

**2006 Manpower Survey Report**  
**Printing and Publishing Industries**

**Printing and Publishing Training Board**  
**Vocational Training Council**



## CONTENTS

<b>Section</b>	<b>Title</b>	<b>Paragraph</b>	<b>Page</b>
Executive Summary		1 - 9	1 - 5
I	Introduction	1.1 - 1.15	6 - 11
II	Survey Findings	2.1 - 2.18	12 - 28
III	Conclusions	3.1 - 3.47	29 - 51
IV	Recommendations	4.1 - 4.35	52 - 62
Appendices		1 - 18	123 - 191

1 - 9                      63 - 66

1.1 - 1.15                67 - 72

2.1 - 2.18                73 - 89

3.1 - 3.47                90 - 112

4.1 - 4.35                113 - 122

1 - 18                      123 - 191

## LIST OF APPENDICES

<b>Appendix</b>		
1	Membership List	123 - 124
2	Terms of Reference	125
3	Printing Industry	127 - 147
	(a) Questionnaire	
	(b) Explanatory Notes	
	(c) List of Job Descriptions	
4	Publishing Industry	148 - 168
	(a) Questionnaire	
	(b) Explanatory Notes	
	(c) List of Job Descriptions	
5	Manpower Statistics in the Printing Industry	169 - 171
6	Manpower Statistics in the Publishing Industry	172 - 173
7	Preferred Education of Employees in the Printing Industry	174
8	Preferred Education of Employees in the Publishing Industry	175
9	Preferred Training Period of Employees in the Printing Industry	176
10	Preferred Training Period of Employees in the Publishing Industry	177
11	Preferred Training Mode of Employees in the Printing Industry	178
12	Preferred Training Mode of Employees in the Publishing Industry	179
13	Distribution of Employees by Monthly Income Range in the Printing Industry	180 - 181

14	Distribution of Employees by Monthly Income Range in the Publishing Industry	182 - 184
15	Forecast Annual Additional Skills Demand between 2007 and 2010 in the Printing Industry	185 - 186
16	Forecast Annual Additional Skills Demand between 2007 and 2010 in the Publishing Industry	187 - 188
17	Courses Offered under the Skills Upgrading Scheme	189 - 190
18	List of Relevant Courses Offered by the Department of Printing and Digital Media, Hong Kong Institute of Vocational Education (Kwun Tong)	191

	123 - 124
	126
	127 - 147
(a)	
(b)	
(c)	
	148 - 168
(a)	
(b)	
(c)	
	169 - 171
	172 - 173
	174
	175
	176
	177
	178
	179
	180 - 181
	182 - 184
	185 - 186

187 - 188

189 - 190

191



## Executive Summary

### 2006 Manpower Survey Report of the Printing and Publishing Industries

#### *Introduction*

The Printing and Publishing Training Board conducted a survey of the printing and publishing industries in May/June 2006 to collect the up-to-date manpower information. This is the fourth joint manpower survey of the printing and publishing industries.

2. The fieldwork of the survey covered 803 establishments from a total of 6 364 establishments registered with the Census and Statistics Department. The survey data from the selected establishments were scaled up statistically to reflect the overall manpower situation of the industries.

#### *Survey Findings*

3. The survey revealed that in June 2006, a total of 21 313 and 7 930 technical workers were employed respectively in the printing and publishing industries. The distribution of employees according to the job level in the branches is as follows:

##### (A) *Printing Industry*

Job Level Branch	Technologist/ Managerial	Technician	Craftsman	Unskilled	Total	Percentage of Total Number of Employees
Newspaper Printing	28	105	630	43	806	3.8%
Job Printing	501	3 226	8 031	872	12 630	59.2%
Other Printing and Allied Industries	64	935	1 949	138	3 086	14.5%
Containers and Boxes of Paper and Paperboard	34	212	455	51	752	3.5%
Printing Agents	451	2 643	103	14	3 211	15.1%
Selected Organizations	107	423	202	96	828	3.9%
Total	1 185	7 544	11 370	1 214	21 313	100%
Percentage of Total Number of Employees	5.6%	35.4%	53.3%	5.7%	100%	

(B) *Publishing Industry*

Job Level Branch	Managerial	Supervisory	Technical Support	Total	Percentage of Total Number of Employees
Publishing and Allied Industries	800	2 111	3 777	6 688	84.3%
Wholesales of Books, Periodicals and Newspapers	22	167	129	318	4.0%
Import and Export of Books, Periodicals and Newspapers	67	204	333	604	7.6%
Selected Organizations	55	111	154	320	4.1%
Total	944	2 593	4 393	7 930	100%
Percentage of Total Number of Employees	11.9%	32.7%	55.4%	100%	

4. Employers reported a total 149 and 34 trainees, and 143 and 173 vacancies, representing about 0.7% and 0.4%, and 0.7% and 2.2% of the total workforce in the printing and publishing industries respectively at the time of survey. In addition, employers forecast that by June 2007, the two industries would have a total workforce of 21 531 and 8 339 employees, representing increases of 0.4% and 2.9% respectively.

***Manpower Changes***

(A) *Printing Industry*

5. Compared with the findings of the 2004 survey on the printing industry, the annual increase in manpower was 0.21%. The Training Board considers that the changes in manpower over the past two years is attributable to the following:

- (i) More principal jobs at the managerial/technological and technicians levels had been included in the survey and the coverage of the survey had also been expanded to include printing equipment suppliers and metal-can manufacturers;
- (ii) The trend of moving towards higher end production and adoption of more advanced technology continued, which contributed to an increase in manpower at the technologist/managerial and technician/supervisory levels, but a decrease of workers at the craftsman and operative levels;

- (iii) There was an increase in the number of printing agents due to some small and medium printing companies converting their business to sales and supplies agents;
- (iv) The number of sales/marketing managers and cost estimators/ sales representatives had increased from 364 to 565 and from 3 709 to 4 129 representing an increase of 55.2% and 11.3% respectively. This reflected the growing business activities generated by the continuous thriving of the Mainland's economy, and the expanded coverage of the 2006 survey;
- (v) The number of factory managers and production/quality managers had increased from 395 to 540 while the number of production planners/controllers/supervisors decreased from 2 367 to 1 987 (i.e. -16.1%) which indicated that more supervisory positions had been taken up by mainland workers;
- (vi) There had been a consistent demand for manpower skilled in desktop prepress and conversant in the application of computers in the past two years. The number of digital printing system craftsmen and electronic prepress technicians/craftsmen remained at some 2 400. The principal job of pre-press technician was first introduced in the 2006 survey; and
- (vii) The number of craftsmen/operatives had decreased from 12 676 to 11 370 (i.e. -10.3%) and the number of general workers from 1 579 to 1 214 (i.e. -23.1%) which reflected the expanded production and sub-contracting activities in Mainland China. The survey revealed that the number of employees engaged by Hong Kong firms in Mainland China had increased by about 30% in the past two years.

(B) *Publishing Industry*

6. Compared with the findings of the 2004 survey on the publishing industry, the annual increase in manpower was 1.4%. The Training Board considers that the manpower expansion over the past two years is attributable to the following:

- (i) There had been an increase of manpower at the managerial and supervisory levels and a decrease at the technical support level, resulting in a slight overall increase of 2.8% for the whole industry in the past two years,
- (ii) Most of the increase in manpower was recorded in the principal jobs of managing director/general manager/publisher and design director at the managerial level; and senior designer and marketing supervisor at the supervisory level. There was a notable increase in the number of sales representatives despite an overall reduction in manpower at the technical support level,
- (iii) The increase of manpower at the managerial and supervisory levels was due to the increase of establishments in new business areas such as digital printing and a gradual upgrading of skill level in the industry.

***Conclusions and Recommendations***

7. Over the past few years, the greater automation of printing processes and the widespread adoption of computer technologies in the prepress industry, in particular the popular use of computer to plate have resulted in the significant improvement in both quality and productivity as well as manpower saving. Secondly, with the opening up of Mainland's economy, the labour-intensive operations have been relocated to the Pearl River Delta areas. Those processes remaining in Hong Kong are generally more sophisticated, technical and quick-responsive. Such developments have prompted a restructuring of the manpower resources. Traditional craft and operative jobs have either been phased out or diminished in substantial numbers while the demand for computer literate manpower would be sustained. It is envisaged that more sales representatives, customer services co-ordinators and quality controllers would be needed to cater for more trading activities in the industry. To meet the development needs of the industry, there should be an on-going demand for technologists and technicians, while at the craftsman level, the traditional prepress craft jobs will gradually become obsolete.

8. The Training Board estimates that the additional number of workers required annually by the printing and publishing industries as a whole at various job levels are as follows:

Job Level	Additional Manpower Required Annually	
	Printing Industry	Publishing Industry
Technologist/Managerial	169 (12.3%)	94 (9.0%)
Technician/Supervisory	755 (9.0%)	163 (5.9%)
Craftsman/Technical Support	184 (1.7%)	113 (2.6%)

(Note: the numbers in brackets denote the percentages of the annual training requirements of manpower at the respective job levels).

9. The Training Board urges employers to step up their training efforts to sustain the development of the printing and publishing industries. They should also make use of the part-time courses offered by the Department of Printing and Digital Media of the Hong Kong Institute of Vocational Education (Kwun Tong), the Printing Industry Training Centre and the Advanced Printing Technology Centre to upgrade their workforce. Employers are also encouraged to contact the Vocational Training Council to set up training schemes and to make use of the New Technology Training Scheme for training their employees in new technologies.

# SECTION I

## INTRODUCTION

### *The Training Board*

1.1 The Printing and Publishing Training Board of the Vocational Training Council is required by its terms of reference to determine the manpower needs of the printing and publishing industries and to make recommendations to the Council for the development of training facilities to meet such needs. The membership and terms of reference of the Training Board are listed in Appendices 1 and 2 respectively.

### *The Survey*

1.2 During the period from 10<sup>th</sup> May to 9<sup>th</sup> June 2006, the Training Board conducted a survey to collect up-to-date manpower information of the printing and publishing industries. The survey was carried out with the assistance of the Census and Statistics Department.

1.3 The following information was collected from the survey:

- (a) the number of employees employed at the time of the survey,
- (b) the number of employees under training,
- (c) the number of existing vacancies,
- (d) employers' forecast of the total number of employees by June 2007,
- (e) employers' views on the preferred education, training mode and training period of employees, and
- (f) the average income of employees.

1.4 Employers in the printing industry were further requested to provide information on the numbers of technologists/managers, technicians and craftsmen who had been deployed to work outside Hong Kong for more than 6 months during the 12 months prior to the survey. The findings are summarized in paragraph 2.17 of Section II.

## *Scope of Survey*

1.5 The survey covered the following industries:

(A) ***Printing Industry***

- HSIC 3421 - Newspaper printing,
- HSIC 3422 - Job printing,
- HSIC 3429 - Printing and allied industries (mainly bookbinding; ornamentation of cards; photo-engraving; typesetting; and label embossing etc.); and
- HSIC 3412 - Containers and boxes of paper and paperboard (for activities related to printing only).
- HSIC 833906 - Printing agents

Selected Organizations

(B) ***Publishing Industry***

- HSIC 3429 - Publishing and allied industries
- HSIC 611504 - Wholesales of books, periodicals and newspapers
- HSIC 631503 - Import and Export of books, periodicals and newspapers

Selected Organizations

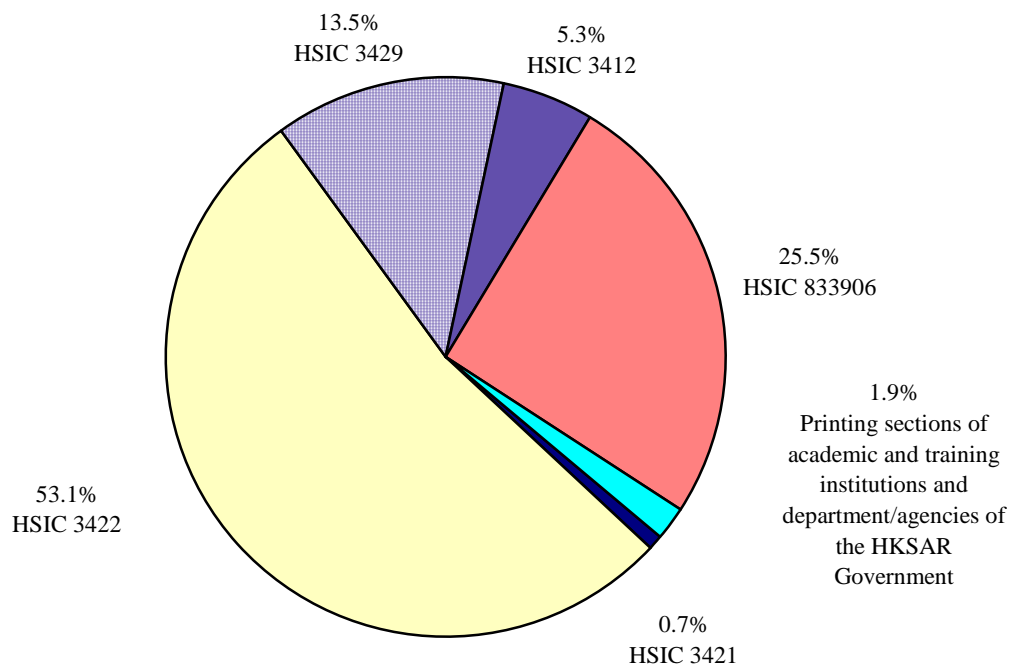
1.6 The selected organizations covered educational and training institutions offering courses in printing technology, the printing sections of academic institutions and department/agencies of the Government of the Hong Kong Special Administrative Region, printing equipment suppliers, metal can manufacturers and companies as well as public bodies/organizations with publishing personnel.

1.7 Under the classifications mentioned in paragraph 1.5 above, there were 5 066 and 1 298 establishments respectively in the printing and publishing industries recorded by the Census and Statistics Department. The distribution of establishments by HSIC Classification are shown in Tables 1.1 and 1.2 and Figures 1.1 and 1.2:

**Table 1.1: Distribution of Establishments by HSIC Classification in the Printing Industry**

Branch	Number of Establishments	Percentage of Total Number of Establishments
HSIC 3421 - Newspaper printing	33	0.7%
HSIC 3422 - Job printing	2 690	53.1%
HSIC 3429 - Other printing and allied industries	686	13.5%
HSIC 3412 - Containers and boxes of paper and paperboard (only printing and related activities)	267	5.3%
HSIC 833906 - Printing agents	1 293	25.5%
Selected Organizations	97	1.9%
Total	5 066	100%

**Figure 1.1: Distribution of Printing Establishments by Branch**

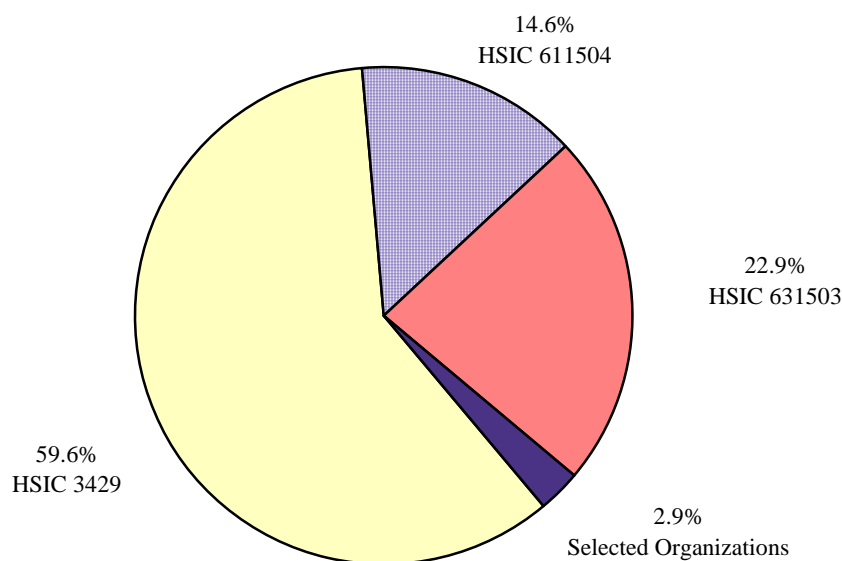




**Table 1.2: Distribution of Establishments by HSIC Classification in the Publishing Industry**

Branch	Number of Establishments	Percentage of Total Number of Establishments
HSIC 3429 - Publishing and allied industries	773	59.6%
HSIC 611504 - Wholesales of books, periodicals and newspapers	190	14.6%
HSIC 631503 - Import and export of books, periodicals and newspapers	297	22.9%
Selected Organizations	38	2.9%
Total	1 298	100.0%

**Figure 1.2: Distribution of Publishing Establishments by Branch**



1.8 Owing to resources constraint, a stratified random sampling method was used to select for the survey fieldwork a sample of 535 printing and related establishments, including the educational and training institutions and the printing department/agencies of the Government of the Hong Kong Special Administrative Region; and 268 establishments in the publishing industry.

## ***Publicity***

1.9 Prior to the fieldwork of the survey, publicity was placed in the local press. Assistance to solicit co-operation from their members was also given by the following associations:

- (a) The Hong Kong Printers Association,
- (b) Graphic Arts Association of Hong Kong Ltd.,
- (c) The Chinese Manufacturers' Association of Hong Kong,
- (d) Federation of Hong Kong Industries,
- (e) The Newspaper Society of Hong Kong,
- (f) The Anglo-Chinese Textbook Publishers Organization, and
- (g) Hong Kong Publishing Professionals Society Ltd.

## ***Method of the Survey***

1.10 Two weeks before the fieldwork, copies of the questionnaires together with the explanatory notes and job descriptions of the principal jobs in the printing and publishing industries were sent to the selected establishments of the two industries (Appendices 3 & 4).

1.11 During the fieldwork, interviewers of the Census and Statistics Department visited the establishments to collect the completed questionnaires, and where required, they also answered queries and assisted in the completion of the questionnaires.

1.12 The data collected were checked and where necessary, confirmed with the respondents. The data were then scaled up statistically to reflect the overall picture of the manpower situation of the two industries.

## ***Response to the Survey***

1.13 Of the 803 establishments (including 46 new cases), 591 supplied their manpower information. 199 establishments either had closed, moved or were no longer engaged in work related to the printing and publishing industries. 13 establishments had declined to supply any information. The effective response rate was 98%.

## ***The Report***

1.14 This report presents the findings of the survey, the Training Board's forecast of the manpower needs of the printing and publishing industries and recommendations on measures to meet these needs. In the report, the terms "workforce", "employees" and "workers" refer to the total number of persons (excluding trainees and apprentices) employed in the 50 principal jobs; the term "trainees" includes all trainees receiving any form of training and apprentices undergoing an apprenticeship.

1.15 The principal jobs in the printing industry had been reviewed in the light of developments in the industry. The major changes are as follows:

- (a) two principal jobs at technologist level were added, i.e. Procurement Manager and Information Technology Manager (Printing);
- (b) five principal jobs at technician level were added, i.e. Designer/Design Officer, Prepress Technician, Purchasing Officer/Controller, Technical Services/Products (Printing) Technician and Information Technology (Printing) Technician;
- (c) the job descriptions for the principal jobs at craftsman level were revised. As a result, the number of jobs were reduced from 16 to 10; and
- (d) the two principal jobs at operative level were deleted.

## SECTION II

### SURVEY FINDINGS

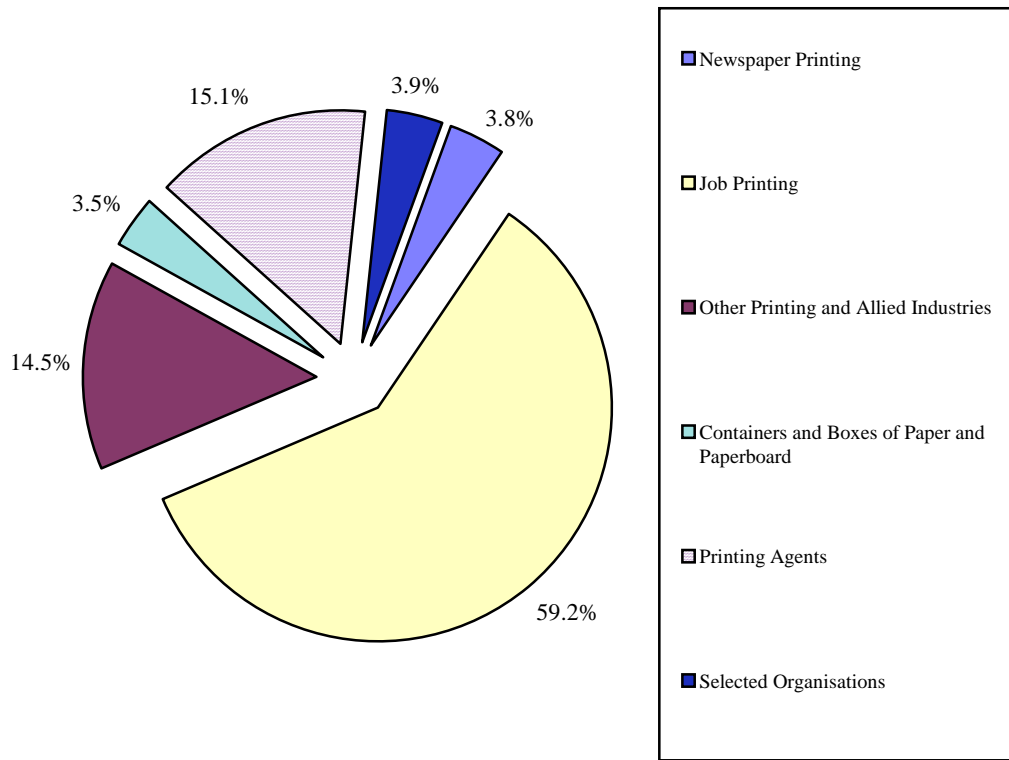
#### *Number of Workers Employed*

2.1 The survey revealed that in June 2006, the printing and publishing industries employed a total of 21 313 and 7 930 employees in 26 and 24 principal jobs respectively. In terms of branches, there were 806 in newspaper printing, 12 630 in job printing, 3 086 in other printing and allied industries, 752 in containers and boxes of paper and paperboard, 3 211 in printing agents and 828 in selected organizations in the printing industry; while there were 6 688 in publishing and allied industries, 318 in wholesale of books, periodicals and newspapers, 604 in import and export of books, periodicals and newspapers and 320 in selected organizations in the publishing industry. With regards to job level, there were 1 185 technologists/managers, 7 544 technicians, 11 370 craftsmen and 1 214 unskilled workers employed in the printing industry; while there were 944 managers, 2 593 supervisors and 4 393 technical support employees in the publishing industry. Details of the manpower statistics are shown in Appendices 5 and 6 respectively. The distribution of employees by branch and job level of the printing industry and publishing industry are shown in Tables 2.1 and 2.2 and Figures 2.1 to 2.4:

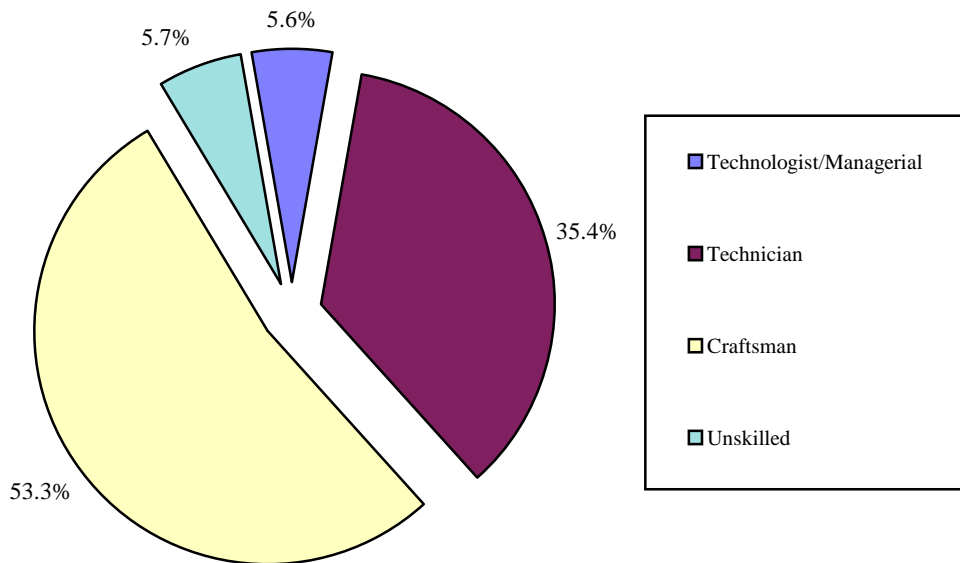
**Table 2.1: Distribution of Employees by Branch and Job Level in the Printing Industry**

Job Level Branch	Technologist/ Managerial	Technician	Craftsman	Unskilled	Total	Percentage of Total Number of Employees
Newspaper Printing	28	105	630	43	806	3.8%
Job Printing	501	3 226	8 031	872	12 630	59.2%
Other Printing and Allied Industries	64	935	1 949	138	3 086	14.5%
Containers and Boxes of Paper and Paperboard	34	212	455	51	752	3.5%
Printing Agents	451	2 643	103	14	3 211	15.1%
Selected Organizations	107	423	202	96	828	3.9%
Total	1 185	7 544	11 370	1 214	21 313	100%
Percentage of Total Number of Employees	5.6%	35.4%	53.3%	5.7%	100%	

**Figure 2.1 : Distribution of Employees by Branch in the Printing Industry**



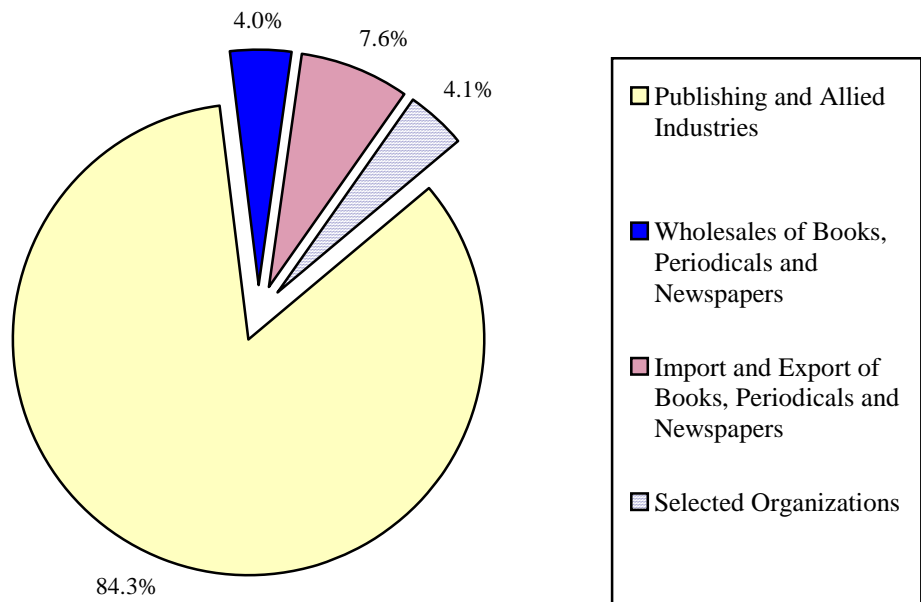
**Figure 2.2 : Distribution of Employees by Job Level in the Printing Industry**



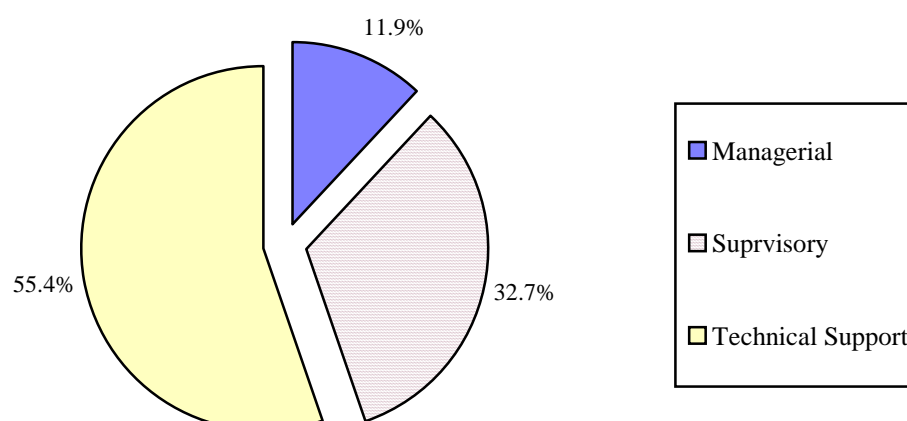
**Table 2.2: Distribution of Employees by Branch and Job Level in the Publishing Industry**

Branch \ Job Level	Managerial	Supervisory	Technical Support	Total	Percentage of Total Number of Employees
Publishing and Allied Industries	800	2 111	3 777	6 688	84.3%
Wholesales of Books, Periodicals and Newspapers	22	167	129	318	4.0%
Import and Export of Books, Periodicals and Newspapers	67	204	333	604	7.6%
Selected Organizations	55	111	154	320	4.1%
<b>Total</b>	<b>944</b>	<b>2 593</b>	<b>4 393</b>	<b>7 930</b>	<b>100%</b>
Percentage of Total Number of Employees	11.9%	32.7%	55.4%	100%	

**Figure 2.3 : Distribution of Employees by Branch in the Publishing Industry**



**Figure 2.4 : Distribution of Employees by Job Level in the Publishing Industry**



2.2 The distribution of employees by job levels on the past surveys conducted by the former Printing Industry Training Board and Advertising, Public Relations and Publishing Training Board and the current Training Board for the printing and publishing industries is shown in Tables 2.3 and 2.4 and Figures 2.5 and 2.6:

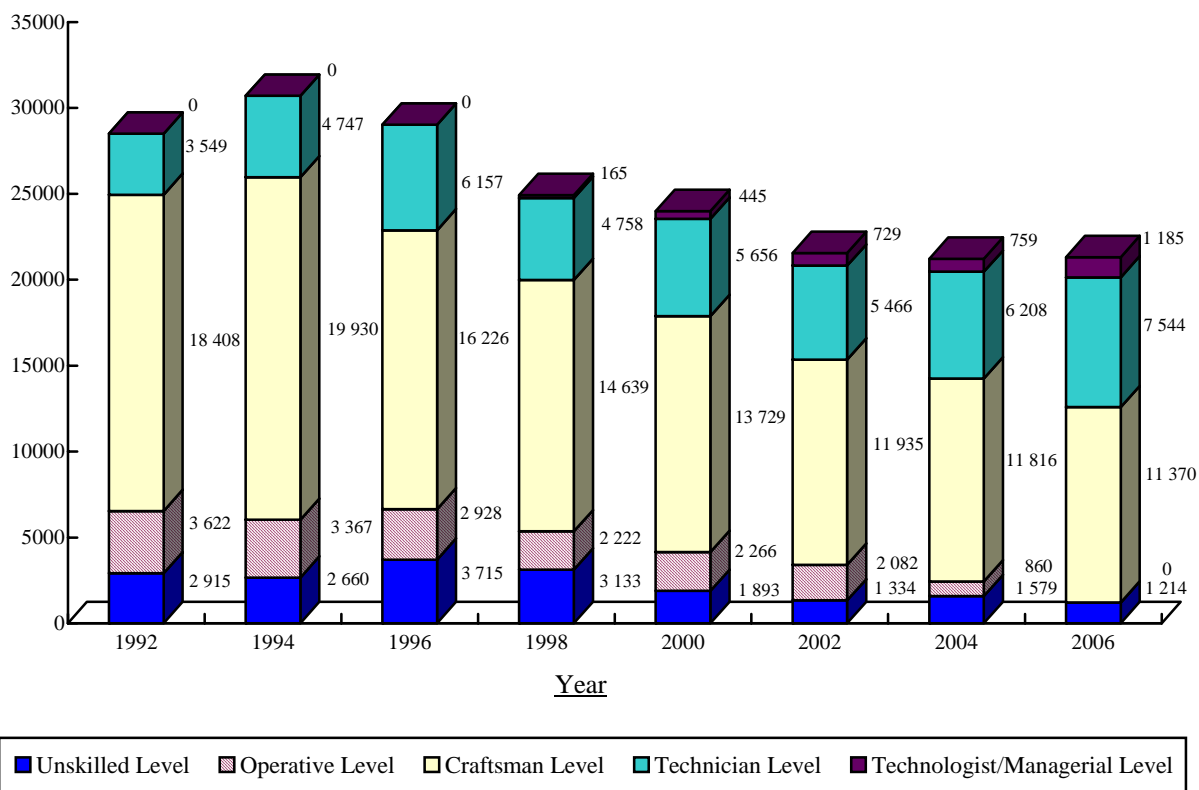
**Table 2.3: Distribution of Employees by Job Level in the Manpower Surveys of the Printing Industry between 1992 and 2006**

Year	Manpower at					Total Manpower
	*Technologist/ Managerial Level	Technician Level	Craftsman Level	Operative Level	Unskilled Level	
1992	-	3 549	18 408	3 622	2 915	28 494
1994	-	4 747	19 930	3 367	2 660	30 704
1996	-	6 157	16 226	2 928	3 715	29 026
1998	165	4 758	14 639	2 222	3 133	24 917
2000	445	5 656	13 729	2 266	1 893	23 989
2002	729	5 466	11 935	2 082	1 334	21 546
2004	759	6 208	11 816	860	1 579	21 222
2006	1 185	7 544	11 370	-	1 214	21 313

\* The survey of technologist/managerial level was first started in 1998 and was widened to cover more principal jobs at the technologist/managerial level in the subsequent surveys. The principal jobs at the operative level were deleted in the 2006 survey.

**Figure 2.5 : Distribution of Employees by Job Level in the Manpower Surveys between 1992 and 2006**

No. of Employees



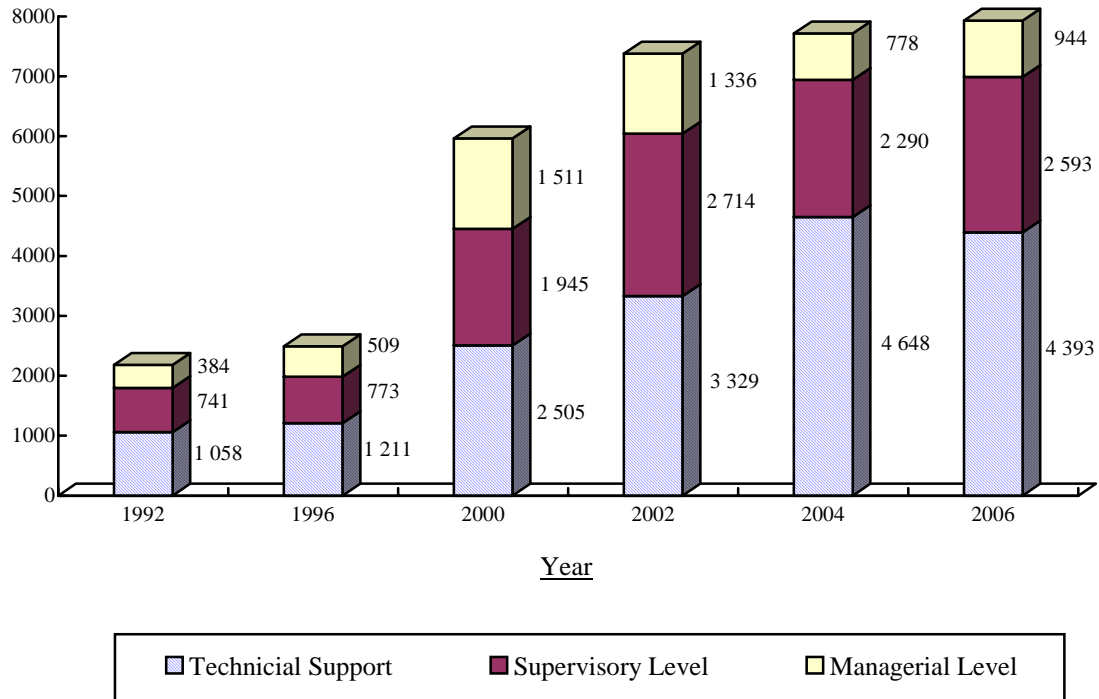
**Table 2.4: Distribution of Employees by Job Level in the Manpower Surveys of the Publishing Industry between 1992 and 2006**

Year	Manpower at			Total Manpower
	Managerial Level	Supervisory Level	Technical Support	
1992	384	741	1 058	2 183
1996	509	773	1 211	2 493
2000	1 511	1 945	2 505	5 961
2002	1 336	2 714	3 329	7 379
2004	778	2 290	4 648	7 716
2006	944	2 593	4 393	7 930



**Figure 2.6 : Distribution of Employees by Job Level in the Manpower Surveys between 1992 and 2006**

No. of Employees



### *Number of Trainees*

2.3 At the time of the survey, there were 149 trainees representing 0.7% of the total number employed in the printing industry and 34 trainees representing 0.4% in the publishing sector. Details of the trainee statistics are shown in Appendices 5 and 6. The distribution of trainees by branch and job level in the printing industry is shown in Tables 2.5 and 2.6:

**Table 2.5: Distribution of Trainees in the Printing Industry**

Job Level Branch	Technologist/ Managerial	Technician	Craftsman	Unskilled	Total	Percentage of Total Number of Employees at the Same Branch
Newspaper Printing	-	-	2	-	2	0.3%
Job Printing	2	23	93	-	118	0.9%
Other Printing and Allied Industries	-	21	-	-	21	0.7%
Containers and Boxes of Paper and Paperboard	-	-	1	-	1	0.1%
Printing Agents	-	1	-	-	1	-
Selected Organisations	-	-	6	-	6	0.7%
Total	2	45	102	-	149	0.7%
Percentage of Total Number of Employees at the Same Level	0.2%	0.6%	0.9%	-	0.7%	

**Table 2.6: Distribution of Trainees in the Publishing Industry**

Job Level Branch	Managerial	Supervisory	Technical Support	Total	Percentage of Total Number of Employees at the Same Branch
Publishing and Allied Industries	2	4	27	33	0.5%
Wholesales of Books, Periodicals and Newspapers	-	-	-	-	-
Import and Export of Books, Periodicals and Newspapers	-	-	-	-	-
Selected Organisations	-	1	-	1	0.3%
Total	2	5	27	34	0.4%
Percentage of Total Number of Employees at the Same Level	0.2%	0.2%	0.6%	0.4%	

## *Number of Vacancies*

2.4 At the time of survey, the total number of job vacancies was 143 and 173, or 0.7% and 2.2% of the total number employed in the printing and publishing industries respectively. Details of the vacancies statistics are shown in Appendices 5 and 6 respectively. The distribution of vacancies by branch and by job level is shown in Tables 2.7 and 2.8:

**Table 2.7: Distribution of Vacancies by Branch and by Job Level in the Printing Industry**

Branch \ Job Level	Technologist/ Managerial	Technician	Craftsman	Unskilled	Total	Percentage of Total Number of Employees at the Same Branch
Newspaper Printing	-	-	1	-	1	0.1%
Job Printing	-	26	44	15	85	0.7%
Other Printing and Allied Industries	-	19	4	2	25	0.8%
Containers and Boxes of Paper and Paperboard	-	-	-	-	-	-
Printing Agents	1	26	-	-	27	0.8%
Selected Organisations	-	5	-	-	5	0.6%
Total	1	76	49	17	143	0.7%
Percentage of Total Number of Employees at the Same Level	0.1%	1.0%	0.4%	1.4%	0.7%	

**Table 2.8: Distribution of Vacancies by Branch and by Job Level in the Publishing Industry**

Branch \ Job Level	Managerial	Supervisory	Technical Support	Total	Percentage of Total Number of Employees at the Same Branch
Publishing and Allied Industries	3	14	129	146	2.2%
Wholesales of Books, Periodicals and Newspapers	-	-	-	-	-
Import and Export of Books, Periodicals and Newspapers	-	-	25	25	0.4%
Selected Organizations	-	2	-	2	0.6%
<b>Total</b>	<b>3</b>	<b>16</b>	<b>154</b>	<b>173</b>	<b>2.2%</b>
Percentage of Total Number of Employees at the Same Level	0.3%	0.6%	3.5%	2.2%	

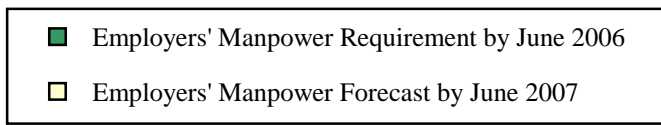
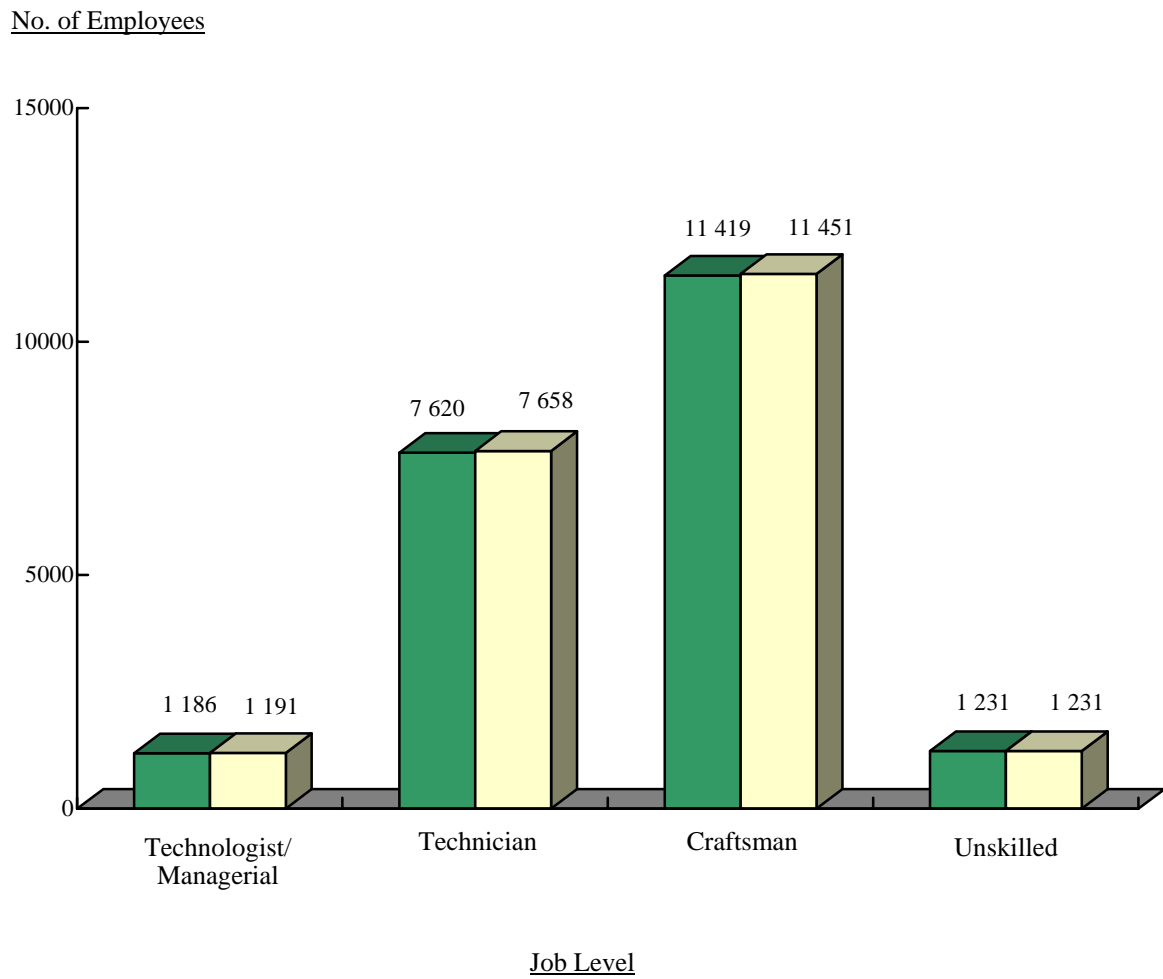
***Forecast Workforce by June 2007***

2.5 Employers forecast that there would be 21 531 and 8 339 employees employed in the printing and publishing industries by June 2007. Details of the forecast workforce are shown in Appendices 5 and 6. The employers' forecasts by job level are shown in Tables 2.9 and 2.10 and Figures 2.7 and 2.8:

**Table 2.9: Employers' Manpower Requirement by June 2006 and Manpower Forecast by June 2007 in the Printing Industry**

Job Level	Number of Employees Employed at Time of Survey	Number of Vacancies	Total Manpower Requirement at Time of Survey	Forecast of Total Number of Employees by June 2007	Forecast Increase/Decrease in Number of Employees
Technologist/Managerial	1 185	1	1 186	1 191	0.4%
Technician	7 544	76	7 620	7 658	0.5%
Craftsman	11 370	49	11 419	11 451	0.3%
Unskilled	1 214	17	1 231	1 231	-
<b>Total</b>	<b>21 313</b>	<b>143</b>	<b>21 456</b>	<b>21 531</b>	<b>0.4%</b>

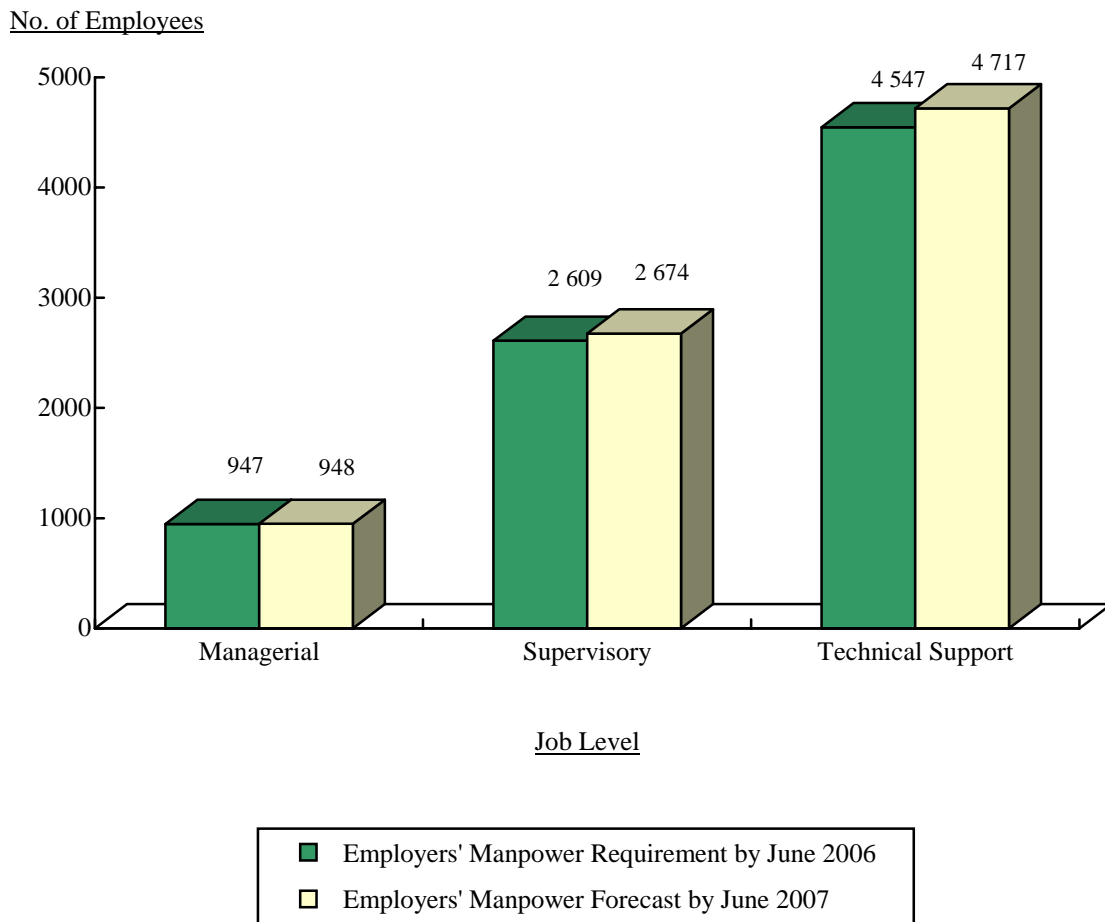
**Figure 2.7 : Comparison of Employers' Manpower Requirements by June 2006 and June 2007**



**Table 2.10: Employers' Manpower Requirement by June 2006 and Manpower Forecast by June 2007 in the Publishing Industry**

Job Level	Number of Employees Employed at Time of Survey	Number of Vacancies	Total Manpower Requirement at Time of Survey	Forecast of Total Number of Employees by June 2007	Forecast Increase/Decrease in Number of Employees
Managerial	944	3	947	948	0.1%
Supervisory	2 593	16	2 609	2 674	2.5%
Technical Support	4 393	154	4 547	4 717	3.7%
Total	7 930	173	8 103	8 339	2.9%

**Figure 2.8 : Comparison of Employers' Manpower Requirements by June 2006 and June 2007**



## ***Preferred Education***

2.6 The majority views of employers in the printing and publishing industries on the preferred education of their employees at each job level are shown in Tables 2.11 and 2.12:

**Table 2.11: Employers' Views on Preferred Education in the Printing Industry**

Job Level	Preferred Education
Technologist/Managerial	Degree
Technician	Certificate/Secondary 5-7
Craftsman	Craft Certificate/Below Secondary 5

**Table 2.12: Employers' Views on Preferred Education in the Publishing Industry**

Job Level	Preferred Education
Managerial	Degree
Supervisory	Degree/Diploma
Technical Support	Diploma/ Higher Certificate

2.7 Details of employers' views are shown in Appendices 7 and 8 respectively.

## ***Preferred Period of Training***

2.8 The majority views of employers in the printing and publishing industries on the preferred period of training for their employees at each job level are shown in Tables 2.13 and 2.14:

**Table 2.13: Employers' Views on Preferred Period of Training in the Printing Industry**

Job Level	Preferred Period of Training
Technologist/Managerial	2 to 3 years
Technician	1 to 3 years
Craftsman	½ to 3 years

**Table 2.14: Employers' Views on Preferred Period of Training in the Publishing Industry**

Job Level	Preferred Period of Training
Managerial	12 months or above
Supervisory	3 to 12 months
Technical Support	3 to 12 months

2.9 Details of the employers' views are shown in Appendices 9 and 10 respectively.

### *Preferred Mode of Training*

2.10 The majority views of employers in the printing and publishing industries on the mode of training for their employees at each job level are shown in Tables 2.15 and 2.16:

**Table 2.15: Employers' Views on Preferred Mode of Training in the Printing Industry**

Job Level	Preferred Mode of Training
Technologist/Managerial	On-the-job training
Technician	On-the-job training
Craftsman	Apprenticeship/On-the-job training

**Table 2.16: Employers' Views on Preferred Mode of Training in the Publishing Industry**

Job Level	Preferred Mode of Training
Managerial	On-the-job training
Supervisory	On-the-job training
Technical Support	On-the-job training

2.11 Details of the employers' views are shown in Appendices 11 and 12 respectively.



## ***Total Monthly Income Range of Employees***

2.12 The distribution of employees by total monthly range in the two industries is shown in Tables 2.17 and 2.18:

**Table 2.17: Distribution of Employees by Total Monthly Income Range in the Printing Industry**

Job Level	\$5,000 or below	\$5,001 - \$6,500	\$6,501 - \$8,000	\$8,001 - \$10,000	\$10,001 - \$15,000	\$15,001 - \$20,000	\$20,001 - \$25,000	\$25,001 or above	Unspecified	Total
Technologist/Managerial	-	-	-	-	60	285	223	425	192	1 185
Technician	-	-	292	1 357	2 995	1 595	357	253	695	7 544
Craftsman	104	141	1 222	2 917	5 669	477	42	25	773	11 370
Unskilled	52	121	432	417	64	-	-	-	128	1 214
Total	156	262	1 946	4 691	8 788	2 357	622	703	1 788	21 313
Total Number of Employees in Percentage	0.8%	1.2%	9.1%	22.0%	41.2%	11.1%	2.9%	3.3%	8.4%	100%

**Table 2.18: Distribution of Employees by Total Monthly Income Range in the Publishing Industry**

Job Level	\$6,000 or below	\$6,001 - \$8,000	\$8,001 - \$10,000	\$10,001 - \$15,000	\$15,001 - \$20,000	\$20,001 - \$30,000	\$30,001 - \$45,000	\$45,001 or above	Unspecified	Total
Managerial	-	-	-	10	38	204	235	380	77	944
Supervisory	-	5	89	613	641	656	356	48	185	2 593
Technical Support	17	158	954	1 918	997	110	6	1	232	4 393
Total	17	163	1 043	2 541	1 676	970	597	429	494	7 930
Total Number of Employees in Percentage	0.2%	2.1%	13.2%	32.1%	21.1%	12.2%	7.5%	5.4%	6.2%	100%

2.13 Details of the monthly income range of employees are shown in Appendices 13 and 14 respectively.

## ***Technical and Non-technical Staff***

2.14 The distribution of technical and non-technical staff in the printing and publishing industries is shown in Table 2.19:

**Table 2.19: Distribution of Technical and Non-technical Staff in the Printing and Publishing Industries**

	<u>Technical Staff</u>	<u>Non-technical Staff</u>	<u>Total</u>	<u>Percentage of Technical Staff</u>
Printing Industry	21 313	8 934	30 247	70.5%
Publishing Industry	7 930	6 606	14 536	54.6%
Total	29 243	15 540	44 783	65.3%

## ***Employers' Views on the Expected Change in Business Situation for the Coming Year***

2.15 The survey revealed that about 46.7% and 82.9% of the employers in the printing and publishing industries respectively had forecasted the business situation would be either the same or better in the coming year. The distribution of the employers' views is shown in Tables 2.20 and 2.21:

**Table 2.20: Views of Employers in the Printing Industry on the Business Situation for the Coming Year**

Employment Size	Business Situation				
	Better	Same	Worse	Unspecified	Total
1 - 9	381	1 291	2 201	22	3 895
10 – 49	107	224	131	3	465
50 & Over	36	29	3	2	70
All	524	1 544	2 335	27	4 430
Percentage of Firms	11.8%	34.9%	52.7%	0.6%	100%

**Table 2.21: Views of Employers in the Publishing Industry on the Business Situation for the Coming Year**

Employment Size	Business Situation				
	Better	Same	Worse	Unspecified	Total
1 – 9	162	417	126	1	706
10 – 49	54	81	24	0	159
50 & Over	23	33	1	7	64
All	239	531	151	8	929
Percentage of Firms	25.7%	57.2%	16.2%	0.9%	100%

### *Age Profile of Employees*

2.16 The distribution of age profiles of the employees in the printing and publishing industries is shown in Tables 2.22 and 2.23:

**Table 2.22: Age Profile of Employees in the Printing Industry**

Age Group	Number of Technologists/Managers	Number of Technicians	Number of Craftsmen	Total	Percentage of Total Number of Employees
Below 35	153	2 307	2 797	5 257	26.1%
35 - 49	783	4 133	6 596	11 512	57.3%
50 and above	249	1 104	1 977	3 330	16.6%
Total	1 185	7 544	11 370	20 099	100%

**Table 2.23: Age Profile of Employees in the Publishing Industry**

Age Group	Number of Managers	Number of Supervisors	Number of Technical Support Staff	Total	Percentage of Total Number of Employees
Below 35	220	1 075	2 630	3 925	49.5%
35 - 49	577	1 171	1 570	3 318	41.8%
50 and above	147	347	193	687	8.7%
Total	944	2 593	4 393	7 930	100%

***Employees Deployed to Work outside Hong Kong  
in the Printing Industry***

2.17 Employers reported the following number of employees who had been deployed to work outside Hong Kong more than 6 months during the 12 months prior to the survey:

**Table 2.24: Number of Employees Deployed to Work Outside Hong Kong in the Printing Industry**

Job Level	Number of Employees	Total Number of Employees at the Same Job Level	Percentage of Total Number of Employees at the Same Job Level
Technologist/Managerial	101	1 185	8.5%
Technician	439	7 544	5.8%
Craftsman	39	11 370	0.3%
Total	579	20 099	2.9%

***Establishments with Production Workshops  
in Mainland China in the Printing Industry***

2.18 The survey revealed that there were 498 establishments with production workshops in Mainland China and they employed some 157 600 employees. The latter figure does not include employees who are Hong Kong residents.

## SECTION III

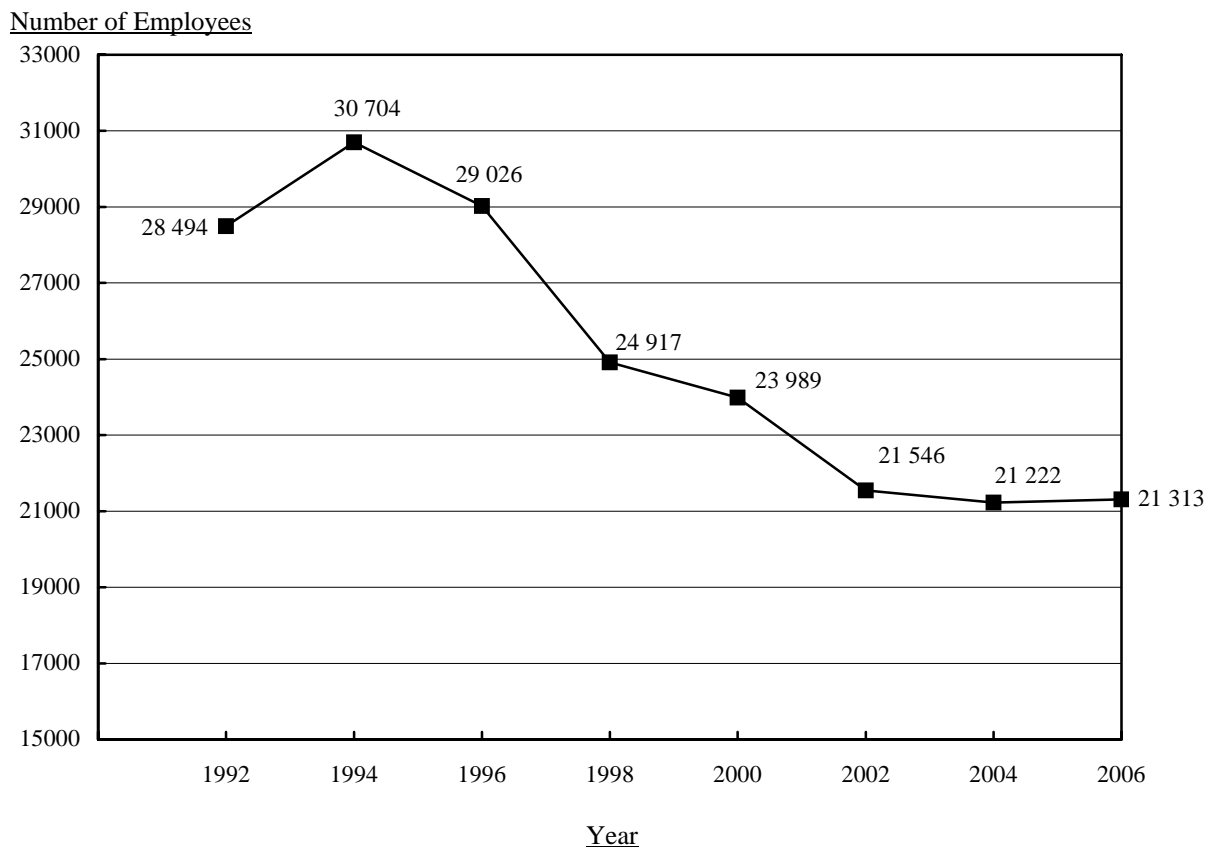
### CONCLUSIONS

3.1 The Training Board has carefully examined the survey findings and considered that they generally reflect the employment situation of the printing and publishing industries at the time of the survey.

3.2 The survey revealed that the printing industry's workforce had slightly increased at an annual rate of 0.2% from 21 222 employees to 21 313 employees since the last survey conducted in June 2004. The workforce of the publishing industry had also increased at an annual rate of 1.4% from 7 716 employees to 7 930 employees since the last survey. Figures 3.1 and 3.2 show the manpower situation of the printing industry and the publishing industry between 1992 and 2006:

#### (A) *Printing Industry*

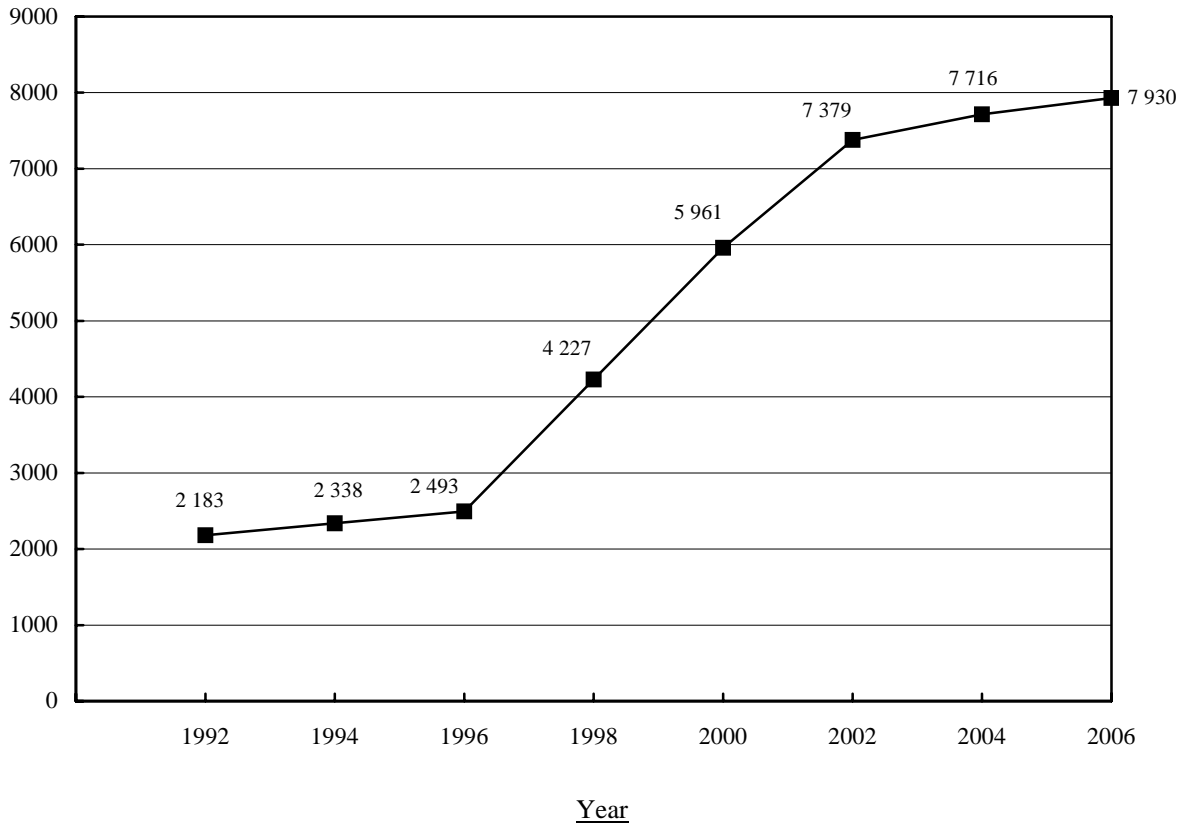
**Figure 3.1 : Manpower Situation Between 1992 and 2006**



(B) *Publishing Industry*

**Figure 3.2 : \*Manpower Situation Between 1992 and 2006**

Number of Employees



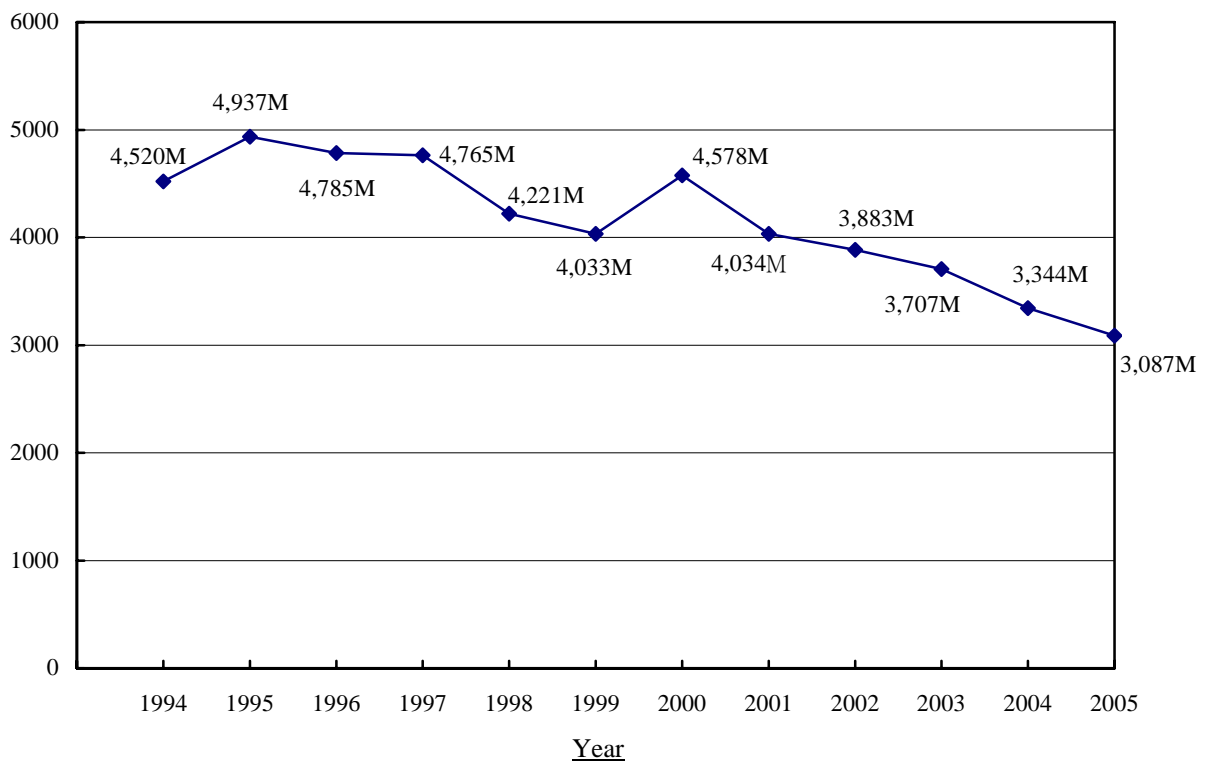
\* The surveys in 2000, 2002, 2004 and 2006 covered a wider scope than the previous surveys in 1992 and 1996 conducted by the former Advertising, Public Relations and Publishing Training Board.

## *Performance of the Printing Industry*

3.3 The domestic export value of printed matters in year 2000 recorded a total of HK\$4,578 million, and it decreased to HK\$3,087 million in 2005. The performance of the domestic export value of printed matters between 1994 and 2005 is shown in Figure 3.3.

**Figure 3.3 : Domestic Export Value of Printed Matters between 1994 and 2005**

HK\$ Million

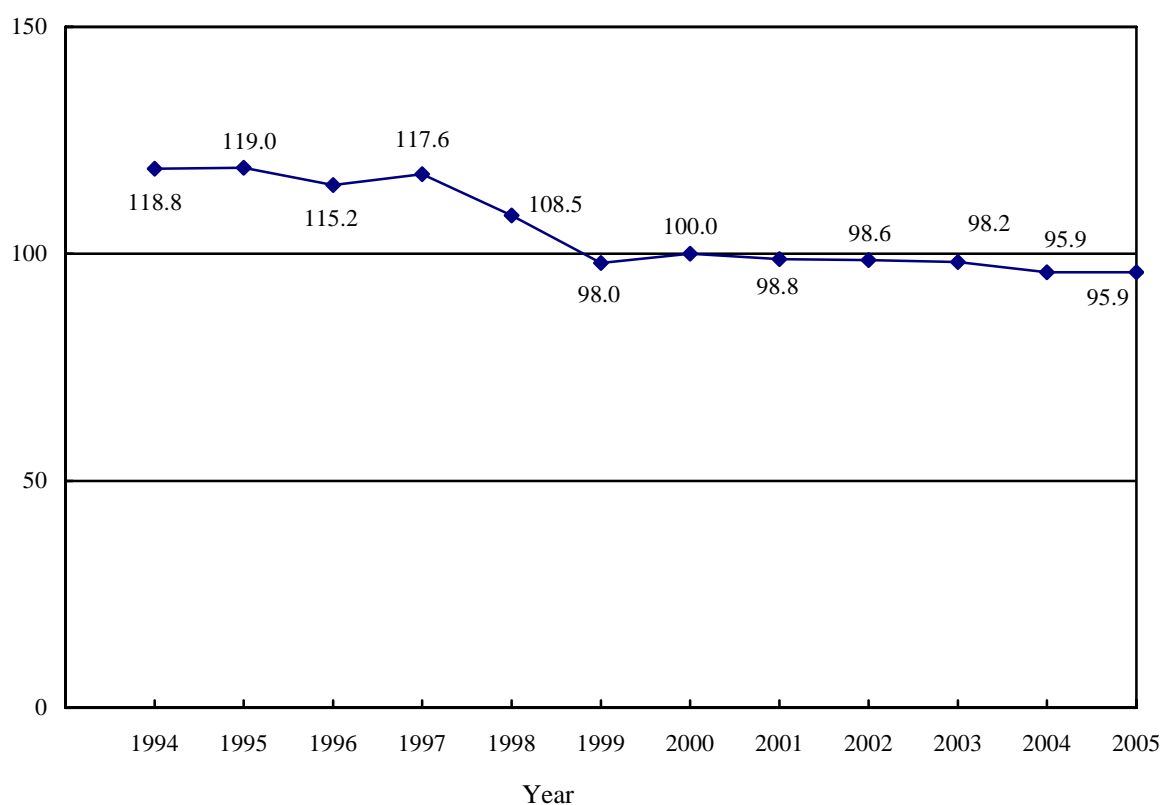


*Source: Hong Kong Trade Statistics, Census and Statistics Department*

3.4 The production index of the industry also decreased correspondingly from 100 in the base year of 2000 to 95.9 in 2005, representing a slight reduced production for paper products and printed matters in the local industry in the past few years (see Figure 3.4 below).

**Figure 3.4 : Paper Products and Printing Industry – Index of Industrial Production**

Index No.  
(2000 = 100)



Source : Census and Statistics Department

Note : The production index measures the change in local manufacturing output in real terms, i.e. changes in volume of local production after discounting the effect of price changes. As from the third quarter of 2002, the base year of the index the industrial production has been changed to 2000.

3.5 The data in paragraphs 3.4 & 3.5 reflect the shifting of printing activities to the Mainland China, and that the transfer process has largely been stabilized. On the other hand, the Labour Productivity Index of the printing industry, which analyse long term effects of factors like enhancement in technology, improvements in organisational structure, quality of labour and increases in capital on productive capacity of industry, shows an increase from 100 (in base year 2000) to 119.6 in 2005; as against the increase of 100 to 104.8 for all industries during the period.



## ***Manpower Changes by Branch***

### **(A) *Printing Industry***

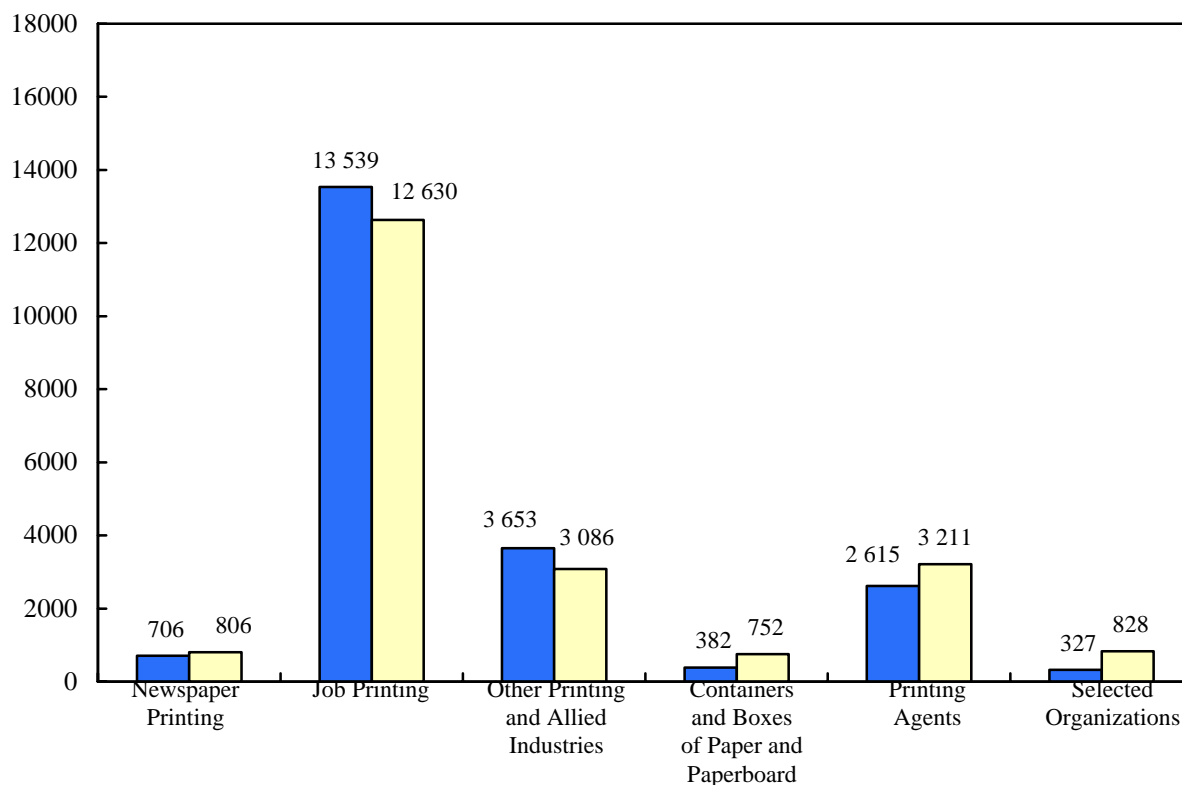
3.6 A breakdown of the manpower changes by branch between June 2004 and June 2006 is shown in Table 3.1 and Figure 3.5:

**Table 3.1 : Breakdown of Manpower Changes by Branch Between June 2004 and June 2006**

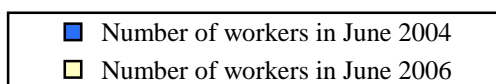
Branch	Number of Employees in June 2004	Number of Employees in June 2006	Change Per Annum
Newspaper Printing	706	806	+6.8%
Job Printing	13 539	12 630	-3.2%
Other Printing and Allied Industries	3 653	3 086	-8.1%
Containers and Boxes of Paper and Paperboard	382	752	+40.3%
Printing Agents	2 615	3 211	+10.8%
Selected Organizations	327	828	+59.1%
Total	21 222	21 313	+0.2%

**Figure 3.5 : Manpower Changes by Branch between June 2004 and June 2006**

Number of Employees



Branch



3.7 The survey revealed that the technical manpower of the newspaper printing branch had increased by 6.8% per annum from 706 in June 2004 to 806 in June 2006. This was attributable to the increase in the number of newspaper and newspaper printing establishments following the recovery of the local economy. There was also an annual increase of 10.8% of manpower from 2 615 to 3 211 in printing agents branch indicating that there was further diversification of the business of some printing firms from manufacturing to trading in the past two years.

3.8 The increase of manpower in the containers and boxes of paper and paperboard printing branch was due to an increased number of establishments, whereas the increase in selected organizations was mainly due to the expanded coverage of the survey to include metal can manufacturers and printing equipment suppliers.

3.9 However, there was an annual decrease of 3.2% of manpower from 13 539 to 12 630 in the job printing branch and an annual decrease of 8.1% in the other printing and allied industries. This might be attributed to the shifting of some printing jobs to operations in the Mainland China.

(B) *Publishing Industry*

3.10 A breakdown of the manpower changes by branch between June 2004 and June 2006 is shown in Table 3.2:

**Table 3.2 : Manpower Changes by Branch  
between June 2004 and June 2006**

Branch	Number of Employees in June 2004	Number of Employees in June 2006	Change Per Annum
Publishing and Allied Industries	6 535	6 688	+1.2%
Wholesales of Books, Periodicals and Newspapers	238	318	+15.6%
Import and Export of Books, Periodicals and Newspapers	618	604	-1.1%
Selected Organizations	325	320	-0.8%
Total	7 716	7 930	+1.4%

3.11 The findings revealed that there was mild changes of employee numbers in various branches of the publishing industry.

## ***Manpower Changes by Job Level in the Printing Industry***

### ***The Industry***

3.12 The manpower changes of the printing industry between 2004 and 2006 is shown in Table 3.3:

**Table 3.3 : Manpower Changes by Job Level  
between June 2004 and June 2006**

Job Level	Number of Employees in June 2004	Number of Employees in June 2006	Change Per Annum
Technologist/Managerial	759	1 185	+25.0%
Technician	6 208	7 544	+10.2%
Craftsman	11 816	11 370	-1.9%
Operative	860	-	-
Unskilled	1 579	1 214	-12.3%
Total	21 222	21 313	+0.2%

### ***Technologist/Managerial Level***

3.13 The survey revealed an increase of 25.0% per annum in manpower for the technologist/managerial level from 759 in 2004 to 1 185 in 2006. Owing to the rapid development of digitalization of the printing processes, employers had continued to employ more technologists to meet the keen competition worldwide. Some printers with production operations in the Mainland further expanded their production capacity there to cope with the economic boom. This was reflected by an increase of some 30% in the number of employees engaged by production workshops in the Mainland. The increase was also partly attributable to the expanded coverage of the survey. A breakdown of the manpower changes is shown in Table 3.4:

**Table 3.4 : Manpower Changes by Principal Job  
between June 2004 and June 2006**

Principal Job	Number of Employees in June 2004	Number of Employees in June 2006	Change Per Annum
Factory Manager	139	152	+4.6%
Production Manager/ Quality Manager	256	388	+23.1%
Sales/Customer Services/ Marketing Manager	364	565	+24.6%
Other New Jobs	-	80	-
Total	759	1 185	+25.0%

### *Technician Level*

3.14 The survey also revealed an increase in the number of technicians, from 6 208 in June 2004 to 7 544 in June 2006. The latter number included 1 156 employees reported under five new principal jobs covered in the survey. A breakdown of the manpower changes is shown in Table 3.5:

**Table 3.5 : Manpower Changes by Principal Job  
between June 2004 and June 2006**

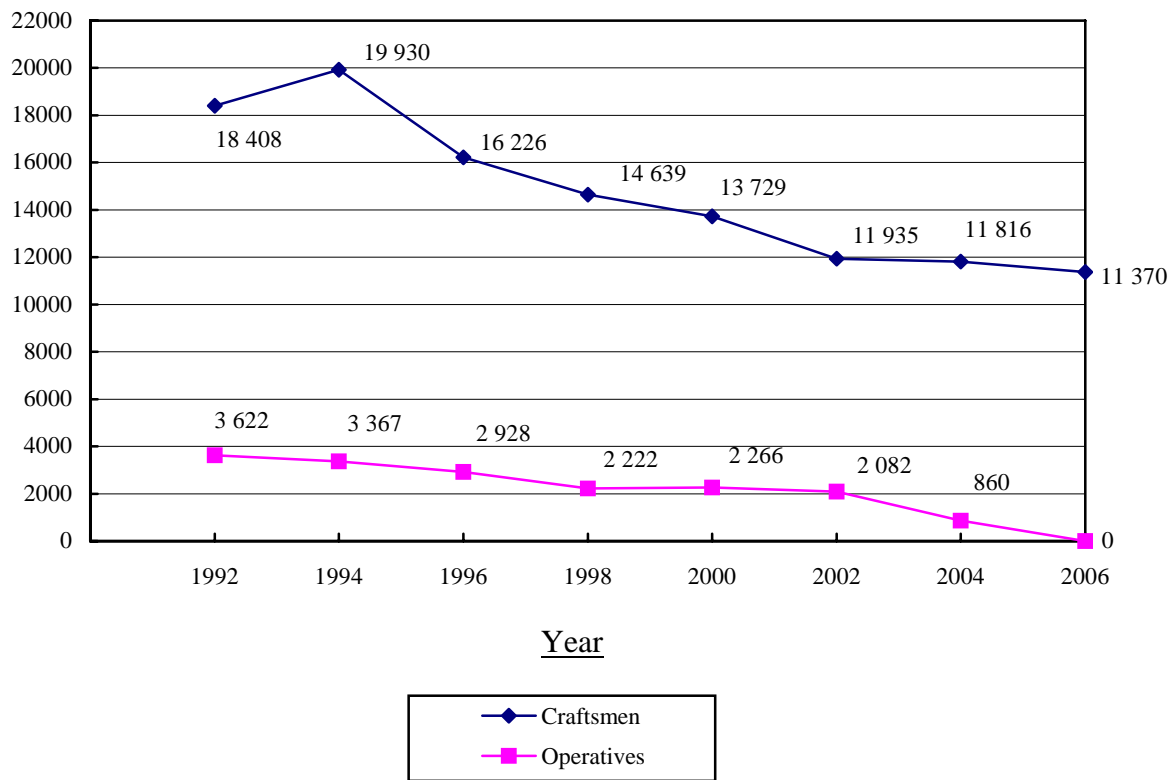
Principal Job	Number of Employees in June 2004	Number of Employees in June 2006	Change Per Annum
Cost Estimator/ Sales Representative	3 709	4 129	+5.5%
Production Planner/ Controller/Customer Services Co-ordinator/ Quality Controller	1 413	1 238	-6.4%
Overseer/Supervisor	954	749	-11.4%
Electrical & Mechanical Maintenance Technician (Printing)	132	272	+43.5%
Other New Jobs	-	1 156	-
Total	6 208	7 544	+10.2%

### *Craftsman and Operative Levels*

3.15 The survey revealed that there was a further decrease of 1.9% per annum in the number of craftsmen between the two years, while the operative level jobs were deleted from the survey. Details of the manpower changes are depicted in Figure 3.6:

**Figure 3.6 : Manpower Changes at Craftsman and Operative Levels between June 1992 and June 2006**

#### Number of Workers



### ***Manpower Changes by Job Level in the Publishing Industry***

3.16 The manpower changes of the publishing industry by job level between 2004 and 2006 are shown in Table 3.6:

**Table 3.6 : Manpower Changes by Job Level between June 2004 and June 2006**

Job Level	No. of Employees in June 2004	No. of Employees in June 2006	Change Per Annum
Managerial	778	944	+10.2%
Supervisory	2 290	2 593	+6.4%
Technical Support	4 648	4 393	-2.8%
Total	7 716	7 930	+1.4%

#### ***Managerial Level***

3.17 The survey revealed a general increase in the number of managers. A breakdown of the manpower changes is shown in Table 3.7:

**Table 3.7 : Manpower Changes by Principal Job between June 2004 and June 2006**

Principal Job	Number of Employees in June 2004	Number of Employees in June 2006	Change Per Annum
Managing Director/ General Manager/Publisher	125	203	+27.4%
Editorial Director/Chief Editor	187	191	+1.1%
Design Director/Art Director	66	88	+15.5%
# Production Director/ Production Manager	52	66	+12.7%
Marketing Director/ Marketing Manager	107	127	+8.9%
Sales Director/Sales Manager (Newspaper and Magazine Publications)	139	144	+1.8%
Sales Director/Sales Manager (Book Publications)	40	43	+3.7%
Editorial Manager	62	82	+15.0%
Total	778	944	+10.2%

# Same job nature as the principal job of “Production Manager” in the printing industry.

### *Supervisory Level*

3.18 The survey also revealed a general increase in the number of supervisors. A breakdown of the manpower changes is shown in Table 3.8:

**Table 3.8 : Manpower Changes by Principal Job  
between June 2004 and June 2006**

Principal Job	Number of Employees in June 2004	Number of Employees in June 2006	Change Per Annum
Commissioning Editor/ Acquisition Editor/ Senior Editor/Editor	1 127	1 225	+4.3%
Senior Designer	228	298	+14.3%
# Production Supervisor	112	105	-3.2%
Sales Supervisor	431	522	+10.1%
Marketing/Publicity Supervisor	136	187	+17.3%
Customer Services Supervisor/Officer (Text Books)	123	140	+6.7%
Circulation Supervisor (Magazine & Newspapers)	133	116	-6.6%
Total	2 290	2 593	+6.4%

# Same job nature as the principal job of “Overseer/Supervisor” in the printing industry.



### ***Technical Support Level***

3.19 The survey revealed a decrease in the number of technical support staff. A breakdown of the manpower changes is shown in Table 3.9:

**Table 3.9 : Manpower Changes by Principal Job between June 2004 and June 2006**

Principal Job	Number of Employees in June 2004	Number of Employees in June 2006	Change Per Annum
Assistant Editor/Copy Editor/ Art Editor/Proof Reader	1 615	1 425	-6.1%
Art Designer/ Illustrator	993	719	-14.9%
Desktop Publishing (DTP) Operator	238	301	+12.5%
# Production Assistant	209	96	-32.2%
Sales Representative/ Sales Executive	1 167	1 464	+12.0%
Marketing/Publicity Assistant	364	352	-1.7%
Other Publishing Related Job	62	36	-23.8%
Total	4 648	4 393	-2.8%

# Same job nature as the craftsman in the printing industry.  
Same job nature as Electronic prepress system craftsman in the printing industry.

3.20 The changes in the number of employees in the industry over the past two years are analysed as follows:

(A) ***Printing Industry***

- (a) There was a notable increase in the number of manpower at the managerial/technological and technician levels. This was mainly attributable to the inclusion of more principal jobs at those levels and the expanded coverage of the survey to include printing equipment suppliers and metal-can manufacturers;
- (b) The trend of moving towards higher end production and adoption of more advanced technology continued, which contributed to an increase in manpower at the technologist/managerial and technician levels, but a decrease of workers at the craftsman and operative levels;

- (c) There was an increase in the number of printing agents due to some small and medium printing companies converting their business to sales and supplies agents;
- (d) The number of sales/marketing managers and cost estimators/sales representatives had increased from 364 to 565 and from 3 709 to 4 129 representing an increase of 55.2% and 11.3% respectively. This reflected the growing business activities generated by the continuous thriving of the Mainland's economy, and the expanded coverage of the 2006 survey;
- (e) The number of factory managers and production/quality managers had increased from 395 to 540 while the number of production planners/controllers/supervisors decreased from 2 367 to 1 987 (i.e. -16.1%) which indicated that more supervisory positions had been taken up by mainland workers;
- (f) There had been a consistent demand for manpower skilled in desktop prepress and conversant in the application of computers in the past two years. The number of digital printing system craftsmen and electronic prepress technicians/craftsmen remained at some 2 400. The principal job of pre-press technician was first introduced in the 2006 survey; and
- (g) The number of craftsmen/operatives had decreased from 12 676 to 11 370 (i.e. -10.3%) and the number of general workers from 1 579 to 1 214 (i.e. -23.1%) which reflected the expanded production and sub-contracting activities in Mainland China. The survey revealed that the number of employees engaged by Hong Kong firms in Mainland China had increased by about 30% in the past two years.

**(B) *Publishing Industry***

- (a) There had been an increase of manpower at the managerial and supervisory levels and a decrease at the technical support level, resulting in a slight overall increase of 2.8% for the whole industry in the past two years,
- (b) Most of the increase in manpower was recorded in the principal jobs of managing director/general manager/publisher and design director at the managerial level; and senior designer and marketing supervisor at the supervisory level. There was a notable increase in the number of sales representatives despite an overall reduction in manpower at the technical support level,

- (c) The increase of manpower at the managerial and supervisory levels was due to the increase of establishments in new business areas such as digital printing and a gradual upgrading of skill level in the industry.

### ***Comparison of Manpower Outturns with Training Board Forecasts***

#### **(A) *Printing Industry***

3.21 Table 3.10 compares the actual outturns (i.e. the number of employees plus vacancies) with the forecasts made by the Training Board in 2004:

**Table 3.10 : Comparison of 2006 Manpower Outturn with Training Board's Forecast made in 2004**

Job Level	Actual Outturn in 2006	Training Board's Manpower Forecast for 2006	Forecast Compared with Actual Outturn
Technologist/Managerial	1 187	773	-19.3% p.a.
Technician	7 589	6 482	-7.6% p.a.
Craftsman	11 472	11 680	+0.9% p.a.

3.22 The forecasts of manpower demand made by the Training Board two years ago were lower than the actual outturns at the technologist/managerial and technician levels. The deviations between the actual outturns and the Training Board's forecasts were attributable to the increasing adoption of new production technology in the industry, increased trading activities as well as expanded coverage of the current survey.

(B) *Publishing Industry*

3.23 The actual outturns (i.e. the number of employees plus vacancies) compared with the forecasts made by the Training Board in 2004 is shown in Table 3.11:

**Table 3.11 : Comparison of 2006 Manpower Outturn with Training Board's Forecast made in 2004**

Job Level	Actual Outturn in 2006	Training Board's Manpower Forecast for 2006	Forecast Compared with Actual Outturn
Managerial	946	784	-9.0% p.a.
Supervisory	2 598	2 310	-5.7% p.a.
Technical Support	4 420	4 874	+5.0% p.a.

3.24 The forecasts made by the Training Board were also lower than the actual outturns at managerial and supervisory levels, but higher at technical support level.

***Business Outlook***

(A) *Printing Industry*

3.25 The Training Board expects that the performance of the industry would remain favourable based on the following factors:

- (a) It is likely that local economy will continue to grow after a strong rebound from recession a few years ago;
- (b) Employers have shown enthusiasm to continue to invest in advanced printing technology and equipment in response to the rapid development in digital technology;
- (c) Despite the use of information technology by the society as printed media, there is still a sufficient local demand for quality printed books and magazines to sustain the industry's growth in the next few years;
- (d) Despite the emerging development of e-book, there is very likelihood that readers and consumers still prefer printed publications to electronic data for reading;

- (e) The Olympic Games to be held in Beijing in 2008 will contribute to the continuing economic boom in Mainland China and the region. As a result, both financial and commercial printing will benefit from this influx; and
- (f) In the light of keen competition, more printing employers have diversified their business from manufacturing to trading. As a result of the diversification of business nature, more skilled workers at technician and technologist levels are required to cater for the further manpower needs at these levels.

(B) ***Publishing Industry***

3.26 Sharing the view of over 80% of the employers who have expressed that the business outlook would be good and stable, the Training Board expects that the industry will continue to develop steadily for the following reasons:

(a) *Textbook Publishing*

Given the low local birth rate, but a constant influx of immigrants from Mainland China, pupil population will reduce steadily at a low rate and the demand for textbooks will be slightly affected.

(b) *General Book Publishing*

China's accession to WTO has helped to spur the output of the local publishing trade. It has also created opportunities for publishers to expand their import and export trade business to the Mainland.

(c) *Magazines Publishing*

The local economy would grow in line with the global economy. This would induce more advertisers to make use of magazines as a vehicle to promote the product sales of their clients and result in more publishers and newspaper establishments to consider expanding their magazine business.

(d) *Web Publishing*

After the downfall of global web business a few years ago, the web industry has consolidated and developed steadily but cautiously. China's accession to WTO has also provided web publishers more opportunities to build up their business in the Mainland.

## ***Future Technological Developments***

### **(A) *Printing Industry***

3.27 Information digitalization is a fundamental change with implications on all businesses. With the ability to store, process, manipulate, analyse, transmit and display via computers, digital information is changing the work both in production and quality in the printing industry.

3.28 The application of digital data in printing and the user friendly software items in prepress processing remains an important development which encourages the greater adoption of IT. Digital printing, a filmless and plateless process, means that the production of short-run, individualized, even single copy printing has now been technically and economically feasible. It would have great impact on the small and medium offset printing when the technology becomes mature and the price comes down to a competitive level.

3.29 Digital offset technology remains another significant development in the printing industry that enables digital data to be sent directly to press without going through the traditional plate making stage. The overall impacts of the development are:

- (a) industry moving towards shorter runs and just-in-time production, thus eliminating the need to keep bulky printed stock;
- (b) a reduction in the manpower required due to the full automation of machines;
- (c) the elimination of films and plates as well as other consumables alike as digital data can be transmitted to printers electronically for production via Internet;
- (d) the creation of new business opportunities; and
- (e) the increase in competitiveness among traditional printers.

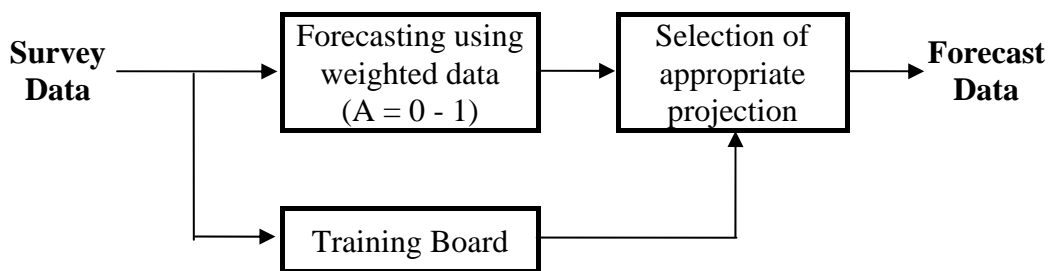
### **(B) *Publishing Industry***

3.30 Despite the emerging development of e-book in future, it is forecasted that printed publications will still occupy the majority of the total publications on sale in the market. Currently e-book sale only constitutes a small segment of the market share as compared with printed publications because the former is still in its developing stage. Nevertheless, it is predicted that e-book technology will bring about a lucrative opportunity to the publishing industry once the technology becomes more mature, for example when a cheap and portable digital reading pad or digital visualizer would be developed to give readers and consumers convenience for reading.

## ***Forecast of Future Manpower***

### **(A) *Printing Industry***

3.31 The Training Board has considered the use of the Labour Market Analysis (LMA) approach for determining the manpower trend of the printing industry. Due to the complexities involved, the LMA model is found to be inapplicable to this survey. The Training Board therefore adopted the adaptive filtering method (AFM) which was used in the previous manpower surveys. The Training Board selects the most appropriate projections, taking into consideration the external factors, economical trends, technological development, the workforce pattern and the future outlook of the industry as mentioned in the above paragraphs. The method is briefly illustrated in the following diagram:



3.32 Having examined the past and present survey data, and considered the future developments of the printing industry, the Training Board considers that the demand for technologists and technicians will continue to increase in the next few years. At the craftsman level, the Training Board forecasts that the demand will be mainly for replacing the wastage of the existing manpower and there should be sustained demand for electronic prepress systems craftsmen and digital printing system craftsman as a result of the development in digital printing technology.

3.33 The survey revealed that the number of vacancies for the technologist, technician and craftsman levels remained low at 0.1%, 1.0% and 0.4%. The Training Board envisages that the staff turnover rate in the foreseeable future would not be high and therefore assumes a wastage rate of 3% of the workforce for the technologist, technician and craftsman levels in the next four years.

3.34 From the above estimates, the additional manpower required by the industry at the technologist, technician and the craftsman levels in the next four years are as follows:

**Table 3.12 : Annual Manpower Demand in the Printing Industry for 2007/10**

Job Level	Annual Average Additional Demand for Employees			
	Forecast Growth (A)	Wastage (B)	Total (A) + (B)	(±10% Range)
Technologist/Managerial	126	43	169	152 – 186
Technician	499	256	755	680 – 830
Craftsman	-148	332	184	166 – 202

A breakdown of the above figures into various principal jobs is given in Appendix 15.

**(B) Publishing Industry**

3.35 The adaptive filtering method is also adopted for manpower projections in the publishing industry. In view of the relatively young workforce, the Training Board also adopts a wastage rate of 3% for manpower at the managerial, supervisory and technical support levels in the next four years.

3.36 From the above estimates, the annual additional demand in the next four years are as follows:

**Table 3.13 : Annual Manpower Demand in the Publishing Industry for 2007/10**

Job Level	Annual Average Additional Demand for Employees			
	Forecast Growth (A)	Wastage (B)	Total (A) + (B)	(±10% Range)
Managerial	62	32	94	85 – 103
Supervisory	80	83	163	147 – 179
Technical Support	-18	131	113	102 – 124

A breakdown of the above figures into various principal job is given in Appendix 16.



## ***Manpower Demand and Supply Analysis***

3.37 The printing industry has a projected annual demand for 152 - 186 technologists. Together with the demand for some 6 – 7 production directors/managers in the publishing industry as mentioned in paragraph 3.17, the total annual demand of the industry for technologists/managers will be 158 – 193.

3.38 Currently manpower supply at technologist level is very scarce because local tertiary institutions do not offer printing degree programmes. Youngsters interested in pursuing higher level printing courses need to enroll overseas. Owing to the limited supply of technologists, the majority of employers recruit their technologists through the promotion of competent technician level workers or directly recruit higher diploma students of the Hong Kong Institute of Vocational Education (Kwun Tong) [IVE(KT)] or university graduates.

3.39 Meanwhile, the IVE(KT) is the only local institute supplying manpower at Higher Diploma level in the printing discipline. The planned output is as follows:

<u>Course</u>	<u>Estimated No. of Graduates</u>		
	<u>2006/07</u>	<u>2007/08</u>	<u>2008/09</u>
<u>Full-time</u>			
Higher Diploma in Advertising, Packaging and Branding	46	140	88
Higher Diploma in Commercial Printing and Digital Media Publishing	52	50	62
Higher Diploma in Photography and Graphic Imaging	-	-	30
	<hr/>	<hr/>	<hr/>
	98	190	180
	<hr/>	<hr/>	<hr/>

3.40 The output from IVE(KT) falls short of the projected demand for the industry in 2006/07 but is adequate in 2007/08 and afterwards. However, it should be noted that some of the higher diploma graduates may join technician level jobs in the industry.

3.41 The forecast demand for technicians in the printing industry is 680 – 830 annually in next four years. Together with a demand for some 6 – 7 production supervisors in the publishing industry as mentioned in paragraph 3.18, the total annual demand of the industry for technicians will be 686 – 837.

3.42 Based on the information provided by the Printing Industry Training Centre (the only local institute providing full-time technician courses on printing), the supply of technician graduates will be:

<u>Course</u>	<u>Estimated No. of Graduates</u>		
	<u>2006/07</u>	<u>2007/08</u>	<u>2008/09</u>
Technician Foundation Course in Printing Digital Workflow Production	56	60	20
Diploma in Vocational Studies (Advertising, Packaging and Printing)	65	88	72
Diploma in Vocational Studies (Graphic Communications)	70	60	72
Diploma in Vocational Studies (Digital Media Design)	-	-	60
Total:	191	208	224

3.43 The total output from the Training Centre is lower than the projected demand. However, some of the technician jobs may be filled by the training of secondary school leavers through apprenticeship and internal promotion of experienced craftsmen. The Training Board is of the view that upgrading training through short courses on trade knowledge and skills as well as supervisory management are necessary for such personnel. Due to the technological advancement in printing processes, the Training Board considers that properly trained technician graduates from vocational institutes are better equipped to take on technician jobs.

3.44 For the craftsman level, although there will not be any projected growth in the next few years, a constant supply of personnel is required to sustain the local printing business. The forecast demand for craftsmen would be 166 - 202 annually in the printing industry. Together with the demand of total 9 – 11 printing craftsmen in the publishing industry as mentioned in paragraph 3.19, the demand would be 175 – 213 annually in the next four years.

3.45 Based on the training capacity of the Printing Industry Training Centre (the only local institute providing full-time craftsman courses on printing), the supply of craft graduates will be:

<u>Course</u>	<u>Estimated No. of Graduates</u>		
	<u>2006/07</u>	<u>2007/08</u>	<u>2008/09</u>
Basic Craft Course in Digital Print Media Publishing Techniques	55	40	20
Basic Craft Course in Computer-aided Printing and Finishing Techniques	20	17	17
Diploma in Vocational Studies (Advertising, Packaging and Printing)	30*	12*	12*
Diploma in Vocational Studies (Graphic Communications)	-	12*	12*
Total:	105	81	61

(\*Denotes the estimated number of second-year graduates to be awarded Vocational Certificate at craft level)

3.46 The total output from the Training Centre is lower than the projected demand for the craftsman jobs. However, the shortage can be alleviated through retraining of workers in the traditional trades through skills upgrading courses.

3.47 The Training Board will conduct another manpower survey in 2008 to review and update the manpower requirements of the industry, and will monitor the progress of the latest technological developments for organizing training for in-service workers.

## SECTION IV

### RECOMMENDATIONS

4.1 Over the past few years, there have been two major developments in the printing industry in Hong Kong. Firstly, the greater automation of printing processes and the widespread adoption of computer technologies in the prepress industry, in particular the computer to plate technology have resulted in significant improvement in both quality and productivity. Secondly, with the opening up of Mainland's economy, the labour-intensive operations have been progressively relocated to the Pearl River Delta areas. Those processes remaining in Hong Kong are generally more sophisticated, technical and quick-responsive. Such developments have resulted in a restructuring of the manpower resources. Traditional craft and operative jobs have either been phased out or diminished in substantial numbers while the continuing demand for computer literate manpower would be sustained. In the light of many manufacturing firms becoming trading firms, it is envisaged that more sales representatives, customer services co-ordinators and quality controllers would be needed to cater for the transforms of the industry. To meet the development needs of the industry, there should be an on-going demand for technologists and technicians, while at the craftsman level, the traditional prepress craft jobs will gradually become obsolete.

4.2 The Training Board considers that the practice of conducting manpower survey at a 2-year interval is useful in building up a series of historical data for comparison and for projecting future manpower requirements. Such a practice should continue so that the manpower and training situation of the printing and publishing employees will be closely monitored. Based on the information, the Training Board can recommend measures to meet the training needs.

#### *Annual Intake of Trainees*

4.3 At the time of the survey, there were only 149 trainees in the printing industry; and 34 in the publishing industry. Since it normally takes up to three years to train a trainee, it is evident that the present training efforts are insufficient to satisfy the industry's needs.

4.4 To ensure an adequate supply of skilled manpower, the Training Board urges employers to embark on an annual manpower training programme of a scale set out below:

**Table 4.1 : Recommended Number of Trainees to be Taken on Annually from 2007 to 2010**

Job Level	Recommended Annual Intake	
	Printing Industry	Publishing Industry
Technologist/Managerial	169	94
Technician/Supervisory	755	163
Craftsman/Technical Support	184	113

A breakdown of the above figures into various principal jobs is given in Appendices 15 and 16.

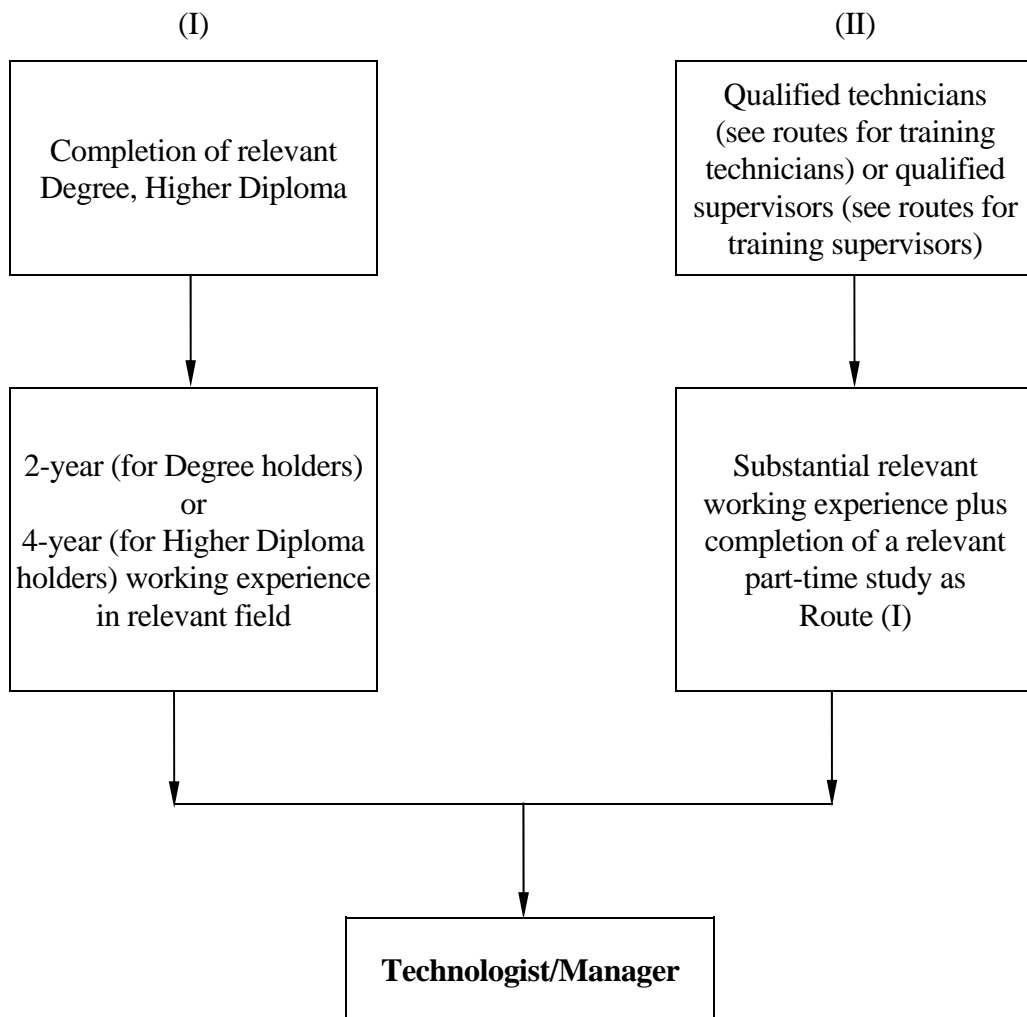
4.5 For manpower planning at the company level, employers are requested to note that the volume of training as indicated in para. 4.4 above, when expressed in terms of existing manpower, represents annual training requirements of about 12.3%, 9.0% and 1.7% respectively of the total numbers of technologists/managers, technicians and craftsmen in the printing industry, and about 9.0%, 5.9% and 2.6% respectively of total numbers of managers, supervisors and technical support staff in the publishing industry.

4.6 The recommended training routes for technologists and managers, technicians and supervisors, as well as craftsmen are outlined in the following paragraphs.

***Training of Technologists and Managers***

4.7 Technologists in the printing industry or managers in the publishing industry should preferably possess either a relevant university degree or higher diploma or higher certificate plus a few years relevant working experience in the printing or publishing field.

4.8 The following diagram shows the usual training routes of a technologist/manager:



4.9 Employers are recommended to recruit either degree or higher diploma holders as technologist/managerial trainees, i.e. route (I). For qualified technicians/supervisors with exceptional abilities, route (II) provides them with advancement opportunities.

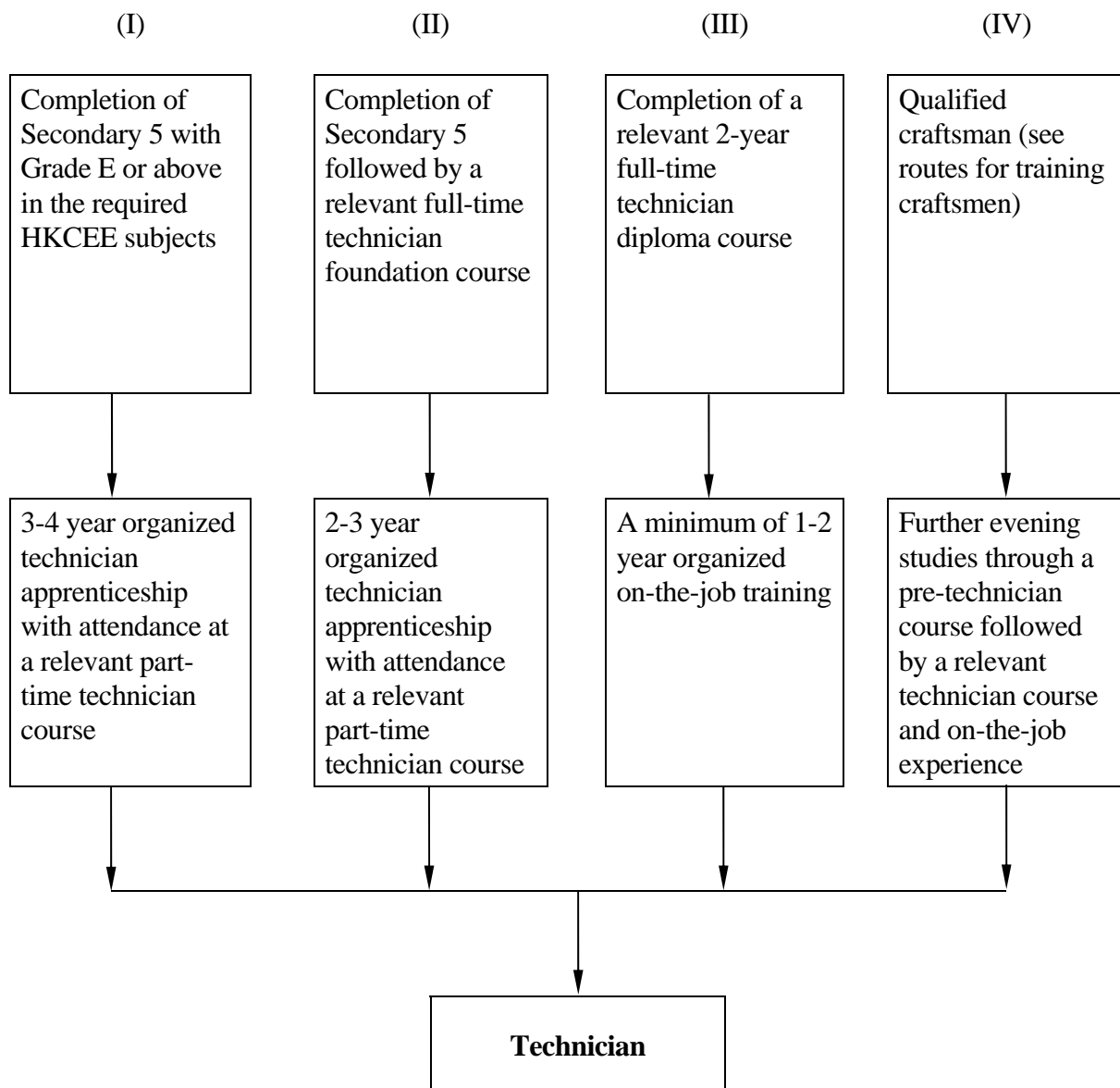
4.10 Employers are recommended to sponsor their technicians/supervisors to attend the part-time evening degree, higher diploma or higher certificate courses to upgrade their knowledge and skills.

## *Training of Technicians and Supervisors*

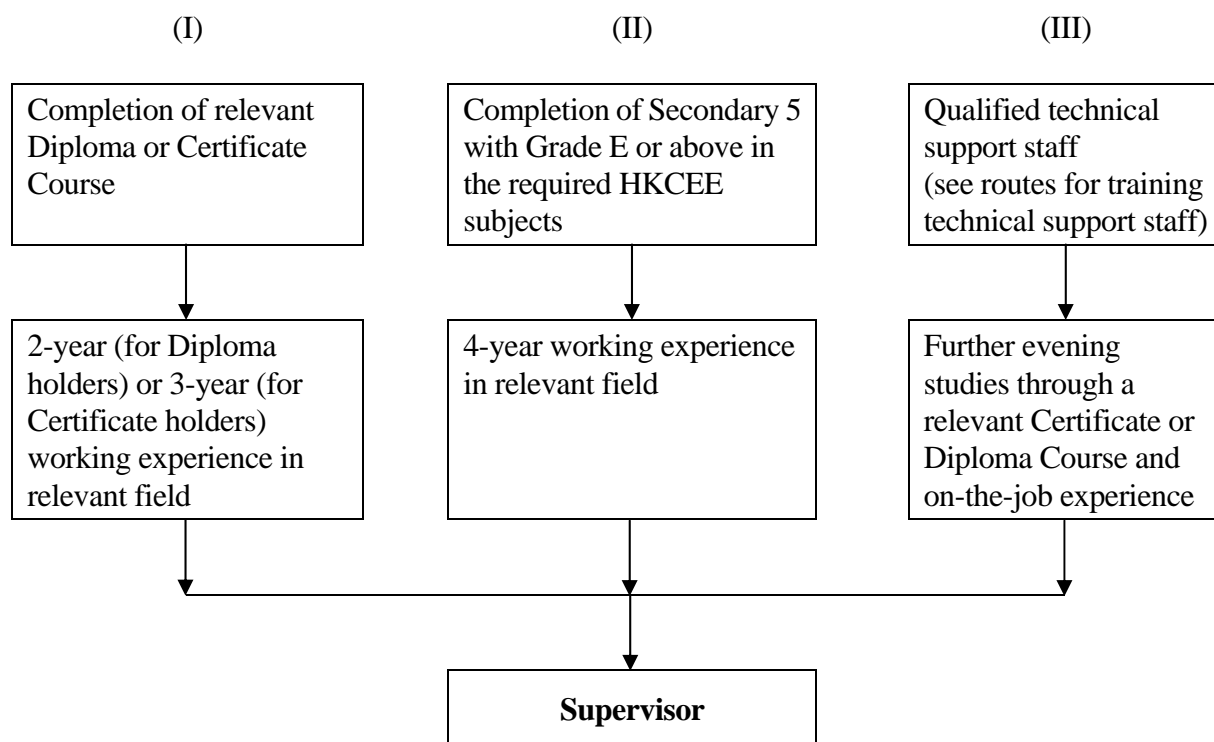
4.11 A technician or supervisor should be able to apply proven techniques and procedures to carry out technical responsibilities, including the supervision of craftsmen or technical support staff under his/her control. The training of a technician or supervisor should comprise on-the-job practical training to gain experience and attendance of a relevant technician certificate course to acquire the theoretical knowledge of the trade.

4.12 The recommended routes for training technicians in the printing industry and supervisors in the publishing industry are shown below:

### (A) *Printing Industry - Technicians*



(B) *Publishing Industry - Supervisors*



4.13 The Hong Kong Institute of Vocational Education of the Vocational Training Council offers full-time Higher Diploma and Diploma courses, part-time Higher Diploma courses and other upgrading courses in the printing discipline; while the Printing Industry Training Centre offers a one year full-time technician foundation course and a new type of Diploma in Vocational Studies courses to prepare youngsters for employment at technician level or further study.

4.14 Many employers recruit secondary school leavers as technician or supervisory trainees. The trainees learn their skills by working closely with experienced technicians or supervisors and at the same time pursue relevant part-time evening courses at the tertiary educational institutions. Some employers recruit graduates of relevant Diploma or Certificate courses from the educational institutions. However some employers in the printing industry prefer to recruit the graduates of the Printing Industry Training Centre as technician apprentices. The period of apprenticeship is normally three years, while graduates of the full-time technician foundation course are exempted from the first year of the apprenticeship.

4.15 The Training Board strongly recommends employers both in the printing and publishing industries to recruit the graduates of the Printing Industry Training Centre and the Hong Kong Institute of Vocational Education and to sponsor them to attend part-time courses for the purpose of either upgrading or updating their skills and knowledge.

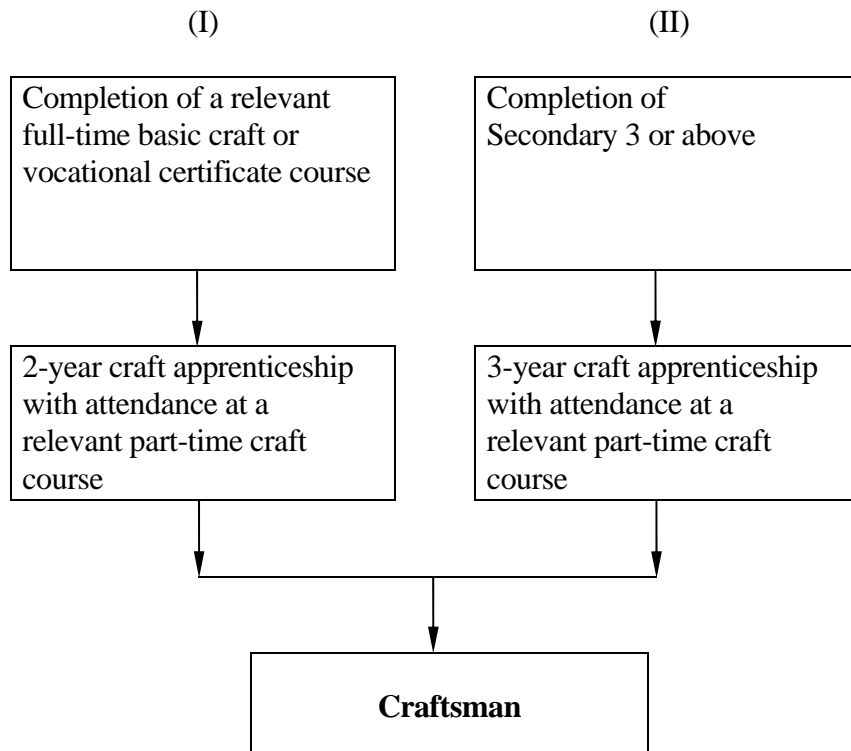


## ***Training of Craftsmen and Technical Support Staff***

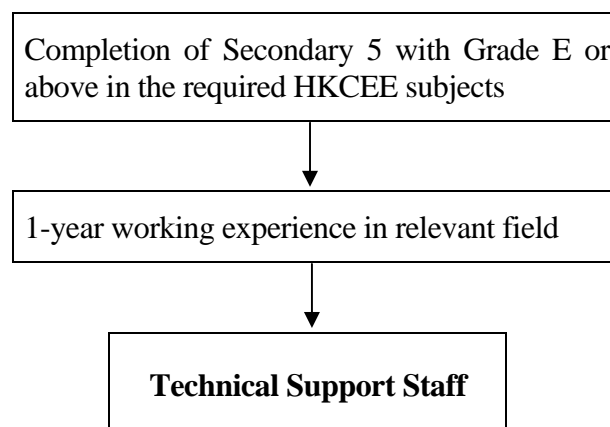
4.16 A craftsman or technical support staff is a skilled employee capable of applying skills to a wide range of jobs within the trade. He/She should require not only practical skills but also related theoretical knowledge so that he/she can adapt to technological advancement.

4.17 The recommended routes of training are:

### **(A) *Printing Industry - Craftsmen***



### **(B) *Publishing Industry - Technical Support Staff***



4.18 Craft courses in printing disciplines are offered by the Printing Industry Training Centre of the Vocational Training Council. To gear up for the widespread adoption of digital technology in the printing industry, courses for craft training in the printing discipline have been revamped to enrich the training contents in computer and digital operations.

### ***Basic Craft Courses in Printing Discipline***

4.19 The Printing Industry Training Centre offers one year full-time Basic Craft Courses (BCCs) which comprise practical training, trade knowledge as well as generic education. The BCCs enable youngsters who are vocationally oriented to join industry upon completion of the courses.

4.20 On completion of the BCCs, the graduates are expected to join industry as second year craft apprentices for a further two-year training. The Training Board urges employers to recruit the graduates as apprentices not only because their training period is shorter but also because they are equipped with basic skills ready for productive work right from the start of their employment.

4.21 The BCCs being offered by the Printing Industry Training Centre are listed in paragraph 4.28.

4.22 Since the academic year 2005/06, the Printing Industry Training Centre has launched a new type of 3-year Diploma in Vocational Studies courses in the printing trades. Second year graduates of these courses who do not progress into the final year will be awarded a vocational certificate for joining the craft jobs.

### ***Skills Upgrading Scheme***

4.23 The Skills Upgrading Scheme (SUS) is operated by the Government to upgrade those low education and low/traditional skilled level workers with the aim of enhancing their employability. Trainees of the SUS courses would be subsidized 70% of the full fees. Suitable providers of printing courses may bid to mount SUS courses. Since the commencement of the SUS courses in September 2001, over 7 800 trainees had attended SUS courses in printing trades. The skills upgrading courses currently offered to tradesmen are listed in Appendix 17.

4.24 Employers are urged to make full use of the part-time skills upgrading courses for upgrading their employees.

## ***Trade Testing for Printing Workers***

4.25 The Vocational Training Council has approved a trade testing and certification system to be implemented by its training boards. The system is operated on a voluntary basis and its objectives are:

- (a) to help industry in the selection of workers for skilled jobs,
- (b) to facilitate the acquisition of recognized qualifications, in particular, for those who have not gone through a formal training,
- (c) to enhance the status of skilled workers,
- (d) to set the specifications related to standards for skilled workers, and
- (e) to facilitate the establishment of a skill hierarchy for career advancement of skilled workers.

4.26 The Printing and Publishing Training Board is responsible for implementing the trade test for printing workers. Currently, the Training Board organizes trade test for offset printing machine craftsmen.

4.27 Employers are urged to encourage their employees to take the test so that their tradesman status can be formally recognized.

### ***Printing Industry Training Centre***

4.28 The Training Board has been charged with the responsibility of advising on the operation of the Printing Industry Training Centre. The full-time courses currently offered by the Training Centre include:

	<u>Duration</u>
(a) Technician Foundation Certificate Course in Printing Digital Workflow Production	1-year
(b) Basic Craft Certificate Course in Digital Print Media Publishing Techniques	1-year
(c) Basic Craft Certificate Course in Computer-aided Printing and Finishing Techniques	1-year
(d) Diploma in Vocational Studies (Advertising, Packaging and Printing)	3-year (or 1-year intensive)
(e) Diploma in Vocational Studies (Graphic Communications)	3-year (or 1-year intensive)
(f) Practical training for students of IVE & SBI in Printing & Digital Media, Business Administration, and Design Disciplines	15-180 hours

### ***Hong Kong Institute of Vocational Education (Kwun Tong) – IVE(KT)***

4.29 Employers are urged to give full support to the Printing and Digital Media Department of IVE(KT) by recruiting its full-time graduates. A list of relevant courses offered by the IVE(KT) is at Appendix 18.

### ***Advanced Printing Technology Centre (APTEC)***

4.30 In September 1999, the Hong Kong Printers Association and the Hong Kong Institute of Vocational Education (Kwun Tong) jointly organized a project to assist the local printing and publishing companies to migrate to the latest digital workflow production. Based on a HK\$8.6 million funding from the Innovation and Technology Fund, the Advanced Printing Technology Centre (APTEC) was established at IVE(KT) in May 2000.

4.31 With the generous support of major equipment suppliers, APTEC has set up a state-of-the-art digital printing production environment with equipment and software having a total value of HK\$15 million. It provides a multi-supplier production environment for real-life demonstration of the digital technology and workflow. It also acts as a technology transfer centre aiming at disseminating the latest technology trend in electronic publishing and digital printing to the local printing and publishing companies by providing technology transfer seminars, training courses, Printing Technology Club membership program and consultancy services.

### ***Training Manuals***

4.32 The Training Board has published manuals of training programmes and specifications for the major principal jobs in the printing industry. The Training Board recommends these manuals to employers who wish to devise training programmes for their trainees or assess the skill level of their workers.

### ***Training Services of the Vocational Training Council***

4.33 The Vocational Training Council offers free services to help employers organize training schemes including:

- (a) The statutory **Apprenticeship Scheme**, through which technicians and craftsmen are effectively trained to meet the needs of the industry;
- (b) The **Engineering Graduate Training Scheme**, which helps engineering students and graduates complete their professional training as engineers;
- (c) The voluntary **Trade Testing and Certification Scheme**, which ascertains the standards of skilled workers; and
- (d) The **New Technology Training Scheme**, which provides financial assistance to local companies that wish to have their employees trained overseas or locally in new technologies. The maximum grant is 50% of the training cost.

Employers in Hong Kong interested in the above training schemes are welcome to contact the Council.

### ***The Need for More Education and Training Facilities***

4.34 Since Hong Kong has established itself as a principal service centre in the region, it is necessary to ensure that Hong Kong is in a position to provide world-class printing and publishing services. The Training Board recommends that tertiary educational institutions should consider offering more printing and publishing courses at degree, higher diploma and diploma levels to meet the projected demand for manpower. In addition, employers should provide more on-the-job training to their employees and release them for off-the-job upgrading training.

### ***Out-centre Courses/Seminars***

4.35 With the cooperation of various educational institutions and publishing associations, the Training Board has been organizing practical skill-oriented short courses/seminars for in-service personnel in the printing and publishing industries. These out-centre courses/seminars aim at upgrading and updating the knowledge and skills of in-service personnel to help them cope with the changing economy and business requirements. The Training Board believes that these out-centre training courses/seminars are effective in achieving the aim and recommends publishing employers to make good use of these out-centre courses and seminars for upgrading their employees.

2. 6 364 803

3. 21 313 7 930

(A)

	28	105	630	43	806	3.8%
	501	3 226	8 031	872	12 630	59.2%
	64	935	1 949	138	3 086	14.5%
	34	212	455	51	752	3.5%
	451	2 643	103	14	3 211	15.1%
	107	423	202	96	828	3.9%
	1 185	7 544	11 370	1 214	21 313	100%
	5.6%	35.4%	53.3%	5.7%	100%	





(iv) 364 565 3 709 4 129  
55.2% 11.3%

(v) 395 540  
2 367  
1 987 16.1%

(vi) 2 400

(vii) 12 676 11 370  
10.3% 1 579  
1 214 23.1%  
30%

(B)

6.  
1.4%

(i) 2.8%

(ii)

(iii)

7.

8.

	169 (12.3%)	94 (9.0%)
	755 (9.0%)	163 (5.9%)
	184 (1.7%)	113 (2.6%)

( )

9.

1.1

1.2                    2006    5    10            6    9

1.3

(a)

(b)

(c)

(d)                    2007    6

(e)

(f)

1.4

12

6

2. 17

1.5

(A)

HSIC 3421 -

HSIC 3422 -

HSIC 3429 -

HSIC 3412 -

HSIC 833906 -

(B)

HSIC 3429 -

HSIC 611504 -

HSIC 631503 -

1.6

1.7

1.5

5 066

1 298

1.1

1.2

1.1

1.2

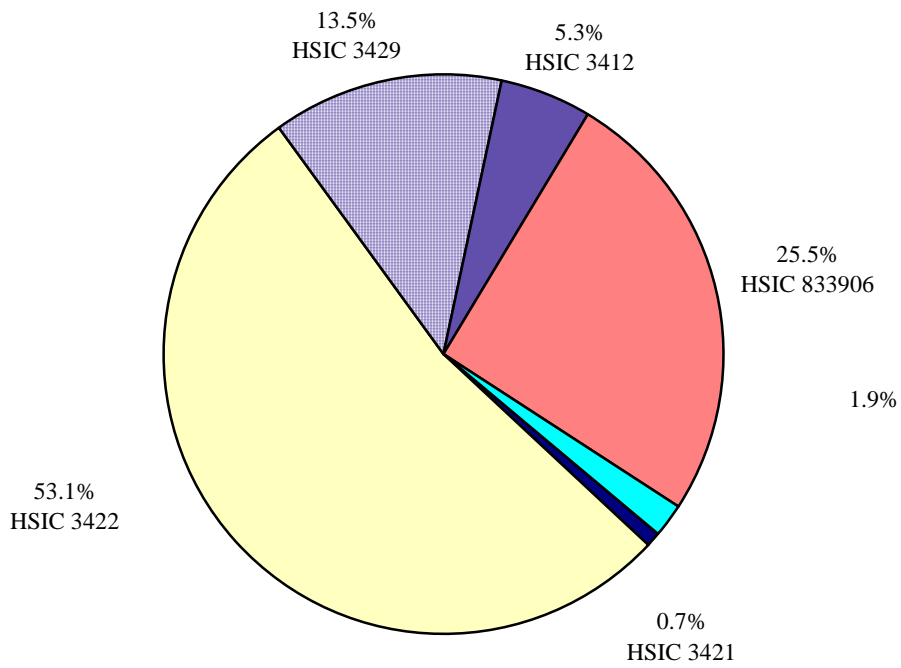
**1.1**

---

HSIC 3421 -	33	0.7%
HSIC 3422 -	2 690	53.1%
HSIC 3429 -	686	13.5%
HSIC 3412 -	267	5.3%
HSIC 833906 -	1 293	25.5%
	97	1.9%
	5 066	100%

**1.1**

---



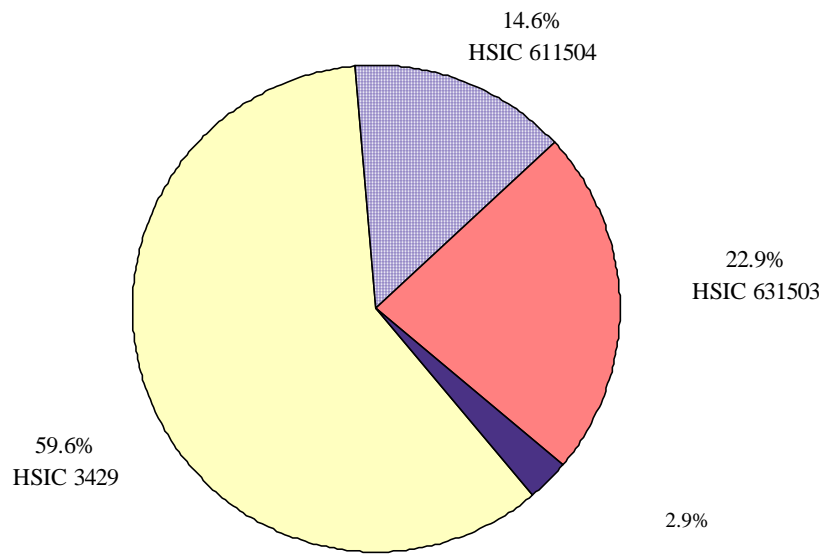
**1.2**

---

HSIC 3429 -	773	59.6%
HSIC 611504 -	190	14.6%
HSIC 631503 -	297	22.9%
	38	2.9%
	1 298	100.0%

**1.2**

---



1.8

535

268

1.9

(a)

(b)

(c)

(d)

(e)

(f)

(g)

1.10

1.11

1.12

1.13

803

199

46

591

13

98%

1.14

50

1.15

(a)

( )

(b)

(c)

16

10

(d)



2.1

	26		
21 313	24	7 930	
806		12 630	3 086
	752		3 211
828			6 688
	318		604
320			1 185
	7 544	11 370	1 214
944	2 593	4 393	
	2.1	2.2	2.1 2.4

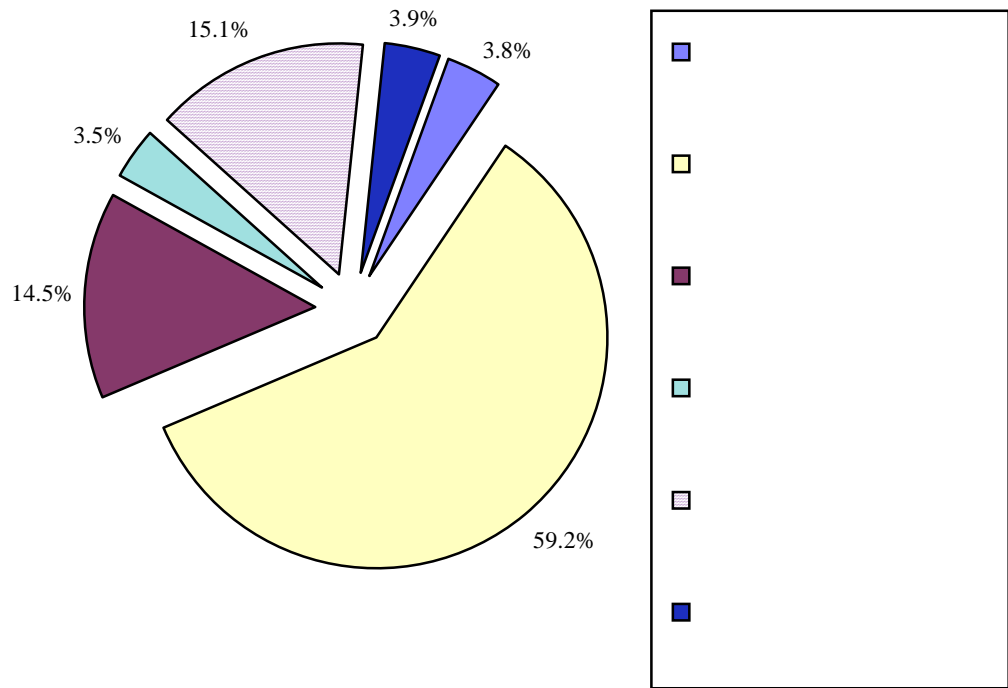
**2.1**

---

	28	105	630	43	806	3.8%
	501	3 226	8 031	872	12 630	59.2%
	64	935	1 949	138	3 086	14.5%
	34	212	455	51	752	3.5%
	451	2 643	103	14	3 211	15.1%
	107	423	202	96	828	3.9%
	1 185	7 544	11 370	1 214	21 313	100%
	5.6%	35.4%	53.3%	5.7%	100%	

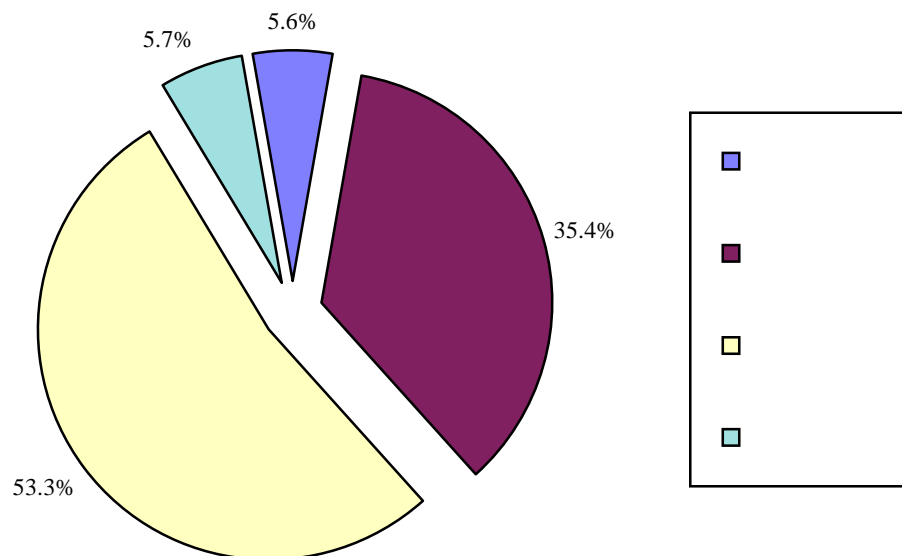
## 2.1

---



## 2.2

---



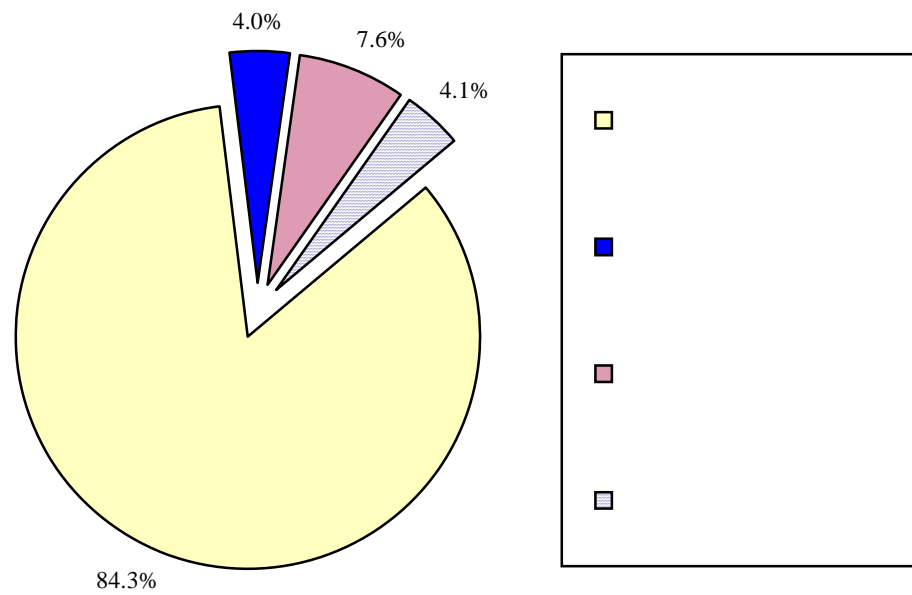
## 2.2

---

	800	2 111	3 777	6 688	84.3%
	22	167	129	318	4.0%
	67	204	333	604	7.6%
	55	111	154	320	4.1%
	944	2 593	4 393	7 930	100%
	11.9%	32.7%	55.4%	100%	

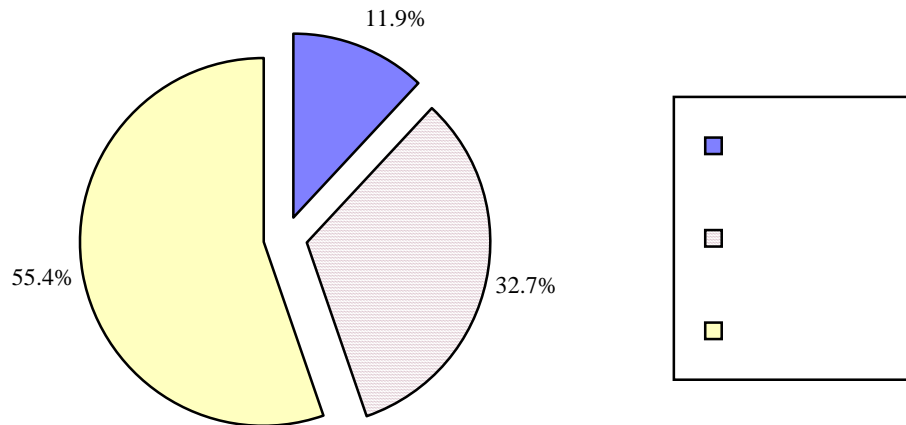
## 2.3

---



## 2.4

---



2.2

2.3 2.4 2.5 2.6

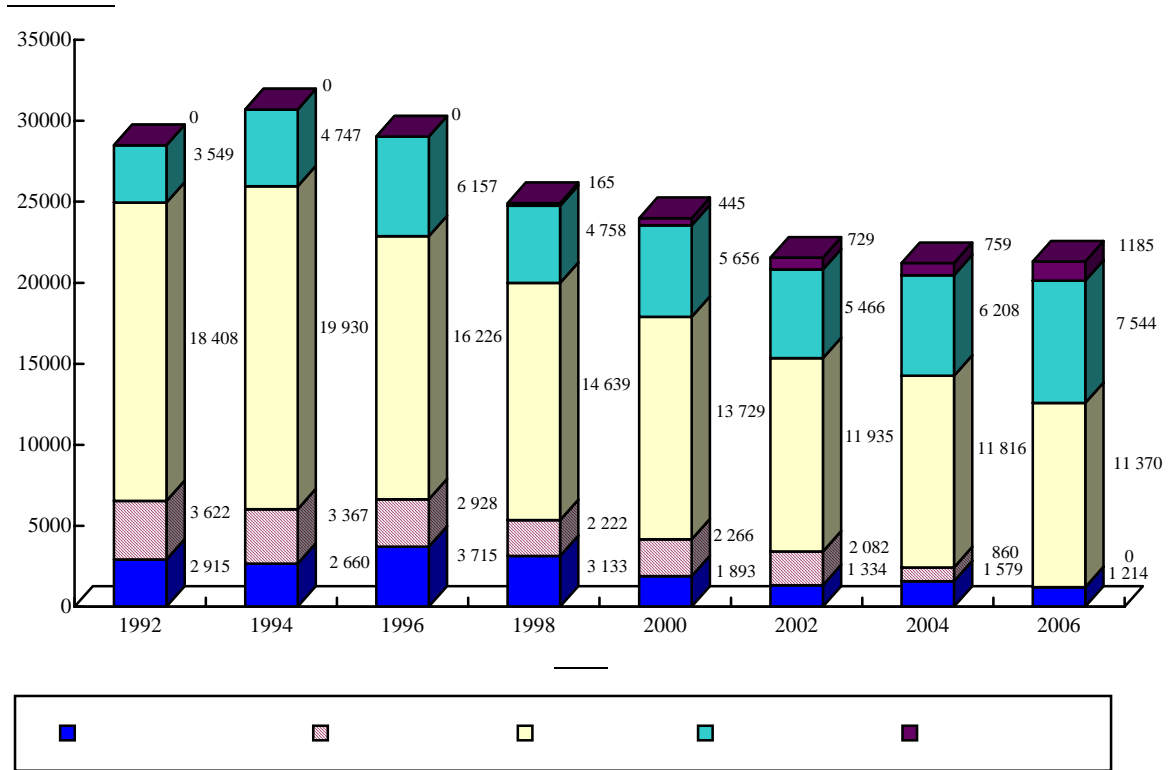
## 2.3

---

	*					
1992	-	3 549	18 408	3 622	2 915	28 494
1994	-	4 747	19 930	3 367	2 660	30 704
1996	-	6 157	16 226	2 928	3 715	29 026
1998	165	4 758	14 639	2 222	3 133	24 917
2000	445	5 656	13 729	2 266	1 893	23 989
2002	729	5 466	11 935	2 082	1 334	21 546
2004	759	6 208	11 816	860	1 579	21 222
2006	1 185	7 544	11 370	-	1 214	21 313

\*

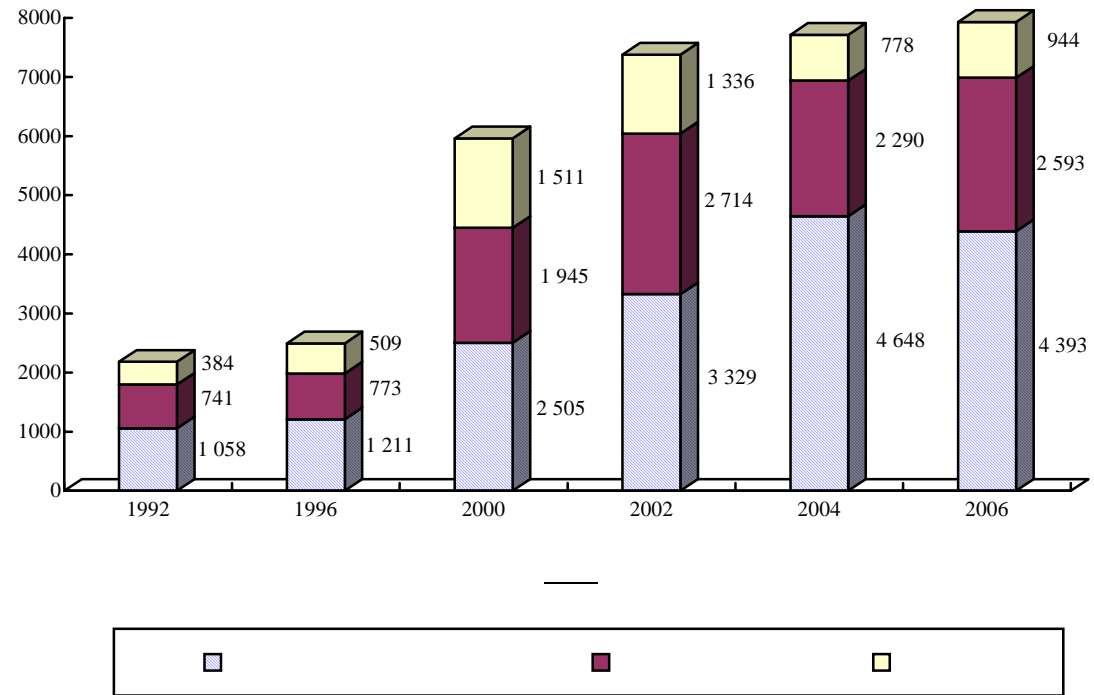
## 2.5



## 2.4

1992	384	741	1 058	2 183
1996	509	773	1 211	2 493
2000	1 511	1 945	2 505	5 961
2002	1 336	2 714	3 329	7 379
2004	778	2 290	4 648	7 716
2006	944	2 593	4 393	7 930

2.6



2.3	34	149	0.4%	0.7%
2.6				2.5

**2.5**

---

\						
	-	-	2	-	2	0.3%
	2	23	93	-	118	0.9%
	-	21	-	-	21	0.7%
	-	-	1	-	1	0.1%
	-	1	-	-	1	-
	-	-	6	-	6	0.7%
	2	45	102	-	149	0.7%
	0.2%	0.6%	0.9%	-	0.7%	

**2.6**

---

\					
	2	4	27	33	0.5%
	-	-	-	-	-
	-	-	-	-	-
	-	1	-	1	0.3%
	2	5	27	34	0.4%
	0.2%	0.2%	0.6%	0.4%	





**2.8**

---

/					
	3	14	129	146	2.2%
	-	-	-	-	-
	-	-	25	25	0.4%
	-	2	-	2	0.6%
	3	16	154	173	2.2%
	0.3%	0.6%	3.5%	2.2%	

2.5

21 531      8 339

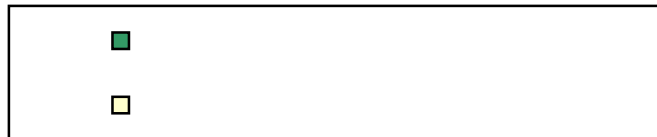
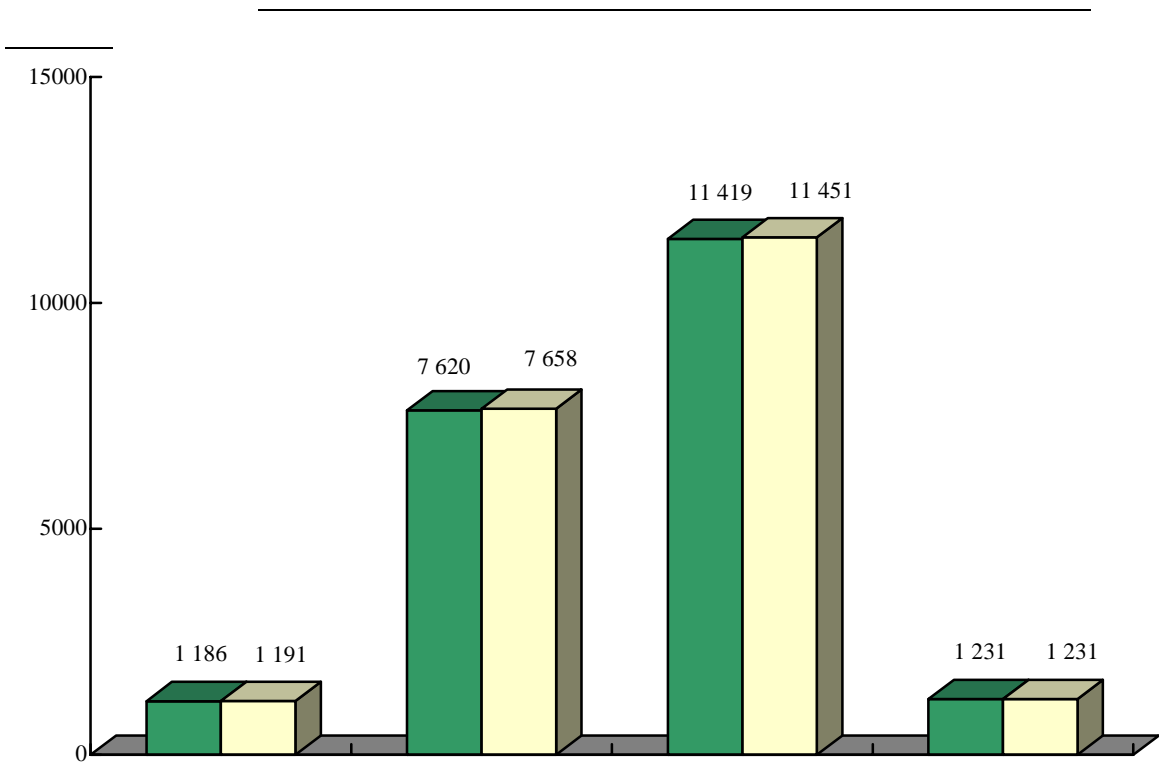
2.9    2.10    2.7    2.8

**2.9**

---

	1 185	1	1 186	1 191	0.4%
	7 544	76	7 620	7 658	0.5%
	11 370	49	11 419	11 451	0.3%
	1 214	17	1 231	1 231	-
	21 313	143	21 456	21 531	0.4%

2.7

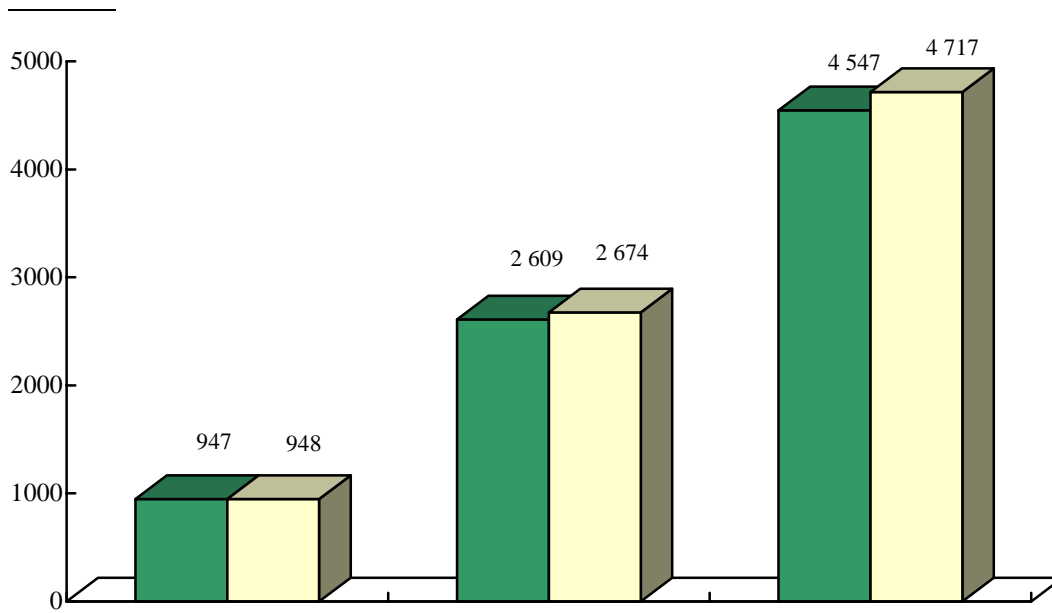


2.10

	944	3	947	948	0.1%
	2 593	16	2 609	2 674	2.5%
	4 393	154	4 547	4 717	3.7%
	7 930	173	8 103	8 339	2.9%

## 2.8

---



2.6

2.11 2.12

## 2.11

---


**2.12**

---


2.7

2.8

2.13 2.14

**2.13**

---


**2.14**

---


2.9

2.10

2.15 2.16

**2.15**

---


**2.16**

---


2.11

2.12

2.18

2.17

**2.17**

---

	\$5,000	\$5,001 \$6,500	\$6,501 \$8,000	\$8,001 \$10,000	\$10,001 \$15,000	\$15,001 \$20,000	\$20,001 \$25,000	\$25,001		
	-	-	-	-	60	285	223	425	192	1 185
	-	-	292	1 357	2 995	1 595	357	253	695	7 544
	104	141	1 222	2 917	5 669	477	42	25	773	11 370
	52	121	432	417	64	-	-	-	128	1 214
	156	262	1 946	4 691	8 788	2 357	622	703	1 788	21 313
	0.8%	1.2%	9.1%	22.0%	41.2%	11.1%	2.9%	3.3%	8.4%	100%

**2.18**

---

	\$6,000	\$6,001 \$8,000	\$8,001 \$10,000	\$10,001 \$15,000	\$15,001 \$20,000	\$20,001 \$30,000	\$30,001 \$45,000	\$45,001		
	-	-	-	10	38	204	235	380	77	944
	-	5	89	613	641	656	356	48	185	2 593
	17	158	954	1 918	997	110	6	1	232	4 393
	17	163	1 043	2 541	1 676	970	597	429	494	7 930
	0.2%	2.1%	13.2%	32.1%	21.1%	12.2%	7.5%	5.4%	6.2%	100%

2.13

2.14

2.19

**2.19**

---

21 313	8 934	30 247	70.5%
7 930	6 606	14 536	54.6%
29 243	15 540	44 783	65.3%

2.15

46.7% 82.9%

2.20

2.21

**2.20**

---

1 – 9	381	1 291	2 201	22	3 895
10 – 49	107	224	131	3	465
50	36	29	3	2	70
	524	1 544	2 335	27	4 430
	11.8%	34.9%	52.7%	0.6%	100%

**2.21**

---

1 – 9	162	417	126	1	706
10 – 49	54	81	24	0	159
50	23	33	1	7	64
	239	531	151	8	929
	25.7%	57.2%	16.2%	0.9%	100%

2.16

2.22

2.23

**2.22**

---

35	153	2 307	2 797	5 257	26.1%
35 – 49	783	4 133	6 596	11 512	57.3%
50	249	1 104	1 977	3 330	16.6%
	1 185	7 544	11 370	20 099	100%



**2.23**

---

35	220	1 075	2 630	3 925	49.5%
35 – 49	577	1 171	1 570	3 318	41.8%
50	147	347	193	687	8.7%
	944	2 593	4 393	7 930	100%

2.17

12

**2.24**

---

	101	1 185	8.5%
	439	7 544	5.8%
	39	11 370	0.3%
	579	20 099	2.9%

2.18

498

157 600