SECTOR ASSESSMENT (SUMMARY): EDUCATION

Sector Road Map

1. Sector Performance, Problems, and Opportunities

1. Mongolia's education achievements compare favorably with those in other lower middle-income countries. In SY2012/2013,[1] the gross enrollment ratio was 85.8% for pre-primary, 116.9% for primary, 103.5% for secondary, and 61.1% for tertiary education. The growth of post-secondary enrollment from 2005 to 2012 has been notable (Table 1). Enrollment in technical and vocational education and training (TVET) institutions has nearly doubled.

Table 1: Number of Institutions and Enrollment by Level of Education, 2005–2012

Level of Education	Item	2005–2006	2010–2011	2011–2012	2012–2013
Tertiary educational institutions	Total no. of institutions	180	113	101	99
	Private institutions	125	92	81	79
	Foreign institutions	6	5	5	5
	Total enrollment	138,019	170,126	172,798	175,591
	Female enrollment (%)	83,871 (60.8%)	101,455 (59.6%)	101,557 (58.8%)	102,427 (58.3%)
TVET institutions[a]	Total no. of institutions	38	63	71	75
	Private institutions	3	19	22	26
	Total enrollment	23,249	46,071	48,134	45,225
	Female enrollment (%)	10,829 (46.6%)	20,491 (44.5%)	21,694 (45.1%)	20,643 (45.6%)
Primary and secondary educational institutions	Total no. of institutions	724	751	752	755
	Private institutions	139	142	138	134
	Total enrollment	556,876	512,213	505,409	496,123
	Female enrollment (%)	285,128 (51.2%)	257,302 (50.2%)	253,456 (50.1%)	248,974 (50.2%)
	SSE	83,486	73,727	79,550	95,418
	Female SSE (%)	46,593 (55.8%)	40,184, (54.5%)	43,301 (50.4%)	51,612 (54.1%)
	JSE	223,768	172,847	169,275	155,318
	Female JSE (%)	114,918 (51.4%)	87,170 (50.4%)	84,980 (50.2%)	77,703 (50.0%)
	Primary enrollment	249,622	265,639	256,584	245,387
	Female primary enrollment (%)	123,617 (49.5%)	129,948 (48.9%)	125,175 (8.8%)	119,659 (48.8%)
Pre-primary educational institutions	Total no. of institutions	729	839	879	945
	Private institutions	86	117	145	195
	Total enrollment	122,104	157,181	164,263	180,969
	Female enrollment (%)	63,983 (52.4%)	79,536 (50.6%)	81,670 (49.7%)	89,963 (48.1%)

JSE = junior secondary enrollment, SSE = senior secondary enrollment, TVET = technical and vocational education and training.

[a] Excluding private short-term training providers.

Source: Ministry of Education and Science. *Education Statistical Yearbooks, 2005–2012*.

2. The growth of TVET enrollment can be explained in part by the monthly stipends provided for TVET students under 24 years old. There are two types of TVET: (i) long-term (2.5–3 years) TVET programs for junior secondary (ninth grade) graduates, who seek to obtain complete secondary (12th grade) and vocational certificates; and (ii) short-term (up to 1 year) TVET courses for youths and adults who seek technical and vocational skills training to improve their employment opportunities. In SY2010/2011, 68% of enrollment was in long-term programs, and 32% in short-term courses. The monthly stipends create an incentive to enroll in TVET, for both (i) junior secondary students, who are in general not academically successful and cannot afford senior secondary education, but wish to obtain a complete secondary certificate

[1] The school year begins on 1 September and ends on 1 June.

(e.g., 15.8% of TVET students pursued studies at the tertiary level after graduation in 2012); and (ii) senior secondary and tertiary education graduates under 24 years old who seek technical and vocational skills training. Despite TVET's poor public image, the employment rate for TVET graduates has been higher than that for tertiary education graduates—in 2012 the employment rate 6 months after graduation was 55.6% for TVET graduates and 41% for tertiary education graduates—while unemployment among those who completed TVET as their highest level of education has been lower (6.1%) than for those who completed tertiary education as their highest level of education attainment (6.8%) (Table 2).

Table 2: Workforce and Unemployment Distribution by Level of Education Attainment, 2009–2012

Level of Education	Item	2009	2010	2011	2012
Working Age Population (15–65 years old)	Total	1,853,519	1,863,381	1,798,389	1,812,118
	Economically Active	1,137,902	1147144	1124711	1,151,146
	Employed	1,006,285	1,033,708	1,037,681	1,056,441
	Unemployed	131,617	113,436	87,030	94,705
	Economically Inactive	715,617	716,237	673,678	660,972
Junior Secondary	Economically Active	242,168	251,319	232,763	254,246
	Employed (%)	213,386 (88.1%)	225,345 (89.7%)	212,403 (91.3%)	232,410 (91.4%)
	Unemployed (%)	28,782 (11.9%)	25,974 (10.3%)	20,360 (8.7%)	21,836 (8.6%)
Senior Secondary	Economically Active	353,329	328,346	330,539	315,182
	Employed (%)	302,255 (85.5%)	285,049 (86.8%)	299,715 (90.7%)	283,657 (90.0%)
	Unemployed (%)	51,074 (14.5%)	43,297 (13.2%)	30,824 (9.3%)	31,525 (10.0%)
TVET Secondary	Economically Active	112,166	101,614	43,230	72,616
	Employed (%)	103,225 (92.0%)	96,305 (94.8%)	41,767 (96.6%)	68,154 (93.9%)
	Unemployed (%)	8,941 (8.0%)	5,309 (5.2%)	1,463 (3.4%)	4,462 (6.1%)
Tertiary Bachelor's Degree	Economically Active	196,247	218,200	279,696	272,223
	Employed (%)	176,421 (89.9%)	200,407 (91.8%)	262,342 (93.8%)	253,580 (93.2%)
	Unemployed (%)	19,826 (10.1%)	17,793 (8.2%)	17,354 (6.2%)	18,643 (6.8%)

TVET = technical and vocational education and training.
Source: National Statistical Office. *Labor Force Surveys, 2009–2012*.

3. Notwithstanding the higher employment rate for TVET graduates than for tertiary education graduates, the employment rate for TVET graduates in Mongolia is much lower than that in other countries. There are a few factors contributing to the relatively low employment rate for TVET graduates in Mongolia, including out-of-date or out-of-use training equipment and facilities, lack of technical and vocational skills and experience of TVET teachers, and the low level of industry and employer involvement in TVET.

4. **Inadequate training equipment and facilities.** A 2013 survey indicates that (i) only about 20.0% of TVET programs and courses had adequate training equipment, while 23.2% had inadequate equipment, and 56.8% had extremely inadequate or almost no training equipment; and (ii) only about 34.2% of training facilities were in good condition, while 65.8% were in poor state requiring repairs.[2] The result was largely consistent with responses obtained in a small-scale TVET graduate opinion survey conducted in 2013.[3] In that survey, only about 26.0%

[2] The September 2013 survey used two questionnaires (one on training equipment, and the other on training facilities), which were sent to all 75 TVET institutions. Of the 24 responding institutions, 14 had received support under projects funded by development partners during 2008–2013. Given the small number of respondents and the high proportion that received support under projects funded by development partners, the survey results should not be considered representative, but do suggest a need for investment in training equipment and facilities.

[3] The survey was conducted between March and July 2013 using a questionnaire distributed to employed TVET graduates in five regions of the country. Given the small number of respondents (51), the survey results cannot be considered representative.

of TVET graduates stated that they were using equipment similar to that used in their workplace, whereas 32.0% responded that they were not using similar equipment at all. The number of TVET programs and courses per institution currently varies from more than 30 to fewer than 5, and the availability of adequate training equipment and facilities differs even among programs and courses offered by the same institution, suggesting there may be a need to rationalize programs and courses offered by TVET institutions. The large number of TVET programs and courses being offered with inadequate training equipment and facilities reveals that more capital investment is required in the TVET subsector. TVET capital expenditures are also insufficient when compared with expenditures in other education subsectors.

Table 3: Expenditures in the Technical and Vocational Education and Training and Education Subsectors, 2012–2013

(MNT million)

Government Agency	Item	2012	2013
Ministry of Labor[a]	Total expenditures	142,221.11	149,813.38
	Recurrent	125,623.92 (88.3%)	136,366.68 (91.0%)
	Capital	16,597.19 (11.7%)	13,446.70 (9.0%)
Ministry of Education and Science[b]	Total Expenditures	897,110.60	1,037,534.07
	Recurrent	776,676.44 (86.6%)	921,013.37 (88.8%)
	Capital	120,434.16 (13.4%)	116,520.70 (11.2%)

[a] Responsible for technical and vocational education and training, employment services, labor policies, and small and medium-sized enterprises.
[b] Responsible for pre-primary, primary, secondary, tertiary education, and technology and science policies.
Sources: Ministry of Labor and Ministry of Education and Science.

5. **Inadequate skills and experience among teachers**. In SY2012/2013, there were 2,236 full-time teachers in TVET, of which 1,468 (65.7%) teach technical and vocational subjects, and 768 (34.3%) general education subjects. Of the technical and vocational subject teachers, (i) 663 (45.2%) held qualifications in production technology, (ii) 512 (34.9%) held qualifications in physical culture and sports, (iii) 791 (53.9%) held a bachelor's degree in education,[4] (iv) 1,358 (92.5%) 0–4 years of industry experience in the subjects they teach, and (v) 494 (33.7%) were under 30 years old. The TVET law specifies that TVET teachers must have (i) a bachelor's or higher degree, (ii) proper experience in production work, (iii) a high vocational degree, and (iv) a teaching license; however, the law lacks details to be consistently enforced. For instance, the number of years of industry experience and the type of degrees considered to be vocational are not specified. No institution offers pre-service education or in-service training in TVET pedagogy and technical and vocational skills. Additionally, the majority of managers of TVET institutions have little industry experience and the skills to develop and manage TVET programs and courses in collaboration with employers, and industry and professional associations. The TVET law specifies that the manager of a TVET institution shall have: (i) production and technology experience, (ii) a high vocational degree, and (iii) a teaching license. However, it appears that the requirements are not satisfied in many cases.

6. **Low level of industry and employer involvement.** The amendment to the TVET law in 2009 led to the establishment of the National Council on Vocational Education and Training (NCVET) as an institution for actively engaging employers, and industry and professional associations in TVET. Four sector subcouncils (on mining, food processing, construction, and road and transportation) were also established. However, in order to assume their mandated responsibilities, the NCVET and sector subcouncils require regular staff, budgets, and an

[4] Most TVET teachers receive a 4-year pre-service teacher education from the Mongolian State University of Education or another pre-service teacher education institution for general education teachers. Graduates must then carry out supervised practice teaching for 1 year in order to obtain a teaching license.

operational plan. One of the NCVET's responsibilities is to set occupational and quality standards for TVET programs and courses and oversee their implementation. With the support of development partners, competency-based training modules have been developed for certain occupations since the late 2000s. Nonetheless, many training modules were developed with heavy reliance on existing competency standards and units developed for Australian training packages, without properly involving Mongolian industries and employers in the process. Moreover, most standards lack NCVET approval or broad recognition by the concerned employers, and industry and professional associations. Focus group discussions and interviews conducted with employers, and industry and professional associations indicate industries and employers have little understanding of competency-based training and assessment, and require training to become involved in the process.

7. **Opportunities.** Mongolia's economy has grown rapidly, which has significantly changed the structure of employment and the demand for skills. The availability of skills is identified as a constraint for the growth of priority sectors—including construction, road and transportation, and agriculture—with potential for employment generation. Unemployment, low productivity, vulnerable employment, and underemployment are some of the major factors contributing to poverty. In order to attain sustainable and inclusive growth, the government has been encouraging TVET as a measure for employment generation and promotion.

2. Government's Sector Strategy

8. The government's TVET subsector strategy has been guided by the Government Platform 2012–2016 and its subsector strategic plan.[5] Reform of the TVET system is a high priority, in particular (i) development of an industry-driven TVET system by setting occupational and related standards in collaboration with employers, and industry and professional associations; and establishing an assessment and certification system using standards; (ii) implementation of a national qualifications framework; (iii) training for TVET teachers in competency-based training and assessment, and technical and vocational skills; (iv) provision of career information and guidance; and (v) establishment of a credit transfer system between TVET and senior secondary and tertiary education, within the national qualifications framework.

3. ADB Sector Experience and Assistance Program

9. The Asian Development Bank has been a long-term development partner in the TVET subsector in Mongolia, assisting the government in introducing competency-based training and upgrading training equipment and facilities. Major lessons emerging from these projects are: (i) potential gains in efficiency and effectiveness will be achieved only if various interventions—such as development of training curricula and materials, upgrading of equipment and facilities, and training for TVET teachers—are better aligned with standards set in collaboration with employers, and industry and professional associations; and (ii) active public communication and consultations are key to sustainable reforms of TVET systems. The Asian Development Bank's Strategy 2020 and the Strategy 2020 midterm review emphasize the importance of supporting TVET to fill labor market gaps.[6]

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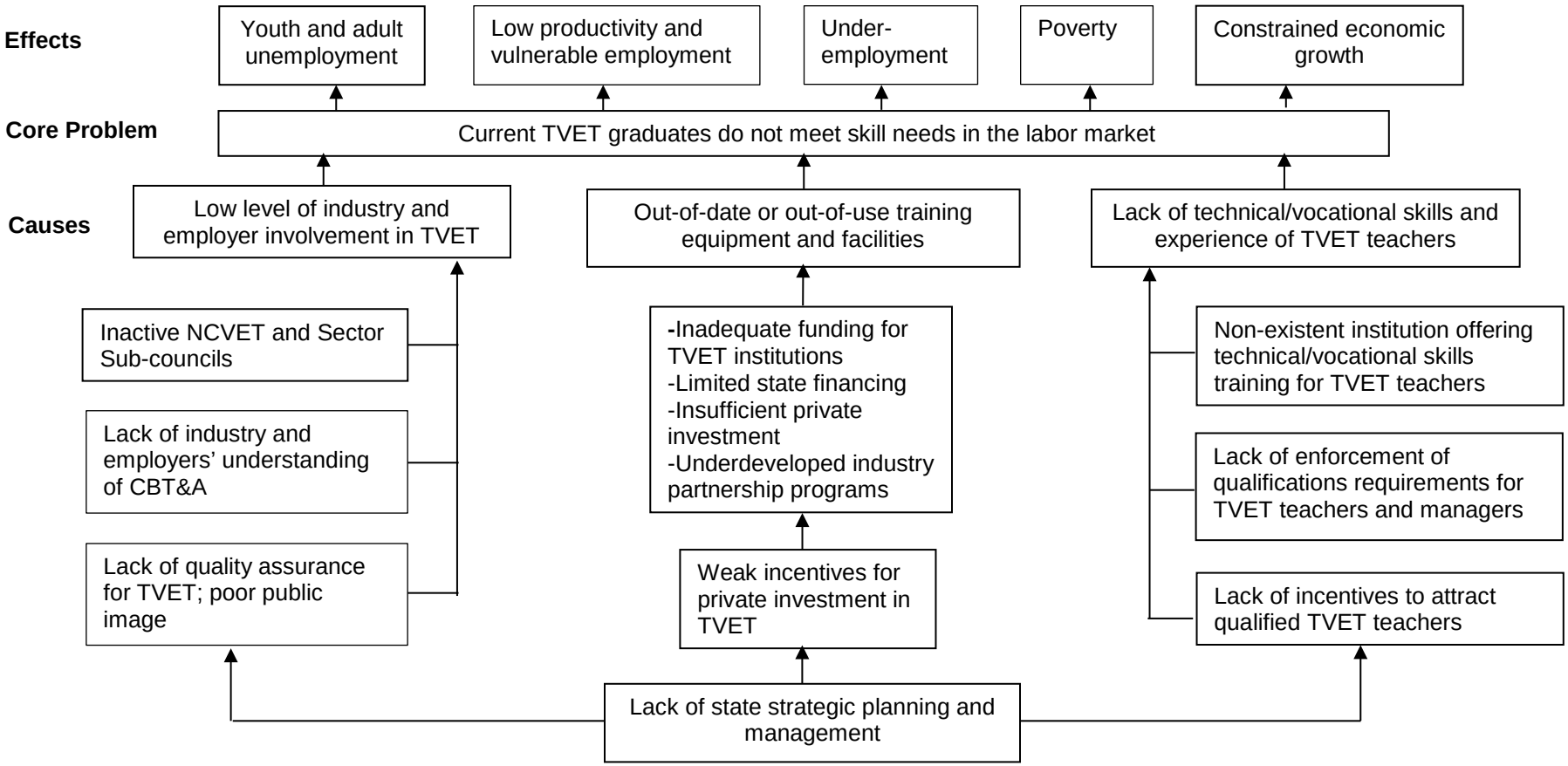
[5] Government of Mongolia. 2012. *Government Platform 2012–2016*. Ulaanbaatar.

[6] ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank*, *2008–2020*. Manila; ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific.* Manila.

Problem Tree for Education



CBT&A = competency-based training and assessment, NCVET = National Council on Vocational Education and Training, TVET = technical and vocational education and training.
Source: Asian Development Bank.

Sector Results Framework (Education, 2014–2016)

Country Sector Outcomes		Country Sector Outputs		ADB Sector Operations	
Outcomes with ADB Contribution	**Indicators with Targets and Baselines**	**Outputs with ADB Contribution**	**Indicators with Incremental Targets**	**Planned and Ongoing ADB Interventions**	**Main Outputs Expected from ADB Interventions**
Improved educational attainment and improved quality, access, efficiency, and relevance in all levels of education	Employment rates of graduates from TVET in priority sectors increased from 55% in 2012 to 57% by 2016 Percentage of higher education graduates employed in fields in which they received training after graduation increased from 40% in 2013 to 50% by 2016[a] Gross enrollment ratios increased to close to 100% (optimal level) by 2016 from their 2012 levels of 85.8% (pre-primary education), 116.7% (primary education), and 103.5%(secondary education)	Access to quality education improved at all levels	Competency standards and competency-based curricula and assessment criteria for 15 key occupations in priority sectors developed by 2016 Percentage of HEIs that have national institutional accreditation increased from 40% in 2013 to 45% by 2016 Textbook rental scheme and textbook revolving fund implemented nationwide by 2016	**Planned subsector targets** TVET subsector (45%) Pre-primary, basic, and upper secondary education subsectors (55%) **Pipeline projects with estimated amounts** Skills for Employment ($25 million) School Development Project ($50 million) **Ongoing projects with approved amounts** Higher Education Reform Project ($20 million) Education Sector Reform Project ($10 million) Education for the Poor—Financial Crisis Response Project ($17 million)	**Planned target subsectors** 20 TVET institutions in priority sectors upgraded to implement competency-based training and assessment 20 pre-primary and primary school complexes constructed **Pipeline projects** TVET programs and courses for 15 key occupations in priority sectors upgraded in partnerships with industry 2,000 pre-primary students enrolled annually in pre-primary and primary school complexes **Ongoing projects** Three programs in priority disciplines receive international accreditation New teaching practice model piloted

ADB = Asian Development Bank, HEI = higher education institution, TVET = technical and vocational education and training.

[a] Outcome indicators are national-level indicators. Outcome indicators are based on United Nations Educational, Scientific, and Cultural Organization estimates, and are not the government's targets, as the latter are not available.

Source: ADB estimates.