# Chapter 11
# The Distribution of Education in Vietnam: Why Does Equality Matter?[1]

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## 11.1 Introduction

After seemingly interminable decades lost to war and later isolation and economic mismanagement, the closing decade of the twentieth century was, in development terms, perhaps the greatest in Vietnam's history. Vietnam enjoyed an average rate of economic growth of 7.6% over the decade, placing it among the fastest growing countries in the world, alongside its neighbor China. Less remarked upon is the burst of poverty reduction Vietnam experienced over this period, one that would, if sustained a further 10 or 15 years, move it from the ranks of the poorest populations in the world to one with negligible levels of absolute poverty. In part because of these numbers, and the textbook fashion in which the Vietnamese economy responded to market-oriented reforms, the World Bank has described Vietnam as a case study of the promise of economic integration or "globalization" for poor countries.[2]

Today, however, a growing number of observers at the multilateral and regional development banks are worried about another phenomenon – one too common in the era of unbridled capitalism and globalization – income inequality. Before turning to the question of education equality in Vietnam and its effects over this same period, I will take a few minutes to analyze recent evidence from Vietnam on the distribution of wealth, that is, per capita income. Inequality of wealth appears to be growing in Vietnam and this may have far-reaching repercussions for self-reliance in that nation.

The increasing geographical concentration of poverty is striking, with the Northern Uplands, Mekong Delta, and North Central Coast regions holding over 67% of Vietnam's poor in 1998, from 55% in 1993.[3] While in the aggregate, Vietnamese income/expenditure inequality is still moderate by international standards,

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[2] See World Bank (2001).

[3] See World Bank (1999).

Y. Hirosato and Y. Kitamura (eds.), *The Political Economy of Educational Reforms and Capacity Development in Southeast Asia*,

a focal point of contention is the pace at which income inequality has been growing. Two recent estimates done from the Vietnam Living Standard Survey (VLSS) for 1993–1998[4] and another appearing in the UNDP-sponsored Country Human Development Report reach significantly different conclusions. The VLSS data showed Vietnam's income Gini coefficient to have increased only marginally, while the UNDP-backed study reports a large increase, from 35.6 to 40.7. It is this latter estimate that is striking. If true, it suggests Vietnamese inequality is growing at one of the fastest rates recorded in the world in recent years, and has reached the same level as China much faster, and at a much lower income level.[5]

## 11.2 Poverty in Vietnam

Poverty in Vietnam is arguably the most momentous socioeconomic issue facing that country over the medium term, for a number of reasons. First, however defined, the sheer number of people living in poverty is still high in Vietnam. Approximately one third of the population, or some 25 million people, fall below the international poverty line. Thus, how Vietnam deals with the question of poverty and inequality will define the type of society it will become. Will it be able to emulate the long-term relative success of the East Asian "tigers" in generating broadly based affluence and reducing poverty? Or will Vietnam ultimately resemble countries like the Philippines or Sri Lanka, which, despite better-than-average social indicators in some areas, have lost the momentum of growth and poverty reduction. A worst-case scenario in which Vietnam drifts toward some unstable combination of accelerating inequality, low economic growth, and institutional dysfunction should not be ignored.

## 11.3 Income Inequality, Poverty, and Economic Growth

Although there is disagreement among macroeconomists about the relationship between inequality and poverty reduction, a few general conclusions appear to be accepted by almost all publications in major peer-reviewed journals and books:

- *There is a necessary relationship between growth and poverty reduction*. Even critics of development theory acknowledge the role of economic growth in sustainable poverty reduction.
- *"High-quality" growth is necessary to maximize poverty reduction*. Economic growth, demystified, is merely the average income per person this year compared to last year. But average income masks the distributional characteristics. If growth is

[4] The Vietnam Living Standards Survey (VLSS) is a publication of the Government Statistics Office.

[5] For details and data presentation, see National Center for Social Sciences and Humanities (2001).

achieved only in certain sectors of the economy or in certain regions of the geography (e.g., urban wage sector) many people are left out of the benefits of growth.

- *No necessary relationship between growth and inequality*. Studies of this relationship have found inequality to slightly rise with greater rates of economic growth in some countries, whereas in others, inequality fell. But even if growth could always be achieved through policies resulting in inequality, there is certainly a political and moral question of whether it is good to achieve growth that way. Brazil and Mexico, for example, have made good progress toward growth but still have very high levels of inequality of income and, of course, many very poor citizens.

The much-studied case of China reveals the complex interplay of the three variables: growth, inequality, and poverty reduction. The same variables also play an important role in interpreting the Vietnamese experience. As in China, the Vietnamese poor have benefited greatly from growth over the past 20 years, with poverty estimated to have fallen by over 50% between 1981 and 1995, regardless of the poverty line used. But also like China, Vietnam has experienced a high degree of inequality generation. Unlike China, Vietnam began its reforms in macroeconomic crisis; it also began its most far-reaching reforms nearly a decade later than China. The scope of Vietnam's *Đổi Mói* reforms stretching over the past 15 years is striking. Vietnam's economy has grown and very quickly whereas many, if not most, other former command-and-control economies have stagnated. Of transition economies from Albania to Uzbekistan, 28 had negative growth rates since 1992. But China and Vietnam were the "stars," with sustained growth rates over 7% through much of the 1990s.

What were the conditions from which Vietnam began this economic ascent? Following reunification of the country in 1975, the north pressed ahead with its model of a top-heavy, centralized economy, which had been consolidated in the north for some decades. An attempt was made to collectivize agriculture in the south where it was fiercely resisted and generally unsuccessful. Private trading of any kind was banned, as the service sector was viewed as nonproductive. The results of this experiment were dire. Per capita growth was negative throughout the late 1970s, including in the state-owned heavy industrial sector, which was intended to be the leading engine of growth. By 1979 calls for reform were heard. Miraculously, by the 1990's Vietnam was set for several decades of strong economic growth.

## 11.4 Education, Growth, and Development in Vietnam

But the typical recounting of the relationship between income inequality and economic growth, which I have just reviewed, albeit briefly, largely ignores Vietnam's unusual investment in education and the equality with which investments were made across all provinces of the country.

Vietnam does not closely resemble any of its Asian neighbors when comparing its relative wealth to its education and other human development indicators. The World

Bank places Vietnam 157 out of 207 countries in terms of GNP per individual. But when examining the position of Vietnam simultaneously on wealth and human development (see Fig. 11.1 below), it is somewhat puzzling to see that while it is close to the bottom of the distribution in terms of wealth per capita, it is located in the top third position in relation to the HDI[6] index – just a little below the average for *medium*-income countries.

Typically macroeconomists have concluded that Vietnam's rapid growth in the post-*Đổi Mói* years generated rapid reductions in poverty; the period between 1993 and 1998 saw a 20.8% decline in the head-count index of poverty. Vietnam's poverty reduction experience over the 1990s was among the fastest ever recorded. All provinces and most subpopulations (such as ethnic minorities) have seen absolute incomes rise and well-being increase. These same economists will also draw attention to the fact that key social indicators such as life expectancy, infant mortality, and literacy have almost uniformly improved during the transition.

What is often not mentioned is that most of the uniqueness of Vietnam's relatively good social indicators, given its income level, was evident prior to the *Đổi Mói* reforms, not as a direct result of them. Overall, education coverage as well as other social service delivery networks were well entrenched at the time of the transition. Not only did education and other social services not decline during the economic transition from central planning to markets, but rather have stabilized and marginally improved,

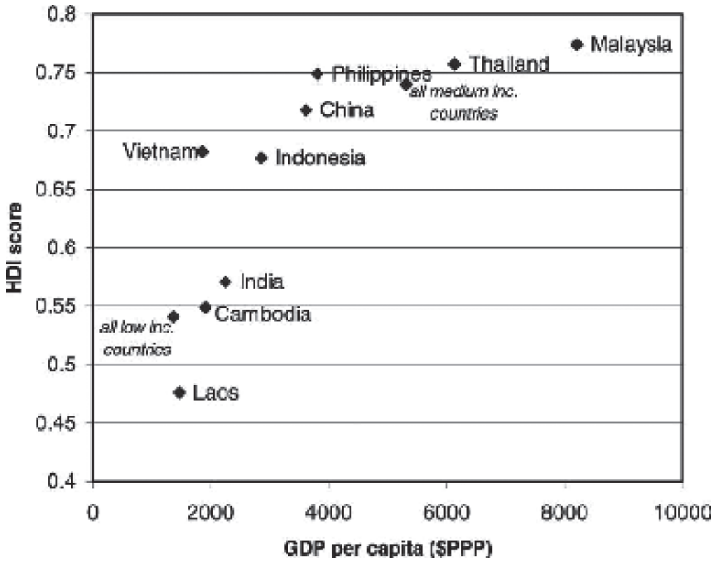


**Fig. 11.1** HDI score and GDP per capita ($PPP) (UNDP (2001)[19]

[6] The Human Development Index or HDI is a composite indicator that is heavily weighted toward literacy and education attainment. It is useful for broad, cross-country comparisons even though it yields little specific information about each country. The HDI was first used in the United Nations Development Program's 1990 Human Development Report.

particularly since the mid-1990s. Given appalling declines in income distribution and social services seen in some transition contexts (e.g., Russia), that is no small achievement. But what I want to emphasize here is that the human capital context, especially the relatively equal distribution of education, was already in place and, in my mind, contributed to the economic growth picture. There are, of course, education disparities, particularly in relation to ethnic minorities. Low HDI provinces are also those with large shares of ethnic minorities. Such disparities in human capital also reinforce economic inequalities.

## 11.5 The Distribution of Education Attainment and Development

Development, when measured exclusively in terms of economic growth, has not been advanced by investments in schooling to the degree anticipated. Following a period in which the accumulation of physical capital was regarded as the only productive asset, developing countries, eager to improve their growth prospects, invested increasing percentages of government expenditures in schooling with expectations of amassing an educated and productive labor force earning higher wages and stimulating economic growth. But it has not turned out this way for many countries.[7] It is now clear that education at all levels contributes to economic growth but cannot alone generate it. There is also considerable evidence that the mere accumulation of seat time in school does not mean that human capital is increased.

But there has emerged a third challenge to the assumed economic benefits of investments in education. This is not so much a challenge as a warning that when education is unequally distributed in a society, economic growth almost never occurs and human talent is wasted – that is, a poor country's most valuable asset remains unproductive.

## 11.6 Education Inequality in Vietnam

Education inequality is and has been low in Vietnam for several decades. A probable outcome of its socialist tendencies, Vietnam has paid close attention to the needs of its female, ethnic minority, and rural populations, the usual culprits when accounting for high levels of inequality in the distribution of education attainment. Not only has Vietnam steadily increased overall amounts and budget share to education at the primary and secondary levels but it has perhaps the highest level of equality in the distribution of education attainment in the developing world. Like other socialist-oriented societies, Vietnam has attempted to provide an equal distribution of education

[7] See Pritchett (1996) for a penetrating analysis of what has gone wrong with education investments leading to the conclusion that significant portion of those investments have fallen into the hands of the wealthiest segments of society.

**Table 11.1** Secondary Enrollment changes between 1994 and 2007 (MOET data)

| Year | Lower secondary | Upper secondary |
|---|---|---|
| 1994/95 | 3,679,100 | 727,400 |
| 2000/01 | 5,918,000 | 2,194,900 |
| 2003/04 | 6,569,800 | 2,589,600 |
| 2004/05 | 6,616,700 | 2,761,100 |
| 2005/06 | 6,371,300 | 2,975,300 |
| 2006/07 | 6,152,000 | 3,075,200 |
| 2007/08 | 6,803,300 | 3,021,600 |
| Growth | 3,124,200 | 2,294,200 |
| Percent change | 217.7 | 415.4 |

attainment and succeeded to a remarkable degree. Nonetheless, substantial variation exists within the country.

The 1990s saw a push toward universal coverage at the primary level. That this has been achieved attests to the tenacity of government and the common thirst for education. It also reflects the unwavering support of the World Bank for primary-level schooling principally on the basis that primary schooling is a public good with high private and social rates of return.

The figures for enrollment change for the period 1994–2007 are presented in Table 11.1. I use 1994 as the base comparison because of the World Bank's foundational study on education finance of that year.

As in other developing countries, lower secondary education in Vietnam increasingly has become aligned with primary schooling in a continuous cycle of compulsory or basic schooling. In part owing to its alignment with primary schooling, enrollments at the lower secondary level have risen remarkably. With a 218% increase since 1994, I can conclude with some finality that Vietnam is on its way toward achieving universal basic education that includes lower secondary in that definition.

But it is at the upper secondary level where the most surprising change occurred. Dramatic would certainly not be an overstated description of a 415% increase in enrollments in 13 years. Indeed this may be the most spectacular increase in secondary enrollments in modern history. Whereas upper secondary school coverage is lagging behind progress at this level elsewhere (except in sub-Saharan Africa), the lower secondary expansion has been impressive. In the next decade enrollment increases at this level should bring Vietnam to parity with other countries of East and Southeast Asia. Clearly Vietnam is doing well in terms of student enrollments at all levels. When considering its GDP rank (101 of 161) among all nations according to UNDP statistics, the enrollment performance of Vietnam is nothing short of phenomenal.

## 11.7 Enrollment Trends in Poor and Rich Provinces

In a system so thoroughly dominated by the state sector it is legitimate to ask whether or not government spending is equitable or even pro-poor. Were a larger share of schools owned or operated by the private sector, as is increasingly the

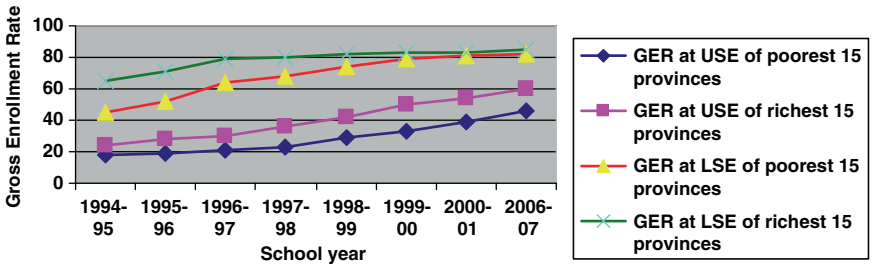


**Fig. 11.2** Enrollment trends between rich and poor provinces, 1994–2006 (MOET data)

case in many developing countries, we might expect to see wealthier provinces pull substantially ahead in their ability to enroll students. But this is not the case in Vietnam except at the upper secondary (US) level and the growing spread between rich and poor provinces is very slight indeed.

For our look at enrollment trends by income levels, I divided the 61 provinces into four groups of approximately similar levels of GDP per capita. I then plotted gross enrollment rates (GER) for each quartile at each year between 1994 and 2006. The results, presented in Fig. 11.2, show a rather unanticipated convergence of lower secondary (LS) enrollment rates between the poorest quartile and the richest quartile. Indeed, at the present time there is almost no difference between the rich and poor provinces – a noteworthy accomplishment.

## 11.8 Distribution of Education Attainment as a Policy Tool

Despite widely and justifiably acknowledged success of Vietnam, the quantitative expansion of education has obscured the question of the equal distribution of education attainment among and within the 61 provinces. Considerable variation exists among the 61 provinces in terms of geography, economic performance, average wealth, the socioeconomic status of individuals, and the proportion and concentration of ethnic and religious minorities. The education attainment for ethnic minorities is substantially lower than that of the ethnic majority. Additionally, the difference in education attainment between these groups is due to "the fact that the minorities live in less productive areas, with difficult terrain, poor infrastructure, and lower accessibility to the market economy" (Belanger and Liu 2004).

Knowledge of the actual distribution of education attainment is important for several reasons. First, the equitable distribution of education attainment is itself an important education policy objective for the government of Vietnam. Second, despite the laudable effort to extend full access equitably to all children, there is still a long way to go; the absence of reliable information on the distribution

of education in Vietnam is therefore significant. Third, the recent effort to move toward a "market-oriented socialist economy" has made the distribution of education attainment and the quality of education in the labor force an item of paramount importance.[8] Fourth, with the increase in both the privatization and deregulation of the economic system, the national government has begun to shift the locus of education decision-making authority to the provincial and district levels of government. Provincial governments have inherited the principal burden from the education decentralization movement with both increased responsibility and influence. Provinces are held accountable for policies and programs that target minorities and other underserved populations in their respective districts and communes.

Initial findings from Table 11.2 indicate several important descriptive features. First, the education Gini coefficient of Vietnam is 0.23. This coefficient represents the distribution of education attainment in the labor force. A Gini coefficient of 0.23 is considered relatively equal. Regional countries with similar Gini coefficients as Vietnam are the Republic of Korea with 0.22, Japan with 0.25, and New Zealand with 0.25. Second, turning to the provincial-level analysis, the province of Vietnam with the most unequal distribution of education attainment is Ha Giang with a Gini coefficient of 0.31. This coefficient is still considered reasonably equal. Regional countries with similar Gini coefficients equivalent to that of Ha Giang province are Hong Kong with 0.32 and the Philippines with 0.33.[9] Third, the province with the most equal distribution of education attainment is Thai Binh with a Gini coefficient of 0.16. This coefficient is considered exceptionally equal. No regional countries have a Gini coefficient as low as Thai Binh province. However, countries outside the region with similar Gini coefficients as Thai Binh province are Canada with 0.16, USA with 0.14, and Poland with 0.14.

While the analysis is at this juncture largely descriptive, two important trends are visible with respect to the level or unit of analysis in research on education inequality. The first trend is that higher or aggregated levels of analysis obscure the inequality of education attainment that becomes visible at lower or disaggregated levels of analysis. This is evident through analysis of the increasing range of Gini coefficients at disaggregated levels. In addition, the differences between the national level and the communal level mean and maximum Gini coefficients are 0.11 and 0.21. Figure 11.3 shows the increase in education attainment inequality with the Lorenz curves for Vietnam, Ha Giang province, Dong Van district, and Ho Quang Phin. The difference between Vietnam and Ho Quang Phin commune in terms of education attainment is 17%; Ho Quang Phin commune is substantially more unequal than Vietnam as a whole.

[8] The economic performance of market economies is highly influenced by the distribution of education in the labor force.

[9] Education Ginis for this section are from Thomas, Yan, and Fan (2001).

**Table 11.2** Provincial education attainment data for the Vietnamese labor force (Vietnam Housing and Population Census 1999; data represent individuals with 15 or more years of age for the year 1999)

| Province name | Total labor force population | Mean years Schooling | Gini Coefficient |
|---|---|---|---|
| An Giang | 1,184,075 | 5.47 | 0.30 |
| Ba Ria-Vung Tau | 477,403 | 7.30 | 0.25 |
| Bac Giang | 907,988 | 7.53 | 0.19 |
| Bac Kan | 149,332 | 7.21 | 0.22 |
| Bac Lieu | 434,456 | 5.78 | 0.29 |
| Bac Ninh | 579,361 | 7.83 | 0.18 |
| Ben Tre | 837,219 | 6.16 | 0.28 |
| Binh Dinh | 888,146 | 6.91 | 0.24 |
| Binh Duonbg | 470,795 | 7.06 | 0.26 |
| Binh Phuoc | 355,528 | 6.71 | 0.25 |
| Binh Thuan | 570,021 | 6.24 | 0.28 |
| Ca Mau | 667,736 | 5.75 | 0.27 |
| Can Tho | 1,110,058 | 6.12 | 0.28 |
| Cao Bang | 233,002 | 7.45 | 0.25 |
| Da Nang City | 413,629 | 8.35 | 0.22 |
| Dak lak | 900,124 | 7.30 | 0.23 |
| Dong Nai | 1,203,838 | 7.29 | 0.25 |
| Dong Thap | 922,323 | 5.89 | 0.29 |
| Gia Lai | 414,424 | 7.07 | 0.25 |
| Ha Giang | 218,608 | 6.00 | 0.31 |
| Ha Nam | 509,006 | 7.91 | 0.17 |
| Ha Noi City | 1,599,722 | 9.32 | 0.17 |
| Ha Tay | 1,487,666 | 8.06 | 0.19 |
| Ha Tinh | 756,530 | 8.06 | 0.17 |
| Hai Duong | 1,069,035 | 8.21 | 0.16 |
| Hai Phong City | 1,079,079 | 8.55 | 0.17 |
| Ho Chi Minh City | 3,323,950 | 8.03 | 0.23 |
| Hoa Binh | 458,055 | 7.45 | 0.23 |
| Hung Yen | 681,682 | 8.20 | 0.17 |
| Khanh Hoa | 611,511 | 7.25 | 0.25 |
| Kien Giang | 838,986 | 5.69 | 0.29 |
| Kon Tum | 434,456 | 5.78 | 0.28 |
| Lai Chau | 175,147 | 6.40 | 0.28 |
| Lam Dong | 545,851 | 7.61 | 0.23 |
| Lang Son | 402,184 | 7.02 | 0.24 |
| Lao Cai | 225,898 | 6.86 | 0.27 |
| Long An | 827,563 | 6.30 | 0.27 |
| Nam Dinh | 1,210,485 | 8.03 | 0.17 |
| Nghe An | 1,649,848 | 8.04 | 0.19 |
| Ninh Binh | 550,377 | 8.10 | 0.18 |
| Ninh Thuan | 246,730 | 6.46 | 0.28 |
| Phu Tho | 793,641 | 8.12 | 0.19 |
| Phu Yen | 452,078 | 6.74 | 0.26 |
| Quang Binh | 454,417 | 7.91 | 0.19 |
| Quang Nam | 824,945 | 7.00 | 0.25 |
| Quang Ngai | 683,595 | 7.03 | 0.25 |

(continued)

**Table 11.2** (continued)

| Province name | Total labor force population | Mean years Schooling | Gini Coefficient |
|---|---|---|---|
| Quang Ninh | 617,814 | 8.34 | 0.20 |
| Quang Tri | 309,684 | 7.56 | 0.22 |
| Soc Trang | 672,885 | 5.57 | 0.28 |
| Son La | 360,201 | 6.36 | 0.27 |
| Tay Ninh | 470,831 | 6.15 | 0.29 |
| Thai Binh | 1,261,271 | 8.16 | 0.16 |
| Thai Nyugen | 654,806 | 8.11 | 0.19 |
| Thanh Hoa | 2,060,376 | 7.88 | 0.19 |
| Thua Thien-Hue | 550,531 | 6.84 | 0.27 |
| Tien Giang | 1,024,638 | 6.41 | 0.27 |
| Tra Vinh | 544,618 | 5.77 | 0.29 |
| Tuyen Quang | 381,674 | 7.29 | 0.22 |
| Vinh Long | 650,138 | 6.41 | 0.28 |
| Vinh Phuc | 674,300 | 7.90 | 0.19 |
| Yen Bai | 354,436 | 7.44 | 0.23 |
| Mean | | | 0.23 |
| Standard Deviation | | | 0.04 |
| Range | | | 0.15 |
| Vietnam | 45,194,762 | 7.34 | 0.24 |

## 11.9 Education Inequality in the Quest for Growth

Poor countries have invested massively in education with the expectation of a population with higher mean education attainment levels, higher earnings, and stimulated economic growth. Yet in several instances economic growth has not materialized at the envisaged rate probably because education attainment was not distributed equitably within the population. As a result, some developing countries, having followed the conventional human capital policy advice, were left with a skewed distribution of education attainment and slow economic growth. According to Thomas,[10] a skewed distribution of education attainment has a deleterious effect on economic growth.

A common finding among those countries experiencing slow economic growth due to an unequal distribution of education attainment is that an elite minority has captured a majority share of public expenditures for schooling. As a result, this population, usually consisting of high-income, urban, or dominant tribal or religious groups, has benefited more than others. In addition, poor countries with slow economic growth have often invested disproportionately in tertiary education. Higher education investments typically display lower economic returns than result

[10] Vinod Thomas was Director of the World Bank Institute, when his book, *The Quality of Growth*, was published in 2000. This book, particularly Chapter 4 on education, was a rich source of inspiration for this author's work.

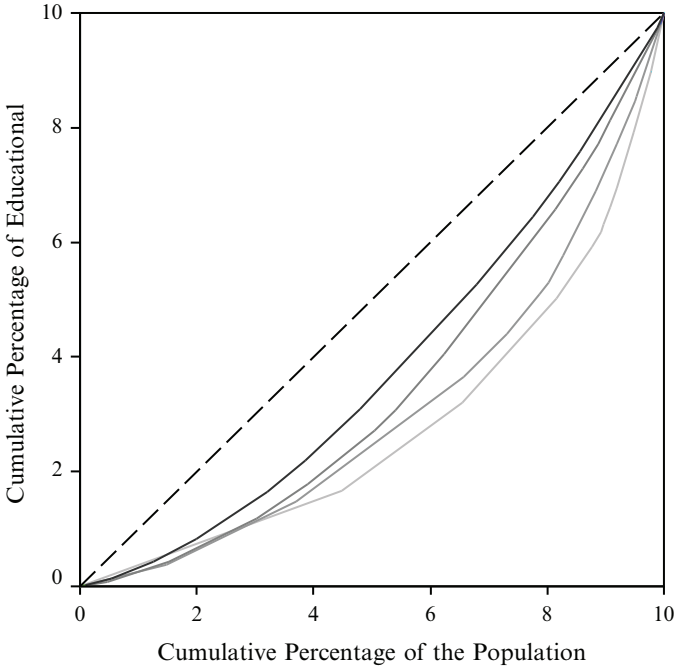


**Fig. 11.3** Lorenz curves and Gini coefficients for Vietnam, Ha Giang Province, Dong Van District, and Ho Quang Phin Commune (Vietnam Housing and Population Census 1999; data represents individuals with 15 or more years of *age* for the year 1999) Vietnam (0.24); Ha Giang Province (0.31); Dong Van District (0.39); and Ho Quang Phin Commune (0.44)

from investments at the primary and secondary levels. A pattern of public spending, which provides large amounts of support to a narrow group of beneficiaries rather than broad equality of opportunity at a basic level, does not constitute a prudent use of scarce public resources.

Typically, when a minority proportion of the population has the majority share of education attainment, this same minority proportion of the population also has the majority share of income. Inequities in education attainment and income inequality are positively correlated. The inequality of education attainment reinforces income disparities. Similarly, the way in which education is distributed will have a profound impact on the distribution of income and the nature of growth. Education attainment inequality generates income inequality, and income inequality impedes economic growth. Equalizing the distribution of education attainment and income produces a larger and more diversified population participating in the economy with access to a larger share of the total wealth of the country. Mass participation in education is requisite for economic growth, at least of the sustainable variety. In my view, economic development of the self-reliant sort occurs via equitable investment in education, and educational expansion coverage should include an equal distribution of education attainment in order to contribute to economic development.

## 11.10 Inequality and Human Capital Formation in Vietnam

A persistent but heretofore unanswered question in the study of education inequality pertains to its relationship with student learning. What impact, if any, do costly efforts to achieve an equal distribution of primary school completion rates have on student learning as measured by standardized achievement tests? This is a question that, up to now, has not been satisfactorily answered due primarily to data limitations. Achievement data, of course, are commonplace in this era of preoccupation with human capital formation through schooling. But similar measures of education attainment equality (or, conversely, inequality) do not exist for most countries; at least not at the subnational level.[11]

This investigation drew on standardized achievement test data from Vietnam disaggregated by provinces. It is a correlational analysis and therefore some caution must be observed in drawing causal relationships. The education Gini coefficients are based on work done under the author's guidance by several graduate students at Brigham Young University. The national test scores based on a national sample of Vietnamese primary school students has not been available until recently. But rarely if ever do such tests purport to be representative of the entire school-age population. In many country cases only a small fraction of schoolchildren attend school thus casting considerable doubt on the meaning of a comparison between a measure of the distribution of education attainment based on an entire age group and a test score based on a subset of a national age cohort.

Vietnam represents an exceptional opportunity to examine the relationship between inequality of education attainment and overall student achievement. This opportunity is the result of the publication of the World Bank supported Reading and Mathematics Assessment Study (December 2004) that reports fifth grade achievement test scores for robust representative samples of Vietnamese schools.[12] The resulting data permit generalization at the provincial level. At about the same time I published education Gini coefficients for Vietnam covering all 61 provinces, thus setting the stage for a rare look at the interrelationship between inequality of the distribution of education attainment and student learning achievement. We are now able to provide preliminary estimates of the possible effect size and direction of influence between these two variables.

The correlation matrix below (Table 11.3) presents correlations between several variables of interest. We pay particular attention here to the Combined Reading and Math score that shows a moderate to strong and significant relationship to the education Gini of $r = -0.54$. There is little room for doubt that the more equal the distribution

[11] Inequality in education attainment means variation among members of a population in the number of years of formal schooling completed. While such estimates, called education Gini coefficients, exist at the national level (for whole countries) they do not exist at the level of individual provinces. Vietnam is an exception.

[12] See World Bank (2004).

of education attainment in a Vietnamese province the higher are the average fifth grade test scores on this carefully constructed examination of math and reading. The Education Gini coefficient is slightly higher than is the Human Development Index relationship to test score performance ($r = 0.40$).

This same relationship can be visualized graphically in Fig. 11.4. Here we have divided the provinces of Vietnam into three groups, each represented by one bar of the graph. The first bar represents the 20 provinces with the most equal distribution

**Table 11.3** Correlation between education Gini and achievement scores

| Variable | Combined Score | Education Gini | HDI rank province | Math score | Reading score |
|---|---|---|---|---|---|
| Combined reading and Math benchmark | 1 | −0.54 | −0.46 | 1 | 0.92 |
| Education Gini (inequality score) | −0.54 | 1 | 0.40 | −0.54 | −0.62 |
| Human Development Index provincial score | −0.46 | 0.40 | 1 | −0.46 | −0.48 |
| Math independent benchmark | 1 | −0.54 | −0.46 | 1 | 0.92 |
| Reading independent benchmark | 0.92 | −0.62 | −0.48 | 0.92 | 1 |

Variable coding: Education Gini index is calculated such that "0" is perfect equality and "1" is total inequality so the higher the score, the more inequality. This produces a negative correlation of.54 with the combined math and reading assessment score. The interpretation is that the more inequality exists in the distribution of education in a province the lower is the fifth grade learning achievement score. The relationship is slightly stronger (−0.62) for reading than for mathematics (−0.54).

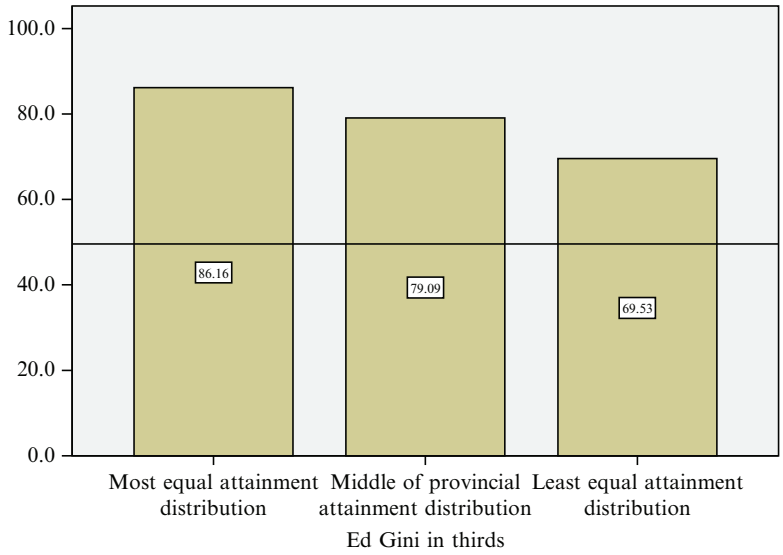


**Fig. 11.4** Student learning achievement scores by provincial inequality (mean combined and math benchmark)

of education attainment, the second bar represents the provinces with education attainment roughly in the middle of the distribution, and the final bar represents provinces with the most unequal attainment. Inside each bar is a little box that contains the mean combined math and reading score for fifth grade students in the same provinces. As can be clearly seen as the inequality of attainment increases the average student achievement score decreases. The results could not be clearer.

## 11.11 Alternative Explanations for the Observed Relationship

Critics might claim that the relationship between attainment inequality and student learning achievement is spurious. Some scholars who are skeptical of our findings argue that the reason behind the highly significant correlations is because in Vietnam the provinces with more equal distributions of number of years of schooling completed are also the same provinces with vastly improved socioeconomic conditions. They maintain that it is these conditions rather than equality or inequality that causes the variability in achievement scores. This is a reasonable hypothesis and should be carefully examined. However our initial efforts to control for a wide range of positive social contextual variables (summarized here by the HDI) did not confirm this suspicion. This fact can be clearly seen in Table 11.4 and in the partial correlation coefficient[13] between the Education Gini and the Combined Achievement score controlling for HDI of $r = -0.44$, still significant at the .001 level.

In Table 11.4, the provincial Combined Fifth Grade Reading and Math test score is presented in the right-hand column. Each row represents one level of the provincial HDI score. The top row contains the achievement scores for provinces at the highest (best) level of HDI. We took this one additional step by breaking down the provinces showing the highest HDI scores into two parts: first, on the top line are the provinces with the highest HDI score and also above average equality.

**Table 11.4** Impact of education inequality on achievement controlling for the HDI level

| HDI level | Education Inequality Index (Gini) | 5th grade Combined Achievement Mean |
|---|---|---|
| Highest | More equal (above mean) | 88.8 |
| Third | Less equal (below mean) | 76.6 |
| Middle | More equal | 83.5 |
| Third | Less equal | 69.8 |
| Lowest | More equal | 83.1 |
| Third | Less equal | 63.5 |

[13] A partial correlation coefficient is a variant of the simple two-variable or bivariate statistics. It introduces a third variable as a control. The interpretation is the relationship between two-variables controlling for, or eliminating the influence of, a third variable.

The next line or row also has the provinces with high average HDI scores but less equal education Gini coefficients.

While more study using advanced statistical methods needs to be conducted, our preliminary investigation of the relationship between attainment inequality and student academic or learning achievement presents what we believe to be convincing results: inequality is bad for student learning.

## 11.12 Inequality and the Political Economy of Vietnam

The widely observed economic reform in Vietnam has been accompanied by the devolution of power to the provinces and districts, a decentralization move that resulted in the gradual strengthening of local governments vis-à-vis Hanoi with its traditionally heavy-handed political machines and central ministries. Some scholars have argued that market reforms have produced the opposite effect, namely, the extension of centralized state control. However, the majority of recent studies of Vietnam have concluded that the shift to market economics and away from central planning has led to local governments prospering financially and playing an ever-greater role in local economic policy. For example, central control of prices and raw materials has disappeared. The range of education decision-making by the Ho Chi Minh City government I witnessed[14] during my Fulbright-sponsored research was uniformly described by respondents as having increased dramatically, in part the consequence of its lessened dependence on Hanoi for fiscal transfers.

Historically and probably the result of its geography, Vietnam has always had significant tensions between the center and the periphery, both in political and economic arenas. Some degree of local autonomy has always been enjoyed by the center and the south. Most scholars of the subject attribute Vietnam's pronounced regionalism to the historically accepted practice of capitalist agriculture in the south and to the enduring presence of independently minded ethnic hill tribes in the north and west. Even in times of intense socialist pressure from Hanoi, the notion of provincial representation to the central Communist party is illustrative of the extent to which decentralization was a deeply ingrained feature of the Vietnamese polity.

Moving to our present concern, namely the distribution of education attainment in Vietnam and the impact of the political economy on the distributional aspects of education resources, one cannot help but note the extent to which the political economy of Vietnam has produced an extraordinary level of uniformity of attainment across provinces. Still, as we have also seen, equality and learning achievement tend to be higher in prosperous, urban, and politically powerfully regions of the country denying to Vietnam the role of an exception to the general rule that the wealthy and politically powerful are almost always able to capture a disproportionate share of public spending on education.

[14] Holsinger was Senior Fulbright Research Scholar at the Ho Chi Minh City Pedagogical University's Institute for Education Research from January to August, 2003.

Primary education is not free in major urban centers and is in fact becoming increasingly expensive. The recent reduction of state subsidies means that parents have to cover more of the expenses involved than before. These expenses surpass the financial capacity of the poorest families, particularly those with many children.

The dilemma faced by poor families is that they cannot afford to send their children to school beyond the primary level. At the same time they cannot afford to keep them at home, since they know that a low level of education is likely to reproduce their own poverty in their children's generation. Unfortunately the impossibility of paying the necessary school expenses is the overriding factor, leaving most parents and children with aspirations that remain unfulfilled and little prospect of a change for the better.

Of specific concern are the expenses due at the start of the school year, which poor families have great difficulty in paying at one time. In families with more than one or two children of school-going age, often one child must drop out of school to enable another to enter. Another option for parents is to send one or all of their children to special free classes of inferior quality and which do not provide the necessary qualifications or skills for school advancement of employment afterward.[15]

## 11.13 School Finance Policy and Attainment Inequality in Vietnam

Although the government of Vietnam has a long-standing formal and generally effective commitment to Universal Primary Education, the introduction of school fees in 1989 put great pressure on Vietnamese families to meet education costs. Households were estimated in 1994 to be meeting 44.4% of the costs of public primary education, 48.7% of the costs of public lower secondary education and 51.5% of the costs of public upper secondary education.[16]

Some researchers have concluded that a progressive school fees structure (with no tuition fees for primary education), might have had limited effect because fees have constituted a relatively small proportion of total household expenditures paid to schools, to say nothing of total school-related household expenditures. School fees averaged only 34% of total school-related household expenditures paid directly to schools (school improvement fees also average 34%, insurance averages 12%, and parent association fees average 10%). School fees, moreover, appeared to be an even smaller share of total school-related household expenditures because school-related household expenditures not paid directly to schools were almost four times as large as those paid directly to schools.

But the above conclusions, based on data for primary school education, simply do not reflect the reality at lower and upper secondary school levels where enrollment growth has been higher and the pressure on the public treasury greater. My findings presented here are based on research completed in 2004. The focus was on government

[15] See World Bank and Department of International Development, UK (1999).

[16] See Holsinger (2001).

current expenditures (fiscal costs). Table 11.5 presents both actual current expenditures and expenditures at constant 1994 prices where the 1994 figures are set at 100 and the 2000 figures deflated to 1994 prices.[17]

With spending held constant at the 1994 level, the 6-year change in government current spending at the lower secondary school (LSS) level was an astonishing 98%. At the upper secondary school (USS) level the same figure is 49%, still high but reflecting the more urgent priority ranking of the lower level of secondary schooling. These are large real increases and represent a high government priority. At the secondary level, both enrollments and real spending increased since the 1994 baseline study. Unanswered to this point is the matter of whether fiscal spending kept pace with new enrollments. If not, how were the costs of secondary schooling financed?

The unit costs of lower and upper secondary are typically different with upper having the higher costs and both being higher than at the primary school level. I will present unit costs by province as well as for Vietnam overall. By making both enrollment projections and unit cost estimates at the provincial level it is possible to address the question of the additional burden on the public treasury required to meet the 10-year expansion targets.

Table 11.6 presents calculations of (average) unit fiscal costs per student for the academic year 2000/01 for both lower and upper secondary education conducted under the Secondary Education Sector Master Plan (SESMP) (Asian Development Bank 2002).

**Table 11.5** Current fiscal costs for lower and upper secondary education (MOET and World Bank data)

| Year and change | LSS (‘000) | USS (‘000) |
|---|---|---|
| 1994 | 885,540 | 432,339 |
| 2000 | 2,652,400 | 971,364 |
| 2000 at 1994 constant price | 1,758,541 | 644,014 |
| Change | 1,766,950 | 539,025 |
| At constant 1994 price | 873,001 | 211,675 |
| Percent change | 199 | 125 |
| Percent at constant price | 98 | 49 |

**Table 11.6** Average fiscal costs per student-year, 2000/01 (1994 figures from Vietnam: Education Financing, World Bank 1997; fiscal costs for 1993 and 1998 are from “Vietnam: Trends in the Education Sector during 1993–1998, World Bank 2001) (AY2000/01 estimates based on MOET data)

| | 1993 | 1994 | 1998 | 2000 |
|---|---|---|---|---|
| Lower Secondary VND (‘000) | 169 | 235 | 337 | 448 |
| US dollars | 15.9 | 21.5 | 27.4 | 30.7 |
| Upper secondary VND (‘000) | 429 | 483 | 448 | 442 |
| US dollars | 40.5 | 44.1 | 36.4 | 30.4 |

Exchange rates: 1993 = 10.69, 1994 = 10.9, 1998 = 12.3, 2000 = 14.5.

[17] Inflation index supplied to the authors by the World Bank resident mission, economics section, in Hanoi. The monthly index, where January 1994 = 100 shows the January 2000 number to be 150.8. We used 0.663 as our deflator.

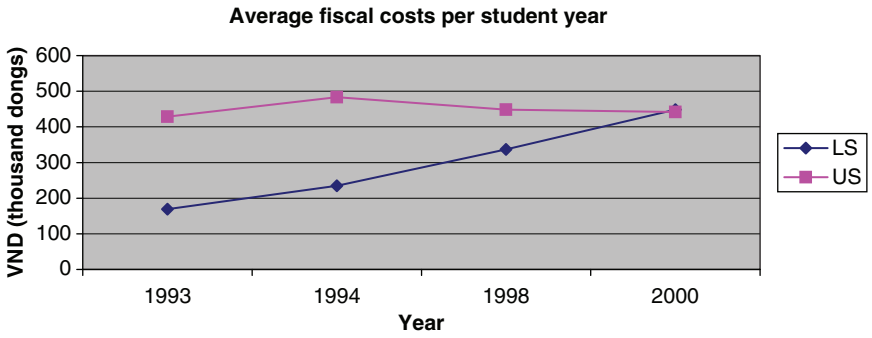


**Fig. 11.5** Unit costs at LSS and USS from 1993 to 2000 (MOET data and SESMP calculations)

The trends observed in Table 11.6 are significant and surprising. The significance lies in the growing fiscal effort at the lower secondary level. The surprising element here is that contrary to typical patterns the unit (fiscal only) cost at the upper secondary level, that is almost always higher than at lower levels of schooling, is now below the lower secondary level. This reversal is easier to see when the numbers in Table 11.6 are presented as trend lines as presented below in Fig. 11.5. Notice the subtle change in unit costs at the upper level. Spending first increased and then steadily declined. The trend at the lower level is obvious. Unit fiscal costs have risen quite sharply over the 6-year period.

At first glance the trend line seen above for USS would appear dubious. After all, with such a preoccupation with education, why would the Vietnamese government decide to spend less per pupil now than 6 years ago when the World Bank first investigated education finance? Moreover, as said before, unit costs are usually thought to increase by level of schooling.

The two trend lines move in opposite directions and by 2000 actually cross. Per pupil spending on lower secondary increased from VND235,000 to VND448,000 from 1994 and 2000 while at the upper secondary level, average spending dropped from VND483,000 to VND442,000 per student. There are at least two possible explanations. First, it is theoretically possible that overall spending declined, or, second, that enrollments increased. But government spending did not decline as shown before in Table 11.7. Rather, the substantial increases in government spending at both levels of secondary schooling were, at the upper level, still insufficient to keep pace with the dramatic increase in upper secondary enrollments. [18]

[18] As a side note, it is natural to wonder what may be happening to school quality at the upper secondary level given the decline in unit costs. The enrollment growth rate reported here is of such significance as to warrant investigation into the topic of teachers who represent by far the largest component of current costs and are of critical importance to the question of how much secondary students actually learn – the ultimate criterion of quality. We return to teachers in this section following the discussion of more traditional finance issues.

**Table 11.7** Private (household) educational expenditure per student by expenditure quintile, urban/rural areas, gender, region and grade level, 1998 (Unit: VND 1,000) (Table is from VLSS97/98)

| Category | Primary | Lower secondary | Upper secondary |
|---|---|---|---|
| Total | 249.0 | 488.1 | 1187.9 |
| Expenditure quintile | | | |
| 1 | 112.6 | 211.9 | 576.5 |
| 2 | 170.1 | 276.3 | 631.7 |
| 3 | 230.9 | 378.0 | 762.0 |
| 4 | 301.7 | 501.1 | 956.4 |
| 5 | 761.5 | 1080.6 | 1815.9 |
| Rural/urban | | | |
| Urban | 682.3 | 1025.2 | 1669.7 |
| Male | 667.3 | 996.6 | 1706.6 |
| Female | 698.7 | 1049.7 | 1633.8 |
| Rural | 181.5 | 354.2 | 946.7 |
| Male | 187.4 | 356.9 | 959.6 |
| Female | 175.1 | 351.1 | 929.7 |
| Region | | | |
| 1 | 105.8 | 212.2 | 757.2 |
| 2 | 240.2 | 389.2 | 995.4 |
| 3 | 158.9 | 308.3 | 897.8 |
| 4 | 256.1 | 607.5 | 1196.8 |
| 5 | 183.2 | 481.0 | 1263.7 |
| 6 | 640.0 | 1034.7 | 2018.0 |
| | 300.6 | 610.5 | 1160.1 |

The educational expenditure per student is calculated for those attending schools only.

The number of private schools in Vietnam has grown steadily but remains relatively small. The biggest change is seen in the private role of finance that has changed substantially in response to growing numbers of upper secondary students and the government decision to shift the operating costs of USS to households. In light of increased demand on the part of the students we conclude that the demand is price-elastic and that the government has made a sound economic decision. However, whether or not this same move will increase inequality remains to be seen. My opinion is that this kind of school finance policy will lead to inequality in the distribution of USS.

At the USS level, enrollments grew faster than did government spending. Given the phenomenal 202% increase in USS enrollments between 1994 and 2000, the large but insufficient 49% increase in real government spending simply could not keep up. But what happened in this same period to family expenditures on education? Was the decline in public subsidy offset by an increase in household spending? The answer is found in the VLSS 1997/98.

Household spending for all levels of schooling in Vietnam has now emerged as a major source of school finance. The best and perhaps only systematic source

of information on this topic comes from the two Living Standards Surveys, 1993 and 1998. Estimates based on these surveys gives the level of household spending in 1993 at 1.7% of GDP and 3.4% of GDP in 1998. Table 11.8 presents a clear contrast of changes in the shares of public and private spending for education in general. At every spending quintile the private contribution to upper secondary schooling exceeds government spending.

The first major conclusion from Table 11.8 is simply that the private sector is playing an increasingly important role in school finance. The second and perhaps even more significant conclusion is that whereas the state is the largest provider of educational services in Vietnam, it now finances directly just over 50% of the costs of education.

There have also been important changes in the pattern of private finance among the several levels of schooling. Again the data for this kind of analysis comes from the household surveys already thoroughly analyzed by Nga of the World Bank. Table 11.9 presents this information.

The movement toward more government finance at the primary and lower secondary is clear and denotes a government policy to finance a compulsory "basic" cycle consisting of primary and lower secondary. However, at the upper secondary and higher education levels, the government policy is to mobilize private or household finance. Government finance at the lower secondary level makes the attainment of

**Table 11.8** Trends in government and non-government expenditure between 1992 and 1998 (Nga op. cit.)

| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|---|---|---|---|---|---|---|---|
| Government | | | | | | | |
| Per capita expenditure ('000) at constant 1994 prices | 39.2 | 58.1 | 71.3 | 82.8 | 80.4 | 100 | 115 |
| Percent of GDP | 1.8 | 2.6 | 2.9 | 3.0 | 2.7 | 3.2 | 3.5 |
| Household | | | | | | | |
| Per capita expenditure ('000) at constant 1994 prices | | 32.7 | | | | | 108.4 |
| Percent of GDP | | 1.7 | | | | | 3.4 |

**Table 11.9** Public and private shares of education financing, 1993 and 1998 (percent of total education expenditure) (Nga, op. cit., p. 11)

| Level | Public financing | | Private financing | | Share of public in total spending | |
|---|---|---|---|---|---|---|
| | 1993 | 1998 | 1993 | 1998 | 1993 | 1998 |
| Primary | 17.9 | 17.6 | 22.0 | 12.2 | 45 | 59 |
| LS | 7.4 | 9.7 | 14.5 | 13.6 | 34 | 41 |
| US | 2.8 | 4.2 | 4.2 | 9.1 | 40 | 32 |
| Higher | 14.8 | 11.1 | 6.0 | 13.0 | 71 | 46 |
| Other | 8.9 | 7.7 | 0.0 | 0.0 | | |

universal coverage at this level highly achievable. But by shifting upper secondary finance increasingly to households it remains to be seen whether or not demand for schooling at this level can continue to grow as intended by Ministry of Education and Training policy or whether private financing will contribute to higher levels of attainment inequality.

The study found that even school fee exemptions that were much better targeted would have only a limited impact on the relationship between total household school-related expenditures and income and therefore, presumably, on poor households' decisions about schooling. To have more of an impact, policies would have to extend exemptions to household expenditures paid directly to schools beyond school fees or amend payment structures to make them much more strongly related to household income (possibly including negative fees or subsidies for children from poorer households).

## 11.14 Private Tutoring and Inequality of Outcomes

Primary education in Vietnam includes grades 1–5 (for children aged 6–10). Secondary education consists of lower secondary education (grades 6–9 for age 11–14), and upper secondary education (grades 10–12 for age 15–17). Examinations at the end of each school level are required to receive the corresponding diploma. For admission into some specialized upper secondary schools or college, students must also take an entrance examination. Places at the tertiary level are fixed and insufficient for the demand. From academic years 1993/94–1997/98, approximately 20% of students who took the university entrance examinations were admitted (MOET 2006). In the recent years, the government's expenditure on education and training was approximately 12% of total expenditures (General Statistical Office 2005).

There has been much public debate about the widespread use of private tutors in Vietnam. Private tutoring is a common media topic and frequently found on the agenda of the National Assembly's hearings of the Minister of Education and Training. Private tutoring has become so controversial that the Vietnamese government has issued several legal decrees that prohibit compulsory extracurricular classes at school, and stipulate the ranges for extra class fees that schools can charge students. However, tutoring not held on school premises is, of course, more difficult to control although several legal measures have tried to do just that with modest success.

Private tutoring classes are now so common in Vietnam that some households employ tutors for their children preparing to enter the first grade. Surveys of families with school-age children report a number of reasons for subscribing to some form of tutoring: compensation for low ability, the need to remain apace of classmates, preparation for examinations, inability to understand classroom lectures (Mac 2002). Typically the amount of tutoring increases as students approach the final year of a particular level of schooling, a fact that serves to underscore the significance of exam preparation in the aforementioned list. Research evidence appears to side

with parents who opt of tutoring as it has been shown to have a significant impact on a student's academic performance. At the lower secondary level where, controlling for community and school characteristics, expenditure on private tutoring classes has a strongly significant impact on a student's academic performance while household expenditure per capita does not. (Dang 2005)

There is no evidence of gender discrimination in expenditure on private tutoring. Ethnic minority families may spend less on private tutoring at the primary level but not at the lower secondary level. This can raise some concern about a sorting process exacerbating inequality where only wealthier households can afford the rising cost of sending their children to higher education. However, some survey evidence suggests that spending on private tutoring would fall significantly at the primary level if the quality of schools was improved by increasing the qualifications of primary teachers.

Controlling for other characteristics, Dang (2006) found that private tutoring had a significant impact on students' academic performance, but the influence is larger for lower secondary students, especially those who are already doing well at school. Thus if effectively managed by policymakers, private tutoring can help students do better at school but might also contribute to differential exam performance with results favoring richer households and ultimately contributing to the rise of inequality of education attainment that Vietnam has, in the past, worked hard to prevent.

## 11.15 Summary

The inequality in the distribution of education in numerous countries is staggering. If, as we assume, people's abilities are normally distributed across income levels, such unequal distributions of education attainment would appear to represent unacceptably high burdens to society. Awareness of education attainment inequality at all levels of system administration has significant education policy relevance not merely for Vietnam but elsewhere in the developing world. In Vietnam, as national, provincial, and district education authorities attempt to formulate education policies targeted at marginalized and underserved groups, it should prove helpful to identify specific locations according to the size of their respective education Gini coefficients. By establishing baseline inequality measures, governments at all levels will be able to demonstrate empirically the progress their education policies and investments have produced. Where the evaluation of policies in terms of economic growth is of principal concern, governments will be aided by the systematic use of the education Gini coefficient, a powerful tool to measure the current status of and improvements in the quality of the Vietnamese or any other country's labor force.

The relatively new use of the education Gini coefficient illustrates the use of analytical tools for understanding central policy issues. First it helps quantify in an internationally comparable way the distribution of education in a country such as Vietnam. Second, it facilitates the analysis of the impact of political decisions such as public education spending. And it points to significant within-country variations in the distribution of education. Applying this analytical tool enables us to view in

bold relief the impact of the political economy of education on important outcomes of schooling such as learning achievement but also, by extension, the important task of building a cohesive, socially just society in an era of rapid economic growth – will all Vietnamese benefit equally?

Education investments that improve the distribution of education attainment in the labor force will be a major factor in Vietnam's regional competitiveness in the future. The contention that education spending of governments is biased toward the rich is hardly a novel idea. There is also a large literature providing ample evidence that such bias is ultimately a political decision. A political bias resulting in income inequality is frequently disguised as "meritocratic" especially where access to successive levels of schooling is determined through high-stakes examinations. In the past two decades, the rise of equity as an explicit objective of development assistance to education has become a ubiquitous feature. In practice, however, the policy focus has been on parity of subgroups within populations, most particularly gender and ethnicity. But the distribution of education attainment or education learning achievement has rarely been measured, in part because there was little understanding of the use of the Gini coefficient as an indicator that could be used to examine this dimension.

We should all care about the unequal distribution of education because its causes and consequences are detrimental to human well-being and to economic self-reliance. Poor children who leave school prematurely become unproductive, dissatisfied adults. Highly unequal distributions of education are associated with low per capita wealth and perpetual dependence on external aid.

## 11.16 Conclusions and Recommendations

The dominant role played by the state in the financing, regulation, and provision of primary and secondary education reflects the widely held belief that education is necessary for personal and societal well-being. The economic organization of education depends on political as well as market mechanisms to resolve issues that arise because of contrasting views on such matters as income inequality, social mobility, and diversity. This chapter deals with the political economy of education in Vietnam – the complex relationship of education, economic growth, and school finance policy – and the implications for the distribution of education attainment and learning achievement in that country.

For years, models of public education provision have predicted an implicit transfer of resources from higher-income individuals toward lower-income individuals. Education as a vehicle for social mobility carries this imbedded assumption. Many studies have documented that public higher education involves a transfer in the reverse direction. This chapter considers the case of Vietnam, a socialist economy with emerging market tendencies. Vietnam has achieved a remarkably equal distribution of education attainment, a condition due in large measure to a deliberate political policy. However, this pattern of redistribution is an equilibrium outcome in a model in which education is only partially publicly provided and individual households

increasingly participate in the finance of schooling, particularly at the upper secondary level. The new Vietnamese political economy of education may lead to the exclusion of poorer children from obtaining higher levels of education while their payment of fees help offset the cost of education obtained by others.

Vietnam's approach is worth considering. It has attempted and largely succeeded in providing schooling through lower secondary to all children equally. It has invested heavily in provinces that are disadvantaged, mountainous or populated by non-Vietnamese-speaking minorities. The government of Vietnam has for many years explicitly encouraged the education of girls and is one of the few countries at its income per capita level that has equal enrollments between boys and girls. Vietnam has concentrated government expenditure on primary and lower secondary, and has expanded upper secondary through the use of school fees. By concentrating spending at lower levels, it has achieved a remarkable level of equality. But Vietnam has not been able to eliminate the examination and its ubiquitous partner, private tutoring. Further reduction of the education Gini may be difficult to achieve for that reason.

For many years the World Bank signaled its strong preference for financing education investments for quality enhancement and enrollment expansion at the level of the primary school. At the same time it aggressively discouraged projects related to secondary education. Many client countries, benefiting from the World Bank's primary education-only policy, redirected their own resources toward secondary education and erected barriers to entry at that level in the form of high-stakes entrance examinations.

The unanticipated result has been that relatively wealthy households increase the probability that their children will succeed in this examination by hiring tutors. Underpaid school teachers are happy to offer their services as after-hours tutors. Thus, a parallel private system operates in such a way as to ensure that at each successive level of schooling the children of comparatively wealthy households capture the education spending of the government. The same pernicious arrangement may exist in the transition between lower and upper secondary and between secondary and tertiary levels.

So what can be done? Concentrating public spending on primary and lower secondary education improves the chances that the poor will benefit, and hence will improve the distribution of education in a country. Efforts to target the poor through more explicit and precise use of distributional measures such as the education Gini coefficient may be among our most promising tools for the improvement of human welfare around the globe. My contention is that the systematic inclusion of the education Gini coefficient as a standard policy instrument will help focus attention clearly and more precisely on one of the largest remaining problems in the public provision of education among the poor of the world.

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