

## AN OVERVIEW OF ACCESS TO AND INEQUALITY IN THE EDUCATION SYSTEM OF VIET NAM

Vu Hoang Linh\*

*This paper studies trends in education in Viet Nam in the 2000s. It focuses on access to education, inequality in the education system and education financing and provides an assessment of the effectiveness of educational activities supported by public spending. The first part of the study presents an overview of the education system in Viet Nam and the reform process of the public provision of education services. The next section focuses on access and inequality in education in Viet Nam, analysing disparities among different population groups and between urban and rural population groups, women and men, ethnic minorities and the ethnic majority and poor and non-poor households. The following section covers the issue of education financing in Viet Nam. The study assesses the trend in family contributions to children's education over time and whether education is a burden on the poor. A model to assess the determinant to lower-secondary, upper-secondary and tertiary enrolments was applied in order to find the factors influencing enrolments. Finally, in the conclusion, we summarize our findings and propose some policy implications for further reforming the country's education system with a view to enhancing accessibility and making it more equitable.*

*JEL Classification:* I21, I22, O15.

*Key words:* Viet Nam, education, access, disparities, financing.

---

\* Assistant Professor, University of Economics and Business, Viet Nam University, and Research Fellow, Indochina Research and Consulting, Hanoi, Viet Nam. E-mail: vhlinh@vnu.edu.vn. I would like to thank two anonymous referees for their valuable comments.

## I. INTRODUCTION

Since the launch of *Đổi Mới* (Renovation) in 1989, Viet Nam has experienced significantly high economic growth and remarkable poverty reduction. During the period 2000-2008, the economy expanded about 7 per cent annually. Meanwhile, the country has made great strides in reducing the poverty headcount, which fell from 58 per cent in 1993 to 16 per cent in 2006 and 14 per cent in 2008.

Education has always played a prominent role in Vietnamese society. Despite being poor country, the country has made significant achievements compared with those countries with similar economic development. One may conclude that the system has been undergoing many reforms. However, the results of these reforms are still debated. Thus, determining whether education reforms in Viet Nam have helped to improve the education system in terms of being accessible and equitable is essential in order to understand the country's education achievements and challenges.

Numerous studies have been conducted on the disparities in and access to education in Viet Nam. Using the country's household survey data in 1993 and 1998, Nguyen (2004) observed that from 1993 to 1998, school enrolment in Viet Nam increased dramatically at all levels, but especially at the higher education levels. The increase occurred for all expenditure groups and regions. In terms of financing, Nguyen (2004) found that private financing to education was a burden for poor children and helped widen the gap in terms of access and quality between poor and better-off children.

Using data from the Viet Nam Housing and Population Census 1999, Holsinger (2009) found that the education Gini coefficient of Viet Nam was 0.23. This coefficient reflects the distribution of education attainment in the labour force. He considered the Gini coefficient of Viet Nam as "relatively equal", similar to such countries as Japan, New Zealand and the Republic of Korea. In his study, the provincial education Gini coefficient ranged from 0.16 in Thai Binh to 0.31 in Ha Giang. Holsinger (2009) argued that concentrating public spending on primary and lower secondary education would benefit the poor and improve the distribution of education in Viet Nam.

Rew (2009) also calculated the provincial education Gini coefficient for Viet Nam using the same data as Holsinger (2009). However, to calculate the Gini coefficient, Rew (2009) included all individuals aged five and above while Holsinger (2009) included individuals aged 15 and above. Therefore, the results from Rew (2009) are slightly different from those of Holsinger (2009). He found that the country's national education Gini coefficient was about 0.26, which was relatively equal. Yet,

considerable variation existed within the country with the education Gini ranging from 0.18 (Thai Binh) to 0.53 (Lai Chau). Rew (2009) also found that substantial disparities existed across ethnic and gender groups.

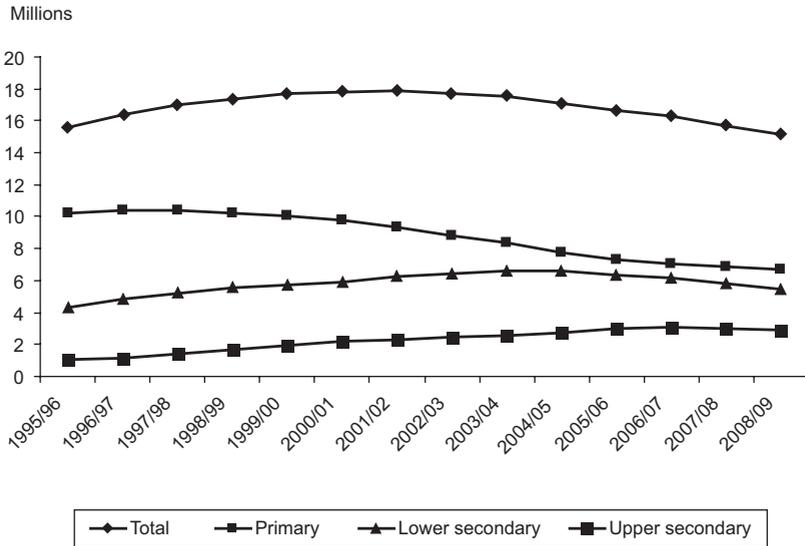
The purpose of this paper is to document and analyse changes in the education system in Viet Nam during the period 2002-2008 in terms of access, inequality and financing. During the period, substantial education policy reforms were implemented. The structure of this paper is as follows. The first section provides an overview of the education system and policies in Viet Nam. Section II discusses access to and disparities in education. In particular, we assess the recent changes in school enrolment and completion, focusing on primary and lower secondary education since the Government of Viet Nam has explicitly stated their goal of universalizing enrolment at these levels. We also examine differences in educational quality received by different population groups, such as urban and rural population groups, women and men, ethnic minorities, urban migrants and persons with disabilities as well as for low income families. Section III discusses education financing. Finally, we examine education financing in Viet Nam, in particular, the effectiveness of the “socialization policy” in increasing access to and the quality of education.

## **II. OVERVIEW OF THE EDUCATION SYSTEM IN VIET NAM**

Viet Nam has change dramatically since 1986, the year the Communist Party and the Government of Viet Nam adopted the economic renovation policy, namely *Đổi Mới*, to replace the centrally planned economy with a regulated market economy. The changes have placed various pressures on the education system in general and the higher education system in particular, in which the unification and restructuring process, including the establishment of semi-public and non-public educational institutions, are embraced. The country’s current education system is divided into five categories: pre-primary, primary, lower secondary, upper secondary and higher education.

Viet Nam universalized primary education by 2000 and lower secondary education by 2010. Figure 1 shows that the absolute numbers of students attending primary schools increased significantly from 1995 to 1998. From 1998, a downward trend was observed for primary schooling due to a demographic change of the population. On the other hand, the number of enrolled pupils at both the lower secondary and upper secondary levels increased at a rapid rate during the period 1995-2005 before a downward trend was observed due to a demographic change.

**Figure 1. Enrolments in Viet Nam 1995-2009 (million)**



Source: Viet Nam, General Statistics Office (various years).

During the last decade, Viet Nam experienced a substantial shift in the composition of the education system. Figure 1 indicates that the tertiary system expanded while the share of primary schooling declined. From 2000 to 2008, the number of tertiary students increased by 120 per cent, from 732,000 students to 1.66 million students. At the same time, the number of enrolled primary students fell by 32 per cent from 10.1 million to 6.9 million people. Thus, there were 13.7 primary pupils per each tertiary student in 2000 as compared to 4.2 in 2008.

There are at least two reasons for this substantial change in the composition of the country’s education system. First, during the last decade, reduced birth rates led to a fall in the population of primary school age students while the population of tertiary school aged children increased. Second, Government policies had shifted in recent years with an aim towards expanding the country’s higher education system.

The Government focused heavily on education during the last 20 years. In 2001, it approved the National Strategy for Education Development 2001-2010, which aimed to ensure access to education for all people. The Law on Education was passed four years later, creating a basic framework for activities in the sector. In addition, many directives, decrees and regulations were issued by the Party, the Government, the National Assembly or the Ministry of Education and Training in order

to improve the system, and targets in education were included in the Millennium Development Goals that Viet Nam committed to fulfill. With an aim of expanding the Millennium Development Goals, Viet Nam has committed to (a) consolidate universal primary education, (b) universalize lower secondary education and (c) gradually expand upper secondary education.

Viet Nam is making good progress in meeting both the Millennium Development Goals of universal primary education and gender equality in access to education and the targets of the National Strategy for Education Development 2001-2010. The net enrolment rate (NER) at the primary school level increased from 96 per cent in the 2006/07 school year to 97 per cent in the 2008/09 school year while at the lower secondary school level, it increased from 78.3 per cent in the 2006/07 school year to 84.4 per cent in the 2008/09 school year (Viet Nam, MOET, 2009a; 2009b).

### **III. ACCESS TO AND INEQUALITY IN EDUCATION**

Viet Nam made impressive progress in enhancing access to basic education for its entire citizens during the 1990s, with primary school being universalized by 2000. In 2000, the country began to focus on universalizing lower secondary education and expanding upper secondary education. According to the Ministry of Education and Training (MOET), Viet Nam has basically universalized lower secondary education nationwide and upper secondary education in major cities by 2010.

Table 1 shows the changes in the gross enrolment rates (GERs) and NERs in Viet Nam between 2004 and 2008. GERs at both the lower and the upper secondary levels increased during the period 2004-2008, from 92.5 per cent in 2004 to 96.9 per cent in 2008 at the lower secondary level and from 69.9 per cent to 74.4 per cent at the upper secondary level. The increase in the GERs at the tertiary education was even more impressive during that period, rising from 18.3 per cent to 30.2 per cent. In contrast, the GERs at the primary level decreased from 120.2 per cent in 2004 to 116.2 per cent in 2008. Since the GERs at the primary level were calculated as the ratio between the number of children attending primary schools to the number of children at the right primary school age, the decrease in GERs shows that children in Viet Nam are increasingly going to school at their right age and fewer primary pupils are repeating classes. However, GERs are still very high, especially in rural areas and among the poorest quintile, such as the 20 per cent of the population who are the poorest.

NERs followed a similar trend. They increased from 92.8 per cent in 2004 to 94.5 per cent in 2008 at the primary level and from 73.6 per cent in 2004 to 79.0 per cent in 2008 at the lower secondary level. However, NERs experience the largest

increase in the upper secondary and tertiary levels during that period, rising by 6.3 percentage points at the upper secondary level and by 7.7 percentage points at the tertiary level.

As shown in table 1, the inequality in education enrolment between the rural and urban population is considerable, particularly at the upper secondary and tertiary education. NERs of the rural population and urban population at the tertiary education were 16.7 per cent and 33 per cent in 2008, respectively. The gap between the rich and the poor is substantial, with it being very wide at the higher levels of education. In 2008, differences in NERs between the richest and the poorest quintile were 6.2 percentage points at the primary level, 23.3 percentage points at the lower secondary level, 47.2 percentage points at the upper secondary level and

**Table 1. Gross and net enrolment ratio in Viet Nam, 2004 and 2008 (per cent)**

	Primary		Lower secondary		Upper secondary		Tertiary	
	2004	2008	2004	2008	2004	2008	2004	2008
<b>GER</b>								
Viet Nam	120.2	116.2	92.5	96.9	69.9	74.4	18.3	30.2
Rural	121.3	117.7	91.8	96.4	65.1	69.8	12.1	23.2
Urban	115.7	111.5	94.8	98.4	87.1	89.2	35.0	49.5
Poorest quintile	120.4	122.4	79.3	83.3	30.5	39.9	0.5	2.5
Lower-middle quintile	120.9	115.0	89.4	99.1	67.4	73.0	3.3	10.6
Middle quintile	123.9	115.2	101.3	103.5	71.3	76.2	8.5	22.0
Upper-middle quintile	121.0	109.8	99.4	103.6	86.9	93.7	23.8	40.1
Richest quintile	112.1	114.1	98.7	101.3	97.6	98.7	47.1	69.6
<b>NER</b>								
Viet Nam	92.8	94.5	73.6	79.0	48.3	54.6	13.3	21.0
Rural	92.4	94.0	71.7	77.4	44.6	50.5	8.8	16.7
Urban	94.4	96.1	80.5	84.1	61.7	67.9	25.5	33.0
Poorest quintile	89.5	91.9	58.6	65.7	18.9	29.3	0.4	1.9
Lower-middle quintile	94.3	93.9	72.5	79.3	42.8	50.6	2.1	7.9
Middle quintile	92.8	95.7	78.4	82.5	52.0	56.5	7.0	17.5
Upper-middle quintile	95.6	95.7	81.2	86.6	59.8	68.2	16.6	28.3
Richest quintile	94.7	98.1	84.6	89.0	71.8	76.5	34.5	45.1

Source: Author's calculations based on data from Viet Nam Household Living Standard Surveys (VHLSSs) 2004 and 2008.

43.2 percentage points at the tertiary level. Therefore, increasing access to lower-income families at upper secondary and tertiary education would be important to reduce inequality in access to education.

Compared to other countries in South-East Asia, the enrolment rates in Viet Nam are relatively high. For example in 2008, GER at the lower secondary level was 97 per cent in Viet Nam compared to 58 per cent in Cambodia, 53 per cent in the Lao People's Democratic Republic, 89 per cent in Indonesia and, 99 per cent in the Philippines and in Thailand. NER at the primary school level in Viet Nam stood at 94.5 per cent in 2008, compared to 89 per cent in Cambodia, 82 per cent in the Lao People's Democratic Republic, 96 per cent in Indonesia, 92 per cent in the Philippines and 89 per cent in Thailand.

Table 2, which summarizes the matching between age and grade in 2004 and 2008, shows that there was a significant improvement in age-grade matching in 2008 at the primary and secondary levels. In 2004, about 17.4 per cent of students attending primary schools were older than 10 years, 18.1 per cent of students attending lower secondary schools were older than 14 years, and 26.8 per cent of students attending upper secondary schools were older than 17 years. In 2008, the corresponding proportions were 12.5 per cent, 16.4 per cent, and 23.6 per cent, respectively.

**Table 2. Age and grade matching, 2004 and 2008  
(percentage of total enrolled in level)**

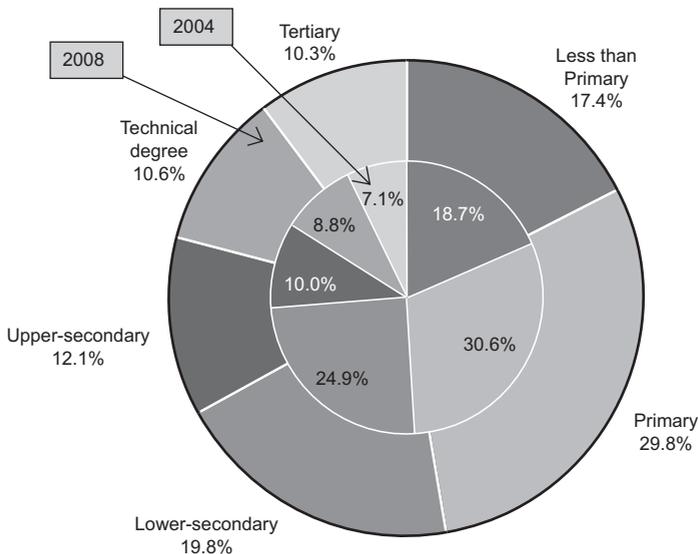
	<6	6-10	11-14	15-17	18-22	>22	Total
<b>2004</b>							
Primary	1.3	81.3	16.8	0.4	0.1	0.1	100
Lower secondary	0.0	2.4	79.6	17.0	0.9	0.2	100
Upper secondary	0.0	0.0	4.1	69.1	25.4	1.4	100
Technical school	0.0	0.0	0.2	5.8	74.8	19.2	100
Tertiary	0.0	0.0	0.0	0.1	72.7	27.1	100
<b>2008</b>							
Primary	1.1	86.2	12.4	0.2	0.1	0.0	100
Lower secondary	0.0	2.1	81.5	15.7	0.6	0.1	100
Upper secondary	0.0	0.0	3.4	73.4	23.0	0.3	100
Technical school	0.0	0.0	0.2	5.4	72.2	22.3	100
Tertiary	0.0	0.0	0.0	1.4	69.7	28.9	100

Source: Author's calculations based on data from VHLSSs 2004 and 2008.

However, the age-grade matching at technical schools and the tertiary level seems to suggest that the average ages of students at technical schools and at colleges and universities were increasing. In 2004, 19.2 per cent of technical school students and 27.1 per cent of college/university students were older than 22 years. In 2008, the corresponding ratios were 22.3 per cent and 28.9 per cent, respectively. The increase in the percentage of students older than 22 years in higher education institutions may reflect the recent increase in the proportion of students attending Master and PhD programmes, other types of training, such as distance learning, or pursuing second degrees.

Figure 2 summarizes the change in education attainment between 2004 and 2008. The proportions of people having finished lower secondary schools, technical schools and colleges and universities increased while those of people having no degree, a primary education or lower-secondary education degree decreased. In 2004, in the 25-to-34-year-old group, 30.6 per cent completed primary education, 24.9 per cent completed lower secondary education, 10.0 per cent completed upper-secondary education, and 7.1 per cent had a tertiary degree. In 2008, the corresponding proportions were 29.8 per cent, 19.8 per cent, 12.1 per cent and 10.3 per cent, respectively.

**Figure 2. Education attainment in 2004 and 2008 (per cent)**



Source: Author's calculations based on data from VHLSSs 2004 and 2008.

Notably, there was still disparity in education attainment between urban and rural areas and between the rich and the poor during the period 2008-2012. Table 3 summarizes education attainment in 2008. In rural areas, 54.4 per cent of the population aged from 25 to 34 years had only a primary education or lower. In contrast, in urban areas, the proportion was only 30.3 per cent. The difference in tertiary degrees was even more markedly: more than 25.3 per cent of the population aged from 25 to 34 years in urban areas had tertiary degrees while the corresponding proportion among rural population was less than 3.9 per cent.

**Table 3. Education attainment of the 25-34 age group in 2008 (per cent)**

	Less than primary	Primary	Lower-secondary	Upper-secondary	Technical degree	Tertiary
Viet Nam	17.4	29.8	19.8	12.1	10.6	10.3
Rural	21.3	33.1	22.1	10.8	8.8	3.9
Urban	8.1	22.2	14.5	15.2	14.7	25.3
Poorest quintile	40.2	33.2	18.0	5.6	2.8	0.4
Lower-middle quintile	20.6	38.8	24.5	8.2	6.1	1.9
Middle quintile	14.9	36.9	23.5	10.7	9.7	4.2
Upper-middle quintile	7.4	27.5	22.7	15.4	17.2	9.8
Richest quintile	2.6	13.3	11.2	20.7	17.6	34.6

Source: Author's calculations based on data from VHLSS 2008.

The difference in education attainment across expenditure groups is also notable. Among the poorest quintile, more than 73 per cent had primary degrees or lower while that percentage was just 16.1 per cent among the richest quintile. Nearly 35 per cent of the richest quintile of the 25-to-34-year-old group had a tertiary degree while a mere 0.4 per cent of the poorest quintile had that.

These trends have important implications for Viet Nam. Even though enrolment in all levels of education have been increasing in the poor and the rural areas, the inequalities between the rich and the poor, and between the urban and the rural areas remain large and persistent. In addition, the gaps are widening at higher levels of education. This suggests that better efforts should be made to remove constraints to poor and rural children in pursuing education.

Table 4 shows that Viet Nam has achieved gender equality in terms of enrolments to education. In 2008, some 94.1 per cent of school-age girls went to primary schools, compared with 94.9 per cent of school-age boys. At the lower

secondary level, NER of girls was slightly higher than that of boys. At the upper secondary level, there was a significant difference between NER of girls and boys in favour of girls while at the tertiary level, NER of females was also higher than that of males, implying that girls are more likely to enrol in higher levels of education than boys. It is interesting that the boys' GERs are higher but their NERs are lower than girls' at the primary and lower secondary levels. This difference implies that boys repeated classes more often than girls. It is also possible that over-aged girls were less likely to stay at schools than over-aged boys.

**Table 4. Gender and ethnic differences in GERs and NERs, 2004 and 2008 (per cent)**

	Primary		Lower secondary		Upper secondary		Tertiary	
	2004	2008	2004	2008	2004	2008	2004	2008
<b>GERs</b>								
Female	119.4	117.1	88.9	95.0	68.9	79.2	18.3	30.9
Male	121.0	115.4	95.8	98.9	70.8	70.0	18.4	29.5
Kinh and Hoa	118.6	115.7	93.5	97.8	73.5	78.8	20.2	33.8
Minority	128.2	118.9	86.1	92.0	46.8	48.9	5.5	9.1
<b>NERs</b>								
Female	93.3	94.1	73.4	79.1	50.0	59.5	14.5	22.4
Male	92.3	94.9	73.7	78.9	46.8	50.2	12.3	19.8
Kinh and Hoa	94.0	95.5	76.8	81.1	52.0	58.9	14.7	23.8
Minority	86.8	89.4	54.4	67.8	24.7	29.8	3.9	5.4

Source: Author's calculations based on data from VHLSSs 2004 and 2008.

A positive development observed in the findings is that the gap between the minority groups and the majority group in basic education had narrowed. In 2004, the gap in NERs was 7.2 percentage points at the primary level and 22.4 percentage points at the lower secondary level as compared to 6.1 percentage points and 13.3 percentage points, respectively, in 2008. However, this success was not achieved at the secondary level and in tertiary education. The gaps in NERs at the upper secondary level and tertiary education widened from 27.3 percentage points in 2004 to 29.1 percentage points in 2008 at the upper secondary level, and from 10.8 percentage points in 2004 to 18.4 percentage points in 2008 at the tertiary education level.

Despite overall improvements in enrolments, inequality among the regions in the country remained high. Table 5 shows that the North-West remained the region with the lowest NERs at all levels of education. More importantly, its NER was even lower in 2008 than in 2004. However, the North-West had considerable success in increasing enrolments at the lower and upper secondary levels. In 2008, its NERs at the lower secondary and upper secondary levels were 16.4 percentage points and 13.2 percentage points higher, respectively, than in 2004, compared with the national increases of 5.4 and 6.3 percentage points, respectively.

**Table 5. Regional NERs, 2004 and 2008 (per cent)**

	Primary		Lower secondary		Upper secondary		Tertiary	
	2004	2008	2004	2008	2004	2008	2004	2008
Viet Nam	92.8	94.5	73.6	79.0	48.3	54.6	13.3	21.0
Red River Delta	93.9	95.9	79.7	85.6	59.9	68.8	16.9	32.2
North-East	93.6	93.4	77.2	83.0	48.1	47.9	10.8	16.0
North-West	87.5	83.8	50.1	66.5	18.3	31.5	2.6	4.7
North Central Coast	92.0	95.6	77.7	79.8	57.1	57.4	15.5	26.9
South Central Coast	96.5	94.7	80.0	81.9	56.3	59.3	15.7	25.4
Central Highlands	90.5	93.9	64.9	74.3	39.3	50.5	10.3	22.1
South-East	92.9	95.6	74.9	79.4	52.1	57.7	17.2	19.7
Mekong River Delta	91.9	94.2	63.1	70.4	28.6	42.2	7.5	10.6

Source: Author's calculations based on data from VHLSSs 2004 and 2008.

#### IV. FINANCING FOR EDUCATION

This section examines education financing in Viet Nam. This was done by taking a close look at the role of public and private financing for education. The data on public expenditure for education were taken from the official source while that on private expenditure for education was calculated from the VHLSSs of 2004 and 2008. The latter was disaggregated by regions, expenditure groups, ethnic and gender groups to assess the disparity of financial burden of education, especially to the poor.

## Public expenditure for education

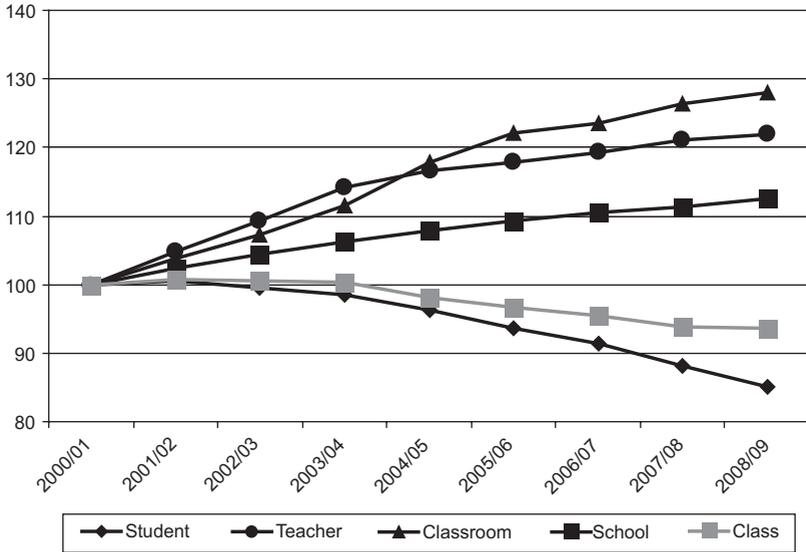
The Government of Viet Nam has directed a lot of attention to the education system, increasing its budget share from 4.1 per cent of gross domestic product (GDP) in 2001 to 5.6 per cent of GDP in 2008. Table 6 shows that the proportion of education expenditure to total government expenditure increased during the 2001-2008 period from 15.5 per cent in 2001 to 20 per cent in 2008. In 2009, despite the economic crisis, the Government maintained education spending at about 20 per cent of the State budget. The Government's commitment to education has brought positive results. The total enrolments at general education have declined in recent years due to demographic changes, but the number of schools and classrooms has increased significantly. From 2000/01 to 2008/09, the number of school enrolments in general education decreased by 14.9 per cent, yet the number of teachers, schools, and classrooms increased by 21.9 per cent, 13.9 per cent, and 27.9 per cent, respectively (figure 3).

**Table 6. Trends in Government expenditure on education**

	2001	2003	2005	2006	2007	2008
GDP (at current prices, billion Viet Nam dong)	481.3	613.4	839.2	973.8	1 269.1	1 453.9
Total State budget (billion Viet Nam Dong)	127.7	181.2	239.5	297.2	367.4	407.1
Budget expenditure for education (billion Viet Nam dong)	19.7	29.0	42.9	54.8	69.8	81.4
<i>Percentage of GDP</i>	4.1	4.7	5.1	5.6	5.5	5.6
<i>Percentage of total State budget</i>	15.5	16.0	17.9	18.4	19.0	20.0

Source: Viet Nam, MOET (2009a).

**Figure 3. Growth of selected education statistics 2000/01-2008/09 (2000/01 = 100)**



Source: Viet Nam, General Statistics Office (various years).

The composition of education spending has also changed in recent years. Table 7 shows that during the period 2001-2008, the budget share of primary education was reduced while the budget share of lower secondary education, vocational and training, and tertiary education was increased. This is understandable given that Viet Nam announced in 2000 that it had universalized primary school education but it may create difficulties in improving the primary school enrolments at remote and mountainous areas, where ethnic minority children live.

In order to analyse the disparities in public education spending, table 8 summarizes per capita public spending for education by region. It shows that during the period 2001 to 2008, public education spending per capita increased by 3.8 times (in nominal terms). Public spending increased the most in poorer regions such as the North-West (5.5 times), the North-East (4.7 times) and the Central Highlands (4.3 times). This change reflects the Government’s target in lowering the disparity in access to education among regions.

**Private expenditure on education**

Although the contribution of the non-State sector in providing education services is fairly small, the role of private financing is significant, especially at higher

**Table 7. Budget shares by education level, 2001-2008 (per cent)**

	2001	2004	2006	2008
Pre-primary	6.9	7.3	7.5	8.5
Primary	32.3	29.4	31.2	28.5
Lower secondary	21.3	21.7	21.6	23.5
Upper secondary	10.9	10.4	10.3	11.2
Vocational and training	8.1	8.4	9.3	13.6
Tertiary	9.1	9.5	8.9	10.8
Others	11.5	13.4	11.2	4.0

Source: Viet Nam, MOET (2009a).

**Table 8. Per capita public spending for education, by region (thousand VND) (per cent)**

	2001	2002	2003	2004	2005	2006	2007	2008
Viet Nam	161	183	234	253	307	383	487	611
Red River Delta	154	172	210	224	265	335	427	513
North-East	193	231	306	348	418	511	691	915
North-West	211	260	328	394	469	607	852	1 155
North Central Coast	175	198	262	277	340	434	506	683
South Central Coast	160	177	230	244	300	386	485	588
Central Highlands	186	212	255	304	375	465	638	796
South-East	145	156	195	205	259	313	385	463
Mekong River Delta	135	152	199	219	266	323	405	496

Source: Author's calculations based on data from General Statistics Office (GSO) of Viet Nam.

levels of education. Table 9 provides an indication of the role of public and private spending on education. We estimated public spending per pupil using MOET data on public spending and GSO data on the number of pupils in 2004 and 2008. Private spending was estimated using the VHLSSs 2004 and 2008. Finally, average public spending per pupil was added with the private spending share to obtain estimated total education spending and to calculate the public and the private shares.

Table 9 shows that private spending was substantial: accounting for 17.5 per cent of total spending at the primary level; 21.7 per cent at the lower secondary level; 35.9 per cent at the upper secondary level; and 52.2 per cent at the tertiary level in 2008. Overall, the State budget financed 64.6 per cent of overall education expenses

in 2004 and 73.0 per cent in 2008 (excluding the pre-primary and technical levels) while the rest was contributed by the private sector. Compared to the year 2004, the share of private financing on total financing decreased thanks to a large increase in public education spending.

**Table 9. Public and private education spending**

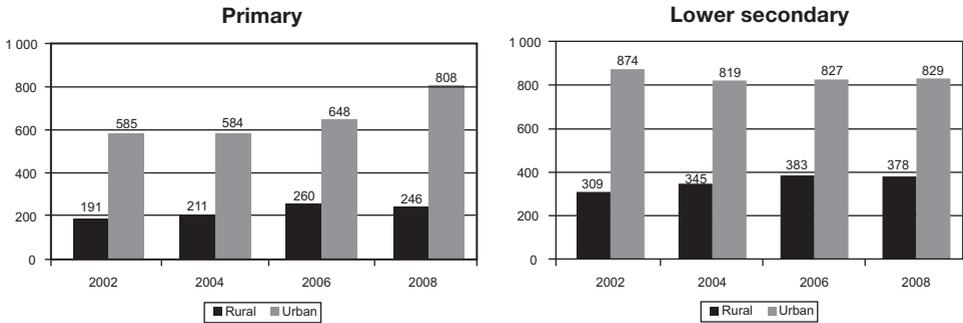
	Public spending (billion Viet Nam dong)	Number of pupils (million)	Public spending share (per cent)	Private spending share (per cent)
<b>Year 2004</b>				
Primary	9.6	7.7	79.4	20.6
Lower secondary	7.1	6.6	65.7	34.3
Upper secondary	3.4	2.8	53.6	46.4
General education	20.1	17.1	67.3	32.7
Tertiary	3.1	1.3	39.0	61.0
<b>Year 2008</b>				
Primary	23.2	6.7	82.5	17.5
Lower secondary	19.1	5.5	78.3	21.7
Upper secondary	9.1	2.9	64.1	35.9
General education	51.5	15.1	75.8	24.2
Tertiary	8.8	1.7	47.8	52.2

Sources: Private spending data were calculated from the VHLSSs 2004 and 2008; public spending data from Viet Nam's MOET (2009a); number of students from Viet Nam's GSO Annual Statistics.

Figure 4 shows that household education expenditure increased from 2002 to 2008, particularly at the primary level in which education expenditure rose in both rural and urban areas but the rate of increase was higher in urban areas (38.1 per cent) than in rural areas (28.8 per cent). At the lower secondary level, household education spending increased among rural households but not in urban households. The figure also indicates that the disparities in education expenditure at basic education, such as the primary and lower-secondary levels, between the rural and the urban areas is notable. Furthermore, these disparities do not seem to have declined during the 2002-2008 period.

Table 10 further decomposes private education costs in 2008 into items as a percentage of total household education costs. It shows that tuition costs and school fees account for about 16.3 per cent, 17.5 per cent, and 23.5 per cent of total education spending at the primary, lower secondary and upper secondary levels,

**Figure 4. Total household expenditure for education  
(thousand Viet Nam dong constant 2002 price)**



Source: Author's estimates based on data from VHLSSs 2002, 2004, 2006 and 2008.

respectively, and about 42.5 per cent at the tertiary level. At the primary and lower secondary levels, textbook and school supplies were the largest item in total education spending, 24.3 per cent and 25.2 per cent, respectively, but at the upper secondary, private tutoring became the largest item, 27.2 per cent. In Viet Nam, private tutoring includes both the after-school extra classes taught by school teachers as a source of supplementary income and the private lessons offered by private tutors.

Table 10 reveals a substantial difference between the composition of costs between the urban and the rural areas. In rural areas, textbook and school supplies were a major spending item, accounting for 37.5 per cent of total education costs at the primary level and 32.3 per cent at the lower secondary level. In contrast, in urban areas, households tended to spend more on private tutoring. It amounts to 22.4 per cent of total education costs at the primary level, 33.2 per cent at the lower secondary level and 36.7 per cent at the upper secondary level.

A comparison between the poorest and the richest quintiles yields useful results: textbook and school supplies were a financial burden to the poorest children. The poor also devoted a larger proportion of their education spending to school contributions and uniforms than the rich. In contrast, the rich spent more on private tutoring and such costs as transportation, food and lodging.

The finding that the best-off households spent as much as one-third of their education spending on private tutoring at the lower and upper secondary levels, while the poorest households spent just 12 per cent on the same item implies that access to higher-quality education is biased against the poor. It also means that access to

**Table 10. Composition of education costs in Viet Nam, 2008 (per cent)**

	Tuition and fees <sup>a</sup>	School contribution	Uniform	Textbook and school supplies	Private tutoring	Other spending <sup>b</sup>
<b>Primary level</b>						
Viet Nam	16.3	16.0	11.3	24.3	20.6	11.5
Rural	2.1	18.3	15.2	37.5	18.4	8.6
Urban	28.1	14.1	8.2	13.4	22.4	13.8
Majority	17.0	15.5	11.2	23.1	21.5	11.7
Minority	1.1	25.1	13.6	47.4	5.0	7.8
Poorest quintile	1.3	22.5	13.9	43.1	12.2	7.0
Richest quintile	32.7	10.7	7.3	11.0	23.7	14.7
<b>Lower secondary level</b>						
Viet Nam	17.5	13.7	11.3	25.2	24.9	7.4
Rural	13.1	15.0	13.1	32.3	17.8	8.7
Urban	22.8	12.1	9.3	16.8	33.2	5.9
Majority	18.1	13.2	11.2	24.2	26.0	7.4
Minority	6.7	22.9	13.2	44.0	5.0	8.3
Poorest quintile	11.2	19.7	12.5	39.6	11.7	5.4
Richest quintile	22.9	11.0	8.7	14.7	34.3	8.4
<b>Upper secondary level</b>						
Viet Nam	23.7	9.9	8.6	18.9	27.3	11.6
Rural	20.8	11.2	9.8	22.9	19.8	15.4
Urban	27.4	8.3	7.2	13.8	36.7	6.7
Majority	24.2	9.7	8.5	18.3	28.1	11.3
Minority	12.6	15.9	11.5	31.7	9.6	18.7
Poorest quintile	22.3	15.6	10.6	30.2	12.3	9.1
Richest quintile	24.9	6.9	6.5	12.6	38.9	10.2
<b>Tertiary level</b>						
Viet Nam	42.5	4.7	0.9	10.7	5.0	36.2
Rural	37.2	4.4	1.0	11.2	3.8	42.4
Urban	48.7	5.0	0.9	10.2	6.3	28.9
Majority	43.0	4.6	0.9	10.7	5.1	35.6
Minority	29.2	6.8	1.0	10.6	1.0	51.3

Table 10. (continued)

	Tuition and fees <sup>a</sup>	School contribution	Uniform	Textbook and school supplies	Private tutoring	Other spending <sup>b</sup>
Poorest quintile	27.5	8.2	3.1	19.4	2.2	39.6
Richest quintile	44.4	4.7	0.9	10.5	6.1	33.4

Source: Author's estimates based on data from VHLSS 2008.

Notes: <sup>a</sup> Primary education is tuition-free at all public schools by law. However, parents may still have to pay certain required school fees.

<sup>b</sup> Including lodging, transportation, food, etc.

tertiary education, which is based on results from entrance exams, will be more limited to the poor. That may explain the huge gap between the rich and the poor households in tertiary education: less than 2 per cent of the people aged between 18 and 22 in the poorest quintile went to a college or a university in 2008 compared to more than 45 per cent of the same group in the richest quintile.

In addition, rich households also spent much more than poor households on tuition and school fees. For example, at the primary level, rich households spent 32.7 per cent of their education expenditure on tuition and school fees while poor households spent just 1.3 per cent. At the lower secondary level, the corresponding proportions were 22.9 per cent for rich households and 11.2 per cent for poor households. This may reflect two things: first, children from well-off households may attend better and more expensive schools than those from poor backgrounds; and second, in some cases, the "tuition and school fees" item might have already included the expenses for extra classes organized by the schools to supplement the teachers' income.

Table 10 also shows that at the tertiary level, other spending was the second largest cost item besides tuition and fees, accounting for 36.3 per cent of total education spending. This is because most universities and colleges in Viet Nam are concentrated in a few large cities and consequently, many students, especially those from rural areas, must spend a large proportion of their education-related expenses on lodging, transportation and food. On average, a tertiary student from rural areas spent 35.6 per cent of his/her education expense on this item while the corresponding percentage of a student from urban areas was 28.9 per cent.

Table 11 summarizes net education cost per student as a percentage of household per capita expenditure. To obtain net education cost, we deducted from

total household education all education benefits, such as grants and scholarships. The table shows that the share of household spending on education increased during the period 2004-2008. In 2004, net education costs per student were 8.1 per cent of household per capita expenditure at the primary level, 13.2 per cent at the secondary level and 44.8 at the tertiary level. In 2008, the corresponding proportions were 9.8 per cent, 13.2 per cent, 22.2 per cent and 51.4 per cent, respectively. The largest increase was at the tertiary level, perhaps contributed by the increase in autonomy at the colleges as well as an increase in the number of newly founded universities and colleges, especially the more expensive private ones. From 2004 to 2008, the number

**Table 11. Net education cost per student  
(as a percentage of per capita expenditure)**

	Primary		Lower secondary		Upper secondary		Tertiary	
	2004	2008	2004	2008	2004	2008	2004	2008
Viet Nam	8.1	9.8	13.2	13.2	21.7	22.2	44.8	51.4
Rural	7.9	8.5	13.1	12.0	22.7	21.4	54.8	57.7
Urban	8.7	14.1	13.6	16.7	18.9	24.4	35.7	43.1
Red River Delta	9.5	12.2	13.7	16.4	21.4	24.0	41.0	44.8
North-East	6.4	8.0	9.8	11.1	16.0	18.7	40.4	51.3
North-West	3.5	2.8	7.7	0.8	15.5	12.7	26.7	33.0
North Central Coast	10.4	12.0	15.5	14.1	26.1	24.0	53.0	59.9
South Central Coast	7.0	8.0	14.3	12.2	23.6	23.4	53.1	51.6
Central Highlands	8.4	7.5	14.7	11.0	23.6	17.2	53.1	49.7
South-East	8.8	14.3	13.9	16.1	22.2	26.0	37.8	50.8
Mekong River Delta	6.6	6.5	12.0	10.7	19.4	19.3	54.3	61.8
Female	8.1	9.8	13.4	13.5	21.2	22.2	43.0	52.7
Male	8.1	9.8	13.0	12.8	22.1	22.3	46.6	50.3
Majority	9.0	11.0	14.1	14.4	22.5	23.4	44.8	51.5
Minority	3.6	4.2	7.1	5.7	12.8	11.3	45.0	49.9
Poorest quintile	7.8	9.0	14.1	12.6	23.1	24.4	63.3	41.4
Lower-middle quintile	8.8	9.1	14.5	13.1	26.2	23.9	63.5	78.5
Middle quintile	8.3	10.5	13.0	12.7	24.0	22.4	72.4	63.5
Upper-middle quintile	7.5	9.4	12.2	13.2	20.6	21.7	49.7	57.0
Richest quintile	7.7	12.4	11.5	14.5	15.6	19.7	36.1	40.0

Source: Author's estimates based on data from VHLSSs 2004 and 2008.

of colleges increased by 71 per cent from 230 to 393, of which the number of private higher institutions increased by 145 per cent from 29 to 71.

As seen in table 11, education spending is clearly a financial burden. Assuming there is a family of four with a husband, a wife, one child at a lower secondary school and the other child at an upper secondary school, the average education expenditure in that household would amount to 35.4 per cent of household expenditure per capita, or 8.9 per cent of total household expenditure in 2008. The financial burden would be even heavier for a student attending higher education as the education expense at that level comprises more than half of household per capita expenditure. Thus, a family of four people with two children attending college would need to spend as much as 25.7 per cent of their household expenditure on children's education.

It is interesting to compare the disparities between population groups. In 2008, urban households spent relatively more on education than rural households, except at the tertiary level. Two reasons behind this are (a) on average, rural households are poorer than urban households and (b) even though there are large differences between urban and rural households in the education expenditure per student at the lower level, the gap at the tertiary level is small. Regarding the latter, at the primary level, education spending of an urban pupil is four times as much as that of a rural pupil. At the lower secondary level and the upper secondary level, the gaps in education spending were 2.6 times and 1.9 times, respectively. However, at the tertiary level, the gap was only 1.1 times.

Geographically speaking, residents from the South-East, the North Central Coast and the Red River Delta regions paid more for education as a percentage of total expenditure per capita than the other regions at all levels of education. On the other hand, the proportion of education expenditure by residents of the North-West region was merely 2.8 per cent of total expenditure per capita at the primary level and 0.8 per cent at the lower secondary level. This result is reasonable because the North-West is the country's poorest region, which receives a lot of assistance from the Government in order to universalize basic education. Similarly, the ethnic minority groups spent much less than the majority group on education spending, except at the tertiary level, in which an ethnic minority student spent a similar proportion of expenditure as an ethnic majority one.

At the basic education (both the primary and the lower secondary) levels, the rich quintiles (quintiles 4 and 5) spent relatively more on education than the poor quintiles (quintiles 1 and 2). However, that changed at the upper secondary and the tertiary levels, in which education spending was more a financial burden to the poor than to the rich. At the tertiary level in 2008, education spending shares were 41.4 per

cent for the poorest quintile and 78.5 per cent for the lower-middle quintile. In contrast, the shares were 57 per cent for the upper-middle quintile and 40 per cent for the richest quintile.

## V. DETERMINANTS OF SCHOOL ENROLMENTS

In this section, we investigate the determinants of school enrolments in 2008, using the VHLSS of 2008. As primary school enrolment is compulsory and nearly all children at the primary school-age attended primary schools, it is not necessary to examine the determinants at this level. Instead, we examine the determinants of school enrolments at the lower secondary level, the upper secondary level and the tertiary level, using a logistic regression model. In the logistic regressions, the dependent variable is school enrolment. The explanatory variables include household size, household composition, father and mother's education, father's age, head of the household's occupation and ethnicity, household per capita expenditure and dummies for geographical regions and urban areas.

Table 12 shows the results from the regressions. The model seems to fit well. It should be noted that there is no direct equivalent of R-squared for logistic regression. However, to evaluate the goodness-of-fit of logistic models, several pseudo R-squareds could be developed. They are called "pseudo" R-squareds in the sense that they are on a similar scale, ranging from 0 to 1 with higher values indicating a better model fit. However, they cannot be interpreted as strictly corresponding to OLS<sup>1</sup> R-squared. In table 12, the pseudo R-squareds (McFadden's  $R^2$  and Count  $R^2$ ) show that the goodness-of-fit is better for the model of tertiary and upper-secondary enrolments than that of lower-secondary enrolments. We also check for multicollinearity in table 12 using variance inflation factor (VIF). A rule-of-thumb for VIF is that if  $VIF > 5$ , multicollinearity could be high. Table 12 shows that multicollinearity is not a problem in the models as the mean VIFs are less than two.

Results from table 12 show that parents' completed education level has a significant positive effect on children's enrolment. At the lower secondary level, the effect is only significant for the father having a lower secondary degree and upper secondary degree. The mother's education has no effect on children's enrolment at the lower secondary level. However, both father and mother's completed education levels have a significant effect on their children school enrolments at the upper secondary level and the tertiary level. The effects of the father's education are higher and stronger than the mother's education, indicating that in a typical Vietnamese family, the father has a larger influence on children's education than the mother.

---

<sup>1</sup> Ordinary least squares.

Table 12. Determinants of school enrolments

	Lower secondary		Upper secondary		Tertiary	
	Coeff.	z	Coeff.	z	Coeff.	z
Urban	0.01	0.08	0.10	0.71	-0.07	-0.60
Minority	-0.15	-0.92	-0.35	-2.12 **	-0.71	-2.95 ***
Female	0.04	0.31	0.35	2.97 ***	-0.09	-0.68
Father's age (log)	-0.50	-1.58	-0.17	-0.52	0.61	1.56
Per capita expenditure (log)	0.76	6.12 ***	0.78	6.78 ***	1.26	10.52 ***
<b>Father's education</b>						
Lower secondary	0.40	2.77 ***	0.74	6.22 ***	0.59	3.86 ***
Upper secondary	0.61	2.51 ***	1.20	5.77 ***	0.96	4.88 ***
Technical education	0.36	1.44	0.83	4.41 ***	0.72	3.83 ***
Tertiary education	0.40	0.83	1.18	2.85 ***	1.37	5.14 ***
<b>Mother's education</b>						
Lower secondary	0.19	1.25	0.22	1.75 *	0.47	3.29 ***
Upper secondary	-0.14	-0.56	0.98	4.33 ***	0.68	3.33 ***
Technical education	-0.39	-1.18	0.51	1.99 **	0.80	3.89 ***
Tertiary education	-0.08	-0.15	0.79	1.82 *	0.79	2.81 ***
Female head	0.18	0.86	0.06	0.32	0.19	1.19
Household size (log)	-0.54	-2.60 ***	-0.51	-2.43 **	0.06	0.26
Proportion of elderly	0.53	0.88	1.97	3.31 ***	0.04	0.08
Proportion of children	-1.23	-3.25 ***	-0.26	-0.70	-1.51	-3.07 ***
Proportion of females	0.16	0.43	0.67	1.81 *	1.68	4.27 ***
<b>Head occupation</b>						
Skilled labourer	0.34	2.06 **	0.04	0.29	0.04	0.26
Agriculture	0.10	0.71	0.01	0.07	-0.26	-1.83 *
North-East	0.28	1.25	-0.20	-1.07	-0.25	-1.39
North-West	-0.21	-0.81	-0.25	-0.97	-1.05	-2.55 **
North Central Coast	0.14	0.68	0.06	0.32	0.17	0.99
South Central Coast	-0.02	-0.11	0.17	0.88	0.38	2.03 **
Central Highlands	-0.06	-0.27	-0.04	-0.18	0.22	1.05
South-East	-0.37	-1.77 *	-0.22	-1.18	-0.34	-1.89 *
Mekong River Delta	-0.64	-3.30 ***	-0.24	-1.37	-0.48	-2.54 **
Constant	-2.18	-1.30	-6.17	-3.68 ***	-16.29	-8.61 ***
Number of observations	2 721		2 430		3 380	
LR chi2 (27)	272.5		569.5		871.4	

Table 12. (continued)

	Lower secondary		Upper secondary		Tertiary	
	Coeff.	z	Coeff.	z	Coeff.	z
Prob > chi2	0		0		0	
Log likelihood	-1 279		-1 395		-1 282	
McFadden's R <sup>2</sup>	0.096		0.17		0.254	
Count R <sup>2</sup>	0.798		0.705		0.822	
Mean VIF	1.62		1.35		1.65	
School age	11-14		15-17		18-22	

Source: Author's estimates based on data from VHLSS 2008.

Notes: Default value for dummies: Red River Delta for regional variables; low skilled non-farm labourer for head occupation; primary or less than primary education level for education variables.

\*, \*\*, \*\*\*: significant at 90%, 95% and 99% confidence of interval respectively.

Household size has a negative effect on school enrolments, except at the tertiary level. Thus, smaller-sized households tend to send their children to schools more than large households. An explanation behind this is that in a large-sized household, education spending per child is often smaller than in a small-sized household as the household must spread out their resources to more household members. That explanation also explains the negative coefficient of the proportion of children.

Household well-being, indicated by per capita expenditure, is strongly correlated with school enrolments at all levels of education. Yet, the effect is higher at the tertiary level than at the upper secondary level, and higher at the upper secondary level than at the lower secondary level. This indicates that financial resources are a constraint to poor children to attend school, in particular at the upper secondary level and at the tertiary level.

Ethnically speaking, while ethnicity does not significantly explain the difference in enrolments at the lower secondary level, there is a large gap between the ethnic minority groups and the majority group at the upper secondary level and the tertiary level. Some of the reasons behind this may be the following. Firstly, there might be a problem of education quality. If the quality of education provided to ethnic minority children is low, the ethnic minority children may have difficulties in competing with the children from the ethnic majority groups in the entrance examinations to the upper secondary and the tertiary levels. Secondly, ethnic minority students may have more difficulty with the popular Viet language, which inhabits their education performance. Thirdly, there may be existing prejudice against the ethnic minority

students at schools and in the society, which creates further difficulties for them to overcome.

It is interesting to note that the “urban” variable has no explanatory power. In other words, other things being equal, an urban child is not more likely to enrol at the lower secondary, the upper secondary, or the tertiary level than a rural child. Among eight administrative regions, the Mekong River Delta and the South-East have significantly lower enrolments than the Red River Delta at both the lower secondary level and the tertiary level. There are a number of possible explanations for that. Culturally, the Red River Delta has a long tradition of learning which emphasizes the values of education and learning. Thus, households in the Red River Delta may be more willing to pay for children’s education than those in the Mekong River Delta and the South-East. In addition, this region may also receive more resources for education than the Mekong River Delta and the South-East regions. Table 8 indicates that per capita public spending in the Red River Delta region is higher than in both the Mekong River Delta and the South-East regions.

## **VI. CONCLUSION**

During the last decade, Viet Nam achieved remarkable success in improving enrolments in education at all levels, particularly at the higher education levels. That improvement occurred at all expenditure groups, ethnicity, gender and regions. Yet, there are still substantial disparities in access to education. While gender equality in education access has basically been achieved, the gaps in education access between rural and urban areas, ethnic minorities and ethnic majority, and poor and rich households are still large. Therefore, more efforts must be placed on improving access to education, especially at the higher education levels, for the disadvantaged groups.

The Government of Viet Nam has focused heavily on improving the education sector. Budget spending for education currently accounts for 20 per cent of total budget spending, implying the high priority given to education. In 2008, education spending was about 5.6 per cent of GDP, which is higher than in most developing countries. For example, in 2006, world average education spending was 4.3 per cent of GDP and the average education spending in East Asia and the Pacific was only 2.8 per cent of GDP (UNESCO Institute of Statistics, 2007).

In recent years, as a result of demographic changes, there has been a decreasing trend in enrolment at the primary and lower secondary levels but an increasing trend in enrolment at the tertiary and technical degree levels. The changes in enrolment require a change in the allocation of public education financing. Public

education spending has been changing at slow pace. Consequently, there has been a shift in the allocation of finance per pupil in the system. In 1998, public spending per upper-secondary student was 1.5 times that of a primary student and public spending per tertiary student was 6 times that of a primary student (Nguyen, 2004). In 2008, public spending per upper-secondary student was 98 per cent that of a primary student and public spending per tertiary student was 1.5 times that of a primary student. While it shows that the Government pays much attention to primary students, this trend may lead to under-financing at the upper-secondary and the tertiary levels. As a result, poorer students may have little accessibility in pursuing the higher education level. A more nuanced policy in allocating public spending would be needed to ensure that the upper levels of education receive enough funds from the Government.

In the meantime, the private sector provided education to 15 per cent of enrolled students and contributed 27 per cent of total education finance in 2008. The role of the private sector in providing education is quite small, suggesting the socialization policy is not very effective in encouraging the private sector to provide education services. In recent years, the shares of the private sector in the lower secondary and the upper secondary levels are even smaller in 2008 than in 1998. Therefore, a policy towards expanding the private lower and upper-secondary schools could be helpful in creating a more diversified and competitive environment for students as well as to share the financial burden of the Government with the private sector. Furthermore, existing studies, such as Vu and others (2011), Dang (2010) and World Bank (2011), indicated a widening gap in terms of both access and quality for ethnic minority children and those living in remote areas. Therefore, there should be more attempts by the Government in increasing the learning conditions of schools and improving school quality, especially in remote and mountainous areas.

---

## REFERENCES

- Dang, Hai-Anh (2010). Vietnam: a widening poverty gap for ethnic minorities. In *Indigenous Peoples, Poverty and Development*. Washington, D.C.: World Bank.
- Holsinger, D. (2009). The distribution of education in Vietnam: why does equality matter? In *The Political Economy of Educational Reform and Capacity Development in Southeast Asia*, Y. Hirotsato and Y. Kitamura, eds. Dordrecht: Springer.
- Nguyen, Nguyet Nga (2004). Trends in the education sector. In *Economic Growth, Poverty, and Household Welfare in Vietnam*, Paul Glewee, Nisha Agrawal and David Dollar, eds. Washington, D.C.: World Bank.
- Rew, J. (2009). Provincial, ethnic, and gender disparities in education: a descriptive study of Vietnam. In *Inequality in Education: Comparative and International Perspectives*, D.B. Holsinger and W.J. Jacob, eds. Dordrecht, Netherlands: Springer.
- UNESCO Institute for Statistics (2007). Laying the foundations for EFA: investment in primary education. Available from [www.uis.unesco.org/template/pdf/EducGeneral/Factsheet07\\_No6\\_EN.pdf](http://www.uis.unesco.org/template/pdf/EducGeneral/Factsheet07_No6_EN.pdf). Accessed 21 June 2010.
- Viet Nam, General Statistics Office (GSO) (various years). *Annual Statistics*.
- Viet Nam, Ministry of Education and Training (MOET) (2009a). *Plan for Reforming Education Financing Mechanism from 2009 to 2014* (in Vietnamese).
- \_\_\_\_\_ (2009b). *Vietnam education strategy 2009-2020. 14<sup>th</sup> Draft* (in Vietnamese).
- Vu, Hoang Linh, and others (2011). Multi-dimensional child poverty among ethnic minorities in Vietnam. Report for UNICEF and Committee for Ethnic Minorities.
- World Bank (2011). Vietnam: high quality education for All 2020. Report vols. 1, 2 and 3.