



Dr. Dieter Dohmen

**Financing of Technical and Vocational Education and Training (TVET)
in Bangladesh**

for the EC/ILO executed TVET Reform Project in Bangladesh

Draft report

Dhaka/Berlin, September 2009



FiBS Consulting GbR

Reinhardtstr. 31 – 10117 Berlin

Tel.: 030 – 84 71 22 3 – 0

Fax: 030 – 84 71 22 3 – 29

E-Mail: consulting@fibs.eu

URL: www.fibs.eu

Content

Executive Summary	7
1. Introduction.....	13
2. The Environment of Technical and Vocational Education and Training	13
2.1 Economic development and future priorities	13
2.2 Returns to Education.....	15
2.3 Budget expenditures for education and TVET.....	16
2.4 Labour Market Development.....	18
2.4.1 Labour Force Development.....	18
2.4.2 The role of TVET in the labour market	19
2.4.3 Demography and the labour market	20
2.4.4 Migration and overseas employment.....	21
2.5 Poverty	21
2.6 Summary.....	22
3. Bangladesh's TVET system.....	22
3.1 Introduction and overview	22
3.2 The number of public and private TVET providers	23
3.3 Student numbers.....	32
3.3.1 Total numbers of TVET-students in Bangladesh.....	32
3.3.2 Gender	35
3.3.3 Regional distribution of students	36
3.3.4 Summary: Strong regional and gender imbalances.....	39
3.4 The number of teachers in TVET	39
4. Financing and Budgeting of TVET in Bangladesh.....	40
4.1 Introduction and overview	40
4.2 Budgeting processes and principles.....	42
4.3 Public expenditures for TVET and per student.....	44
4.3.1 Recurrent expenditures and expenditures per student at Polytechnics.....	44
4.3.2 Recurrent expenditures per student at Technical Schools and Colleges	48
4.3.3 Recurrent expenditures per student at Technical Training Centres	52
4.3.4 Summary.....	54
4.4 National expenditure on TVET	54
4.4.1 Public spending for TVET.....	55
4.4.2 Private contributions.....	58

4.4.3	Public and private expenditures for TVET	63
4.5	Some considerations on efficiency	63
4.6	PPP-Initiative	64
5.	Future plans and financial requirements concerning TVET	65
6.	Funding Sources – an overview on options and empirical evidence.....	67
6.1	Trainee financed Training.....	67
6.1.1	Wage Reductions (Wage below Productivity).....	67
6.1.2	Tuition and Apprenticeship Fees	69
6.2	Employer financed training	70
6.2.1	Single Employer Funding.....	70
6.2.2	Training Levy /Payroll Tax System	70
6.3	Public Financing of TVET	74
6.3.1	Direct Payments/Subsidies.....	75
6.3.2	Tax deductions/Tax rebates.....	75
6.3.3	Vouchers/Entitlements.....	77
6.3.4	Provision of Training Loans	78
7.	Models for Financing TVET and Skills Development in Bangladesh	78
7.1	Reform options within the present funding system	79
7.1.1	Voucher system.....	79
7.1.2	Financing of institutions based on graduate numbers	80
7.2	Reform options for apprenticeships.....	81
7.2.1	Apprenticeships Vouchers (IAVs).....	81
7.3	Alternative sources for (additional) funding	82
7.3.1	Combining tuition fees for TVET with deferred and income-related payment – the Bangladesh Vocational Education Contribution Scheme (BD-VECS).....	82
7.3.2	The contribution of companies – a training fund?.....	84
7.3.3	Corporate Social Responsibility as Source of Funding.....	84
8.	Annexes	85
8.1	Delegation of Financial Powers	85
8.2	Terms of Reference.....	96
8.3	People met, institutions visited	98
8.4	Bibliography and documents consulted	100

List of Figures

Figure 1: A preliminary overview of TVET-institutions in Bangladesh	26
Figure 2: A summarised overview of TVET-institutions in Bangladesh	27
Figure 3: Distribution of TVET-institutions across regions (2008-9)	28
Figure 4: Distribution of public and private TVET-institutions across regions (2008-9)	29
Figure 5: Distribution of TVET-students across regions (2008-9)	37
Figure 6: Relative distribution of TVET-students by region and programme	38
Figure 7: Regional Distribution of TVET-students by programme (2008-9)	39
Figure 8: Funding sources for public and private TVET-institutions	42
Figure 9: Trend analysis of unit costs (revised budget) at polytechnics	47
Figure 10: Distribution of original and revised budget for polytechnics across divisions	48
Figure 11: Economies of Scale at TSCs	51
Figure 12: Distribution of TSC students and funds across divisions	51
Figure 13: Economies of scale at TTCs	53
Figure 14: The effects of a voucher system on institutional budget	80
Figure 15: The effects of a voucher system on institutional budget	81

List of Tables

Table 1: Distribution of public and private TVET-institutions across regions	9
Table 2: Distribution of students by programme and region	9
Table 3: Distribution of male and female students by programme, region and public and private institution	10
Table 4: Distribution of students by gender, programme, region and public and private institution	10
Table 5: Number and share of TVET-institutions by programme (2009; source: BTEB)	24
Table 6: Number of public institutions covered by BTEB-statistics (2009)	25
Table 7: Number of public institutions not covered by BTEB-statistics	25
Table 8: Public and private TVET-providers across regions (summary) (2008-9)	29
Table 9: Public and private TVET-providers across regions (detailed downbreak) (2008-9)	31
Table 10: Number of students in BTEB-accredited courses by programme (2008-9)	32

Table 11: Distribution of students in BTEB-accredited courses by programme and provider (2008-9).....	32
Table 12: Distribution of students in BTEB-accredited courses by programme and among public and private providers (2008-9).....	33
Table 13: Number of students in BTEB-accredited programmes by form of institutions (2008-9)	33
Table 14: Number of students in non-accredited programmes by form of institutions.....	33
Table 15: Number of people trained by DYD.....	34
Table 16: Female students by programme and public and private provider (date?).....	36
Table 17: Share of female students by programme and public or private provider	36
Table 18: Distribution of female students by programme and public and private provider	36
Table 19: Distribution of TVET-students by region and programme (absolute figures) (2008-9).....	38
Table 20: Expenditures for polytechnics and costs per student (2008-9).....	46
Table 21: Summary of expenditures for polytechnics by division (2008-9).....	48
Table 22: Expenditures for TSCs and expenditures per student	50
Table 23: Expenditures for TTCs and costs per student	52
Table 24: Expenditures for TTCs and costs per student (FY 2007-08)	52
Table 25: MoE spending for TVET	57
Table 26: Funding sources and expenditures for private education (2007).....	62
Table 27: Approximation of private expenditures for (formal) TVET-programmes (2008-9).....	62
Table 28: Public and private spending for TVET	63
Table 29: Hypothetical considerations of the efficiency of the TVET-systems	64
Table 30: Sources of Liquidity and Financiers of VET-Funding.....	68
Table 31: Examples of revenues of BD-VECS (Bangladesh Vocational Education Contribution Scheme).....	83

Executive Summary

This report reviews Bangladesh TVET funding system with regard to present funding levels and regulations as well as future funding opportunities to increase overall funding levels and improve efficiency.

In principle, the TVET system covers formal, non-formal and informal though the common understanding covers particularly the formal and to some extent the non-formal TVET system, including apprenticeships in the informal economy. This report caters mainly to the formal institution-based stream of TVET, whose programmes are accredited by BTEB and where institutions are operating under the Ministry of Education and the Bureau of Manpower Employment and Training (BMET). Yet, it should be understood that several other ministries are also engaged in non-formal TVET, and which are not covered by this report. Only the activities of the Department of Youth Development (DYD) will be presented as an example of the activities of other ministries.

This understanding of focussing on the activities of Directorate of Technical Education (DTE) of the Ministry of Education (MoE) or Bureau of Manpower Employment and Training (BMET) when TVET financing is concerned meets the common understanding, as all the figures mentioned in other studies covers mainly public financing of public institutions, i.e. Polytechnics, Technical Schools and Colleges (TSC) and Technical Training Centres (TTC) funded either through the Directorate of Technical Education (Ministry of Education) or Bureau of Manpower Employment and Training (BMET).

In the fiscal year 2007-08 the allocation for polytechnics and TSCs was Tk 2.73 bln (revised budget); another estimated Tk 0.5 mln was spent by BMET for the 37 TTCs and the Bangladesh Institute of Marine Technology (BIMT). This is a share of 2.2% of the total budget allocation for education, as covered by the Ministry of Education and the Ministry of Primary and Mass Education. For the present fiscal year the MoE-allocation is expected to increase by 5% to Tk 2.87 bln. However, taking into account that the overall budget allocation of MoE is increasing by 10%, this means that the share for TVET is, in fact, slightly decreasing.

Yet, it should be understood that this figure is incomplete as neither the public and private spending for private TVET is covered nor the allocations earmarked for TVET under other Directorates. Thus, an issue of this report is to get a better understanding of overall funding levels.

Firstly, the public allocations for private institutions shall be taken into account. Private education institutions can receive public funding through so-called MPOs, i.e. monthly payment orders, covering 100% of the teacher salaries. In total, 1,100 out of 15,500 private MPO-funded institutions delivers TVET-programmes, i.e. a share of 7.1%. According to statistical figures only 1.9% of all MPO allocations are for private TVET-courses. This would mean that Tk 0.6 bln can be added to the TVET-bill.

Secondly, some Tk 0.7 bln are spent for TVET through the Education Engineering Department, responsible for major construction and capital works, or to finance Technical Teacher Training Centres and

Vocational Training Centres. Thus, public spending for MoE- and BMET-financed TVET can be estimated to be Tk 4.0bln. This is a share of 3.0% of the public education budget and 0.3% of the total GoB-budget. Compared to other countries this figure is very small.

Thirdly, private spending plays an important role in the education system in Bangladesh in general. According to Bangladesh Bureau of Statistics (2009a) private spending for private education amounts to Tk 46bln, a break down of this figure for TVET in this study suggests that Tk 2.3bln are privately financed. However, another approach, starting from the distribution of TVET-students in public and private institutions suggests private spending of Tk 3.9bln for fees. Another Tk 0.9 bln comes from private donations.

Adding up these figures one arrives at Tk 8.8 bln spent by public (45%) and private sources (55%) for the core TVET-system. However, taking into account only the amount of funds allocated in this years' budget (FY 09-10) for non-formal TVET by DYD (Tk 8.6 bln) it becomes evident that even this figure which is already far higher than the picture presented by previous studies is far below the full spending levels. It might be worthwhile aiming at an even broader picture of TVET in Bangladesh, yet this will require far more effort than can be delivered by this consultancy.

According to statistics provided by BTEB the formal TVET-system consists of 4,173 institutions running accredited programmes. However, by the same data almost 900 of these institutions are not reported to have students, all but six are private institutions. It could be that these institutions were registered in the past but are not operating anymore, it might be that they just don't run TVET programmes any more. With regard to funding the core question is, to what extent these institutions receive public funding, e.g. through MPO.

Of those 3,450 BTEB-accredited institutions, reporting to have students, 11% are public while 89% are private. If non-formal institutions are taken into account, the number will probably rise to some 5,000, however, no figures seems available yet.

Almost 500,000 students are enrolled in formal TVET-programmes, of which one third (165,000) are enrolled in public and two thirds in private institutions. A matter of concern is that roughly 85% of students in public institutions are male, while close to 60% of students in private institutions are female. Only one out of 10 female students is enrolled at a public institution!

Even though it can be argued that this gender distribution is due to the prevalence of technical programmes in public institutions, it has to be noted that this is linked to important gender imbalances. As private institutions are financed through fees from the students and their parents, this indicates that male TVET-students receive a public subsidy that is by far larger than that of female students. The question is whether this goes in line with regional imbalances of public and private TVET-institutions.

Table 1 summarises the regional distribution of TVET-institutions in general and the distribution of public and private providers across regions. It indicates that private providers are the major drivers of the

overall regional distribution of TVET-institutions and that 19 out of 20 institutions are private. Since private providers respond to market demand this suggests that demand for formal TVET-programmes is particularly strong in Rajshahi, Dhaka and Khulna. However, a somewhat surprising finding might be that demand seems to be (very) limited in the more prosperous regions of Sylhet and Chittagong, while it is stronger in the poorer regions of Rajshahi and Khula.

	Total number	Regional Distribution	Private	Public
Rajshahi	1 216	38,2%	37,0%	1,2%
Khulna	506	15,9%	15,2%	0,7%
Barisal	263	8,3%	7,8%	0,5%
Dhaka	815	25,6%	24,1%	1,5%
Sylhet	68	2,1%	1,9%	0,2%
Chittagong	313	9,8%	8,7%	1,1%
Total	3.181	100,0%	94,7%	5,3%

Source: BTEB data, FiBS calculations

Table 1: Distribution of public and private TVET-institutions across regions

Table 2 reveals the distribution of students across programmes and regions, indicating that the regional distribution of students is by and large similar to the distribution of institutions.

	Total numbers of students	Computer	<u>Six month short courses</u>	SSC(voc)	HSC(voc)	Polytechnics	Total share of students
Rajshahi	155.417	1,7%	0,1%	16,5%	14,2%	4,9%	37,3%
Khulna	65.669	1,5%	0,1%	6,5%	5,1%	2,6%	15,8%
Barisal	29.819	0,4%	0,0%	3,3%	2,2%	1,2%	7,2%
Dhaka	111.401	1,2%	0,6%	12,3%	6,2%	6,4%	26,7%
Sylhet	9.193	0,1%	0,0%	0,9%	0,4%	0,7%	2,2%
Chittagong	45.003	0,6%	0,2%	4,8%	1,8%	3,4%	10,8%
Total	416.502	5,5%	0,9%	44,3%	29,9%	19,4%	100,0%

Source: BTEB statistics, FiBS calculations

Table 2: Distribution of students by programme and region

However, the relevance of regional and of gender imbalances become evident when reviewing the distribution of students by gender and public or private provider (see Table 3). Particularly when considering the longer formal programmes (SSC(voc) and HSC(voc)) it turns out that share of female students enrolled in private institutions is by far higher than the share of male students, as far as the 2-year programmes are concerned. However, even the majority of male students is enrolled at private institutions.

	Computer Training		Six Month Short Course		SSC Level		HSC Level	
	Male	Female	Male	Female	Male	Female	Male	Female
Rajshahi	5,255	1,656	207	19	50,627	18,228	40,439	18,482
public	0%	0%	23%	1%	19%	9%	6%	1%
private	100%	24%	69%	7%	81%	91%	94%	99%
Khulna	4,721	1,430	220	50	19,400	7,526	13,655	7,758
public	0%	0%	7%	3%	27%	11%	6%	1%
private	76%	23%	74%	15%	73%	89%	94%	99%
Barisal	1,176	346	140	19	9,305	4,557	5,390	3,685
public	0%	0%	0%	0%	30%	12%	12%	3%
private	77%	23%	88%	12%	70%	88%	88%	97%
Dhaka	3,733	1,453	2,253	278	34,243	16,911	16,111	9,661
public	0%	0%	47%	2%	29%	11%	9%	2%
private	72%	28%	42%	9%	71%	89%	91%	98%
Sylhet	378	117	4	0	2,668	1,244	1,207	513
public	0%	0%	0%	0%	59%	28%	27%	15%
private	76%	24%	100%	0%	41%	72%	73%	85%
Chittagong	2,141	431	685	41	13,397	6,449	4,857	2,663
public	0%	0%	52%	0%	42%	23%	16%	6%
private	83%	17%	42%	5%	58%	77%	84%	94%

Source: BTEB-data, FBS calculations

Table 3: Distribution of male and female students by programme, region and public and private institution¹

	Computer Training		Six Month Short Course		SSC Level		HSC Level	
	Male	Female	Male	Female	Male	Female	Male	Female
Rajshahi	76%	24%	92%	8%	74%	26%	69%	31%
public	72%	28%	94%	6%	86%	14%	93%	7%
private	76%	24%	91%	9%	71%	29%	68%	32%
Khulna	77%	23%	81%	19%	72%	28%	64%	36%
public	68%	32%	68%	32%	86%	14%	91%	9%
private	77%	23%	83%	17%	68%	32%	63%	37%
Barisal	77%	23%	88%	12%	67%	33%	59%	41%
public	-	-	-	-	84%	16%	86%	14%
private	77%	23%	88%	12%	62%	38%	57%	43%
Dhaka	72%	28%	89%	11%	67%	33%	63%	37%
public	-	-	96%	4%	84%	16%	87%	13%
private	72%	28%	82%	18%	62%	38%	61%	39%
Sylhet	76%	24%	100%	0%	68%	32%	70%	30%
public	-	-	-	-	82%	18%	81%	19%
private	76%	24%	100%	0%	55%	45%	67%	33%
Chittagong	83%	17%	94%	6%	68%	32%	65%	35%
public	-	-	99%	1%	79%	21%	84%	16%
private	83%	17%	89%	11%	61%	39%	62%	38%

Source: BTEB-data, FBS calculations

Table 4: Distribution of students by gender, programme, region and public and private institution

Looking at the regions more in detail it turns out that the share of students enrolled in private institutions is far higher in the poorer regions than in the better-off regions. The same applies to the share of female students enrolled in private institutions. Table 4 clearly indicates that share of female students is higher in private institutions than in public ones. Again the share is particularly high in the worse-off regions, while much lower in the better-off regions, though still far higher than the share of male students.

¹ Student numbers by gender are not available for polytechnics.

This analysis clearly indicates that strong regional as well as gender imbalances exist. As public institutions are almost completely financed by the government and student fees are low compared to private institutions this is linked to imbalances in the distribution of funds by gender. This is not compensated by the female stipend programme. Thus, this analysis suggests to introduce a different allocation mechanism of the TVET-system. Several options exist:

- private institutions receive a comparable allocation (in relation to the costs of the programmes) from the GoB than public institutions;
- the input- and supply-oriented financing system is transferred to a demand-led system, e.g. through the introduction of vouchers², combined with the increase of fee levels at public institutions.

Both approaches are limited by the fact that this would require an additional budget allocation of several billion Taka from the government. Even when taking into account that it was stated several times during the consultants mission in Bangladesh that additional funds for the establishment of new institutions are available, the replacement of private by public sources would only be linked to a crowding-out effect of private sources which could be used to further improve and expand the system. In addition, the preparedness to pay by students and parents would not be utilised to further improve and expand the system.

Thus, fees should not be abolished but introduced for public institutions as well, linked to the introduction of a Bangladesh Vocational Education Contribution Scheme (BD-VECS) in which students receive a loan that has to be repaid after completion of the programme and successful transition into the labour market (see chapter 7.3.1 for some details). Further discussion is required to specify the voucher system as well as the BD-VECS, this is part of the 2nd phase.

However, the introduction of a loan scheme will not be sufficient to increase the funding levels as would be required to expand the system and to upgrade the present institutions as is necessary to bring them in a position to respond to the requirements of the labour market.

One option, which is applied in many countries around the world, is a training fund, where companies contribute a certain share, usually 1 to 2% of their wage bill. While this is an approach that is suitable for larger companies, it is usually only of limited value and support for SMEs. Although this limits the role a training fund could play in Bangladesh, since the 90 or even 95% of the companies are SMEs, this does not imply that a fund will not be useful.

Another approach which is already implemented in Bangladesh is PPP, where national or international donors provide funds, either as loan or grant, to establish and equip new or already existing institutions. Recent examples – though different in detail – are the Bangladesh-Korean TTC, MAWTS, Grameen

² The term vouchers is used here for all instruments that are related to demand-led approaches, including learning accounts, training cheques or so-called ASH (Average Student Hours).

Shikka or UCEP; further negotiations are taking place with the World Bank and the Asian Development Bank.

A weakness of this approach is that such institutions, particularly if publicly owned are often not equipped with adequate funds to ensure long-term functionality of newly established or refurbished TVET-institutions. Thus, the provision of international funds, whether grants or loans, should depend on to agreements on long-term matching funds from the GoB to ensure a sustainable operation of TVET-institutions and to ensure long-term returns on such investments.

Another question in this regard is what the interest rates of such loans are. The higher the rate the lower is the net return to the country. As presented more in detail in section 2.2 it seems plausible that the returns of TVET are not very high, so that reasonable lending rates should probably be below 5%.

Positive examples of PPP in the sense of sustainability are also available in Bangladesh where funds are utilised to establish privately run TVET-enterprises. MAWTS can be named as an example; the future will show whether Grameen Shikka will be successful, which is obviously following this approach. Based on such examples, it should be investigated which role Corporate Social Responsibility (CSR) could play by supporting the establishment or the operation of TVET-institutions.

Eventually, the question is, which role apprenticeship could and should play in the formal and informal economy. Since it seems to play a certain role in the informal economy it seems of interest to identify the role that an Apprenticeship Voucher could play in this.

1. Introduction

The technical and vocational education and training (TVET) system in Bangladesh is undergoing significant reform and potentially major structural change, if the plans of the TVET Reform Project are realised over the next years. The aim is to transform the present supply-driven system to a system that is responsive to the technical education and training needs of the population and industry. The new system will deliver competency based training and assessment.

Reforms are aimed at the whole TVET system including how it is funded. The system needs to expand and raise quality and service levels. For this to happen new sources of funding and the improved funding mechanisms are required. Governments are commonly challenged by the need to diversify sources of funding.

The purpose of the TVET Funding Review in Bangladesh was to assess the present system, identify its strength and weaknesses and identify options for the reform of TVET financing system. This report will be presented at a consultation workshop scheduled for early November 2009. A final report will be produced as an outcome of the workshop.

This report is divided into four sections. The next chapter will briefly review the economic environment for TVET as well as political targets and priorities. Chapter 3 provides an overview of the present TVET-system, the structures of public and private institutions and the number of students enrolled. Chapter 4 examines the budgeting principles and the unit costs for different institutions. It also aims to assess the amount of money that is spent on TVET in Bangladesh. The final chapter presents options for improvement through expanding the amount and sources of TVET funding as well as reviewing the funding mechanisms.

2. The Environment of Technical and Vocational Education and Training

2.1 Economic development and future priorities

The new government has a clear vision of achieving GDP growth rates of about 10% over the next 8 to 10 years (MoF 2009). Even in recent years growth rates are quite substantial and much higher than international (world-wide) levels at 6.2 and 6.4% in 2008/09 and 2007/08, respectively. This is slightly less than the growth rates of China, but well ahead of India, whose economic development is well ahead of Bangladesh.

The drivers of economic development in Bangladesh are the industry and services sector whose growth rates are well above the agricultural sector. However, even the growth rates of the agricultural sector were above 4%, mostly.

Future priority areas

Examining future priorities of the Government of Bangladesh (GoB), as presented in the Mid-term Budget Framework (MTBF), six priority areas are identified (see MTBF, p. 8-10).

- Sustaining economic development in the face of the global financial and economic crises
- Enhancing domestic demand
- Undertaking effective action against corruption
- Ensuring adequate power and energy supplies
- Eliminating poverty and inequality
- Establishing good governance

Although education and skills development would fit under several headlines, it is not mentioned, neither explicitly or implicitly. Only the female stipend programme is mentioned with its impetus to improving gender equality (MTBF, p. 11). This might support the impression that education is not extremely high on the priority list. This impression may also be supported by the budget for the FY 2009-10 approved in June 2009. It seems that the education and training sector received a reduced share compared to previous years. However, it should be noted, that the budget share for education remains the biggest one of all ministries, if both ministries – the Ministry of Education and the Ministry of Primary and Mass Education – are counted jointly. And in fact, given the overall budget increase by almost 20% as compared to the previous year, an increase of the education budget of about 10% is quite a substantial increase in absolute terms.

According to official figures the budget share for education is about 10%, while that of TVET is 2 to 3% of the education budget, depending on the coverage (i.e. inclusion of BMET or not). However, it is worth noting here already, that public funding is only one source for education in general as well as TVET in particular and it might even be the lower share compared to private funding (see chapter 4).

Public debt

With regard to future financing opportunities and burdens, it seems to be worth looking at public debt as well as interest and repayment requirements. According to MTBF 09-12, the share of debt financing is increasing from 4.1% of GDP in FY09 to 5% in the next years till 2012. This will lead to an increased allocation of budget funds for interest and re-payments of loans. Almost 20% of the budget's revenues of the

next few years as covered by MTBF are to be spent for interest payments (p. 33), debt repayments increasing it further.

In relation to GDP, total debt amounts to almost 45% of GDP, though this share may slightly decrease over the next years, provided GDP grows as projected.

This suggests that debt financing as source of improving the TVET-system might have a limited potential although this would mean on the other hand that any TVET-expansion would have to be financed largely by private sources.

2.2 Returns to Education

According to a World Bank study (2008) the returns to education in Bangladesh as measured by income returns are quite low, particularly compared to other countries in the region. On average they are the lowest for primary education (3.6%) and highest for undergraduate education (9.2%). Rates of return for secondary education are at around 6%, with junior secondary education slightly higher than for senior secondary (6.2% and 5.9%, respectively). Female returns are higher than male returns at the lower levels (primary and lower secondary) but are lower at the higher levels (upper secondary and undergraduate education). Jobs in the public sector increase returns to 8.4% for women, but decrease them to 5.9% for men. This suggests that private sector employment is particularly rewarding for better educated men. Returns in urban areas are higher for women (9.3%) than for men (7.2%). In contrast, returns are very low in the daily wage sector (2.1%), but particularly low for women (1.0%). Yet, the rate of 2.2% for male workers in this sector suggests that this sector is dominated by male workers.

The fact that the rates of returns are modest for most education segments may have implication concerning the modes and distribution of funding. Firstly, such modest returns suggest caution for individuals as well as for the society to finance an extension of the TVET system through (mortgage) loans. To gain a net-benefit from investment into education the returns to education need to be higher than the interest rate; i.e. if the interest is at a rate of 5%, returns need to be higher than that. Yet, loans from international donors are often lent at lower rates.

Although there are no calculations of the rates of return to TVET yet, it seems quite plausible to expect that they are at the lower boundary of the rates mentioned above, due to internal and, particularly, external efficiency problems.

It might be an option for the ongoing TVET reform project to support the monitoring of the rates of return at different levels of TVET enabling institutions and ministries to improve such returns. However, it should be noted that the data requirements are quite high and given the experiences made while conducting the study at hand, data availability, completeness and reliability is a matter of concern. To the consultants opinion a starting point into this direction would be to conduct tracer studies, to better understand the

link between TVET and the labour market and role of TVET for individuals' education pathways and to identify good-practice.

2.3 Budget expenditures for education and TVET

As far as the funding of education, and particularly, TVET, is concerned, there seems to be room for improvement. This is even more of importance, as the share of funding for education in relation to the whole budget is only slightly above 10% and the share of public expenditures in relation to GDP is limited at around 2.0% (MTBF, p. 36). Yet, it should be noted that this still is the highest share as far as public expenditures for certain sectors and ministries, respectively, are concerned. Secondly, this figure seems to be related to the expenditures of the two ministries of education and primary and mass education only, though the budgets of other ministries also contain allocations for training purposes. Thirdly, private spending on education is obviously remarkable and is not included in such calculations (see below chapter 4.4.2).

It is common in international comparisons to review budget shares for education as well as public expenditures in relation to GDP. However, it should be taken into consideration that this exercise contains several limitations and restrictions. A very important factor is that demography has an impact on budget allocations for education; countries with higher birth rates and, thus, a bigger share of young people would have to spend more on education than countries with a lower rate. Since Bangladesh is a country with a growing share of young people, one would expect a higher share for education than 10%, even when acknowledging the importance of other areas, e.g. power and infrastructure. A better figure than expenditures for education in relation to GDP is to look at the ratio of per-student spending for education in relation to GDP per capita (Dohmen 2005). However, there is no overall figure on the expenditures for education in general nor for TVET in particular; even the total number of students enrolled at TVET institutions is often not available. As presented in section 3.3 students are enrolled to a different extent in formal and non-formal programmes at public (and private) institutions and are not necessarily covered by statistics; the length of programmes varies etc. Yet, all these issues affect the calculation of unit-costs which is a crucial input to this indicator.

However, a first approximation could be based on the (preliminary) unit-cost calculations of this study (see chapter 4.3) estimating an expenditure of Tk 10,700 per student enrolled at polytechnics and of Tk 12,100 at TSCs. As GDP per capita is estimated at \$1,500 (Tk 105,000) (CIA World Fact Book) the ratio is 10.2% and 11.5%, respectively.³ A comparison of these figures with other countries is limited, as this indicator is rarely used and if so related to secondary education as a whole, not distinguishing between general and vocational education and training. However, some figures for developing countries are presented in the annual OECD-publication "Education at a glance" (OECD 2009) allowing at least a rough

³ It should be noted that this is an estimation only and that data restrictions apply (see chapter 4.3 for more details),

comparison. According to this report, Brazil and Chile are the countries with the lowest spending levels for secondary education, spending 16% and 15%, respectively, of GDP per capita per student.

Taking into account that unit-costs per student in general education are usually far lower than that of TVET, it can be assumed that the comparable ratios for Bangladesh are well below 10% and, thus, much lower than these figures. This suggests an increase in education spending for Bangladesh.

Secondly, with regard to macro-level data on education as well as TVET the composition of a system is important. School-based systems would – *ceteris paribus* (i.e. all other things being equal) – require higher public budget allocations than company-driven systems, such as the German dual system for example. Thirdly, salary levels are a factor that drive education budgets, due to the commonly high share of salaries on total expenditures for education. Teacher salaries are limited in Bangladesh, as is the case in many developing countries. As salaries are an important factor of individual career decisions an increase of salaries would most probably increase the attractiveness of teaching and, thus, improve the quality of the teaching force. This is of particular relevance for the TVET system since good teachers may be poached by companies by offering better salaries.

In the year 2000, Malaysia, Thailand, Jordan and the Philippines spent more than 15% of the overall budget on primary, secondary and post-secondary education (OECD 2003, p. 51). In contrast, spending level for education in Bangladesh has been slightly above 10%. India and China spent more than 12%; while Indonesia spent 5%.

A recent overview by UNESCO confirms this finding that the share of education in relation to total public expenditure exceeds usually 10% by far. Some countries, such as Thailand and Malaysia are well above of 25% (Unesco Institute for Statistics 2006).

Education expenditure in relation to GDP was generally higher than 3% (except for Indonesia and Uruguay) and on average above 5% (OECD 2003, p. 50). This finding is confirmed by a recent UNESCO study, highlighting that public education expenditures are above 3% for all but three countries under investigation (UNESCO Institute for Statistics 2006). Only one country spent less than 2%. According to Human Development Report 2007/08 Bangladesh spent 2.5% of GDP for education,⁴ public expenditure only. Other countries in the region spent often more on education. For example, India spent 3.8%, Nepal 3.4%; Mongolia 3.5%, Sri Lanka 3.2% (1995). Only Pakistan has similar low levels (2.3%) (<http://hdrstats.undp.org/en/indicators/100.html>; retrieved: 11.09.09).

In addition, the OECD (2003, p. 54-5) estimated that education expenditure in relation to GDP will grow between 2000 and 2015 in most countries under consideration; due to demographic trends. In some coun-

⁴ The figure refers to the most recent year of the period 2002-05 for which data is available (<http://hdrstats.undp.org/en/indicators/100.html>; retrieved: 11.09.09).

tries that growth rate is expected to exceed 2 percentage points. If this increase would apply to Bangladesh the country would almost have to double its education budget.

Although there is no relationship between education expenditure and economic development, it seems that higher education expenditures are linked to a better economic situation (OECD 2003, p. 69). However, it should also be noted that in other countries with low levels of economic development, such as example India, China, the Philippines and Thailand, their educational expenditure levels are far beyond the Bangladeshi level. Considering public spending only, for example Malaysia spent 5.0%, already almost a decade ago.

In most countries, public spending is higher than private spending. In contrast, there is a strong indication that private spending in Bangladesh exceeds public spending for TVET (see chapter 4.4). Although this might be justified and politically acceptable, if this refers to the fact that particularly the better-off participate in (upper) secondary and particularly tertiary education, such an approach would have to be supported by a student support system serving children from economically disadvantaged backgrounds. However, this is not yet in place in Bangladesh, since the merit based stipend system favours particularly the children from better-off families whose educational performance will be usually better than that of children from economically worse-off families.

According to the consultants knowledge, data on TVET are not comparable, given the different roles TVET plays among different countries. This is different to indicators on education in general of certain segments of education, as for example, secondary or higher education., which are far more comparable than technical and vocational education.

However, there is sufficient evidence that funding levels for education in general and TVET in particular are (very) low compared to other countries, even to countries at a similar level of economic development. Thus, one of the core questions of this study is, how to increase funding levels for education and TVET.

2.4 Labour Market Development

2.4.1 Labour Force Development

The Bangladesh Bureau of Statistics (BBS 2008) has recently published the Labour Force Survey (LFS) 2005-06, which provides insight into several relevant issues.

In relative terms, employment is shifting from agriculture to industry and, particularly, to services sector jobs, though employment in the agricultural sector is still growing at a rate of 0.7%. Yet, job growth rates in industry and service sector are higher, with 3.9 and 5.4% respectively. In the industry sector particularly construction is the job driver (+7.5%), while growth in manufacturing (+2.8%) is lower. Actually, the share

of agricultural jobs is 46%, while that of the services sector is largely unchanged (23%) and service sector employment increased to 31%.

The LFS 2005-06 (p. 53) clearly indicates that the share of the labour force engaged in the primary sector (agriculture, forestry, and fishing) is almost unchanged, though slightly diminishing. Of some interest is the gender difference; women get more involved and men less. Most industry areas, such as manufacturing (average growth rate: +6.4%), wholesale, retail and vehicle repair (+5.2%) show higher labour force numbers as well as shares and are, therefore, growing, while construction (-0.4%), electricity, gas and water supply (-8.1%) are decreasing. Almost all service areas, except public administration and defence (-3.7%) and health and social work (-10.4%), are of increasing importance. Hotels, restaurants (+8.1%), logistics (9.7%), real estate (7.2%) and, particularly, financial intermediation (+31.5%) are growing labour market segments. Yet, it should be noted that the size of these segments is different. For example while 23 mln people are employed in agriculture, hunting and forestry, financial intermediation accounts for 220,000 jobs.

Finally, it should be noted that Bangladesh is a big exporter of labour force. Remittances from overseas employment are currently higher than the export income of any one industrial sector.

2.4.2 The role of TVET in the labour market

A major issue with regard to TVET is the limited amount of people with technical or vocational qualifications. According to the LFS only 64,000 people of the overall labour force of about 49.5 mln report to having technical and vocational qualifications. It should be noted that graduates from the formal TVET-system might also have sorted themselves under other options, such as SSC/equivalent, HSC/equivalent or degree.⁵ Overlap seems plausible, since a total output of only 64,000 graduates from the TVET-system over the last decades would be a very small figure.

Another very interesting finding in this regard is that only 3.4% of the population aged 5 years and above report to have received any kind of training at all. Here, 1.34 mln (1.1%) report that they received technical or vocational training, almost 800,000 (0.65%) mention on-the-job-training and 356,000 youth development training, while approximately 760,000 report different areas of training (garment, welding, motor mechanics, nursing etc.). Finally, 540,000 people report other training.⁶

It is evident that already these two sections provide ample room for further questions. Yet, it seems possible that the highest level of education is reported so that particularly those who underwent further stages of education will not have reported technical and vocational qualifications, but their polytechnic or university degree.

⁵ As far as could be established, the LFS does not provide any clear definition on technical and vocational education and its distinction to SSC and HSC.

⁶ It seems that multiple answers to this question were possible.

Given the limited relevance of technical/vocational education reported in the LFS in general (0.13% of the labour force) and the issues mentioned above, its share is above average in construction (0.2%) as well as in many service sectors (e.g. financial intermediation (1%), public administration/defence (0.45%) and real estate (0.4%).

The share of people with technical or vocational qualifications in professional/technical occupations (0.9%) and as clerical workers (0.4%) is above average. Service workers and sales workers are only slightly above average at 0.2%. In contrast, the share is below average in the primary sector for production, transport labourer.

In addition, it should be noted that the unemployment rate of technical/vocational training (7%) is above average (4.25%). However, unemployment for women is slightly below their overall average of unemployment.

Looking at the younger age cohorts (15-29 years), the ratio of TVET (0.13%) is unchanged. However, it should be noted that the gender composition of people with TVET qualifications has changed drastically in recent years. While, in general, the ratio of males with technical or vocational qualifications in the total labour force is higher than females (0.14 to 0.11%), among the younger cohort the share of women is higher (0.19% to 0.11%).

Young Bangladeshis are particularly employed in agriculture, hunting and forestry (primary sector), manufacturing, wholesale & retail and in logistics. These three segments of the labour market account for 80% of the whole labour market for young people, with 40% employed in the primary sector.

Unemployment tends to be concentrated among the younger age groups, the more educated, and women (p. 19). However, underemployment is a larger problem than unemployment.

2.4.3 Demography and the labour market

One of the biggest challenges for the labour market is the increasing number of young people. Due to demography the size of the labour force will increase strongly over the next years. Between 2005 and 2015 the working age population will grow by about 22 mln people (p. 20f). Thus, to cope with this growth of unskilled, semi-skilled as well as (highly)-skilled labour, the job market will have to grow at a substantial rate.

This demographic growth will surely affect all areas of education, though at different levels and times. Given the different qualification levels required in the economy this suggests a well-structured strategy covering the whole range from basic vocational skills to highly-skilled vocational and technical skills. As far as could be established the delivery of basic vocational and technical skills is far more prevalent in other ministries than education (see chapter 4.4.1.3 concerning the role and plans of the DYD as one example of basic education and training).

As long as the successful completion of grade VIII is the entry requirement for (formal) TVET, the first provision would be the extension of primary and junior secondary education. Senior secondary education and TVET will have to grow with increasing graduation rates or TVET in general will have to be opened for other pre-qualification levels. Bangladesh has – as far as the consultant could establish – a numbers of programmes, mainly funded by other ministries, that cater for this target group. For a well-founded discussion of consequences for the distribution of funds among certain segments of education, including the role of TVET, it would be worth extending the information of this segment. This is beyond the resources of this consultancy.

Although it is obvious that funds for TVET (as well as for education in general) will have to grow the core question is how can a structured systemic approach look like; this requires a broader discussion at systems level which does not seem to take place yet. However, some issues on funding will be discussed in chapter 5.

2.4.4 Migration and overseas employment

Although migration is considered an option to cope with the demographic challenge, this will be only one side of the coin. At the moment the number of Bangladeshis working abroad seems to be relatively modest with less than 560,000 estimated to be working overseas in April 2009 (Byron 2009). Prior to the current economic crisis in early 2008, the number was 875,000 (BMET).⁷ The other side of the coin may be the risk that in the long run particularly the better educated will leave the country to work abroad.

With regard to the ambitious goal of achieving growth rates of 10% and more within 10 years, an increasingly skilled labour force is required. In fact, the strategy of increasing skill levels should not be to look at the formal education sector only, but also at the non-formal as well as informal sector of education, including technical and vocational education and training.

2.5 Poverty

With regard to financial means and options, it should also be taken into account, that poverty is still persistent, since 40% of the population (58 mln) live below the poverty line (MoF, PPP-paper, 2009) and many more just above. There is a growing East-West difference in poverty; while poverty rates are declining in East- and South Bangladesh, they are persistent in Western and Northern areas. Poverty is particularly declining in Dhaka division, followed by Chittagong and Sylhet (World Bank 2008, p. 13). Although polytechnic education has a relatively high share of the TVET-students in these divisions (see chapter

⁷ The overall amount of remittance for the year 2008 amounted to almost USD 9 bln (Financial Express, March 24, 2009). However, this may drop sharply this year due to the financial and economic crisis and the probably decreasing numbers of overseas employees..

3.3.2), particularly in the latter two, TVET does probably not contribute a lot to this development, due to the modest size in absolute numbers.

2.6 Summary

The previous section reviewed some important aspects which are of relevance for education in general and TVET in particular.

Bangladesh's economy has been growing and is expected to grow further at remarkable rates. However, following the Labour Force Survey the role of TVET is very limited, only 0,13% of the labour force report to have such qualification. Comparing this figure with the number of more than 400,000 students enrolled in formal TVET only (see chapter 3.3), this figure is strikingly low and suggests further investigation.

Even if TVET is one pathway to higher education, on the one hand this finding raises the question of the efficiency of the education system in general, and on the other hand it raises the question of the suitability of TVET qualifications for the labour market. Taking the limited labour market success rates of TVET graduates into account, this clearly suggests that the limited labour market responsiveness of the TVET system is a serious issue. The institutions visited by the consultant provide evidence of the segmented (formal) TVET system. On the one hand there are few (public and private) institutions with modern and up to date equipment, sometimes charging high fee rates, and on the other hand there are (again public and private) institutions with outdated and insufficient equipment. Thus, renovation and rehabilitation of most public TVET institutions is an important issue to bring them in a basic position to being able to respond to labour market requirements. The establishment of new institutions to respond to increased social demand due to growing number of young people is another requirement.

Thus, it is obvious that major investments into the TVET-system are needed, requiring huge sums. The establishment of new TVET-institutions is only one side of the coin, upgrading and improvement of existing institutions is the other. This is the more of importance as newly established institutions are obviously not equipped with adequate funds to keep the equipment up-to-date and to operate properly.

3. Bangladesh's TVET system

3.1 Introduction and overview

The TVET-system is highly segmented and lacks transparency. It comprises public and private TVET-institutions (TSC, TTC and Polytechnics), with private institutions to be distinguished into those being (partly) publicly funded through so-called Monthly Payment Order (MPO) and those which are not. TTCs and TSC as well as comparable private institutions offer 2-year programmes at lower or upper secondary

level. The former are called SSC(Voc), the latter HSC(Voc) and HSC (BM)⁸. Entry requirement is successful completion of grade VIII and grade X, respectively. These schools and colleges also offer a number of formal, i.e. accredited by the Bangladesh Technical Education Board (BTEB), and sometimes also non-formal (so-called self-supporting) short-courses short-courses.

The latter, the self-supporting short-courses, are usually solely funded through tuition fees. Formally, these fees remain at the institution and increase their revenues, though, in fact, regulations determine the usage of these funds, particularly for teacher salaries and, additionally, for teaching and raw materials etc.

Private institutions also offer formal and non-formal programmes. Fees are the core income source of private institutions (see chapter 4.4.2), whether MPO or non-MPO institutions. Furthermore, no governmental rules apply to the utilisation of private institution revenues.

Polytechnics and some Monotechnics offer 4-year diploma courses; entry requirement is graduation from senior secondary education.

3.2 The number of public and private TVET providers

It appears quite difficult to get an actual overview of the real size of the present system. One reason for this is that the most recent statistical data is from 2005 and no single statistics covers the whole sector, i.e. public and private as well as formal and non-formal TVET. Another reason is that several ministries are involved in TVET and that there is not one single TVET-system but a TVET-system with several segments. The most important ministries as far as formal TVET is concerned are the Ministry of Education (MoE) and the Ministry of Expatriates Welfare & Overseas Employment (MoEW&OE). Both ministries have special units, which are responsible for the operation of TVET, i.e. the Directorate of Technical Education (MoE) and Bureau of Manpower Employment and Training (BMET) (MoEW&OE). However, several other ministries are also engaged in technical and vocational education (see Figure 1 for a preliminary overview). A third reason is that non-formal programmes do not need to be accredited through BTEB. Thus, although statistical information will be collected from different sources the picture will still be incomplete.

According to recent figures, which were compiled for this report from BTEB, which is responsible for accreditation of institutions delivering formal TVET-programmes, i.e. particularly certificate-programmes [SSC(voc), HSC(voc)] at TTCs and TSCs and Diploma programmes at polytechnics, an actual figure arrives at a total number of 4,173 institutions offering programmes accredited by BTEB. However, of this figure one fifth, or 895 exactly (889 non-government and 6 public institutions), do not have any students according to this data. Thus the number of operating institutions can be reduced to 3,278.⁹ With regard to

⁸ SSC and HSC Vocational and HSC Business Management

⁹ The alternative option would be that these institutions have students which are not included in the statistics, for whatever reason.

financing a crucial question is to what extent these institutions without students are getting public funds for TVET-programmes.

Of those 3,278 institutions reporting student numbers, 190 are public and 3,088 are private (see Table 5). This suggests that a share of 6.2% of all institutions accredited by BTEB is public, while 93.8% are private.

TVET-institutions by programme	Absolute numbers			Share		
	Private	Public	Total	Private	Public	Total
Computer only	261		261	8.2%		8.2%
Short courses only	33		33	1.0%		1.0%
Computer & Short courses	18		18	0.6%		0.6%
SSC only	1,359	54	1,413	42.7%	1.7%	44.4%
HSC only	1,067	2	1,069	33.5%	0.1%	33.6%
SSC & HSC	145	63	208	4.6%	2.0%	6.5%
Diploma only	83	44	127	2.6%	1.4%	4.0%
Computer & SSC	4		4	0.1%		0.1%
Computer & HSC	20		20	0.6%		0.6%
Computer & Diploma	4	1	5	0.1%	0.0%	0.2%
Short courses & SSC		2	2		0.1%	0.1%
Short courses & HSC	2		2	0.1%		0.1%
Short courses & Diploma	3	2	5	0.1%	0.1%	0.2%
Computer & Short courses & Diploma	2		2	0.1%		0.1%
SSC & HSC & Diploma	2		2	0.1%		0.1%
HSC & Diploma	10		10	0.3%		0.3%
Total	3,013	168	3,181	94.7%	5.3%	100.0%

Table 5: Number and share of TVET-institutions by programme¹⁰ (2009; source: BTEB)

Reviewing the structure of public and private institutions some overlap as well as several differences can be identified. Public institutions are largely concentrated on SSC-programmes only (32.1% of all public institutions), SSC and HSC-programmes (37.5%) or on Diploma programmes (26.2%). The share of public institutions offering 2 or 4-year programmes in combination with short or computer training is very limited. In contrast, although 80% of private institutions offer either SSC- or HSC-programmes (45.1% and 35.4%, respectively) 10% are engaged in short courses and/or computer training, with the majority of them engaged in computer training only. 5% and 3%, respectively, of private institutions offer HSC or Diploma programmes.

These figures provide a different picture to the TVET statistics shown so far. A brief summary on the outcomes of previous statistics is presented in the box below to allow a more detailed review of the differences. Important is the reduced number of operating TVET-institutions, 3,278 instead of 4,200. A review of the institutions without students indicates that the majority are private institutions.

¹⁰ The table presents only those combinations that yield results. It should be noted that the figures on the structure of public and private institutions is based on data initially delivered by BTEB. Thus, real figures may be slightly different.

Table 6 provides a breakdown of the 193 public institutions which are included in the BTEB-data:.

Technical School and College	64
Technical Training Centres	19
Textile Vocational Institute ¹⁾	41
Agriculture Training Institutes	13
Women College	2
District Textile Institutes ¹⁾	5
Polytechnics and Monotechnics	49
Total	193

Source: BTEB, FiBS calculations
Remarks: 1) 1 District Textile Institute could not be identified as such

Table 6: Number of public institutions covered by BTEB-statistics (2009)

However, another 177 public institutions are obviously either not having students in formal BTEB-programmes or not (yet) covered by the statistics of BTEB (see Table 7). Their non-inclusion into BTEB-statistics may have different reasons. One reason could be that BTEB-data only include institutions running formal (BTEB accredited) programmes. Another reason might be that some institutions were established only recently and are not yet registered with BTEB.

Technical Training Centre (est.) ¹⁾	18
Youth Training Centres (public)	53
Bangladesh Marine Institute of Technology	1
Women Technical College (Min of Woman Affairs)	64
BRDB Technical Colleges	38
BSCIC Technical Colleges	3
Total	177

Source: BTEB, FiBS calculations
Remarks: 1) Number of non-reported TTCs estimated on basis of 37 TTCs

Table 7: Number of public institutions not covered by BTEB-statistics

Box 2: Data on the TVET-system according to other (previous) statistics

The following Figure summarises some figures and, also, assigns institutions to groups according to “ownership” (public and private institutions) as well as funding sources.¹¹ Summarizing these figures, roughly 330 public institutions exist. Comparing this figure with the number of private institutions it is less than 10 %, only in relation to the number of private entities presented in the upper right quarter of Figure 1, covering only those private institutions accredited by BTEB. However, it should be noted that the number of public as well as private providers may rise, when institutions are included, which are aligned to other line ministries offering non-formal courses. Furthermore, it is questionable, to what extent private providers are covered by these statistics, since the figure only includes those private institutions running programs accredited by BTEB.

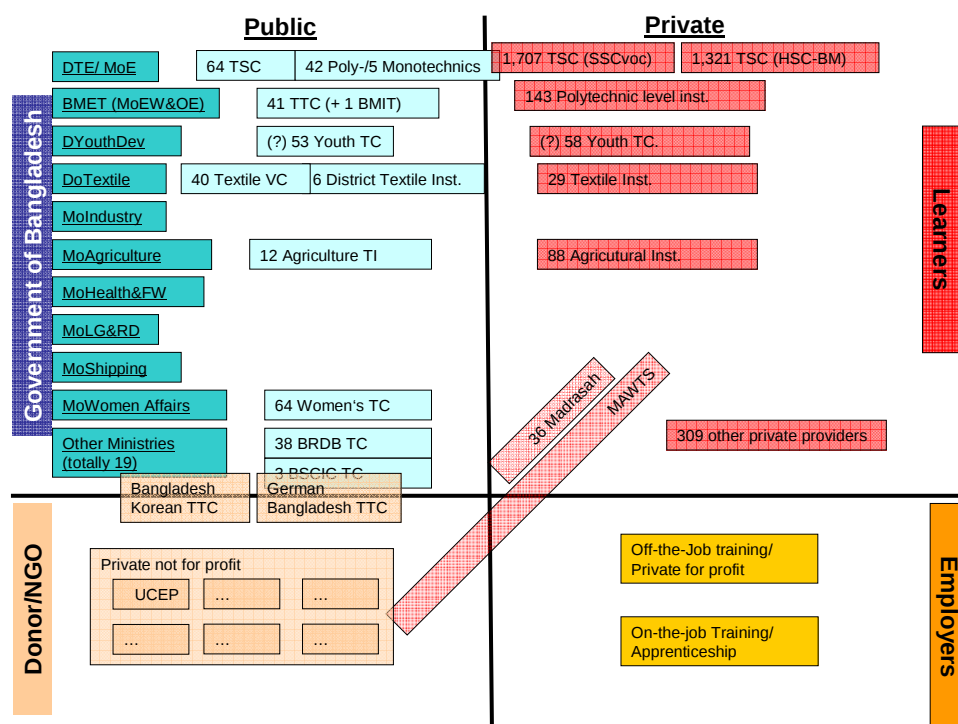


Figure 1: A preliminary overview of TVET-institutions in Bangladesh

Additionally, according to BANBEIS¹² for the year 2005 the following figures apply: polytechnics: 134 (obviously public and private), VTI/TSC (64), Commercial institutes (16), TTCs (13), SSC(voc) (1,224), HSC(BM) (1,180) and other technical institutes (97). These numbers add up to 2,728 public and private institutions. If the number of public institutions mentioned above (330) does not change too much, the public share increases to 12%. However, it should be taken into consideration that these figures don't match with those presented in Figure 1, drawn from official sources.

The Banbeis-statistics also indicates an increase of technical and vocational education institutions of about 140% between 2000 and 2005.

Finally, a recent BBS-statistics (2009a) on key findings on private education 2007 suggests that 4,054 private institutions offer TVET-courses.¹³ Provided that this data are correct, 5.14% of all private institutions offer TVET-courses.

¹¹ These figures are collected from different sources (particularly ILO/Comyn 2009, Rahman/Mondal/Islam 2008).

¹² The data are collected from BANBEIS-website (www.banbeis.gov.bd/trend_analysis2) (2 July 2009).

¹³ The final figure may be higher since schools can offer general and vocational education courses and may be summarised as general education institutions.

reported by BTEB to have no students. The number of public institutions is 370 or 377, (if the institutions currently without students are included). The number of private institutions, covered by the different statistical sources gathered for this report, is 3,088 or 3,977 (inclusive of institutions which currently do not report enrolments), respectively. Thus, the share of public institutions could be 11%, if only the institutions reporting the enrolments are considered, or 7.4%, if all institutions that may offer TVET-programmes, are included. Yet, the latter figure should be considered as an estimate only.

Distribution of (formal) TVET-institutions across regions

Figure 3 and Table 9 provide an overview on the distribution of public and private providers across the six divisions in Bangladesh. Figure 3 indicates that the distribution of TVET-institutions offering formal programmes is very different. Almost two thirds of all institutions are located either in Rajshahi division (38%) or Dhaka division (26%). In contrast, Sylhet division has a share of 2% only, and Barisal of 8%. Chittagong division (10%) and Khulna division (16%) are in between.

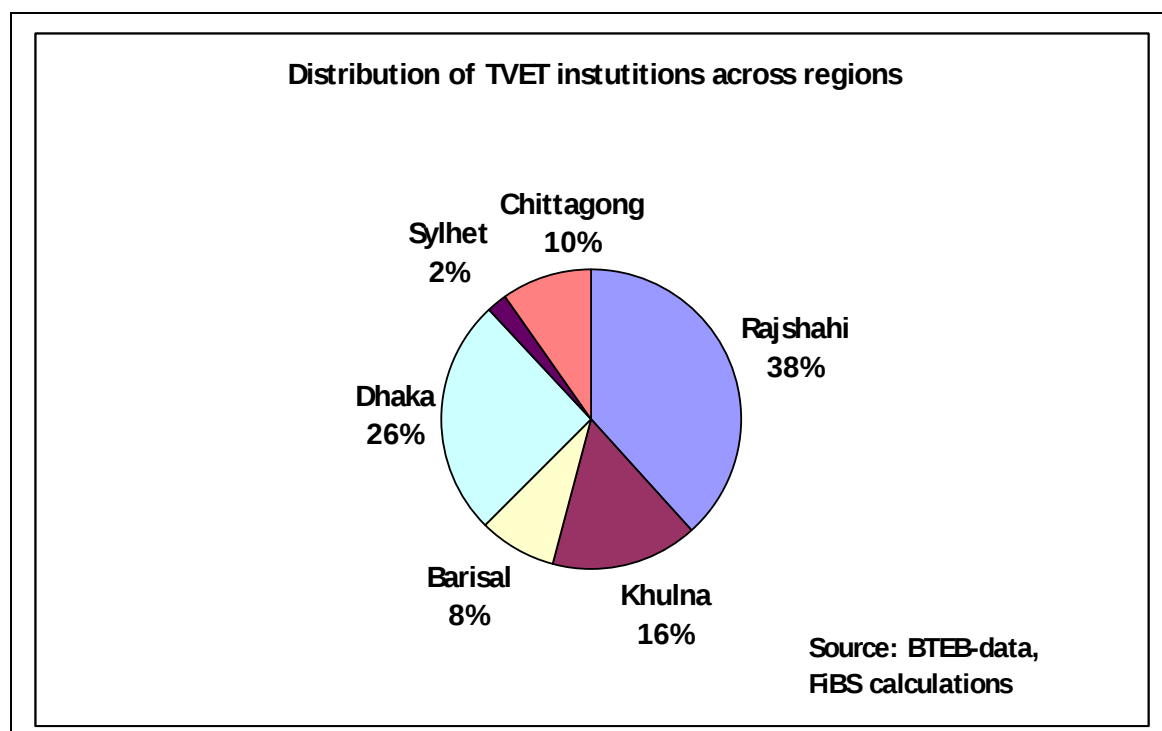


Figure 3: Distribution of TVET-institutions across regions (2008-9)

Analysing Table 8 it becomes evident that private providers strongly influence this distribution. While public institutions are far more present in the economically better-off divisions, i.e. Chittagong (11.2%) and Sylhet (10.3%), private institutions are more represented in weaker regions.

	Private	Public
Rajshahi	96.8%	3.2%
Khulna	95.5%	4.5%
Barisal	94.3%	5.7%
Dhaka	94.0%	6.0%
Sylhet	89.7%	10.3%
Chittagong	88.8%	11.2%
Total	94.7%	5.3%

Source: BTEB data, FIBS calculations

Table 8: Public and private TVET-providers across regions (summary) (2008-9)

Looking at the distribution of public institutions across regions (see Figure 4) it turns out that their location is different than the overall Figure. Almost three quarters of public institutions are located in three regions, Dhaka (29%), Rajshahi (23%) and Chittagong (21%), leaving only 4% for Sylhet and 9% for Barisal.

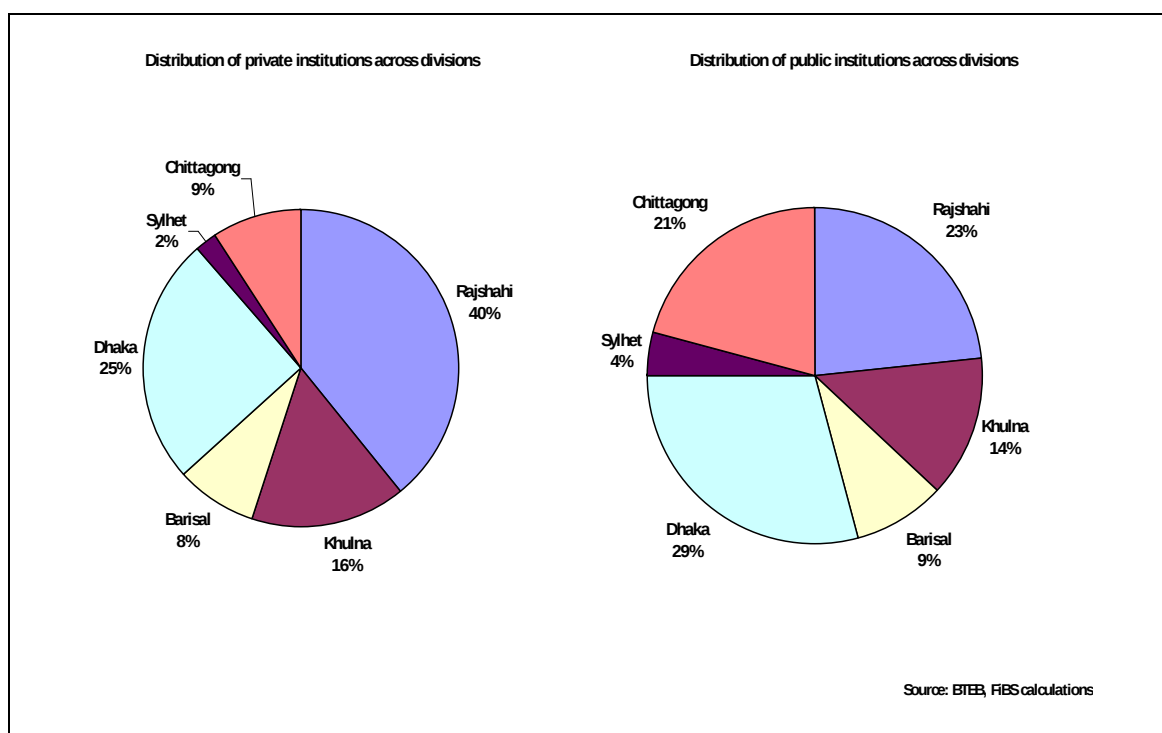


Figure 4: Distribution of public and private TVET-institutions across regions (2008-9)

In contrast, nearly two third of private providers are concentrated in two divisions, Rajshahi (40%) and Dhaka (25%). Adding 16% for Khulna, 80% of private institutions are located in three divisions. In contrast, Sylhet has a share of only 2%, Chittagong of 9%, and Barisal of 8%.

However, the major differences between the distribution of public and private TVET-institutions occur in two divisions, Rajshahi and Chittagong. As private providers respond to market demand, they obviously take the room that is left by public institutions. As worked out more in detail in the executive summary,

important regional imbalances apply, particularly if the different modes and share of public – and vice versa private – funding are taken into account.

Thus, to some extent it appears that private providers complement public institutions. However, this would have to be qualified by student numbers (see chapter 3.3.2).

As already mentioned above, it should be noted that the figures in this section only cover the institutions offering formal TVET-programmes, although those institutions are excluded that are not reported to have students in formal programmes.

Investigating the institutional setting of public and private institutions, some differences occur. The public institutions are concentrated on SSC(voc) (only), SSC and HSC (combined) and Diploma programmes in all divisions. More than 80% of the private institutions offer either SSC or HSC programmes; usually the ratio of those providing SSC-courses is above 40%, while the share of HSC is between 30% and 40%. In all divisions a relevant share of between 6% and 15% offers computer training solely.

	Rajshahi			Khulna			Barisal		
	Private	Public	Public & Private	Private	Public	Public & Private	Private	Public	Public & Private
SSC only	546	13	559	202	7	209	129	5	134
HSC only	447		447	188		188	82		82
Diploma only	17	9	26	3	7	10	3	4	7
SSC & HSC	80	15	95	12	9	21	7	6	13
HSC & Diploma	3		3						
SSC & HSC & Diploma	1		1	1		1			
Computer only	71		71	64		64	16		16
Short courses only	4		4	2		2	2		2
Computer & Short courses	2		2	3		3	1		1
SSC & Computer	1		1	2		2			
HSC & Computer	4		4	3		3	7		7
Diploma & Computer		1	1	2		2			
SSC & Short courses									
HSC & Short courses							1		1
Diploma & Short courses	1	1	2						
Diploma & Computer & Short courses				1		1			
Total	1,177	39	1,216	483	23	506	248	15	263

	Dhaka			Sylhet			Chittagong		
	Private	Public	Public & Private	Private	Public	Public & Private	Private	Public	Public & Private
SSC only	329	17	346	26		26	127	12	139
HSC only	249	1	250	18		18	83	1	84
Diploma only	46	11	57	2	2	4	12	11	23
SSC & HSC	31	18	49	4	5	9	11	10	21
HSC & Diploma	6		6	1		1			
SSC & HSC & Diploma									
Computer only	69		69	9		9	32		32
Short courses only	19		19				6		6
Computer & Short courses	7		7	1		1	4		4
SSC & Computer	1		1						
HSC & Computer	5		5				1		1
Diploma & Computer	2		2						
SSC & Short courses		1	1					1	1
HSC & Short courses							1		1
Diploma & Short courses	1	1	2				1		1
Diploma & Computer & Short courses	1		1						
Total	766	49	815	61	7	68	278	35	313

Source: BTEB-data, FiBS calculations

Table 9: Public and private TVET-providers across regions (detailed downbreak) (2008-9)

3.3 Student numbers

3.3.1 Total numbers of TVET-students in Bangladesh

The overall figure on the number of students enrolled in the TVET system is even more difficult to gather than the number of public and private providers, with the likelihood that each figure could be incomplete.. **According to ILO/Comyn (2009, p. 4) the seating capacity of the 328 public TVET-institutions is approximately 153,000**, including 2nd shift capacity for programs conducted in BTEB-accredited programs. However, it should be noted that this figure of 328 public institutions does not correspond to the number of public institutions identified in the previous chapter, amounting to 377, if all institutions are included.

According to official statistics from the Ministry of Education the number of students enrolled in TVET-institutions was 241,336 in 2005, of which 192,360 were in private and 48,976 in public institutions (www.moe.gov.bd). This suggests that 20 % of all TVET-students are enrolled in public institutions. Student enrolment has more than doubled between 2000 and 2005 (Banbeis 2009a).¹⁴ Most recent BTEB-data suggest that the number of students has increased further in the last few years.

Table 10 indicates an increase to 451,670 students for the year 2008-9, of which 122,700 (27%) are enrolled in public institutions, and 328,960 in private (73%) (see Table 11 also). Comparing the number of 123,000 students in public institutions with the seating capacity of 153,000 (see above), this would suggest that only 80% of capacity is utilised actually.

The distribution of students across programmes indicates that almost three quarters are enrolled either in SSC(voc) (41% or 184,550) or HSC(voc) (28% or 124,500), while 18% (80,700) are enrolled in Polytechnics. Thus, only 6.0% are registered for computer training (5%) or six month short courses (1%).

	Computer	Sx month short courses	SSC(voc)	HSC(voc)	Polytechnics	Agriculture.TI	Textile	Total
Private	22,784	2,212	142,906	117,513	21,784	15,388	6,374	328,961
Public	53	1,704	41,649	6,975	58,922	9,257	4,147	122,707
Total	22,837	3,916	184,555	124,488	80,706	24,645	10,521	451,668

Source: BTEB statistics, FIBScalculations

Table 10: Number of students in BTEB-accredited courses by programme (2008-9)

	Computer	Sx month short courses	SSC(voc)	HSC(voc)	Polytechnics	Agriculture.TI	Textile	Total
Private	5.0%	0.5%	31.6%	26.0%	4.8%	3.4%	1.4%	72.8%
Public	0.0%	0.4%	9.2%	1.5%	13.0%	2.0%	0.9%	27.2%
Total	5.1%	0.9%	40.9%	27.6%	17.9%	5.5%	2.3%	100.0%

Source: BTEB statistics, FIBScalculations

Table 11: Distribution of students in BTEB-accredited courses by programme and provider (2008-9)

¹⁴ Unfortunately, the BBS-statistics on private education does not mention any student number.

Table 12 reveals that only public polytechnics (73%) enrol a majority of students compared to private providers (27%). In all other areas of TVET provision, the share and number of students enrolled in private institutions exceeds that of public institutions by far.

	Computer	Six month short courses	SSC(voc)	HSC(voc)	Polytechnics	Agriculture TI	Textile	Total
Private	99.8%	56.5%	77.4%	94.4%	27.0%	62.4%	60.6%	72.8%
Public	0.2%	43.5%	22.6%	5.6%	73.0%	37.6%	39.4%	27.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: BTEB statistics, FiBS calculations

Table 12: Distribution of students in BTEB-accredited courses by programme and among public and private providers (2008-9)

Looking at the student numbers of different forms of public institutions, more than 120,100 students are registered here (see Table 13). Almost half of these students (59,000) are enrolled in polytechnics while 30% are enrolled at TSCs. A similar number of youth receives training through training programmes of the Department for Youth Development (see Table 14 and section 4.4.1.3 for more details). An estimated number of roughly 14,500 students could be enrolled at TTCs, though the number could also be higher since not all TTCs are included in the BTEB-statistics.

Technical School and College	35,868
Technical Training Centres	8,105
Textile Vocational Institute ¹⁾	4,525
Agriculture Training Institutes	9,257
Women College	83
District Textile Institutes ¹⁾	3,299
Polytechnics and Monotechnics	58,975
Total	120,112

Source: BTEB, FiBS calculations

Remarks: 1) 1 District Textile Institute could not be identified as such

Table 13: Number of students in BTEB-accredited programmes by form of institutions (2008-9)

Technical Training Centre (est.) ¹⁾	6,399
Youth Training Centres (public)	35,665
Bangladesh Marine Institute of Technology	299
Women Technical College (Min of Woman Affairs)	n.a.
BRDB Technical Colleges	n.a.
BSCIC Technical Colleges	n.a.
Total	42,363

Source: BMET, DYD, FiBS calculations

Remarks: 1) Number of non-reported TTCs estimated on basis of 37 TTCs

Table 14: Number of students in non-accredited programmes by form of institutions

It should be taken into consideration that these figures cover largely only formal TVET-programmes (only non-formal Department of Youth Development (DYD) - courses are covered). In addition, several TVET-institutions accredited with BTEB-data run so-called self-supporting short-courses. Other providers, such as, for example, Youth Training Institutes offer only non-formal programmes which are not incorpo-

rated in this statistics. According to information of the Department of Youth Development 35,700 youth were trained 2007-08. The target for 2008 was almost 214,000, which would have increased the number of DYD-trainees almost by factor 7.

The question is whether and to what extent those learners are counted who are enrolled in non-formal short-courses; it seems plausible that they are not counted by these statistics.¹⁵

In addition to the numbers mentioned so far, 60,043 students were enrolled in professional education programmes (2005) (MoE-statistics), of which 17,500 (29%) are enrolled in public and 42,500 (71%) in private institutions.

Department of Youth Development

Since other ministries are engaged in non-formal TVET, it seems of interest to present one example to broaden the overall picture. The Department provides a statistical overview “at a glance” which is of interest for this study. Table 15 provides an overview on the different programmes conducted. Accordingly, more than 35,000 youth were trained in the FY 07-08.

Table 15 also indicates that the number of youth to be trained in the FY 08-09 is to raise to 213,600, which would be an increase by factor 7. If this goes in line with the plans other ministries engaged in non-formal TVET this suggests a competition for limited budgets, suggesting an analysis of the position of DTE and BMET; since if other ministries are stronger funds will not be sufficient to cope with the expansion plans of formal TVET (see chapter 5)

	Number of trained people		
	Target 07-08	Achievement by June 08	Target 08-09
On-going projects	Persons		
1 Electrical & House Wiring	12,080	5,441	16,541
2 Youth Empowerment	4,587	4,407	4,440
3 Innovative Management	3,100	3,100	7,000
New projects			
Implemented Programmes through Completed			
3 Youth Training & Self-employment project	160	121	158,980
4 Technical Training for Unemployed Youth	4,420	4,330	8,840
5 Training to male & female unemployed youth	14,040	15,548	16,390
6 Bogra Regional Youth Centre	2,460	2,718	1,440
Total	40,847	35,665	213,631

Source: Department of Youth Development

Table 15: Number of people trained by DYD

¹⁵ Yet, it seems that even some of the institutions don't calculate the non-formal students on an annual basis. When asking this question, the common answer referred to the number of students enrolled in such programmes at the moment.

Comparing the numbers of people trained, this is roughly half the number of students in formal training. Taking into account that other ministries, such as, for example, textile, agriculture or women affairs, are also engaged, this suggests to develop a sector strategy covering formal and non-formal TVET. The development of such a sector strategy might be an issue for the Skills Development Council.

Summary

Combining the figures of BTEB, MoE and DYD – although they are of different years and, thus, don't fit completely – one arrives at a figure of 495,000 people undergoing TVET in one way or another (i.e. incl. professional training and training for unemployed youth). Out of these 495,000 some 165,000 (33%) are enrolled in public and 330,000 (67%) in private institutions.

Although this report is concentrated on formal TVET, it is important to note that other ministries are particularly engaged in non-formal TVET; an important task of those other ministries is obviously to cater to those requiring basic vocational and technical skills to earn their living, often in the informal economy. Here, DYD has been considered as one example of the work of those other ministries. And with regard to funding issues it is important to recognise that DYD intends to increase the number of trainees for 36,000 to 214,000. If other ministries intend to raise the number of participants in non-formal TVET-courses in a similar range this may result in a competition for limited public funds. Those ministries will be most successful which are particularly strong or better embedded in the hierarchy of the government. **Thus, an analysis of the position of DTE and BMET might be of interest to the TVET Reform Project.**

3.3.2 Gender

A special look at the number of female students reveals that they are particularly underrepresented at public institutions (see Table 16). Only 7,500 females can be identified as studying at public institutions, but gender figures for some institutions (particularly polytechnics) are missing. In contrast 96,000 female are enrolled at private institutions. Thus, only 7% of all females studying in formal TVET-programmes are enrolled at public institutions while 93% are at private ones. Even when accounting for the fact that the share of female students in public polytechnics will be higher, this distribution of male and female students across public and private institutions strongly affects the gender distribution of public subsidies.

In addition, combining the figures on enrolments in private institutions, this suggest that the majority of students (57%) at private institutions is female, while only one out of six students (17%) at public institutions is female.

Female students	Computer	Sx month short courses	SSC(voc)	HSC(voc)	Polytechnics	Agriculture TI	Textile	Total
Private	5,417	346	48,270	41,967	n.a.	n.a.	n.a.	96,000
Public	16	61	6,645	795	n.a.	n.a.	n.a.	7,517
Total	5,433	407	54,915	42,762	n.a.	n.a.	n.a.	103,517

Source: BTEB statistics, FIBS calculations

Table 16: Female students by programme and public and private provider (date?)

However, it should be noted that no gender-related data is available for Polytechnics, Agriculture and Textile institutes. A major reason for this gender distribution and the limited share of female students in public institutions is probably the technical orientation of most public institutions. Such a distribution between public and private institutions would cause no distributional problem if financing modalities are similar for both of them and if there is distribution of “work” among them, i.e. public institutions offer costly technical programmes and private providers less costly business management or other programmes. However, this is not the case in Bangladesh, where private institutions are largely privately funded but fee rates are modest at private institutions.

Female students	Computer	Sx month short courses	SSC(voc)	HSC(voc)	Polytechnics	Agriculture TI	Textile	Total
Private	23.8%	15.6%	33.8%	35.7%	n.a.	n.a.	n.a.	57.2%
Public	30.2%	3.6%	16.0%	11.4%	n.a.	n.a.	n.a.	17.3%
Total	23.8%	10.4%	29.8%	34.4%	n.a.	n.a.	n.a.	49.0%

Source: BTEB statistics, FIBS calculations

Table 17: Share of female students by programme and public or private provider

Another issue that would be of interest is whether the female stipend programme is restricted to students at public institutions only or whether it is also available for those at private institutions.

Female students	Computer	Sx month short courses	SSC(voc)	HSC(voc)	Polytechnics	Agriculture TI	Textile	Total
Private	99.7%	85.0%	87.9%	98.1%	n.a.	n.a.	n.a.	92.7%
Public	0.3%	15.0%	12.1%	1.9%	n.a.	n.a.	n.a.	7.3%
Total	100.0%	100.0%	100.0%	100.0%	n.a.	n.a.	n.a.	100.0%

Source: BTEB statistics, FIBS calculations

Table 18: Distribution of female students by programme and public and private provider

3.3.3 Regional distribution of students

Figure 5 reveals the distribution of TVET-students across the Bangladeshi regions. More than one third of TVET-students is located in Rajshahi and more than quarter in Dhaka, i.e. two thirds of all TVET-students are studying in these two regions. As with the number of institutions, Chittagong and, particularly, Sylhet, although both economically strong, have a relatively small number and share of TVET-students.

While the number of students does not correlate with economic performance of regions, the share of polytechnic students in relation to the students in the particular division obviously does. Sylhet and Chittagong have by far the highest share of TVET-students in polytechnics, though particularly Sylhet at a very low absolute level. In contrast, while the ratio of polytechnic education in Rajshahi is relatively small, the

number of students at polytechnics is more than double the total number of TVET-students in Sylhet division.

In all divisions the largest share of TVET-students is enrolled in SSC(Voc) followed either by HSC(Voc) or by Diploma programmes at polytechnics. The share of students in computer training and short courses is below 10% in all divisions. Thus, commonly more than 90% of TVET students are enrolled in two- and four year programmes. Commonly, around 50% of students in a division are enrolled in HSC(Voc) or polytechnic education (see Figure 6).

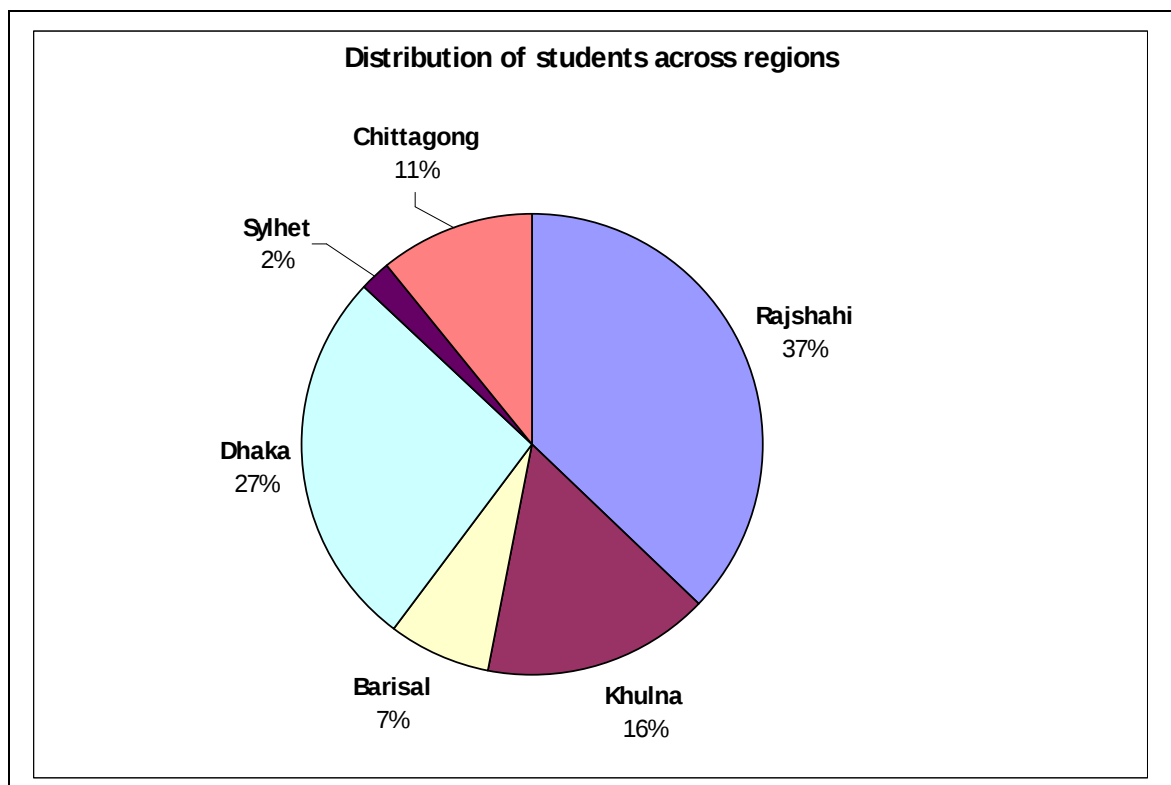


Figure 5: Distribution of TVET-students across regions [\(2008-9\)](#)

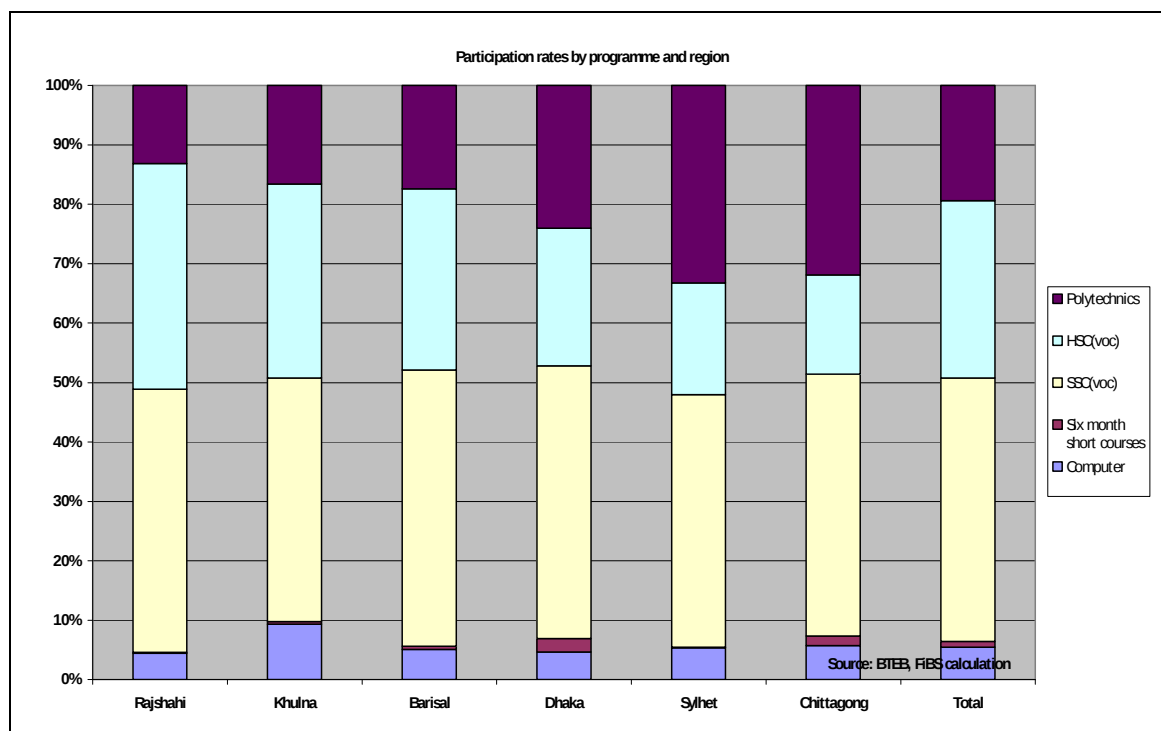


Figure 6: Relative distribution of TVET-students by region and programme

	Computer	Sx month short courses	SSC(voc)	HSC(voc)	Polytechnics	Total
Rajshahi	6,911	226	68,855	58,948	20,477	155,417
Khulna	6,151	270	26,926	21,427	10,895	65,669
Barisal	1,522	159	13,862	9,083	5,193	29,819
Dhaka	5,186	2,531	51,154	25,783	26,747	111,401
Sylhet	495	4	3,912	1,724	3,058	9,193
Chittagong	2,572	726	19,846	7,523	14,336	45,003
Total	22,837	3,916	184,555	124,488	80,706	416,502

Source: BTEB statistics, FIBS calculations

Table 19: Distribution of TVET-students by region and programme (absolute figures) (2008-9)

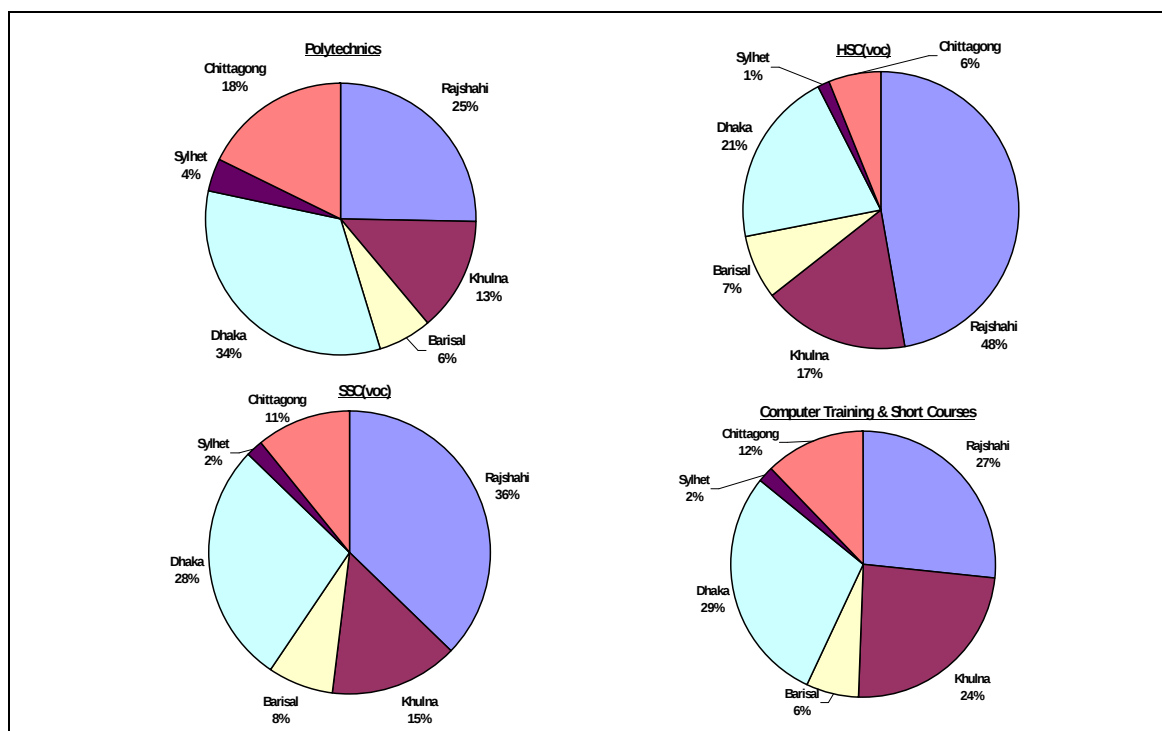


Figure 7: Regional Distribution of TVET-students by programme (2008-9)

3.3.4 Summary: Strong regional and gender imbalances

As worked out in the executive summary, the present system is linked to important regional and gender imbalances. The share of students enrolled in public institutions is higher in better-off regions, while private institutions cater even more to worse-off regions than they do in better-off regions already. This suggests a review of the decision making process where new TVET-institutions of which capacity shall be established.

As public institutions serve particularly to male students, the majority of female students is, in fact, forced to enrol in private institutions. Again, the share of female students in private TVET is even higher in worse-off regions than in better-off regions. More details are presented in the executive summary (see above).

3.4 The number of teachers in TVET

Some more figures from BANBEIS can be added.¹⁶ According to these statistics the number of teachers is as follows: polytechnics: 1,654, VTI (now called TSC) (792), Commercial institutes (68), TTCs (359), SSC(voc) (7,511), HSC(BM) (6,120) and other technical institutes (1,681). These numbers add up to 18,185 teachers in public and private institutions.

¹⁶ The data are collected from BANBEIS-website (www.banbeis.gov.bd/trend_analysis2) (2 July 2009).

This statistics also indicates an increase of technical and vocational education teachers from 7,100 in 2000 to 18,185 in 2005, which is an increase by more than 150%.

Linking student and teacher numbers, the average student-teacher-ratio is 16:1.

4. Financing and Budgeting of TVET in Bangladesh

4.1 Introduction and overview

The financing of TVET institutions covers two issues: at micro-level it concerns the sources and mechanisms of institutional funding; at macro-level it deals with the overall funding levels, and their distribution between the public and private sources. In Bangladesh, several financiers support both the public and the private providers.

The public and private sources and the level of funding received from them differ for public and private TVET-institutions. The **public TVET providers** are mostly funded from the GoB budget allocation through a corresponding ministry, where two different budget sources apply.

Financing the development of new public TVET institutions

Major TVET development projects as well as the initial recurrent funding for new institutions are financed from the so-called Development Budget. For example, at the moment, 26 TTCs are still operating under the Development Budget, although they are already operational. The resources of these Development Budget Institutions are coming either from the GoB or from international donors. Minor investments and recurrent expenditures of public TVET-institutions are financed through the non-development or revenue budget. After the start-up phase development projects are transferred from the development budget to the revenue budget. It appears that this transition is a serious problem, since, in practice, transition often takes quite a long time and results in insecurity for personnel and financing. This will often lead to teachers quitting and moving to other jobs followed by long-lasting and centrally organised replacement procedures. In consequence students may not be taught and leave the institution without appropriate qualifications.

Private funding of public TVET institutions

Although students who are enrolled in formal programs of public TVET-institutions pay a nominal fee of about TK 20 per semester, these funds flow to the public revenue. In addition, public providers can also run the so-called 'self-supporting' short courses, conducted usually in the afternoon or evening. The students and sometimes employers finance these courses through fees. The funds will have to be spent mainly for teacher salaries and for those items required to run the courses, i.e. teaching and raw materials.

Funding of private providers

Private institutions can be divided into three segments. The first group of them receives its basic funding in the form of so-called MPO (Monthly Payment Order) from the government. This MPO covers 100% of the teachers' salaries. Other recurrent expenditures are financed mainly through student fees (see more details in Section 4.4.2).¹⁷ Donations from public or private sources may also cover part of the expenditures.

The second group of private schools does not receive any public support and is dependent on the fees collected from students or donations etc. (for more details see Section 4.4.2). It should be noted that MPO-funding is related to certain programmes so that private schools can run MPO as well as non-MPO programs, sometimes in general education as well as in TVET. It appears that some cross-subsidisation happens between MPO and Non-MPO funded classes, possibly resulting in misuse of public funds.

Finally, a third group of public and private TVET-providers can be identified, which receive endowments from national or international donor agencies. Some of them also collect student fees. The public institutions in this group receive their recurrent budgets from the GoB. For example, UCEP or MAWTS are private institutions while Bangladesh-German TTC or Bangladesh Korean TTC are public institutions.

Figure 8 provides an overview of the funding sources of public and private institutions.

¹⁷ There seems to be some concern regarding over-spending for MPO-schools. According to a newspaper article, over 5,000 educational institutions inappropriately gain MPO-funding, which would not occur if the MPO-rules and regulations were applied appropriately (Deabnath 2009).

4.2 Budgeting processes and principles

- (1) TVET institutions prepare their budget requests and send them to the Directorate (or ministry) to which they report . The institutions' budget requests are line-item based, i.e. salaries are ,
- (2) The Directorates prepare a consolidated budget proposal for all TVET institutions they are responsible for and forward it to the responsible ministry
- (3) The ministries prepare a summarised budget proposal for all its duties and liabilities and forward this budget request to the Ministry of Finance.
- (4) The Ministry of Finance prepares the budget proposal for the whole government and sends it to Parliament who finally decides on the budget.

42

results (disbursements) of the previous year and to add increases due to inflation and/or additional requirements, e.g. to replace a non-functioning computer etc.

Having send the budget request to the next higher authority, three options of the further procedures remain:

- a) the higher authority agrees on the budget request,
- b) the higher authority cuts down the budget request to what she thinks fits, or
- c) negotiations take place among the parties involved in the budgeting process concerning the amount of money being requested from the next higher authority.

Finally, the budget is presented to and approved by the national parliament. The allocated funds are then disbursed top down. Eventually the full budget allocation is transferred in one instalment at the beginning of the fiscal year and can then be disbursed as required by an institution. However, funds can only be disbursed as far as they are available in the particular budget line, i.e. teaching materials can only be bought and paid if the full allocation for teaching materials has not yet been fully disbursed. If the allocation for a certain line-item has been spent completely, no transfer of funds from other line-items is possible. If the allocation for a line-item cannot be fully spent, unspent funds are to be returned to the directorate or ministry. This happens even if there is an immediate need to buy training materials etc. Thus, this inflexibility results in the return of funds to the ministry although there may be an urgent need to by teaching materials or other items, even if funds are available under another line item.

The restrictions on the funds transfer between the budget lines as well as on carrying funds forward to further years explain why funds are left unspent even if funds are allocated below the initial requests. In addition, some institutions complain about insufficient funds. However it appears that some institutions were unable to spend the whole budget due to the protracted procurement procedures.

The “Delegation of Financial Power” (see annex 8.1) specifies the financial regulations in great detail.. The major powers are assigned to the Head of ministerial department, who can, for example, approve a contract of new construction work in the non-development account up to Tk 10mln per work. In contrast, category I-officers (i.e. school principles) are limited to Tk 1.5mln, category II-officers to Tk 700,000.

The day-to-day-purchases by TVET institutions can be made up to a level of Tk 200,000 (by the category II-officer) or 300,000 (by the category I officer, i.e. school principle), provided that procedures of the Procurement Act are followed. Computers can be bought up to an amount of Tk 10,000 or 20,000 see para 12 (c) of the “Delegation of Financial Power”. Thus, on the one hand, it appears that the TVET providers do have the powers to make some day-to-day purchasing decisions. On the other hand, these powers are limited by rules and procedures that, in fact, do not adequately respond to the requirements of

running an institution properly.¹⁸ The core funding problem however is that resources for the operation of public providers are very limited, particularly as teaching and learning oriented materials and supplies are concerned (see chapter 4.3 for more details).

The details of the procurement procedures are laid down in the Public Procurement Rules (PPR). They require that works and services of up to Tk 0.5 mln can be procured by quotation, by limited tender (up to 2.5 mln) or open tender (above Tk 2.5 mln). In addition, committees have to be formed assessing the bids for such tenders. Such procedures are also common in other countries. During the consultants' mission a political and particularly public debate was ongoing about the PPR 2008.

Thus, it can be stated that the discretionary power of TVET-institutions is limited and leaves room for greater devolution. However, at the moment it appears that limited funds as well as the utilization of spending power by the institutions are the core problems of TVET in Bangladesh. It appears that institutions in general cannot effectively disburse the funds allocated to them.

Summarising the previous section 3 problems can be identified:

- a) operational funds are insufficient,
- b) the budget flexibility is low as transfers between budget lines are not permitted;
- c) institutions receive a limited share of their budgets to disburse at their discretion,

In addition the management capacity of school principles seems rather limited as they are not prepared properly to act as school principle. Furthermore, it seems that the institutions' or principals' interest to extend their own financial power is limited. Obviously, they fear too much internal discussion for which purposes funds should be disbursed.

The correct usage of funds is audited on a formal basis, i.e. the auditor proves whether the procurement rules and regulations were correctly applied and whether funds were disbursed properly according to the particular line-item.

4.3 Public expenditures for TVET and per student

This section aims at a closer look at the (recurrent) expenditures per institution and the unit costs. The data presented are collected either from the Directorate of Technical Education (MoE) or from BMET.¹⁹

4.3.1 Recurrent expenditures and expenditures per student at Polytechnics

Data concerning the expenditures in FY 2008-09 (original and revised budget) is available for all but four institutions while student numbers are available for all poly- and monotronics. Although not all finan-

¹⁸ This restrictive action may be caused by corruption and fraud in previous years.

¹⁹ The consultant would like to thank Serajul Islam who collected all the data from the different stakeholders.

cial data required to calculate the total allocation of funds are readily available, imputation methods can be applied to fill in the missing data for the remaining four institutions. Total allocation can be estimated to be around Tk 740 mln (original budget), while the revised budget is around Tk 640 mln; thus, about 15% of the funds originally allocated are not spend finally.

For a total number of 59,427 students the average annual expenditure per student is Tk 12,400 based on the original allocation and Tk 10,700 due to the revised budget. However, the range of per student cost is quite substantial. Chittagong Women Polytechnic has the lowest cost per student (Tk 6,425), while the Graphic Arts Institute has the highest (Tk 31,500). Even if the Graphic Arts Institute is considered a special case, the highest unit costs are Tk 26,000 at Feni Computer Institute. Thus, a student at the most expensive institution costs five to six times that of the least costly polytechnic.

Another interesting finding is that the costs per student of almost all women polytechnics are at the lower boundary. The only exception is the Dhaka Women Polytechnic with unit costs of Tk 16,600 (original) and Tk 13,400 (revised), while the unit costs of other women polytechnics are below Tk 7,500 and Tk 5,100, respectively. These limited funds for the Women polytechnics could suggest that the share of training expenditures for female students is even below the already very limited share of female students in relation to all students; i.e. that the share of funds spent for female students is even below the already limited share of female students.

Reviewing the connection between size and unit costs there is obviously no indication of economies of scale at the polytechnics. Instead, eradicating either some of the particular expensive or some particularly big institutions, costs per student would even increase with the number of students at an institution. This suggests diseconomies of scale. What the reasons for this has to be left unanswered for the time-being, as the required data (e.g. on teacher numbers, subjects, equipments, seating capacity) is not available.

Yet, it should also be noted that the distribution of costs across polytechnics is not necessarily an indicator for costs but for the relationship between allocation and student numbers, which may be affected. Furthermore, as line-item budgets are usually requested on the basis of the previous years' allocation and often negotiated with the next higher authority, the negotiation power of those involved, though the subjects on offer at a polytechnics may play a role concerning the unit costs.

Name of institution	Total allocation in FY 2008-09 (original)	Total allocation in FY 2008-09 (revised)	Number of students	Cost per Student (original)	Cost per Student (revised)
Chittagong Polytechnic Institute	37,52	35,13	3,246	11,559	10,823
Feni Computer Institute	9,75	2,56	375	26,000	6,827
Chittagong Womenpolytechnic Institute	2,57	2,15	400	6,425	5,375
Comilla Polytechnic Institute	28,66	27,75	2,197	13,045	12,631
Feni Polytechnic Institute	22,79	24,14	1,755	12,986	13,755
BSKaptai Polytechnic Institute	23,87	20,38	1,234	19,344	16,515
Survey Institute, comilla	4,48	4,39	386	11,606	11,373
Laxmipur	3,5	3,5	293	11,945	11,945
Chandpur	4,04	4,04	480	8,417	8,417
Brahman Baria	3,95	3,95	376	10,505	10,505
Cox's Bazar	3,68	3,68	567	6,490	6,490
Chittagong Division	144,81	131,67	11,309	12,805	11,643
Barisal Polytechnic Institute	27,38	25,55	2,293	11,941	11,143
Patuakhali Polytechnic Institute	13,8	12,74	1,507	9,157	8,454
Borgona	3,73	3,73	228	16,360	16,360
Barisal Division	44,91	42,02	4,028	11,149	10,432
Bogra Polytechnic Institute	34,51	33,89	2,709	12,739	12,510
Dinajpur Polytechnic Institute	27,88	25,28	1,901	14,666	13,298
Pabna Polytechnic Institute	33,31	32,48	2,675	12,394	12,086
Rajshahi Women Polytechnic Institute	3,23	2,46	479	6,743	5,136
Rajshahi Polytechnic Institute	31,96	27,86	2,442	12,945	11,284
Rangpur Polytechnic Institute	32,65	27,93	2,645	12,344	10,560
Thakurgaon Polytechnic Institute	4,08	4,08	496	8,226	8,226
Naogaon Polytechnic Institute	4,8	4,8	450	10,667	10,667
Sirajgonj	6,2	6,2	593	10,455	10,455
Kurigram	4,05	4,05	430	9,419	9,419
Rajshahi Division	182,67	169,03	14,820	12,293	11,375
Dhaka Polytechnic Institute	68,61	58,46	5,518	11,597	9,882
Women Polytechnic Institute, Dhaka	19,62	15,85	1,182	16,599	13,409
Glass & Ceramic Institute	15,58	15,13	888	17,545	17,038
Graphic Arts Institute	17,25	14,01	547	31,536	25,612
Tangail Polytechnic Institute	19,01	16,94	1,442	13,183	11,748
Mymensing Polytechnic Institute	32,03	30,99	3,021	10,602	10,258
Faridpur Polytechnic Institute	23,93	22,42	1,722	13,897	13,020
Sherpur	3,98	3,98	540	7,370	7,370
Narsingdi	5	5	379	13,193	13,193
Munshigonj	4,2	4,2	168	25,000	25,000
Gopalganj	4,52	4,52	515	8,777	8,777
Shariatpur	3,22	3,22	353	9,122	9,122
Dhaka Division	216,95	194,72	16,275	13,012	11,679
Jessore polytechnic Institute	29,13	24,61	2,056	14,168	11,970
Khulna Women Polytechnic Institute	2,57	1,85	355	7,239	5,211
Khulna Polytechnic Institute	35,94		3,188	11,274	
Kustia Polytechnic Institute	24,48	23,57	1,957	12,509	12,044
Jhenaidah Polytechnic Institute	4,96	4,96	514	9,650	9,650
Shatkhira	4,88	4,88	535	9,121	9,121
Bhola	4,56	4,56	545	8,367	8,367
Khulna Division	106,52	64,43	9,150	11,642	7,042
Sylhet Polytechnic Institute	29,69	25,21	2,363	12,565	10,669
Hobigonj	3,63	3,63	479	7,578	7,578
Sylhet Division	33,32	28,84	2,842	11,724	10,148
Chapai Nawabganj (Rajshahi) 1)	1,04	0,97	85	12,293	11,375
(Rajshahi) 1)	4,03	3,73	328	12,293	11,375
Kishoreganj Polytechnic (Dhaka) 1)	0,59	0,53	45	13,012	11,679
Bhola Polytechnic (Barisal) 1)	6,08	5,69	545	11,149	10,432
Imputed polytechnics (est.)	11,74	10,91	1,003	11,704	10,876
All polytechnics	740,92	641,62	59,427	12,377	10,718

Remarks:

1) The cost of the missing polytechnics were set equivalent to the average cost per student of the particular division.

2) The fields highlighted contain implausible information; clarification requested

Source: DTE

Table 20: Expenditures for polytechnics and costs per student (2008-9)

A review of the total distribution of funds for polytechnics across regions indicates that almost three quarters of funds are allocated to the three divisions of Dhaka (30%), Rajshahi (25%) and Chittagong (20%) (see Figure 10), while the other three divisions share the remaining 25%. Comparing distribution of funds with the distribution of students across regions it turns out that both go in line largely. Only Dhaka Divisions' share of funds is 4 Percentage points less than would be proportionate to the share of students, while some other divisions receive a marginally higher share.

Figure 10 also indicates that the distribution of funds changes only very modestly between original and revised budget.

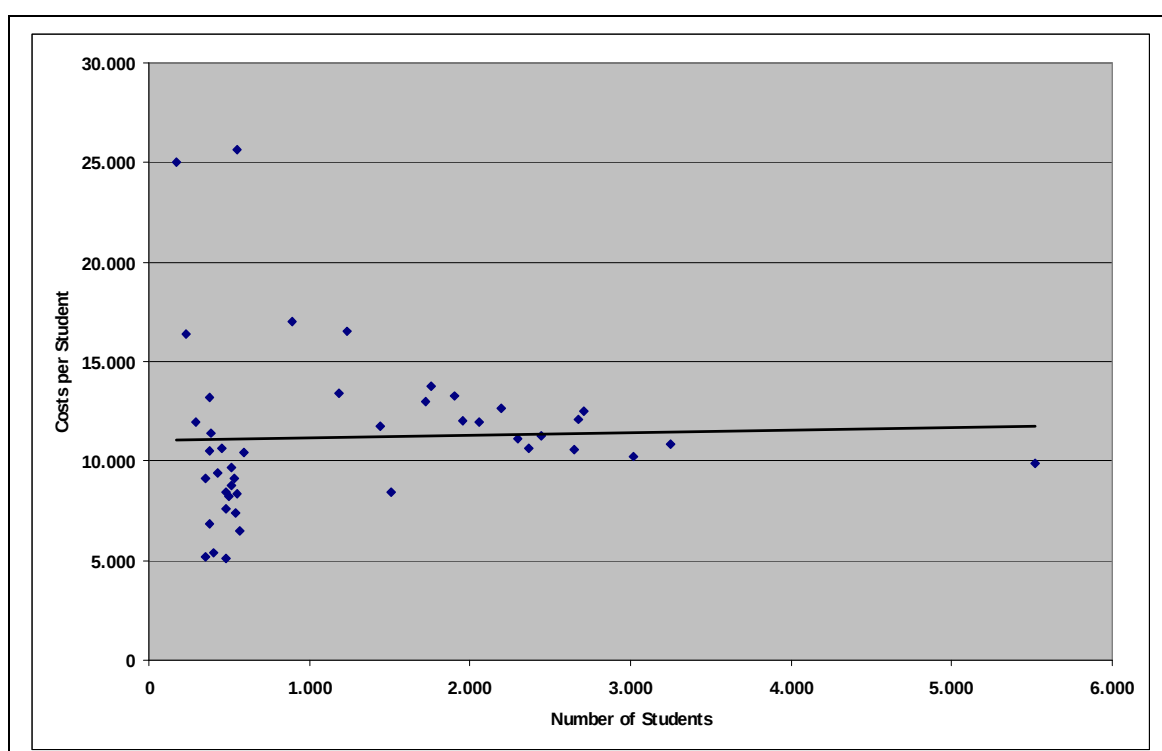


Figure 9: Trend analysis of unit costs (revised budget) at polytechnics

In addition, the number of polytechnics running BTEB-accredited short courses is very limited. Only three institutions report such courses, and only one institution (Dhaka Polytechnic) reports a number of participants higher than 55.²⁰

Finally, Table 20 allows to compare changes between original and revised budget. On average, revised budget is 87% of original budget, though the ratio differs between 72% and 106%.²¹ Another finding

²⁰ When calculating the unit costs, these short courses students were included with a share of 50%. Yet, this does not alter the unit costs at the corresponding institution too much.

²¹ Two institutions show lower ratios: Feni Computer Institute has a ratio of 26% only, which is due to originally allocated funds for salaries and allowances which do not appear again in the revised budget, though other recurrent expenditures do, surprisingly. The same applies to Rajshahi Women Polytechnic Institute.

is that several polytechnics do not have any allocation for recurrent expenditures other than salaries and allowances as indicated by the fields marked (shaded area).

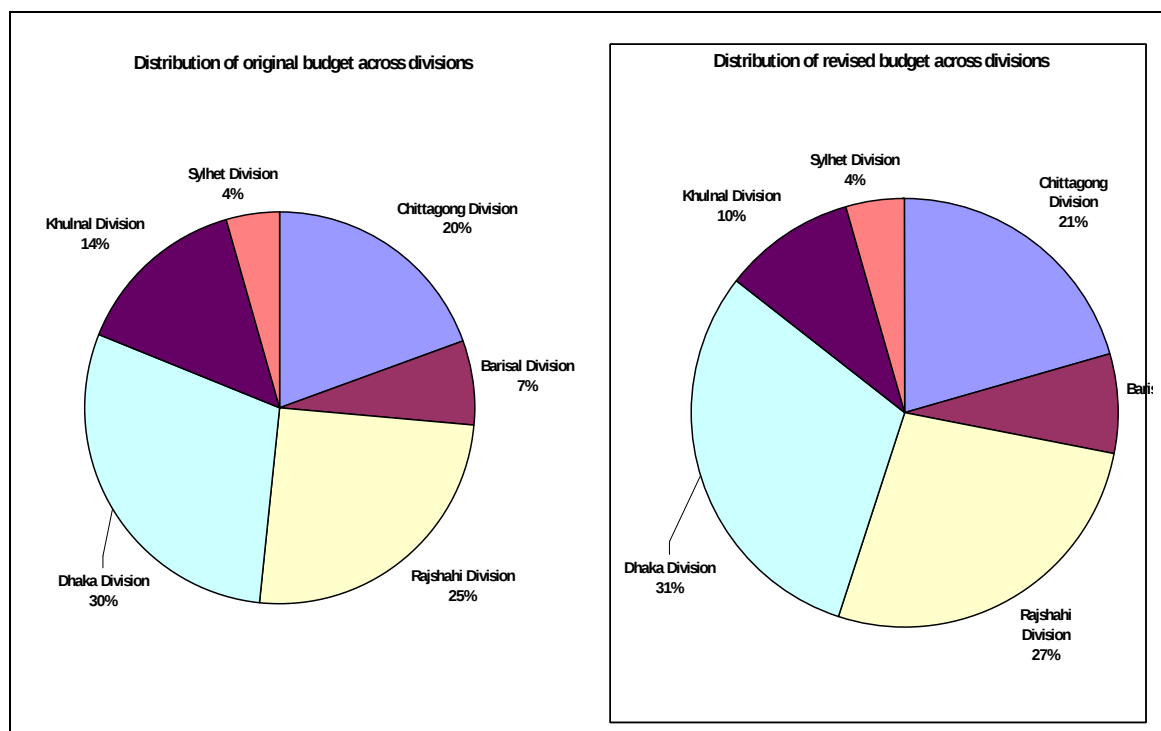


Figure 10: Distribution of original and revised budget for polytechnics across divisions

Name of Division	Total allocation in FY 2008-09 (original)	Total allocation in FY 2008-09 (revised)	Number of students	Number of students in BTEB short courses	Cost per Student (original)	Cost per Student (revised)
Chittagong Division	145	132	11,309		12,805	11,643
Barisal Division	51	48	4,573		11,149	10,432
Rajshahi Division	188	174	15,233	79	12,293	11,375
Dhaka Division	218	195	16,320	796	13,012	11,679
Khulna Division	107	64	9,150		11,642	7,042
Sylhet Division	33	29	2,842		11,724	10,148
All polytechnics	741	642	59,427	875	12,377	10,718

Source: FBS calculations

Table 21: Summary of expenditures for polytechnics by division (2008-9)

4.3.2 Recurrent expenditures per student at Technical Schools and Colleges

Financial data and student numbers are available for all 64 TSCs (see Table 22). Financial data concern the revised budget only, allowing to calculate the unit costs on the basis of the amounts spent. Total recurrent expenditure for all 64 TSCs is Tk 328 mln. Given the total number of 36,788 students, the aver-

Secondly, according to the data Khulna Polytechnic Institute has received no revised budget allocation at all; thus, it seems that this polytechnic is not operational yet.

age expenditures per student are Tk 12,100. Comparing this figure with the average unit cost at polytechnics, it appears that TSCs cost the government 13% more than the polytechnics.

Unit costs differ between Tk 6,400 (Sherpur TSC) and Tk 22,900 at Brahmanbaria TSC. However, some other TSCs are also as expensive as the Brahmanbaria TSC.

	Name of Institution	DISTRICT	Salary	Others	Total (Tk. Million)	SSC	HSC	Total	Cost per student
1	TSC	Panchagar	3.40	1.42	4.82	264	42	306	15,800
2	TSC	Thakurgaon	5.76	1.85	7.61	584	150	734	10,400
3	Parbotipur TSC	Dinajpur	4.88	1.34	6.22	600	166	766	8,100
4	TSC	Dinajpur	3.54	1.28	4.82	556	94	650	7,400
5	TSC	Nilphamari	5.69	1.83	7.52	539	120	659	11,400
6	TSC	Lalmanirhat	4.80	1.62	6.42	399	148	547	11,700
7	TSC	Rangpur	13.04	5.64	18.68	1,460	542	2,002	9,300
8	TSC	Kurigram	5.99	2.21	8.20	524	116	640	12,800
9	TSC	Gaibandha	4.40	1.67	6.07	560	200	760	8,000
10	TSC	Joypurhat	5.12	1.39	6.51	456	200	656	9,900
11	TSC	Naogaon	4.62	1.81	6.43	289	94	383	16,800
12	TSC	Nawabganj	6.71	1.66	8.37	425	150	575	14,600
13	TSC	Natore	5.68	1.68	7.36	410	148	558	13,200
14	TSC	Sirajganj	7.14	1.70	8.84	563	130	693	12,800
15	TSC	Pabna	13.71	4.74	18.45	877	122	999	18,500
	Rajshahi Divisional		94.48	31.84	126.32	8,506	2,422	10,928	11,600
16	Hosenabad TSC	Kushtia	4.53	1.32	5.85	497	86	583	10,000
17	TSC	Kushtia	3.39	1.38	4.77	394	28	478	10,600
18	TSC	Meherpur	4.98	1.48	6.46	532	146	678	9,500
19	TSC	Chuadanga	5.05	1.55	6.60	564	108	672	9,800
20	TSC	Jhenaidha	4.92	1.57	6.49	432	110	542	12,000
21	TSC	Magura	6.02	1.77	7.79	453	56	509	15,300
22	TSC	Narail	5.14	1.39	6.53	383	70	453	14,400
23	TSC	Jessore	3.39	1.47	4.86	430	128	558	8,700
24	TSC	Saikhira	4.60	1.37	5.97	429	50	479	12,500
25	TSC	Bagerhat	4.78	1.70	6.48	291	68	359	18,100
	Khulna Division		46.80	15.00	61.80	4,405	850	5,311	11,700
26	TSC	Firojpur	5.29	2.01	7.30	362	134	496	14,700
27	TSC	Barguna	3.00	1.25	4.25	324	72	396	10,700
28	TSC	Patuakhali	5.14	1.82	6.96	355	80	435	16,000
29	TSC	Bhola	3.87	1.40	5.27	545	94	639	8,200
30	TSC	Jhalakati	3.12	1.25	4.37	219	38	257	17,000
31	TSC	Barisal	13.55	4.85	18.40	594	300	894	20,600
	Barisal Division		33.97	12.58	46.55	2,399	718	3,117	14,900
32	TSC	Shariatpur	2.83	1.11	3.94	316	50	366	10,800
33	TSC	Madaripur	4.88	1.37	6.25	380	78	458	13,600
34	TSC	Gopalganj	5.22	1.56	6.78	480	96	576	11,800
35	TSC	Rajbari	5.21	1.53	6.74	484	140	624	10,800
36	TSC	Manikganj	5.41	1.86	7.27	543	152	695	10,500
37	TSC	Munshiganj	4.37	1.21	5.58	242	24	266	21,000
38	TSC	Dhaka	2.59	0.97	3.56	170	52	222	16,000
39	TSC	Narayanganj	5.91	1.86	7.77	417	102	519	15,000
40	TSC	Narsingdi	3.44	0.96	4.40	217	28	245	18,000
41	TSC	Gazipur	3.91	1.60	5.51	250	32	282	19,500
42	TSC	Tangail	5.91	1.70	7.61	487	118	605	12,600
43	TSC	Jamalpur	5.01	1.72	6.73	654	176	830	8,100
44	Dewanganj TSC	Jamalpur	5.62	1.56	7.18	475	100	575	12,500
45	TSC	Sherpur	3.09	1.38	4.47	570	132	702	6,400
46	Gouripur TSC	Mymensingh	3.86	1.45	5.31	619	94	713	7,400
47	TSC	Netrakona	5.30	1.56	6.86	612	108	720	9,500
48	TSC	Kishoreganj	5.61	1.66	7.27	513	46	559	13,000
49	Bhairab TSC	Kishoreganj	5.28	1.36	6.64	384	84	468	14,200
	Dhaka Division		83.45	26.42	109.87	7,813	1,612	9,425	11,700
50	TSC	Sunamganj	4.08	1.27	5.35	266	24	290	18,400
51	Chhatak TSC	Sunamganj	3.80	1.13	4.93	309	78	387	12,700
52	TSC	Sylhet	9.02	3.75	12.77	702	160	862	14,800
53	TSC	Moulvibazar	3.93	1.37	5.30	258	66	324	16,400
54	TSC	Habiganj	4.96	1.63	6.59	399	68	467	14,100
	Sylhet Division		25.79	9.15	34.94	1,934	396	2,330	15,000
55	TSC	Brahmanbaria	5.41	1.36	6.77	273	22	295	22,900
56	Bancharampur TSC	Brahmanbaria	4.01	1.42	5.43	289	124	413	13,100
57	TSC	Chandpur	5.75	1.42	7.17	351	477	828	8,700
58	TSC	Laksmipur	3.48	1.41	4.89	347	106	453	10,800
59	Begumganj TSC	Noakhali	4.32	1.18	5.50	287	52	339	16,200
60	Majdee TSC	Noakhali	4.82	1.79	6.61	593	90	683	9,700
61	TSC	Feni	3.31	1.48	4.79	407	48	455	10,500
62	TSC	Khagrachari	5.11	1.87	6.98	679	160	839	8,300
63	TSC	Bandarban	3.82	1.10	4.92	272	82	354	13,900
64	TSC	Cox's Bazar	3.16	1.70	4.86	421	84	505	9,600
	Chittagong Division		43.19	14.73	57.92	3,919	1,245	5,164	11,200
	Grand Total		327.68	109.72	437.40	28,976	7,243	36,275	12,100

Table 22: Expenditures for TSCs and expenditures per student

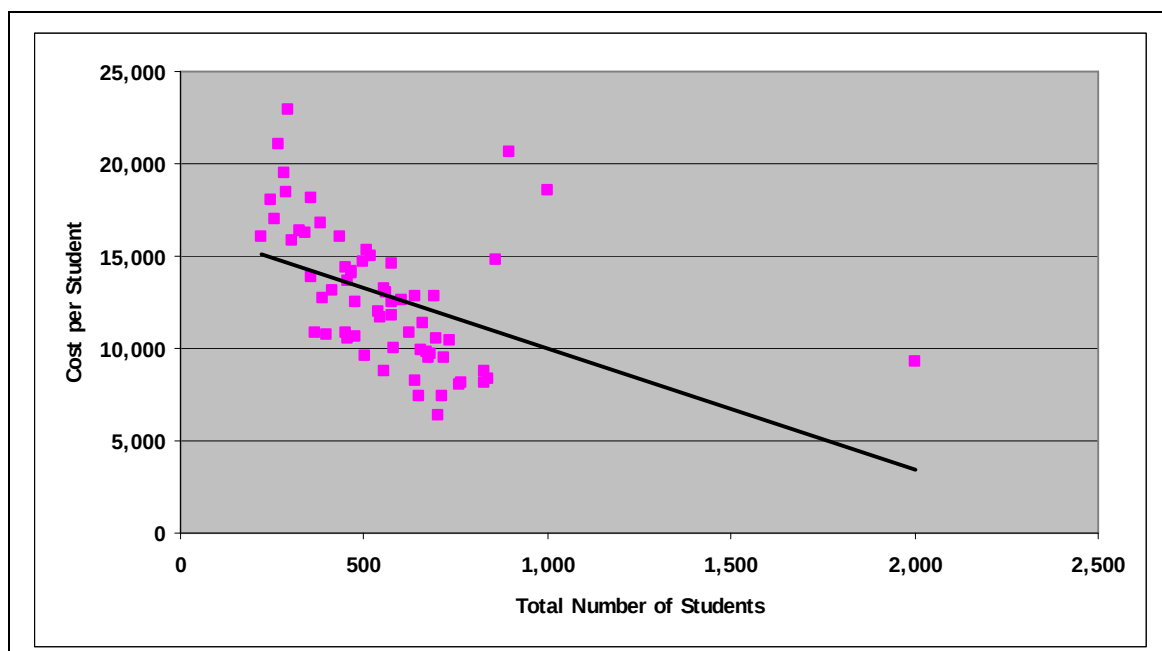


Figure 11: Economies of Scale at TSCs

Costs per students are particularly high in Sylhet and Barisal Division, respectively, where unit costs are (almost) Tk 15,000. This is 25% beyond the country's average. On the other hand, per student costs are almost 10% below country average in Chittagong Division.

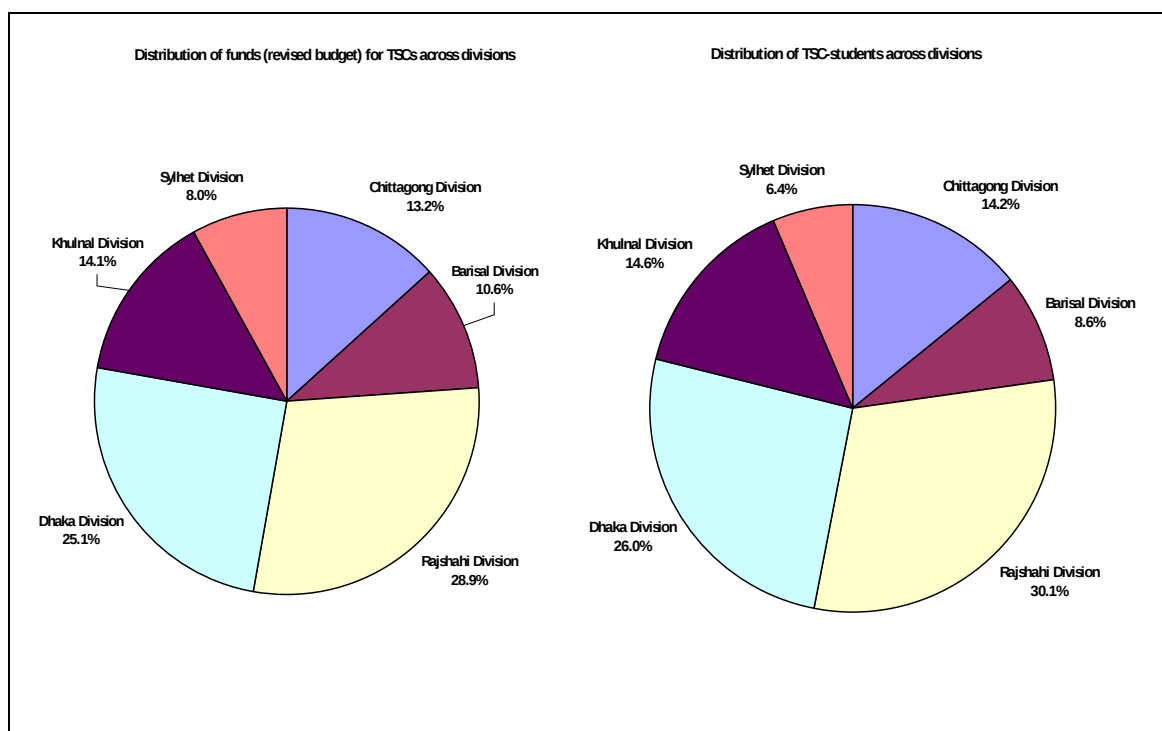


Figure 12: Distribution of TSC students and funds across divisions

Figure 12 reveals the distribution of funds for TSCs across regions and indicates that the distribution of funds is similar to the distribution of students. However, some redistribution effects can be identified. Due to its high unit costs, Sylhet Division and Barisal Division receive a share of funds that is 2 percentage points higher than the corresponding student share, while all other divisions receive a smaller share.

Reviewing the relationship between a size of a TSC and unit costs, the cost per student decreases with the size of the institutions (see Figure 11), i.e. smaller TSCs are relatively more expensive than the bigger ones. This effect is known as the economies of scale. Yet, this effect could be stronger, if the costs of a very large TSC at Rangpur are eliminated from calculations.

4.3.3 Recurrent expenditures per student at Technical Training Centres

Financial data as well as enrolment data are available for the 11 TTCs operating under the revenue budget only. However, the delivery of additional data concerning finances and student number allows a more extended discussion on the impact of different figures, e.g. here particularly on enrolment, on the expenditures per student.

	B-K TTC Dhaka	B-G TTC Dhaka	Chitta- gong TTC	Rajshahi TTC	Khulna TTC	Bogra TTC	Comilla TTC	Barisal TTC	Mymen- singh TTC	Ranga-mati TTC	Faridpur TTC	Total
Total allocation	23,716	23,141	16,625	20,815	17,364	18,231	15,268	14,359	15,389	12,235	14,231	191,374
Number of students												
SSC(voc) 2-year	448	763	854	923	730	692	489	493	615	716	544	7267
Short courses		444	382									
Cost per student	52,900	23,500	15,900	22,600	23,800	26,300	31,200	29,100	25,000	17,100	26,200	26,300

Source: BMET, FIBS calculation

Table 23: Expenditures for TTCs and costs per student

Total allocation FY 07/08 (in 1,000 Tk)	20,550	19,109	13,118	17,327	15,462	14,589	12,854	8,593	11,927	10,282	12,824	156,635
Number of students												
SSC(voc) 2-year	448	656	665	648	606	682	675	564	640	646	594	6824
Short courses	2,040	9,113	2,840	2,500	1,460	1,933	2,870	1,250	1,299	1,428	1,350	28,083
Cost per student	14,000	3,700	6,300	9,100	11,600	8,800	6,100	7,200	9,200	7,600	10,100	7,500

Source: BMET, FIBS calculation

Table 24: Expenditures for TTCs and costs per student (FY 2007-08)

Table 23 contains the expenditures of the FY 08-09 (provided by BMET) and the number of students as prepared by the statistics of BTEB for the same year. Table 24 covers the budget allocations for the FY 2007-08 as well as student numbers, both supplied from BMET. Yet, it is unclear whether the students enrolled in short-courses are enrolled in formal or non-formal programmes and how long they last. The differences in both student statistics may be due to the fact that student numbers for the previous FY 2007-08 are readily available, while this is not yet the case for the last year. It could also be the case that these students are enrolled in non-formal programmes, while Table 23 correctly refers to the students in formal short-courses.

However, the results are extremely different. While expenditures per students in FY 08-09 arrive at Tk 26,300 they are at Tk 7,500 only for the FY 2007-08.²² While the former figure would indicate that the costs per students for the 11 TTCs under consideration are particularly high as compared to TSCs and polytechnics, the latter figure would suggest lower expenditures per student. These findings clearly indicate that data availability and data reliability is crucial for the assessment of the expenditures per student. This also indicates a conflict of interests between the intention to improve the information base on TVET in Bangladesh and the problem of insufficient data quality.

Although the number of TTCs is very limited, a glance at the correlation between size and the development of costs per student suggests that costs per students decrease with size (see Figure 13). Thus, economies of scale can be identified, similarly as for TSCs.

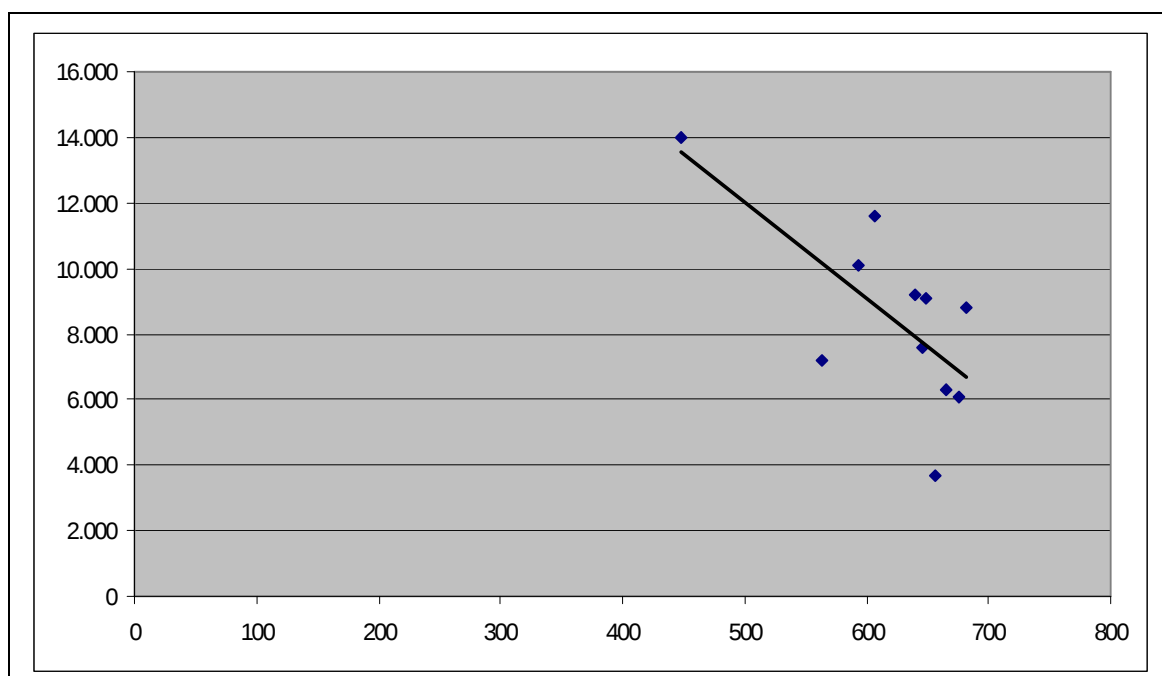


Figure 13: Economies of scale at TTCs

A more detailed analysis of the structure of expenditures at TTCs indicates that on average 88% of the allocation is for salaries and allowances. This leaves only 12% for other recurrent expenditure, of which roughly two thirds are spent on electricity. Although high electricity costs may be linked to the operation of instructional equipment, such a budget structure leaves a very limited portion of the budget for funding other costs of instruction.” Some international data suggest that the ratio of non-staff oriented recurrent expenditure is crucial for student performance (Pritchett/Filmer 1999; Dohmen/Haillesselassie 2003).

²² All calculations on the expenditures per students are based on the assumption that short-courses last six months, or better, that student numbers refer to two programmes.

4.3.4 Summary

The previous section aimed at calculation of (recurrent) expenditures per student at different kinds of institutions. Expenditures per student are a result of the amount of money allocated to an institution and the number of students at this institution. It could be considered as an indicator on the financial endowment of a student at each institution in relation to others.

However the findings of this section should be considered with caution as neither data reliability nor completeness can be ensured. Financial data were collected from the responsible ministry, while student numbers were taken from data, which were provided by BTEB. Particularly the calculations concerning the TTCs indicate that the results strongly depend on the appropriate number of students. For the TTCs the inclusion of students which were possibly not enrolled in formal programmes led to a drop in the expenditures per student, though uncertainties remain.

However, the preliminary estimates on the expenditures per student suggest important differences in the endowment among institutions of the same type (TSCs, TTCs and polytechnics), while the differences of the average allocation between these institutions are limited, if the calculation for the TTCs is based on the data for the previous year and includes students in short courses. Yet, for the time-being it cannot be judged what is covered by these data.

4.4 National expenditure on TVET

As far as the overall level of TVET funding in Bangladesh is concerned, information is rather limited. This is to some extent due to the number of ministries involved in TVET²³ or skills development more broadly, and mainly due to the fact that only the public expenditures of MoE are accounted for.

Allocations through the development budget

It should also be noted, that TVET is financed through two different budgets. The development budget contains all funding for major investment projects and can be financed through international donors and NGOs as well as the Government of Bangladesh. Over the period from 1971/72 to 2007/08 a total amount of USD 2,700 mln was spent for education and religious affairs (Economic Relations Department 2009). There seems to be no further breakdown for education and in particular for TVET; though the share for religious affairs seems to be very limited. Allocation for education and religious affairs was higher than USD 300 mln in 2005-06, peaking USD 365 mln in FY 2006/07, and dropping down to USD 217 mln in

²³ The consultant reviewed the mid-term budget frameworks of those ministries for which information was available. From these ministries some did not indicate any relevant training and skill development activity: the Local Government Division, Ministry of Food and Disaster Management, Roads and Railway Division, Power Division, and Bridges Division.

2007/08. This was equal to 11 % of the overall disbursement from the development budget of USD 1,950 mln in FY 07/08.

With regard to TVET two new projects are included in the budget of FY 07/08, the EC-ILO project (USD 17.9 mln, grant) and the ADBs Skills Development Project (USD 50 mln, loan), although the latter has not yet commenced. For the future, the World Bank is obviously at this point in time, deciding to further proceed with negotiations about a new TVET-project, worth USD 45 mln in total, of which USD 5 mln are local resources.

It should also be noted that the share of loans has largely increased and that loan disbursement is now higher than USD 1,000 mln per year. This is highly important for future budgets, since loans are to be repaid. In the FY 2007/08 loan repayments are almost at USD 800 mln, which is equivalent to approximately 30% of GDP. However, it seems that this is on the decrease, obviously due to a GDP growth higher than the increase in loan burdens.

4.4.1 Public spending for TVET

4.4.1.1 Allocations of the MoE for public and private institutions

MoE-allocation for public institutions

Public institutions and many private institutions receive their core funding through allocations from the public budget. According to MTBF, total allocation for the Directorate of Technical Education for the fiscal year 2008/09 was about DBT 2.87 bln (including funding of institutions); for DTE itself the allocation was 1.77 bln. Compared to the total allocation of almost Tk 68.8 bln for MoE, this would be a share of 4.1% for TVET. However, in previous years a reasonable difference between original and revised budget indicates that spending was usually less than originally planned. For example, in FY 2007-08 the revised budget (Tk 2.73 bln) was 22% less than the original allocation (3.48 bln). An estimate, gathered during the mission, guessed that the final disbursements will add to 97 % of this revised budget allocation. Given that final spending was less than 80 % of the originally allocated funds a reduced allocation for FY 2009-10 is not surprising. In addition, given the fact that some of these reduced funds in the end remained unspent it seems astonishing that some school principals complain about having insufficient funds to carry out their work program.

Financial data, collected during this mission and which was discussed more in detail in the previous section, suggests that the revised allocation is Tk 642 mln for the polytechnics and Tk 437 mln for the Technical Schools and Colleges. This adds up to Tk 1,080 mln.

The difference between the original and the revised budget suggests that the TVET-system has a serious problem of spending the allocated resources. This impression may be confirmed by the following

information. In FY 2007-08, the initial allocation for DTE was Tk 3.48bln incl. institutions' funding, while the revised budget was about Tk 2.73bln. This is a reduction of almost one third of the initial budget allocation. Given this, it is not surprising that the original allocation for FY 2008-09 for TVET decreased to 2.87bln.

According to MTBF 09, the projected allocation for FY 09-10 and 10-11 indicates an increase to 5.8bln and 7.2bln, respectively. This would double the original allocation for FY 08-09 and more than triple the revised allocation. If the increase becomes reality eventually, this would mean an increase for TVET from 4.1% of MoE-budget to 7.1% and to 7.8%, respectively. However, it should be taken into account that such increases were already planned in previous years but did not become effective. For example, mid-term projection 2006-09 (MTBF 06, p. 59) indicated an allocation of 5.22 bln for FY 2007-08 and of 5.67bln for FY 08-09. Yet, the initial as well as the revised allocation for this fiscal year revealed a different Figure. One of the core questions is, whether this discrepancy between original and revised budget is due to problems of spending the allocated funds or of political priorities. Although there is a strong indication that the former issue has its impact, it seems possible that the latter point matters.

Education Engineering Department

The previous figures cover only the immediate budget of DTE, but some funds are hidden in other budget lines of MoE. Some funds for the TVET-system are part of the Education Engineering Department, responsible for major construction and capital works, while minor maintenance and construction ("recurrent repair") is part of DTE-budget. According to DTE the EED allocation adds Tk 180 mln. to the funding level for technical education.

MPOs for private institutions

MoE does not only finance public institutions but also a large number of private institutions through so-called Monthly Payment Orders (MPOs). These MPOs cover 100% of the teachers salaries and are not included in the allocation for DTE but under the Department of Secondary Education.

Out of a total number of MPO institutions of almost 15,500, 1,104 deliver either SSC(voc) or HSC(BM) programmes. This is a share of 7.1%. According to statistical information, Tk 48.36 mln were spent for TVET-MPOs in December 2007. This is a share of 1.87%. This suggests that private TVET-providers do not receive a balanced proportion of the total MPO allocation..

As the amount of Tk 48.36 mln is for one month only, annual allocation for MPOs can be estimated at around Tk 580 mln, if the same amount is spend every month of the fiscal year.

Summary: MoE-spending for public and private institutions

Summing up the different kinds of information and the different areas of spending, the following Figure for the Ministry of Education expenditures for TVET arrives:

MoE-expenditures for TVET (in Tk 1,000)	Budget	Estimate		Data gathered during consultancy
	2007-08	Revised Budget 07-08	Budget 2008-09	
DTE	2,543	1,857	1,770	1,333
Polytechnics	575	510	662	642
TSCs	-	-	-	437
Technical Teachers Training Centres	13	13	18	18
Vocational Training Centres	259	268	315	315
Education Engineering Department (e	-	-	-	180
Monthly Payment Order (est.)	-	-	-	580
Total	3,391	2,648	2,765	3,504

Source: MTBF, FIBS estimates

Table 25: MoE spending for TVET

Thus, Tk 3.39 bln were originally allocated for TVET for the FY 2007-08 within the Ministry of Education. This corresponds with a share of 5.2% for TVET of the total (original) MoE-budget (MTBF, pp. 129-130). Since the a revised budget is Tk 750 mln less than the original budget, this share decreased to 4.3% in relation to total MoE-budget. Original budget allocation for the FY 2008-09 was only slightly higher than the revised budget FY 2007-08. Since total MoE-budget increased more than the TVET-share the ratio decreased to 4.0%. However, it should be noted that the consideration so far only reviewed the “official” allocation for the Directorate of Technical Education.

As the budget does not include the MPOs and the TVET-related expenditures of the Education Engineering Department, this underestimates the total allocation for TVET. The right column indicates that spending for TVET might finally arrive at Tk 3.5 bln, which would be a share of 5.1% of the total budget of MoE.

In relation to the total GoB-budget (revenue budget), this is equal to a share of 0.2 %. In relation to GDP this is a ratio of less than 0.06%. In addition to MoE, other ministries are also engaged in TVET.

4.4.1.2 Financing by BMET

At the moment, 38 TTCs are operating under the auspices of BMET, if institutions operating under development as well as non-development budget are considered jointly. The allocation for the 11 TTC operating under the revenue budget is Tk 191 mln (revised budget) (see chapter 4.3.3).

Though the majority of TTCs are still operating under the development budget, this does not provide the full Figure. According to information gathered during the mission, the overall allocation for the establishment of 12 institutions was Tk 1,500 mln for a period of five years. On average this would arrive at an allocation of Tk 125 for establishment and operation. Assuming the costs are divided more or less equally over the five years period, Tk 300 mln. can be added.

Thus, an estimate of the total allocation for the 37 TTCs of BMET arrives at some Tk 510 mln., including Tk 18.5 mln for the Bangladesh Institute of Marine Technology.

Adding up the expenditures of MoE and BMET one would arrive at total expenditures for TVET of Tk 4.0 bln, which raises the ratio to 0.3% of the total GoB budget and to 0.07% of GDP.

4.4.1.3 Department for Youth Development (DYD)

In addition to MoE and BMET, the DYD is also engaged in non-formal training of young people. According to information provided by DYD (2009) almost 41,000 youth was trained in FY 2007-08, though final achievement was slightly less with approximately 36,000. For this training, Tk 1.56 bln were originally allocated and Tk 1.44 bln finally spent.

Plans for FY 08-09 are far more ambitious. According to plans, mentioned in a DYD-brochure (2009), 213,600 youth should be trained during this year, though no complete financial data was provided. If average costs per youth would be similar to previous years, spending would be at around Tk 8.6 bln, which is twice that of MoE and BMET together.

4.4.1.4 Total public financing of TVET

Adding up the overall allocation of DTE, BMET and DYD for recurrent expenditures for formal and non-formal TVET-institutions (operating under development as well as non-development budget) one arrives at a figure of almost Tk 5.5 bln for the previous year. This is equal to a share of 0.4% of GoB-budget and 0.09% of GDP.

If particularly the plans of DYD become reality the total TVET-budget may increased to Tk 12.0 bln for the fiscal year 2009-10. This would correspond to 0.9% of total GoB-budget and to 0.22% of GDP.

4.4.2 Private contributions

Traditionally, private contributions can be sources from learners or from employers. In addition, NGOs and donor agencies or private donors play an important role in Bangladesh's education system.

4.4.2.1 Learners' fee payments for formal TVET-courses at public institutions

With regards to tuition fees, different market segments should be distinguished. The first market-segment is the public formal TVET-system, covering TTCs, TSCs and polytechnics with their SSC(voc), HSC(voc) and Diploma programmes. In addition, even some (non-formal) short-courses are included in this segment, for which the students pay fees.

Student fees for formal programmes at public institutions

Although students pay different fees, which may be quite substantial, these fees do not improve the situation of TVET-institutions. Instead, a moderate fee of Tk 12-20 per month is part of the treasury's revenue, but not of the institutions while the bulk of fees is revenue of BTEB.

According to MTBF 2008/09 the small tuition fee amounted to Tk 14.7 mln in FY 07/08 and was expected to rise to 17.8 mln in FY 2008/09 for DTE-institutions. However, these figures suggest that only 61,250 and 74,000 students would have paid fees, though 120,000 students are enrolled in formal TVET-programmes. A share of the fee revenue in the total DTE-budget is slightly more than 0.5%. Yet, it should be noted that the revenue does neither increase the budget of the institution nor of DTE but is absorbed by the general revenue.

Fees paid to BTEB

The core of student fees is paid to BTEB:

- Registration fee: Tk 50 for SSC(voc), 130 for HSC(voc) and Tk 200 for Diploma, paid once upon enrolment
- Examination fee: Tk 225 per Semester
- Certification fee: Tk 100 (paid once)

As far as the consultant could establish there seems to be no comprehensive (consolidated) overview of financial resources flowing into the TVET-system in BD, even not as far as the BTEB-affiliated programmes of formal TVET are concerned.

Fees for self-supporting courses

Fee revenues of public institutions are much higher when self-supported short courses are concerned. The German- Bangladesh TTC reported fee revenues of Tk 626,000 (3% of GoB budget allocation) and the Korean Bangladesh TTC of Tk 900,000 (ca. 4 %)

If one assumes, for the time being, that these figures are similar for other institutions, a rough estimation of the revenues of public vocational institutions from student fees for self-supporting courses would have amounted to Tk 25 - 35 mln. Yet, this would be less than 1% of public spending for TVET, which seems to be very low, if the majority of public TVET-institutions provides self-supporting programmes. Starting from another approach, i.e. 3 to 4% of total public spending for TVET one would arrive at Tk 100 to 150mln.

4.4.2.2 Financing and expenditures of private TVET institutions

Private education providers receive their funding through different sources. Three examples will be presented briefly.

UCEP was established and is completely financed through donor support (DFID, DANIDA, SDC and SCSD). It is operating 43 Integrated General and Vocational Education Schools and 7 Technical Schools, further expansion is envisaged. In total, UCEP schools have a capacity of 55,000 and some 150,000 underprivileged children were enrolled since inception: Mostly, they receive education and training for some hours a day only, to allow “income” generation.

Equipment seemed largely up-to-date, suggesting the graduates will have good labour-market opportunities. According to tracer study, a transition to employment seems high (95%) as compared to public TVET-institutions.

Although UCEP is a success-story it seems difficult to consider it as a model for many successors, as sustainability depends on long-term donor support.

MAWTS was established by and financed for the first 25 years by Caritas Bangladesh, but is now operating as a private provider earning its revenue through fees as well as a vendor of products manufactured by the students of its programmes. MAWTS offers 8 formal BTEB-accredited programmes as well as non-formal courses. In total, 62 modular courses are offered as well as 8 tailor made courses. The fees paid by the students are substantial. The lowest fee rate is Tk 6,000 charged for example for 4 -week courses such as Steel fixer or Shutter carpenter. The highest rate is Tk 50,000 for the 10-week course such as Pipe fitter (Welding arc & Gas) or Steel fabricator. Costs for lunch or residential courses may add to the amount mentioned.

As far as BTEB-accredited programmes are concerned an admission fee of Tk 5,000 and a semester fee of Tk 12,000 is charged. In addition, a registration fee of Tk 400-500 is paid once, while an examination fee of Tk 500-600 is paid every semester. Thus, a 2-year programme would cost students around Tk 55,000, while a 4-year programme would cost Tk 105,000.

MAWTS also gains revenue by selling products produced by the students during their training. Thus, the approach consists elements of “training cum production” or apprenticeship. The consultant was told that 20% of training time in the first year, 50% in the second year and 100% in the third year were devoted to practical training, including production.

During an interview with the consultant, a revenue of about Tk 50 mln was stated. The same amount was mentioned regarding the turnover of the production unit. If this is to be added to each other, this would result in an annual revenue of MAWTS of about Tk 100 mln. This figure does not seem implausible, if the figure of 30,000 students in modular courses is correct. However, some of the revenue, arguably Tk 12 mln, were said to be spent for students from low socio-economic background identified and sent by Caritas.

MAWTS’ example indicates that private provision of TVET may work under certain conditions, particularly if the up-front investment costs can be borne by a NGO or a donor, whether national or international. Secondly, if quality of instruction is considered adequate by customers substantial fees can be charged, obviously. Thirdly, selling the products manufactured by the students adds to turnover. As the latter requires a high training standard to produce market-oriented products this will provide an additional incentive to deliver high quality training.

Grameen Shikkha, established in 1997, is a sister organisation of Grameen Bank. It operates a Scholarship programme and has recently started vocational training courses.

The scholarship programme is supported through temporary sponsorship. People or organisations can deposit funds for a few years at a bank account. The scholarships itself are financed by the interest returns of the deposit only. Thus, the deposit can be returned to the “donor” after the end of the donation period.

Secondly, Grameen Shikkha has started vocational training programmes recently. The funds for the initial investment (equipment) were provided by international companies, as part of their Corporate Social Responsibility (CSR) programmes. The “business model” is to raise the amount and level of tuition fees gradually to a level that is finally sufficient to finance at least recurrent expenditures. However, to become sustainable, this approach requires success concerning graduation and labour market transition.

The three examples described present different approaches for private provision of TVET in Bangladesh, although they have one thing in common, i.e. donor funds at least for the start-up phase. However, while it appears that UCEP is an example of limited value for others to follow, due to the sole dependency on long-term commitment of donors, MAWTS as well as Grameen Shikkha may have a chance to be sustainable, if quality of instruction remains high enough to provide the basis for cost-covering fee rates. However, the existence of other private providers suggest that there is a market for private training providers. However a major concern should be the quality of instruction. Several institutions visited appeared to be run down and lacking modern training equipment.

Summarising the findings, it appears that donor or NGO support is a crucial requirement for establishing high quality private provision. An interesting question is whether this donor dependency can be replaced by other financiers, particularly concerning the financing of investment costs (see chapter 6).

With regard to the overall levels of private engagement for TVET, two approaches are applied here. Firstly, a recent BBS-statistics (2009a) on private education presents some figures on their annual?? institutional income (see Table 26). According to this data the total income of private education institutions amounts to Tk 60.4 bln, which is almost equal to the budget of the Ministry of Primary and Mass Education or the Ministry of Education (Tk 66 bln). Without the government allocations to private providers, the annual private investment in TVET reaches the amount of Tk 46.2 bln. If the share of private expenditures would correlate with the share of funding for TVET-institutions in relation to all private institutions, this would be around Tk 2.3bln.²⁴

²⁴ It should be noted that this assumptions has some pre-requirements: (1) TVET-institutions are on average of the same size than general education schools, (2) fees for TVET are roughly equivalent to general education programmes and (3) donors distribute their donations equally among general and technical education.

Private education income	Million Tk	Share
Tuition fees from govt. (MPO)	5077	8,4%
Tuition fees from students	17125	28,4%
Different kinds of special fees (from stud	10994	18,2%
Donations from Person/Institution	5874	9,7%
Donation from govt (except fees)	9122	15,1%
Others	12198	20,2%
Total	60389	100,0%

Source: BBS-statistics private education

Table 26: Funding sources and expenditures for private education (2007)

However, even though this might be a guesstimate only, according to this calculation the private contribution to private TVET would be approximately Tk 2.3 mln. Learners fees account for 61% (Tk 1.4mln) and private donations and others for 39% (Tk 0.9mln).

The second approach starts from the distribution of TVET-students in public and private institutions (see chapter 3.2). If fees for private programmes were similar to those of public expenditures, one would arrive at the following Figure:

	Computer	Six month short courses	SSC(voc)	HSC(voc)	Polytechnics	Agriculture TI	Textile	Total (Tk 1,000)
Costs per student	6,250	6,250	12,500	12,500	10,700	10,700	10,700	
Private	142,400	13,825	1,786,325	1,468,913	233,089	164,652	68,202	3,877,405
Public	331	10,650	520,613	87,188	630,465	99,050	44,373	1,392,669
Total	142,731	24,475	2,306,938	1,556,100	863,554	263,702	112,575	5,270,074

Source: FIBS calculations

Table 27: Approximation of private expenditures for (formal) TVET-programmes (2008-9)

Table 27 would suggest that private expenditures for formal TVET-programmes, i.e. programmes accredited by BTEB, would amount to almost Tk 3.9 bln. Given the impression that fee rates at private institutions are (far) higher than public expenditures for public TVET (see e.g. the figures presented for MAWTS), this is probably the lower boundary still.

Thus, combining both estimates, the annual private expenditure on TVET can be estimated as being Tk 2.3 -3.9 bln. However, the limits of both estimates should be taken into account. It seems plausible that private expenditures are higher than estimated, but, unfortunately, there is no basis for another estimate so far.

4.4.2.3 Employers contribution to TVET and skill development

Although a private training market for company-oriented off-the-job training obviously exists, it was not possible to get a deeper insight into this market. It appears that knowledge about this sector is very limited.

4.4.3 Public and private expenditures for TVET

Combining the information collected and presented during the previous sections an overall estimate on the public and private expenditures for TVET arrives probably at a figure of Tk 7,75 bln for the last fiscal year (see Table 28). If DYD succeeds as planned and if non-formal programmes are taken into consideration (future) spending may even arrive at almost Tk 17.5 bln, though this should be considered a guess only, as data are missing, particularly as far as non-formal training is concerned.

Public and private expenditures for TVET	FY 2008-09 (Million Tk)	FY 2009-10 (Million Tk)
MoE	3,504	3,504
BMET	510	510
DYD	1,440	8,600
Private fee	1,400	3,900
Private donations and other contributions	900	900
Total	7,754	17,414

Source: FIBS estimates

Table 28: Public and private spending for TVET

Based on these estimates the private contribution would be approximately 30 % and public share 70%. However, it seems that this figure may underestimate the private engagement.

Thus, TVET-funds are between 0.06 and 0.30% in relation to GDP.

It should be noted that a gender bias will continue to exist, since more than 90% of female students are enrolled in private institutions, paying the fees themselves, while male students are (relatively) more enrolled in public institutions.

4.5 Some considerations on efficiency

Several indicators suggest that the TVET in Bangladesh is highly inefficient. The reasons for this inefficiency are manifold, but need to be identified to improve the utilisation of public and private funds as well as the future job prospects of young Bangladeshis.

Some core issues of efficiency are enrolment and participation (in contrast to drop-out), successful graduation, labour market transition of graduates and employment of graduates. Although the data provided by DTE and BMET do not touch graduation rates, it seems that graduation rates are sometimes below 70%. The limited employment ratios of TVET-graduates were highlighted in a recent World Bank study (2006).

Due to lack of detailed data, the following exercise presents some hypothetical calculations on the effect of different efficiency ratios, but it should be noted that the figures are based on an approximation of real figures – combined with some facts of the Bangladeshi TVET-system.

		(1)	(2)	(3)	(4)	(5)
1	GoB allocation (1,000 Tk)	24.000	24.000	24.000	24.000	24.000
2	Enrolment capacity	240	480	240	240	240
3	Capacity cost per student	10.000	5.000	10.000	10.000	10.000
4	Enrolment	90%	90%	90%	90%	100%
5	Student number	216	432	216	216	240
6	Cost per student enrolled	11.000	6.000	11.000	11.000	10.000
7	Drop-out rate	10%	10%	10%	10%	5%
8	Attending students	194	389	194	194	228
9	Cost per attendee	12.000	6.000	12.000	12.000	11.000
10	Graduation rate	60%	50%	50%	70%	75%
11	No. Of graduates	116	195	97	136	171
12	Cost per graduate	21.000	12.000	25.000	18.000	14.000
13	Employed graduate	10%	10%	25%	25%	50%
14	No. of employees	12	20	24	34	86
15	Cost per employee	200.000	120.000	100.000	71.000	28.000

Table 29: Hypothetical considerations of the efficiency of the TVET-systems

Table 29 presents five different calculations what the effects of different assumptions on enrolment figures, drop-out and graduation rates as well as labour market transition are on the costs per attendee, per graduate or cost per employed graduate. The examples clearly indicate that costs per student, per graduate or per successful employee are highly depend on the particular assumptions made. Even if costs per student may be reasonable, costs per graduate will increase sharply if graduation rates are modest. Yet, costs per successful employee are particularly high, when only 10% enter the labour market successfully after graduation.

These figures together with the low graduation rates and the low share of students entering the labour market after graduation suggest that the TVET-system in Bangladesh is costly, even if the expenditures per student may seem reasonable.

4.6 PPP-Initiative

Given the GoB is promoting a growth-oriented policy, it has identified an immediate need to increase investment levels from 25% to 35 to 40% of GDP. For the next five years till 2014 this amounts to an increase of the investment allocations from USD 23.5 bln to 40 bln. Linking this to affordable level, a deficit of about USD 28 bln will emerge. To fill the gap in available, GoB is about to launch it's PPP-initiative, which aims to achieve a bigger private share in (public) investments. The idea and the background seems quite sound, given the limited sources of public revenue and the huge investment requirements.

Education, particularly secondary and technical education, is among the sectors identified for PPP. So far, PPP seems to be more an idea than a detailed concept. Therefore the government has introduced several ways to foster the idea of PPP, e.g. funds for technical assessment of PPP-proposals.

With regard to education it should be taken into consideration that, in fact, already several schools operate on a PPP-basis. For example, MPO's can be considered PPP.

Even the use of donor funds for the establishment or refurbishment of schools could be considered a PPP, particularly if PPP is not too narrowly defined. The use of internships in private companies or the so-called dual system, as applied in Germany, with practical in-company training and school-based education is a model of PPP.

The principle options are, for example, private investment and public long-term oriented co-financing, private management of public institutions etc.

5. Future plans and financial requirements concerning TVET

According to the information gathered, BMET has applied to establish 30 new TTCs. This is estimated to cost Tk 7.2bln. in total or Tk 240mln per TTC, disbursed over a period of five years, including recurrent expenditures for 2 to 3 years. The amount of funds allocated suggests a relevant increase in the costs of establishing TTCs, since these costs were almost half of this amount (Tk 125mln) in the past.

In addition, DTE also is planning to establishment a total number of 450 technical schools, i.e. one in each upazila. In a first phase, 64 schools shall be established every year, adding up to 250 schools. According to the information gathered during consultations, no official estimate concerning the costs of this project are available yet, though it was stated that this project is of high priority. However, if the costs per institution come in at Tk 100mln, which would be less than half the costs of a new TTC, a rough estimate gives a figure of some Tk 30 bln. Spreading this amount over four years, for example, annual expenditures would arrive at Tk 7.5bln.

However, it seems that no allocation is made yet within the budget for FY 2009-10, though it was stated that the provision of funds would not be a problem, once the project is approved, even within the present budget that passed the parliament at the end of June. Establishing all 450 technical schools would cost Tk 54 bln.

Additionally, DTE has plans to establish 25 new polytechnics for which cost estimates arrive at Tk 6.2bln. Yet, it seems that this project has not been prioritised as, for example, the establishment of the 250 technical schools has.

GoB announced that the share of young people enrolled in TVET shall rise to 20 % of all secondary students (PRSP II, p. 111), presently it is 3 %. As an interim goal, enrolment in TVET should increase by about 50 % by 2011, with women's enrolment to be increased by 60 % (PRSP II, p. 111). This suggests that the GoBs budget appropriations for TVET will have to increase strongly. The present level of funding does not seem to fit to this ambitious planning. In addition to this plans, the budget for the FY 2009/10 mentions several other topics to be achieved and which will add to the amount of money needed. **Thus, funding levels for TVET should strongly increase over the next few years. Given the fact that previous TVET-budgets had very ambitious goals, as indicated by the original budget allocation, but did not happen, it has to be observed to what extent this will happen this time.**

It should be understood that technical education is in fact taking place under 19 ministries in total. The following refers (for the time being) only to TVET as far as it is part of the MoE, where two Directorates are of special interest, the DTE and the Directorate of Educational Engineering, responsible for establishing the institutions. To allow for a comparison with other education sectors the full budget allocation of MoE will also be presented.

As far as this budget outline is concerned it covers development and non-development budget, i.e. the revenue budget.

According to the MTEF of earlier years (FY 2006/07, the budget of DTE was supposed to increase from Tk 2.12 bln (FY 2005/06, revised) over 2.97 bln in 2006/07 to 5.67 bln. According to budget (outline grant no.18, p. 59) this was to happen largely in FY 07/08 to 5.22 bln and then in FY 08/09 up to 5.67 bln. However reviewing the budget estimate of 2008/09 it becomes evident that this increase did not become effective. The revised budget for 2007/08 shows an allocation of Tk 2.73 bln, which is 20 % less than the initial requested Tk 3.48 bln. The budget allocation 2008/09 was only slightly higher at Tk 2.87 bln. As with the previous mid-term expenditure framework, the budget breakdown of 2008/09 foresees a strong increase to 5.80 bln in 2009/10 and 7.17 bln in 2010/11.

However, this increase is largely to the advantage of DTE headquarter, with an increase from Tk 1.98 to 4.59 bln while the increase for the polytechnics is increasing from Tk 339 mln to 630 mln (+ 95%) and for other vocational and technical institutions increasing from Tk 221 mln to Tk 435 mln. Although this would almost double the expenditures for these institutions, this is far less than the increase for DTE headquarter.

These figures refer to DTE only, though expenditure to the advantage of technical and vocational education are also included in the budget of Educational Engineering Department (EED). In the previous mid-term expenditure framework a huge increase was envisaged for EED. The budget was supposed to increase from Tk 1.48 bln to 7.05 bln, which would have raised the allocation by factor five almost. However, comparing this planning with the realisation a few years later, it seems that there is a major difference. For

example, while the initial planning for the FY 2007/08 foresaw a level of Tk 6.02 bln it was firstly reduced to Tk 3.41 bln and further revised to Tk 2.57bln. Thus, although this is still an increase by 15% compared to its 2005/06, it does surely not meet the expectations generated through the FY's 2006/07 budget. The same applies to FY 2008/09, where the initial planning was hardly met by the updated allocation of about Tk 2.88 bln, which is only 40% of of about Tk 7.05 bln

The overall budget of MoE was due to increase from Tk 62 bln to 78 bln (USD 900 mln to 1.1 bln) for the period 2006/07 to 2008/09, i.e. an increase of about 20%. This would have suggested that the increase of DTE's budget were seriously higher than that of other directorates. Yet, in fact, budget allocation for 2007/08 was even less than for 2006/07.

Thus, the crucial question is to what extent this planning becomes effective. The look at past developments might suggest that the challenging prospects of future plans also might be hampered by insufficient funding. However, it should also be noted that this change in the past might have occurred due to political situation with an caretaker government in place.

6. Funding Sources – an overview on options and empirical evidence

6.1 Trainee financed Training

6.1.1 Wage Reductions (Wage below Productivity)

The opportunity to reimburse the costs of training by wage reductions is limited to any kind of training for employees or trainees under contract, independent from whether it is pre-employment or in-service training. In all other cases the trainee does not get any wage payment.

In a traditional privately organised training system the trainee would get either no payment or a payment which is below his productivity. If his/her productivity is very low and training causes net-costs for the employer the trainee would even have to pay a training fee (see section 6.1.2).

However, as far as the payment of the apprentice is lower than his/her productivity s/he bears the costs of training and reduces the financial burden of the employer. A payment which is below the productivity of the trainees can be justified by the lower productivity of the trainer and/or other direct and indirect costs of training to be borne by the training firm.

Opportunities to finance education			
Financiers	Present Income	Future Income	Past Income
Government	Taxes and Fees	Public Debt	Selling of Public Property
Trainees/Students (Families)	All Kinds of Income (Salaries, Rent, Scholarships, Tax Reductions)	Credits, Loans	Withdrawing, Liquidisation of Property, Saving Accounts
Provider/ Institutions	Fees, Income Generation	Credits, Loans	Withdrawing from Bank Accounts
Employers/ Companies	Income, Revenues, Turnover, Returns, Rent-, Interest-, Leasing-Income	Credits, Loans	Withdrawing from Bank Accounts
Employees	All Kinds of Income (Salaries, Rent, Scholarships, Tax Reductions)	Credits, Loans, Drawing rights	Withdrawing from Bank Accounts, Drawing rights

Source: Timmermann, 1999

Table 30: Sources of Liquidity and Financiers of VET-Funding

How much of the training costs the employers try to recover by wage reductions depends on how much of the training is firm-specific (monopson) or general (polygopson) (Becker 1964, 1993; Dougherty and Tan 1997) or relevant for just a few employers (oligopson). Some other factors, such as the structure of the training market or the quit rates of graduates etc., will be important, too. Empirical research suggests that employers bear more of the costs as appears to be justified by the share of firm-specific training.²⁵

If the pay reduction is higher than the total costs of training the firm would gain a net-benefit at the end of training. Since this reduces the risk for companies to incur net-costs, it may raise the number of firms providing apprenticeships. However, since this might be firms with short-term interest in such apprenticeships only, this inherits the risk that there is no demand for employees with such skills. In this case, youth may be trained but unemployed due to insufficient demand (Wolter 2007).

²⁵ For example, referring to Germany, it is said that the costs of training are higher than the returns for most training companies, thus incurring a loss (von Bardeleben and Beicht 1996). But it has to be taken into account that the results differ according to the costs concept, branch and company size. For example, net costs are typically higher in technical areas than in service-oriented occupations; estimating the total costs of training for all companies independent of size leads to net costs for all, but if only the marginal costs of training are imputed small companies gain a profit due to training, while large companies incur a loss.

6.1.2 Tuition and Apprenticeship Fees

In a number of countries students or trainees have to pay a fee covering the total or a share of the education or training costs not only for classroom or school based training but – as Velenchik (1995) reports for apprentices in Ghana – also in small enterprises for training. According to Dougherty (1989) and Dougherty and Tan (1997) this is still common in West Africa.

The most common argument for a general introduction of fees is that individuals benefit from training while otherwise the firms providing training or the government would have to bear the total costs. Some economists argue that only the trainees gain from training, so that they would have to bear the full costs of training.

Other arguments in favour of fees are the expectation that they enhance the efficiency of training measures and contribute to the resources as well. Participants are likely to pay for training if it is of a good quality and can bring personal benefits and high private rates of return (Bolina 1996; Gasskov 1994, 2000). Fees can be used to equalize supply and demand as they can be raised if demand is higher than supply and can be reduced if supply is higher than demand. Different fee levels can also be linked to different levels of quality, if better training institutes request a higher fee rate (Bolina 1996). Yet the latter point could also mean that trainees from lower socio-economical backgrounds would not be able to opt for high quality education at expensive institutions. This requires that the social consequences of differentiated fee systems need to be considered.²⁶

Another argument points into a somewhat different direction as more able trainees may argue in favour of lower fees due to their higher productivity, requesting less input of the training institution.

If public spending is not reduced due to the introduction of fees or in expecting rising fee levels the quality may improve. On the other hand, fee systems also incorporate disadvantages, since they may affect trainees from poor families, hindering them to get access to training because of unaffordable fees.

Another problem may also arise if the fee level is too low and thus providing only a small incentive for the institutions to be responsive to students as the income from fees comprises only a small proportion of the budget.

Whether training fees can fully cover the programme costs or not depends on the particular course that is on offer. For short-term courses in attractive areas, like computer or language courses, a fee covering the total costs might be possible, while in other areas, like very expensive long-term technical courses, fees could cover just a small portion of the costs. But this is neither a general advantage of fees nor a disadvantage, but it may suggest that only some courses can be offered on a cost covering basis.

²⁶ With regard to higher education this has led to the introduction of deferred fee payments and income-contingent loans (see for example the recent overview by Chapman 2006)

6.2 Employer financed training

The employer is involved in the financing of training, whenever an apprentice incurs net-costs. This is particularly the case for dual training arrangements. However, it might be taken into consideration that the company's costs may be deductible from the tax base. In this case, the net-costs (after tax) are lower than the cost before tax. For example, German companies bear only a third of all training cost, when tax deductibility is accounted for, while the Government's share is approximately two third (Dohmen/Hoi 2004).

With regard to the dual system two general concepts are of interest. The first is that only those firms bear the cost that provide training, the second is that a training levy is paid for by all companies (of a certain branch).

6.2.1 Single Employer Funding

According to Bolina (1996), vocational training in large companies in Japan is organised as a 'single employer financing system'. Big companies organise their own vocational training and the expenditures for in-house training are considered part of the labour costs. In Japan the relationship between employers and employees is unique and generally for the whole working life of a person. Due to the lifelong relationship the company can expect to gain returns to training and is therefore prepared to bear the costs.

Georg and Demes (1996) point out that these principles – which are quite often mentioned as the general principle of the Japan labour market – are valid for core staff but not for all employees. Furthermore, the training of an employee is strongly related to his tasks and duties but not to a general job qualification as, for example, in Germany. In fact, this may mean that training is more or less firm-specific and refers to the distinction of Becker (1963, 1993). Here, poaching is only of limited relevance. On the contrary, workers who move from one firm to another will receive a lower salary and, thus, have a strong incentive to stay with their employer.

6.2.2 Training Levy/Payroll Tax System

Due to the character of training as a local public good for employers in need of employees with a certain qualification, training could be financed by a training levy or payroll tax.

In practice, two general approaches of levy systems can be distinguished. The first is the so-called revenue generating scheme where companies (of a particular branch) contribute to the fund with a certain share of their payroll, usually to finance public provision of training institutions. The second approach is called a levy-rebate or levy-grant scheme where the levy is either used to repay the company's costs of training or to reduce the contribution of firms which train their staff themselves.

However, there may be some more alternatives on how the levy system works in detail. For example, all companies pay the same share of their payroll and the costs of training firms are repaid partially by the

fund. The idea of such a fund is to redistribute training costs between companies which train their employees and firms which do not. Thus, it is either a cost-sharing or a cost-redistribution mechanism between training and non-training firms. In fact, a difference to a general tax reduction or tax rebate occurs only for companies which do not train. If the training costs were to be included in the tax system companies which do not provide training would not have to bear any training costs. Instead, individuals would have to pay a part of the costs.²⁷

Greig (1997) distinguishes three general approaches according to the manner how governments spend the revenue of training levies: (1) the levy is not redistributed to companies but to provide training centres or training development services, (2) the levy is used to intervene in detail in industrial training, e.g. through the use of grants to subsidise individual training activities or the training performance etc., or (3) for ad hoc intervention with training investments and subsidies in priority areas that are defined to be of major national interest but not addressed by employers.

Training levies were introduced in several countries, particularly in Latin and South America, e.g. in Brazil, and the Caribbean some 50 years ago. Other countries are Argentina, Colombia, Ecuador, Guatemala, Honduras, Peru, and Venezuela. But training levies are not limited to Latin America but have been introduced around the world, e.g. Côte d'Ivoire has imposed a levy in 1977 covering 1.5 % of the wage bill. Companies providing training opportunities do not have to contribute (Bas 1988). Taiwan has introduced a levy scheme in 1972; South Korea imposed it 1974.

According to Dougherty and Tan (1997), the levy scheme is restricted to the industrial sector in most countries. In a few countries it covers commerce, too, or, like in Honduras, it is all-embracing. Generally, small firms are exempted but with different definitions what a small firm is. Sometimes the schemes comprise only large firms e.g. with more than 300 employees.

In most countries the contribution is between 1.0 and 2.0 % of the payroll and is typically paid by the firms only. In Venezuela the levy is 2.5 % covering also a contribution of the employee. The contribution might differ between industries or is limited to certain branches.

The initial idea of training levies was to provide funding for institutionalised training. In 1976 it has been amended in Brazil and in Chile to a levy/grant scheme. Dougherty and Tan (1997) question whether the net impact of the new programme is as impressive as it appears at first glance: 80 % increase in training expenses and a tripling of man-hours of training until 1980 in Brazil, while the number of firms participating in the programme tripled in Chile. But corresponding to the total numbers of firms only 0.35 % and 1.4 %

²⁷ The underlying assumption is that certain tax revenue is necessary to cover the public expenditures. If training costs were not tax deductible the tax contribution of other tax payers would be less. Thus, they have to bear part of the training cost indirectly. If this share is to be borne by non-training companies the tax contribution of other tax payers is equal to a tax system that not considers training costs as tax deductible.

participated in Brazil and in Chile, respectively. Each worker is trained for 3 hours per year in Brazil and for 2 hours in Chile. The total expenditure on approved training schemes was 1 % in Chile and 2 % in Brazil.

Dougherty and Tan reject two possible explanations. The first is directed to a disproportional channeling of funds to a minority of occupations so that the low figures would be without relevance. This is refused by the argument that large firms contribute disproportional to their numbers in the programme what can be observed in Brazil as well as in other countries.²⁸ Furthermore, they assume that the training would have been undertaken anyway, so that the real impact of the programme would be rather low.

A special case is the training levy system in South Korea which relies on firms with more than 300 workers which do not provide a sufficient percentage of their employees with training. Thus the levy is a panel tax for companies not providing sufficient training or spending too less for training (Booth and Snower 1996). The impact on training was an increase from 13,000 to 91,000 during the first five years. Later on, the numbers dropped to less than 30,000 so that the programme is nearly without impact regarding the provision of training.

In Taiwan there was a discussion whether the introduction has worked like a 'initial ignition' as the number of trainees, which has more than tripled within 2 years and covered 8 % of the labour force, has only been slightly reduced after the scheme has been abandoned (Dougherty and Tan 1997). Some, like San and Chao-Nan (1986), argue that the scheme might have had some kind of demonstration effect regarding the benefits of training. An aspect which has to be taken into account is the changing economic environment linked to a more sophisticated technology and generally connected with an increasing necessity of training.

In Malaysia a training levy was established in 1993 with a matching grant of the government (World Bank 1997a; Tan and Gill 2000). Employer contributing at least 6 months are entitled to claim a portion of their allowable training expenses up to the limit of their own levy which is 1 % of the payroll. The levy is compulsory for all companies with more than 50 workers; firms with less than 50 employees are under the umbrella of the 'Double Deduction Incentive for Training' Scheme (DDIT), which is a tax reduction (see chapter 6.3.2). Even if the levy is mandatory, roughly 27 % of companies are non-compliant, particularly small firms with less than 100 employees. These firms avoid the payroll levy as well as the potentially high fix costs for setting up a formal training programme that would enable them to get their expenses reimbursed, if not already existing. Thus, non-compliance is advantageous for small firms which do not intend to provide training – or intend to provide only informal training – which is not covered by the levy system.

²⁸ The major questions are: (1) whether small firms are less prepared than large firms to provide training and/or (2) are not prepared either to apply for or to redirect courses to become eligible for funding. If these or other possible explanations point into the right direction than a systematic disadvantage for small companies exists in receiving public subsidies for training.

It is reported that quite a number of firms pay the levy but do not claim for reimbursement what can be explained with non provision of training only for a minority of 6 % . More than half train informally and are therefore not eligible, while 40 % train formally and would get reimbursed. Often they do not apply for reimbursement because of low expenses and thus, a too low reimbursement compared to the costs of application. This is also most relevant for small firms with mature technology needing low skill levels and weak training capabilities.

The most relevant question whether the introduction of the levy has increased training provision has not yet been answered clearly as the scheme has started to work just a few years ago. But first results point to this direction (World Bank 1997a; Tan and Gill 2000).

In contrast to many other researchers, Dougherty and Tan (1997) are very reserved regarding the effects and the arguments in favour of a training levy. In their opinion, the arguments for the introduction of training levies are not very convincing as only the trainees benefit from training. Thus, why shall companies contribute to the financing of training?

From their point of view, the best argument in favour of a levy comes from Whalley and Zideman (1990) resting on an analysis of the incidence of a payroll tax. The question is whether the contribution to the levy scheme is really paid out of the firms' profits or is shifted to purchasers via higher product prices or workers by reduced wages. As the literature suggests for developed countries that the tax burden is shifted to the workers, Whalley and Zideman assume that this is the case for developing countries as well. Thus, the payroll tax can be regarded as a reverse social insurance contribution, an income contingent loan or training tax because the repayment depends on the wage payment. Therefore, the repayment is positively related to income. Finally it is unclear how far workers contribute to the scheme and how far they benefit from training.

Whalley and Zideman (1990) point to some evidence that the effects of such a scheme are somewhat arbitrarily, so that a loan scheme might be more favourable and supported by a clear relationship between the benefits and the contributors of a levy system.

Finally, Dougherty and Tan (1997) point to three problems connected to a levy: (1) they see no reason to shelter the public funding of training more than e.g. general education, as it is often said to be the case of training levies; (2) the revenue of the levy is quite often much higher than the expenses, so that there is an incentive to increase administration or to spend ineffectively; (3) all ear-marked taxes, and so for a levy as well, are subject to diversion and misuse of funds.

Some advantages, or, as they describe it, some arguments for the popularity of a levy, are, first, its general security of the availability of funds for training independent from changes in the economic environment. Secondly, a levy might be an opportunity to mobilise additional funds for public spending which are otherwise not available. Thirdly, it could be used not only for the promotion of training but also to re-

structure the labour force, e.g. as has been intended in Singapore. However the failure of the programme might be another argument against a levy.

In the end, Dougherty and Tan (1997), refer to some more general arguments by Levin (1977). The most important one might be the distortinary effect because of the fact that a payroll tax increases the costs of labour compared to capital. Undesirable redistribution effects can be the higher taxation of labour income which is the most important source of income for the working poor and the middle class, while unearned income like rents, dividends, profits and income which are major sources of the rich are unaffected.

Recent studies from Switzerland (Wolter et al. 2003; Muehlemann et al. 2005) suggest that subsidies for firms not yet providing training may be ineffective for several reasons. Firstly, they argue that such firms do not train because of missing returns and not because of too high net-costs. The latter may, for example, be due to low skilled or very high-skilled work or simply too few staff not allowing redistributing work to apprentices. Thus, a reduction of costs does not solve this problem. Secondly, even in case that net-costs are a major reason for not supplying apprenticeships, a cost reduction might be of interest to first that aim at recovering their costs in the short-run. Yet, such firms might not employ their apprentices later on. If the option to move to other firms is limited, the apprentice may be trained, but unemployed after training. Thus, the efficiency is questionable. Thirdly, the cost-elasticity of companies that train with a long-term employment perspective is limited, i.e. they offer so many apprenticeships as they expect to need in the long-run and do not respond to reduced net-costs. Thus, they will not increase the number of training places, whatever the net-costs are.

Furthermore, since it is impossible to identify those firms that finally would increase their number of apprenticeships, the subsidy would have to be available for all firms. According to Wolter (2007) this would result in a dead-weight loss of about 75 to 80 %, referring also to an Austrian study investigating the effect of the so-called “Blum-Bonus”, paying a subsidy of € 8.400 to firms increasing their apprenticeship figures (Arbeiterkammer Niederösterreich 2007). These is important, since training levies would have the same effect as public subsidies.

These findings are of interest with regard to levy systems as the general principle is the same, i.e. the reduction of net-costs for firms providing training. On the other hand, a recent overview by Dohmen et al. (2007) indicates that levies are a major instrument in Western Europe for the financing of continuing vocational education and training.

6.3 Public Financing of TVET

The intention of public funding is to contribute to the cost of TVET because education and training produce the public benefits. In many cases, the public funding may also cover the cost of TVET which was, in

principle, to be born by other beneficiaries- the employers and private individuals (the trainees and their parents), particularly when the risks are high that the private returns to investment may not be realized or when the private beneficiaries are unable to bear the cost. In that sense, the public funding may reduce the costs of training to the immediate beneficiaries.

One can distinguish between two major kinds of subsidies: direct subsidies or payments, on the one hand, and indirect transfers, like tax reductions, on the other hand. In addition, this section will also briefly review vouchers, which is more an allocation mechanism for public (and sometimes even private) resources.

Two major arguments are responsible for the strong public intervention and financing. The most important issue is that education and training is linked to (large) social benefits, which cause an externality and are linked to under-investment if decisions on education and VET are taken by individuals and companies only. The second is to ensure social equity for those who cannot afford to bear the costs education or VET on their own. Since public spending reduces the individual costs it is suitable to support particularly training opportunities for socially disadvantaged groups (Bolina 1996).

6.3.1 Direct Payments/Subsidies

A direct subsidy either to training institutions, individuals and/or firms is a common way to provide incentives for education. A general mechanism is to bear the costs of public or private VET schools or to subsidise the wages of trainees or the costs of firms providing training.

As Dougherty and Tan (1997) report that a number of, particular Asian, countries like Sri Lanka, India or Nepal contribute to the wages of trainees even when they are trained on-the-job. Subsidising off-the-job training for apprentices is reported from Fiji, New Zealand and Australia.

However, as already mentioned above, the impact of public funding with regard to the dual system may be limited though costs are high if additional apprenticeships, due to a training subsidy, can not be isolated from others. Deadweight loss is estimated to be at around 75 to 80 % of costs. Yet, public financing of training schools is common even in countries with dual VET.

6.3.2 Tax deductions /Tax rebates

Tax reductions or tax rebates provide an incentive for firms to bear the costs of training by reducing its net-costs. According to Bolina (1996) a tax reduction is – like a payroll levy system – directed towards a cost-sharing among those who benefit from training. Barr (1998, p. 325) argues for the tax deductibility of training costs: „Education, to the extent that it raises an individual’s future earnings, increases his/her future tax payments; in absence of any subsidy, an individual’s investment in education confers a ‚dividend‘ on future taxpayers.“ Thus, if a tax system relies on individual earnings training expenses should be tax deductible or training costs should be reduced through subsidies.

The training expenses of companies are tax deductible in a number of countries. Tax relief has been introduced in UK in the mid 1990s (Booth and Snower 1996). Such an investment becomes even more favourable if more than the total expenditures can be deducted, e.g. 150 % of the expenditures are tax deductible in the Philippines, and 200 % in Brazil (Dougherty and Tan 1997; Ducci 1988). Austria allows a deduction of 120 % for expenses for external training, while Germany allows in principle a 100 % deduction from individual income tax. Yet, its final impact is limited as, in fact, training expenditures reduce tax burden only if they exceed the lump-sum reduction of all “professional expenses” of about € 900 (Dohmen 2007).²⁹

The analysis of the effects of tax reductions on the net costs of training depends on the concrete mechanism applied. In principle, one can distinguish a reduction of the tax base and a reduction of the tax payment. The first is called a tax allowance or a tax exemption while the latter is a tax credit.³⁰

Tax credits are applied e.g. in Argentina where the tax credit covers the training expenses up to a maximum of 0.8 % of the payroll. Dougherty and Tan (1997) point to a special arrangement that is equal to a tax credit in its effect on the net expenditures. This is the case if training expenses are deductible from (or reimbursed by) the training levy or payroll tax as established in Fiji, Ireland, Taiwan, and UK.

A World Bank (1997a) study on Malaysia pointed to the poor performance of the ‘Double Deduction Incentive for Training’ Scheme (DDIT) which allowed a tax deduction if firms send their workers to approved training courses. While small companies have more or less not participated in the scheme especially multinational or joint-venture companies have benefited. More than one third of the applications for approval of in-house training have been refused so that only 3,250 trainees within a 6 year period have been supported. Also the utilisation between the economic sub-sectors has been uneven. Industrial firms (e.g. electronics, electronics, and chemicals) have benefited mostly while programmes in food and beverage industries, wood and furniture or textiles have participated rather seldom.

As multi-national and joint-venture firms will train their staff even without such an incentive the programme missed its aim to encourage training provision. According to the authors, these findings confirm other studies pointing out the low cost-effectiveness of tax reduction policies (World Bank 1997a).

The most important reasons for not using the DDIT programmes were: no awareness of the programme (45 %), no need or no provision of training (25 %), not met requirements (11 %), insufficient information about programme details (6 %) or too few trainees (4 %) and some other minor points. Thus, the most important problem was no or imperfect information, despite of great governmental efforts to inform about the availability, referred to by one out of two employers not applying to the programme. And one out

²⁹ For a more general analysis of tax and treatment of education expenses in Germany see Dohmen (1999).

³⁰ Terms as tax rebates or tax reductions can cover both kinds so that they are not specific and open for confusion.

of four employers was not in need of or currently not training or did not know how to train. Roughly 15 % do not meet the requirements or train too few people, thus applying would be of limited reward.

A crucial issue with regard to the reduction of training expenses from the tax base in progressive tax systems, as applied e.g. in Germany or Austria, is that the net-costs of training (after tax) decrease with tax base, i.e. net-costs of training decrease with an increasing income . This suggests that training investment is higher for those with higher income, while those with low income invest not or only to a minor extent.

Dougherty and Tan (1997) regard tax rebate schemes difficult for another reason. Even acknowledging that investments in physical and human capital should be treated equally they argue that the investments in human beings have typically better conditions of depreciation as it can be deducted with total or even more than total expenditures in the investment period while physical capital can be depreciated only over a couple of years. In combination with a progressive marginal tax system the higher marginal tax reduction of depreciation in one particular year leads to lower net investment costs.

6.3.3 Vouchers/Entitlements

Vouchers or entitlements are a demand-oriented mechanism for financing education and training. Commonly, the trainee receives a voucher enabling him/her for training. The voucher has a certain face value which is paid for by the government to the training institute. So far, vouchers are more relevant for the financing of child care, school and further education,³¹ but a few training systems or specific training sections contain some elements of a voucher system.

In Kenya's VET-system vouchers have been introduced as 'Jua Kali Pilot Voucher Programme' to finance skill upgrading in small and micro enterprises. The programme was targeted to established entrepreneurs and their employees to improve the productivity of micro and small enterprises and to increase their income. Further aims were an increasing demand for training and the enlargement of supply of training providers catering to the sector as well as to promote choice by introduction of competition between training providers. According to a first assessment of the programme, undertaken immediately after the end of the four month pilot, the programme was to achieving many of its objectives. It has not been evaluated whether the programme achieves its objective to enhance the productivity and the earnings due to the timing of the mission immediately after the end of the pilot.

Somewhat difficult is the assessment of the top-up that the trainee has to pay out of his own pocket. On the one hand a number of approved vouchers have not been used, possibly due to the top-up fee. On

³¹ For a recent overview with regard to school vouchers see Dohmen (2006, 2007b) and Dohmen (2007a) for adult education. Earlier publications on this issue are West 1996; Mangold/Oelkers/Rhyn 1999; West/Sparkes/Balabanov 1999; Dohmen/Koppenhöfer 2000; Wolter 2001.

the other hand, people receiving training said they were prepared to pay a 20 % top-up. Furthermore, some training providers reduced their requested payments to a level below the top-up, thus the trainees did not have to pay any contribution. This is either due to cost reductions which would be an advantage because of enhanced cost-effectiveness; contrary, it could lead to windfall-profits if trainees spend their (reimbursable) vouchers to training providers without receiving training. According to the assessment report, there have been complaints about the quality of training, particularly by mastercraft workers.

In industrialised countries vouchers in VET and further education are operating in Austria and Belgium (West et al. 1999) and some of the German laender. A voucher-like model, the so-called Individual Learning Accounts, was applied in the United Kingdom to foster continuing education. This model was suspended particularly because of misuse and mis-appropriation of funds as well as fraud (Dohmen 2007). However, as such problems may occur in any market driven system and even in non-market systems this suggests quality assurance as well as information and advice, in fact for all training systems.

Top-up vouchers may conflict with social equity policies as trainees from low-income families cannot afford the payment of the top-up fee. But according to Gray (1997) the most crucial point of vouchers arises due to market imperfections, i.e. the inability of trainees to assess and to judge the quality of teaching in advance due to insufficient information. The trainee becomes subject to recruitment strategies of training providers which may have other interests than the trainee. That is to avoid changing and uncertain demand of prospective trainees they may devote too much resources to advertising and other marketing (Gray 1997).

6.3.4 Provision of Training Loans

Booth and Snower (1996) point out that loan policies appear to be far more accepted for secondary and higher education than for training while Dougherty and Tan (1997) favour loan policies compared to grants to finance training costs e.g. by trainees, if such a loan programme is practicable. Even for further training, where some loans for individuals and companies exist, demand is rather limited, though it appears that such loans are important to finance programmes that are more costly (Dohmen 2007; Dohmen / de Hesselde / Himpele 2007).

7. Models for Financing TVET and Skills Development in Bangladesh

The following considerations aim at a first and preliminary identification of possible (additional or “alternative”) funding sources as well as allocation mechanisms that have the potential to enhance the efficiency and effectiveness of the TVET-system in Bangladesh.

Having said that, it should be noted that there is no one unique TVET system but rather there are several segments to the TVET system. The core segments are formal and non-formal school-based TVET as well as apprenticeships. Apprenticeships can take place in the formal economy as well as in the informal economy. It seems appropriate to also include the informal economy otherwise 80% or even 90% of the economy would be excluded.

Another issue is the level of change that is aimed at. According to the project documents one of the final results of the project is a system of competency-based qualifications. However, it will be a very long way to go until this target will be reached comprehensively across the TVET-system. Thus, a strategy for establishing pilot institutions that can be targeted for reform at all levels including options for agreed changes to the funding system and mechanisms.

7.1 Reform options within the present funding system

7.1.1 Voucher system

Vouchers are a common approach to finance education as well as vocational education.³² A voucher is allocated to each student or each prospective student and equipped either with a certain amount of money or time. When students enrol in an institution the voucher is handed over to the institutions which requests reimbursement.

The idea behind vouchers is that institutions compete for students, and if students opt for those institutions with the highest quality of instruction, this will lead to a quality driven competition.

For example, a voucher could be equipped with a value of Tk 25,000 for a 2 year SSC(voc) or HSC(voc)-programmes and with Tk 50,000 for a 4-year diploma programme. All figures are roughly equivalent of present unit costs. The effects of such a system are briefly summarised in Figure 14 on the basis of an allocation of Tk 40,000 per student.

The effect is that institutions not meeting a sufficient number of students, due to lack of quality and/or responsiveness to labour market needs, will suffer, while those will gain that provide high quality programmes and labour market related programmes.

As demand for TVET is possibly higher than supply, allowing institutions to skim the cream of students, entrance barriers to the TVET system need to be low (though basic quality standards should be ensured), to allow new suppliers to enter the market and to compete for students with already established institutions.

³² However, it should be noted that the terminology differs. Vouchers, Individual Learning Accounts, Training cheques and other names can be found. See for a comprehensive overview Dohmen (2007).

If private providers shall compete with public providers on a fair basis investment costs need to be refinanced through the face value of the voucher.

Perhaps it is also necessary to clarify a) what should be the policies for awarding vouchers to individual youth since the public funds are insufficient for giving a voucher to everybody, b) what should be the face value of the voucher (as unit costs are different across segments of institutions) and c) whether in awarding vouchers the government should exercise preferences linked to the economic priorities since public funds are broadly insufficient to finance the individual preferences in TVET, etc.etc.

Future Funding Options - comparison				
Present system		Voucher system		
TTC: 500 students		Cost per student: 40,000		
Budget: Tk 20 mln	TTC 1: 600 students	TTC 2: 400 students		
50 Instructors	Budget: Tk 24 mln	Budget: Tk 16 mln		
<u>50 Support staff</u>				
Total salary: Tk 15 mln	Total salary: Tk 15 mln			
Pass rate: 50%				
Cost per student: 40,000	=> Tk 5 mln for other recurrent cost items	=> Tk 1 mln for other recurrent cost items		
Cost per graduate: 80,000	=> Tk 4 mln for improvement and depreciation	=> Tk 4 mln missing for other recurrent cost items		

Figure 14: The effects of a voucher system on institutional budget

7.1.2 Financing of institutions based on graduate numbers

A similar approach would be to pay institutions according to the number of graduates. If, for example, graduation rates are 50% on average, a “graduate voucher” could be equipped with a value of Tk 80,000 (or even less to foster the increase of graduation rates). In this case, institutions with a lower graduation rate will suffer while those with a higher will gain. See Figure 15 for a brief example on the effects.

If a full transition to a financing system based on graduate is not possible or not preferred, the same principle can be applied by topping up the institutional budget, by a certain amount of money, e.g. Tk 5,000 or Tk 10,000.

Future Funding Options - comparison		FiBS	
Present system	Pass rate-system		
TTC: 500 students	Cost per graduate: Tk 80,000		
Budget: Tk 20 mln	TTC 1: 600 students	TTC 2: 400 students	
50 Instructors <u>50 Support staff</u>	Pass rate: 60%	Pass rate: 30%	
Total salary: Tk 15 mln	No. of graduates: 360	No. of graduates: 180	
Pass rate: 50%	Budget: Tk 28.8 mln	Budget: Tk 14.4 mln	
Cost per student: 40,000	Total salary: Tk 15 mln	Total salary: Tk 15 mln	
Cost per graduate: 80,000	=> Tk 13.8 mln for other recurrent costs, for improvement and depreciation	=> Funds are not sufficient to pay even all salaries	

Figure 15: The effects of a voucher system on institutional budget

7.2 Reform options for apprenticeships

7.2.1 Apprenticeships Vouchers (IAVs)

The extent of apprenticeships in Bangladesh training system is considerable. As far as formal apprenticeships are concerned the number is obviously very small. However, in the informal sector it is clear that there is a well established system that provides opportunities for thousands of young Bangladeshis (ILO 2009).

Aiming at an extension of this kind of skills development, and having a (more) formalised system of skills assessment in place than at the moment (for major parts of non formalised apprenticeships), an apprenticeship voucher could be introduced, equipping apprentices with a certain amount of money, e.g. to covers some of the employer's costs and, possibly, also some of the apprentices costs of living (either directly to the apprentice or indirectly via the employers paying a small salary to the apprentice). The voucher could also flexibly respond to the duration of training if, for example, with a fixed amount of money, say Tk 1,000 per month.

The inclusion of some funds for financing the costs of living for apprentices is a point of discussion, though it seems an important issue to allow youth from poorer backgrounds to participate in training.

In addition, a similar approach could be utilised to make internships of students at polytechnics or technical training schools and institutes more attractive for companies and employers, in the formal as well as informal sector.

7.3 Alternative sources for (additional) funding

One of the major problems of TVET is a very limited financial basis for additional public financing. The government has already identified a huge gap of public resources for additional investment in general as well as in education. Although it was stated several times that funding restrictions are not the problem of TVET, it should also be taken into account that the funding requirements are huge, since almost all public and many private TVET-institutions would require modernisation and refurbishment to be able to respond to the labour market requirement of a modern economy, although there is a big gap between the requirements of modern industries and services on the one hand and subsistence level industries in rural (and urban) areas.

7.3.1 Combining tuition fees for TVET with deferred and income-related payment – the Bangladesh Vocational Education Contribution Scheme (BD-VECS)

Bangladesh has a divided system of the TVET-financing. A relatively small, although increasing group of students can study at public TVET-institutions, while the majority of learners is enrolled in private institutions, charging high fees to be paid by students and parents. Without a functioning market for educational loans or without public loans or grants, TVET (and education) at private institutions is generally available only to the students from the better-off families. However, the existing market for private TVET in Bangladesh suggests that there is a potential for the introduction and increase of fee levels even at public institutions.

At the moment it is not possible to suggest any fee level that might be substantial as well as sustainable. However, an increase and a general introduction of fees for TVET should be discussed.

Having said that, either a grant or loan scheme for the financing of these fees or another mechanism could be established to support those who cannot afford such fees.

Normal mortgage loans transfer the risk to the borrower on an individual basis. Thus the bank relies on personal items of the borrower to minimise the inherent risk of such loans. This would exclude many Bangladeshis from credits, since their assets to safeguard such loans are limited.

Secondly, the take up-rate of such loans depends also on the individual readiness to assume that risk and the individual expectation on future returns. Given the fact that returns to education are modest at best in Bangladesh, investment in education and TVET would probably be very limited.

Thus, to really increase participation rates in TVET another model seems to be advantageous, where the fee payment can be deferred until the students enter the labour market and earn a certain income.

A “concrete” approach of such an income-contingent loan could be that (former) students repay their fees with a contribution of 5% of their monthly income over a period of seven (ten) years. Thus, the amount of money repaid depends on the individual income, the share and a person earning Tk 5,000 per month pays less than a person earning Tk 10,000 (see Table 31).

In general, this approach is based on the Australian Higher Education Contribution Scheme (HECS), which seems to be the best model to share risk among those more or less successful at the labour market. The aim of this model should be that the average repayment rate covers the average cost of TVET (possibly added by some percentage points to compensate for default rates).

It is possible as the same system is applied in many education funding schemes which are based on loan repayment contingent on the labour market success. However, the system of tracing former students and deducting the amounts due from their salaries is quite complex. (Example : Canada)

Monthly income (in Tk)	Share of income paid	Monthly payment (in Tk)	Repayment period (No. of years)	Total payment (in Tk)
2,500	7%	175	5	10,500
5,000	7%	350	5	21,000
7,500	7%	525	5	31,500
10,000	7%	700	5	42,000
2,500	5%	125	7	10,500
5,000	5%	250	7	21,000
7,500	5%	375	7	31,500
10,000	5%	500	7	42,000

Table 31: Examples of revenues of BD-VECS (Bangladesh Vocational Education Contribution Scheme)

A more elaborate version of BD-VECS could integrate the different costs and/or duration of programs. One could also integrate different levels of financing the costs of living through this system. Thus, it is flexible with regard to different approaches.

Another approach could link the institutions revenue with BD-VECS if, for example, a certain share of the payments is considered income of the institution. In this case, those institutions offering courses which are more suitable to labour market requirements – as indicated by the (average) income of the graduates – gain through higher revenues than others. Implicitly, this also favours those institutions with lower drop-out or higher graduation rates.

7.3.2 The contribution of companies – a training fund?

It could be assumed that companies benefit from qualified graduates of TVET-institutions, but do not specifically contribute to the cost of their training. They only contribute in the case of on-the-job-training or when they request off-the-job-training from training providers.

If companies in Bangladesh do finance training, the costs of this training are exempted from the company's tax base. However, this applies to larger companies only, since most companies don't pay any (company) tax at all.

A common approach to gain from company contributions is the establishment of a training fund, as for example the Malaysian Skills Development Fund. The economic rationale of such funds is the following: Since companies face the risk of poaching trained employees they may under-invest in training. The establishment of a training fund, financed through employer contributions (e.g. payroll levy) allows to equalize the risks of poaching and results in the increase of investment in training.

However, it seems that such funds also have their weaknesses. One of the most important pre-requirements is that only "registered" companies can be included in such funds. Yet, in Bangladesh 90% of the economy – and thus companies – are informal, which means that such establishments may be excluded from some tax obligations. However, this does not necessarily mean that such a fund cannot be introduced in Bangladesh, but it limits its scope.

7.3.3 Corporate Social Responsibility as Source of Funding

It seems that Corporate Social Responsibility (CSR) as a motive for private support of education institutions is on the rise. During the country visit of the consultant there were several notes in newspapers that companies or foundations made donations to the education institutions. For example, Dhaka University received funds by NN and also NCC Bank Foundation forwarded Tk 1.2m to several education institutions, among them Nurul Islam Technical Institute of Chittagong (Financial Express, June 30, 2009).

8. Annexes

8.1 Delegation of Financial Powers³³

(The following is the translation of the relevant table from a text book in Bangla. This is a partial description of the financial powers. For a complete story on financial rules and delegation/sub-delegation of financial powers, the reader has to read the original orders of the Government of Bangladesh. For any conflict of meaning, inadequacies, updating and errors, the original orders should be referred.)

Sl. No.	Item No	Head of the Department	Subordinate Offices (cat I - school principle)		
			Officers in Category- 1	Officers in Category-II	Officers in Category-III
1	2	3	4	5	6
1.	Creation of temporary posts	Nil	Nil	Nil	Nil
2.	Abolition of posts	Nil	Nil	Nil	Nil
3.	Reappropriation of budgeted funds.	Reappropriation can be made within same finance code range subject to the conditions that: (a) funds may not be re-appropriated in respect of pay code to other codes; (b) reappropriation may be limited to the budgeted funds. (c) No reappropriation should be made to meet expenditure which is likely to recur in future years.	Nil	Nil	Nil
4	Approval/execution of contract of new construction works in the Non-Development account.	Tk. 1.00 crore in each work.	Tk.15.00 lac in each work	Tk.7.00 lac in each work	Tk.3.00 lac in each work
5.	Administrative approval to new expenditure to Non-Development budget.	Tk. 8.00 lac subject to allocation of budget.	Tk. 2.00 lac subject to allocation of budget	Tk. 50.00 thousand subject to allocation of budget	Nil

³³ ILO, TVET Reform Project, TVET Legislation, Policy & Regulations in Bangladesh: An Overview, prepared by M.M. Rahman Siddiqi, Dhaka.

6..	Disposal of Govt. Property-				
	(i) Dismantling and selling of unserviceable/ abandoned buildings	Nil	Nil	Nil	Nil
	(ii) Declaring the property unserviceable	Tk. 3.00 lac subject to observance of the regular procedure.	Tk. 50 thousand subject to observance of the regular procedure	Tk.30 thousand subject to observance of the regular procedure	Nil
	(iii) Sale of unserviceable stores	Full powers provided that the sale is made by Public auction/tender/ quotation.	Full powers provided that the sale is made by Public auction/tender/ quotation.	Tk.50 thousand provided that the sale is made by Public auction/Tender/ quotation.	Tk. 25 thousand provided that the sale is made by Public auction/Tender/ quotation
	(iv) Lease of Government land	Full powers provided that the sale is made by Public auction/tender/quotation	Full powers provided that the sale is made by Public auction/tender/ quotation for one year	Full powers Provided that the sale is made by Public auction/tender/ quotation for one year.	Full powers upto Tk. 20 thousand provided that the sale is made by Public auction/tender/ quotation for one year
	(v) Lease of canteen	Full powers provided that the sale is made for one year by Public auction/tender/quotation	Full powers provided that the sale is made for one year by Public auction/tender/ quotation	Full powers provided that the sale is made for one year by Public auction/tender/ quotation	Full powers upto Tk. 10 thousand provided that the sale is made for one year by Public auction/tender/ quotation
	(vi) Other collections of rent/lease	Full powers provided that the sale is made for one year by Public auction/tender/ quotation	Full powers provided that the sale is made for	Full powers provided that the sale is made for	Full powers upto Tk. 20 thousand Provided

			one year by Public auc- tion/tender/q uotation	one year by Public auc- tion/tender/q uotation	that the sale is made for one year by Public auc- tion/tender/q uotation
7.	Write off irrecoverable value of stores or public money due to losses on account of fraud, theft, etc.	Subject to prescribed conditions Tk. 30 thousand for each case	Subject to prescribed conditions Tk. 10 thousand for each case	Subject to prescribed conditions Tk. 5 thousand for each case	Subject to prescribed conditions Tk. 2500 thousand for each case
8.	Powers to make refund in accordance with the rules or in pursuance of decisions of court in respect of which no appeal is proposed to be filed.	Full power subject to observance of prescribed rules.	Full power Subject to observance of pre-scribed rules.	Full power Subject to observance of pre-scribed rules	Nil
9.	Powers to investigate the claims for arrears of officers and staff excepting claims of pre-independence period.	Claims for arrears of upto 15 years excepting the personal claim of the Head of the Division.	Claims for arrears of upto 6 years excepting the personal claim of the Head of Office.	Claims for arrears of upto 3 years excepting the personal claim of the Head of Office	Nil
10.	Purchase of item/sanction of expenditure/purchase agreement under Supply and Services (Finance Code 4840 – 4899). (a) if there is definite allocation of funds (excepting finance code 4878)	Full power subject to the following conditions: (i) The related work must be included in the division of budget allocation. (ii) Implementation procedure, purchase processing, approval procedure and regular financial rules and regulations must be followed in accordance with the Regulation 2003.	Full powers subject to observance of conditions under column 3.	Full powers subject to observance of conditions under column 3.	Full powers subject to observance of conditions under column 3.
	(b) In case there is no specific budget provision in any item (except finance Code No 4874)	Full power subject to the following conditions: (i) The relevant work must be included in the approved distribution by the appropriate authority.	Full powers subject to observance of conditions under	Full powers subject to observance of conditions under	Full powers subject to observance of conditions under

		(ii) Implementation procedure, purchase processing, approval procedure and regular financial rules and regulations must be followed in accordance with the Regulation 2003.	column 3.	column 3.	column 3.
	(iii) Approval/ implementation of the acceptance of the consultancy services (under the Finance Code 4874)	Upto Tk 15 lac subject to the following conditions: (i) The relevant work must be included in the allotment distribution of the annual budget. (ii) Implementation procedure, purchase processing, approval procedure and regular financial rules and regulations must be properly followed in accordance with the Regulation 2003.	Nil	Nil	Nil
11.	Sanctioning of expenditure of items under repairs, maintenance and rehabilitation:				
	(a) Repairs to Govt. owned vehicles	Subject to budget provision not exceeding Tk.50000 in one year with the following conditions: (i) The Govt. Motor vehicles workshops certify that they are unable to perform the work.	Not exceeding Tk. 25000 subject to the conditions (ii) and (iii) under column 3	Not exceeding Tk. 15000 subject to the conditions (ii) and (iii) under column 3	Not exceeding Tk. 10000 subject to the conditions (ii) and (iii) under column 3
		(ii) Existing rules and Govt. orders and instructions must be observed.			
		(iii) The total expenditure cannot be split up to avoid the sanctioning of higher authority.			
	(b) Repairs of instruments, equipment, office stationery & furniture.	Full power subject to budget allocation	Full power subject to budget allocation	Full power subject to budget allocation	Full power subject to budget allocation.
	(c) Bicycle repairs	Full power	Full power	Full power	Full power
	(d) Repairs to hired buildings/requisitioned buildings	Full power subject to budget allocation and on condition that lease deed /law of requisition must be within payment limits of	Not exceeding Tk. 2500 subject to the condi-	Not exceeding Tk. 1500 subject to the condi-	Nil

		the Government.	tion men- tioned in column 3	tion men- tioned in column	
12.	Sanctioning of expenditure of items under capital expenditure:				
	(a) Purchase of vehicles	Nil	Nil	Nil	Nil
	(b) Approval of purchase agreement for Commodities/materials/ instruments/office stationery/furniture	Upto Tk. 10.00 lac at one time subject to the following condition: (i) The relevant work must be included in the allotment distribution of the annual budget. (ii) Implementation procedure, purchase processing, approval procedure and regular financial rules and regulations must be properly followed in accordance with the Regulation 2003 (iii) Total repair expenditure cannot be split up to avoid the approval of the higher authority.	Upto Tk. 3.00 lac at one time subject to the conditions mentioned in column 3.	Upto Tk. 2.00 lac at one time subject to the conditions mentioned in column 3	Upto Tk. 1.00 lac at a time subject to the conditions mentioned in column 3
	(c) Purchase of computer/computer software/computer parts	Full power subject to budget allocation and on conditions that relevant rule and Government orders/ instructions must be followed.	Not exceeding Tk. 20.00 thousand subject to the condition mentioned in column 3.	Not exceeding Tk. 10.00 thousand subject to the condition mentioned in column 3.	Nil
	(d) Purchase of Bicycles	Full power subject to budget allocation and on conditions that relevant rule and Government orders/instructions must be followed	Full power subject to the condition mentioned in column 3.	Full power subject to the condition mentioned in column 3.	Nil
13.	Sanctioning of expenditure under scholarship, grants etc.				
	(a) Scholarship	Nil	Nil	Nil	Nil
	(b) Grant-in-aid	Nil	Nil	Nil	Nil
14.	Fixation of initial pay of officiating Government officers/staff in posts with time-	Nil	Nil	Nil	Nil

	scale				
15.	Payment of honorarium to Government officers/staff for related works in departmental examination following prescribed rules.	Not exceeding Tk.1000	Nil	Nil	Nil
16.	Sanctioning of appointment related to fees.	Full power subject to the condition that that amount should not exceed Tk. 1000 in a single case, and Tk. 2000 in one year.	Nil	Nil	Nil
17.	Relaxation the time limit relating to travelling allowance.	Full power, if advance payment is not made. If paid in advance, already withdrawn advance must be adjusted within 12 months. Otherwise, the advance will be recoverable	Full power subject to the condition mentioned in column 3	Nil	Nil
18.	Relaxation of prescribed time limit where the family of a transferred Gove officer/staff could not join him within six months due to shortage of accommodation, education of children, or on medical ground or on compassionate ground.	Not exceeding one year subject to the conditions: (1) In case of inability to transfer the family due to the reasons of less availability of residential accommodation, education of children, medical or humanitarian cause. (ii) If repayment of advance is made within six months.	Similar to column 3	Nil	Nil
19.	Grant of traveling and daily allowances to non-official members of Commissions/ Committees set-up by the Govt. and to foreign experts.	Full power subject to the conditions: (i) The family of the transferred officer/staff must travel to the new place after the transfer order.	Similar to column 3	Nil	Nil
20.	Sanctioning of expenditure of daily allowance and traveling allowance of private members and foreign specialists of Commissions/ Committees formed by the Government.	Nil	NIL	NIL	NIL
21.	Grant of daily allowance for compulsory halt due to dislocation of communications.	Full power	Full power	Full power	Nil
22.	Granting of extra-ordinary leave not exceeding one year for reasons beyond their	Full power excepting own case.	Full power excepting own case,	Nil	Nil

	control.		subject to the condition that the granting official must be the appointing authority of the concerned officer/staff		
23.	Granting of leave of officer/staff appointed on contract.	Nil	Nil	Nil	Nil
24.	Granting of special disability leave.	Nil	Nil	Nil	Nil
25.	Granting of advance to officers/staff from various provident funds	Full power excepting own case, subject to the condition that the relevant rule and Government orders/instructions must be followed.	Full power excepting his own case, subject to the condition that the relevant rule and Government orders/instructions must be followed and he must be the appointing authority of the officer/staff concerned	Similar to column 4	Similar to column 4
26.	Permission to postpone recovery of an advance drawn from the G.P. Fund for a specified period	Power excepting own case to postpone recovery of not more than one advance for a period of not exceeding 2 years	Power excepting own case to postpone recovery of not more	Nil	Nil

			than one advance for a period of not exceeding one year.		
27.	Relaxation of time of one month in which the purchase of vehicle by advance should be completed.	Full power to raise the limit up to three months.	Full power to raise the limit up to two months.	Full power to raise the limit up to one month.	Nil
28.	Authorisation of the final payment of the provident fund dues of a deceased Govt. officer/staff to the members of his family depending on the production of succession certificate and guardianship certificate in the case of minor heir(s).	Full power on production of an indemnity bond if the share of each is Tk. 5000	Full power on production of an indemnity bond if the share of each is Tk. 3000	Full power on production of an indemnity bond if the share of each is Tk. 2000	Full power on production of an indemnity bond if the share of each is Tk. 1000
29.	Question of deciding on the real legal heir(s).	Full power in consultation with the law Ministry.	Similar to column 3	Nil	Nil
30.	Condonation of interruption of work.	Nil	Nil	Nil	Nil
31.	Condonation of deficiency in qualifying service for pension.	Nil	Nil	Nil	Nil
32.	Powers to sanction to training abroad.	Nil	Nil	Nil	Nil
33.	Loans and advances to Govt. officer/staff (Permanent and temporary)	Subject to availability of funds, full powers excepting own case. The following conditions apply: (i) he has to be the appointing authority of the concerned officer/staff. (ii) the relevant rule and Government orders/ instructions must be followed	Nil	Nil	Nil
34.	Grant of additional allowances to Govt. officers/staff performing duties of more than one post.	Nil	Nil	Nil	Nil
35.	Powers to sanction pension.	Full powers excepting own case in respect of officers and staff	Similar to column 3	Similar to column 3	Nil

		appointed by him subject to audit officer's report.			
36.	Powers to sanction commutation to pension.	Full powers in respect of officers/staff to whom he can sanction pension.	Full powers in respect of officers/staff to whom he can sanction pension.	Full powers in respect of officers/staff to whom he can sanction pension.	Nil
37.	Powers to sanction traveling allowance to Govt. officers/staff compelled to answer civil or criminal charges in connection with official duties.	Full powers	Full powers	Full powers	Full powers
38.	Sanction of traveling allowance to a suspended Govt. officer/staff required to undertake a journey for attending departmental inquiry other than relating to him	Full powers	Full powers	Full powers	Full powers
39.	Powers to grant exemption from rule limiting a halt on tour to ten days.	Full powers	Full powers	Nil	Nil
40.	Powers to grant leave to a Govt. officer/staff in respect of whom a medical committee has reported that there is no prospect of his return to duties.	Full powers	Full powers	Full powers	Nil
41.	Powers to accept certificate of fitness signed by medical practitioners.	Full powers	Full powers	Full powers	Full powers
42.	Traveling allowance advance	Full powers	Full powers	Full powers	Nil
43.	Powers to appoint a Govt. officer/staff in two or more posts.	Nil	Nil	Nil	Nil
44.	Permission to increase the number of installments beyond 24 for the recovery of G.P. fund advance.	Powers to increase the monthly installments up to 48 excepting his own case.	Powers to increase the monthly installments up to 48 excepting	Nil	Nil

			his own case		
45	Sanction to L.A. estimate	Nil	Nil	Nil	Nil
46.	Entertainment in meetings where non-officials and/or foreigners are present and also for meetings of Board committee, etc	At the rate of Tk 12 per person, not exceeding Tk 300.	Nil	Nil	NIL
47.	Sanction of direct purchase without tender/quotation.	(a) In case of Commodities/ materials/instruments/office stationery/furniture up to Tk. 15 thousand at one time. (b) Physical services: Upto Tk. 50 thousand at one time. Subject to rule 18(2) and conditions mentioned in Appendix A of Public Procurement Regulations, 2003 : (i) In the budget distribution in the annual budget the relevant work has to be included. (ii) Implementation procedure, purchase processing, approval procedure and regular financial rules and regulations must be properly followed in accordance with the Regulation 2003. (iii) The total expenditure can not be split to avoid the approval of higher authority.	Similar to column 3	Similar to column 3	Similar to column 3
48.	Sanction of purchase through quotation without publication of tender.	(i) Up to Tk. 2 lac at one time within the country			
		(ii) Up to Tk. 5 lac in each case at one time for the Foreign Missions of Bangladesh. (ii) Subject to rule 20 (1) and 20(2) and conditions mentioned in Appendix A of Public Procurement Regulations, 2003 : (i) In the budget distribution in the annual budget the relevant work has to be included.			

		(ii) Implementation procedure, purchase processing, approval procedure and regular financial rules and regulations must be properly followed in accordance with the Regulation 2003. (iii) The total expenditure can not be split to avoid the approval of higher authority			
--	--	---	--	--	--

8.2 Terms of Reference

The overall study will be conducted in two Phases:

- **Phase 1:** Review the national budgeting and funding policies and systems in TVET in Bangladesh
- **Phase 2: (July - August 2009):** Review funding mechanisms in TVET institutions in Bangladesh

This ToR refers to **Phase 1 alone** which aims to review and make judgments and recommendations on:

- Relevant GOB legislation, regulations and policies pertaining to existing TVET funding; identification of linkages between national education and training policies, objectives and budgeting practices;
- The current systems and processes of budgeting and funding in TVET (as part of education and training); linkages to national and sectoral priorities and objectives related to economic growth, competitiveness, productivity, equity, inclusion, demographic processes, etc;
- Identification of the government commitments to funding TVET in comparison with funding of the general and higher education; making judgments on the relevance of budgeting proportions;
- Identification of the government commitments to finance the public and proprietary providers of education and training; making judgments on the relevance of such commitments;
- The current processes of funds targeting, budgeting, coordination and disbursement through the training systems administered by multiple public ministries, relevant agencies and private training providers; compare the budgeting provisions for similar TVET programmes by different ministries and agencies
- Equality of distribution of TVET funds across the country's regions and localities as a factor impacting on the equality of access to TVET
- Accountability regimes at the national and ministry levels as far as the public TVET funding is concerned
- Funding policies and processes for ensuring equitable access to TVET and employability of people from different backgrounds, of different gender, rural and urban, and different levels of levels of education;
- Funding provisions for skills training of people willing to go for foreign employment;
- Existing and potential alternative sources of funding TVET;
- Possibilities of utilization of new financial instruments providing support for skills training of underprivileged groups, i.e.loans, grants, etc.

- Possibilities for introducing the TVET funding policies enabling to reduce dependency on government and increase stakeholder and beneficiary contribution to financing TVET

Expected outputs

- A draft Consultancy Report providing information along the lines of the above outline; it should involve judgments, comparisons and proposals and will cite policy experiences of some other countries. The report will consider alternative funding policies and systems in TVET. The report will recommend strategies for optimizing the national use of existing financial resources in TVET.
- The consultant will present the key findings at the workshop to be organized at the end of field assignment by the ILO TVET Reform Project in Bangladesh.
- Submission of the final report to the satisfaction of the ILO taking account of the comments made at the wrap-up workshop, etc.

8.3 People met, institutions visited

#	Organisation	Person /Designation	Date	Time
1.	TVET Reform Project	Dr. Md. Wazed Ali, Programme Officer, TVET Reform Project	June 16 Tuesday	8.30 am to 9.00 am
2.	Directorate of Technical Education	Director General Director Planning Asst. Director Finance Asst. Director Planning	June 16 Tuesday	10.00 am to 11.30 am
3.	Bureau of Manpower Employment and Training (BMET)	Director General	June 16 Tuesday	2.30 pm to 3.30 pm
4.	Bangladesh-German TTC, Dhaka	Principal Head of Department	June 17 Wednesday	11.00 am to 13.00 pm
5.	Dhaka Polytechnic Institute	Principal Head of Department	June 17 Wednesday	2.30 pm to 3.30 pm
6.	Technical School and College, Narayanganj	Principal Head of Department	June 18 Thursday	10.30am to 12.00am
7.	Private Providers (MPO)	Lalmatia Housing High School and College	June 18 Thursday	3.00 pm to 4.00pm
8.	Private Providers (Non MPO)	Ali Hossain Girls School Mohammadpur	June 18 Thursday	4.30 pm to 5.15 pm
9.	UCEP	Director Program Manager Finance Manager Technical Education	June 21 Sunday	10.00 am to 12.00 am
10.	MAWTS	Manager Training	June 21 Sunday	12.15 am to 13.15am
11.	Bangladesh Technical Education Board (BTEB)	Mr. Md. Shahjahan Miah Secretary & Member of the budget committee	June 21 Sunday	3.30 pm to 4.30pm
12.	BIDS	Dr. Abdul Hye Mondol Dr. Nazneen Ahmeed	June 23 Tuesday	10.00 am to 12.00 am
13.	Department of Youth Development	Mr. Al-Amin Chowdhury Director Training Begum Masuda Akand Deputy Director (Training)	June 24 Wednesday	2.30 pm to 3.15 pm
14.	CSDC	Mikhail I Islam	June 24 Wednesday June 25 Thursday	4.30 pm to 6.00 pm 9.00 am to 10.30 am
15.	Bangladesh	Mr. Farok Ahmed	June 28	09.30 am to

#	Organisation	Person /Designation	Date	Time
	Employer's Federation		Sunday	10.30 am
16.	Bangladesh-Korean TTC	Principal Vice Principal Accountant	June 28 Sunday	11.30 am to 12.30 pm
17.	Consultative Working Group Meeting		June 29 Monday	03.30 am to 05.30 pm
18.	Dr. Nurul Islam	Director BMET	June 30, Tuesday	11.30 am to 12.45 pm
19.	Planning Commission	Joint Chief (Education) Deputy Chief (Education)	June 30 Tuesday	2.30 pm to 3.30 pm
20.	BIDS	Dr. Anuara Begum Sr. Research Fellow	July 1 Wednesday	9.30 am to 10.20am
21.	Grameen Bank	Training Division	July 1 Wednesday	10.30 am to 12.00 am
22.	Ministry of Finance	Mr. Nazmus Saqib Deputy Secretary & Consultant	July 1 Wednesday	2.15 pm to 3.15 pm
23.	Mr KM Mozammel Hoq	Joint Secretary (Tech. Education), MOE	July 1 Wednesday	3.15 pm to 4.15 pm
24.	DGDTE	Prof. Dr. Nitai Chandra Sutradhar	July 2 Thursday	2.45 pm to 3.45 pm

8.4 Bibliography and documents consulted

- Bangladesh Bureau of Statistics (2008), Labour Force Survey 2005-06, Dhaka.
- Bangladesh Bureau of Statistics (2009a), Private education (Key findings), (www.BBS.gov.bd).
- BMBF, OECD (2005), Policies to strengthen incentives and mechanisms for co-financing lifelong learning. International Policy Conference, October 8-10, 2003, Bonn.
- Byron, R. K., Remittance Growth Beats Doomsayers, The Daily Star, July 6, 2009,
- CIA World Fact Book, <https://www.cia.gov/library/publications/the-world-factbook/geos/bg.html> (retrieved: 11.09.09)
- Deabnat, Suranjith (2009), Education privilege plundered for politics (newspaper report; no additional information available).
- Department of Youth Development, Ministry of Youth & Sports (2008), Activities of the Department of Youth Development at a Glance-2008, Dhaka.
- Dohmen, Dieter (1994), Systems of Student Support and Family Allowances in the EU Member States, Study commissioned by Hans-Boeckler-Foundation (unpublished), Cologne.
- Dohmen, Dieter (1999), Education Costs, Student Support and Family Allowances. An Economic Analysis taking into Account Legal Frame Conditions. (Ausbildungskosten, Ausbildungsförderung und Familienlastenausgleich. Eine ökonomische Analyse unter Berücksichtigung rechtlicher Rahmenbedingungen), Berlin.
- Dohmen, Dieter (2003), Demand-led Financing of Competency Development Processes, in: Jahrbuch Kompetenzentwicklung 2003: Technik - Gesundheit - Ökonomie, ed. Arbeitsgemeinschaft Betriebliche Weiterbildungsforschung e.V./Projekt Qualifikations-Entwicklungs-Management, Münster.
- Dohmen, Dieter (2005), Deutschlands Bildungssystem im internationalen Vergleich vor dem Hintergrund der technologischen Leistungsfähigkeit, Auswertung der OECD-Studie „Education at a Glance“, Studie für den Bericht zur technologischen Leistungsfähigkeit Deutschlands, FiBS-Forum Nr. 24 (www.fibs.eu), Köln.
- Dohmen, Dieter (2007), Current trends in the demand-led financing of further professional training in Europe – a synopsis, FiBS-Forum No. 40 (www.fibs.eu).
- Dohmen/Hailesselassie 2003, Die Entwicklung der bildungspolitischen Position Deutschlands im internationalen Vergleich, Studien zum Deutschen Innovationssystem Nr. 19-2003 (mimeo), Köln.
- Economic Relations Department, Ministry of Finance (2009), Flow of External Resources into Bangladesh, Dhaka.
- Government of Bangladesh, Rules of Business 1996, Allocation of Business & Warrant of Precedure 1986, Dhaka.
- ILO/Comyn (2009), Review of the Structure and Coordination of TVET in Bangladesh, prepared by Paul Comyn, Dhaka.
- ILO/JOBS (2009), Survey and Assessment of Formal and Informal Apprenticeships in Bangladesh, Dhaka.
- MTBF – Midterm Budget Framework (2009), Ministry of Finance (ed.), Dhaka.
- Ministry of Finance (Finance Division) (2009), Invigorating Investment Initiative Through Public Private Partnership. A Position Paper, Dhaka.
- OECD (2001), Economics and Finance of Lifelong Learning, Paris.
- OECD (2003), Financing Education – Investments and Returns. Analysis of the World Education Indicators 2002 edition, Paris.
- OECD (2004), Co-Financing Lifelong Learning. Towards a Systematic Approach, Paris.
- OECD (2005), Education Policy Analysis 2004, Paris.
- OECD (2009), Education at a Glance, Paris.

- Pritchett, Lant, Deon Filmer (1999); What education production functions really show: a positive theory of education expenditures, in: Economics of Education Review, Vol. 18, pp. 223-239.
- Rahman, Rushidan Islam, Abdul Hye Mondal, Rizwanul Islam (2008), Mapping and Analysis of Growth-Oriented Industrial Sub-Sectors and their Skill Requirements in Bangladesh (Final report), Dhaka.
- Schuetze, Hans G. (2005), Financing Lifelong Learning: Potential of and Problems with Individual Learning Accounts in Three Countries, Thompson Hall.
- Unesco Institute for Statistics (2006), Education Counts. Benchmarking Progress in 19 WEI countries – World Education Indicators 2006, Montreal.
- World Bank (2008), Poverty Assessment for Bangladesh. Creating Opportunities and Bridging the East-West Divide, Bangladesh Development Series, Washington.