

occasional paper
on
business statistics

**THE EDUCATION INDUSTRY
IN SINGAPORE**

Singapore Department of Statistics
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The Education Industry in Singapore

Introduction

The education industry forms an integral part of Singapore's economy, contributing 3.0 per cent to GDP in 2000. The Economic Review Committee (ERC) 2002 has identified the education industry as one of the services industries to be developed and promoted. Other than serving local needs, the education industry also caters to a large number of international students here. As at September 2001, there were some 50,000 foreign students here on student passes¹. As stated in the ERC report, "education is an area that Singapore can take a commanding regional position in, and build into a substantive engine of growth for our economy".

2 This paper first provides an overview of the education industry. The second part of the paper looks at the profile of locally-owned and foreign-owned education establishments. Finally, the third section examines, in more detail, profit-making firms among the locally-owned and foreign-owned segments.

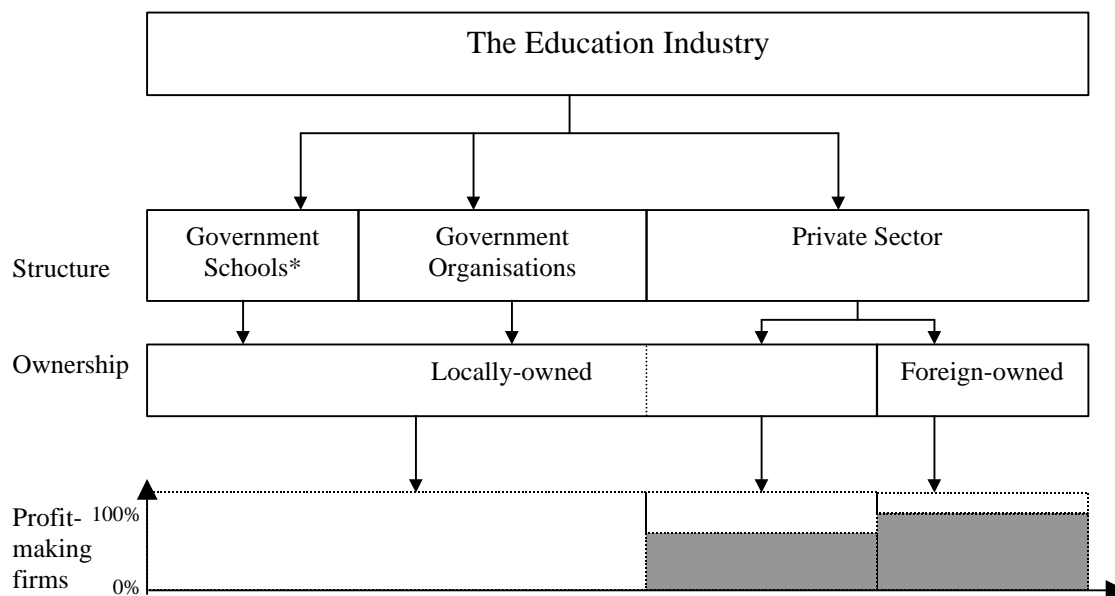
Defining the Education Industry

3 The education industry comprises all types of schools and education services pertaining to the provision of training and instruction on a wide range of subjects. It covers academic education (ranging from kindergartens to junior colleges), commercial and information technology and technical schools, tertiary institutions, music and dancing schools, language schools, driving schools and supporting services to education (eg agencies of foreign education institutions which recruit students for institutions overseas), etc. These establishments could operate as for-profit or non-profit organisations.

4 The education industry can be presented by the following diagram which segregates the industry into various segments by type of institutions, ownership and type of operation (profit-making or non-profit).

¹ Source : Economic Review Committee report

Diagram 1 : Singapore's Education Industry



* Comprise government, government-aided and independent schools as classified by the Ministry of Education (MOE)

Note : Diagram is not drawn to scale

The Education Industry's Contribution to Economy

5 The education industry in Singapore comprised some 2,300 establishments in year 2000, accounting for 1.1 per cent of the total number in the economy (Table 1). The share had increased from 0.8 per cent 10 years ago. The industry's employment share also showed a marginal rise between 1990 and 2000, while its GDP contribution hovered around 3 per cent.

Table 1 : Share of the Education Industry in the Economy, 1990, 1995 & 2000

	1990	1995	Per cent 2000
Establishments	0.8	0.9	1.1
Employment	3.0	3.4	3.4
GDP contribution	3.1	2.8	3.0

Sources: Annual Surveys of Services, DOS
Commercial Establishment Information System (CEIS), DOS
Yearbook of Statistics 2002, DOS
Ministry of Education

Growth of the Education Industry

6 Rising demand for knowledge and skills has contributed to the growth of the education industry over the years. Between 1995 and 2000, the industry size expanded from some 1,600 to 2,300 establishments (Chart 1). An average annual growth rate of 7.0 per cent was achieved, despite the economic slowdown during this period. As noted by the Economic Review Committee 2002, education tends to be counter-cyclical as the demand for upgrading of skills and re-training increases when workers are unemployed.

7 During 1995-2000, the education industry's employment level rose from 57,500 to 71,300 workers, at an average annual rate of 4.4 per cent (Chart 2). The growth in industry size and workforce was mainly attributed to the profit-making firms which increased by 9.6 per cent annually on average during this period, with expansion in employment of 7.2 per cent per annum.

Chart 1 : Number of Establishments in the Education Industry, 1990-2000

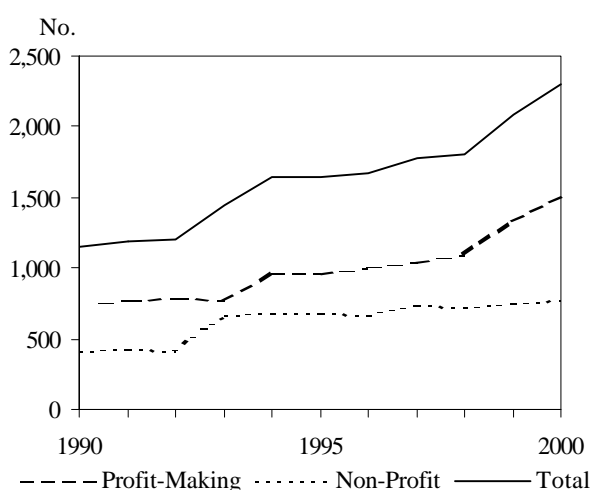
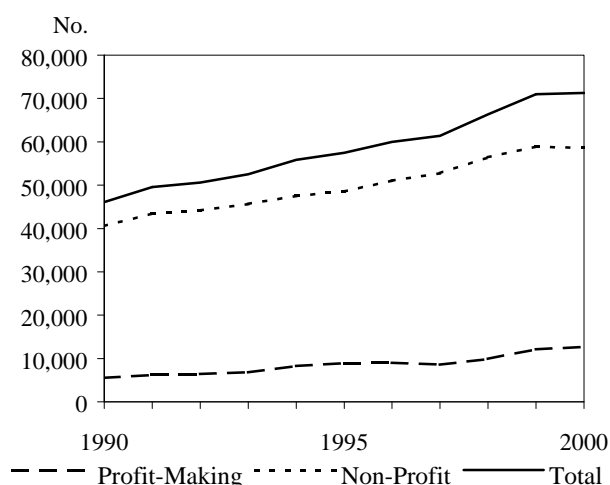


Chart 2 : Employment of the Education Industry, 1990-2000



Sources: Annual Surveys of Services and MOE

Composition of the Industry

8 The majority (61 per cent) of the education industry was locally-owned and profit-making (Table 2). Locally-owned and non-profit organisations, however, had the highest employment share of 82 per cent. This was due to the large employment size of local tertiary institutions like the National University of Singapore, Nanyang Technological University and polytechnics which were all non-profit organisations.

Table 2: Selected Statistics of the Education Industry, 2000

	Establishments		Employment	
	(No.)	(%)	(No.)	(%)
Total	2,296	100.0	71,256	100.0
Locally-Owned ⁽ⁱ⁾ : Profit-Making	1,390	60.5	10,454	14.7
: Non-Profit	771	33.6	58,289	81.8
Foreign-Owned ⁽ⁱⁱ⁾ : Profit-Making	126	5.5	2,215	3.1
: Non-Profit	9	0.4	298	0.4

Sources: Annual Surveys of Services and MOE

(i) Establishments with at least 50 per cent local equity

(ii) Establishments with more than 50 per cent foreign equity

9 Foreign-owned organisations represented 5.9 per cent of the education industry, with an employment share of 3.5 per cent. Some of the more well-known foreign-owned education organisations in Singapore included British Council English Language Teaching Centre (United Kingdom), University of Chicago Graduate School of Business (United States), INSEAD (France) and Yamaha Music School (Japan). The foreign-owned category also comprised some foreign system schools (eg United World College of Southeast Asia and Italian Supplementary School). Foreign system schools are defined as education institutions that follow their respective countries' education systems and syllabuses.

Structure and Profile of the Education Industry, 2001

Type of Education Services Provided

10 Academic subjects and tuition formed one of the more important types of education services offered by both locally-owned and foreign-owned establishments (Table 3). For the locally-owned establishments, the large 46 per cent share was not surprising since academic education made up the foundation of the education structure. Among foreign-owned establishments, foreign system schools constituted more than half of this category in year 2001. These schools cater primarily to the children of foreigners in Singapore.

Table 3 : Number of Education Establishments by Type of Education Services, 2001

Type of Education Services	Locally-Owned		Foreign-Owned	
	(No.)	(%)	(No.)	(%)
Total	2,765	100.0	143	100.0
Music, Dancing & Language	275	9.9	52	36.3
Academic Subjects & Tuition	1,278	46.2	31	21.7
Commercial, Information Technology & Technical	495	17.9	19	13.3
Higher Learning	16	0.6	3	2.1
Others	701	25.4	38	26.6

Sources: Commercial Establishment Information System and Census of Education Services

11 Organisations offering music, dancing and language courses, though not a large category in the overall education industry, made up a dominant group among foreign-owned education establishments. In particular, language appeared to be a popular subject offered by foreign-owned establishments, probably due to the better command of their native languages.

Length of Operation

12 The majority of education establishments commenced operations only in the past decade or so. About 65 per cent of them commenced operations in 1990 and after (Table 4). The foreign-owned education industry was comparatively “younger” than the locally-owned industry. As at 2001, the mean number of years in operation for foreign-owned establishments was 8.3 as compared with 12.3 for locally-owned ones.

Table 4 : Number of Education Establishments by Commencement Year, 2001

Commencement Year	Locally-Owned		Foreign-Owned	
	(No.)	(%)	(No.)	(%)
Total	2,765	100.0	143	100.0
Before 1950	73	2.6	1	0.7
1950-1959	52	1.9	1	0.7
1960-1969	56	2.0	2	1.4
1970-1979	162	5.9	5	3.5
1980-1989	662	24.0	17	11.9
1990-1999	1,422	51.4	88	61.5
2000 and after	338	12.2	29	20.3

Sources: Commercial Establishment Information System and Census of Education Services

13 The oldest foreign-owned education organisation in Singapore was the British Council English Language Teaching Centre, which was set up in 1940. Other foreign-owned establishments which commenced in the 1950s and 1960s were mostly foreign system schools.

Types of Legal Organisation

14 Sole-proprietorships formed the largest group among both the locally-owned and foreign-owned establishments (Table 5). This was likely due to their simpler set-up procedures. Furthermore, it was not uncommon for individuals to set up a one-man business offering education courses (eg tuition, language) or training to clients at the clients' premises.

Table 5 : Number of Education Establishments by Legal Organisation, 2001

Legal Organisation	Locally-Owned		Foreign-Owned	
	(No.)	(%)	(No.)	(%)
Total	2,765	100.0	143	100.0
Sole Proprietorships	1,188	43.0	61	42.6
Partnerships	351	12.7	8	5.6
Public Companies	377	13.6	12	8.4
Private Companies	380	13.7	53	37.1
Government Schools *	376	13.6	-	-
Government Organisations	13	0.5	-	-
Others	80	2.9	9	6.3

Sources: Commercial Establishment Information System and Census of Education Services

* Comprise government, government-aided and independent schools as classified by the MOE

15 The next largest groups of locally-owned establishments were private and public companies, as well as government schools. Among the foreign-owned establishments, there was a significant proportion of private companies. These companies were mainly music, dancing and language schools, and establishments offering commercial, information technology and technical courses.

Preferred Business Location

16 Most education establishments operated outside the Central Business District (Table 6). This was especially so for locally-owned education

establishments, and in particular those in the “academic subjects and tuition” category. They comprised kindergartens and government schools which tend to be located near residential areas for students’ convenience.

Table 6 : Number of Education Establishments by Business Location, 2001

Business Location	Locally-Owned		Foreign-Owned	
	(No.)	(%)	(No.)	(%)
Total	2,765	100.0	143	100.0
Inside CBD				
- In Shopping Malls	337	12.2	15	10.5
- Outside Shopping Malls	186	6.7	23	16.1
Outside CBD				
- In Shopping Malls	274	9.9	16	11.2
- Outside Shopping Malls	1,968	71.2	89	62.2

Sources: Commercial Establishment Information System and Census of Education Services

Country of Ownership

17 There was a strong European presence among foreign-owned education establishments in Singapore, contributing to almost half of the entire group (Table 7). In particular, establishments whose ownership originated from the United Kingdom constituted one-third of the overall foreign-owned education industry. Japan and Australia were the next two most important countries, representing 21 per cent and 11 per cent respectively.

Table 7 : Number of Foreign-Owned Education Establishments by Country of Ownership, 2001

Country of Ownership	Number	Per cent
Total	143	100.0
United Kingdom	48	33.5
Japan	30	21.0
Australia	15	10.5
United States	7	4.9
Malaysia	5	3.5
Switzerland	4	2.8
Others	34	23.8

Source: Census of Education Services

Performance of the Foreign-Owned and Locally-Owned Education Industry in Recent Years

18 From this section onwards, the performance of the profit-making component of the education industry is examined. Non-profit education firms (whether foreign-owned or locally-owned) are excluded from the analyses since non-profit organisations are not subject to market forces, and have different operational structures from profit-making firms due to the nature of their activities. This means that locally-owned establishments like public schools, National University of Singapore, Nanyang Technological University, polytechnics etc and foreign-owned education institutions like The Japanese School are not analysed.

Internationalisation of the Education Industry

19 The number of foreign-owned education firms in Singapore showed an increase in recent years. In year 2000, an influx of new firms caused the number of foreign-owned establishments to grow substantially by 34 per cent over 1999 (Table 8). The growth rate was only 5.6 per cent in 2001. Correspondingly, the industry's employment size grew by 13 per cent in 2000 and by a slower rate of 4.0 per cent in 2001.

20 In comparison, the number of locally-owned firms increased at a relatively smaller rate of 12 per cent while their employment level rose by only 2.6 per cent in year 2000.

Table 8 : Establishments, Employment and Operating Receipts of the Education Industry, 1999–2001

	Year	Establishments		Employment		Operating Receipts	
		(No.)	(% Change)	(No.)	(% Change)	(\$ Mil)	(% Change)
Foreign-Owned	1999	94	-	1,956	-	193	-
	2000	126	34.0	2,215	13.2	207	7.4
	2001	133	5.6	2,304	4.0	223	7.5
Locally-Owned	1999	1,240	-	10,187	-	539	-
	2000	1,390	12.1	10,454	2.6	630	16.9

Sources: Census of Education Services and Annual Surveys of Services (latest available is 2000 data)

21 In tandem with the overall growth of the education industry, total operating receipts of foreign-owned education firms displayed an upward trend, rising at 7-8 per cent in 2000 and 2001. Locally-owned firms which registered a larger growth of 17 per cent in 2000 out-performed the foreign-owned ones.

Staff Strength and Remuneration

22 On average, employment size of foreign-owned firms stood at 18 workers per establishment in 2000 (Table 9). The relatively high average was primarily due to the large average employment size of foreign system schools (151 workers). If these schools were excluded, the average for the foreign-owned education industry was actually much lower at 7.3 workers per establishment. This was very close to the average for the locally-owned education industry (ie 7.5 workers in 2000).

Table 9 : Staff Strength and Remuneration of the Education Industry, 1999-2001

			Foreign- Owned	Locally- Owned	Ratio of Foreign-Owned to Locally- Owned
Employment Size Per Establishment	(No.)	1999	20.8	8.2	2.5
		2000	17.6	7.5	2.3
		2001	17.3	-	-
Remuneration Per Employee	(\$)	1999	61,700	26,300	2.3
		2000	58,800	27,000	2.2
		2001	61,200	-	-

Sources: Census of Education Services and Annual Surveys of Services

23 Employees engaged by foreign-owned firms were relatively more well-paid than their counterparts in the locally-owned firms. The former received an average annual remuneration of \$58,800 in 2000. This was more than double that received by employees in the locally-owned firms in the same year. This is due to the higher remuneration of employees in foreign system schools. Excluding foreign system schools, the remuneration per employee in 2000 of foreign-owned firms was \$34,900, closer to the \$27,000 of locally-owned firms.

Scale of Business Operations

24 In terms of operating receipts per establishment, foreign-owned firms generally operated on a larger scale compared with their locally-owned counterparts. The average operating receipts of a foreign-owned education firm ranged between \$1.6 million and \$2.1 million during 1999–2001, which was 4-5 times that of an average locally-owned firm (Table 10). As course fees formed the bulk of education services' operating receipts, the large difference could be attributed to higher fees charged by foreign-owned firms, especially for specialised courses or subjects.

Table 10 : Scale of Business Operations of the Education Industry, 1999-2001

		Foreign- Owned	Locally- Owned	Ratio of Foreign-Owned to Locally- Owned
Operating Receipts Per Establishment (\$'000)	1999	2,054	435	4.7
	2000	1,646	453	3.6
	2001	1,675	-	-

Sources: Census of Education Services and Annual Surveys of Services

Operating Performance

25 One way to measure the operating performance of the education industry is by using the profitability ratio. The ratio, which is defined as operating surplus to operating receipts multiplied by 100, shows the proportion of operating receipts that is converted to profits.

26 The profitability ratio of foreign-owned firms was lower than that of the locally-owned firms in 2000. Foreign-owned firms reported a ratio of 9.7 per cent as compared with a higher ratio of 16 per cent for the locally-owned firms (Table 11). This was due to a decline of 17 per cent in total operating surplus of the foreign-owned firms during that year as compared with 1999. Using 1999 data for comparison, the profitability ratio of foreign-owned firms was nearly on par with that of locally-owned ones.

Table 11 : Operating Performance of the Education Industry, 1999-2001

			Foreign- Owned	Locally- Owned	Ratio of Foreign-Owned to Locally- Owned
Profitability Ratio ⁽ⁱ⁾	(%)	1999	12.6	13.3	0.9
		2000	9.7	15.6	0.6
		2001	11.3	-	-
Earnings-Expenditure Ratio ⁽ⁱⁱ⁾	(%)	1999	13.5	14.4	0.9
		2000	10.1	17.5	0.6
		2001	12.1	-	-
Value Added Per Worker	(\$)	1999	74,900	31,700	2.4
		2000	68,200	34,300	2.0
		2001	71,500	-	-

Sources: Census of Education Services and Annual Surveys of Services

(i) Defined as the ratio of operating surplus to operating receipts multiplied by 100

(ii) Defined as the ratio of operating surplus to operating expenditure multiplied by 100

27 Similarly, foreign-owned firms' decline in operating surplus in 2000 affected their performance in terms of cost effectiveness (as measured by the earnings-expenditure ratio). They were only 60 per cent as cost effective as locally-owned firms in that year. In 1999, however, both groups of firms registered earnings-expenditure ratios of about 14 per cent.

28 The labour productivity of foreign-owned firms was generally higher than locally-owned ones. The former's value added per worker in 1999 and 2000 was twice that of the locally-owned firms.

Concluding Remarks

29 Over the years, Singapore's education industry has progressed from an industry supplying basic academic education, to one which is able to cater to varied needs ranging from personal enrichment, to skills building to professional training. The industry structure has also transformed in recent years, with the entry of more foreign-owned establishments.

30 An established education industry is essential not only to enable Singaporeans to acquire new competencies and knowledge, it will also help bring in global talent to the well-developed education scene. With the concerted effort by the government and private sector, Singapore's education industry is expected to continue to grow in the future.

SINGAPORE DEPARTMENT OF STATISTICS
NOVEMBER 2002

Principal Statistics of the Education Industry (Profit-Making), 1990 - 2000

Year	Establishments	Employment	Operating Receipts	Operating Expenditure	Operating Surplus	Value Added
	Number		Thousand Dollars			
1990	740	5,531	229,465	222,161	19,134	128,739
1991	771	6,171	283,559	284,085	17,427	163,593
1992	785	6,421	315,010	306,671	27,269	187,852
1993	779	6,808	367,502	347,213	40,775	223,334
1994	967	8,306	483,204	452,711	56,266	283,850
1995	959	8,944	532,422	489,905	68,645	325,705
1996	1,002	8,977	606,513	556,412	80,548	372,085
1997	1,037	8,587	653,454	581,521	102,692	392,323
1998	1,092	9,868	712,065	656,196	94,542	415,587
1999	1,334	12,143	732,377	677,546	96,061	469,250
2000	1,516	12,669	837,641	762,551	118,691	509,670

Source: Annual Surveys of Services

Principal Statistics of the Education Industry (Non-Profit), 1990 - 2000

Year	Establishments	Employment	Gross Receipts	Operating Expenditure	Operating Surplus*	Value Added*
	Number		Thousand Dollars			
1990	411	40,580	2,207,485	2,038,283	133,767	929,367
1991	425	43,408	2,453,519	2,267,696	137,572	1,092,218
1992	412	44,209	2,851,705	2,395,414	142,354	1,179,905
1993	666	45,680	2,904,983	2,681,232	170,826	1,328,107
1994	677	47,534	3,243,708	3,026,099	202,940	1,610,486
1995	680	48,561	3,652,389	3,338,456	266,372	1,752,218
1996	669	51,040	4,359,116	3,702,695	291,425	1,907,043
1997	738	52,765	4,152,614	3,750,708	275,832	1,872,682
1998	718	56,448	4,408,332	3,879,535	336,392	1,974,985
1999	751	58,840	4,549,410	4,130,525	460,560	3,321,219
2000	780	58,587	5,628,565	5,060,266	521,836	3,995,262

Sources: Annual Surveys of Services and MOE

* Exclude full government schools for 1990-1998 for these two items as data not available.

Annex 2

Number of Education Establishments by Type of Education Services and Commencement Year, 2001

Type of Education Services	Total	Before 1950	1950 - 1959	1960 - 1969	1970 - 1979	1980 - 1989	1990 - 1999	2000 Onwards
Total	2,908	74	53	58	167	679	1,510	367
<u>Locally-Owned</u>	2,765	73	52	56	162	662	1,422	338
Music, Dancing & Language	275	1	3	3	9	40	184	35
Academic Subjects & Tuition	1,278	70	39	37	35	462	506	129
Commercial, Information Technology & Technical	495	2	1	6	13	72	329	73
Higher Learning	16	0	2	2	1	3	4	4
Others	701	0	7	8	104	86	399	97
<u>Foreign-Owned</u>	143	1	1	2	5	17	88	29
Music, Dancing & Language	52	1	0	0	1	5	32	13
Academic Subjects & Tuition	31	0	1	2	3	7	13	5
Commercial, Information Technology & Technical	19	0	0	0	1	4	12	2
Higher Learning & Others	41	0	0	0	0	1	31	9

Sources: Commercial Establishment Information System and Census of Education Services

Number of Education Establishments by Type of Education Services and Business Location, 2001

Type of Education Services	Total	Inside CBD		Outside CBD	
		In Shopping Malls	Outside Shopping Malls	In Shopping Malls	Outside Shopping Malls
Total	2,908	352	209	290	2,057
<u>Locally-Owned</u>	2,765	337	186	274	1,968
Music, Dancing & Language	275	54	33	54	134
Academic Subjects & Tuition	1,278	66	24	79	1,109
Commercial, Information Technology & Technical	495	88	67	77	263
Higher Learning	16	1	0	1	14
Others	701	128	62	63	448
<u>Foreign-Owned</u>	143	15	23	16	89
Music, Dancing & Language	52	6	6	6	34
Academic Subjects & Tuition	31	2	3	1	25
Commercial, Information Technology & Technical	19	1	6	5	7
Higher Learning & Others	41	6	8	4	23

Sources: Commercial Establishment Information System and Census of Education Services

Number of Foreign-Owned Education Establishments by Type of Education Services and Country of Ownership, 2001

Type of Education Services	Total	United Kingdom	Japan	Australia	United States	Malaysia	Switzerland	Others
Total	143	48	30	15	7	5	4	34
Music, Dancing & Language	52	18	14	4	3	1	1	11
Academic Subjects & Tuition	31	8	5	2	2	2	1	11
Commercial, Information Technology & Technical	19	8	5	1	0	1	0	4
Higher Learning & Others	41	14	6	8	2	1	2	8

Sources: Commercial Establishment Information System and Census of Education Services