

ECONOMIC ANALYSIS

1. Extensive research shows the importance of and large returns from investment in education. Education significantly promotes national growth and development,¹ and is vital in developing economies where an expansion of the supply of skilled workers allows the economy and industries to modernize, adopt new technologies, attract foreign investment, increase productivity and trade competitiveness, and better respond to new opportunities created by shifting markets. Education also promotes inclusive growth.

2. In addition to benefiting the economy, education and human capital accumulation are critical in determining employment outcomes for individuals. In particular, many economic development studies demonstrate significant wage returns to education, with most finding that one additional year of schooling raises an individual's earnings by around 10%.² The returns to primary and secondary schooling are particularly high in less-developed countries, and secondary education appears particularly important in rapidly growing economies, including those in Asia.³ Many studies have found that completion of secondary education by girls has a large impact on wages, as well as broader impacts such as participation in the formal labor market and non-agriculture sectors.⁴

3. Investments in upper secondary education offer more immediate returns than investment in basic education, as upper secondary graduates enter the labor market. The dual challenges confronting Viet Nam's economy are that insufficient students acquire an upper secondary education, and those who do continue cannot realize the benefits. In predominantly rural areas where returns from agricultural labor are low, the costs of continuing education require deferral of any income, however poorly paid. In poor rural areas, families see the costs of continuing at school and the loss of more immediate earnings as barriers to keeping students in school. Improving access to affordable, quality schooling is an important step towards improving long-term outcomes for poor families.

4. Viet Nam's economic objective during 2011–2020 is to maintain macroeconomic stability, with an annual gross domestic product growth rate of 7%–8%. In order to sustain and enhance the growth and competitiveness of the economy and to counter economic downturn, the government has maintained sound economic policies while acknowledging the need to invest in development of a more skilled labor force. Upgrading of the labor force is needed in order to modernize and increase the efficiency of the industrial, agricultural and service sectors; develop an intellectual economy; rapidly increase exports; and increase technological and scientific content in domestic products.

5. A key factor is increased productivity among young laborers aged 20–39 years, who make up half of the total labor force. Emphasis is placed on strengthening the quality of middle skill workers who enter the labor market after graduating with an upper secondary or higher education. Secondary education is therefore particularly important in providing workers with the required skills, as well as the capacity to learn on the job while adapting to new technologies.

¹ See, for example, D. Cohen and M. Soto. 2007. Growth and Human Capital: Good Data, Good Results. *Journal of Economic Growth* 12. pp. 51–76.

² G. Psacharopoulos and H.A. Patrinos. 2004. Returns to Investment in Education: A Further Update. *Education Economics* 12(2). pp. 111–35.

³ R. Barro and J. Lee. 2010. A New Data Set of Educational Attainment in the World, 1950–2010. *NBER Working Paper 15902*. Cambridge, Massachusetts. This paper finds high rates of return in East and South Asia.

⁴ C. Spohr. 2003. Formal Schooling and Workforce Participation in a Rapidly Developing Economy: Evidence from Compulsory Junior High School in Taipei, China. *Journal of Development Economics* 70/2. pp 291–327.

6. An equally important issue recognized by the government is promoting balanced development between the rich and the poor, especially for disadvantaged groups. Recent programs seek to improve the socioeconomic condition of poor, remote, and disadvantaged regions; education that aims to improve labor skills for local economic development is a priority.

7. Viet Nam's population of 85.8 million has doubled during 1975–2010. Gross domestic product growth averaged 7.3% annually during 2001–2010. Population growth will further increase the working-age population, with projections indicating that the labor force will increase from 50.5 million in 2010 to 52.8 million in 2015. The working-age population will continue to account for around 58% of the total population. Changes in the employment structure show the industrial and construction sectors accounting for an increased share of overall employment (from 18.2% in 2005 to 22.2% in 2010), along with the service sector (which increased from 24.7% in 2005 to 26.9% in 2010); at the same time, the share of employment provided by agriculture, forestry and fishing declined (from 57.1% in 2005 to 50.9% in 2010). An estimated 1.3 million workers are moving each year from the agricultural to the industry and service sectors, and they need the skills required in these sectors.

8. Viet Nam's labor force remains "low skilled". Unskilled workers in all occupations made up 48% of the total workforce in 2010, with high-level professional workers accounting for 9.4%, and skilled workers for 27.9%. The current shortage of skilled workers is seen as hampering economic competitiveness and has become an impediment to the country's capacity to realize the full benefits associated with rapidly growing investments. Economic growth raises the required skill level for laborers. By 2020, the percentage of high-level professional workers is forecast to increase to 14.7%, and of skilled workers in all occupations to 34.6%. By contrast, unskilled workers in all occupations will decrease to 37.2%, from the current 48%.

9. Equity remains a major issue. Even with the above changes in employment structure, 80% of the labor force from poorest households work in agriculture. The proportion of untrained workers or those that have never attended school was 38.2% of the poorest households, 4.8 times higher than that of the richest households. The proportion of females was 24.6%, 1.6 times higher than males. Among the wealthiest households the proportion of workers with a college qualification or higher was 60 times greater than among the poorest households.

10. **Education sector context:** Public and private investment in education at all levels in Viet Nam has been substantial since the comprehensive socio-economic reform policy "*Doi Moi*" was initiated in 1986. Increased government and household education spending at all levels has had a direct impact on access to and participation in education. For the last 5 years, enrollment in primary schools, lower secondary schools and upper secondary schools has increased significantly.

11. Participation rates, measured as gross enrollment rates or net enrollment rates, have improved, but the 2009 population census points to a major demographic transition, with fewer children per household and stabilization or possible decline in the teenage population.⁵ Population data from the 2009 census show secondary enrollments⁶ are only 20% for the poorest households compared with 80% of the age-group in the least poor households.

⁵ General Statistics Office. 2011. *Age-Sex Structure and Marital Status of the Population of Viet Nam*. Ha Noi.

⁶ The census analysis reported in General Statistics Office. 2011. *Education in Viet Nam: An Analysis of Key Indicators*, Ha Noi (Table 4.2, p. 36). The analysis uses an international definition of level of schooling (International Standard Classification of Education) and does not distinguish between lower and upper secondary schooling.

12. The challenge for upper secondary education is that more densely settled urban areas have better access to sectors with employment growth, providing more immediate benefits to school leavers. Poorer, rural and remote areas depend more on agriculture, and have declining employment opportunities, less access to post-school training opportunities, and include more ethnic minority students.

13. The challenge for Viet Nam is that the transition is uneven: poorer families in more remote provinces, often with more students from minority groups, need investment in new school classrooms, equipment, textbooks and learning materials, supported by strengthened teaching and sector management.

14. **The proposed project.** The Second Upper Secondary Education Development Project focuses on 33 provinces, with the aim of increasing their participation in, the performance of and access to secondary and higher levels of education.

15. The government's goal is to expand and improve secondary education by 2020 to promote industrialization and economic modernization. Access and quality improvement, particularly for disadvantaged groups of pupils, is the highest priority. The country's socioeconomic, political, and cultural climate supports improvement of education, including physical school conditions, curriculum and teaching methods. To achieve a sustainable growth path and survive in a globally competitive environment, the Viet Nam needs to build a dynamic human resource base with adaptable skills.

16. Investment under the project consists of improving quality, promoting access and retention, and increasing the efficiency and effectiveness of planning and management in upper secondary education through support to (i) renew the upper secondary education curriculum after 2015, (ii) improve pedagogical capacity and skills of lecturers and students in teacher training universities, (iii) improve educational quality for gifted and disadvantaged students, (iv) classroom construction, (v) research, (vi) educational management training; and (vii) financial management.

17. **Economic rates of return and project benefits.** The project will contribute to the national effort to increase the number of upper secondary school graduates. It will directly improve the quality of outcomes and performance of graduates in the labor market. The project will provide the means to raise academic standards and improve the alignment between graduates' skills and the labor market's needs. Increased earnings for students from disadvantaged communities will support poverty reduction strategies.

18. The economic benefits include high social returns from the investment through (i) more efficient infrastructure and personnel, and better resource allocation; and (ii) improved productivity of graduates. The major economic benefits of the project lie in its contributions to improving the internal efficiency of upper secondary education nationwide. Newly built classrooms will be equipped with furniture and teaching aids in more than 150 upper secondary schools in disadvantaged districts, thereby improving enrollment capacity in target areas. The construction and renovation of classrooms—including simulation classrooms in the six centers of pedagogical excellence in six provinces—will absorb more teacher trainees, and improve the teacher training efficiency.

19. Support for instructional materials and teaching methodologies and skills will enable newly trained and in-service teachers to improve teaching quality, thus helping to improve the

performance of their students. The pedagogical capacity and skills of teacher training lecturers, teacher trainees, and upper secondary teachers will be upgraded so that they will be able to effectively implement the new curriculum and textbooks after 2015. Their capacity will be also upgraded, especially in (i) teaching foreign languages and other selected subjects; (ii) active teaching and active disciplines; and (iii) to meet the specific needs of disadvantaged groups, including ethnic minority and deaf pupils.

20. The interventions will target upper secondary education managers, directors of continuing education centers, and principals of upper secondary schools to improve the quality of planning and management of upper secondary education. Block grants for DOETs in 63 provinces will create opportunities for initiative and autonomy in resource management by local governments and contribute to the renovation of education management mechanisms, with greater decentralization.

21. Project benefits are expected from (i) productivity differentials (para. 22), and (ii) cost savings due to increased system efficiency. Key benefit assumptions include the yearly annual savings expected as a result of strengthening management of education at all levels. The project is expected to improve cost-effectiveness by increasing capacity utilization of upper secondary schools, reducing the cost of upper secondary education, and strengthening the management of upper secondary education at the central, provincial and school levels in target areas. The expected cumulative savings are assumed to be about 0.5% of annual recurrent upper secondary education costs.

22. Productivity differentials result from improved productivity of graduates. The quality improvement measures and teacher training are expected to increase earnings of graduates based on the better education that they will receive through the project. Benefits will come from increased earnings, because students have been directed into subjects for which demand is greater. Better qualified teachers and student centered approaches will improve student performance and thus improve the quality of graduates and the workforce.

23. In quantifying the returns from the project, the approach is to estimate a rate of return based on the least benefits that could be expected from the proposed investments to improve secondary education. With a minimum economic internal rate of return of 13%, the project is considered economically viable (see table).

24. According to the 2010 Viet Nam Household Living Standards Survey, the annual per capita income (mean income) was D18.7 million (\$921) and median income was D13.3 million (\$655), resulting in a productivity differential of D5.4 million (\$266).⁷ Productivity differentials are computed from the projected number of USE graduates, multiplied by the differential earnings from mean and median income. The difference is the productivity differential of USE graduates under national effort, including the project, assuming an 82% USE completion rate.

25. Age-group, highest level of schooling completed, income (quintile), major area of employment, gender, ethnicity and provincial location are descriptive attributes in the living standards survey data. The income-based analysis provides no picture of the outcomes for people unable to find long-term, paid employment. As part of project monitoring, more details about household size, structure, and household (rather than individual) earnings may be

⁷ General Statistics Office. 2011. *Results of the Viet Nam Household Living Standards Survey 2010*. Ha Noi (Table 3.4, p.143–152). Data is presented by main economic industry, by urban and rural, region, gender, income quintile, and level of education.

extracted from 2009 Population Census and 2010 Households Living Standards data in selected provinces. Together with enrollment data reported to MOET, this offers an opportunity for ongoing assessment of the economic benefits.

26. The aggregate expected benefits from the productivity differential and cost savings due to increased system efficiency are estimated as rising from around \$20 million per annum during the project to almost \$28 million by 2025 (see table, column 6). The calculations assume that 40% of graduates benefit from a productivity differential. A further 30% of the productivity differential (annual benefits) is attributed to interventions under the project. Savings of 0.5% of annual recurrent costs due to improved system efficiency would yield at least D96 billion (\$4.7 million) over 2013–2025 (column 7 of the table).

Quantified National Benefits 2013–2025

School Year	USE Enrollment ('000)	USE Graduates ('000)	Annual Benefits D billion	Estimated 30% benefit attributable to USEDP II		Annual benefit assuming at least 0.5% productivity	
				D billion	\$ million	D billion	\$ million
2011/12	2,664	872					
2012/13	2,573	852					
2013/14	2,519	835	1,485	445	21.93	62	3.05
2014/15	2,538	813	1,447	434	21.38	66	3.25
2015/16	2,600	795	1,415	424	20.89	71	3.50
2016/17	2,704	787	1,400	420	20.69	76	3.74
2017/18	2,822	799	1,422	426	20.99	81	3.99
2018/19	2,953	822	1,463	439	21.63	87	4.29
2019/20	3,094	856	1,524	457	22.52	93	4.58
2020/21	3,218	897	1,595	479	23.60	100	4.93
2021/22	3,293	941	1,674	502	24.74	107	5.27
2022/23	3,339	989	1,759	528	26.02	114	5.62
2023/24	3,390	1,032	1,836	551	27.15	131	6.45
2024/25	3,443	1,059	1,883	565	27.84	140	6.90

Note: Annual Benefit based on income differential; Exchange rate US\$=VND 20,295 assumed constant.
 USE = upper secondary education, USEDP II = Second Upper Secondary Education Development Project.
 Source: Asian Development Bank estimates.

27. These benefit estimates are conservative, especially when project construction of new classrooms makes upper secondary education accessible to more students who would otherwise leave school and seek employment. Agriculture currently employs 57% of employed 15–19 year-olds, 74% of the poorest income quintile, and 75% of ethnic groups other than Kinh or Chinese. Well-targeted district selection would contribute to the transition from “farm” to “non-farm” sectors, and thereby have a larger potential impact on individual income and on aggregate economic activity.