

## FINANCIAL ANALYSIS

1. This financial analysis seeks to determine whether the level of available resources for the Government of Viet Nam and new model universities (NMUs), including the University of Science and Technology of Hanoi (USTH), is sufficient to manage recurrent costs of the project's investments. The scenario underlying this analysis is presented in para. 1 of the economic analysis (Linked Document 8).<sup>1</sup> This analysis relates only to the USTH. The Government has also established an NMU in Ho Chi Minh City, financed by the World Bank. Two other NMUs, at Danang and Can Tho, may follow. The issue of sustainability relates to the whole NMU subsector.

2. **Summary of findings.** The main findings are as follows: (i) Table 1 estimates the operating costs and funding sources of the USTH; (ii) Repayment costs are given in Table 2; (iii) The recurrent costs are compared with the resources projected for Viet Nam's higher education system in Table 3 and Table 4, on the assumption that the loans will not be on-lent to the USTH; (iv) The USTH is projected to absorb about 0.5% of higher education system resources by 2014, rising to 2.0% (exclusive of loan repayments) by 2020. These costs are significant, especially in a period when Viet Nam is also striving for large increases in higher education participation; and (v) The government must weigh up the qualitative improvements offered by NMUs against their costs. Other developing countries, notably the People's Republic of China, have committed significant resources to developing a small number of science and technology universities of very high quality. To be effective, long-term whole-of-government commitment will be needed.

3. **Recurrent and operating costs.** The first step in the analysis is to project the recurrent costs of the project, which include: (i) the costs of operating the USTH, including salaries, purchase of goods and services, etc.; (ii) support for students attending the USTH; and (iii) loan repayments on the cost of buildings, equipment, and capacity building.

4. Taking into account spending requirements, price levels in Viet Nam, and affordability, the project preparatory technical assistance team recommended that: (i) \$4,000 per student in 2009 dollars be set as a guideline for the initial operating funding for the two NMUs to be established with the Asian Development Bank (ADB) loan; (ii) in the consolidation phase funding per student should be increased to \$5,000 and in the expansion phase to \$6,000 in 2009 dollars, so as to be consistent with Viet Nam's objectives to raise the NMUs progressively through regional and world rankings; and (iii) over time, the NMUs should seek to raise a larger proportion of their funds from sources other than the state budget.<sup>2</sup>

5. Table 1 reflects this three-point approach. It incorporates a progressive increase in income from sources other than the state budget.

6. Increased funding per student over time will be needed not just to improve provision but also to sustain the asset base in good working order. For example, the University of Western Australia applies straight-line depreciation at rates ranging from 12.5% to 25.0% to plant and equipment, depreciates library stock 100% in the 4th year after acquisition, and allows for 2% reducing balance depreciation on the value of its building stock. If the USTH were to follow that example, annual provision for depreciation would need to be about \$10 million.

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<sup>1</sup> See the introduction to the economic analysis for some assumptions that also apply to the financial analysis.

<sup>2</sup> ADB. 2009. *Preparing the Higher Education Sector Development Project*. Midterm Report. Manila. Vol. 1 p. 11.

**Table 1: Indicative Operating Expenditure over Time for USTH, by Funding Source, 2009**

(\$ million)			
<b>Expenditure</b>	<b>A. Establishment Phase, about 2014<sup>a</sup></b>	<b>B. Consolidation/ Full Design Capacity, about 2020</b>	<b>C. Expansion Phase, about 2026–2030<sup>b</sup></b>
Number of students	1,000	5,000	7,000
Guideline expenditure per student (\$s)	\$4,000	\$5,000	\$6,000
Total annual operating expenditure <sup>c</sup>	\$4m	\$25m	\$42m
Funding source			
Government funding for teaching	\$2.40m (60%)	\$11.25m (45%)	\$17.85m (42.5%)
Government block funding for research	\$0.80m (20%)	\$5.00m (20%)	\$5.25m (12.5%)
Student tuition fees	\$0.40m (10%)	\$6.25m (25%)	\$12.60m (30%)
Income from research contracts, business activities, and development agencies (including international partners).	\$0.40m (10%)	\$2.50m (10%)	\$6.30m (15%)
Total annual income	\$4.00m	\$25.00m	\$42.00m
Income from state budget <sup>d</sup>	\$3.20m	\$17.75m	\$25.72m
Income from other sources	\$0.80m	\$7.25m	\$16.28m

USTH = University of Science and Technology of Hanoi.

<sup>a</sup> Student numbers derive from USTH current plans.

<sup>b</sup> Assumes growth in USTH to 7,000 students

<sup>c</sup> Total annual operating expenditure is arrived at by multiplying enrolments by the guideline expenditure per student. In practice that will not be sufficient in the establishment phase when student numbers are low, but assistance from the French international partner is available at that time.

<sup>d</sup> The figure is increased by \$1.50 million in column B and by \$2.62 million in column C to allow for the fact that some of the student tuition fee income will ultimately derive from the state budget via student support (Table 3 in the economic analysis).

Source: Adapted from TA Team estimates included at p.34 of the Feasibility Report for the USTH Sub-project Proposal, March 2010.

7. Table 2 shows that loan repayments are a significant proportion of NMUs' recurrent costs in the consolidation phase, and to a slightly lesser extent in the expansion phase. Accordingly, the assumption of no on-lending is critical to the assessment of sustainability.

**Table 2: Total Annual Recurrent Costs for USTH**

(\$ million)			
<b>Expenditure</b>	<b>Establishment Phase, about 2014</b>	<b>Consolidation/ Full Design Capacity, about 2020</b>	<b>Expansion Phase, about 2026–2030</b>
Total annual operating expenditure	4.0	25.00	42.00
Loan repayments <sup>a</sup>	0.0	13.80 <sup>b</sup>	13.80
<b>Total annual recurrent costs</b>	<b>4.0</b>	<b>38.80</b>	<b>55.80</b>
Funded from state budget	3.2	31.55	39.52
Funded from other sources	2.4	7.25	16.28

USTH = University of Science and Technology of Hanoi

Note: <sup>a</sup> Loan repayment phases are 2017–2037 for the ordinary capital resources loan and 2019–2043 for the hard-terms facility of the Asian Development Fund (ADFHT) loan. No allowance is made for additional capital expenditure in the expansion phase. For this analysis, it is assumed that loan repayments are fully met from the state budget, with no on-lending to USTH.

<sup>b</sup> Includes both the Ordinary Capital Resources and ADFHT loans.

Sources: Page 1 of the Economic Analysis (LD08) for loan repayments, Table 1 above for other figures.

8. **Recurrent resources for higher education in Viet Nam.** In May 2009, the Ministry of Education and Training (MOET) published projections from its Medium-Term Expenditure Framework (MTEF).<sup>3</sup> For higher education during 2009–2014 these show

- (i) an increase in student numbers of nearly 50%, from 1.39 million in 2009 to 2.07 million in 2014;
- (ii) nominal funding (state budget plus tuition fees) more than doubling from D10,273 trillion in 2009 to D21,670 trillion in 2014; and
- (iii) an increase of 42% in nominal funding per student between 2009 and 2014.

9. The inflation assumptions underlying these projections are not stated but they appear to be about 7% a year. If so, funding per student at 2009 prices would remain roughly constant over the period. Some increase in tuition fees is planned to ease the strain on the state budget; for technology and science subjects, fees rise from D255,000 a month in 2009 to D650,000 a month in 2014. For technology, the proportion of costs borne by the fee goes up from 36% to 44%, and for science from 40% to 49%. Fee increases remain very controversial.

10. For the period up to 2020, further large-scale increases in higher education participation are projected, raising the rate from 200 higher education students per 10,000 people in 2010 to 450 by 2020. It is envisaged that by 2020 40% of students will attend nonpublic universities. The Medium-Term Expenditure Framework also looks forward to a number of qualitative improvements, including the development of the NMUs.

11. The government targets for higher education participation are ambitious. A recent World Bank study estimated that to meet them, public expenditure on higher education as a percentage of gross domestic product would need to grow from 0.58% in 2006 to 1.17% by 2020.<sup>4</sup> Qualitative improvements would generate additional pressures on resourcing. Recent debate in the National Assembly indicates that, after a period of very rapid expansion, sentiment is shifting toward the need to temper the expansion in numbers and to improve quality. The comparison of new model university costs with the resources available for the establishment phase (2014) is in Table 3, and the comparison for the consolidation phase (2020) in Table 4.

**Table 3: Comparison of USTH Costs with Higher Education System Resources, 2014**

	Calculations	Amount
1.	NMU operating costs in 2014, constant prices	\$4.0 million
2.	Higher education system resources, in nominal terms	D21,670 trillion
3.	Higher education system resources, in constant prices, assuming 7% annual inflation	D15,076 trillion
4.	Convert row 3 to dollars at D20,680 = \$1	\$729.01 million
5.	NMU operating costs as percentage of higher education system resources (row 1 divided by row 4)	0.5

D = dong, NMU = new model university, USTH = University of Science and Technology of Hanoi

Note: Table indicates that by 2014 USTH would account for about 0.5% of higher education system resources.

Sources: Table 1 above for Row 1, MOET MTEF for Row 2.

<sup>3</sup> Ministry of Education and Training. 2009. *Scheme for the Reform of the Financing Mechanism for Education and Training 2009–2014*, MOET. May.

<sup>4</sup> World Bank. 2008. *Vietnam: Higher Education and Skills for Growth*. Washington DC. Chapter III.

**Table 4: Comparison of USTH Costs with Higher Education System Resources, 2020**

	Calculations	Amount
1.	USTH operating costs, constant prices	\$25.0 million
2.	USTH loan repayment costs	\$13.8 million
3.	(1) + (2)	\$38.8 million
4.	Higher education system resources, at constant prices	D23,923 trillion
5.	Convert row 4 to dollars at D20,680 = \$1	\$1,157 million
6.	USTH operating costs as percentage of higher education system resources (row 1 divided by row 5)	2.2
7.	USTH operating and loan repayment costs as percentage of higher education system resources (row 3 divided by row 5)	3.3
8.	Cost of USTH to state budget (\$31.55 million) costs as percentage of higher system resources	2.7

USTH = University of Science and Technology of Hanoi

Note: For row 4, the figure from row 3 of Table 3 (D15,076 trillion) has been taken as the base and increased by 8% annually; the same average annual increase at constant prices as the MTEF shows from 2009 to 2014.

Sources: Tables 1 and 2 above for Rows 1 and 2, MOET MTEF for Row 4.

15. In principle, this same comparison could be done for the expansion phase, but it would be artificial to extend the projection of higher education system resources for a further 8 or more years based on the arbitrary assumption of 8% annual growth used in Table 4.

16. **Discussion of comparisons.** In 2014 the cost of the USTH is just 0.5% of higher education system resources because the university is still small, pending completion of its premises. In 2020, when the USTH expects to be at full capacity of 5,000 students, the operating cost amounts to 2.2% of the higher education system resources, or 3.3% if loan repayments are included. After allowing for contributions from other sources, the cost to the state budget (inclusive of loan repayments) is 2.7% of the higher education system resources. Allowing also for the Vietnamese-German University, the cost of NMUs in the 2020s could be twice the numbers shown in Tables 3 and 4.

17. On any view, the cost of the NMUs represents a significant burden on Viet Nam's higher education resources to educate a small number of students. In principle, Viet Nam could reduce the burden by making the NMUs charge higher fees. However, student fee assumptions represent best judgment as to what is needed to ensure demand from the best students, and to achieve equity.

18. In the view of the project preparation consultant team, the costs are implicit in the objective of establishing a few science and technology universities of international standard within a public university system with a very low overall level of funding. The question for the government is whether the qualitative improvements, which NMUs promise, are sufficiently high to justify the cost. The People's Republic of China faced a similar question in respect to their 985 Program and concluded that they were.