member of the family died, it could cause a difficult situation for children, because they would have to work or work harder:

Marta: [the boy is poor] because he works on the farm, Miss ... because his dad died ... and they work on the farm.

Interviewer: His dad died ... and why do they need to work on the farm?

Marta: Because there is no money for anything – not for food ... clothes ... eating. ... there is no money ... so they have to go to work.”

(Marta, 12 years old, rural Andahuaylas)

Marta's view of what makes a child poor shows how movement into poverty may be caused by the sudden death of a parent, a situation that impoverishes the whole family and forces its younger members into the labour market.

Some children expressed a view of large families as a relative disadvantage. They viewed a large family negatively because they thought that having more family members, and limited resources, would imply less for each one (food, education, etc.) and more sacrifice or effort:

“There are many people who do not have a house. They rent and they have several children – like seven children – and the mother works, the father works. And the mother goes to sell refreshments, and the father is an alcoholic and the mother sacrifices everything to provide to her children.” (Luz, 14 years old, urban San Román)

This view corresponds with a particular time in family life, when most children are small and dependent on their parents. However once they grow, it is not uncommon for the older ones to help provide for the household, contributing perhaps to processes of upward mobility.

5.3 Access to services

In Tables 5.9, 5.10 and 5.11 we show the percentage of children in households reporting access to improved water, sanitation and electricity, respectively. First it is evident that the coverage of these services has increased sharply among the sample households. The improvement in the access to safe drinking water occurred mostly between 2006 and 2009, while the improvements in sanitation and electricity occurred both between 2002 and 2006 and between 2006 and 2009. This pattern of improvement in access to services is consistent with Peruvian official statistics (INEI 2010b).

Improvements are heterogeneous across the sample. In the case of access to safe water, while the gap between less educated mothers and those with higher education has decreased, the urban–rural gap has stayed about the same, as water infrastructure services have increased in rural areas, especially in the rural Andes.

Table 5.9. Access to services: safe water (both cohorts) (%)

	R1 (2002)	R2 (2006)	R3 (2009)	Change between R1 and R2	Change between R2 and R3	Change between R1 and R3
Gender						
Boys	55.7	58.5	80.9	2.8	22.3 ***	25.2 ***
Girls	52.9	56.3	81.8	3.4	25.4 ***	28.8 ***
Mother's first language						
Spanish	55.6	58.2	83.2	2.6	25.0 ***	27.6 ***
Indigenous language	52.4	56.3	78.5	3.9	22.2 ***	26.1 ***
Area of residence						
Urban	63.2	66.2	88.7	3.0	22.5 ***	25.5 ***
Rural	40.6	42.7	67.3	2.1	24.6 ***	26.7 ***
Maternal education						
Primary incomplete or less	42.9	47.6	74.8	4.8	27.1 ***	31.9 ***
Primary complete up to complete secondary	56.5	58.7	83.2	2.1	24.5 ***	26.7 ***
Higher education	80.3	84.6	93.2	4.3	8.7 ***	13.0 ***
Poverty						
Bottom quintile		34.6	73.4		38.8 ***	
Top quintile		75.8	89.5		13.6 ***	
Younger Cohort	54.0	58.9	78.0	4.8 ***	19.2 ***	24.0 ***
Older Cohort	54.6	55.7	85.3	1.1	29.6 ***	30.7 ***
Both cohorts average	54.3	57.4	81.3	3.1	23.9 ***	27.0 ***

Note: Panel data for R1-R2-R3. Adjusted for sample design. Change between rounds expressed in percentage points.

Safe water considers access to water piped into dwelling (public net) and tube well with hand pump.

Differences are significant at ***1%, **5%, and *10%.

Access to sanitation also shows a greater improvement for households living in rural areas, those with less educated mothers and those where mothers are of indigenous origin. This pattern is consistent with the increase in investment in rural areas through PRONASAR, the National Rural Water Supply and Sanitation Programme. PRONASAR started its operation in 2003 and has invested US\$20 million in the 2003–04 period and over US\$71 million in the 2005–08 period.

Table 5.10. Access to services: improved sanitation (both cohorts) (%)

	R1 (2002)	R2 (2006)	R3 (2009)	Change between R1 and R2	Change between R2 and R3	Change between R1 and R3
Gender						
Boys	76.4	84.5	89.9	8.1 ***	5.4 ***	13.5 ***
Girls	73.8	81.2	91.8	7.4 ***	10.6 ***	18.0 ***
Mother's first language						
Spanish	82.7	88.7	93.5	6.0 ***	4.8 ***	10.8 ***
Indigenous language	62.8	73.4	86.7	10.6 ***	13.4 ***	24.0 ***
Area of residence						
Urban	81.6	87.2	92.0	5.6 ***	4.8 ***	10.5 ***
Rural	65.1	75.5	88.5	10.4 ***	13.0 ***	23.4 ***
Maternal education						
Primary incomplete or less	61.6	73.7	89.1	12.1 ***	15.4 ***	27.5 ***
Primary complete up to complete secondary	80.0	86.0	90.9	6.1 ***	4.9 ***	10.9 ***
Higher education	94.6	98.6	96.7	3.9 **	-1.8 *	2.1
Poverty						
Bottom quintile	–	70.4	88.9	–	18.5 ***	–
Top quintile		95.0	95.8		0.9	
Younger Cohort	74.3	83.9	90.8	9.7 ***	6.8 ***	16.5 ***
Older Cohort	76.0	81.4	90.9	5.4 *	9.4 ***	14.8 ***
Both cohorts average	75.1	82.8	90.8	7.7 *	8.0 ***	15.7 ***

Panel data for R1-R2-R3. Adjusted for sample design. Change between rounds expressed in percentage points.

Improved sanitation refers to a flushing toilet or pit latrine.

Differences are significant at ***1%, **5%, and *10%.

In the case of electricity, again we see greater improvements for those children living in rural areas and those children whose mother is less educated or has an indigenous background.

In a context where the Peruvian economy has been growing steadily during the period under analysis, and public social expenditure and rural infrastructure investments have increased substantially (as was mentioned in the previous section), it is not surprising that the gap in the access to key public services has been reduced. This is simply the effect of urban areas needing little additional investment in basic services as their access reaches almost full coverage and the areas with lack of coverage getting increasingly concentrated in rural areas.

Table 5.11. Access to services: electricity (both cohorts) (%)

	R1 (2002)	R2 (2006)	R3 (2009)	Change between R1 and R2		Change between R2 and R3		Change between R1 and R3	
Gender									
Boys	62.2	72.1	85.4	9.9	***	13.3	***	23.2	***
Girls	59.3	68.6	86.1	9.3	***	17.5	***	26.8	***
Mother's first language									
Spanish	70.5	80.6	89.3	10.1	***	8.7	***	18.8	***
Indigenous language	44.8	53.4	79.8	8.6	**	26.4	***	34.9	***
Area of residence									
Urban	84.4	87.9	95.7	3.5	**	7.7	***	11.3	***
Rural	24.5	40.9	67.0	16.4	***	26.1	***	42.5	***
Maternal education									
Primary incomplete or less	39.1	51.5	75.2	12.3	***	23.8	***	36.1	***
Primary complete up to complete secondary	68.7	77.5	90.5	8.8	***	13.1	***	21.8	***
Higher education	93.5	95.8	98.7	2.4		2.9		5.3	**
Poverty									
Bottom quintile	–	43.8	67.4	–		23.6	***	–	
Top quintile		92.3	97.8			5.5	***		
Younger Cohort	60.6	70.9	83.7	10.3	***	12.8	***	23.1	***
Older Cohort	60.9	69.7	88.2	8.8	**	18.5	***	27.3	***
Both cohorts average	60.8	70.4	85.7	9.6	**	15.4	***	25.0	***

Note: Panel data for R1-R2-R3. Adjusted for sample design. Change between rounds expressed in percentage points.

Differences are significant at ***1%, **5%, and *10%.

5.4 Education

All over the world, education is increasingly seen as an important instrument for the advancement of individuals and societies. This is certainly the case for Peru, where school enrolment has increased significantly in recent decades. This section presents information on school enrolment and the percentage of children who are over-age (i.e. they are one year or more behind the grade they should be given their age; in Peru the normal age for starting first grade is 6) in the sample. According to the Constitution it is mandatory for children to attend primary school for six years and secondary school for five, although no enforcement occurs if the child drops out.

Table 5.12. School enrolment rates and over-age children in school (%), and average age of starting primary school (Younger Cohort)

	Enrolment (%)			% of children over-age by R3	Average age children started primary school
	R2	R3	Change between rounds		
All sample	82.5	98.0	15.5 ***	11.9	6.1
Gender					
Girls	80.9	97.9	16.9 ***	12.2	6.1
Boys	84.1	98.1	14.1 ***	11.6	6.1
Mother's first language					
Spanish	87.6	98.6	10.9 ***	9.2	6.1
Indigenous language	73.2	97.0	23.8 ***	16.8	6.2
Area of residence					
Urban	86.7	98.4	11.7 ***	8.8	6.1
Rural	75.3	97.3	22.0 ***	18.0	6.2
Maternal education					
Primary incomplete or less	70.3	96.6	26.3 ***	20.2	6.2
Primary complete up to complete secondary	86.0	98.6	12.6 ***	8.9	6.1
Higher education	97.8	99.3	1.6	4.0	6.0
Absolute poverty					
Bottom quintile	64.2	95.4	31.2 ***	21.2	6.3
Top quintile	93.6	99.2	5.5 ***	6.1	6.0

Notes: Panel data for R1-R2-R3. Adjusted for sample design. Change between rounds expressed in percentage points. 'Over-age' means one or more years over the usual age for that grade.

Differences are significant at ***1%, **5%, and *10%.

In Round 2, most children from the Younger Cohort were at pre-school age, while in Round 3 they should all be in primary school (and indeed almost all were). This situation helps to explain the increase in enrolment figures between rounds. However, enrolment at pre-school age was lower for children who were rural or poor, and children of less educated or indigenous mothers, with only small differences by gender. By primary school, for the Younger Cohort there are significant differences in children reaching the appropriate grade for their age, favouring children of Spanish speakers, better-educated mothers, urban, and non-poor. Hence while enrolment is high, it seems evident that there are gaps in achievement.

For the Older Cohort, enrolment in Rounds 1 and 2 was also high, but starting to fall in Round 3 as children entered secondary school. This may be related to there being fewer secondary schools in rural areas, in comparison with primary schools. This implies that children have to move to urban areas or commute daily, which involves costs for the families that may not be sustainable over time (see for example Cueto et al. 2011; Ames and Rojas 2011). Indeed, the completion rate for secondary education in rural areas is 36 per cent, about half what it is for urban areas (72 per cent) (Ames and Rojas 2011). Drop-out is particularly high for rural children (almost three times higher than their urban peers), as well as for children of mothers did not complete primary school, and for the poorest children, suggesting that education is

not achieving its role as an equalising institution. Furthermore, the difference between children from different groupings achieving the appropriate grade for their age are associated with the same variables as for the Younger Cohort: children who were rural or poor, and children whose mothers speak an indigenous language are more likely to be over-age.

Table 5.13. School enrolment and drop-out rates, and over-age children in school (%), and average age of starting primary school (Older Cohort)

	Enrolment (%)						Drop-out between R2 and R3	% of children over-age by R3	Average age children started primary school
	R1	R2	R3	Change between R1 and R2	Change between R2 and R3	Change between R1 and R3			
Whole sample	98.8	99.1	91.3	0.3	-7.8 ***	-7.5 ***	8.3	49.0	6.3
Gender									
Girls	99.3	99.5	92.4	0.2	-7.1 ***	-6.9 ***	7.0	50.0	6.3
Boys	98.2	98.6	90.2	0.4	-8.4 ***	-8.0 ***	9.7	48.0	6.4
Mother's first language									
Spanish	98.8	99.0	92.0	0.3	-7.1 ***	-6.8 ***	7.4	41.9	6.3
Indigenous language	98.7	99.1	90.3	0.4	-8.9 ***	-8.5 ***	9.7	59.3	6.4
Area of residence									
Urban	98.6	98.5	94.2	-0.1	-4.3 ***	-4.4 ***	5.1	44.2	6.2
Rural	99.0	100.0	86.0	1.0	-14.0 ***	-13.0 ***	14.2	58.4	6.5
Maternal education									
Primary incomplete or less	98.8	99.1	86.9	0.2	-12.2 ***	-11.9 ***	13.0	66.2	6.5
Primary complete up to complete secondary	98.8	98.8	94.9	0.1	-4.0 ***	-3.9 ***	4.4	41.5	6.2
Higher education	100.0	100.0	100.0	0.0	0.0	0.0	0.0	13.8	6.0
Absolute poverty									
Bottom quintile	-	98.7	87.2	-	-11.4 ***	-	11.1	67.1	6.5
Top quintile	-	100.0	94.1	-	-5.9 ***	-	5.9	38.0	6.1

Notes: Panel data for R1-R2-R3. Adjusted for sample design. Change between rounds expressed in percentage points. 'Over-age' means one or more years over-age.

Differences are significant at ***1%, **5%, and *10%.

Beyond enrolment and children being over-age however, there are issues of equality of educational opportunities and of quality of education for children from different groups, which remain of central importance, as other Young Lives research has shown (Woodhead et al. 2009; Ames et al. 2010; Cueto et al. 2011). Thus, for example, these studies show that poorest groups tend to access educational services with fewer educational resources available, while non-poor groups are increasingly opting for private education in search of better quality (Cueto

et al. 2009a). Also, many children from indigenous groups do not have access to bilingual education and the educational services they get are under-resourced.

The qualitative sub-studies provided further evidence on how children in both cohorts assessed the quality of their education in multiple dimensions. Thus, for example, children reflected on the educational settings they attended, and what they liked and disliked about them, and made suggestions for improvement (illustrated in Box 5.3).

Box 5.3. Space and resources to learn: school buildings and classrooms

Younger and older children told us about their learning environments, and compared the layout, infrastructure and equipment they had when moving from one educational level to the next. Thus, children from the Younger Cohort pointed out that the physical learning environment and the learning resources available to them had radically changed in their transition from preschool to primary school: there were more resources for playing at preschool (toys and games), than in primary schools, as well as learning corners and a more attractive layout and decoration of the classroom:

Interviewer: What was your preschool classroom like?

Hugo: Cool.

Interviewer: What did it have?

Hugo: Games.

Interviewer: And now, what is your first grade classroom like? Is it nice or ugly?

Hugo: It is ugly.

Interviewer: Hugo, look, Alejandro says his first grade classroom does not have any drawings.

Hugo: No.

Interviewer: And did the preschool classroom have some?

Hugo: Yes.

Interviewer: Was it nicer?

Hugo: Yes.

(Hugo, age 6, rural Rioja)

Lupe: I liked that school better. There were toys ... we had two breaks ... there were also things for playing house.

Interviewer: Was it a preschool?

Lupe: Yes.

Interviewer: And you liked it more?

Lupe: Yes. Here it is not like preschool. ... There are not so many toys. I would like it if there were more toys here.

(Lupe, age 7, Lima)

Older Cohort children like their schools to have big buildings and ample space to play and do sports, as well as science and computer labs, a library and gardens. However, they also had ideas to improve their school infrastructure, such as improving the cleanliness of the toilets, the construction materials of some classrooms, replacing the broken windows, and adding new facilities such as a chemistry lab, musical instruments and a kiosk for snacks.

Interviewer: What do you like best about your school in Andahuaylas?

Esmeralda: The school is pretty; it has everything, a library, *kioskos*, roses, gardens, and a food-technology workshop.

Interviewer: And which do you think are the best schools?

Esmeralda: Mine, because people come from other places to study here.

(Esmeralda, age 14, rural Andahuaylas)

Children also assessed the quality of their educational experience by referring to their teachers, the quality of teaching and the treatment they get at school. One of the issues that

emerged most strongly from young children's views of their schooling was the use of physical punishment by their teachers and how it is centrally located in their definitions of good and bad teachers (Box 5.4).

Box 5.4. Quality of education: the persistence of physical punishment

Qualitative research found worrying evidence in relation to the kinds of experiences young children have in their first encounters with the school system. Young children in three of the four research sites reported that their teacher punished them physically for not doing their homework, for doing it wrong, or for not writing or drawing. The quality of education is an overarching concept that encompasses teacher–student relationships and teacher performance, and physical punishment impacts on both of these issues. Indeed, the image of teachers and the presence of physical punishment were strongly linked from the point of view of young children, aged 5 to 7 years old.

Interviewer: What happens when you don't do the sums or the writing?

Ana: Hitting, Miss.

Interviewer: Who hits?

Ana: My teacher.

Interviewer: What does he punish you with?

Ana: With a whip, Miss.

Interviewer: Do you think that is all right or not?

Ana: No, Miss.

Interviewer: Why?

Ana: They cry, Miss, my classmates.

(Ana, 6 years old, rural Andahuaylas)

Some children believe that teachers have to hit children in order for them to learn, showing they view physical punishment as legitimate, a view probably shared not only within school but also among families:

Interviewer: What does your teacher do when you don't obey her?

Jose: She hits us.

Interviewer: And why do teachers hit children?

José: [For children] to learn.

Interviewer: Do you like it?

José: Yes ... because I learn more.

(José, 7 years old, urban San Román)

For most children, however, a good teacher is someone who does not hit or shout at them, but treats them kindly, helps students, and teaches them mathematics and reading. A bad teacher on the contrary is someone who hits them.

Interviewer: What is your teacher like? Tell me.

Fabricio: Good.

Interviewer: How is she good?

Fabricio: She does not hit us.

(Fabricio, 6 years old, rural Andahuaylas)

Children also ask their teachers to attend more and not skip lessons, claiming more responsibility on their part:

Isabel: Sometimes [the teacher] comes to the school just for a while and then he leaves.

Interviewer: And what would you like? For him to go more to the school?

Isabel: Yes ... to make us understand more.

(Isabel, 8 years old, urban San Román)

This last interview extract shows how, beyond enrolment, the way schools function (teacher absenteeism, inadequate use of learning time) may still present several problems.

Older Cohort children also mentioned the presence of physical punishment, although it was less reported in secondary than in primary school. Children expressed their rejection of physical punishment by teachers, although some support its use as a way to reinforce

learning, in the same way as Younger Cohort children. Punishment always appeared to be associated with children's images of good and bad teachers.

In Peru, like many other countries, teachers are considered key to improving education. Older Cohort children participating in the qualitative sub-study offered their views on their teachers and their own definitions of good quality teaching (Box 5.5).

Box 5.5. Good and bad teachers: assessing teaching quality

Older children provided more details on the characteristics of the good teachers they have and would like to have. On the one hand, children stressed that a good teacher explains the lessons clearly, has patience and teaches well, helping his or her students understand, and avoids overburdening them with too much homework; s/he is nice, treats students well, attends all lessons and shows understanding, avoiding shouting.

Interviewer: What do you like most about your teachers?

Ana: [I like] the way they explain, [so that] you can understand them ... and they do not ask for too much homework.

(Ana, 13 years old, urban Lima)

Interviewer: What is your best teacher like?

Diana: She teaches me well ... she teaches mathematics nicely. She has patience.

(Diana, 13 years old, rural Rioja)

On the other hand, children consider a bad teacher someone who lacks patience, is always upset, does not explain things well, shouts at students, hits them, punishes children, lowers their grades and forces his or her students to do things they don't like. These teachers punish students when they don't do homework, when they don't study or if they are not silent in class, disobey or play about. Sadly, children do have teachers with these characteristics too:

Interviewer: Why don't you like your social science teacher?

Sandro: Because he does not explain homework, he has a bad temper ... pulls your hair When children are making a noise, he pulls their hair.

Interviewer: Are there others like him?

Sandro: Others use a whip.

Interviewer: They hit students with a whip ... and do you think it is good or bad?

Sandro: Good, because in that way children do [homework].

(Sandro, 13 years old, rural Andahuaylas)

Children's reports show they value pedagogical expertise and responsibility in their teachers but they also want a good relationship with them, based on respect and good treatment. Education cannot be regarded as high quality without the respect children are entitled to.

Parents show similar views to their children about the characteristics of good teachers: they value good teaching, patience, kind treatment of children and a good temper; they also want information from teachers and responsibility regarding their working hours and academic demands on their children. On the contrary, a bad teacher, from the point of view of parents, does not pay enough attention to children, nor put enough effort in teaching well, is frequently absent, does not prepare lessons well, has a bad temper and punishes children physically (although some parents in two regions point out that physical punishment can be useful to correct inadequate behaviour). In one region the issue of corruption among bad teachers also arose. The links between parents and schools have been explored by Balarin and Cueto (2007). Results here also suggest patterns of inequality, with parents of poorer children reporting being less well informed by schools about their children's performance, which

is particularly important given that poorer parents (often with lower levels of literacy) may themselves find it harder to engage effectively with services such as schools.

Despite the challenges identified in securing a quality education for all and the issues raised by children, children's overall perspective on school education is positive. Peruvian children in both cohorts value attending school and are aware of the importance education has in their present and future lives. Younger children like school because they learn and meet other children. Older children provide more detail on the place of education in their future aspirations (Box 5.6).

Box 5.6. Older children's views on the value of education

One of the children's concerns, expressed mostly in the Andean sites (both urban and rural), is telling in regard to the value they attach to education. Older children show uncertainty about the future and fear that something might prevent them from finishing their schooling, such as the illness or death of a family member, the family running out of money, needing to repeat a grade (and thus being withdrawn from school as a punishment) or even starting a family.

Interviewer: What could happen to prevent from completing secondary school?

Atilio: I might get married ..., or die Someone [in my family] might die, or there could be trouble, or journeys. (Atilio, 13 years old, Andahuaylas)

Interviewer: So, if you have to repeat the grade, you won't come back to school?

Sergio: Yes, because I will disappoint my mum I don't like talking about this. I am afraid I will really have to repeat the grade.

Interviewer: Has your mother told you that if you repeat you are not coming back to school?

Sergio: Yes.

(Sergio, 14 years old, urban San Román)

Older Cohort children value their school education highly as often their aims are to go into higher education and become professionals, to have a better job and a better life, thus escaping poverty. In the case of rural children, for them, pursuing the higher levels of education means not having to work in the fields as a peasant, and avoiding all the hard work, 'suffering' and poverty this implies, according not only to the children themselves, but also to their parents:

Eva's mother: I want Eva to study, to become a professional, to pay attention.

Interviewer: Why do you want her to become a professional?

Eva's mother: If she is not a professional, what money would she have? She will suffer then. If she works [as a professional] each month she will earn [money].

(Eva, 14 years old, rural Andahuaylas)

(See also Crivello 2009; Ames and Rojas 2011; and Rojas and Portugal 2010 for more detailed analysis on this topic.)

5.5 Health and nutrition

Malnutrition is an important issue in Peru. Table 5.14 presents the percentage of children who are thin (i.e. below 2 standard deviations under the international median, using Body Mass Index (BMI) for age, by WHO growth standards/references) and stunted (i.e. below 2 standard deviations under the international median of height-for-age, by WHO standards) at age 8. Low BMI (weight/height²) for age z-score, is a measure of thinness, which may be referred to as acute under-nutrition, and signifies that the person has not consumed, or is not consuming, sufficient calories to meet their needs. It is generally considered that this is a measure of

an acute problem since linear growth has been relatively spared. Stunting, or linear growth faltering, occurs when diets are either globally inadequate or provide sufficient energy but are lacking in protein and/or essential micronutrients. Stunting represents the accumulated history of childhood health and nutrition and is a sign of chronic malnutrition. Stunting has long-term consequences and is considered a proxy indicator of a country's future human capital (Victora et al. 2008).

Table 5.14. Under-nutrition: stunting and thinness of both cohorts when aged 8 (%)

	Thinness			Stunting		
	OC R1 (2002) age 8	YC R3 (2009) age 8	Change between YC and OC	OC R1 (2002) age 8	YC R3 (2009) age 8	Change between YC and OC
Whole sample	5.0	5.7	0.8	33.0	21.9	-11.0 ***
Gender						
Boys	6.6	5.8	-0.8	36.9	23.4	-13.5 ***
Girls	3.3	5.6	2.3	29.0	20.5	-8.5
Mother's first language						
Spanish	3.4	4.7	1.2	25.4	14.5	-10.9 ***
Indigenous language	7.3	7.6	0.4	43.8	35.4	-8.4 **
Area of residence						
Urban	3.5	3.9	0.5	23.4	14.2	-9.2 **
Rural	7.1	9.2	2.1	46.9	37.3	-9.6
Maternal education						
Primary incomplete or less	6.3	8.8	2.5	42.0	35.7	-6.4 **
Primary complete up to complete secondary	3.8	4.9	1.0	28.9	17.6	-11.3 **
Higher education	2.8	1.1	-1.7	14.8	5.1	-9.8

Note: Panel data for R1-R2-R3. Adjusted for sample design. Change between cohorts expressed in percentage points.

Differences are significant at ***1%, **5%, and *10%.

Thinness is relatively uncommon in Peru and is not very different between the two cohorts of children at the same age (8) in 2002 and 2009. The percentage is highest in children whose mothers' first language is indigenous, who are less educated or who live in rural areas. In these children in both cohorts, the percentage of thin children is more than twice the percentage <2 SD in the WHO reference 'normal' population. In Round 3 there is almost no difference between boys and girls. National data (INEI 2010b) only sample children up to the age of 5 and use the indicator weight-for-height z-score <2 SD below the median (WHO standard) as a measure of acute malnutrition. However, the finding in the health and demographic survey (ENDES) 2009 is that only 0.5 per cent of children aged 4 to 5 years have low weight-for-height z-scores is in keeping with our report and indicates that acute malnutrition is uncommon in Peru (INEI 2010a). This is also consistent with the fact that most children satisfy their requirements for energy and protein and the problem is more about of diets of poor quality. Diets tend to be high in carbohydrates from staples such as rice and potatoes, with sufficient energy and protein but lacking in variety and essential micronutrients, especially those vitamins and minerals that are found in highest concentrations and most readily available (high bioavailability) in ASFs. These micronutrients, for instance zinc and iron, are important for linear growth and the prevention of anaemia.

In keeping with national data for younger children (those under 5), stunting in our sample is much more common than thinness.¹⁴ The comparison between the 8-year-olds in 2002 and 2009, even when corrected for the higher number of urban children in the Older Cohort, shows a significant reduction over the years in stunting. Reductions in stunting for younger children (aged under 5) have been reported in Demographic Health Surveys over this period, where nationwide stunting has declined from 29.5 per cent in 2000 to 23.2 per cent in 2010. The change is more marked in rural areas, especially in the last three years: between 2007 and 2010 it declined from 45.7 per cent to 38.8 per cent and in the Andes from 42.4 per cent to 34.4 per cent. Despite these improvements stunting remains a serious problem in Peru. There has been less change in urban and coastal areas; in the latter stunting was 11.8 per cent in 2010. This change is smallest (but statistically significant) for children whose mothers did not complete primary school; for some of the other groups the differences between cohorts are larger but sometimes not statistically significant owing to the small size of the groups. Finally, for the children from the Younger Cohort whose mothers have at least some higher education, stunting is lowest by some margin (5.1 per cent, compared to 39 per cent of children in the bottom wealth quintile).

Given the significance of stunting, Table 5.15 presents additional information. Stunting in the first two years of life is characteristic of disadvantaged populations and the Young Lives sample is no exception, with highest stunting rates among the children whose mother is an indigenous language speaker or less educated, and who live in rural areas. The association between maternal education and stunting is especially striking, with the prevalence of stunting being seven times as high in Round 3 among Younger Cohort children with mothers who did not complete primary school, compared with the children of mothers with higher education. This association with maternal education is seen in both the Younger and Older Cohorts, and is maintained across the three rounds. Data from the Older Cohort in Round 2 and Round 3 are more difficult to interpret as children will be experiencing or have experienced pubertal growth spurts and the age at which this occurs varies a lot between individuals.

The table shows that some children in the Younger Cohort recovered from stunting between Round 1 and Round 2. There is a marked reduction in stunting rates between Rounds 2 and 3. This is a somewhat surprising finding and to our knowledge this has not been reported before in Peru, probably because there have been no longitudinal studies. There are examples of catch up growth of school-age children in the literature but this has been relatively little studied and we intend to investigate this phenomenon further in the Younger Cohort.

¹⁴ Stunting is expressed as the height in metres in relation to children of the same age from a healthy population whose growth has not been restricted by nutritional deficiency or illness. We have used the WHO reference values.

Table 5.15. Stunting of the Younger Cohort, Round 1–Round 3, and of both cohorts age 8 (%)

	Younger Cohort							Older Cohort
	R1 (2002) age 1	R2 (2006) age 5	R3 (2009) age 8	Change between R1 and R2	Change between R2 and R3	Change between R1 and R3	R1 (2002) age 8	
All sample	30.3	36.5	21.9	6.1 ***	-14.5 ***	-8.4 ***	33.0	
Gender								
Boys	34.8	35.5	23.4	0.6	-12.1 ***	-11.5 ***	36.9	
Girls	25.8	37.4	20.5	11.6 ***	-16.9 ***	-5.3 **	29.0	
Mother's first language								
Spanish	20.6	25.3	14.5	4.7 ***	-10.8 ***	-6.1 ***	25.4	
Indigenous language	47.9	56.8	35.4	8.9 ***	-21.4 ***	-12.5 ***	43.8	
Area of residence								
Urban	20.6	23.1	14.2	2.5	-8.9 ***	-6.4 ***	23.4	
Rural	45.9	59.5	37.3	13.6 ***	-22.3 ***	-8.7 ***	46.9	
Maternal education								
Primary incomplete or less	47.2	57.2	35.7	10.0 ***	-21.6 ***	-11.6 ***	42.0	
Primary complete up to complete secondary	24.4	30.4	17.6	6.0 ***	-12.8 ***	-6.8 ***	28.9	
Higher education	11.4	9.0	5.1	-2.4	-4.0 *	-6.3 ***	14.8	
Poverty								
Bottom quintile		63.1	39.0		-24.1 ***			
Top quintile		11.7	8.5		-3.2			

Note: Panel data for R1-R2-R3. Adjusted for sample design. Change between rounds expressed in percentage points.

Differences are significant at ***1%, **5%, and *10%.

Table 5.16 reports results for overweight. There is not yet a universally accepted way of defining and expressing overweight and obesity in children. Since physicians, and most publications, tend to use growth percentiles we present the results in this way. A particular percentile, for instance the 85th, corresponds to the BMI below which 85 per cent of the population will be found. When applied to a reference standard population this means that 85 per cent of a normal healthy population of children will be below this level and 15 per cent will be above. If in a given population more than 15 percent of children are above this line, then there is a higher than expected rate of overweight. Being above the 85th percentile is taken to represent overweight, and above the 95th percentile obesity. These percentile values are based on risk assessment; children who are above the 85th percentile are at increased risk of adverse health consequences. An alternative way of defining overweight and obesity is by comparison with the z-scores for BMI for age. In this case greater than or equal to 1 SD BMI for age is considered overweight and greater than or equal to 2 SD BMI for age is considered obese in this age group. This data is not shown.

As mentioned, 15 per cent of a 'normal' healthy population would be expected to have BMI values above the 85th percentile and in the Younger Cohort this is approximately the rate reported for rural children and children of mothers with the least education. However, in children from the least poor households, urban children, children with the most educated mothers and boys, the rates are higher, up to twice the expected rates.

Table 5.16 – amend title to read: Overweight, Older Cohort, Round 1–Round 3, and of both cohorts age 8 (%)

	Older Cohort						Younger Cohort
	R1 (2002) age 8	R2 (2006) age 12	R3 (2009) age 15	Change between R1 and R2	Change between R2 and R3	Change between R1 and R3	R3 (2009) age 8
All sample	22.9	17.9	18.3	-5.0 **	0.4	-4.6 *	25.2
Gender							
Boys	25.7	17.9	15.6	-7.7 **	-2.3	-10.0 ***	29.5
Girls	20.1	17.9	20.9	-2.2	3.1	0.9	20.9
Mother first language							
Spanish	27.6	24.4	21.5	-3.2	-2.9	-6.2 *	29.5
Indigenous language	15.9	8.2	13.5	-7.7 **	5.2	-2.5	17.4
Area of residence							
Urban	28.9	21.8	20.7	-7.1 **	-1.1	-8.2 **	30.9
Rural	14.2	11.5	13.9	-2.6	2.3	-0.3	13.8
Maternal education							
Primary incomplete or less	17.9	14.8	18.4	-3.1	3.6	0.5	15.6
Primary complete up to complete secondary	26.5	18.5	18.1	-8.0 **	-0.4	-8.5 **	25.7
Higher education	15.1	20.8	11.7	5.7	-9.1	-3.4	46.0
Poverty							
Bottom quintile		9.7	11.5		1.7		12.5
Top quintile		30.3	22.8		-7.6		43.6

Note: Panel data for R1–R2–R3. Adjusted for sample design. Change between rounds expressed in percentage points. Overweight = 85th percentile or higher of BMI values. Includes obese children.

In terms of obesity (Table 5.17), in the Younger Cohort the overall rate is 12.3 per cent and the percentages of obese boys (15.2 per cent), urban children (16.8 per cent) and children of women whose mother tongue was Spanish (16.2 per cent) are three times the expected rate. Among children of better-educated mothers (26.2 per cent) and those from more wealthy households, almost 1 in 4 children (23.9 per cent), instead of 1 in 20, children are obese.

A higher percentage of the 8-year-olds in the Younger Cohort are overweight compared with the Older Cohort when they were aged 8, although this difference is not statistically significant. However, the difference is statistically significant for children of mothers with at least some higher education. Forty-six per-cent, more than three times the expected rate, of children of mothers with the highest education level are overweight in Round 3 in the Younger Cohort (see Table 5.16). This trend is even more marked for obesity. There is an increase from 7.8 per cent obesity in the Older Cohort when they were aged 8 to 12.3 per cent in the Younger Cohort children at the same age. This is especially marked among the children of better-educated mothers, where the rate has increased fourfold. These rates of increase are higher than the increases in wealth indices or per capita expenditure and suggest that there are accelerated

childhood behavioural changes over the past seven to eight years that are not explained just by greater wealth. This will be the material of future research.

These rates of overweight and obesity are in keeping with findings from studies of Lima schoolchildren and indicate that in this relatively advantaged group, by this definition, overweight is as common as stunting is in the disadvantaged families, both conditions being associated with long-term adverse health consequences. The increase over time is also in keeping with national trends.

The pattern shown by the Older Cohort is somewhat different, as by Round 3 most of the Older Cohort have entered puberty and it seems that there has been a reduction in the percentage of overweight children overall and particularly in some groups, for instance boys and urban children. Most of this reduction occurred between Rounds 1 and 2 but continued to a lesser extent between Round 2 and Round 3. Between Round 1 and Round 3 there was a reduction of 10 per cent in the prevalence of overweight among boys (25.7 per cent to 15.6 per cent) and a 3.1 per cent reduction in obesity. This may partly be explained by the fact that children accumulate weight and appear fatter before the pubertal spurt in linear growth and some of the overweight seen especially in Round 1 and the change between the rounds may reflect this process. Boys have a greater pubertal growth spurt than girls and this may explain the lower rates of overweight in boys compared with girls in Round 3. In our sample it seems that girls who are overweight and/or obese at 8 maintain this profile after puberty. This is in keeping with the data on adults where overweight and obesity rates are higher among women.

There is less change in obesity rates in general and specifically between Rounds 2 and 3 and the only statistically significant reduction in rates is among the children of better-educated women. In this group the prevalence of obesity declines from 10.3 to 3.0 per cent. Further research and continued follow-up of this group will be needed to explain the disassociation from overweight and obesity trends, but it may be that obesity as measured by >95 per cent percentile identified a more pathological state in contrast to the physiological process of pre-pubertal weight gain mentioned above. The follow-up of the Younger Cohort with their much higher rates of obesity will be especially important in understanding this phenomenon.

Table 5.17. Obesity (according to BMI-for-age z-score), Older Cohort, Round 1–Round 3, and of both cohorts when aged 8 (%)

	Older Cohort						Younger Cohort
	R1 (2002) age 8	R2 (2006) age 12	R3 (2009) age 15	Change between R1 and R2	Change between R2 and R3	Change between R1 and R3	R3 (2009) age 8
Whole sample	7.8	7.9	7.0	0.1	–0.9	–0.8	12.3
Gender							
Boys	8.6	8.2	5.5	–0.4	–2.7	–3.1	15.2
Girls	7.0	7.6	8.6	0.6	1.0	1.5	9.4
Mother's first language							
Spanish	10.5	11.0	9.0	0.5	–2.0	–1.5	16.2
Indigenous language	3.8	3.3	4.0	–0.5	0.7	0.2	5.3
Area of residence							
Urban	11.8	9.9	8.7	–2.0	–1.1	–3.1	16.8
Rural	1.9	4.7	4.0	2.8	–0.7	2.1	3.4
Maternal education							
Primary incomplete or less	4.1	6.5	8.3	2.3	1.8	4.1	3.9
Primary complete up to complete secondary	10.6	8.6	5.2	–2.0	–3.4 *	–5.4 **	13.8
Higher education	5.9	10.3	3.0	4.3	–7.2 **	–2.9	26.2
Poverty							
Bottom quintile		4.6	3.1		–1.5		3.3
Top quintile		12.3	7.9		–4.4		23.9

Note: Panel data for R1–R2–R3. Adjusted for sample design. Change between rounds expressed in percentage points. Obesity=95th percentile or higher of BMI values.

Another area we explore is access to healthcare (see Tables 5.18 and 5.19). Almost one in five caregivers of children in the Younger Cohort stated that they had not taken their child to a healthcare facility when they were ill or injured, although they would have liked to have done so. There was no gender difference and the rate was lowest in the least advantaged groups. In all groups, the direct cost of healthcare was the biggest barrier, and not considering the child's illness serious enough to overcome difficulties was also common in all groups. As might be expected, difficult access and long distance together with indirect costs were more common barriers in rural areas. Relatively few families reported concern that the child would miss school as a barrier and only a very small number reported being embarrassed about health problems. Between 11 and 18 per cent of caregivers reported that lack of trust in the quality of healthcare on offer was a consideration in preventing them accessing the healthcare facility, and this opinion was expressed in urban, rural, poor and non-poor families across the board.

An analysis of information from national (INEI) surveys of access to health services (2000)¹⁵ revealed that 53.7 per cent of families had reported a health problem and half of these (51.5 per cent) visited a formal health facility (i.e. not a pharmacy or traditional healer). Rates were lower in the poorest households. In general health facilities were accessible without using

15 Accessed at <http://www.inei.gov.pe/biblioineipub/bancopub/est/lib0387/PRESENTA.htm>.

transport: 60.5 per cent of rural and 47.8 per cent of urban visits were made on foot and the facilities were quite close, especially in urban areas, where 91.4 per cent of families reported reaching the health facility within 30 minutes. In rural areas 68.5 per cent took 30–60 minutes to reach the health facility and 10.9 per cent more than one hour. In the survey 9.5 per cent of urban families stated distance was a barrier to accessing healthcare and 35.0 per cent of families in rural areas stated this. In the national survey the main barriers to accessing health services were lack of money (22.3 per cent), consultation not considered necessary (22.0 per cent), and preference for home remedies (44.2 per cent). Only 4.1 per cent of people stated the non-existence of health services as a barrier. This is somewhat similar to the Young Lives results in that it suggests that economic barriers are more important than factors such as distance or availability.

The pattern of reasons for not accessing healthcare facilities was similar in the Older Cohort but in all groups a lower percentage of caregivers reported that they had not taken the child to a healthcare facility when they would have liked to. In this case there were higher numbers of girls who had not been taken to the healthcare facility.

Table 5.18. Difficulties in accessing healthcare (Younger Cohort) (%)

	% of caregivers who would have liked to take the child to a healthcare facility when the child was ill or injured, but did not	Reasons for not taking the child to a healthcare facility						
		Direct costs (fees, cost of tests/medicine)	Indirect costs (transport, loss of salary)	Long distance, difficult access	Illness was not serious enough	Don't trust quality of healthcare service	Embarrassed about health problem	Child would miss school
Whole sample	19.6	54.7	22.9	15.2	42.2	14.5	0.9	4.6
Gender								
Girls	19.8	57.6	22.7	15.0	41.2	11.4	1.2	3.9
Boys	19.5	51.8	23.0	15.4	43.1	17.6	0.5	5.2
Mother's first language								
Spanish	22.2	54.0	19.1	11.2	43.3	13.2	0.7	4.5
Indigenous language	15.1	56.5	32.7	25.9	39.3	18.0	1.2	4.8
Area of residence								
Urban	23.0	56.1	20.2	9.5	41.6	15.1	0.7	3.8
Rural	13.0	50.0	32.1	35.0	44.0	12.6	1.5	7.3
Maternal education								
Primary incomplete or less	13.1	56.0	28.7	24.4	40.4	19.2	1.5	2.5
Primary complete up to complete secondary	23.9	53.7	20.8	11.9	41.8	13.2	0.4	5.6
Higher education	20.2	57.3	23.1	15.6	46.7	12.9	1.8	3.1
Absolute poverty								
Bottom quintile	14.8	54.4	25.0	20.8	35.8	12.3	2.2	3.9
Top quintile	21.8	51.4	21.4	7.4	42.8	14.0	1.1	4.1

Note: Panel data for R1-R2-R3. Adjusted for sample design.

Table 5.19. Difficulties in accessing healthcare (Older Cohort) (%)

	% of caregivers that would have liked to take the child to a healthcare facility when the child was ill or injured, but they did not	Reasons for not taking the child to a healthcare facility						
		Direct costs (fees, cost of tests/ medicine)	Indirect costs (costs for transport, loss of salary)	Long distance, difficult access	Illness was not serious enough	Don't trust quality of health-care service	Embarrassed about health problem	Child would miss school or work
All sample	14.5	53.9	21.8	10.4	49.2	18.5	2.6	6.6
Gender								
Girls	17.2	44.2	20.6	7.4	58.6	20.4	3.2	5.5
Boys	11.8	68.4	23.6	15.1	34.7	15.6	1.6	8.4
Mother tongue								
Spanish	15.2	64.1	23.1	8.8	46.8	21.5	2.5	6.1
Indigenous language	13.5	37.7	19.8	13.1	53.0	13.8	2.7	7.5
Area of residence								
Urban	16.4	57.8	21.8	7.5	48.2	17.6	1.5	9.1
Rural	11.1	43.3	22.1	18.3	51.9	20.9	5.4	0.0
Maternal education								
Primary incomplete or less	8.7	51.3	29.3	16.8	50.6	7.5	2.8	7.5
Primary complete up to complete secondary	18.3	54.8	18.2	7.5	50.4	24.0	3.1	5.2
Higher education	17.7	62.2	27.4	14.7	46.0	12.9	0.0	16.0
Poverty								
Bottom quintile	9.2	43.9	20.4	11.2	76.2	8.7	3.7	0.0
Top quintile	20.1	59.2	19.6	8.3	49.1	24.6	1.6	16.7

Note: Panel data for R1-R2-R3. Adjusted for sample design.

5.6 Children's work and time use

Table 5.20 shows the percentage of children from the Younger Cohort who engage in different core activities and the hours per day allocated to such activities by those who engage in them. Table 5.21 shows similar data for the Older Cohort. In the case of the Younger Cohort the data have been reported by the mother, while the data for the Older Cohort are reported by the children themselves.

In the Younger Cohort very few children are engaged in paid work, according to their mothers. Almost all children spend some time studying at home, the average being two hours a day, and on leisure activities (almost five hours per day). Most (71 per cent) do household chores, on which they spend a bit more than an hour. Time allocation is heterogeneous across the sample between urban and rural, with a higher percentage of rural children caring for family members, doing household chores and engaging in unpaid work on the family farm or business. Similar patterns can be found when one focuses on children whose mothers are of indigenous origin or children of less educated mothers. Although rural children, children of mothers of indigenous origin and children of less educated mothers are almost as likely to study at home, the number of hours they engage in this activity is somewhat smaller, compensating for the additional work they are doing.

It is important to recognise that there are significant differences in the percentage of children from the Younger Cohort engaging in paid work when the information reported by the mother is compared with what the children say. As can be seen in Appendix Table A.11, children are much more likely to report doing paid work. This is in keeping with the results of a national survey (Rodriguez and Vargas 2009). It is important to indicate however that the average number of hours spent on this activity is small in both reports.

For the Older Cohort, the main activities children report (over 90 per cent of children) are school and study, household chores and leisure activities, while only 9 per cent report paid work, and almost 40 per cent being involved in unpaid work in the household or family farm.

Time allocation is also heterogeneous in the Older Cohort. Girls tend to spend more time doing household chores, while boys spend more time on paid work. Similarly, children of less educated mothers spend more time on household chores and are more likely to be involved in unpaid work at home or paid work than children of more educated mothers. To compensate for this burden, children of less educated mothers end up spending less time studying at home or engaging in leisure activities.

Table 5.20. Children's time use – hours per day spent on core activities in a typical day (Younger Cohort)

	Caring for family members		Household chores		Unpaid work on family farm/business		Paid work		At school		Studying at home		Leisure	
	%	Average hours per day	%	Average hours per day	%	Average hours per day	%	Average hours per day	%	Average hours per day	%	Average hours per day	%	Average hours per day
Whole sample	33.4	1.47	70.9	1.28	18.5	1.6	0.6	1.9	98.3	6.0	98.2	2.0	99.8	4.9
Gender														
Boys	33.0	1.48	69.2	1.25	19.9	1.6	0.5	2.5	98.3	6.0	97.7	2.0	99.7	5.0
Girls	33.8	1.46	72.7	1.31	17.2	1.5	0.6	1.4	98.3	6.1	98.7	2.1	99.9	4.8
Mother's first language														
Spanish	28.0	1.42	62.4	1.19	8.4	1.5	0.5	2.2	98.9	6.1	98.8	2.2	99.8	5.0
Indigenous language	43.2	1.53	86.4	1.40	36.8	1.6	0.7	1.5	97.2	6.0	97.1	1.7	99.7	4.7
Area of residence														
Urban	28.9	1.48	64.1	1.21	7.7	1.5	0.3	1.0	98.6	6.0	98.5	2.2	99.8	5.0
Rural	42.3	1.46	84.4	1.39	39.8	1.6	1.1	2.4	97.7	6.1	97.5	1.7	99.7	4.7
Maternal education														
Primary incomplete or less	40.8	1.49	83.0	1.38	33.5	1.6	0.7	1.5	95.9	6.1	95.6	1.7	99.5	4.8
Primary complete up to complete secondary	32.1	1.47	67.5	1.24	12.8	1.5	0.6	2.2	99.3	6.0	99.4	2.1	99.9	4.9
Higher education	20.8	1.45	54.7	1.15	4.1	2.2	0.0	.	100.0	6.2	100.0	2.5	100.0	5.0
Poverty														
Bottom quintile	43.8	1.51	79.3	1.34	26.0	1.6	1.1	1.6	95.3	6.0	94.8	1.7	99.0	4.8
Top quintile	20.2	1.44	55.3	1.18	7.4	1.5	0.3	8.0	99.9	6.2	99.9	2.4	99.9	5.0

Note: Panel data for R1-R2-R3. Adjusted for sample design. Reported by the mother. Figures reported for those children who participate in each activity.

Table 5.21. Children's time use – hours per day spent on core activities in a typical day (Older Cohort)

	Caring for family members		Household chores		Unpaid work on family farm/business		Paid work		At school		Studying at home		Leisure	
	%	Average hours per day	%	Average hours per day	%	Average hours per day	%	Average hours per day	%	Average hours per day	%	Average hours per day	%	Average hours per day
Whole sample	41.3	1.88	91.1	1.82	39.1	2.60	9.1	4.26	90.9	6.43	89.4	2.19	95.8	2.72
Gender														
Boys	40.8	1.74	86.8	1.46	38.4	2.79	11.3	4.65	89.3	6.36	88.0	2.11	95.8	2.86
Girls	41.8	2.02	95.4	2.15	39.8	2.41	6.8	3.62	92.5	6.50	90.8	2.27	95.7	2.57
Mother's first language														
Spanish	38.1	1.85	87.0	1.72	30.1	2.70	10.4	4.12	90.1	6.47	89.4	2.26	96.5	2.94
Indigenous language	45.5	1.92	97.0	1.94	51.9	2.51	7.2	4.57	91.9	6.38	89.3	2.10	94.6	2.39
Area of residence														
Urban	36.5	1.91	88.6	1.79	27.7	2.33	10.1	4.22	93.6	6.39	92.5	2.31	96.0	2.84
Rural	50.0	1.84	95.4	1.86	59.6	2.82	7.3	4.38	86.0	6.51	83.7	1.97	95.4	2.50
Maternal education														
Primary incomplete or less	48.0	1.79	95.8	2.00	52.5	2.78	9.1	3.84	87.8	6.49	85.6	2.00	94.0	2.50
Primary complete up to complete secondary	37.6	1.89	88.4	1.77	32.6	2.33	9.2	4.33	93.1	6.40	91.9	2.29	97.1	2.88
Higher education	40.5	1.86	89.2	1.30	20.4	2.54	3.2	3.14	97.9	6.45	97.9	2.52	95.0	2.83
Poverty														
Bottom quintile	48.4	1.86	95.5	1.95	51.3	2.93	7.5	5.31	85.5	6.45	86.2	1.89	95.6	2.38
Top quintile	38.7	2.11	85.1	1.94	24.7	2.10	10.1	4.88	93.8	6.51	91.4	2.44	95.9	2.96

Note: Panel data for R1-R2-R3. Adjusted for sample design. Reported by the mother. Figures reported for those children who participate in each activity.

The qualitative sub-studies also provided interesting information on how children spend their time. Box 5.7 presents information on diverse domestic chores, and Box 5.8 on children's play.

Box 5.7. Children's activities at home: increasing responsibilities over time

Younger Cohort children reported performing a wide range of domestic activities, and rural children in particular showed greater involvement in domestic and productive activities within their households, which is reflected in the main survey as well. Thus, most of the rural children we visited took care of themselves (through activities such as washing and dressing themselves, brushing their teeth, combing their hair, etc.), and they fed themselves, but they also took care of others, particularly younger siblings, by feeding them or keeping them clean. They also helped their mothers with domestic activities, such as cooking (e.g. peeling vegetables), cleaning, washing the dishes, making beds, running errands, undertaking light shopping, fetching water and wood for cooking, helping with laundry, and collecting grass or grinding corn to feed the animals. In the case of young urban children, they also helped their mothers with many domestic activities, although the range of such activities was narrower than in rural areas: they helped with cooking, cleaning, washing the dishes, making beds, running errands and doing light shopping.

Rural children at the ages of 6 and 7 were not only intensively involved in domestic activities but also in productive activities, such as agriculture and cattle-raising, within their households. As we saw during our visit, children joined their parents in their gardens and farms, and helped to perform some activities (feeding the animals, clearing the crops, scaring birds away, digging holes in the ground for sowing, grazing the flock, etc.), while learning progressively by observing older siblings or adults undertaking other activities (milking the cows, getting honey, moving the animals around pastures, sowing and harvesting, etc.). In the Andean cities, some young children were involved in their parents' economic activities, such as street commerce.

As for Older Cohort children, they participated more and in a wider range of activities, both paid and unpaid, and gender differences were more evident, so boys carried out fewer domestic activities than girls. Some of the boys mentioned that they washed their clothes (their school uniform), as well as the dishes, and fed domestic animals, while all the girls reported these and other domestic activities such as caring for younger siblings, cleaning, cooking, going to market with their mother, etc. Both girls and boys in rural areas also participated in productive activities on family land: grazing the flock, sowing, harvesting, etc. Both in rural and urban areas, most of the Older Cohort children had experience of paid work (see Box 5.9). Some rural children of this age (between 11 and 13) associated their increasing responsibilities at home and on the family lands with their transition from childhood to adolescence, showing how participation in such activities is attached to endogenous definitions of maturity and growth. Indeed, in rural areas, chronological age is not necessarily a sign of maturity as it is the kind of things a person is able to do and the skills he or she masters that matter. Thus, starting to earn his own money shows the maturity of a boy more than the number of years he acquires. In the case of girls, mastering certain techniques (in food preparation, textile handicrafts, etc.) also marks her growth into adolescence and even her readiness to marry.

Box 5.8. Children's play and leisure

Children's play and leisure activities vary across sites: rural children's leisure activities were playing football, climbing trees, riding bikes, making and playing with handmade kites or going out with friends for a walk. In the Andean community we visited, some children had few toys (they used bottle tops, trolleys, empty cans and dolls). Few of them had DVDs at home and watched videos (films, TV series, music clips, soap operas, etc.) In the Amazonian village there were important changes due to access to more services in the community. Thus in 2008 children reported watching more TV than the previous year because most households had an electric power supply. This had led to most of the families acquiring a TV. Also access to mobile phone networks in the community allowed some children to spend time playing with mobile phones.

Children in urban areas were also active, although most of their activities occurred within the home: watching television, listening to music, doing homework, and playing (with peers or alone; some boys mentioned using the PlayStation game at home). Children from urban areas had more access to technology such as computers, the internet and video games. Thus, many wrote in their diaries that they had access to the internet (and used it either for doing homework or for games with their friends) and some had PlayStation (video games) or went to public places to play them. In urban areas the gender difference related to the places children went with friends was more evident: boys went out and played with friends (football or basketball) in the park or even in another neighbourhood. Girls, on the other hand, played at home with their siblings. Girls were not allowed to 'hang around' in the streets because it was considered dangerous for them (parents feared they could be attacked or robbed).

Table 5.22 shows that the likelihood of children being engaged in paid work has increased for the Older Cohort as they have got older, and compares the Younger Cohort's engagement in paid work in Round 3, when the child was 8, with that of the Older Cohort in Round 1, when these children were the same age.

For the Older Cohort, over time the patterns are very distinct for boys and girls. For boys the rate of engagement in paid work increases more sharply than for girls. Indeed, fewer girls were doing paid work in Round 3 than in Round 2. Similarly the rate of children working is somewhat higher in rural areas and for those children with less educated mothers.

When we compared the children from the Younger Cohort in Round 3 with those from the Older Cohort in Round 1, when both cohorts were aged 8, we found that the percentage of children engaged in paid work had decreased. It is likely that the growth in per capita household income and expenditure, and the improvement in well-being indicators experienced by many, are at least partly responsible for this trend, as improved incomes may be reducing the need for some children to engage in paid work. Box 5.9 presents some views on the same issues from the qualitative sub-studies.

Table 5.22. Paid work (percentage of children who report working for pay in the last 12 months, Older Cohort, and Younger Cohort when aged 8)

	Older Cohort						Younger Cohort
	R1 (2002) age 8	R2 (2006) age 12	R3 (2009) age 15	Change between R1 and R2	Change between R2 and R3	Change between R1 and R3	R3 (2009) age 8
Whole sample	23.2	30.2	30.1	7.0 **	-0.1	6.8 **	8.8
Gender							
Boys	20.7	33.6	38.3	12.9 ***	4.7	17.6 ***	9.3
Girls	25.8	26.7	21.7	1.0	-5.0	-4.1	8.3
Mother's first language							
Spanish	14.7	26.8	26.4	12.1 ***	-0.5	11.6 ***	6.4
Indigenous language	36.1	35.4	35.8	-0.7	0.4	-0.3	13.1
Area of residence							
Urban	17.9	30.3	29.0	12.5 ***	-1.3	11.2 ***	7.4
Rural	31.1	30.0	32.0	-1.1	2.0	0.9	11.5
Maternal education							
Primary incomplete or less	34.9	32.9	36.6	-2.0	3.7	1.7	8.4
Primary complete up to complete secondary	17.2	29.7	25.8	12.5 ***	-3.9	8.6 **	10.2
Higher education	5.6	16.2	19.5	10.5	3.4	13.9 **	4.6
Poverty							
Bottom quintile		35.0	28.7		-6.3		9.5
Top quintile		22.5	20.3		-2.2		7.5

Note: Panel data for R1-R2-R3. Adjusted for sample design. Reported by the child. Change between rounds expressed in percentage points.

Box 5.9. Children's views on paid work

Our in-depth discussions with children on two visits showed similar results to the main survey: Older Cohort children's involvement in paid and unpaid work has increased as they have got older, especially in rural areas. Thus, by 2008, all of the rural boys in our sub-sample had worked for pay at least once on other people's land at harvest time. In 2008 there were more rural girls than in 2007 who had done temporary paid work in the fields during harvest time.

For most of the children we interviewed, paid work was important since it helped to provide resources for the family's or children's needs. Esmeralda, a rural girl living in Andahuaylas, who commutes to go to school in the district capital, did not do any paid work in 2007, but had to in 2008 when her father was ill:

"[When my father fell ill] there was no money for our bus tickets [to school] ... [so] my sister and I went to work on Saturdays."

(Esmeralda, 14 years old, rural Andahuaylas)

For Esmeralda, working for pay was not only a help to her family but also to herself, to provide money that allowed her to keep going to her school in the district capital every day. Not working in her case might have meant dropping out of school or attending one she considered of inferior quality. A boy in her community also pointed out that children have expenses they need to cover, even at school:

Sandro: It is OK that children work ... because it is easy to get [money] for pay.

Interviewer: What do you need to pay for? ... Do you need to pay for things?

Sandro: Yes ... for photocopies, or for the exam.

(Sandro, 13 years old, rural Andahuaylas)

Some children however support the idea that children should not work for pay and should just focus on studying. This was highlighted especially in urban sites, where several children said that ideally, education should be the main activity of children, although in rural areas some children also said they might be too young for long hours of hard work in the fields, as in the case of Maria:

Maria has done paid work during the school holidays for the first time this year. She worked as a casual worker on a farm to help with the harvest. Her family needed money, and so she contributed by working. However, she said she did not like it, because it was 'very tiring work' and there was 'a lot of sun', considering these conditions very difficult. Her younger sister went to the capital district at weekends and worked washing dishes on the food stalls for tips from the stallholders. She did this often, but said she does it when she needs money to buy school materials.

(Maria, 13 years old, rural Rioja)

Nevertheless, children were aware that household circumstances and poverty might affect their dedication to schooling and force them to work. In fact, some urban and rural children alike were working in the family business for part of the day or at weekends as well as going to school. In rural sites, children were even more fully involved in other activities. Indeed, children who do not do paid work still do agricultural and herding work within their households, but instead of considering this "work" they call it 'help at home' (see also Box 5.7).

5.7 Well-being

In the surveys we have included a variety of measures of what could be called subjective well-being. As suggested above, poverty is a multidimensional concept including both objective conditions and people's perceptions of these. The next few tables present information on some of the variables we have measured.

In Table 5.23 we present some of the feelings of children, which are an important component of Young Lives. We include the results of four questions that we asked the Older Cohort about

communicating with parents and emotions. In these variables the patterns of differences do not follow the trends observed with health and education indicators. Still, there are important variations for each variable and within groups. For example, only about one in four of the children, of more educated mothers respond 'certainly true' when asked whether they feel able to speak to their parents about how they feel, compared to 40 per cent or more in the other groups; on the other hand, the children of less educated mothers are less likely to feel that their parents treat them fairly. Regarding the more personal questions, girls are more likely to report feelings of worry and feeling unhappy, downhearted or tearful. These are only a sample of questions on these topics; an in-depth analysis is beyond the scope of this report.

From the qualitative sub-studies, there is also information about children's understandings of well-being, showing that family relationships are central. The presence of parents, the actual time they spend with children and the presence or not of violence in family relationships, are key to children's well-being, according to the children themselves. The ability of parents to satisfy the basic material needs of their children is also taken into account. Younger children also highlight the importance of having time to play with friends and relatives on the one hand, and on the other, the importance of learning, school and education, as part of their well-being. Once again the presence of physical punishment at school appears as an indicator of ill-being (see also Box 5.4). Older children support these views and add assessments of the kind of social environments they live in: rural children especially consider their communities safer and cleaner than urban areas and value them, acknowledging that these characteristics contribute to their well-being. However, they acknowledge the lack of educational services for the upper levels of education (secondary school in some cases, higher education in all cases) and the consequent need to migrate for further education as detrimental to their well-being. Urban children also recognise dangerous environments marked by delinquency, drug dealing and crime as threats to their well-being. However, urban children value the safety of their homes, the free time they enjoy and access to the more numerous educational opportunities they have in the city as part of their well-being.

The Round 3 survey also included a set of self-administered questions about at-risk behaviours, including smoking and drinking, for children in the Older Cohort. National statistics for young people aged 12 to 18 show that 36 per cent drink alcohol and 22 per cent smoke cigarettes (DEVIDA 2006). Our study is not strictly comparable, as our sample is around the age of 15, but our figures are quite similar. Table 5.24 presents the results for smoking and alcohol consumption, which in Peru are illegal for minors. About 20 per cent said they had tried smoking at least once, with boys more likely to do it. For alcohol there were only small differences by gender; instead the differences are marked by mothers' mother tongue (Spanish speakers more likely to drink), area of residence (urban dwellers more likely to drink), and maternal education (children of more educated mothers are more likely to drink). However none of these groups reported drinking often, as most of the responses for drinking were 'only on special occasions' and 'hardly ever'. The levels of smoking and drinking reported here could be considered low, but what is interesting is the evolution of these and other at-risk behaviours over time.

Table 5.23. Subjective well-being (Older Cohort) (%)

	I usually feel able to speak about my feelings with my parents			Most of the time I feel my parents treat me fairly when I do something wrong			I worry a lot			I am often unhappy, downhearted or tearful		
	Certainly true	A little true	Not true	Certainly true	A little true	Not true	Certainly true	A little true	Not true	Certainly true	A little true	Not true
Whole sample	40.6	49.9	9.5	47.3	32.0	20.7	31.7	52.3	15.9	17.4	33.5	49.1
Gender												
Girls	36.7	52.7	10.6	46.7	31.3	22.0	36.2	48.5	15.4	21.8	36.8	41.3
Boys	44.7	47.0	8.3	48.0	32.7	19.3	27.2	56.4	16.5	12.6	29.8	57.5
Mother's first language												
Spanish	37.8	53.3	9.0	50.6	33.4	16.1	31.3	56.2	12.5	16.3	33.3	50.4
Indigenous language	44.9	44.8	10.3	42.0	30.2	27.9	32.0	47.3	20.8	18.5	34.0	47.5
Area of residence												
Urban	35.6	53.8	10.6	48.0	35.9	16.1	34.9	53.5	11.5	17.1	34.2	48.7
Rural	49.9	42.7	7.4	46.2	24.5	29.3	25.7	50.1	24.2	18.0	32.1	49.9
Maternal education												
Primary incomplete or less	45.3	44.5	10.2	41.9	31.8	26.3	34.7	48.8	16.6	19.5	34.8	45.7
Primary complete up to complete secondary	40.2	52.2	7.6	48.2	33.2	18.6	31.0	54.8	14.2	17.3	34.1	48.6
Higher education	25.5	61.0	13.4	69.8	27.4	2.8	22.4	55.4	22.2	13.1	23.3	63.7
Absolute poverty												
Bottom quintile	50.7	44.1	5.2	45.9	27.9	26.2	28.3	48.6	23.1	14.5	35.9	49.7
Top quintile	28.5	60.2	11.3	50.1	38.2	11.6	37.1	48.9	14.0	22.5	34.3	43.2

Note: Panel data for R1-R2-R3. Adjusted for sample design. Data from a confidential self-administered questionnaire.

Table 5.24. Smoking and alcohol consumption (Older Cohort) (%)

	I smoke cigarettes						I drink alcohol						
	Every day	At least once a week	At least once a month	Hardly ever	Never	No response	Every day	At least once a week	At least once a month	Only on special occasions	Hardly ever	Never	No response
Whole sample	0.4	2.9	3.1	11.6	75.9	6.1	0.2	0.9	2.9	14.6	10.5	64.1	6.7
Gender													
Girls	0.1	2.1	1.7	5.8	86.9	3.5	0.1	1.2	2.5	15.2	9.9	67.8	3.3
Boys	0.7	3.7	4.6	17.3	65.2	8.6	0.2	0.7	3.3	14.0	11.2	60.5	10.0
Mother's first language													
Spanish	0.1	2.3	3.7	12.3	74.3	7.2	0.1	1.2	2.6	20.3	15.2	53.1	7.5
Indigenous language	0.8	3.7	2.3	10.6	78.1	4.4	0.3	0.5	3.4	6.4	3.8	80.7	4.9
Area of residence													
Urban	0.1	2.2	3.3	13.3	75.6	5.5	0.1	1.0	2.6	18.0	13.4	58.6	6.3
Rural	0.9	4.2	2.8	8.5	76.4	7.1	0.3	0.8	3.4	8.6	5.5	74.0	7.4
Maternal education													
Primary incomplete or less	0.5	3.8	3.3	10.1	76.0	6.2	0.0	0.4	5.0	11.0	8.0	68.5	7.1
Primary complete up to complete secondary	0.2	2.5	3.2	11.7	76.5	5.9	0.2	0.6	1.6	16.7	10.8	64.2	5.8
Higher education	0.0	0.8	2.6	19.2	76.6	0.8	0.0	1.5	0.8	23.5	16.1	53.9	4.2
Absolute poverty													
Bottom quintile	0.3	2.4	1.2	9.4	76.6	10.0	0.3	1.4	2.7	13.3	4.8	65.2	12.3
Top quintile	0.0	1.2	1.3	11.3	83.1	3.1	0.0	0.6	3.4	21.3	12.6	57.9	4.1

Note: Panel data for R1-R2-R3. Adjusted for sample design. Data come from a confidential self-administered questionnaire.

As mentioned before, the survey also includes children's subjective evaluations of their own lives. In Table 5.25 we present the results of a question which asked children to place themselves on a ladder of 9 steps on quality of life. Rungs 1–3 were taken as meaning they thought they had a 'bad life', and rungs 7–9, a 'good life', while rungs 4–6 were understood as indicating an average life. The results are quite different in the Younger and Older Cohort, suggesting that the developmental stages they are experiencing are linked with their responses. In general, the Younger Cohort reported higher self-evaluations. There were almost no differences between boys and girls and only a large one for poverty level. There were bigger differences linked with maternal education and mother's first language, as well as area of residence, favouring better-educated, Spanish-speaking and urban children. For the Older Cohort there were differences favouring girls, no children of mothers with higher education marked the lower three rungs and smaller differences in all other categories. Again, this is quite a different pattern from that observed in almost all the health and education indicators.

Table 5.25. Children's perception of their relative quality of life (both cohorts) (%)

	Younger Cohort			Older Cohort		
	Bad life	Average life	Good life	Bad life	Average life	Good life
Whole sample	7.7	44.5	47.8	7.5	72.5	20.1
Gender						
Girls	7.3	44.5	48.2	7.3	66.2	26.5
Boys	8.1	44.6	47.3	7.6	78.7	13.7
Mother's first language						
Spanish	5.8	41.2	53.0	5.4	71.7	22.8
Indigenous language	11.2	50.7	38.1	9.8	74.0	16.1
Area of residence						
Urban	5.8	43.1	51.0	6.9	72.4	20.7
Rural	11.4	47.3	41.3	8.4	72.6	19.0
Maternal education						
Primary incomplete or less	10.5	49.9	39.6	8.4	69.9	21.7
Primary complete up to complete secondary	7.1	43.1	49.8	7.3	75.6	17.1
Higher education	3.3	36.9	59.9	0.0	79.0	21.0
Absolute poverty						
Bottom quintile	12.1	48.5	39.4	9.5	74.0	16.5
Top quintile	3.6	42.7	53.6	4.2	76.3	19.5

Notes: Panel data for R1-R2-R3. Adjusted for sample design. The question asked was: 'There are nine steps on this ladder. Suppose we say that the ninth step, at the top, represents the best possible life for you and the bottom represents the worst possible life for you. Where on the ladder do you feel you stand at the present time?'

To complement the survey data, Box 5.10 presents the perspectives of children on these topics as gathered in the qualitative sub-study.

Box 5.10. Children's worries and fears

Children's worries are usually closely associated with the context they live in and their daily activities. Thus, Younger and Older Cohort children in rural areas express concerns about animals that may kick or butt them or pass on infections. They also express the fear of having accidents with sharp instruments, such as the machetes and knives as they work with from an early age. The fear of being run over was also mentioned as children from one rural site walk alone along the road to go to school.

Interviewer: Did you cut yourself?

Hugo: Yes, with a machete. I almost cut my finger off.
(6 years old, rural Rioja)

Interviewer: So, have you cut yourself?

Rodrigo: Sure, a lot of times.
(6 years old, rural Rioja)

In contrast, in urban areas, children's concerns are related to the insecurity in the cities: they fear being kidnapped or being victims of a crime, being caught in a traffic accident or involved in a fight, and they mention robbers, gangs, drunks and rapists. These children highlight the violence that pervades their daily life and describe how this concerns them. In contrast, rural children are aware of the relative safety of their villages and value this.

"I rather prefer to go to school in the morning, because in the afternoons it is more dangerous. When I come back [in the afternoons] it is darker. ... in the streets there is always danger, but in the morning it is not so dangerous. It is less likely that something will happen to you. ... in the street, at night, there are more adults, drunken people. I don't know, [it is] more dangerous."
(Susan, 13 years old, urban Lima)

Interviewer: Is this a good place to live?

Eva: Yes, because here we are calm, safe, here nothing happens, while in the city, they rape you.

Interviewer: Who told you that?

Eva: My cousins.

Interviewer: And does it happen here?

Eva: No, never.

(Eva, 14 years old, rural Andahuaylas)

5.8 Shocks

One of the topics that Young Lives has included in its surveys is sudden changes in the situation families live in, or shocks. From our data, we see that about two-thirds of households report having experienced at least one shock since Round 2 (see Table 5.26). The most common shocks are those related to changes within the family (diseases, loss of a member of the family), environmental shocks (floods, drought, etc.), abrupt changes in economic conditions (typically changes in employment) and crimes that affected the asset base of the family. It is interesting to note that these adverse shocks have been less frequent in Round 3 than in Round 2, with the exception of environmental shocks, which have increased in Round 3 (at least for the households of the Younger Cohort; see Tables 5.27 and 5.28).

Incidence of crime and changes within the family tend to be fairly similar across households with different backgrounds, However environmental shocks appear to be more frequent among the rural sub-sample and households where mothers are less educated or of indigenous origin. This is expected as people with these backgrounds are more likely to be dependent on agriculture and therefore are more affected by weather fluctuations and environmental shocks.

It is also interesting to note that girls in the sample have been more likely to be adversely affected by environmental shocks and by changes within the family.

When one compares shocks affecting the Younger and Older Cohorts it is evident that both profiles are similar, probably arising from the clustered nature of the sample which may explain that both types of children are affected by similar correlated shocks (crimes, economic conditions or environmental). Even changes within the families are on average similar across cohorts.

Table 5.26. Households experiencing at least one shock since previous survey round (%)

	Younger Cohort			Older Cohort			Both cohorts		
	R2 (2006)	R3 (2009)	Change between rounds	R2 (2006)	R3 (2009)	Change between rounds	R2 (2006)	R3 (2009)	Change between rounds
Whole sample	64.6	64.4	-0.3	69.1	68.1	-1.0	66.6	66.0	-0.6
Gender									
Boys	63.6	65.7	2.1	64.2	66.6	2.4	63.9	66.1	2.2
Girls	65.6	63.0	-2.6	74.0	69.5	-4.5	69.4	66.0	-3.5
Mother's first language									
Spanish	62.5	57.0	-5.5 ***	62.6	59.7	-2.9	62.6	58.2	-4.4 **
Indigenous language	68.4	77.6	9.2 ***	78.4	80.2	1.8	73.2	78.9	5.7 **
Area of residence									
Urban	59.5	58.7	-0.8	62.7	63.9	1.2	60.9	61.0	0.1
Rural	73.5	75.5	2.0	79.5	75.6	-3.9	76.2	75.5	-0.7
Maternal education									
Primary incomplete or less	70.8	73.1	2.3	75.6	77.4	1.8	73.2	75.2	2.1
Primary complete up to complete secondary	62.8	61.3	-1.6	68.2	62.7	-5.5	65.2	61.9	-3.3
Higher education	57.5	55.3	-2.2	50.3	58.9	8.6	55.1	56.5	1.4
Poverty									
Bottom quintile	69.5	68.4	-1.1	73.4	69.5	-3.9	71.3	68.9	-2.4
Top quintile	58.2	58.5	0.3	56.0	61.6	5.6	57.2	59.9	2.7

Note: Panel data for R1-R2-R3. Adjusted for sample design. Change between rounds expressed in percentage points.

Differences are significant at ***, **, and *10.

Table 5.27. Shocks experienced since previous survey round (Younger Cohort) (%)

	Crimes (theft, vandalism)			Economic conditions (changes to prices or employment, asset disputes)			Environmental shocks			Changes within the family		
	R2 (2006)	R3 (2009)	Change between rounds	R2 (2006)	R3 (2009)	Change between rounds	R2 (2006)	R3 (2009)	Change between rounds	R2 (2006)	R3 (2009)	Change between rounds
Whole sample	15.4	15.2	-0.2	20.4	16.7	-3.7 ***	26.6	30.2	3.6 **	32.6	25.9	-6.8 ***
Gender												
Boys	15.1	14.8	-0.3	20.8	17.4	-3.4 *	24.5	29.9	5.5 **	34.1	24.6	-9.5 ***
Girl	15.6	15.6	-0.1	19.9	16.0	-3.9 **	28.8	30.5	1.7	31.1	27.1	-4.1 *
Mother's first language												
Spanish	16.9	15.9	-1.0	21.4	16.0	-5.4 ***	16.9	15.8	-1.1	33.5	24.8	-8.7 ***
Indigenous language	12.7	14.0	1.3	18.5	18.0	-0.5	44.2	56.3	12.1 ***	31.1	27.8	-3.3
Area of residence												
Urban	16.2	16.6	0.4	18.9	15.2	-3.7 **	14.6	16.4	1.8	32.3	25.9	-6.5 ***
Rural	14.0	12.5	-1.5	23.0	19.8	-3.2	47.4	57.6	10.2 ***	33.1	25.8	-7.3 ***
Maternal education												
Primary incomplete or less	13.8	14.0	0.2	22.2	17.0	-5.2 **	44.4	52.1	7.7 **	34.9	24.8	-10.1 ***
Primary complete up to complete secondary	14.0	15.1	1.1	20.8	17.3	-3.5 *	20.8	22.4	1.6	31.4	25.9	-5.4 ***
Higher education	24.3	18.4	-6.0	15.2	13.2	-2.0	6.7	8.2	1.4	32.9	28.5	-4.4
Poverty												
Bottom quintile	13.6	13.5	0.0	20.3	14.7	-5.6 *	42.9	47.0	4.0 **	34.5	20.8	-13.7 ***
Top quintile	22.6	21.0	-1.6	16.5	16.0	-0.5	7.3	8.8	1.5	29.0	26.1	-2.9

Note: Panel data for R1-R2-R3. Adjusted for sample design. Considers the most frequent shocks. Change between rounds expressed in percentage points.

Differences are significant at ***, **, and *10.

Table 5.28. Shocks experienced since previous survey round (Older Cohort) (%)

	Crimes (theft, vandalism)			Economic conditions (changes to prices or employment, asset disputes)			Environmental shocks			Changes within the family		
	R2 (2006)	R3 (2009)	Change between rounds	R2 (2006)	R3 (2009)	Change between rounds	R2 (2006)	R3 (2009)	Change between rounds	R2 (2006)	R3 (2009)	Change between rounds
All sample	14.9	10.5	-4.5 **	20.4	17.0	-3.4	37.2	35.9	-1.4	33.2	27.8	-5.4 *
Gender												
Boys	12.1	8.0	-4.1 *	20.8	15.4	-5.3	33.9	36.0	2.1	26.7	25.6	-1.1
Girls	17.8	13.0	-4.8	19.9	18.5	-1.4	40.6	35.8	-4.9	39.7	30.0	-9.7 **
Mother's first language												
Spanish	15.5	12.0	-3.6	19.5	15.4	-4.1	21.7	19.7	-2.0	32.4	26.5	-6.0 *
Indigenous language	14.1	7.7	-6.3 *	21.6	19.2	-2.4	59.7	60.2	0.5	34.5	29.3	-5.2
Area of residence												
Urban	16.5	13.5	-3.0	18.7	15.6	-3.1	23.5	21.9	-1.6	34.2	28.8	-5.3
Rural	12.5	5.0	-7.4 **	23.1	19.5	-3.6	59.6	61.1	1.5	31.6	25.9	-5.7
Maternal education												
Primary incomplete or less	13.3	9.6	-3.7	20.7	16.1	-4.6	56.1	58.4	2.3	33.8	24.2	-9.6 *
Primary complete up to complete secondary	16.5	10.7	-5.8 **	22.0	17.7	-4.3	28.8	22.5	-6.3	33.3	29.6	-3.8
Higher education	13.5	9.5	-4.1	12.5	14.7	2.3	6.9	11.9	5.0	32.5	34.1	1.6
Poverty												
Bottom quintile	10.4	6.7	-3.7 *	19.1	13.3	-5.7	57.8	53.2	-4.5	25.9	21.0	-4.9
Top quintile	18.4	13.8	-4.6	16.4	19.8	3.4	17.0	10.9	-6.1	30.9	31.5	0.6

Note: Panel data for R1-R2-R3. Adjusted for sample design. Considers the most frequent shocks. Change between rounds expressed in percentage points.

Differences are significant at ***, **, and *10.

5.9 Policies and programmes

In this section we briefly present information about the way Young Lives children and their families have experienced a number of government programmes aimed at fighting poverty. First we present DEMUNA (*Defensoría Municipal del Niño y del Adolescente*), a programme initiated by the Office of the President in 1993 and implemented by the municipalities since 1997. It consists of a network of drop-in centres offering services to promote young people's rights and help protect them from violence and abuse. DEMUNA is aimed at protecting and promoting children's and young people's development. In that sense, it is in charge of protecting children and young people when their rights are being violated – centres employ caseworkers who help report crimes to the authorities, handle conflicts that can be solved by mediation or follow up cases, as well as promoting prevention (Boza 2007; DEMUNA 2004; Terreros and Tibblin 2004). DEMUNA centres do not actually have legal powers, so their work depends mostly on the correct functioning of other state institutions (e.g. the judiciary; Luttrell-Rowland, forthcoming).

There has been an increase in the number of DEMUNA centres over the years. The programme started with six centres in 1993 (Terreros and Tibblin 2004) and according to statistics from the Ombudsman's Office, there were between 600 and 700 in 2006 (Boza 2007); however, only around 50 per cent of the municipalities in the country had established DEMUNA centres by that time (Ciudadanos al Día 2010). Also, according to the INEI, there were 234,072 DEMUNA cases in 2007, and according to both INEI and MIMDES, most of these concerned food and child support (CAD 2010; Luttrell-Rowland, forthcoming).

This is related to the fact that while DEMUNA centres were intended to protect the rights of children and young people, their work often focuses on helping women (specifically mothers) in an unofficial way regarding family violence and child support, since there are few institutions that help women with these things (Luttrell-Rowland, forthcoming). This has two consequences: first, women are seen by the State primarily in their role as mothers, ignoring other issues (e.g. gender-based violence); and second, children's and young people's rights are defined in relation to the family, not as an issue of public relevance.

On the other hand, since each municipality is in charge of the management of DEMUNA centres, there is a wide variation in their quality, depending on the resources available locally and the political will to take on the issues that DEMUNA tackles (Boza 2007).

The results in Table 5.29 are presented for both cohorts and show that while most families have heard of DEMUNA, only around 12 per cent of them have actually sought help at DEMUNA centres. While most of those seeking services thought that DEMUNA centres were helpful, only about 40 per cent (Younger Cohort) or 30 per cent (Older Cohort) would rate them as good or very good. This is probably because DEMUNA often acts as an orientation institution, referring people on to other sources of help, but cannot take on all cases because of limited resources; this is a topic that would require further research.

In terms of differences between groups, Spanish speakers and urban families have been more inclined to seek help at a DEMUNA. This may be due either to availability of DEMUNA centres or difficulties in reaching or communicating with them. DEMUNA centres are important institutions that have been studied very little; indeed Young Lives published one of the few studies on this topic (Boza 2007).

Table 5.29. Caregivers' experiences of the DEMUNA programme (Younger and Older Cohort) (%)

	Younger Cohort				Older Cohort			
	Have heard about the DEMUNA programme	Have sought help from DEMUNA	Felt somebody in DEMUNA was helpful	Rate DEMUNA as good or very good	Have heard about the DEMUNA programme	Have sought help from DEMUNA	Felt somebody in DEMUNA was helpful	Rate DEMUNA as good or very good
Whole sample	80.7	12.4	80.6	39.0	79.6	12.3	77.3	29.9
Gender								
Girls	80.5	11.6	77.0	40.6	77.9	11.7	76.6	23.9
Boys	81.0	13.1	83.8	37.6	81.3	12.8	78.0	34.7
Mother's first language								
Spanish	92.9	14.6	78.1	36.9	91.7	13.6	78.1	32.3
Indigenous language	58.7	8.3	88.3	45.3	61.5	9.8	81.0	27.1
Area of residence								
Urban	90.2	15.4	77.7	37.3	87.2	15.9	75.0	28.4
Rural	62.0	6.5	93.9	47.0	65.9	5.8	88.8	40.8
Maternal education								
Primary incomplete or less	60.5	6.5	91.7	44.8	61.3	9.7	78.1	19.0
Primary complete up to complete secondary	88.5	15.4	76.3	37.1	91.5	14.6	77.3	36.9
Higher education	99.0	15.5	85.9	40.0	92.8	7.9	69.4	9.6
Poverty								
Bottom quintile	62.4	8.3	92.3	50.6	60.0	6.7	86.7	18.1
Top quintile	96.3	15.3	73.1	31.5	92.4	13.1	83.7	42.3

Note: Panel data for R1-R2-R3. Adjusted for sample design.

Another important social programme in Peru is Juntos, a conditional cash transfer programme founded in 2005 to reduce poverty. Monetary incentives are provided to poor families, conditional on their using health, education, nutrition and other services (e.g. regular attendance of children at primary school, having vaccinations, regular check-ups during pregnancy, and getting a National Identity Document), since it is aimed at developing human capital in order to constrain the intergenerational transfer of poverty.

The programme is focused on poor families with children up to the age of 14 and pregnant women, and consists of giving the mother 100 nuevos soles (approximately US\$35) each month for a maximum of four years, provided she uses the above-mentioned services. By December 2010, Juntos reached 490,563 families in 14 regions in Peru.

A non-experimental impact evaluation revealed that the programme has had an impact on reducing poverty and improving welfare (Perova and Vakis 2009). For instance, the incomes of Juntos beneficiaries have increased by 28 per cent and their consumption has grown, especially consumption of food. However, many beneficiary families are still below the poverty line. Accordingly, Huber et al. (2009) point out that despite the fact that cash transfers have helped the families to make improvements in their lives and meet the conditions of the

programme, 100 nuevos soles are not enough to make changes that can be sustained after they leave Juntos.

On the other hand, there is some evidence of positive effects of Juntos on health and education. For example, Juntos has increased the utilisation of health services by both children and women, and also had positive impacts on nutritional intake (Perova and Vakis 2009). In education, Juntos has had positive impacts on school attendance (Perova and Vakis 2009). Moreover, in a qualitative study it was found that parents enrolled in the programme were more interested in their children's education and participated in it more than before (Jones et al. 2007).

These positive results show an increase in the demand for health and educational services; however Alcázar (2009) points out that the supply needs to be extended and improved in order to meet these demands.

As shown in Table 5.30 only about 57 per cent of households in both cohorts have heard of Juntos. This is because Juntos is a programme aimed at poor people in rural areas, where indigenous populations are more prevalent. Juntos provides around 30 per cent of the income of participating families. Still, only around 60 per cent evaluate Juntos as good or very good, so it would seem there is still much room for improvement. Young Lives has performed some studies on the implementation of the programme that may help in improving it (Jones et al. 2007; Alcázar 2009).

Table 5.30. Caregivers' experiences of the Juntos programme (Younger and Older Cohort) (%)

	Younger Cohort					Older Cohort				
	Have heard of the Juntos programme	Have applied to the Juntos programme	Are currently in the Juntos programme	% of family income that comes from Juntos	Rate Juntos as good or very good	Have heard about the Juntos programme	Have applied to the Juntos programme	Are currently in the Juntos programme	% of family income that comes from Juntos	Rate Juntos as good or very good
All sample	56.8	27.4	22.1	29.5	61.9	57.5	30.2	22.4	28.8	56.1
Gender										
Girls	57.2	28.6	22.3	31.2	62.9	55.5	34.0	26.0	24.8	59.5
Boys	56.3	26.3	21.9	27.8	60.9	59.5	26.4	18.8	34.6	52.9
Mother's first language										
Spanish	41.5	6.7	4.0	30.3	50.5	41.0	7.4	5.1	31.8	49.1
Indigenous language	84.3	64.7	54.8	29.4	72.1	81.9	63.5	48.2	28.4	61.7
Area of residence										
Urban	46.7	11.5	7.2	25.2	51.6	48.1	16.5	11.5	23.1	49.9
Rural	76.5	58.6	51.4	30.7	74.1	74.4	54.9	42.1	31.7	63.3
Maternal education										
Primary incomplete or less	73.1	55.9	47.1	29.6	74.3	70.1	56.2	46.0	27.9	68.7
Primary complete up to complete secondary	46.6	15.9	11.8	29.7	58.3	50.0	14.8	9.4	33.2	46.4
Higher education	55.3	1.7	0.3	15.7	33.6	49.8	8.5	0.0	12.2	38.9
Poverty										
Bottom quintile	62.2	47.0	38.3	35.5	72.5	66.5	44.7	35.7	35.9	62.3
Top quintile	51.2	4.4	2.2	28.9	45.3	50.2	7.0	3.6	14.8	37.3

Note: Panel data for R1-R2-R3. Adjusted for sample design.

Another important government initiative in the past few years has been to provide a National Identity Document (NID) to all citizens. This is being managed by RENIEC (*Registro Nacional de Identificación y Estado Civil*). The NID is a personal document that must be presented in any civil, commercial, administrative or judicial transaction, and is also required to vote. For children, the NID serves as identification since it is registered in the national archive, which is helpful if the child moves, or in case of an accident or similar, and is the only document required to travel to some neighbouring countries. The NID also facilitates access to social programmes and services (e.g. health and education).¹⁶

According to RENIEC (2010) in April 2010, 15.4 per cent of all Peruvian minors (under 18s) had no NID. RENIEC also reported differences regarding gender and area of residence; for instance, 50.8 per cent of these were boys and 49.2 per cent were girls, while 60.5 per cent lived in rural areas and 39.5 per cent in urban areas. In order to increase the take-up of NIDs, RENIEC is implementing a national campaign between 2010 and 2011 to provide free NIDs to children under 15 (RENIEC 2010). There have also been other campaigns aimed at giving

¹⁶ The above information was gathered from the NID official website: <http://www.reniec.gob.pe>.

documentation to populations who do not have it, which have helped increase the number of children with identity cards (e.g. 'Mi Nombre' and 'Sin Documentos Somos Como Sombras'; Reuben and Cuenca 2009).

From Table 5.31, it appears that the percentages of children with an NID could be considered low, but are likely to indicate significant increase in recent years. Furthermore, we consider it a good sign that the percentages are higher for indigenous and rural children, although this result is different from what RENIEC reported. This looks like an important initiative that should be continued in years to come.

Table 5.31. Caregivers' responses to the National Identity Document (NID) for Children campaign (Younger and Older Cohort) (%)

	Younger Cohort		Older Cohort	
	Child has an NID	% who were charged for it	Child has an NID	% who were charged for it
Whole sample	46.0	24.4	49.9	26.3
Gender				
Girls	47.7	23.7	49.0	22.9
Boys	44.4	25.2	50.8	29.5
Mother's first language				
Spanish	44.2	23.4	46.1	29.4
Indigenous language	49.3	26.0	55.9	22.5
Area of residence				
Urban	44.2	23.0	44.3	26.8
Rural	49.6	26.8	59.9	25.6
Maternal education				
Primary incomplete or less	47.5	28.4	56.5	20.9
Primary complete up to complete secondary	42.7	22.0	43.5	31.7
Higher education	55.3	22.8	64.1	29.7
Absolute Poverty				
Bottom quintile	41.8	21.2	54.1	26.9
Top quintile	48.8	22.0	43.7	22.8

Note: Panel data for R1-R2-R3. Adjusted for sample design.

Another topic we include is health service coverage. One main initiative over the past few years has been SIS (*Seguro Integral de Salud*), which is a government health insurance system designed to provide quality health services to vulnerable groups and poor and extremely poor populations. It started in 2001 and by December 2010 it had reached 12,385,998 people (SIS 2010), that is 36.3 per cent of the Peruvian population (INEI-ENAHO 2011).

The affiliation process takes place at any health establishment; to register a person must have an NID and complete a means test. People evaluated as poor or extremely poor get free insurance. People who have low incomes (between 700 and 1,600 nuevos soles)¹⁷ are

17 In September 2011 the exchange rate is about 2.75 nuevos soles per US dollar.

eligible for an SIS subsidy and make a monthly payment of between 10 and 30 nuevos soles, according to their earnings.¹⁸

Calculating the effects of SIS on maternal health, Parodi (2005) found that on average, it increased access to Ministry of Health childbirth establishments and professional healthcare workers. Nevertheless, the demand for this service has been stronger in the richest segments of the population, therefore it seems improvements in equality are still needed.

The data for the Younger Cohort (Table 5.32) suggests that SIS is fulfilling its function and is reaching more than 90 per cent of rural families and is being accessed by the most vulnerable, the least educated, indigenous caregivers and the poor. There is no gender difference. Few families have private health insurance or armed forces insurance. About one in eight families are in the social security health service (Essalud), which is associated with being on a payroll. This rises to 39.8 per cent of families where the mother has higher education and nearly one-third of the non-poor. A significant percentage of families have no health insurance: about one in four urban families and 30 per cent of families of well-educated women. This needs further investigation but probably reflects the pattern of independent and/or informal employment in these groups.

The pattern of health insurance coverage in the Older Cohort is similar to the Younger Cohort, again showing that about one-quarter of families, especially in urban areas, have no health insurance.

Table 5.32. Health insurance coverage (Younger and Older Cohort) (%)

	Younger Cohort					Older Cohort				
	SIS	Essalud	Private	Army / other	None	SIS	Essalud	Private	Army / other	None
All sample	66.5	12.4	0.6	0.3	20.1	65.4	9.3	0.4	1.2	23.7
Gender										
Girls	68.1	11.1	0.6	0.3	19.9	67.5	9.5	0.6	0.6	21.6
Boys	64.9	13.8	0.5	0.4	20.4	63.2	9.1	0.3	1.7	25.8
Mother's first language										
Spanish	57.1	17.3	0.9	0.5	24.2	54.1	14.0	0.4	1.8	29.7
Indigenous language	83.4	3.7	0.0	0.0	12.9	81.7	2.4	0.4	0.2	15.2
Area of residence										
Urban	54.4	17.7	0.7	0.5	26.7	53.1	13.3	0.7	1.8	31.1
Rural	90.3	2.2	0.2	0.0	7.3	87.2	2.2	0.0	0.0	10.6
Maternal education										
Primary incomplete or less	86.2	1.9	0.0	0.1	11.8	81.3	1.1	0.2	0.0	17.5
Primary complete up to complete secondary	64.0	12.1	0.4	0.5	23.0	59.8	10.3	0.5	1.3	28.1
Higher education	28.0	39.8	2.4	0.2	29.6	31.3	38.7	1.5	5.9	22.6
Absolute poverty										
Bottom quintile	88.4	2.3	0.0	0.0	9.3	84.1	1.2	0.0	0.0	14.7
Top quintile	30.9	30.8	2.3	1.0	35.0	36.9	22.1	1.0	4.0	36.1

Note: Panel data for R1-R2-R3. Adjusted for sample design.

¹⁸ Information gathered from SIS official website: www.sis.gob.pe.

6. Implications for policy and future research

Peru held municipal and regional elections at the end of 2010, and presidential and Congress elections in the first half of 2011. Indeed, President Ollanta Humala assumed the presidency at the end of July 2011. Listening to the candidates in the campaign, and to the elected authorities, it seems that children's well-being is at the heart of their proposals. Indeed, there are some indications that good intentions for children may be turning into reality. For instance, as shown before, social expenditure in Peru has grown over the years, enrolment in primary education is above 90 per cent, and poverty and child mortality seem to be decreasing. So, is it a matter of governments continuing with current policies? We think the answer is no.

The main message from Young Lives, as from a few other studies, is that averages and percentages hide wide disparities, both in terms of opportunities and of outcomes. Specifically, life is much more difficult in Peru for a child who is poor, lives in a rural area, has a mother with little education or belongs to an indigenous group; gender difference is also relevant in some circumstances. How these characteristics are related is an interesting question for policy. Below we present the correlations between the main categories used in the analyses presented in this report.

Table 6.1. Association between demographic characteristics of children (all variables converted to binary scores)

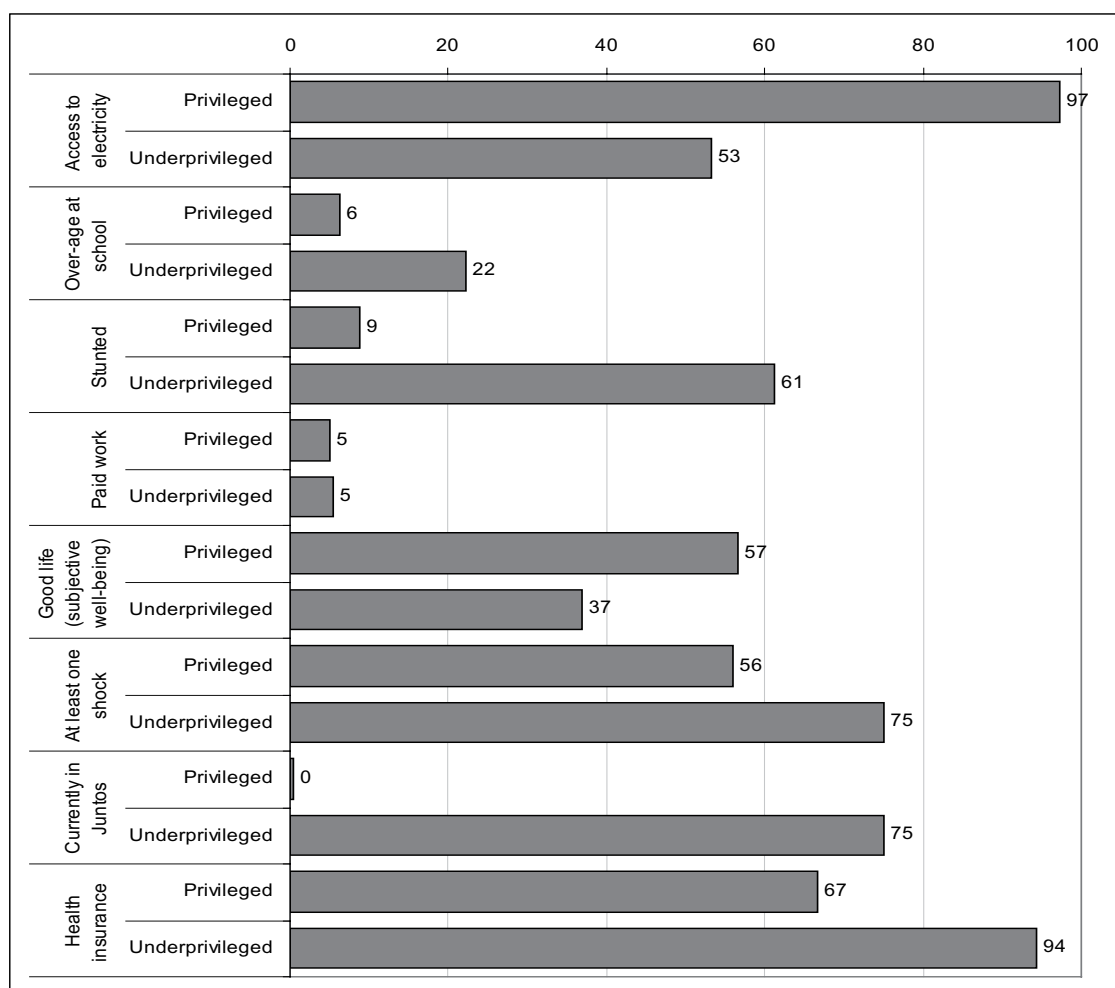
	Younger Cohort				Older Cohort			
	Gender (boys)	Mother's first language (Spanish)	Area of residence (urban)	Maternal education (primary complete or above)	Gender (boys)	Mother's first language (Spanish)	Area of residence (urban)	Maternal education (primary complete or above)
Mother's first language (Spanish)	-0.01	1			-0.15 *	1		
Area of residence (urban)	-0.06	0.57 ***	1		-0.03	0.60 ***	1	
Maternal education (primary complete or above)	0.02	0.66 ***	0.64 ***	1	-0.02	0.65 ***	0.52 ***	1
Expenditure (above median expenditure)	-0.10 **	0.36 ***	0.42 ***	0.51 ***	-0.02	0.37 ***	0.46 ***	0.41 ***

Note: Tetrachoric correlation for binary variables was used in all cases. ***p<.01, **p<.05, *p<.10

As shown above, gender has a relatively low association with the other demographic characteristics used in the study. This does not mean that there are no gender issues in Peru, but we think that the advances made towards gender equality in the past decades

have been significant. The association between the other three variables: mother's mother tongue, area of residence, and expenditure, is in all cases significant and points to a pattern of inequality in both cohorts. However, children are not limited to one characteristic or another, but have a combination of several. Below we present the percentages in several indicators used in this study, for Round 3 for two groups of children that we have labelled 'privileged' and 'underprivileged'. 'Underprivileged' are defined as children living in rural areas, from households where expenditure is below the median (calculated for our samples), and whose mothers have an indigenous mother tongue and lower education levels (i.e. they have not completed primary school). On the other hand, privileged are defined as children living in urban areas, from households where expenditure is above the median (calculated for our sample), and whose mothers have Spanish as their mother tongue and a higher education level (i.e. they have completed primary school). (For gaps between these groups by gender see Figures A12 and A13 in Appendix 1.)

Figure 6.1. Percentages of privileged and underprivileged children in selected indicators (Younger Cohort)

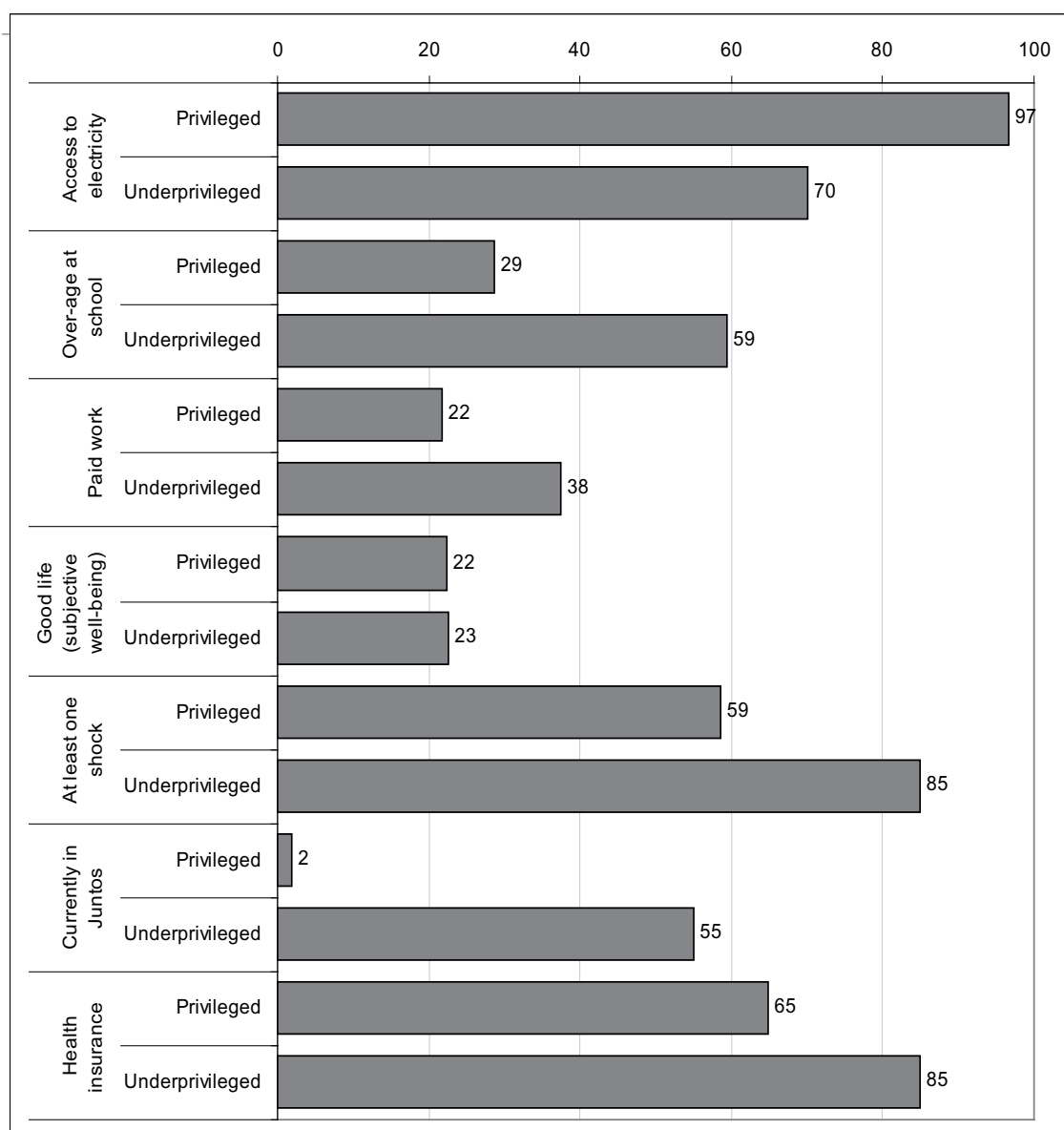


Note: All the differences between groups are statistically significant ($p < 0.05$) except for Paid work. 'Good life' refers to the percentage of children who place themselves on the top two rungs of a nine-rung ladder when asked 'Where on the ladder do you feel you stand at the present time?'

Number of observations for the privileged group = 416

Number of observations for the underprivileged group = 124

Figure 6.2. Percentages of privileged and underprivileged children in selected indicators (Older Cohort)



Note: All the differences between groups are statistically significant ($p < 0.05$) except for Good life (subjective well-being), which refers to the percentage of children placing themselves on the top two rungs of a nine-rung ladder. We don't present stunting for the Older Cohort as it is not an accurate measure of chronic malnutrition by the age of 15.

Number of observations for the privileged group = 152

Number of observations for the underprivileged group = 40

The results are interesting because they confirm patterns of inequality, which are emphasised when we combine children's characteristics. As expected, the gap in stunting between underprivileged and privileged children is quite high for the Younger Cohort. Regarding the children's perceptions of their own quality of life, there are differences between the two groups in the Younger Cohort, while the percentages of children who feel they have a good life are lower but equal for both groups in the Older Cohort. With regard to participation in government programmes, it would seem from the above data that Juntos is well targeted;¹⁹ this is consistent with other studies as cited before. What is surprising is that more underprivileged households report having health insurance in both cohorts. As suggested before, this is

¹⁹ The lower percentage of children in Juntos in the Older Cohort is related to the fact that the programme's conditionalities are targeted at children up to the age of 14.

probably linked with the expansion of public programmes for poor people in Peru, and it is certainly good news. Better-off families are more likely to make other private arrangements for their health.

Making underprivileged children and their families the target of government plans would seem a rational thing to do for a government and society that claim to exercise democracy. However, this would require social policies targeted at poorer children, as it seems is the case with some programmes such as health insurance and Juntos. Furthermore, social expenditure would need to be higher in areas with poorer development indicators; currently the opposite is true, as in general public investment is higher in urban, more populated areas (Figure 2.5). It would also require more programmes targeted at these groups and it would mean improving the quality of services and not only providing access to them. President Humala has promised to reduce poverty and increase equality, targeting policies and programmes at young children. The current political situation does seem like a unique opportunity to make Peru a more egalitarian society, and we trust that childhood research, such as Young Lives, will help this promise be kept.

An informed observer of the situation in Peru might think that some of the analysis presented in this report is not new, given a wide range of results from national censuses and periodic household surveys. However, what makes Young Lives unique for Peru is that it is by far the largest (in terms of sample size and number of cohorts) and longest longitudinal study on childhood poverty. Below we summarise some of the main results from the first three rounds of survey data collection and two rounds of qualitative data collection.

The results suggest that, in keeping with national trends, monetary poverty is indeed decreasing in the sample. There is of course some pro-poor bias in this sample, so we cannot make unqualified inferences about trends at the national level. Still, we do find increases in the expenditure levels of families that are poorer, in rural areas and from indigenous backgrounds. However this movement, while in the right direction, is small when we compare it with the acute disparities prevailing.

Access to services shows a similar and somewhat expected trend, as increases in public expenditure have brought about improvements in water and sanitation infrastructure and access to electricity for those who had limited or no access to these services, who are the poorer people, those living in rural areas, those that are less educated and those from an indigenous background.

In education our data are similar to other national statistics showing that almost all children are enrolled in school by the age of 8. For the Older Cohort (age 15) enrolment is above 90 per cent but decreasing as children get older. Also, the age at which children enrol in primary is similar across groups. Nevertheless, qualitative sub-studies have shown that despite wide access, children's experiences at school may be negative, for example, when they involve physical punishment or through lack of quality teaching. Therefore more attention is needed to improve the quality of education, especially in poor, rural and indigenous areas. On the other hand, while over-age children (i.e. children one or more years above the usual age for their grade) are relatively rare in the Younger Cohort, the rate is around 49 per cent for the Older Cohort. As in other indicators, being over-age is more common for children who come from rural areas, are relatively poor, have less educated mothers or come from an indigenous family. There are only small differences between boys and girls. It is important to note that the data include not only the above education indicators but also measures of children's skills, such as receptive vocabulary, mathematics and reading skills. We are in the process of

finalising psychometric analysis before releasing Round 3 data on this; for Round 2 test results see Cueto et al. (2009c).

With regard to health the anthropometric findings point to a reduction in stunting over the last eight years but with high rates still remaining in rural areas and among the poorest families and those with the least educated mothers. Evidence from the first two rounds showed that some children were able to catch up and the reduced stunting rate from Round 2 to Round 3 suggests that this process also occurs in school-age children. Further research is needed to explore this and establish whether it is associated with an improvement in cognitive achievement. On the other hand overweight and obesity are increasing and are associated with urban residence and being a child of a better-educated mother and from a wealthier household. The Older Cohort children, who had relatively low rates of overweight when aged 8 show some reduction in overweight as they grow older, probably for physiological reasons, but rates of obesity remain the same and higher than the expected rates for a healthy population.

With regard to time use, children are involved in several core activities, and the time they dedicate to some of them increases as they get older. This is shown by the increase in participation in several activities between rounds and also by the higher proportion of Older Cohort children participating in paid work in contrast with Younger Cohort children. There are some gender differences, particularly in the Older Cohort, in participation in paid work, as it increases more sharply for boys than for girls, although the latter dedicate more time than boys to domestic chores. The increase in participation in paid work is also higher for those living in rural areas, and for those children with a less educated mother.

In terms of cross-cohort comparisons, when we compare the children of the Younger Cohort in Round 3 with the Older Cohort in Round 1, when they were the same age, we find that the percentage of children engaged in paid work has decreased, showing less involvement by children in paid work, which is probably associated with the improvements in living standards referred to above.

We also gathered information on well-being, showing that children consider material and non-material dimensions of their own well-being. Thus, although all consider the satisfaction of basic needs (food, clothes, housing) as essential for their well-being, they value more the presence of core family members (i.e. parents) and good family relationships that provide emotional support and care. Education is also central to their definitions of well-being: to be well a child must attend school. Some of the children's fears and concerns are related to economic, health or academic problems that lead to the interruption of their education, a point hardly ever acknowledged by educational policies, which offer no means of support in such situations.

With regard to shocks, two in every three Young Lives households have experienced at least one in each round. These shocks, which include environmental shocks, loss of a family member, abrupt changes in economic conditions (such as changes in employment), and crimes affecting the family's asset base, exert pressure on the resources of these families and the well-being of their children. These events need to be further investigated to learn how shocks could be mitigated.

With regard to government policies and programmes, we explored preliminary results for four programmes which we believe have significant potential for reducing children's poverty, although no rigorous impact evaluations are available. However, Young Lives has information and, in some cases, in-depth studies concerning them.

According to our results, while DEMUNA seems to be a relatively well-known programme, it has been less used by relatively poor, indigenous and rural people, as well as children of less educated mothers. This suggests that the programme needs to concentrate on work with these populations.

Juntos on the other hand seems to be a programme that is reaching its target group (the rural poor) more effectively, although it is far from achieving universal coverage in this regard. As suggested in *Young Lives* and other studies, improvement in the quality of the public services linked to the conditions set by the programme would seem to be needed (Alcazar 2009).

The national identity card (NID) programme has reached almost half of the Younger and Older Cohort children, which was a surprise to us and is probably due to the campaigns by successive governments over the past few years. Registering children through NID is only the first step towards targeting services to those most in need.

Finally, we were also pleasantly surprised to see the relatively high coverage of the universal health insurance programme, especially among the indigenous, rural, relatively poor and less educated families, which is in contrast to most results in this report. We do not have information on the quality of health services, but reaching children and their families is an important first step in fulfilling their needs. Over the next few years we plan to continue gathering data on these programmes and in some cases carry out in-depth studies.

So, given the above, one still wonders what is needed to generate more pro-poor policies for children so that some of the gaps between groups could diminish over time. Currently our general message could be synthesised by saying that while the averages seem to be improving in many indicators, the gaps between groups are often maintained or even increased. How could we make Peru a country more inclusive for all children, where individual and family characteristics would not decide individual and group opportunities to access high-quality services and programmes or determine outcomes?

It is clear that knowledge is not enough for political action. *Young Lives* approach over the years has been to try to disseminate our research and engage with different stakeholders, especially policymakers, programme officers and politicians in different sectors and at different levels, and explore with them its policy implications. Our approach has not been to try and dictate what policy should be, beyond the general implications mentioned above and in other documents. We understand our role as researchers is quite different from that of the above stakeholders, yet at some level we should interact and exchange ideas and possibilities.

Accordingly, *Young Lives* over the past few years has been an active participant in the Collective for Childhood, an initiative from the Roundtable for Coordination of the Fight Against Poverty (Mesa de Concertación de Lucha contra la Pobreza).²⁰ This group includes institutions from different sectors, and we try to make our research voice heard in its actions. It seems to us that concerted action may be a good vehicle to promote children's well-being. In the recent municipality and presidential elections the Collective for Childhood managed to get most of the main candidates to sign commitments to improve specific indicators, in many cases aiming not only to reduce averages but also gaps between groups. It is our intention to continue participating in this collective and review whether what the candidates committed themselves to becomes policy and has results. Our research should help keep an eye on this, in an attempt to close the gap between knowledge and action for the benefit of all children.

²⁰ For more information see <http://www.mesadeconcertacion.org.pe/>.

As mentioned at the beginning of this report, one of our aims has been to convey a sense of the vast amount of data available in the surveys. We have not attempted to go into detail. For this we have planned a set of studies by the Peru researchers but our data is also being analysed by researchers from other institutions in Peru and internationally. We invite interested parties who would like further information to read our published research and learn about future priorities for our work; furthermore, we invite researchers to learn about our surveys and download our data from the ESDS public repository.²¹ If you do, please share your results with us.

²¹ For information on our surveys and access to databases see <http://www.ninosdelmilenio.org/basededatos.shtml> or <http://www.younglives.org.uk/what-we-do/access-our-data>. The data are also available on CD-ROM for users in developing countries.

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Appendix 1: Supplementary tables and figures

Table A1. Young Lives children living in households below the poverty line (Younger Cohort) (%)

	Absolute poverty			Relative poverty (expenditure is 50% of median or less)		
	Round 2 (2006)	Round 3 (2009)	Change between rounds	Round 2 (2006)	Round 3 (2009)	Change between rounds
Whole sample	60.5	44.0	-16.5 ***	14.3	12.3	-2.0 *
Gender						
Boys	61.7	45.4	-16.3 ***	12.9	11.4	-1.5
Girls	59.3	42.5	-16.7 ***	15.8	13.3	-2.5
Mother's first language						
Spanish	50.7	37.3	-13.4 ***	10.4	9.4	-1.0
Indigenous language	78.2	56.0	-22.1 ***	21.4	17.6	-3.8
Area of residence						
Urban	52.3	36.2	-16.2 ***	11.1	9.6	-1.5
Rural	74.5	59.4	-15.1 ***	19.8	17.8	-2.0
Maternal education						
Primary incomplete or less	82.3	61.4	-20.9 ***	26.4	21.9	-4.5 *
Primary complete up to complete secondary	57.8	42.3	-15.5 ***	10.3	9.2	-1.1
Higher education	19.1	9.4	-9.7 ***	0.6	1.4	0.7

Note: Panel data for R1-R2-R3. Adjusted for sample design. Change between rounds expressed in percentage points.

Poverty lines produced by INEI and adjusted by the percentage of Young Lives expenditure underestimation. For further explanation see Appendix 2. Categories urban/rural are round-specific.

Differences are significant at ***1%, **5% and *10%.

Table A2. Young Lives children living in households below the poverty line (Older Cohort) (%)

	Absolute poverty			Relative poverty (expenditure is 50% of median or less)		
	Round 2 (2006)	Round 3 (2009)	Change between rounds	Round 2 (2006)	Round 3 (2009)	Change between rounds
Whole sample	60.4	44.7	-15.7 ***	18.0	12.1	-5.9 **
Gender						
Boys	60.5	46.0	-14.5 ***	18.8	11.3	-7.5 **
Girls	60.4	43.5	-16.9 ***	17.2	12.9	-4.2
Mother's first language						
Spanish	49.7	37.6	-12.1 ***	11.1	12.0	0.9
Indigenous language	76.0	55.0	-21.1 ***	27.6	12.2	-15.4 ***
Area of residence						
Urban	54.5	37.8	-16.7 ***	14.6	10.9	-3.8
Rural	70.1	57.2	-12.9 **	23.4	14.3	-9.1 *
Maternal education						
Primary incomplete or less	77.3	57.6	-19.7 ***	27.7	16.3	-11.4 **
Primary complete up to complete secondary	54.9	39.7	-15.2 ***	11.6	9.0	-2.5
Higher education	20.3	14.4	-5.9	6.4	0.8	-5.7

Note: Panel data for R1-R2-R3. Adjusted for sample design. Change between rounds expressed in percentage points.

Poverty lines produced by INEI and adjusted by the percentage of Young Lives expenditure underestimation. For further explanation see Appendix 2. Categories urban/rural are round-specific.

Differences are significant at ***1%, **5% and *10%.

Table A3. Wealth index and per capita expenditure level of Young Lives households (Younger Cohort)

	Average wealth index						Average real expenditure per capita (nuevos soles)		
	Round 1 (2002)	Round 2 (2006)	Round 3 (2009)	Change between R1 and R2 (%)	Change between R2 and R3 (%)	Change between R1 and R3 (%)	Round 2 (2006)	Round 3 (2009)	Annual percentage change
Whole sample	0.44	0.45	0.52	1	16 ***	18 ***	177	202	14 ***
Gender									
Boys	0.45	0.46	0.53	2	15 ***	17 ***	175	201	15 ***
Girls	0.44	0.44	0.52	1	17 ***	18 ***	180	203	13 ***
Mother's first language									
Spanish	0.51	0.52	0.59	3 *	13 ***	16 ***	203	224	10 ***
Indigenous language	0.33	0.32	0.40	-3	25 ***	22 ***	132	162	23 ***
Area of residence									
Urban	0.55	0.55	0.61	0	12 ***	12 ***	197	224	14 ***
Rural	0.28	0.28	0.34	2	21 ***	23 ***	144	158	9 **
Maternal education									
Primary incomplete or less	0.29	0.29	0.38	-1	29 ***	28 ***	120	149	23 ***
Primary complete up to complete secondary	0.48	0.49	0.56	2	15 ***	17 ***	179	202	13 ***
Higher education	0.66	0.68	0.72	3	5 ***	8 ***	308	326	6
Poverty									
Bottom quintile		0.25	0.35		42 ***		63	78	25 ***
Top quintile		0.69	0.71		3 *		383	409	7 *

Note: Panel data for R1-R2-R3. Adjusted for sample design.

Differences are significant at ***1%, **5% and *10%.

Table A4. Wealth index and per capita expenditure level of Young Lives households (Older Cohort)

	Average wealth index						Average real expenditure per capita (nuevos soles)		
	Round 1 (2002)	Round 2 (2006)	Round 3 (2009)	Change between R1 and R2 (%)	Change between R2 and R3 (%)	Change between R1 and R3 (%)	Round 2 (2006)	Round 3 (2009)	Annual percentage change
Whole sample	0.44	0.43	0.53	-1	22 ***	21 ***	177	205	16 ***
Gender									
Boys	0.44	0.45	0.53	1	19 ***	20 ***	179	203	14 *
Girls	0.43	0.42	0.53	-2	25 ***	22 ***	175	208	18 **
Mother's first language									
Spanish	0.49	0.50	0.59	2	16 ***	19 ***	204	228	12 *
Indigenous language	0.36	0.33	0.45	-7 *	34 ***	24 ***	138	172	25 **
Area of residence									
Urban	0.52	0.52	0.61	-1	17 ***	16 ***	187	225	20 ***
Rural	0.31	0.30	0.39	-4	31 ***	25 ***	161	170	5
Maternal education									
Primary incomplete or less	0.33	0.32	0.44	-5	39 ***	33 ***	142	172	21 *
Primary complete up to complete secondary	0.48	0.48	0.57	0	18 ***	19 ***	178	208	17 ***
Higher education	0.67	0.69	0.70	3	1	4	317	357	13
Poverty									
Bottom quintile		0.26	0.37		46 ***		62	82	32 ***
Top quintile		0.63	0.70		12 ***		393	432	10

Note: Panel data for R1-R2-R3. Adjusted for sample design.

Differences are significant at ***1%, **5% and *10%.

Table A5. Access to services: safe water (Younger Cohort) (%)

	Round 1 (2002)	Round 2 (2006)	Round 3 (2009)	Change between R1 and R2	Change between R2 and R3	Change between R1 and R3
Whole sample	54.0	58.9	78.0	4.8 ***	19.2 ***	24.0 ***
Gender						
Boys	55.7	60.2	78.9	4.5 *	18.6 ***	23.2 ***
Girls	52.4	57.5	77.2	5.1 **	19.7 ***	24.8 ***
Mother's first language						
Spanish	57.6	61.2	81.2	3.7 *	20.0 ***	23.7 ***
Indigenous language	47.7	54.6	72.3	6.9 **	17.7 ***	24.6 ***
Area of residence						
Urban	65.3	69.7	87.0	4.4 **	17.3 ***	21.7 ***
Rural	36.1	40.2	60.4	4.1	20.2 ***	24.3 ***
Maternal education						
Primary incomplete or less	37.7	44.2	66.3	6.5 **	22.1 ***	28.6 ***
Primary complete up to complete secondary	58.0	61.9	81.6	3.9 *	19.7 ***	23.6 ***
Higher education	78.3	82.7	93.5	4.4	10.9 ***	15.2 ***
Poverty						
Bottom quintile		30.0	67.0		36.9 ***	
Top quintile		82.9	88.8		5.9 **	

Note: Panel data for R1-R2-R3. Adjusted for sample design. Change between rounds expressed in percentage points.

Safe water refers to access to water piped into dwelling (public net) and tube well with hand pump.

Differences are significant at ****1%, **5% and *10%.

Table A6. Access to services: safe water (Older Cohort) (%)

	Round 1 (2002)	Round 2 (2006)	Round 3 (2009)	Change between R1 and R2	Change between R2 and R3	Change between R1 and R3
Whole sample	54.6	55.7	85.3	1.1	29.6 ***	30.7 ***
Gender						
Boys	55.7	56.5	83.3	0.8	26.8 ***	27.6 ***
Girls	53.6	54.9	87.3	1.3	32.4 ***	33.7 ***
Mother's first language						
Spanish	53.0	54.2	85.7	1.3	31.5 ***	32.7 ***
Indigenous language	57.5	58.1	85.1	0.7	27.0 ***	27.7 ***
Area of residence						
Urban	60.7	61.9	90.9	1.3	29.0 ***	30.2 ***
Rural	45.8	45.5	75.1	-0.2	29.5 ***	29.3 ***
Maternal education						
Primary incomplete or less	48.3	51.2	83.7	2.9	32.4 ***	35.3 ***
Primary complete up to complete secondary	54.7	54.5	85.3	-0.2	30.8 ***	30.6 ***
Higher education	84.1	88.4	92.8	4.3	4.3	8.6
Poverty						
Bottom quintile		40.1	81.1		41.0 ***	
Top quintile		67.4	90.3		23.0 ***	

Note: Panel data for R1-R2-R3. Adjusted for sample design. Change between rounds expressed in percentage points.

Safe water refers to access to water piped into dwelling (public net) and tube well with hand pump.

Differences are significant at ****1%, **5%, and *10%.

Table A7. Access to services: improved sanitation (Younger Cohort) (%)

	Round 1 (2002)	Round 2 (2006)	Round 3 (2009)	Change between R1 and R2	Change between R2 and R3	Change between R1 and R3
Whole sample	74.3	83.9	90.8	9.7 ***	6.8 ***	16.5 ***
Gender						
Boys	74.5	84.2	90.0	9.6 ***	5.8 ***	15.5 ***
Girls	74.1	83.7	91.6	9.7 ***	7.8 ***	17.5 ***
Mother's first language						
Spanish	82.8	89.1	93.0	6.3 ***	3.9 ***	10.2 ***
Indigenous language	59.0	74.6	86.8	15.7 ***	12.2 ***	27.8 ***
Area of residence						
Urban	82.5	88.5	92.0	6.0 ***	3.5 ***	9.4 ***
Rural	61.1	76.1	88.4	15.0 ***	12.4 ***	27.3 ***
Maternal education						
Primary incomplete or less	59.1	74.1	87.7	14.9 ***	13.7 ***	28.6 ***
Primary complete up to complete secondary	78.7	86.5	91.1	7.8 ***	4.6 ***	12.4 ***
Higher education	93.8	98.2	97.1	4.4 **	-1.1	3.2 *
Poverty						
Bottom quintile		75.5	89.2		13.7 ***	
Top quintile		96.7	94.8		-1.9	

Note: Panel data for R1-R2-R3. Adjusted for sample design. Change between rounds expressed in percentage points.

Improved sanitation refers to flushed toilet or pit latrine.

Differences are significant at ***1%, **5%, and *10%.

Table A8. Access to services: improved sanitation (Older Cohort) (%)

	Round 1 (2002)	Round 2 (2006)	Round 3 (2009)	Change between R1 and R2	Change between R2 and R3	Change between R1 and R3
Whole sample	76.0	81.4	90.9	5.4 *	9.4 ***	14.8 ***
Gender						
Boys	78.6	84.8	89.8	6.3 *	4.9	11.2 ***
Girls	73.4	78.0	92.0	4.6	14.0 ***	18.5 ***
Mother's first language						
Spanish	82.5	88.2	94.1	5.6 *	5.9 ***	11.5 ***
Indigenous language	66.8	72.0	86.7	5.2	14.7 ***	19.8 ***
Area of residence						
Urban	80.3	85.5	92.1	5.2	6.6 **	11.7 ***
Rural	69.7	74.8	88.7	5.1	13.8 ***	19.0 ***
Maternal education						
Primary incomplete or less	64.1	73.2	90.5	9.1	17.2 ***	26.3 ***
Primary complete up to complete secondary	81.6	85.4	90.7	3.9	5.3 *	9.1 ***
Higher education	96.2	99.3	96.1	3.1	-3.2	-0.1
Poverty						
Bottom quintile		64.2	88.6		24.3 ***	
Top quintile		93.0	97.2		4.2	

Note: Panel data for R1-R2-R3. Adjusted for sample design. Change between rounds expressed in percentage points.

Improved sanitation refers to flushed toilet or pit latrine.

Differences are significant at ***1%, **5% and *10%.

Table A9. Access to services: electricity (Younger Cohort) (%)

	Round 1 (2002)	Round 2 (2006)	Round 3 (2009)	Change between R1 and R2		Change between R2 and R3		Change between R1 and R3	
Whole sample	60.6	70.9	83.7	10.3	***	12.8	***	23.1	***
Gender									
Boys	62.4	73.2	85.8	10.9	***	12.5	***	23.4	***
Girls	58.9	68.6	81.7	9.7	***	13.1	***	22.8	***
Mother's first language									
Spanish	72.1	81.8	89.8	9.7	***	8.1	***	17.7	***
Indigenous language	40.0	51.4	72.7	11.4	***	21.4	***	32.7	***
Area of residence									
Urban	84.7	87.8	95.2	3.1	**	7.4	***	10.5	***
Rural	22.1	41.9	61.1	19.8	***	19.2	***	39.0	***
Maternal education									
Primary incomplete or less	34.3	49.1	69.0	14.8	***	19.9	***	34.7	***
Primary complete up to complete secondary	68.3	77.7	89.1	9.5	***	11.3	***	20.8	***
Higher education	93.8	97.3	98.9	3.6	**	1.5		5.1	***
Poverty									
Bottom quintile		41.6	65.3			23.7	***		
Top quintile		96.1	97.3			1.3			

Note: Panel data for R1-R2-R3. Adjusted for sample design. Change between rounds expressed in percentage points.

Differences are significant at ***1%, **5% and *10%.

Table A10. Access to services: electricity (Older Cohort) (%)

	Round 1 (2002)	Round 2 (2006)	Round 3 (2009)	Change between R1 and R2		Change between R2 and R3		Change between R1 and R3	
Whole sample	60.9	69.7	88.2	8.8	**	18.5	***	27.3	***
Gender									
Boys	62.0	70.7	84.9	8.7	*	14.2	***	22.9	***
Girls	59.8	68.7	91.6	8.8	*	22.9	***	31.8	***
Mother's first language									
Spanish	68.5	79.1	88.7	10.6	***	9.6	***	20.2	***
Indigenous language	50.0	55.6	87.4	5.5		31.8	***	37.3	***
Area of residence									
Urban	84.0	88.1	96.2	4.1		8.2	***	12.3	***
Rural	27.2	39.8	73.7	12.6	**	33.9	***	46.5	***
Maternal education									
Primary incomplete or less	44.1	54.0	81.7	9.8		27.8	***	37.6	***
Primary complete up to complete secondary	69.2	77.1	92.4	7.9	*	15.3	***	23.2	***
Higher education	92.8	92.8	98.5	0.0		5.7		5.7	
Poverty									
Bottom quintile		46.5	70.0			23.5	***		
Top quintile		87.8	98.3			10.5	**		

Note: Panel data for R1-R2-R3. Adjusted for sample design. Change between rounds expressed in percentage points.

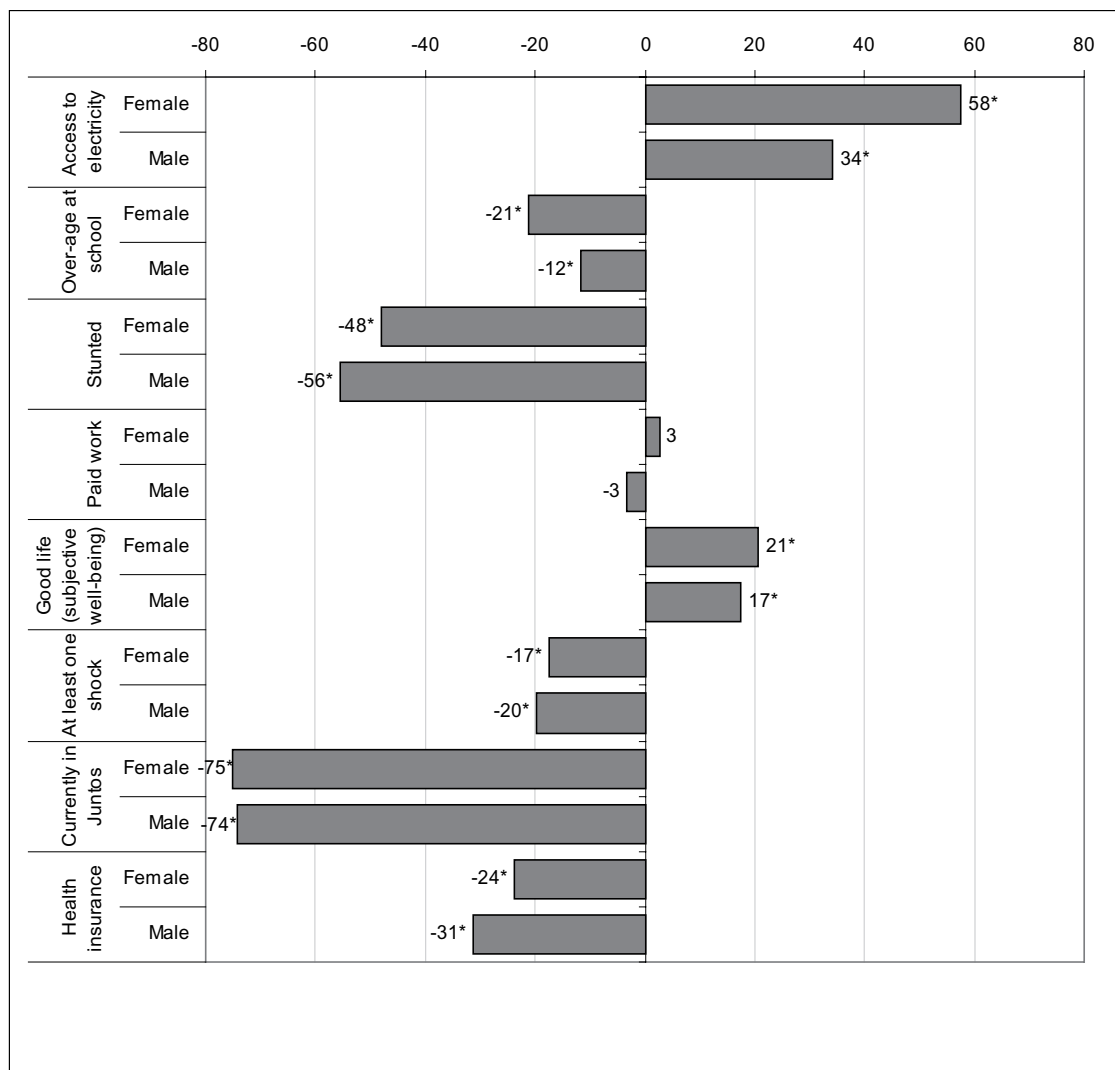
Differences are significant at ***1%, **5% and *10%.

Table A11. Paid work (percentage of children who work for pay) (Round 3, both cohorts)

Respondent	Younger Cohort				Older Cohort		
	Mother	Mother	Mother	Child	Mother	Child	Child
Reference period	Typical day (Mon to Fri) for household members aged 4–17	Typical day (Mon to Fri) only for the child	Last 12 months	Last 12 months	Typical day (Mon to Fri) for household members aged 4–17	Typical day (Mon to Fri) only for the child	Last 12 months
Whole sample	0.4	0.6	3.1	8.8	6.9	9.3	30.1
Gender							
Boys	0.5	0.5	3.1	9.3	11.0	11.7	38.3
Girls	0.2	0.6	3.2	8.3	2.9	7.0	21.7
Mother's first language							
Spanish	0.3	0.5	2.8	6.4	8.2	10.7	26.4
Indigenous language	0.4	0.7	3.7	13.1	5.2	7.3	35.8
Area of residence							
Urban	0.3	0.3	2.8	7.4	7.1	10.5	29.0
Rural	0.5	1.1	3.7	11.5	6.6	7.3	32.0
Maternal education							
Primary incomplete or less	0.3	0.7	2.8	8.4	7.6	9.3	36.6
Primary complete up to complete secondary	0.5	0.6	3.8	10.2	6.5	9.4	25.8
Higher education	0.0	0.0	1.4	4.6	2.6	3.2	19.5
Poverty							
Bottom quintile	0.0	1.1	3.3	9.5	3.6	7.5	28.7
Top quintile	0.0	0.3	4.1	7.5	8.1	10.8	20.3

Note: Panel data for R1-R2-R3. Adjusted for sample design.

Figure A1. Gaps between privileged and underprivileged children in selected indicators by gender (Round 3, Younger Cohort) (%)



Note: The gaps refer to the difference on the average indicator, that is privileged–underprivileged. Hence if the result is positive the average was higher for the privileged and if it was negative it was higher for the underprivileged; 0 differences mean the averages were very close. All differences marked with an asterisk were significant at the 5% according to the t-test for independent samples.

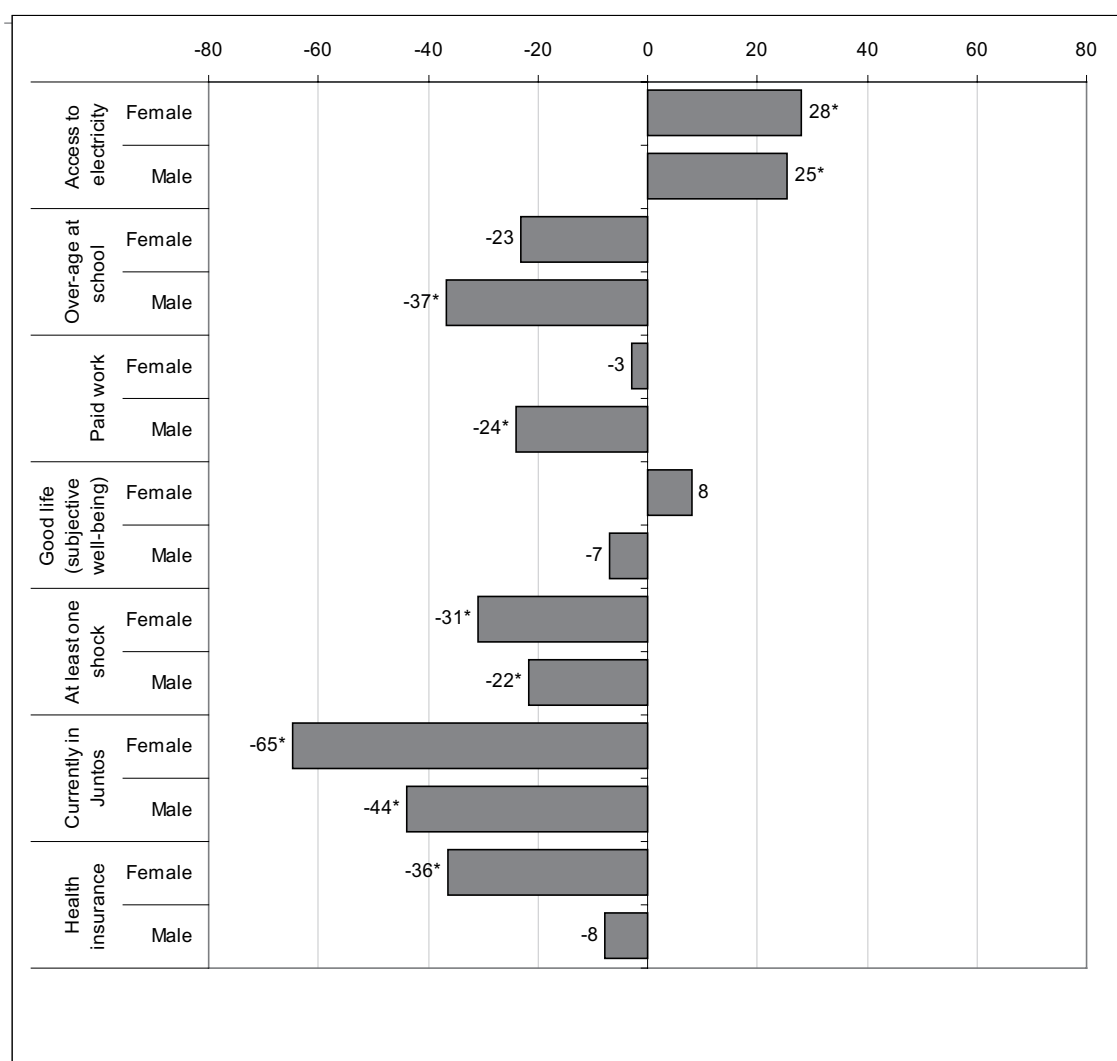
Number of observations for the privileged female group = 210

Number of observations for the privileged male group = 206

Number of observations for the underprivileged female group = 53

Number of observations for the underprivileged male group = 71

Figure A2. Gaps between privileged and underprivileged children in selected indicators by gender (Round 3, Older Cohort) (%)



Note: The gaps refer to the difference on the average indicator, that is privileged–underprivileged. Hence if the result is positive the average was higher for the privileged and if it was negative it was higher for the underprivileged; 0 differences mean the averages were very close. All differences marked with an asterisk were significant at the 5% according the t-test for independent samples.

Number of observations for the privileged female group = 74

Number of observations for the privileged male group = 78

Number of observations for the underprivileged female group = 17

Number of observations for the underprivileged male group = 23

Appendix 2. Definitions of key outcome variables

Outcome variable	Description	Calculation	Component description	Detailed estimation - for all rounds				
Wealth Index (WI)	Composite index that reflects the welfare of household members in terms of the quality of the dwelling, use of durable goods, and access to basic services	$WI = \frac{HQ + CD + SV}{3}$	Simple average of scaled number of rooms per person, material of walls, material of roof, material of floor	$HQ = \frac{HQ_1 + HQ_2 + HQ_3 + HQ_4}{4}$ <p>If Ratio1 = (Number of Rooms / Household size) $HQ_1 = [\text{Ratio1} - \text{Min}(\text{Ratio1})] / [\text{Max}(\text{Ratio1}) - \text{Min}(\text{Ratio1})]$ $HQ_2 = 1$ if Wall's material = Brick or plastered wall $HQ_3 = 1$ if Roof's material = Sturdy roof, such as corrugated iron, tiles or concrete $HQ_4 = 1$ if Floor's material = Finished material, such as cement, tiles or laminated material</p>				
					$CD = \frac{CD_1 + CD_2 + \dots + CD_{11} + CD_{12}}{12}$	$CD_1 = 1$ if household owns a radio $CD_2 = 1$ if household owns a refrigerator $CD_3 = 1$ if household owns a bicycle $CD_4 = 1$ if household owns a television $CD_5 = 1$ if household owns a motorbike $CD_6 = 1$ if household owns a motor vehicle $CD_7 = 1$ if household owns a mobile phone $CD_8 = 1$ if household owns a land phone $CD_9 = 1$ if household owns a stove $CD_{10} = 1$ if household owns a iron $CD_{11} = 1$ if household owns a blender $CD_{12} = 1$ if household owns a record player/music centre		
							$SV = \frac{SV_1 + SV_2 + SV_3 + SV_4}{4}$	$SV_1 = 1$ if dwelling has electricity $SV_2 = 1$ if water is piped into dwelling (public net) or tube well with hand pump $SV_3 = 1$ if dwelling has a flushed toilet or pit latrine $SV_4 = 1$ if cooking fuel is gas, electricity or kerosene

Outcome variable	Description	Calculation	Component description	Detailed estimation - for all rounds
		$TotCons = \frac{(FCons + NFCons)}{FullDeflator * HHSize}$		
Real monthly consumption per capita	Sum of estimated value of food and non-food consumption, adjusted by a compound deflator and divided by the household size. The consumption aggregate is only constructed for R2 and R3	FCons= Food consumption	Sum of estimated value of consumption of food items	$FCons = FCons_1 + FCons_2 - FCons_3$ $FCons_1 = \text{Sum}(\text{food bought and consumed in the past 15 days})^2$ $FCons_2 = \text{Sum}(\text{food consumed from own sources - food from farm, presents, own business and payments- in the past 15 days})^2$ $FCons_3 = \text{Sum}(\text{food not consumed in the past 15 days})^2$
		NFCons= Non-Food consumption	Sum of estimated value of non-food items	$NFCons = EduCons + MedCons + ClothCons + EntCons + OthCons_1 + OthCons_2 + OthCons_3$ $EduCons = \text{Sum}(\text{expenditure in education items in the last 12 months}) / 12$ $MedCons = \text{Sum}(\text{expenditure in medical treatment in the last 12 months}) / 12$ $ClothCons = \text{Sum}(\text{expenditure on adults and children's clothing and footwear in the last 12 months}) / 12$ $EntCons = \text{Sum}(\text{expenditure on cinema and entertainment in the last 12 months}) / 12$ $OthCons_1 = \text{Sum}(\text{expenditure in presents for children, any other transport cost, other costs/transfers and any other expenditure in the last 12 months}) / 12$ <p>[excludes expenditure in jewellery]</p> $OthCons_2 = \text{Sum}(\text{expenditure in tobacco/cigarettes, personal care items, firewood, paraffin, gas, batteries and candles, internet, public transport, security, telephone rates, electricity rates, water rates, housing rent, housing maintenance and repairs, cleaning materials, business rent, cable TV in the last 30 days})$ $OthCons_3 = \text{Sum}(\text{expenditure in licenses for business, vehicle maintenance, fees and paper work, legal advice, festivals, celebrations, and family events and local government payments in the last 12 months}) / 12$
		Full deflator	Compound deflator to express consumption at Lima prices from 2002	$(1) \text{ TemporalDeflator} = \frac{P_{it}}{P_{0it}} \quad (2) \text{ SpatialDeflator} = \frac{P_{it}}{P_{itL}}$ $(3) \text{ FullDeflator} = (1) * (2) = \frac{P_{it}}{P_{0itL}}$ <p>Dó: P_{it} is the price index for Lima at time "t" P_{0it} is the price index for Lima at time "0" (2002) P_{itL} is the price index for the region "i" at time "t"</p>

Outcome variable	Description	Calculation	Component description	Detailed estimation - for all rounds
Absolute poverty	Percentage of households/ Young Lives children with per capita consumption level below an adjusted poverty line	Proportion of households with a total real monthly per capita consumption below an adjusted poverty line	Official poverty lines need to be adjusted for the percentage of food and non-food expenditure under-estimation found in Young Lives data, in comparison to ENAHO (official) expenditure for the comparable sub-population	
Relative poverty	Percentage of households/ Young Lives children living with a consumption level below the relative poverty line	Proportion of households with a total real monthly per capita consumption level below 50% of the median consumption for all households		

Outcome variable	Description	Calculation	Component description	Detailed estimation - for all rounds
Shocks	Percentage of household experiencing any shocks in the last 3 years (last interview)	Percentage of households that have suffered negative changes in their livelihoods due to crime, economy, environment or family-related shocks		
		<i>Crime-related shocks</i>	Percentage of people who experienced crime-related shocks since last interview	Crime related shocks include destruction or theft of tools or inputs of production, theft of cash, crops, livestock, theft or destruction of housing or consumer goods, crime resulting in death or disablement of working adult household member, and imprisonment, kidnapping or levy of a working adult member of the household
		<i>Household economy-related shocks</i>	Percentage of households that experienced shocks that affected negatively the household economy since last interview	Household economy-related shocks include large increases (decreases) in input (output) prices, destruction of place of employment, job-loss, source of income/family enterprise, industrial actions, contract disputes, credit source disbanded, disputes with family members of neighbours regarding land or assets
		<i>Environment-related shocks</i>	Percentage of households that have experience shocks related to sudden changes in the environment since last interview	Environment-related shocks include droughts, too much rain or flood, erosion, frosts or hailstorms, pests or diseases affecting crops or livestock, crops failure, pests and diseases that led to storage loses and affected livestock, earthquake, forest fire and livestock died
		<i>Family circumstances-related shocks</i>	Percentage of households that have experienced deaths, illnesses and changes within the family since last interview	Family circumstances-related shocks include death or episodes of illness of child's parents or other household member, divorce or separation or abandonment, birth of new household member, child's school enrolment

Outcome variable	Description	Calculation	Component description	Detailed estimation - for all rounds
Access to electricity	Percentage of households with access to electricity			
Sanitation facilities	Percentage of households with adequate toilet facilities	Proportion of households with flush toilet or pit latrine in dwelling		
Access to safe drinking water	Percentage of households with access to safe drinking water	Proportion of households with water piped into the dwelling (public net) or tube well with hand pump		
Enrolment	Percentage of children currently enrolled in school	Proportion of children currently enrolled in formal education		
Dropout	Percentage of children who dropout from school	Proportion of children who dropout from school between R2 and R3. Older Cohort only		

Outcome variable	Description	Calculation	Component description	Detailed estimation - for all rounds
Overage	Percentage of children in overage	Proportion of children who is one or more years below the grade they should be given their age (in Peru normal age to enter first grade is 6 years, and there is automatic promotion in first grade)		
Stunting	Percentage of children with low height for age (or age (or shortness)	Proportion of children with a z-score of height for age below two standard deviations (<-2SD), under the international median of height for age	2007 WHO reference	
Underweight	Percentage of children with low weight for age	Proportion of children with a z-score of weight for age below two standard deviations (<-2SD), under the international median of weight for age	2007 WHO reference	

Outcome variable	Description	Calculation	Component description	Detailed estimation - for all rounds
Wasting	Percentage of children with underweight for height	Proportion of children with a z-score of BMI for age below two standard deviations (<-2SD), under the international median of BMI for age	2007 WHO reference	
Overweight	Percentage of children with overweight in terms of BMI for age	Proportion of children who are above the 85 th percentile under the standards of BMI for age	2007 WHO reference	
Obesity	Percentage of children with obesity	Proportion of children: who are above the 95 th percentile under the standards of BMI for age with a z-score of height for age above two standard deviations (>2SD), under the median of height for age	2007 WHO reference	
Child work	Percentage of children performing paid activities	Proportion of children who report working for pay in the last 12 months		R1 and R2: Percentage Of children who report working or doing anything else in the last year to get money or things for themselves or their families R3: Percentage of children who report doing some paid activity or paid work at home in the last 12 months for helping their families or get things for themselves

Outcome variable	Description	Calculation	Component description	Detailed estimation - for all rounds
Time use	Time spent in different activities on a typical day	Average number of hours children spend on household chores, taking care of family members, performing domestic tasks, at school, studying outside school, on paid activities and in leisure activities on a typical day. The denominator is the total number of children performing the activity		

Appendix 3. Young Lives publications from Peru (most recent first)

Dornan, Paul (2011, in press) *Growth, Wealth and Inequality: Evidence from Young Lives*, Young Lives Policy Paper 5, Oxford: Young Lives

Pells, Kirrily (2011) *Poverty, Risk and Families' Responses: Evidence from Young Lives*, Young Lives Policy Paper 4, Oxford: Young Lives

Pells, Kirrily (2011) *Poverty and Gender Inequalities: Evidence from Young Lives*, Young Lives Policy Paper 3, Oxford: Young Lives

Rojas Arangoitia, Vanessa (2011) *'I'd rather be hit with a stick...Grades are sacred': Student Perceptions of Discipline and Authority in a Public High School in Peru*, Working Paper 70, Oxford: Young Lives

Crivello, Gina (2011) *Becoming Somebody': Youth Transitions through Education and Migration in Peru*, *Journal of Youth Studies* 14.4: 395-411

Crivello, Gina and Jo Boyden (2011) *Situating Risk in Young People's Social and Moral Relationships: Young Lives Research in Peru*, Working Paper 66, Oxford: Young Lives

Crookston, Benjamin T., Kirk A. Dearden, Stephen C. Alder, Christina A. Porucznik, Joseph B. Stanford, Ray M. Merrill, Ty T. Dickerson and Mary E. Penny (2011) *Impact of Early and Concurrent Stunting on Cognition, Maternal and Child Nutrition*

Dornan, Paul (2010) *Understanding the Impacts of Crisis on Children in Developing Countries*, Round 3 Preliminary Findings, Oxford: Young Lives

Pells, Kirrily (2010) *Inequalities, Life Chances and Gender*, Round 3 Preliminary Findings, Oxford: Young Lives

Molinas, Oswaldo, Ingo Outes and Alan Sanchez (2010) *Psychosocial Well-being and Cognitive Achievement in Peru*, Working Paper 65, Oxford: Young Lives

Vargas, Silvana and Mary E. Penny (2010) *'Measuring Food Insecurity and Hunger in Peru: A Qualitative and Quantitative Analysis of an Adapted Version of the USDA's Food Insecurity and Hunger Module'*, *Public Health Nutrition* 13(10): 1488-97

Patricia Ames, Vanessa Rojas y Tamia Portugal (2010) *Métodos para la investigación con niños: Lecciones aprendidas, desafíos y propuestas desde la experiencia de Niños del Milenio en el Perú*, Documento metodológico, Lima: Niños del Milenio

Murray, Helen and Martin Woodhead (2010) *Early Childhood Care and Education as a Strategy for Poverty Reduction*, Policy Brief 9, Oxford: Young Lives

Streuli, Natalia (2010) *Atención y educación de la primera infancia en el Perú: Evidencia de Niños del Milenio*, Boletín de políticas públicas N° 3, Lima: Niños del Milenio

Porter, Catherine with Paul Dornan (2010) *Social Protection and Children: A Synthesis of Evidence from Young Lives Longitudinal Research in Ethiopia, India and Peru*, Policy Paper 1, Oxford: Young Lives

Ames, Patricia, Vanessa Rojas and Tamia Portugal (2010) *Continuity and Respect for Diversity: Strengthening Early Transitions in Peru*, Working Papers in Early Childhood Development 56, The Hague: Bernard van Leer Foundation

Ames, Patricia and Vanessa Rojas (2010) *Infancia, transiciones y bienestar en Perú: Una revisión bibliográfica*, Nota Técnica 16, Lima: Niños del Milenio

Cueto, Santiago, Gabriela Guerrero, Claudia Sugimaru and Alvaro Zevallos (2010) 'Sense of Belonging and Transition to High Schools in Peru', *International Journal of Educational Development* 30(3)

Woodhead, Martin, Patricia Ames, Uma Vennam, Workneh Abebe and Natalia Streuli (2010) *Equidad y Calidad? Retos para la educacion inicial y la primeria en Etiopia, India y Peru*, Spanish translation of Bernard van Leer Foundation Working Paper 55

Cueto, Santiago, Gabriela Guerrero, Juan León, Elisa Seguin and Ismael Muñoz (2010) 'Explaining and Overcoming Marginalization in Education: A Focus on Ethnic/Language Minorities in Peru', Background Paper for *UNESCO Education For All Global Monitoring Report 2011*, Paris: UNESCO

Guerrero, Gabriela y Claudia Sugimaru (2010) *Oportunidades y riesgos de la transferencia del servicio Wawa Wasi a los Gobiernos Locales provinciales*, Lima: Niños del Milenio

Alcazar, Lorena (2009) *El gasto público social frente a la infancia: Análisis del Programa Juntos y de la oferta y demanda de servicios asociadas a sus condiciones*, Lima: Niños del Milenio

Woodhead, Martin, Patricia Ames, Uma Vennam, Workneh Abebe and Natalia Streuli (2009) *Equity and Quality? Challenges for Early Childhood and Primary Education in Ethiopia, India and Peru*, Working Papers in Early Childhood Development 55, The Hague: Bernard van Leer Foundation

Escobal, Javier and Eva Flores (2009) *Maternal Migration and Child Well-being in Peru*, Working Paper 56, Oxford: Young Lives

Sanchez, Alan (2009) *Early Nutrition and Cognitive Achievement in Pre-school Children in Peru*, Working Paper 57, Oxford: Young Lives

Woodhead, Martin (2009) *Pathways through Early Childhood Education in Ethiopia, India and Peru: Rights, Equity and Diversity*, Working Paper 54, Oxford: Young Lives

Cueto, Santiago, Gabriela Guerrero, Juan Leon, Alvaro Zevallos and Claudia Sugimaru (2009) *Promoting Early Childhood Development through a Public Programme: Wawa Wasi in Peru*, Working Paper 51, Oxford: Young Lives

Ames, Patricia, Vanessa Rojas, Tamia Portugal (2009) *Young Lives Qualitative Research: Round 1 - Peru*, Technical Note 18, Oxford: Young Lives

Lees, Christina (2009) 'The Nature of Migration and Its Impact on Families in Peru', Young Lives Student Paper (thesis for MSc in Economics for Development, University of Oxford)

Ames, Patricia and Vanessa Rojas (2009) *Childhood, Transitions and Well-being in Peru: A Literature Review*, Technical Note 16, Oxford: Young Lives

Ames, Patricia, Tamia Portugal and Vanessa Rojas (2009) *Starting School: Who is Prepared? Young Lives' Research on Children's Transition to First Grade in Peru*, Working Paper 47, Oxford: Young Lives

Ames, Patricia, Vanessa Rojas and Tamia Portugal (2009) *Empezando la escuela: ¿Quién está preparado? Investigando la transición al primer grado*, Documento de Trabajo 47, Lima: Niños del Milenio

Crivello, Gina (2009) *'Becoming Somebody': Youth Transitions Through Education and Migration. Evidence from Young Lives, Peru*, Working Paper 43, Oxford: Young Lives

Ames, Patricia, Santiago Cueto, Javier Escobal, Eva Flores and Mary E. Penny (2008) *Peru Round 2 Survey Report*, Oxford: Young Lives

Deustua Rossel, Jose (2008) 'The Impact of Climatic Shocks on Child Nutrition in Peru', Young Lives Student Paper (thesis for MSc in Economics for Development, University of Oxford)

Penny, Mary E., R. Margot Marin, Rosario E. Quispe and Roxana Alarcon (2008) 'Family Access to Animal Source Foods: An Analysis of the Young Lives Project in Peru', *FASEB Journal* 22: 1083.12

Sanchez, Alan (2008) *Childhood Poverty in Peru: An Annotated Literature Review*, Technical Note 8, Oxford: Young Lives

Escobal, Javier and Eva Flores (2008) *An Assessment of the Young Lives Sampling Approach in Peru*, Technical Note 3, Oxford: Young Lives

Escobal, Javier (2007) *Trade Liberalisation and Children: Understanding and Coping with Children's Vulnerabilities*, IFPRI: 2020 Focus Brief, Washington DC: IFPRI

Jones, Nicola, Paola Perezniето and Eliana Villar (2007) *Trade Liberalisation and Child Well-being: potential impacts of the Peru-US Free Trade Agreement*, Policy Brief 3, London: Save the Children

Escobal, Javier and Carmen Ponce (2007) *Trade Liberalisation and Child Welfare: Assessing the Impact of a Free Trade Agreement between Peru and the USA*, Working Paper 36, Oxford: Young Lives

Escobal, Javier y Carmen Ponce (2007) *La liberalización del comercio y el bienestar de la infancia: Potenciales impactos del Tratado de Libre Comercio entre Perú y Estados Unidos*, Boletín de políticas públicas sobre infancia N° 1, Lima: Niños del Milenio

Balarin Maria and Santiago Cueto (2007) *The Quality of Parental Participation and Student Achievement in Peruvian Government Schools*, Working Paper 35, Oxford: Young Lives

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De Silva , Mary J., Trudy Harpham, Sharon R. Huttly, Rosario Bartolini and Mary E Penny (2007) 'Understanding Sources and Types of Social Capital in Peru', *Community Development Journal* 42(1): 19-33

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- Cueto, Santiago, Gabriela Guerrero, Juan Leon, Mary De Silva, Sharon Huttly, Mary E. Penny, Claudio F. Lanata, and Eliana Villar (2005) *Capital social y resultados educativos en el Perú urbano y rural*, Documento de Trabajo 28, Lima: Niños del Milenio
- Escobal, Javier, Sharon Huttly, Claudio F. Lanata, Mary E. Penny, Pablo Suárez, and Eliana Villar (2005) *Does Having a Newborn Child Affect Income Diversification Opportunities? Evidence from the Peruvian Young Lives Study*, Young Lives Working Paper 24, London: Save the Children
- Escobal, Javier, Sharon Huttly, Claudio F. Lanata, Mary E. Penny, Jaime Saavedra, Pablo Suárez and Eliana Villar (2005) *The Interaction of Public Assets, Private Assets and Community Characteristics and its Effect on Early Childhood Height-for-Age in Peru*, Young Lives Working Paper 14, London: Save the Children
- Escobal, Javier, Jaime Saavedra and Pablo Suárez (2005) *Economic Shocks and Changes in School Attendance Levels and Education Expenditure in Peru*, Young Lives Working Paper 13, London: Save the Children
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- Escobal, Javier, Sharon Huttly, Claudio Lanata, Sofia Madrid, Mary E. Penny, Jaime Saavedra, Pablo Suárez, Héctor Verastegui, Eliana Villar (2004) *Young Lives Preliminary Country Report: Peru*, London: Save the Children

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

This report presents initial findings from the third round of data collection by Young Lives in Peru, carried out from late 2009 to early 2010. 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 earlier rounds of data collection in 2002 and 2006 and this third round. In particular, we are able to make comparisons between the older children at age 8 in 2002 (in Round 1), and the younger cohort at age 8 in 2009 (Round 3) – to highlight changes that have happened in the children's lives and their communities over that time.

The Young Lives research team in Peru is based at the Grupo de Análisis para el Desarrollo (GRADE) and the data collection team at the Instituto de Investigación Nutricional (IIN). In Peru Young Lives is known as *Niños del Milenio*. The website gives further information in both English and Spanish: www.ninosdelmilenio.org

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