

Changes in Education and Health

The health and education status of the majority of the people of Viet Nam has improved substantially in recent years. However, this has come at a high price: many types of human investment noticeably dropped in the early part of *doi moi*. The improvement in education and health also coincides with increasing inequality in Viet Nam. *The poor are enjoying better education and health, but the improvement is slower for the poor than for the nonpoor. In some cases, people with low human capital may even be slipping into poverty.*

Education and Schooling

Education is a key contributor to development and one of the most important assets of a household in the labor market. Numerous studies have shown that better-educated workers have higher incomes. Educated families also tend to be smaller and healthier. For the country as a whole, higher education is associated with higher and more sustainable economic growth. Clearly, improving the level of education is a key strategy in reducing poverty.

For both men and women the literacy rate has slowly but steadily improved. The literacy gap between men and women has also been narrowing

Education Levels

The literacy rate and the average level of education of adults are broad measures of the educational status of the population. Improvements in these measures tend to be slow and are the result of concentrated Government efforts and broad cultural and economic shifts over many years. Now, after 15 years of *doi moi*, it should be possible to identify the changes in education that resulted from changes in education policy and from the economic growth of Viet Nam.

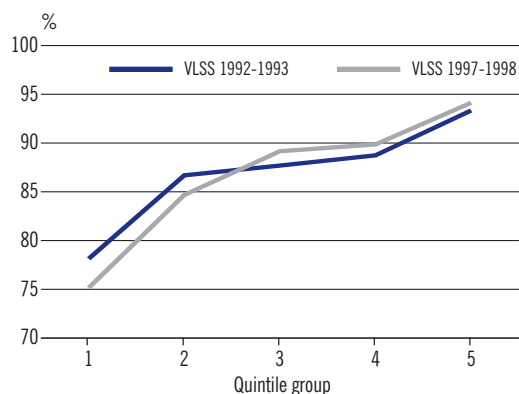
The literacy rate in Viet Nam has improved gradually over the past decade. According to data from the Ministry of Education and Training (MOET), by July 2000 all cities and provinces nationwide had achieved the national standards for eradicating illiteracy and universalizing primary education¹ (Nguyen Ba Thai and Nguyen Cong Giap 2001). Table 3.1 shows the general changes in the literacy rate for the population over the age of 10 from the 1989 and 1999 population censuses and the 1992–1993 Viet Nam Living Standards Survey (VLSS).² For both men and women there has been a slow but steady increase in the literacy rate. The literacy gap between men and women has also been narrowing.³

¹ According to these standards, universal primary education has been achieved in a province if 80 percent of the 14-year-olds in 90 percent of its communes (for provinces in the lowland areas) or 70 percent of 14-year-olds in 80 percent of its communes (for provinces in mountainous areas) have completed primary education. Therefore, a province may be considered to have eradicated illiteracy and achieved universal primary education despite a high rate of illiteracy in its remote hamlets.

² Literacy is defined here as the ability to read and write.

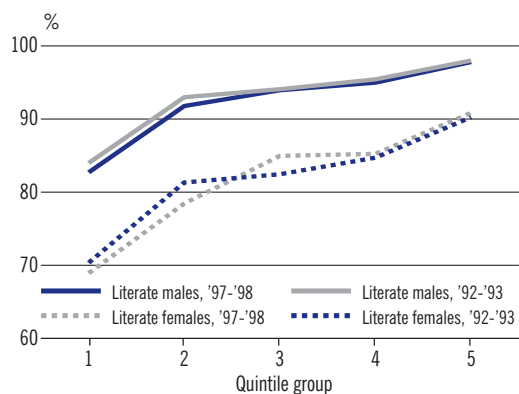
³ According to the 1999 Population Census, the illiteracy rate for people between the ages of 15 to 29 is virtually the same for men and women, with a gap of less than .2 percent. Indeed, most of the gender gap in illiteracy is concentrated in the population over the age of 50. With time, the gap will disappear.

Figure 3.1: Literacy Rate for the Population Over the Age of 18, by Expenditure Quintile, 1992–1993 and 1997–1998



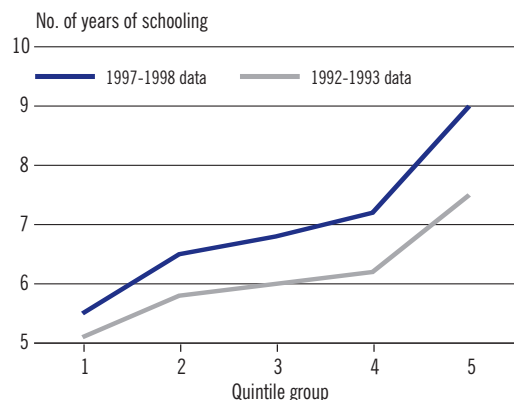
Sources: 1992–1993 and 1997–1998 VLSSs

Figure 3.2: Literacy Rates, by Gender, 1992–1993 and 1997–1998



Sources: 1992–1993 and 1997–1998 VLSSs

Figure 3.3: Education Level of Adults Between the Ages of 25 and 65



Sources: 1992–1993 and 1997–1998 VLSSs

Table 3.1: Changes in the Literacy Rate in Viet Nam, 1989 to 1999 (%)

Item	1989 Census	1992–1993 VLSS	1999 Census
Literate males	92.8	93.4	94.3
Literate females	84.2	85.1	88.2
Total literate population, 10 years and over	88.2	89.0	91.1

Source: Central Census Steering Committee (2000) for Census data

Literacy is unevenly distributed within the population and the illiteracy rate is substantially higher among the poor. The evidence from the 1992–1993 and 1997–1998 VLSSs in Figure 3.1 shows clearly that literacy rises with income and that the illiterate population is largely concentrated at the bottom of the income distribution.⁴

The literacy rate actually dropped for the first two expenditure quintiles in the five years from 1993 to 1998. *Doi moi* appears to have concentrated the illiterate population at the bottom of the earning distribution. In 1992–1993, the distribution of literacy was relatively equitable in the middle of the expenditure distribution, with the second, third, and fourth quintiles having similar rates, and the first and fifth quintiles above and below the national average, respectively. By 1997–1998, the distribution was quite a bit steeper, indicating a greater concentration of the illiterate and an increase in inequality. Since the overall literacy rate increased slightly in this period, the illiterate are apparently falling deeper into poverty at the same time that some of the literate population are able to take better advantage of new opportunities.

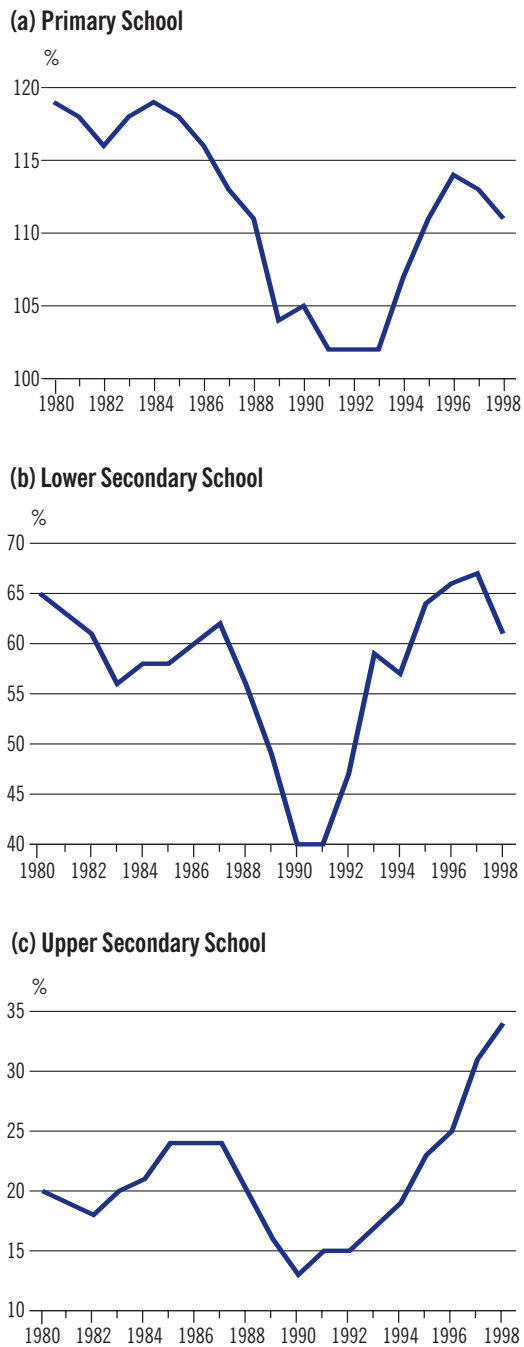
The literacy rate has been relatively constant among men but has become substantially more inequitable among women. Figure 3.2 shows that the literacy rate among women has decreased noticeably for the first and second quintiles, while it has improved for other quintiles, especially the third. Thus, the reversal seen in Figure 3.1 is almost all due to an increase in female illiteracy in the poorest quintiles. Clearly, illiterate women are especially vulnerable to becoming poor and face serious difficulties escaping from poverty.

Literacy in Viet Nam is quite high by international standards. Even in the poorest quintile, more than 70 percent of adults can read. The number of years of education for adults is probably a better indicator of the differences in education levels and the ability of people from different expenditure groups to function in the labor force. Figure 3.3 presents the average number of years of schooling for adults between the ages of 25 and 65, roughly corresponding to the members of the workforce that have completed all of their education.

Much like literacy, education is becoming increasingly concentrated in the higher quintiles. Although the education levels of all quintiles have risen, the richest quintile had by far the biggest gains. The average years of schooling of rural adults over the age of 25 is 2.2 years less than for urban adults. The Mekong River delta and Central Highlands regions have

⁴ Because of the way the question was constructed in the 1997–1998 VLSS, the definition of literacy is confined here to the ability to read.

Figure 3.4: Gross Enrollment Rate (GER) for Primary, Lower Secondary, and Upper Secondary School, 1980 to 1995



Sources: Central Census Steering Committee (2000), General Statistical Office (2000b); population data calculated from 1999 Census

education levels that are more than 1.5 years below the national average, as do adults in ethnic minority households. These figures show the complexity of poverty in Viet Nam: the Mekong delta region has one of the lowest levels of education in the country, although its poverty rates are not as high as in other regions. According to MOLISA researchers, the dropout rate in some areas may reach 30 percent.

Enrollment in the Education System

Increasing levels of education are the result of long-term investment in the education of children. It is much more cost-efficient to educate a child than to try to educate an adult. Besides their inherent advantages in learning, children have more time to devote to education.

Basic education in Viet Nam is divided into primary education (grades 1 through 5) and lower secondary education (grades 6 through 9). Upper secondary education covers grades 10 through 12. Viet Nam also has an extensive preschool program, with crèches and kindergarten classes for younger children. At the tertiary level, there are a number of different university and other higher education options of varying lengths. Both the preschool and tertiary education systems mainly serve urban students. Although most students are enrolled in public schools, Viet Nam does have a variety of private and mixed schools at all levels.

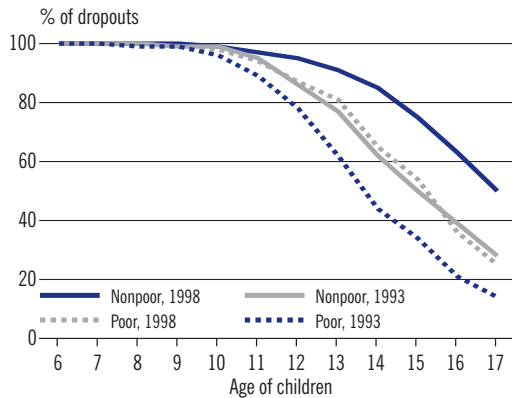
This report focuses on three commonly used measures: the gross enrollment rate (GER), the net enrollment rate (NER), and the age-specific enrollment rate (AER). These capture different aspects of enrollment, reporting the number of students as a ratio to different target populations. Using all three permits a more complete picture of the state of education. The three measures are explained in greater detail in Appendix 5 of this report.

Viet Nam has excellent historical data that permit an analysis of the recent evolution of enrollment. Figure 3.4 shows the gross enrollment rate for primary, lower secondary, and upper secondary school from the 1980–1981 school year until the 1998–1999 school year.⁵

At all levels of schooling, there was a significant drop in enrolment in the late 1980s and early 1990s. The regions with the lowest enrollment rates are the Central Highlands, the Mekong delta, and the Northern Mountainous region. In the case of primary education, there was a noticeable drop in enrollment that started around 1984, two years before *doi moi*. Gross enrollment also measures excess enrollment (due to the entry of overage children and repetition, for example). While some of the decrease in enrollment in primary school may be due to an increase in efficiency, it is difficult to escape the conclusion that fewer children were attending primary school in the late 1980s and early 1990s. It is not clear if this was the result of early dropouts (from primary school) or children simply not entering the school system in the first place.

⁵ This only includes enrollment in the public school system. Starting in 1992–1993, nonpublic schools were authorized. By the late 1990s, many students were enrolled in private schools, especially at the upper secondary level.

Figure 3.5: Enrollment, 1992–1993 and 1997–1998



Sources: 1992–1993 and 1997–1998 VLSSs

Lower secondary schools saw the greatest decline in enrollment in the late 1980s. Although enrollment has since recovered, it declined from 1986, when serious economic problems surfaced and *doi moi* was formally introduced. It is interesting to note that enrollment in secondary school hit its lowest level in 1989, around the time school fees were introduced, and has recovered strongly since 1992. The decline in GER in 1997 and 1998 may reflect improvements in efficiency rather than a drop in actual enrollment.

Enrollment in upper secondary school was relatively stable in the 1980s, although in the late 1980s it did start to go down quite rapidly. The fall-off in upper secondary enrollment was sharp and it occurred around the time of the introduction of school fees. Enrollment in upper secondary school increased once again starting in 1991 and is now well above pre-*doi moi* levels.

In the 1990s, students in Viet Nam stayed in school longer. Figure 3.5 shows the pattern of enrollment in the education system. It measures the proportion of the population in the school system for each age group. The analysis starts in the 1992–1993 school year, which, from the historical data, appears to be near the bottom of the enrollment decline. From this low starting point, the decade of the 1990s saw a major increase in enrollment for both the poor and the nonpoor. In 1997–1998 the enrollment pattern for the poor was similar to that for the nonpoor in 1992–1993. However, the enrollment rate grew faster for the nonpoor than for the poor, indicating an increase in inequality in education within the five-year period.

Box 3.1: Education and Enrollment

People understand the importance of education for their children. They know that education will enable their children to escape from poverty and take advantage of new opportunities. However, for many, significant barriers to education remain.

Yes, even though we are very poor, I intend to send my children to school until they can no longer learn. I know that without a good education, our children will be even poorer than we are now.—Ms. Dam, Central Highlands region

Even considering their poverty, many families say that they will try their best to provide for their children's education because they know that education is an investment in the future. Some are more concerned about educating their male, rather than their female, children because they consider education to be less important and helpful for girls.

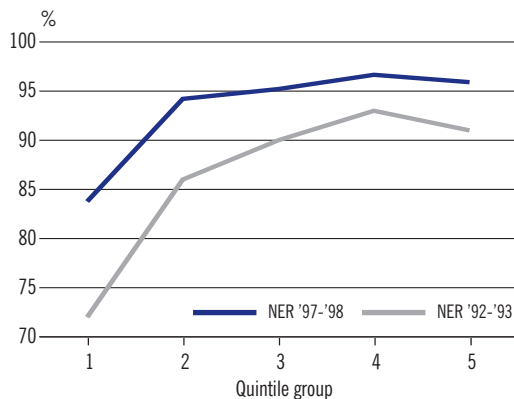
Unlike the Kinh, the Kho Me ethnic group cannot afford to let their children complete school. About 30 percent of Kho Me children drop out after the second or third grade. In this hamlet, only one Kho Me family was able to send its children through the 10th grade, and this was because it had support from a relative living abroad.—A women's group in the Mekong River delta

By all measures, enrollment in primary education increased substantially and became more equitable in the 1990s. Table 3.2 presents the GER, Figure 3.6a the NER, and Figure 3.6b the AER for primary education.

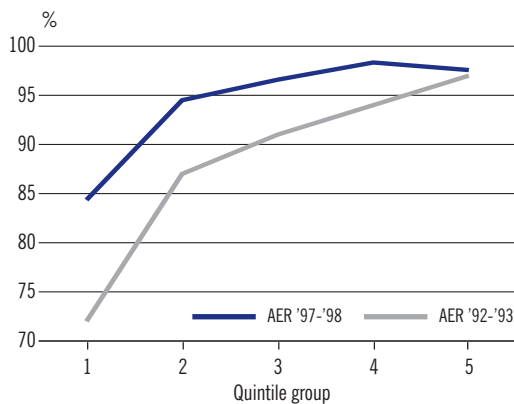
Enrollment among children in the lowest expenditure quintile registered the largest increase, to levels well over 100 percent. This indicates that there are more children in primary school than might be expected from the age composition of the population—

Figure 3.6: Enrollment in Primary School

(a) Net Enrollment



(b) Age-Specific Enrollment



Sources: 1992–1993 and 1997–1998 VLSSs

Table 3.2: Gross Enrollment Rate (GER), Children Aged 6 to 10 (%)

Expenditure Quintile	VLSS 1992–1993	VLSS 1997–1998
1	89.3	112.2
2	108.3	118.9
3	112.1	117.1
4	116.8	121.9
5	106.5	102.0
Total	105.6	114.8

Sources: 1992–1993 and 1997–1998 VLSSs

a likely indicator of universal education. There was a small drop in GER for the fifth quintile. This was probably the result of increased efficiency in primary education as children from this age group generally complete their primary education on time with less repetition.

The net enrollment rates also show that more children from all expenditure quintiles are passing through primary education on schedule. Poor children saw the biggest increase as the gap between the best-off and worst-off children narrowed somewhat. This indicates an increase in efficiency for the poorer students as they pass through primary schools faster.

But despite the gains seen by all children, especially the poor, it appears that many students either enter primary school late or drop out of school early. The age-specific enrollment rates show that poor children in the primary-school age group are less likely to be enrolled in school than students from other age groups. Indeed, with the exception of the poorest quintile, the AER is almost horizontal. It is interesting to note that there has been no discernible increase in AER for the wealthiest expenditure quintile. This reflects the fact their rates were so high to begin with that there is little room for them to improve.

Although the poor have increased their participation in lower secondary school, the gap between the poor and the nonpoor has increased. Table 3.3 shows the GER for children of lower-secondary-school age. While the children in the lowest quintile gained substantially in the five-year period (by 23 percent), the gains were less than for the other quintiles. The largest increases came about in the middle expenditure quintiles, but even the richest quintile had impressive gains. Education for children aged 11 to 14 has become universal for children in the fifth quintile; still it is a matter of great concern that less than 50 percent of children in the poorest quintile are in school.

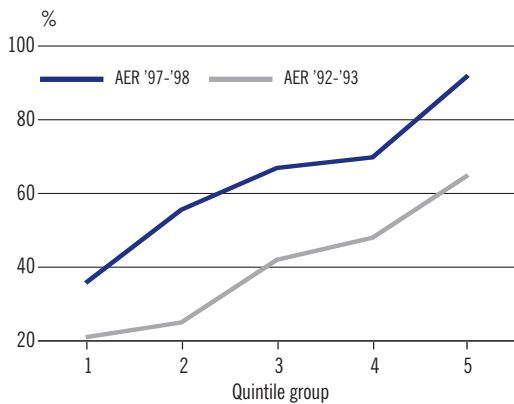
Table 3.3: Gross Enrollment Rate (GER), Children Aged 11 to 14 (%)

Expenditure Quintile	VLSS 1992–1993	VLSS 1997–1998
1	24.3	47.3
2	31.9	70.5
3	51.0	84.8
4	56.3	90.5
5	83.7	107.3
Total	49.2	78.4

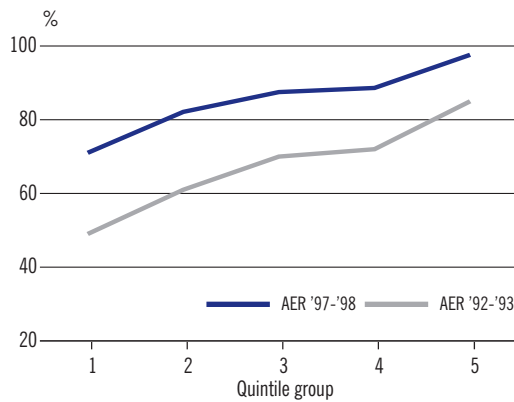
Sources: 1992–1993 and 1997–1998 VLSSs

Figure 3.7: Enrollment in Lower Secondary School

(a) Net Enrollment

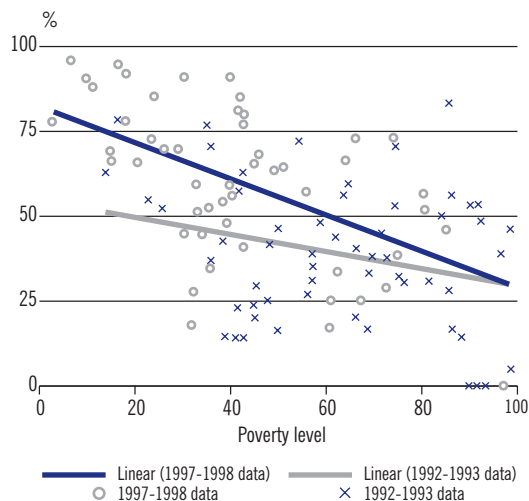


(b) Age-Specific Enrollment



Sources: 1992–1993 and 1997–1998 VLSSs

Figure 3.8: Relationship Between Lower Secondary School Net Enrollment Rate (NER) and Poverty Rate at the Provincial Level, 1992–1993 and 1997–1998



Sources: 1992–1993 and 1997–1998 VLSSs

Evidence from the NER for lower secondary school (Figure 3.7a) confirms this general trend. Although enrollment has increased among the poorest quintile, it has increased even faster among the middle quintiles and has become virtually universal among the wealthiest expenditure quintile.

However the AER rates (Figure 3.7b) show a somewhat more positive picture, namely, a large increase in the probability of enrollment among children in the poorest quintile in school (at any level). A good part of the increase is most likely due to average poor children going to primary school, either as repeaters or as late enrollees. Although this situation is not ideal, it is definitely better than having children drop out of school.

There is also evidence of growing inequality in lower secondary school in the provinces. Figure 3.8 shows the relationship between the poverty rate (the percentage of the population living below the poverty line) and the net enrollment rate.⁶ Although the NER has increased in Viet Nam as a whole and in most provinces, the greatest increases appear to have happened in provinces with the lowest poverty rate. The poorest provinces appear to have had little or no increase in net enrollment.

Boys and girls in lower secondary school appear to be in a similar situation. The overall NER is slightly higher for girls than for boys but there is no apparent trend in the gender gap by expenditure level.

Beyond the lower secondary school level, there has been only a small relative increase in the participation of students from the lower expenditure quintiles and a large increase in overall inequality. The GER for students from the first quintile was 2 percent in the 1992–1993 VLSS and it increased to 9 percent in 1997–1998, as shown in Table 3.4. Although this is a major increase in proportional terms, it is well below the increases for other quintiles. In fact, the largest gains in absolute terms occurred in the highest expenditure quintiles, which represent a growing proportion of all students in upper secondary school.

Overall there is a gender gap in upper secondary school enrollment. This gap is biggest in the second and third expenditure quintiles and is present to some degree in all expenditure quintiles. Interestingly, the gender gap is smallest in the poorest expenditure quintile.

Table 3.4: Gross Enrollment Rate (GER), Children Aged 15 to 17 (%)

Expenditure Quintile	VLSS 1992–1993	VLSS 1997–1998
1	2.0	9.5
2	4.7	20.5
3	8.0	28.3
4	18.9	46.8
5	35.3	75.4
Total	14.9	36.9

Sources: 1992–1993 and 1997–1998 VLSSs

⁶ The poverty rate is calculated at the provincial level using data from the 1992–1993 and 1997–1998 VLSSs. Although this survey is not intended to be representative at this level,

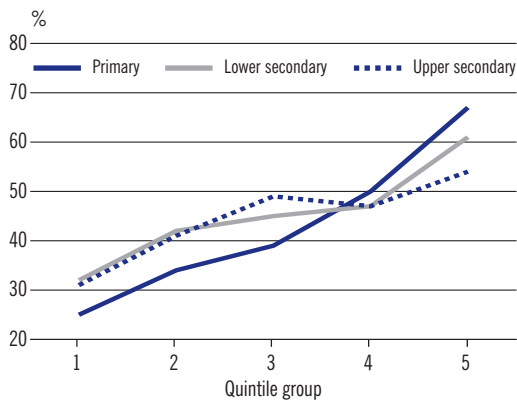
At the tertiary level very few students come from the poorest households. Although the total number of students receiving university education increased from 123,000 in 1993 to 402,000 in 1998 (General Statistical Office 2000b), most of these were from the fourth and especially the fifth expenditure quintiles. The net enrollment rate for individuals from the first quintile was 0 percent, according to the 1992–1993 VLSS, and remained virtually unchanged in the 1997–1998 VLSS. On the other hand, the NER for the fifth quintile increased from 9 percent to 27 percent in the same period. In 1992–1993, students from the fifth quintile accounted for 66 percent of total university enrollment; by 1997–1998 this figure had increased to 68 percent. In both years, only 3 percent of total university enrollment came from the first and second quintiles.

Quality of Education

Measuring the quality of education received by children is difficult but extremely important for the evaluation of the education system. A good education requires much more than simply attending school for a given number of years. Rather, a good education should provide learning and the ability to solve problems.

Figure 3.9 shows the percentage of students who earn good or excellent marks (as opposed to average or poor) in primary, lower secondary, and upper secondary school. These measures are largely subjective and are available only in the 1997–1998 VLSS.

Figure 3.9: Percentage of Students Receiving Good or Excellent Marks in Primary, Lower Secondary, and Upper Secondary School



Source: 1997–1998 VLSS

Students from wealthier households consistently do better in school and get higher marks at all levels. This is especially true in primary school, which is close to being universal and is perhaps the best indicator of the distribution of grades. This pattern is repeated for students at the higher levels, although there is probably some selection bias, with the more academically inclined poor students staying in schools, causing an upward bias in the score of the poorest students. At all levels in general, good or excellent marks were given to 61.6 percent of students from the wealthiest households, 39.1 percent of those from the rural areas, 26.6 percent of those from the Central Highlands, and 22.9 percent of students from the ethnic groups. The Northern Highlands region and Mekong delta regions also had a low percentage of students receiving good or excellent marks. These figures are consistent with the analysis of the rates of completion of all levels of schooling by region from the 1997–1998 survey.

Health and Nutrition

Much like investing in education, investing in health is central to reducing poverty. Health is important to the welfare of individuals, and households are willing to dedicate significant time and money resources to maintaining or improving the health of their members. Health is also important in work and in school, as healthy individuals are able to work and study longer and more efficiently. Health has many dimensions and there is no single measure of health status. This section looks at a variety of indicators of health and nutrition and also presents the extent of use of the health-care system as a health outcome.

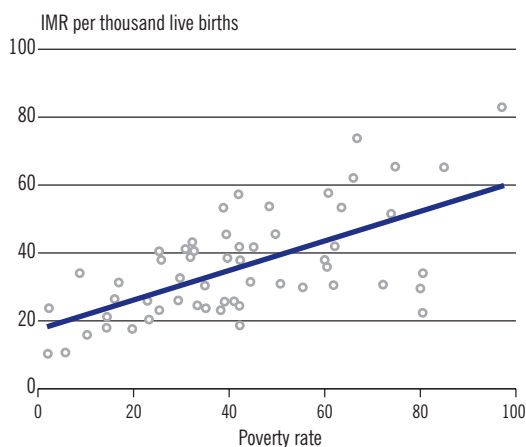
The health system of Viet Nam has undergone many changes under *doi moi*. Previously, Viet Nam had a State-operated system that offered services at little or no monetary cost to the patient. A great deal of emphasis was traditionally placed on the primary health-care system, and indeed Viet Nam was recognized as a leader and a model in the primary health-care movement (Fritzen 1999). Under *doi moi*, the options for care from the private sector have increased substantially and many more drugs and other supplies are available. However, medical care is no longer free. Despite such Government policies as investing in remote areas by bringing health care to the hamlet, allowing the commune health clinic (CHC) to accept medical insurance for the poor, training traditional midwives, and providing clean delivery kits, the fact that health care is no longer free seems, to some extent, to have made it less available in remote areas.

Infant Mortality

Infant mortality is a particularly sensitive measure of health as infants are affected by poor sanitation, malnutrition, lack of care by their parents, and many other factors. Excessively high infant mortality also contributes to high fertility. Households that have reason to believe that some of their children will die before they can contribute to society will tend to have more children and will be reluctant to invest heavily in the human capital of their children (Becker 1991). While other factors such as cultural beliefs and low access to family planning services also lead to high fertility, concrete actions to reduce infant mortality will, in the long run, reduce fertility besides producing better outcomes in nutrition, education, and child health (Rosenzweig and Wolpin 1982).

By all accounts, Viet Nam has a substantially lower infant mortality rate than expected, given its per capita income. However, measuring the relationship between infant mortality and poverty in Viet Nam is complicated by the lack of data.

Figure 3.10: Relationship Between Poverty and Infant Mortality at the Provincial Level



Sources: Central Census Steering Committee (2000); 1997–1998 VLSS

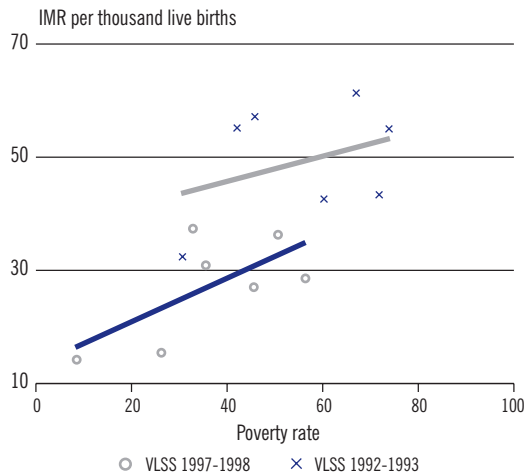
The 1999 Population and Housing Census included a 3 percent sample with detailed information on the infant mortality rate (IMR) in the country. This data source provides perhaps the best estimate of fertility and mortality in the country.⁷ However, the sample did not cover questions that would allow direct measurement of poverty at the household level. For this reason, provincial estimates from the 1997–1998 VLSS are used here. These estimates give the percentage of the population that lives below the poverty line.

There is a positive relationship between infant mortality and poverty: poorer provinces have substantially more infant mortality. Figure 3.10 shows the relationship between the poverty rate (on the x-axis) and the infant mortality rate (the IMR, on the y-axis). The elasticity between the poverty rate and the infant mortality is .48, indicating that an increase of 1 percentage point in the poverty rate will lead to an increase of nearly .5 percent in the IMR.⁸ Although the Government has targeted funds to poor provinces,

⁷ The Central Census Steering Committee (2000) provides detailed information on the organization of the Census, the sample framework for the 3 percent sample from the Census, and the results of the 3 percent sample.

⁸ The R^2 coefficient for this linear curve is .4037, indicating that about 40 percent of the variation in IMR among provinces can be explained by the variation in the provincial poverty line. This is relatively high considering the numerous proximate causes of IMR and also the fact that the provinces can be quite heterogeneous.

Figure 3.11: Relationship Between Poverty and Infant Mortality Rate (IMR) at the Regional Level, 1992–1993 and 1997–1998



Sources: 1992–1993 and 1997–1998 VLSSs

there must be a general improvement in incomes, education, and living standards for infant mortality to be reduced.

The VLSS also permits estimates of infant mortality to be made; however, the value calculated from the VLSS appears to be quite a bit below the census figure.⁹ Figure 3.11 presents the IMR for each of the seven geographical regions compared with the poverty levels for those regions. Infant mortality is still high in the Central Highlands and Southern Central regions.

Infant mortality has decreased although it appears to be more concentrated and less equitably distributed. Two important conclusions are immediately apparent: first, the infant mortality rate decreased dramatically in just five years. Second, the curve became somewhat sharper in 1997–1998 than in 1992–1993. It appears that infant mortality has become more sensitive to changes in income, at least at the macro level.¹⁰

Does this trend hold at the household level as well, and is infant mortality higher among poorer households? Limited evidence seems to suggest so. Hoa, Hojer, and Persson (1997) found a higher IMR among poorer families in a district in the Red River delta in 1992. Swenson et al. (1995) came up with similar results for both poor and nonpoor households, using the 1988 Demographic and Health Survey.

While the IMR has decreased for all households, the gap between the poor and the nonpoor appears to have widened. Table 3.5 compares the infant mortality rates reported by the 1992–1993 and 1997–1998 VLSSs for the five years preceding the surveys. As seen earlier, the number of premature deaths has gone down and this reduction is benefiting both poor and nonpoor households.

Table 3.5: Infant Mortality Rate (IMR) for Poor and Nonpoor Households, 1992–1993 and 1997–1998 (%)

Item	VLSS 1992–1993	VLSS 1997–1998
Nonpoor	34.4	24.5
Poor	39.4	33.6
Total	35.8	26.9

Sources: 1992–1993 and 1997–1998 VLSSs

⁹ The 1999 Population and Housing Census estimates the IMR for the whole country at 35.6 per 1,000 live births (Central Census Steering Committee 2000), versus 35.8 from the 1992–1993 VLSS and 26.9 from the 1997–1998 VLSS. Infant mortality is relatively rare and estimates for small populations are somewhat random. Moreover, because of the small number of occurrences, the IMR has to be estimated by combining self-reported birth histories from several years. This procedure introduces the possibility of memory problems, especially for families that have had a large number of births. The VLSS does not interview all women about their fertility; rather, it selects at random an ever-married woman between the ages of 15 and 49 for further questioning. This may lead to possible bias because the composition of the household may not be random: poorer households may have more than one ever-married woman present, which may reduce the average age of the respondent. But despite these biases, it should be possible to compare the IMRs from the two VLSSs since the same biases exist in both rounds of the surveys.

¹⁰ The elasticity of poverty relative to the IMR increased from .35 to .50 at the same time that the fit of the curve (measured by the R^2 coefficient) increased.

While the infant mortality rate has decreased for both the poor and the nonpoor, the gap in infant mortality between poor and nonpoor households has widened

In conclusion, although there has been a real reduction in infant mortality, the risk of early mortality has dropped substantially more for the nonpoor than for the poor. Given the sensitivity of the IMR to health, this trend is likely to be replicated throughout the population, with the poor being more susceptible to illness and having a higher mortality rate.

Morbidity

Morbidity is an important indicator of health. Illness not only reduces welfare, it can also lead to significant economic loss. In the worst cases, it can also put the life of the sick individual at risk. However, overall morbidity is difficult to measure. While the health system is often able to track the progress of certain illnesses that pose particular risks to public health (for example, malaria, HIV/AIDS, and tuberculosis), it cannot track all of the illnesses that affect the population. In addition, healthiness is often a subjective concept, with different individuals perceiving health problems differently.

From the cases of morbidity reported in the four weeks before the surveys, morbidity increases with poverty. Table 3.6 reports the percentage of the population who reported an illness in the four weeks before the surveys. Because of problems of incompatibility between the two surveys data are presented as average ratios.¹¹ A ratio greater than 1 indicates that the quintile tends to get sick more often than the population average. It is also important to note that different groups may perceive diseases differently according to their cultural beliefs, level of education, and the opportunity cost of inactivity. In the 1992–1993 survey, morbidity seemed to be equally distributed among the population (with all quintiles near the population averages); by 1997–1998, the poor were in greater risk of falling ill.

Table 3.6: Ratios of Self-Reported Morbidity, 1992–1993 and 1997–1998

Quintile	VLSS 1992–1993		VLSS 1997–1998	
	0 to 19 Years	20 Years and Over	0 to 19 Years	20 Years and Over
1	0.96	0.93	1.06	1.06
2	1.03	1.04	1.03	1.00
3	1.00	0.96	1.01	1.03
4	0.98	1.06	0.96	1.01
5	1.03	1.01	0.90	0.93

Sources: 1992–1993 and 1997–1998 VLSSs

One indicator of morbidity that is consistent across the two surveys is time lost from work or school due to illness. People stop their ordinary activities only if they have a serious health problem. Although cultural and institutional factors also affect the decision to stop normal activities, this indicator should be relatively

¹¹ The data from the 1992–1993 and 1997–1998 VLSSs are not directly comparable because of changes in the way that questions were asked. The 1997–1998 VLSS probed more; this could explain part of the increase in the morbidity between the two surveys and also make it more likely that the 1997–1998 VLSS used objective criteria for measuring morbidity. In 1992–1993, the morbidity rates were 23.5 percent for people aged 0 to 19, and 31.2 percent for those 20 years old and over. The corresponding figures for 1997–1998 were 35.1 percent and 47.1 percent.

objective.¹² Table 3.7a shows the percentage of the population that had to stop their normal activities because of illness, and Table 3.7b gives the number of days lost to illness per capita (including people who were sick as well as those who were not). The data in both tables pertain to the four-week period prior to the survey.

Table 3.7a: Percentage of the Population Unable to Carry Out Normal Activities Because of Illness, 1992–1993 and 1997–1998

Quintile	VLSS 1992–1993			VLSS 1997–1998		
	Age 6 to 11	Age 12 to 17	Age 18+	Age 6 to 11	Age 12 to 17	Age 18+
1	17.5	10.9	23.3	19.7	15.3	27.4
2	17.2	10.7	24.5	19.9	11.0	22.0
3	15.1	14.0	22.2	19.0	10.3	22.8
4	13.2	11.0	23.6	16.5	12.5	20.3
5	13.9	13.6	21.7	13.4	7.9	15.5
Total	15.6	12.0	23.0	18.3	11.4	21.2

Sources: 1992–1993 and 1997–1998 VLSSs

Table 3.7b: Number of Days Lost to Illness over the Previous Four-Week Period

Quintile	VLSS 1992–1993			VLSS 1997–1998		
	Age 6 to 11	Age 12 to 17	Age 18+	Age 6 to 11	Age 12 to 17	Age 18+
1	0.87	0.76	1.80	0.86	0.61	1.70
2	0.73	0.55	1.79	0.69	0.55	1.36
3	0.74	0.68	1.78	0.68	0.38	1.38
4	0.60	0.57	1.84	0.63	0.41	1.32
5	0.61	0.61	1.55	0.48	0.30	1.10
Total	0.72	0.63	1.74	0.70	0.45	1.35

Sources: 1992–1993 and 1997–1998 VLSSs

The number of poor people who were unable to work because of illness increased even as the total number of poor people decreased

In recent years, poor adults have been much more likely than the nonpoor to stop their regular activity because of illness. This is a relatively new development, since in 1992–1993 the distribution of illness was relatively equitable, with no clear trend for adults and older children. The number of poor people who were unable to work because of illness increased even as the total number of poor people decreased. The number of days lost to illness followed the same pattern: the distribution was relatively equitable in 1992–1993 but became less so in 1997–1998. The actual number of days lost declined between the two surveys. Policymakers should consider the economic activity lost because of illness in addition to the cost of illness to the health-care system.

Unlike the adults, the children started out with an inequitable distribution that only got worse with time. In 1992–1993, poorer children of primary school age had a higher morbidity rate than nonpoor children. By 1997–1998, the gap had grown and children in the richest quintile were losing fewer days to illness, while the poorest children had virtually the same morbidity rate.

¹² Often workers employed in large establishments (the formal sector) receive sick leave benefits, allowing them to continue being paid despite being absent because of illness. In Viet Nam, this is a luxury that the poor do not generally have.

Nutrition

Nutrition plays a very important role in welfare, and good nutrition is essential for good, long-term health for both children and adults. Indeed, the monetary indicator of poverty is primarily a measure of the household's ability to purchase enough food and maintain a minimum standard of nutrition.¹³

A number of health problems are directly associated with not consuming enough micro-nutrients—anemia, for example, is a result of not consuming enough iron. Nutrition is also important in fighting infections and helping people recover from illness and is vital to overall health, as a sick child must use more energy to fight infection and will therefore not have enough energy for growth. Nutrition and caloric consumption also significantly affect the capacity to work. The poor could fall into a vicious circle: with too little income, they can hardly purchase enough food, and without enough food they cannot generate sufficient income.

Nutrition has long been a concern in Viet Nam, and despite significant gains in overall health status, malnutrition remains quite high. Chen and Hiebert (1994) observed that while the under-five mortality rate "...in Vietnam approximated that of China's, the presence of childhood malnutrition in Vietnam was more than twice that of China's." Data from the United Nations Development Programme (2000) show that childhood malnutrition is more prevalent in Viet Nam than in other countries with similar levels of human development.

Anthropometric measures are often used as indicators of nutritional status, especially for children.¹⁴ For children, anthropometrics can be a powerful indicator of past consumption of nutrients and past health episodes. It can also reflect the current nutritional state and indicate ongoing problems. The data for anthropometric measures are normalized and presented in terms of Z-scores. As a normalized variable, the Z-scores of a healthy population have a mean of 0 and a standard deviation of 1; the healthy population used for comparison is that of children of the same age in the United States (National Center for Health Statistics 2000). These procedures are explained in Appendix 6.

During the 1990s, Vietnamese children had arm circumferences that were substantially below the recommended levels. The circumference of the upper arm of children is an indicator of reduced muscle and is the result of significant deficiency in protein intake. Table 3.8 summarizes the data for children between the ages of 1 and 5 in the five expenditure quintiles from the 1992–1993 and 1997–1998 VLSSs.¹⁵

Although children in general now have less protein malnutrition, those from the wealthiest quintile have been the greatest beneficiaries. In 1992–1993, children from wealthier households were significantly less likely to suffer from protein malnutrition. This trend

Monetary poverty is primarily a measure of the household's ability to purchase enough food and maintain a minimum standard of nutrition

¹³ Dasgupta (1993) presents quite succinctly the relationship between poverty and nutrition and provides a comprehensive discussion of nutrition and human welfare.

¹⁴ Anthropometric measures are measurements of the physical dimensions of the human body, such as height, weight, arm circumference, and head circumference.

¹⁵ A child is classified as malnourished if he or she has an arm circumference that is less than 2 standard deviations from the age-specific mean. A child is severely malnourished if his or her arm circumference is less than 3 standard deviations from the mean.

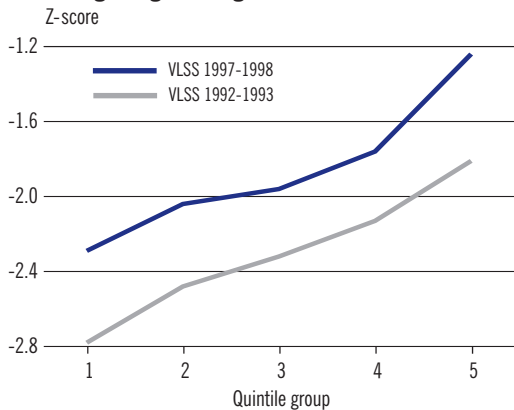
Table 3.8: Percentage of Children Aged 1 to 5 Who Are Malnourished or Severely Malnourished, Based on Upper-Arm Circumference

Quintile	VLSS 1992–1993			VLSS 1997–1998		
	No Malnutrition	Malnourished	Severely Malnourished	No Malnutrition	Malnourished	Severely Malnourished
1	60.9	32.7	6.4	72.8	23.4	3.8
2	66.1	29.7	4.2	80.2	17.9	1.9
3	68.6	27.9	3.5	83.9	15.0	1.1
4	72.6	23.6	3.8	78.5	19.1	2.4
5	82.7	15.9	1.3	90.7	8.5	0.8
Total	68.3	27.5	4.2	79.4	18.3	2.4

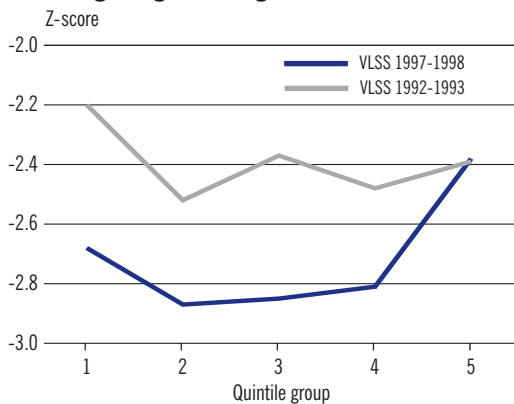
Sources: 1992–1993 and 1997–1998 VLSSs

Figure 3.12: Indicators of Growth and Well-Being for Children from 2 to 11 Years

(a) Average Height-for-Age



(b) Average Weight-for-Height



Sources: 1992–1993 and 1997–1998 VLSSs

continued in 1997–1998. Children from the wealthier quintiles had a noticeable improvement in their arm circumference and a reduction in protein malnutrition; children from other groups had significantly less improvements.

Height-for-age is an important indicator of the growth and well-being of children. A low height-for-age (stunting) indicates that the child is not growing to his or her potential. This is likely to be the result of long-term undernutrition and frequent illness and infection. Figure 3.12a shows the height-for-age for children between the ages of 2 and 11 in 1993 and 1998.

Another commonly used indicator is weight-for-height, a measure of the child's weight given his or her height (and irrespective of age). A low weight-for-height (wasting) is generally interpreted as a short-term or seasonal indicator of poor nutrition. It is quite possible for a child with a low weight in one period to gain additional weight later on; it is much more difficult (although not impossible) for a child to catch up on lost growth. Figure 3.12b shows the trends for weight-for-height. Table 3.9 gives the percentage of children between the ages of 2 and 11 who are stunted or severely stunted.¹⁶

In five years, the height of Vietnamese children improved dramatically for all expenditure groups, but especially so for children from wealthier households. In 1992–1993, quite a number of Vietnamese children from all expenditure categories were stunted. By 1997–1998, the stature of children from the poorest expenditure group to the richest had improved substantially—by an average of 1 standard deviation. This overall improvement in nutrition was a continuation of previous trends: stunting now affects fewer children and nutrition levels in general are improving throughout the country (Ponce, Gertler, and Glewwe 1998). Children in the lowest quintile in 1997–1998 were taller on average than children in the third quintile in 1992–1993, and children in the second quintile were taller than children in the fourth quintile only five years earlier.

The percentage of children who are stunted or severely stunted has also dropped significantly, especially among wealthier households. The poor have fewer stunted children; still they are clearly not keeping up with the gains seen by richer households.

¹⁶ A child is classified as stunted if he or she is less than 2 standard deviations from the age-specific mean height for age. A child is severely stunted if he or she is less than 3 standard deviations from the mean.

Table 3.9: Percentage of Stunted or Severely Stunted Children

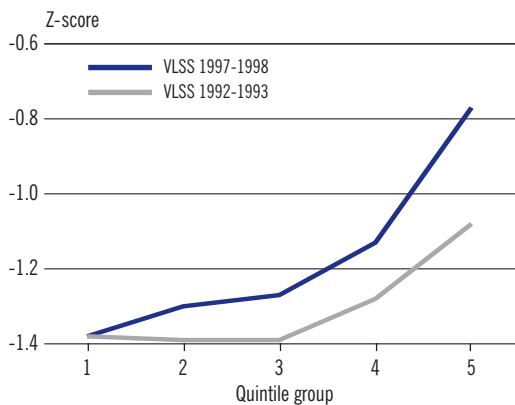
Quintile	VLSS 1992–1993			VLSS 1997–1998		
	Not Stunted	Stunted	Severely Stunted	Not Stunted	Stunted	Severely Stunted
1	27.5	35.9	36.6	39.4	37.9	22.6
2	33.7	38.7	27.7	47.8	36.1	16.0
3	39.1	36.6	24.3	52.6	34.4	13.0
4	45.0	37.0	17.9	59.6	29.8	10.6
5	60.0	27.5	12.5	75.9	21.1	3.1
Total	38.7	35.7	25.6	51.6	33.5	14.9

Sources: 1992–1993 and 1997–1998 VLSSs

The weight-for-height trend indicates a general worsening of nutritional status and increasing inequality. Evidence suggests that weight-for-height has actually deteriorated for most groups. This is not surprising given the fact that children have grown much taller in just five years; in many cases the increase in weight has not caught up. In 1992–1993, the weight-for-height seemed evenly distributed throughout the population; by 1997–1998, the richest quintile had a substantially better measure than the rest of the population and they were the only group with fewer wasting children. As the long-term nutrition of Vietnamese children has improved, there still appear to be occasional short-term nutritional shortfalls.

There is no gender gap in nutrition for children. Generally, the nutrition status indicators tend to be quite equitable between boys and girls across the distribution.

Figure 3.13: Body Mass Index (BMI) for Adults over the Age of 20, 1992–1993 and 1997–1998



Sources: 1992–1993 and 1997–1998 VLSSs

The body mass index (BMI) is an important indicator of adult nutritional status and capacity to work.¹⁷ A low BMI measure indicates that the individual is underweight and may be wasting, with a low capacity to work and to generate income. Mothers with low BMI are more likely to have underweight children, and the latter have a lower probability of survival (Bales 1999). Figure 3.13 shows the BMI distribution by expenditure group for the two survey years.

The BMI distribution among adults became much more inequitable in five years. The nutritional status of adults in the poorest quintile did not improve at all. In 1992–1993, the lowest three expenditure quintiles had almost the same average for the Z-score with a gradual increase for the richer two quintiles. By 1997–1999, some interesting changes had occurred in the distribution. The poorest quintile had experienced no changes at all in their Z-scores, while the other expenditure groups were starting to see some improvement in their status. This improvement was quite gradual for the second and third expenditure quintiles but was significant for the fourth and especially the fifth quintiles.

Although women generally had better BMI scores than men, the BMI scores of men increased substantially in this period, while women realized significantly less gains. Indeed, there was a slight decline in the BMI scores of women in the poorest two expenditure quintiles. The BMI scores of women from the richer three expenditure quintiles did increase, however, although not as much as the men's scores did.

¹⁷ Appendix 6 explains how the body mass index is calculated.

Use of Health Services

The use of health services is an important determinant of health status. Although there are many other factors involved, the health system plays a special role as it is closely linked to the state and is likely to be main recipient of targeted subsidies aimed at protecting and improving the health status of the poor.

Measuring the use of health-care services in Viet Nam is complicated. The explosive growth of the private sector in recent years hampers the interpretation of Government data, which focus on public providers. The two VLSSs allowed some monitoring of health-care use by different groups, but they posed questions very differently, making direct comparisons difficult.

Evidence shows a large reduction in the use of health services in the 1980s. According to official statistics, the number of consultations per person declined from 2.1 in 1987 to .9 in 1993. During the initial phases of *doi moi* in the late 1980s, the public health system was the only legal provider. Most of the decline in service use occurred before the private sector was fully authorized. Likewise, inpatient admissions dropped from 105 per 1,000 persons in 1987 to 68 per 1,000 in 1990 (World Bank 1995). By 1993, the admission rate had recovered to 93 per 1,000 but then it dropped again to 68 per 1,000. Official statistics also show a significant increase in the average length of stay, from 4.2 days in 1993 to 8.2 in 1998 (Ministry of Public Health 1999). The public sector has a virtual monopoly on hospital care in Viet Nam and official statistics are thus likely to capture most of the hospitalization status in Viet Nam.¹⁸

As a starting point, Tables 3.10a and 3.10b present the health-seeking behavior of individuals who reported that they were ill in the four weeks before the 1992–1993 and 1997–1998 surveys. The tables show how the individuals responded to the reported illness.¹⁹ This is a common way of presenting health-seeking behavior. However, given the changes in the definition of morbidity, Tables 3.11a and 3.11b show the use of health-care services by the entire population, regardless of health status. These tables show the gross rate of contact; the majority of the population was not ill and did not use the health system.

In five years, more individuals of all quintiles avoided contact with health providers and resorted to self-medication or simply ignored the illness. The number of individuals who take no action in the face of illness has noticeably increased. The use of drug vendors is a strategy that is uniformly popular among the poor and the nonpoor and is becoming increasingly important for those seeking treatment for their illness in all groups.

The poor are less likely to seek formal health care than the nonpoor and this pattern of behavior has remained relatively stable. The poor are also less likely to seek health care from hospitals, and the use of hospitals, in general, has declined. This decline has not

M Measuring the use of health-care services in Viet Nam is complicated. The explosive growth of the private sector in recent years hampers the interpretation of Government data, which focus on public providers

¹⁸ In 1999, there were 817 public hospitals and 4 private hospitals in the country. Seventy-eight of the public hospitals are operated by ministries other than the Ministry of Public Health.

¹⁹ In the 1992–1993 VLSS, individuals reported only if they had purchased drugs or seen a provider. But the 1997–1998 VLSS included treatment options. For this reason, the later survey probably provides a more accurate measure of the purchase of pharmaceutical products (drugs) than the earlier VLSS.

Table 3.10a: Health-Seeking Behavior of People with Illness, 1992–1993 (%)

Quintile	Visited a Provider					Only Took Drugs	Did Nothing
	Hospital	Commune Health Clinic	Public Clinic	Private Clinic	Other		
1	4.2	6.9	0.4	14.5	0.0	59.5	14.5
2	5.8	6.1	0.7	15.2	0.1	66.4	5.8
3	8.7	6.1	0.6	21.5	0.1	57.5	5.5
4	9.3	4.5	1.1	19.7	0.2	61.1	4.3
5	15.6	3.0	1.5	24.3	0.0	52.4	3.3
Total	8.8	5.3	0.9	19.1	0.1	59.4	6.6

Source: 1992–1993 and 1997–1998 VLSSs

Table 3.10b: Health-Seeking Behavior of People with Illness, 1997–1998 (%)

Quintile	Visited a Provider (1)					Only Took Drugs (2)	Used a Combination of Providers or (1) and (2)				Did Nothing
	Hospital	CHC	Public Clinic	Private Clinic	Other Option		Hospital + Drug	CHC + Drug	Hospital + CHC	Other Combination	
1	2.2	5.7	0.5	7.5	1.9	49.0	1.0	1.2	0.1	4.4	26.7
2	3.5	5.1	0.2	5.9	2.8	57.2	1.6	1.7	0.2	5.2	16.6
3	3.4	5.0	0.7	7.3	1.8	57.2	2.3	1.7	0.4	5.8	14.5
4	5.2	3.8	0.9	9.0	1.5	55.5	2.5	1.4	0.1	6.1	14.0
5	6.5	1.5	0.5	10.4	1.4	53.7	4.7	0.6	0.0	8.1	12.5
Total	4.1	4.3	0.6	8.0	1.9	54.5	2.4	1.3	0.2	5.9	17.0

Sources: 1992–1993 and 1997–1998 VLSSs

Table 3.11a: Health-Seeking Behavior of the Entire Population, 1992–1993 (%)

Quintile	Visited a Provider					Only Took Drugs	Did Nothing
	Hospital	Commune Health Clinic	Public Clinic	Private Clinic	Other		
1	1.1	1.8	0.1	2.1	1.8	15.6	77.6
2	1.6	1.7	0.2	2.7	1.7	18.9	73.2
3	2.3	1.6	0.2	3.6	2.2	15.5	74.6
4	2.6	1.3	0.3	4.1	1.5	17.1	73.2
5	4.5	0.9	0.4	5.6	1.4	15.0	72.3
Total	2.4	1.5	0.2	3.6	1.7	16.4	74.2

Sources: 1992–1993 and 1997–1998 VLSSs

Table 3.11b: Health Seeking Behavior of the Entire Population, 1997–1998 (%)

Quintile	Visited a Provider						Only Took Drugs	Did Nothing
	Hospital	CHC	Public Clinic	Private Clinic	Combination	Other		
1	1.0	2.5	0.2	3.2	2.9	0.9	21.9	67.5
2	1.5	2.1	0.1	2.5	3.6	1.2	24.9	64.0
3	1.5	2.1	0.3	3.1	4.3	0.7	25.5	62.5
4	2.3	1.6	0.4	3.8	4.2	0.7	24.1	62.9
5	2.7	0.6	0.2	4.1	5.3	0.6	22.0	64.5
Total	1.8	1.8	0.2	3.3	4.1	0.8	23.7	64.3

Sources: 1992–1993 and 1997–1998 VLSSs

Box 3.2: Health-Seeking Behavior

Households react differently to health problems depending on their income, the cost of services, and their knowledge of good health practices. The Government and NGOs can influence this behavior by providing incentives and disseminating information.

The community has better living standards than it did 10 years ago. Many families have electricity, better houses, clean water. The health-care system is also better. There are more clinics and more doctors. Wealthy families can call doctors to their house if they can afford the expenses.

Ethnic minorities are also doing better. They are following the Kinh in their eating, drinking, and especially their health-care habits. They now also go to see the doctor or take medicines when they are ill.—Mr. Luong, 50 years old, Mekong River delta

When we have a minor illness, we just buy medicines at the drugstore and treat ourselves. It is expensive to visit doctors for an injection. We cannot get injections on credit in Government clinics but we can do that in private clinics. For serious sickness we have to go to a district hospital. In this commune, sometimes we are called to visit the CHC for immunization. We do not know what diseases these shots prevent, but we are happy, as we know the shots are good for our health. Occasionally, immunization is given to pregnant women. The most recent campaign was about four or five years ago.—A women's group in the Mekong River delta

Before, we did not have vaccinations, but in the last seven to eight years, nurses from the first-aid clinic and hospital have been coming here to give us injections when we are six months pregnant.

We know that having vaccination shots is good for us so we usually try to go for an injection unless we are busy with our work or we don't know where to get the shots.—Ms. Y, 25 years old, Central Highlands region

I stopped working in my last month of pregnancy. I went to local clinic twice for prenatal checks. I was given information about child care and had vaccination shots at the CHC. Some women in the hamlet give birth at home. I think this is dangerous without a doctor's help. I delivered my baby in the clinic at a cost of 50,000 dong.—Ms. Duong, 19 years old, Northeast province

The poor are less likely to seek formal health care than the nonpoor and this pattern of behavior has remained relatively stable

benefited the private-sector providers of health care, whose share of the market has not increased. Instead, pharmacies (presumably private) have gained a larger share.

Contact rates are useful in understanding the number of visits made to different types of health providers. A contact is the average number of visits per person to a provider in a year. As previously mentioned, inconsistencies between the two VLSSs complicate direct comparisons. Health-care use must be analyzed, using different measures, to understand fully the changes it has undergone. Table 3.12 compares the overall use of the health system by sick people. The VLSS helps in distinguishing between contacts with a provider and contacts that just involve some form of self-medication. To promote consistency between the two surveys, all provider contacts are treated equally regardless of whether they are inpatient stays or visits to a commune nurse for a prescription.

Yet, despite the foregoing measurement problems, it is clear that the overall number of contacts with the health system has increased. The increase in contacts has been larger among the poor than among the nonpoor, and overall patterns of use have become somewhat more equitable. The poor are now more likely to see a provider than before, although they are still less likely to do so than the nonpoor. The use of self-medication has also increased significantly for all groups. However, it must be emphasized that these contacts can be made with any provider in the health system and that there may be a growing gap in the quality of the contacts.

Table 3.12: Standardized Rates of Contact with the Health System (%)

Quintile	VLSS 1992–1993			VLSS 1997–1998		
	Only Use Drugs	Visited a Provider	Total	Only Use Drugs	Visited a Provider	Total
1	2.02	0.90	2.92	2.66	1.35	4.02
2	2.45	1.04	3.49	3.06	1.41	4.47
3	2.00	1.31	3.31	3.09	1.55	4.64
4	2.22	1.28	3.49	2.94	1.63	4.57
5	1.95	1.67	3.62	2.64	1.72	4.36
Total	2.13	1.24	3.37	2.88	1.53	4.41

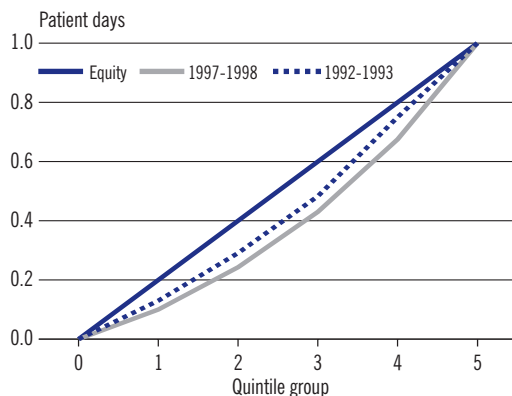
Sources: 1992–1993 and 1997–1998 VLSSs

Hospitalization is one of the major concerns of the poor in Viet Nam because of its high cost. Although hospitalization is relatively rare, it can be economically catastrophic to the poor, who often have to enter into debt to pay the usually unexpected costs involved. Previously cited official data show that while the number of days of hospitalization has increased, inpatient admission has declined substantially.

The VLSS allows some estimation of inpatient admission, which is reasonably comparable between the two surveys. Table 3.13 shows the distribution of inpatient admission and the number of days of hospitalization, as reported in the 1992–1993 and 1997–1998 VLSSs.

Hospitalizations started from an inequitable base and have become even less equitable with time. The admission rates reported here are quite similar to those reported by the Ministry of Health; however, the length-of-stay estimates do exceed the official statistics substantially. Admission rates started out as quite inequitable in 1992–1993 and declined equally for all quintiles. However, there was a noticeable increase in inequality in terms of length of hospital days. In 1992–1993, the average length of stay was relatively equitable across the income distribution. However by 1997–1998, the length of stay had increased substantially more for the wealthier quintiles than for the poor.

Figure 3.14: Distribution of Patient Days, by Expenditure Quintile



Sources: 1992–1993 and 1997–1998 VLSSs

Table 3.13: Inpatient Admission and Patient Days per Hospital Stay

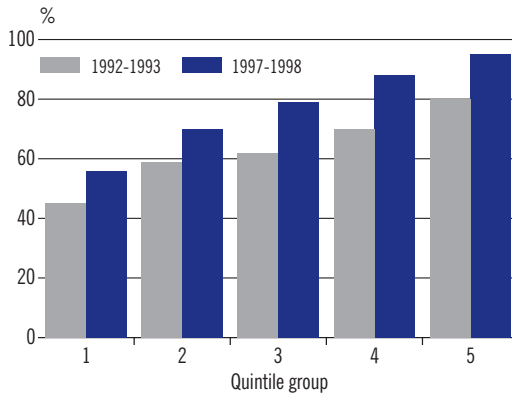
Quintile	Admission Rate per 1,000		Patient Days per Hospital Stay	
	VLSS 1992–1993	VLSS 1997–1998	VLSS 1992–1993	VLSS 1997–1998
1	65.5	33.9	8.1	10.7
2	79.1	44.4	8.3	10.9
3	106.3	48.6	7.4	13.6
4	128.3	61.4	8.5	13.7
5	144.3	63.4	7.0	17.8
Total	104.7	50.4	7.8	13.8

Sources: 1992–1993 and 1997–1998 VLSSs

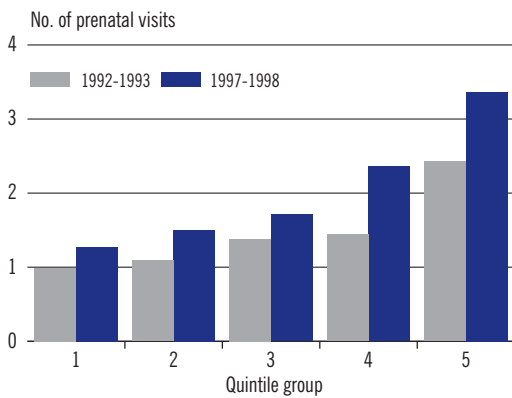
Figure 3.14 shows the distribution of total inpatient stay by expenditure quintile, summing up the total number of days of hospitalization for the entire expenditure quintile. As

Figure 3.15: Prenatal Care for Most Recent Birth

(a) Use of Prenatal Care

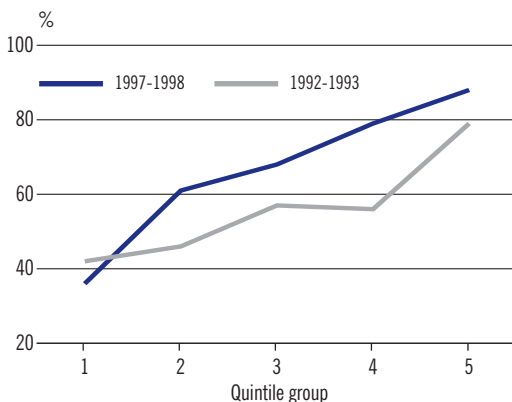


(b) Average Number of Prenatal Visits



Sources: 1992–1993 and 1997–1998 VLSSs

Figure 3.16: Percentage of Births in Modern Facilities



Sources: 1992–1993 and 1997–1998 VLSSs

with the benefit incidence graph, the diagonal line indicates equity and lines to the right and beneath the diagonal line indicate an inequitable distribution favoring higher-income groups. It is quite clear that the already inequitable distribution of hospital care has become even more inequitable.

Prenatal care plays an important role in ensuring the survival and well-being of both infants and mothers. Traditionally Viet Nam has had a strong program of monitoring pregnant women organized around commune-based services. The advent of *doi moi* has increased the options for prenatal care but has also weakened the local system of providing care at the commune level.

Figure 3.15a shows the percentage of women who used any form of prenatal care for their most recent birth. Only estimates are given for deliveries in the two years before the household survey. Figure 3.15b reports the average number of prenatal visits of women for their most recent birth; women who received no antenatal care were included in the total population.

There has been an increase in the use of prenatal care, with the biggest gains occurring among women in the middle and upper end of the income distribution. The gains among the poor have been minimal. As income rises, the use of prenatal services also rises. Although the poorest women have the most to gain in terms of closing the gap with wealthier women, the average number of visits has increased only marginally for the poor. The increase in the number of visits for poor women largely represents an increase in the number of women who go for a single visit. For women in the fourth and especially the fifth quintiles, the increase in the average number of visits for the most part is the result of an increase in the number of visits per woman rather than an increase in the number of women receiving prenatal care. From an inequitable base to start with, prenatal care is becoming even more inequitable in both quality and quantity.

Besides prenatal care, a well-equipped birth facility and the presence of a professional during the birth can reduce infant and postpartum maternal mortality. Figure 3.16 shows the percentage of women who reported giving birth most recently in modern facilities, defined here as a hospital, clinic, or maternity home. Table 3.14 shows the primary type of birth attendance for the most recent birth. In both cases, the data report only on women whose most recent birth was less than 24 months before the date of the survey.

Both in the choice of birth facility and the type of provider in attendance, there has been a steady increase in inequality, with no improvement for the poorest women. The percentage of use of a modern facility declined slightly for these women while it increased for women from the other four quintiles, worsening the already serious inequality in terms of birth facility. Likewise, women in the first quintile have not seen any improvement in provider attendance at birth; nearly one in five births still takes place without trained attendance. The nonpoor, on the other hand, benefited from improved access to modern medical facilities. Overall inequality worsened.

Immunization should be the cornerstone of a public health system. Although there are significant private benefits to receiving vaccinations, immunization systems are

Table 3.14: Percentage of Women Giving Birth, by Type of Provider in Attendance

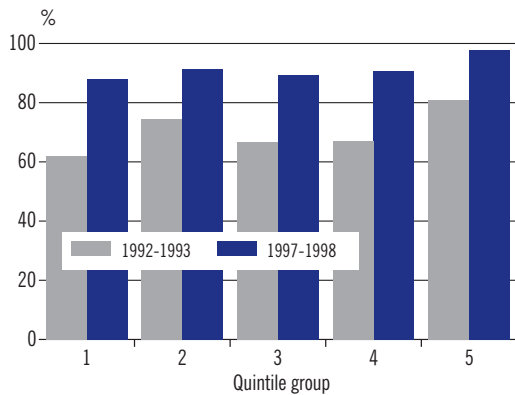
Quintile	VLSS 1992–1993				VLSS 1997–1998			
	Doctor	Other Modern Provider	Midwife	Other	Doctor	Other Modern Provider	Midwife	Other
1	5.9	40.5	32.4	242.5	6.9	39.0	32.3	21.8
2	8.3	46.9	36.2	9.7	16.4	47.8	29.0	6.9
3	14.9	54.3	26.4	4.3	21.4	49.7	26.5	2.5
4	20.5	35.8	37.1	6.6	37.7	37.9	19.5	4.9
5	45.7	33.3	20.9	0.00	53.3	30.0	15.4	1.4
Total	15.3	43.2	31.4	10.8	21.5	41.4	26.7	10.4

Notes: "Other Modern Provider" includes assistant physicians and nurses. "Midwife" includes both traditional and trained midwives. "Other" includes a family member, neighbor, or no assistance.

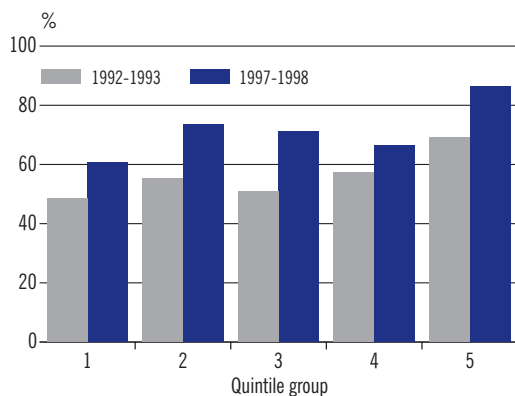
Sources: 1992–1993 and 1997–1998 VLSSs

Figure 3.17: Child Immunization Rate

(a) Percentage of Children with at Least One Vaccination



(b) Percentage of Children Who Are Fully Immunized



Sources: 1992–1993 and 1997–1998 VLSSs

complicated and need support from the Government. There are also major public benefits to having a fully immunized population.

Measuring the coverage of immunization is complicated by the fact that a child requires a series of different injections at different times. It is often difficult for parents to remember which injections the child has received; in many cases, parents do not have a vaccination card. Focusing on children between the age of 1 and 2 years, Figure 3.17a shows the percentage of children who have had at least one immunization against any disease. Children with no coverage are likely to be at particular risk. Figure 3.17b gives the percentage of children whom their parents believe to be fully covered with a full series of BCG (antituberculosis), DPT, polio, and measles shots.²⁰

The 1990s saw a major increase in vaccination coverage in all quintiles, when measured by the number of children with at least one immunization. The poorest quintile perhaps gained the most in terms of coverage, and the children in that group now essentially have equal coverage with the children from the second, third, and fourth quintiles. The fifth expenditure quintile has also gained; virtually all the children in that quintile have had at least one immunization. In terms of full immunization, however, the poor are still substantially behind the nonpoor quintiles. While the rate of coverage of the poor has increased, the increase has not been as much as that for the fifth quintile. Impressive gains have been achieved toward the goal of immunizing all children at least once, but much work remains to be done to ensure that more children, particularly among the poor, are fully immunized.

²⁰ Official figures show that in 1997, 95.4 percent of children under the age of 1 had been fully vaccinated (Ministry of Public Health 1998). The estimates from the VLSS are substantially less. Given the difficulty of tracking in both surveys and official data, the actual figure is probably somewhere between the survey estimates and the official statistics.