Survey of Engineering Graduates 2001

NIHERST

NATIONAL INSTITUTE
OF HIGHER EDUCATION
RESEARCH, SCIENCE AND TECHNOLOGY

INCORPORATED BY ACT OF PARLIAMENT ACT NO 20 OF 1984

Introduction

In this publication, the National Institute of Higher Education, Research, Science and Technology (NIHERST) presents the results of the Survey of Engineering Graduates, 2001. This study is the second of its kind to be conducted by NIHERST; the first was undertaken in 1989.

The frame of the study included all Trinidad and Tobago nationals who graduated from the Faculty of Engineering, The University of the West Indies (UWI), over the period 1995-1999. The survey was designed to obtain information on the current status of the stock of engineers who graduated within this period. Data were collected on the following characteristics: gender, year graduated, area of specialisation, employment status, length of time taken to acquire first job, sector of employment, income levels, job satisfaction, relevance of academic qualifications and the number of graduates pursuing further education.

In keeping with official policy for the overall development of Trinidad and Tobago human resource capacity, this study provides useful information on the current status, as well as, the supply and demand for UWI engineering graduates of 1995-1999. It also provides a framework from which further studies can be undertaken, in addition to providing data on the relevance of local academic programmes to the actual job market in Trinidad and Tobago. This information can, therefore, assist policy makers, educators and academicians engaged in curriculum reform and development.

NIHERST wishes to thank the UWI and the graduate engineers who willingly provided the data collated in this report.

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Executive Summary

- The total number of Trinidad and Tobago nationals who graduated from the Faculty of Engineering, The University of the West Indies, over the period 1995-1999 was 638, of which 482 or 75% were males and 156 or 25% females. The ratio of male to female graduates was 3:1.

- Of the population of graduates surveyed (638), 411 or 64% responded, of which 317 (77 %) were males and 94 (23%) were females, also representing a ratio of 3 males to 1 female.

- By area of specialisation, males out-numbered their female counterparts significantly in the areas of Mechanical Engineering (9:1) and in each of Electrical and Computer Engineering and Surveying (4:1). A considerably smaller gender disparity, however, was observed in Chemical and Process, Civil and Industrial Engineering (2:1).

- A significant percentage of the engineers (86%) was between 20-29 years old. This suggests that most engineers, both male and female, read for their first degree soon after their A'Level examination.

- Almost all of the engineers (97%) who responded to the survey was employed as at 15th January, 2001. However, only 2% were self-employed.

- The most popular areas of specialisation among the engineers were Mechanical and Electrical and Computer Engineering.

- A considerable degree of mobility was observed among engineers. As at 15th January 2001, approximately one third of the engineers (36% or 149) who graduated between 1995-1999 was employed in their second job and 32% (131) had moved to their third job.

- Based on the number of jobs held, employment opportunities were more prevalent in the areas of Mechanical, Electrical and Computer, and Chemical and Process Engineering.

- A substantial percentage (70% and over) of the engineers had obtained employment within the same year of graduation.

- Thirty two percent of the engineers (32%) in each case earned monthly incomes of less than $4000 and between $4000-$5999 in their first job.

- The income distribution of both male and female engineers was similar in their first job.

- The majority of graduates in Civil Engineering (52%), Industrial Engineering (41%), and Electrical and Computer Engineering (30%) earned a higher monthly income ($4000-$5999) in their first job, compared with their counterparts in the other areas of specialisation.

- Of the engineers earning a starting salary of less than $4000 monthly, the majority (36%) were graduates in Mechanical Engineering, followed by 22% in Electrical and Computer Engineering. Engineers in these two areas of specialisation also accounted for the largest proportion (33%) in the income group of $15000 and over.

- As engineers obtained job experience, they moved to positions with enhanced incomes as observed from their second and third jobs.

- In terms of their current job, the majority of the engineers (25%) earned between $4000-$5999 per month, while 21% received between $6000-$7999 and 19% between $10000-$14999.

- By area of specialisation, males in Mechanical and Electrical and Computer Engineering and females in Electrical and Computer, and Chemical and Process Engineering were the highest paid engineers.

- Of the engineers who responded to the survey, 293 (71%) obtained their first job in the Private Enterprises sector. Further, over 50 percent of the engineers in each area of specialisation were employed in this sector.

- The majority of the engineers (30%) in the Private Enterprises sector were graduates in Mechanical Engineering, followed by Electrical and Computer Engineering (25%). In the Public Utilities, a relatively large percentage (61%) of the engineers was in Electrical and Computer Engineering.

- As at 15th January, 2001, approximately one quarter of the engineers (26%) indicated that their current employment was less than 50% related to their area of specialisation while a substantial proportion (70%) reported a degree of relationship of 50% and over.

- In terms of the components of the engineering education, a substantial proportion of engineers indicated that Laboratory content (46%), Industrial training (48%), Guidance from lecturers (50%) and Seminars (50%) were 'least' helpful to them in their job. However, Theory content and Project work provided the most assistance.

- Of the response from the 411 engineers who graduated with a first degree between 1995-1999, only 5% (22) obtained post-graduate qualifications. By field of study, 14 engineers or 64% obtained a master's level qualification in engineering while 5 or 23% received a similar qualification in business.

- The survey data indicate that of the 134 engineers (33%) who pursued post-graduate studies, the majority, 102 or 76%, was in the field of engineering and 23 or 17% in business studies.

- A significant number of graduate engineers (124) pursued a second degree qualification at The University of the West Indies. Only 14 of the total number of post-graduates studied in the United Kingdom and 4 in the United States.

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List of Abbreviations

Agric	Agriculture and Natural Sciences
Chem & Process	Chemical and Process Engineering
Elect & Comp	Electrical and Computer Engineering
Surveying	Surveying and Land Information

METHODOLOGY

Introduction

The Survey of Engineering Graduates, 2001 is the second of its kind to be conducted by NIHERST. Similar to the initial study, this Graduate Tracer Study was undertaken to assess the current status of the stock of engineers who graduated over the five-year period, 1995-1999. This methodology describes the objectives, scope, coverage and data collection and processing of the study.

Objectives

The major objectives of the study were to determine:

- the employment status of Trinidad and Tobago nationals who graduated from the Faculty of Engineering, UWI, from 1995-1999;
- a career profile of these engineers based inter alia on the length of time taken to acquire first job, number of jobs held, occupation, income and sector of employment;
- relevance of academic qualifications and the level of job satisfaction among graduates and
- the number of graduates pursuing further education by field and country.

Scope/Coverage

The frame for the study was obtained from the UWI. It contained a total of 638 Trinidad and Tobago nationals who graduated between 1995-1999 in the various areas of specialisation in engineering. These include:

- Agricultural Engineering
- Chemical and Process
- Civil
- Electrical and Computer
- Industrial
- Mechanical
- Surveying and Land Information

A census was undertaken in each of the above-mentioned areas of engineering. Table A provides a gender distribution of graduates by area of specialisation and year of graduation.

TABLE A: No. of Engineering Graduates by Area of Specialisation and Gender, 1995-1999

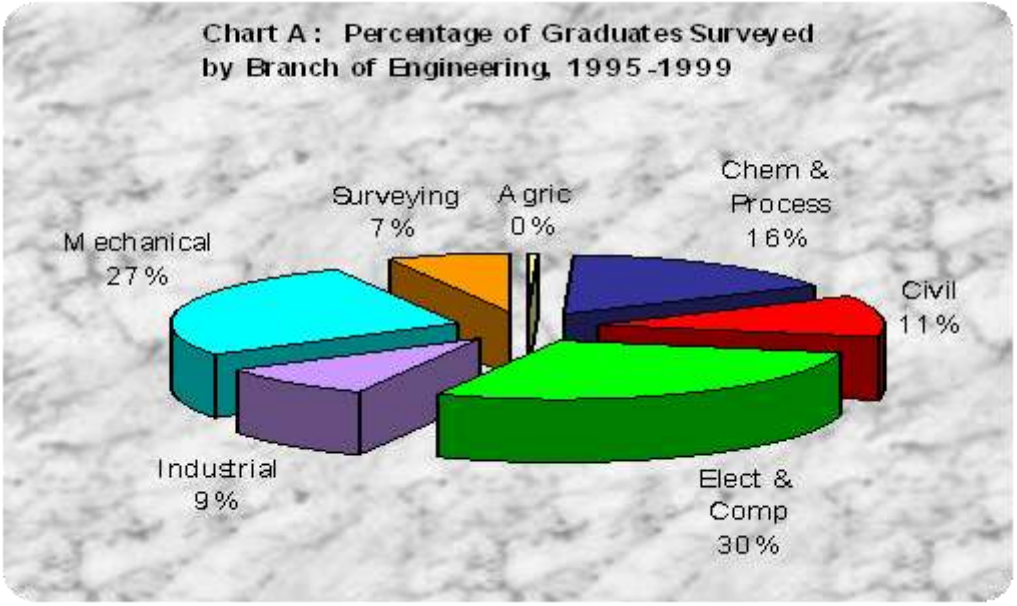
Area of Specialisation	Total		1995		1996		1997		1998		1999	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
All Areas	(1) 482	(2) 156	(3) 80	(4) 32	(5) 106	(6) 35	(7) 95	(8) 26	(9) 96	(10) 28	(11) 105	(12) 35
Agric	1	2	1	0	0	0	0	1	0	1	0	0
Chem & Process	70	35	14	10	20	9	12	4	8	6	16	6
Civil	46	27	7	3	4	1	6	9	16	6	13	8
Elect & Comp	144	39	27	9	35	8	26	7	30	6	26	9
Industrial	36	22	5	2	7	8	7	3	8	4	9	5
Mechanical	152	20	21	3	33	6	36	1	28	4	34	6
Surveying	33	11	5	5	7	3	8	1	6	1	7	1

Source: The University of the West Indies

Over the five-year period, a total of 638 engineers graduated from the UWI , of which 482 or 75% were males and 156 or 25% females. The ratio of male to female graduates was 3:1.

Overall, 57% of the graduates studied Mechanical and Electrical and Computer Engineering. These two areas of specialisation were also popular among the male engineers, representing 32% and 30% respectively of the male graduates. Similarly for the females, Electrical and Computer engineering (25%) was the preferred major, followed closely by Chemical and Process Engineering (22%).

A relatively small percentage of the graduates (11%) majored in Civil Engineering, Industrial Engineering (9%) and Surveying (7%). A negligible percentage (0.4%) studied Agricultural Engineering (Chart A).



Data Collection

A draft questionnaire was designed to incorporate the underlying objectives and a pilot survey was conducted. The questionnaire was mailed to each graduate and subsequently monitored through personal contacts, the telephone and e-mail. Table B shows the response rate of the engineers by year graduated while Table C gives the responses by area of specialisation. Out of the total 638 graduates, 411 or 64 percent responded, 105 or 16% could not be contacted due to changes in address, 71 or 11% migrated, 48 or 8% refused (Chart C).

Table B: Response Rate of Engineers by Year Graduated

Year Graduated	Total no. of Graduates Surveyed	Number of Responses	Response Rate (%)
Total	638	411	64
1995	112	70	63
1996	141	86	61
1997	121	74	61
1998	124	80	65
1999	140	101	72

Table C: No. of Graduates Surveyed, Response and Non-Response by Area of Specialisation

Area of Specialisation	No. of Graduates						
	Surveyed	Responded	Non-Response				
			Total	No Contact	Migrated	Refused	Deceased
All Areas	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	638	411	227	105	71	48	3
Agric	3	3	0	0	0	0	0
Chem & Process	105	69	36	17	13	6	0
Civil	73	48	25	5	12	7	1
Elect & Comp	183	105	78	39	24	15	0
Industrial	58	37	21	12	3	4	2
Mechanical	172	117	54	28	14	13	0
Surveying	44	32	12	4	5	3	0

Data Processing

The completed questionnaires were verified, edited and coded by staff members. The computer package, SPSS, was used to tabulate the results.

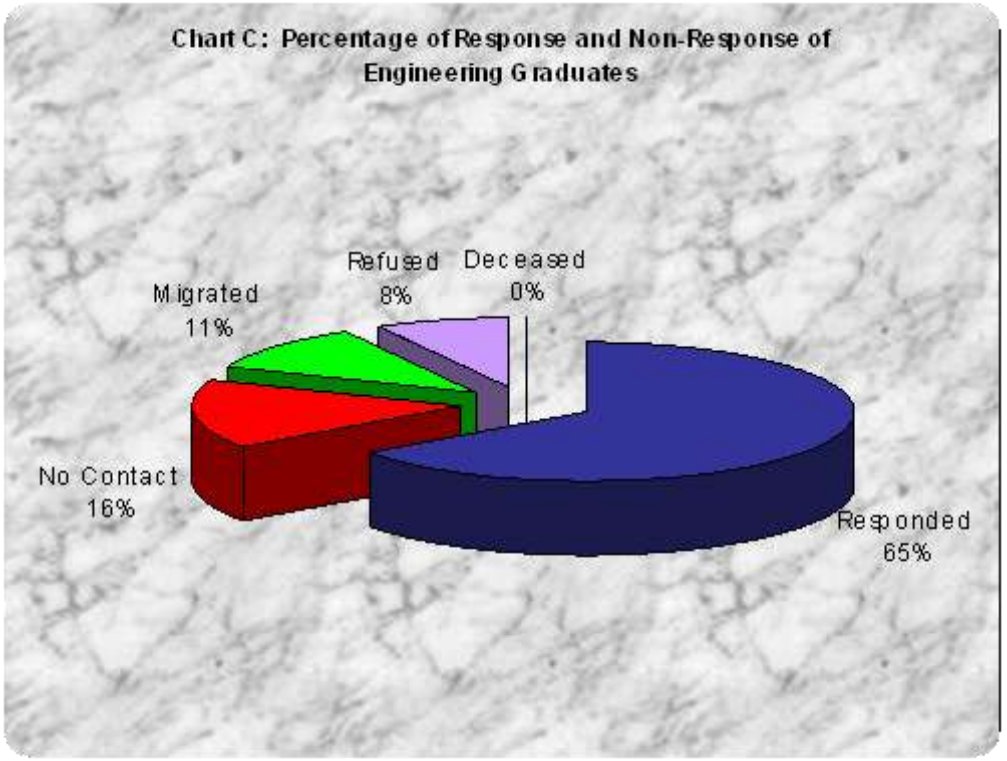


Chart C: Percentage of Response and Non-Response of Engineering Graduates
Refused 8%
Deceased 0%
Migrated 11%
No Contact 16%
Responded 65%

Table 1: No. of Engineers by Area of Specialisation and Year Graduated

Area of Specialisation	Total	Year Graduated				
		1995	1996	1997	1998	1999
	(1)	(2)	(3)	(4)	(5)	(6)
All Areas	411	70	86	74	80	101
Agric	3	1	0	1	1	0
Chem & Process	69	18	17	11	6	17
Civil	48	4	4	11	14	15
Elect & Comp	105	21	26	16	24	18
Industrial	37	3	6	8	7	13
Mechanical	117	17	25	21	22	32
Surveying	32	6	8	6	6	6

Of the total number of engineers (411) who responded to the Survey of Engineering Graduates, the majority (101 or 25%) graduated in 1999, followed by 86 or 21% in 1996 (Tables 1 and 1a). A similar proportion of responses was registered from those engineers who graduated in 1995, 1997 and 1998 (Chart 1). By area of specialisation, the largest number of engineers (117 or 28%) was in Mechanical engineering. This was followed by those in Electrical and Computer engineering (105 or 26%), shown in Chart 2. These responses compare favourably with the actual proportion of engineering graduates by year of graduation and area of specialisation between 1995 and 1999 from the Faculty of Engineering, and is therefore representative of the population as can be seen in Table A in the Methodology.

Table 1a: Percentage of Engineers by Area of Specialisation and Year Graduated

(Row Percentage of Table 1)

Area of Specialisation	Total	Year Graduated				
		1995	1996	1997	1998	1999
	(1)	(2)	(3)	(4)	(5)	(6)
All Areas	100	17	21	18	19	25
Agric	100	33	0	33	33	0
Chem & Process	100	26	25	16	9	25
Civil	100	8	8	23	29	31
Elect & Comp	100	20	25	15	23	17
Industrial	100	8	16	22	19	35
Mechanical	100	15	21	18	19	27
Surveying	100	19	25	19	19	19

Chart 1: Percentage of Engineers by Year Graduated

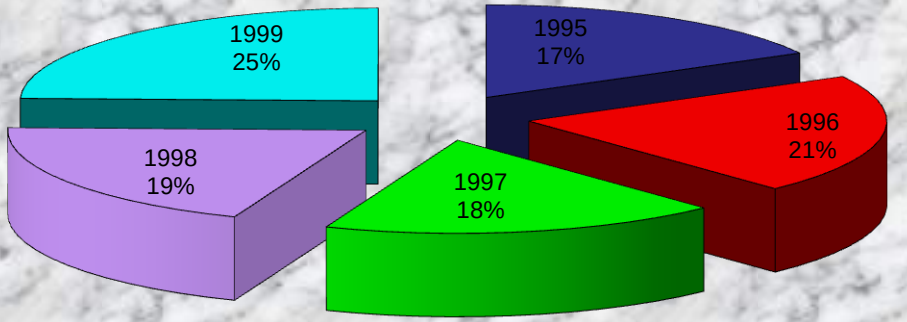


Table 1b: Percentage of Engineers by Area of Specialisation and Year Graduated

(Column Percentage of Table 1)

Area of Specialisation	Total	Year Graduated				
		1995	1996	1997	1998	1999
	(1)	(2)	(3)	(4)	(5)	(6)
All Areas	100	100	100	100	100	100
Agric	1	1	0	1	1	0
Chem & Process	17	26	20	15	8	17
Civil	12	6	5	15	18	15
Elect & Comp	26	30	30	22	30	18
Industrial	9	4	7	11	9	13
Mechanical	28	24	29	28	28	32
Surveying	8	9	9	8	8	6

Chart 2: Percentage of Engineers by Area of Specialisation, 1995-1999

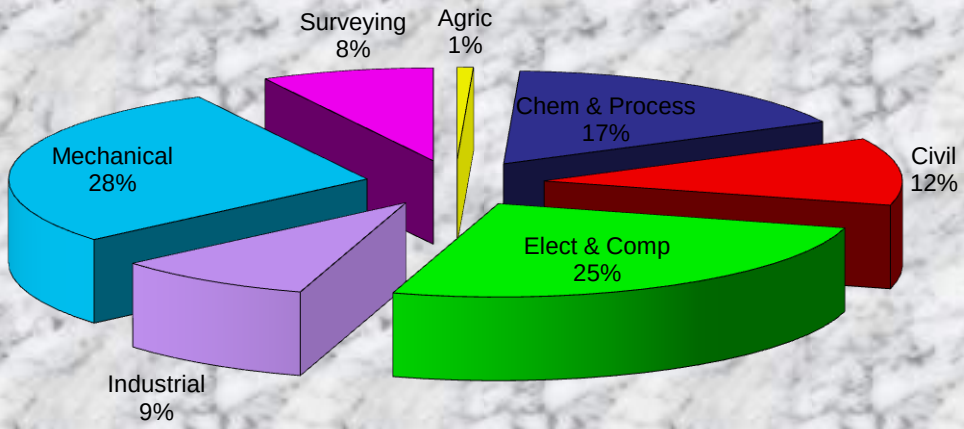


Table 2: No. of Engineers by Area of Specialisation and Gender, 1995-1999

Area of Specialisation	Total	Gender	
		Male	Female
	(1)	(2)	(3)
All Areas	411	317	94
Agric	3	1	2
Chem & Process	69	46	23
Civil	48	29	19
Elect & Comp	105	85	20
Industrial	37	25	12
Mechanical	117	105	12
Surveying	32	26	6

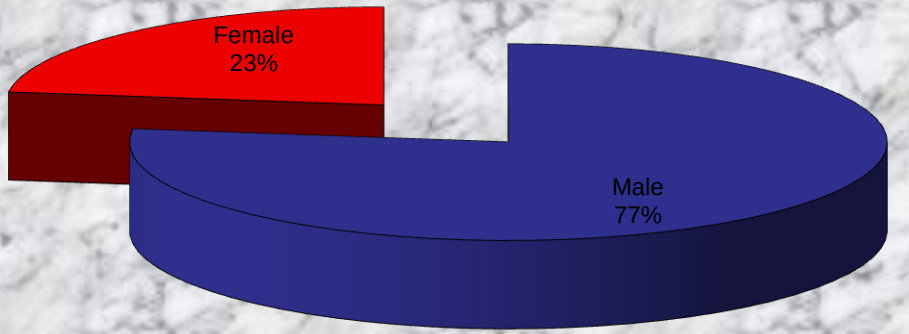
Table 2 shows that of the 411 engineers who responded to the survey, 317 (77%) were males and 94 (23%) were females. This represents an overall ratio of 3 males to 1 female. In reviewing the data by area of specialisation, it was observed that the male engineers out-numbered their female counterparts significantly in the areas of Mechanical engineering (9:1) and in each of Electrical and Computer engineering and Surveying (4:1). However, a considerably smaller gender disparity of approximately 2 males to 1 female was recorded in Chemical and Process, Civil and Industrial engineering.

Table 2a: Percentage of Engineers by Area of Specialisation and Gender, 1995-1999

(Row percentage of Table 2)

Area of Specialisation	Total	Gender	
		Male	Female
	(1)	(2)	(3)
All Areas	100	77	23
Agric	100	33	67
Chem & Process	100	67	33
Civil	100	60	40
Elect & Comp	100	81	19
Industrial	100	68	32
Mechanical	100	90	10
Surveying	100	81	19

Chart 3: Percentage of Engineers by Gender, 1995-1999



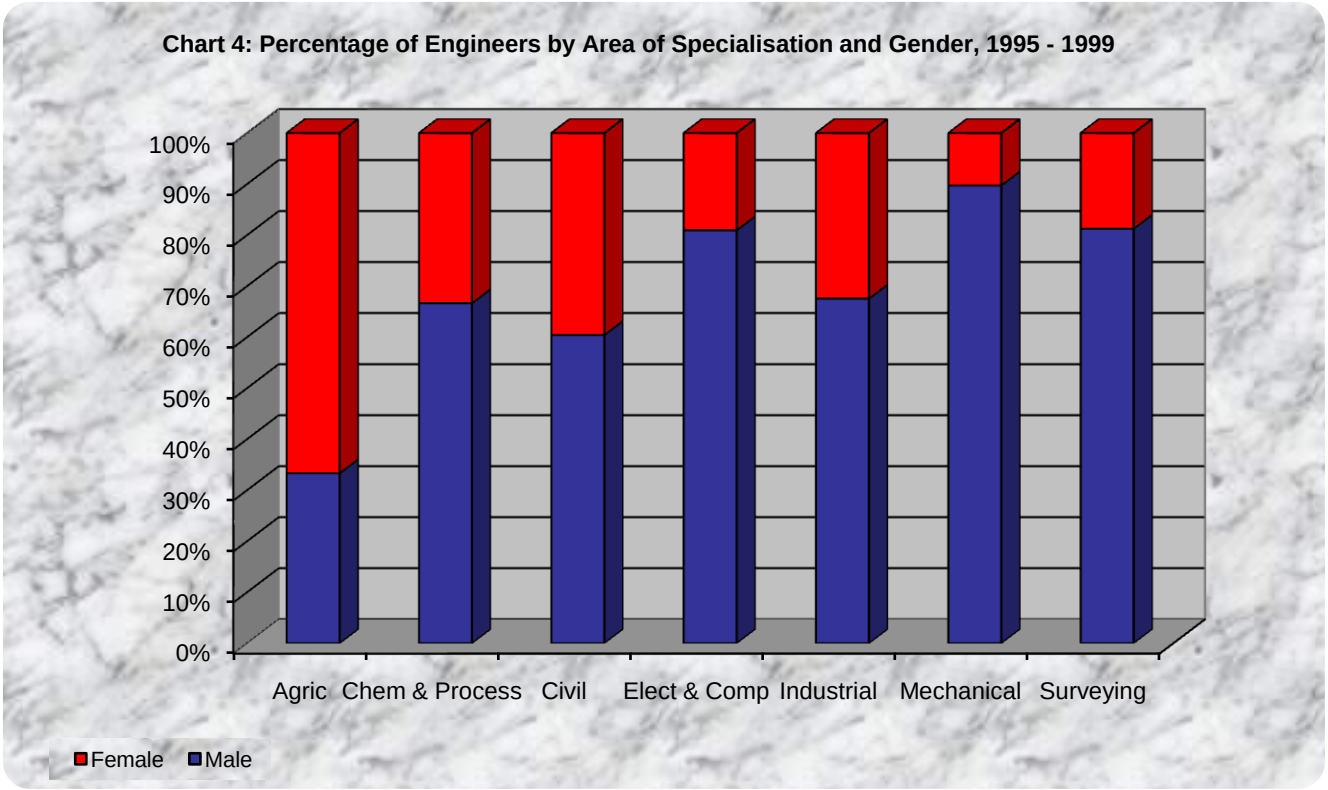


Chart 4: Percentage of Engineers by Area of Specialisation and Gender, 1995 - 1999
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Agric
Chem & Process
Civil
Elect & Comp
Industrial
Mechanical
Surveying
Female
Male

Table 2b: Percentage of Engineers by Area of Specialisation and Gender, 1995-1999

(Column percentage of Table 2)

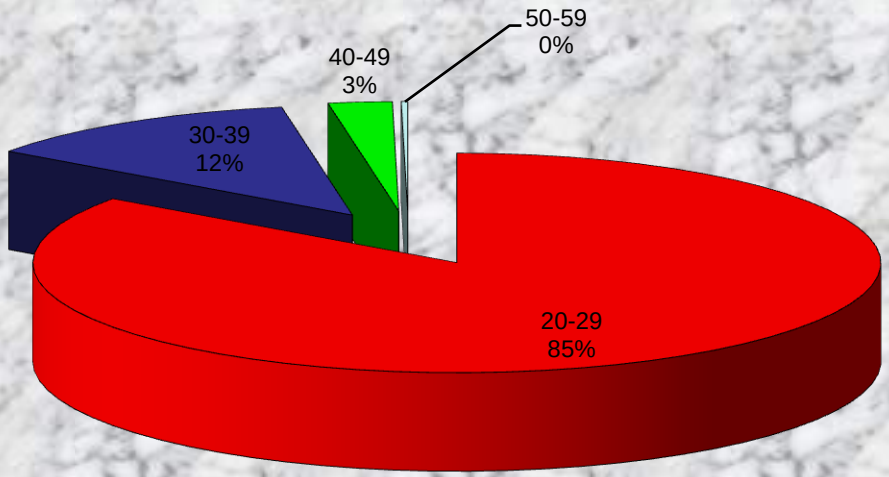
Area of Specialization	Total	Gender	
		Male	Female
	(1)	(2)	(3)
All Areas	100	100	100
Agric	1	0	2
Chem & Process	17	15	24
Civil	12	9	20
Elect & Comp	26	27	21
Industrial	9	8	13
Mechanical	28	33	13
Surveying	8	8	6

Table 3: No. of Engineers by Age and Gender

Age (yrs.)	Total	Gender	
		Male	Female
	(1)	(2)	(3)
All Ages	411	317	94
20-29	349	265	84
30-39	51	43	8
40-49	10	8	2
50-59	1	1	0

A significant number of engineers (349 or 86%) who responded to the survey was between 20-29 years old (Table 3 and Chart 5). This figure suggests that most engineers, both male and female, read for their first degree soon after their A'Level examinations. Only 12% of the engineers were between 30-39 years of age (Chart 5).

Chart 5: Percentage of Engineers by Age



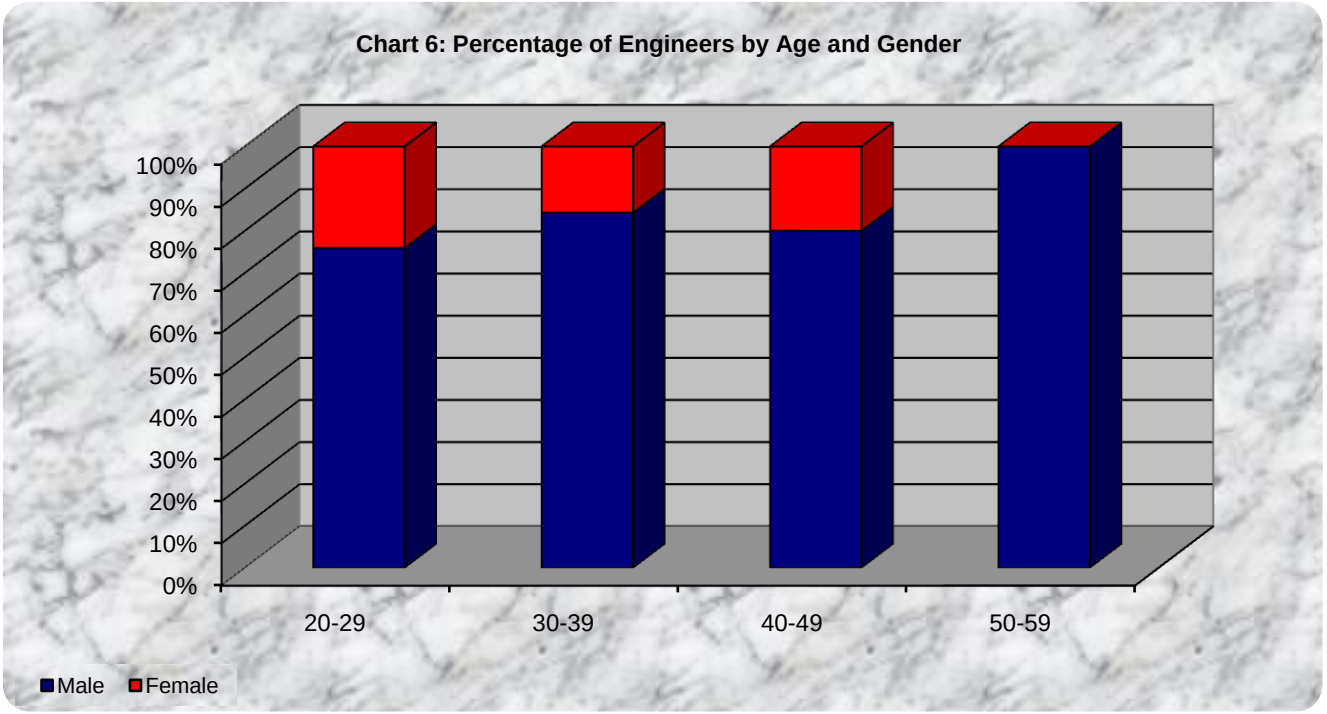


Chart 6: Percentage of Engineers by Age and Gender
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
20-29
30-39
40-49
50-59
Male
Female

Table 4: No. of Engineers by Area of Specialisation and Age

Area of Specialisation	Total	Age (yrs.)			
		20-29	30-39	40-49	50-59
	(1)	(2)	(3)	(4)	(5)
All Areas	411	349	51	10	1
Agric	3	2	1	0	0
Chem & Process	69	63	6	0	0
Civil	48	36	4	8	0
Elect & Comp	105	91	14	0	0
Industrial	37	34	3	0	0
Mechanical	117	103	14	0	0
Surveying	32	20	9	2	1

In terms of area of specialisation, Table 4 shows that the majority (222 or 54%) of engineers, mainly in the 20-29 age group, studied Mechanical and Electrical and Computer engineering. The relatively large numbers of Mechanical and Electrical and Computer engineers can perhaps be attributed to the growth in demand for qualified manpower in the industrial and information, communication and technology sectors.

Table 4a: Percentage of Engineers by Area of Specialisation and Age

(Row percentage of Table 4)

Area of Specialisation	Total	Age (yrs.)			
		20-29	30-39	40-49	50-59
	(1)	(2)	(3)	(4)	(5)
All Areas	100	85	12	2	0
Agric	100	67	33	0	0
Chem & Process	100	91	9	0	0
Civil	100	75	8	17	0
Elect & Comp	100	87	13	0	0
Industrial	100	92	8	0	0
Mechanical	100	88	12	0	0
Surveying	100	63	28	6	3

Table 4b: Percentage of Engineers by Area of Specialisation and Age

(Column percentage of Table 4)

Area of Specialisation	Total	Age (yrs.)			
		20-29	30-39	40-49	50-59
	(1)	(2)	(3)	(4)	(5)
All Areas	100	100	100	100	100
Agric	1	1	2	0	0
Chem & Process	17	18	12	0	0
Civil	12	10	8	80	0
Elect & Comp	26	26	27	0	0
Industrial	9	10	6	0	0
Mechanical	28	30	27	0	0
Surveying	8	6	18	20	100

Chart 7: Percentage of Engineers by Area of Specialisation and Age

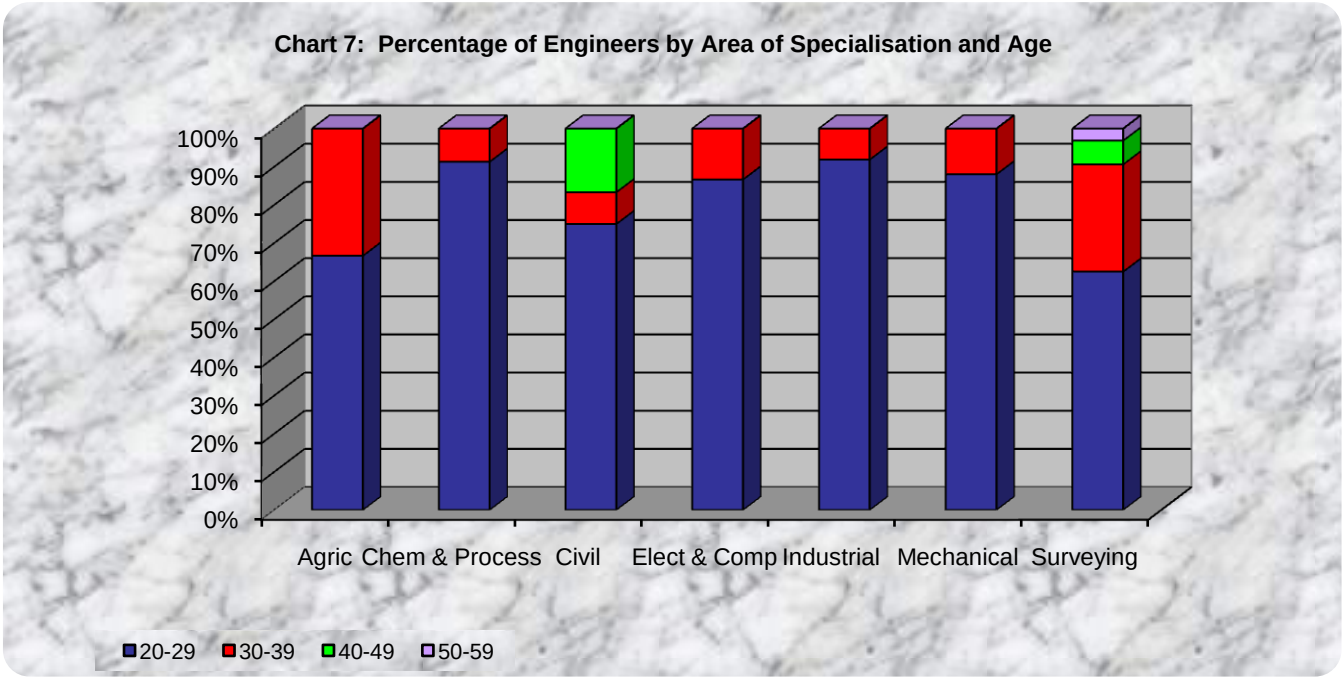


Table 5: No. of Engineers by Employment Status and Gender

Employment Status	Total	Gender	
		Male	Female
	(1)	(2)	(3)
All Status	411	317	94
Employed	388	299	89
Self-Employed	9	9	0
Unemployed	14	9	5

Table 5 shows that almost all (97%) of the engineers who responded to the survey was employed as at 15th January, 2001. This level of employment implies that the various sectors in Trinidad and Tobago have, so far, been able to absorb the graduates in engineering from the University of the West Indies. Employment of male engineers (97%) was similar to that of female (95%). However, self-employment was recorded among male engineers only. The extremely small number of self-employed needs to be examined in the context of developing the entrepreneurial skill of young professionals. This necessary focus will result in job creation and will impact positively on scientific and technological activities.

Table 5a: Percentage of Engineers by Employment Status and Gender

Employment Status	Total	Gender	
		Male	Female
	(1)	(2)	(3)
All Status	100	100	100
Employed	94	94	95
Self-Employed	2	3	0
Unemployed	3	3	5

Chart 8: Percentage of Engineers by Employment Status

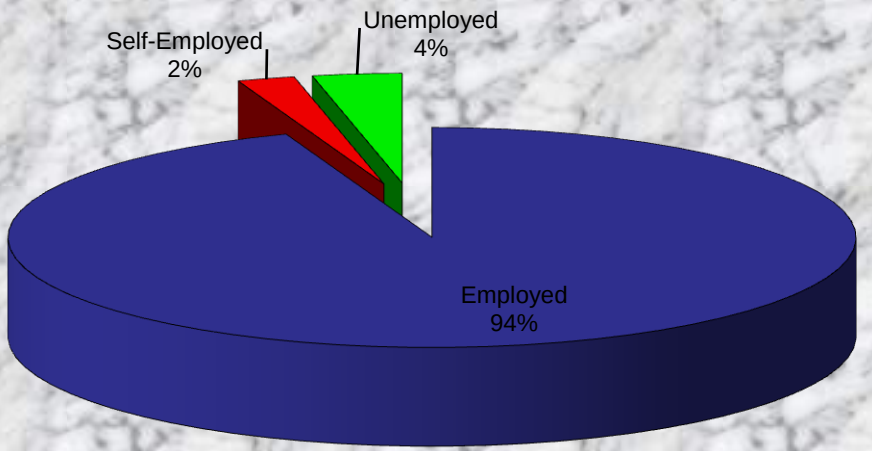


Table 6: No. of Engineers by Employment Status and Age

Employment Status	Total	Age (yrs.)			
		20-29	30-39	40-49	50-59
	(1)	(2)	(3)	(4)	(5)
All Status	411	349	51	10	1
Employed	388	331	47	10	0
Self-Employed	9	6	2	0	1
Unemployed	14	12	2	0	0

In reviewing the distribution of engineers by employment status and age, Table 6 shows that of the 388 employed, 331 or 85% were in the 20-29 age group. This group also comprised the largest percentage (67%) of self-employed engineers (Chart 9).

Chart 9: Percentage of Engineers by Employment Status and Age

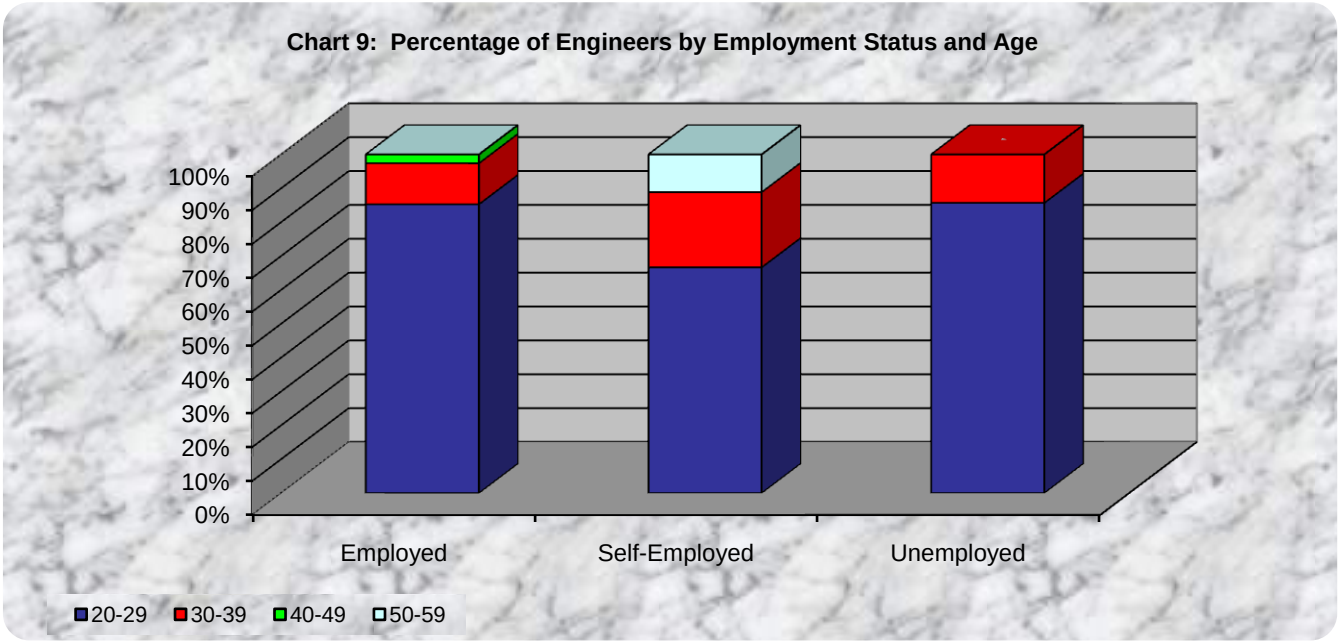


Table 7 : No. of Engineers by Area of Specialisation and Employment Status

Area of Specialisation	Total	Employment Status		
		Employed	Self-Employed	Unemployed
	(1)	(2)	(3)	(4)
All Areas	411	388	9	14
Agric	3	3	0	0
Chem & Process	69	66	1	2
Civil	48	45	0	3
Elect & Comp	105	100	1	4
Industrial	37	37	0	0
Mechanical	117	111	3	3
Surveying	32	26	4	2

Table 7 provides the distribution of engineers by employment status and area of specialisation. Chart 10 shows that the majority of engineers in each area of specialisation was employed. The largest proportion of self-employed was observed in Surveying.

Chart 10: Percentage of Engineers by Area of Specialisation and Employment Status

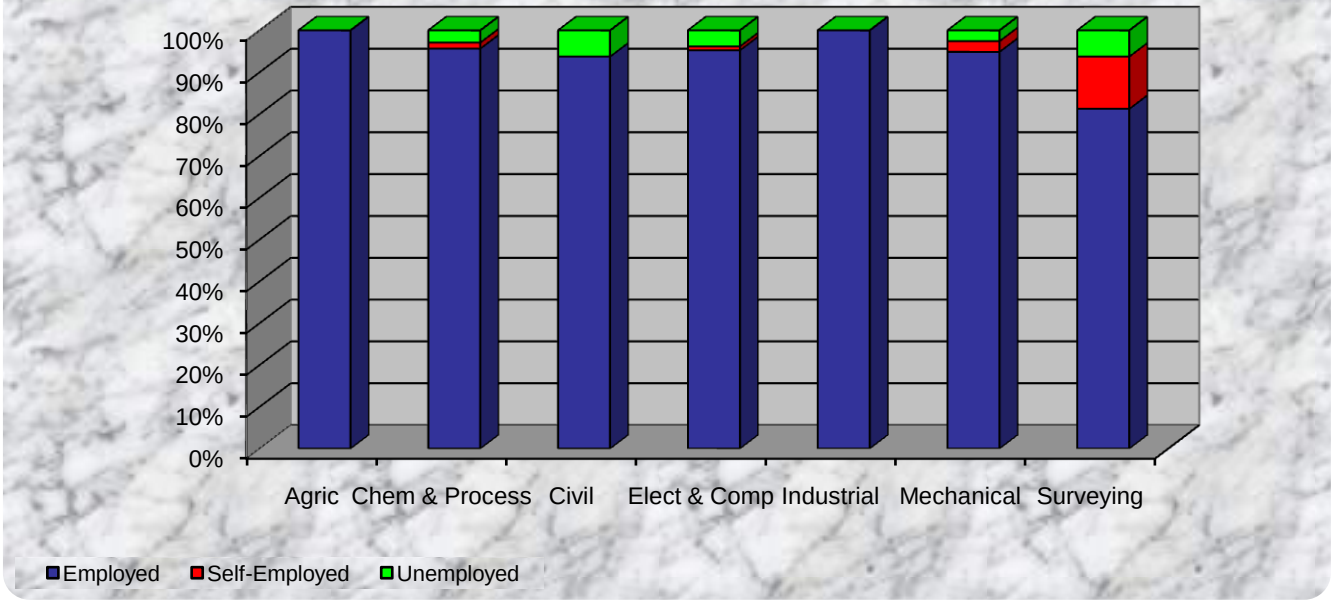


Table 8: No. of Engineers by Area of Specialisation and Jobs Held

Area of Specialisation	Total	Number of Jobs Held				
		One	Two	Three	Four	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)
All Areas	411	125	149	131	3	3
Agric	3	2	0	1	0	0
Chem & Process	69	20	27	21	0	1
Civil	48	21	13	14	0	0
Elect & Comp	105	33	33	38	0	1
Industrial	37	10	20	6	1	0
Mechanical	117	29	45	41	2	0
Surveying	32	10	11	10	0	1

As shown in Table 8, a considerable degree of mobility was observed among engineers when reviewing the number of jobs held by each area of specialisation. As at 15th January, 2001, approximately one third (36% or 149) of the engineers who graduated between 1995-1999 was employed in their second job; 32% (131) had moved to their third job while 30% (125) remained in their first job (Table 8a). In terms of area of specialisation, Table 8a also indicates that a substantial proportion of graduates in Industrial engineering (54%), Chemical and Process (39%), Mechanical (38%) and Surveying (34%) had obtained their second employment.

Table 8a: Percentage of Engineers by Area of Specialisation and Jobs Held

(Row percentage of Table 8)

Area of Specialisation	Total	Number of Jobs Held				
		One	Two	Three	Four	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)
All Areas	100	30	36	32	1	1
Agric	100	67	0	33	0	0
Chem & Process	100	29	39	30	0	1
Civil	100	44	27	29	0	0
Elect & Comp	100	31	31	36	0	1
Industrial	100	27	54	16	3	0
Mechanical	100	25	38	35	2	0
Surveying	100	31	34	31	0	3

The data also reveal that a relatively large proportion of graduates in Electrical and Computer engineering (36%) and Mechanical engineering (35%) had moved to their third job (Table 8a). Based on the number of jobs held, employment opportunities were more prevalent in the areas of Mechanical, Electrical and Computer and Chemical and Process engineering

Chart 11: Percentage of Engineers by Area of Specialisation and Jobs Held

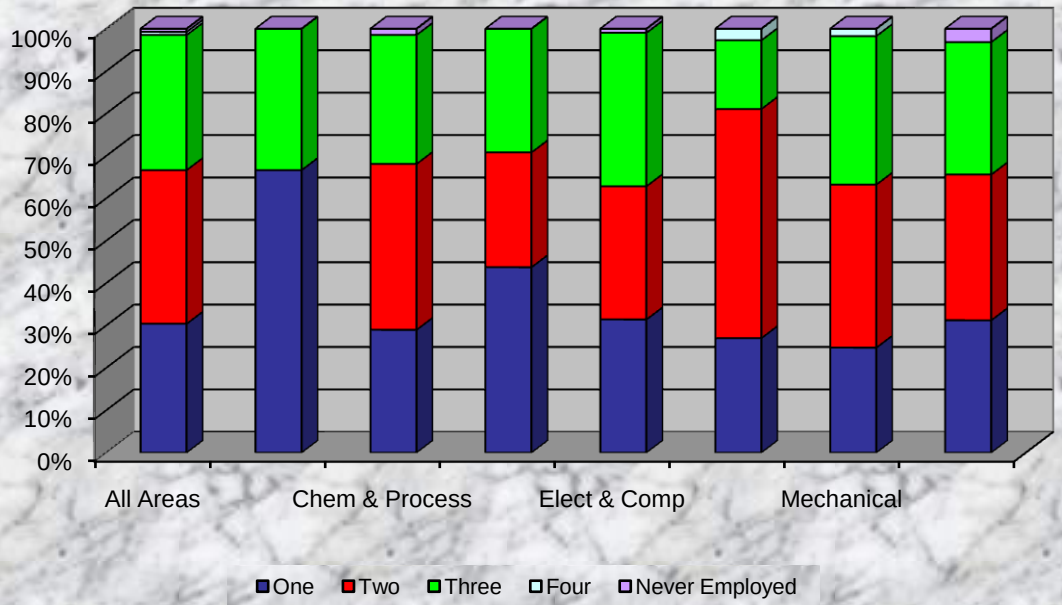


Table 8b: Percentage of Engineers by Area of Specialisation and Jobs Held

(Column percentage of Table 8)

Area of Specialisation	Total	Number of Jobs Held				
		One	Two	Three	Four	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)
All Areas	100	100	100	100	100	100
Agric	1	2	0	1	0	0
Chem & Process	17	16	18	16	0	33
Civil	12	17	9	11	0	0
Elect & Comp	26	26	22	29	0	33
Industrial	9	8	13	5	33	0
Mechanical	28	23	30	31	67	0
Surveying	8	8	7	8	0	33

Table 9: No. of Engineers by Year Graduated and Year of First Employment

Year Graduated	Total	Year of First Employment								
		1995	1996	1997	1998	1999	2000	2001	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
All Years	411	53	77	83	83	77	30	3	2	3
1995	70	53	11	5	0	0	1	0	0	0
1996	86	0	66	15	5	0	0	0	0	0
1997	74	0	0	63	6	2	1	2	0	0
1998	80	0	0	0	72	4	3	0	1	0
1999	101	0	0	0	0	71	25	1	1	3

A substantial percentage (70% and over) of the engineers who responded to the survey stated that they had obtained employment within the same year of graduation (Table 9a). In 1999, however, though the employment figure was high (70%), it was relatively lower than that of the earlier years (1995-1998). Twenty five percent (25%) of the engineers who graduated in 1999 gained employment in 2000.

Table 9a: Percentage of Engineers by Year Graduated and Year of First Employment

Year Graduated	Total	Year of First Employment								
		1995	1996	1997	1998	1999	2000	2001	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
All Years	100	13	19	20	20	19	7	1	0	1
1995	100	76	16	7	0	0	1	0	0	0
1996	100	0	77	17	6	0	0	0	0	0
1997	100	0	0	85	8	3	1	3	0	0
1998	100	0	0	0	90	5	4	0	1	0
1999	100	0	0	0	0	70	25	1	1	3

Chart12 : Percentage of Engineers by Year Graduated and Year of First Employment

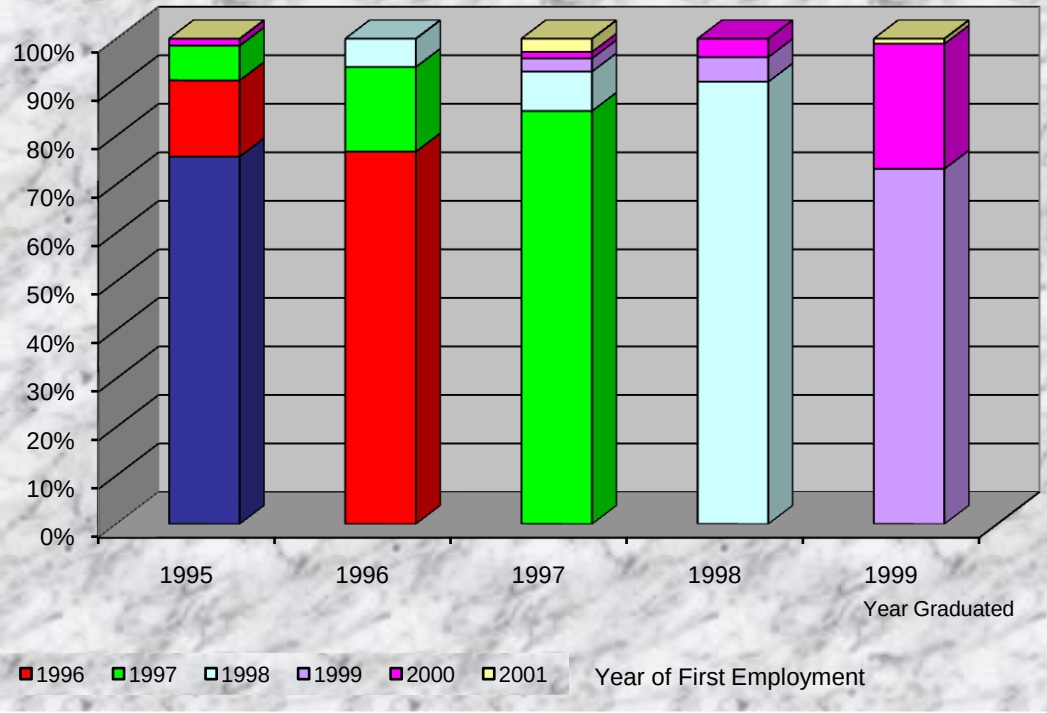


Table 10: No. of Engineers by Area of Specialisation, Year Graduated and Year of First Employment

Agricultural

Year Graduated	Total	Year of First Employment					
		1995	1996	1997	1998	1999	2000
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
All Years	3	1	0	0	1	0	1
1995	1	1	0	0	0	0	0
1997	1	0	0	0	0	0	1
1998	1	0	0	0	1	0	0

Table 10a: Percentage of Agricultural Engineers by Year Graduated and Year of First Employment

Year Graduated	Total	Year of First Employment					
		1995	1996	1997	1998	1999	2000
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
All Years	100	33	0	0	33	0	33
1995	100	100	0	0	0	0	0
1997	100	0	0	0	0	0	100
1998	100	0	0	0	100	0	0

Table 10 shows the period of time taken for graduate engineers to acquire their first job. Generally, the majority of graduates (over 60%) from each area of specialisation obtained employment within the same year of graduation. The highest percentage obtaining employment within the same year was among the following areas of specialisation: Civil engineering (91-100%) Table 10c, Industrial engineering (67-100%) Table 10e, Surveying (67-100%) Table 10g and Mechanical engineering (63-95%) Table 10f.

Chart 13: Percentage of Agricultural Engineers by Year Graduated and Year of First Employment

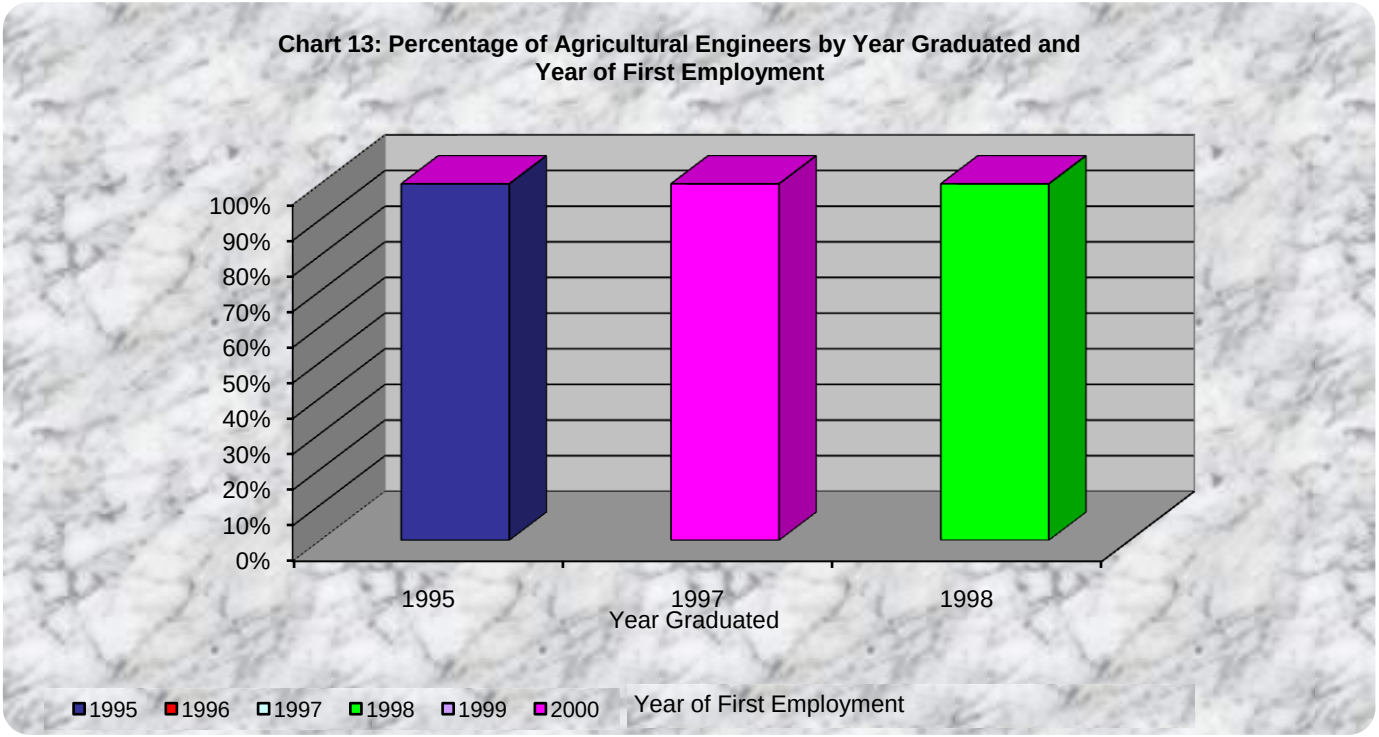


Table 10: No. of Engineers by Area of Specialisation, Year Graduated and Year of First Employment (continued)

Chemical and Process

Year Graduated	Total	Year of First Employment							
		1995	1996	1997	1998	1999	2000	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Years	69	11	9	22	6	14	5	1	1
1995	18	11	3	4	0	0	0	0	0
1996	17	0	6	10	1	0	0	0	0
1997	11	0	0	8	2	1	0	0	0
1998	6	0	0	0	3	1	1	0	1
1999	17	0	0	0	0	12	4	1	0

Table 10b: Percentage of Chemical & Process Engineers by Year Graduated and Year of First Employment

Year Graduated	Total	Year of First Employment							
		1995	1996	1997	1998	1999	2000	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Years	100	16	13	32	9	20	7	1	1
1995	100	61	17	22	0	0	0	0	0
1996	100	0	35	59	6	0	0	0	0
1997	100	0	0	73	18	9	0	0	0
1998	100	0	0	0	50	17	17	0	17
1999	100	0	0	0	0	71	24	6	0

However, in Chemical and Process Engineering, the data suggest that employment opportunities were not readily available when compared with other areas of specialisation. Of the 1995 graduates, 22% obtained employment after an average waiting period of 2 years and of the 1996 graduates only 35% were employed in the same year while 59% got their first employment after 9 months. Of the 1998 graduates, only 50% obtained employment in the same year of graduation while 17% each were first employed in 1999 and 2000. In addition, approximately one quarter (24%) of the 1999 graduates obtained their first job after 9 months (Table 10b).

Chart 14: Percentage of Chemical and Process Engineers by Year Graduated and Year of First Employment

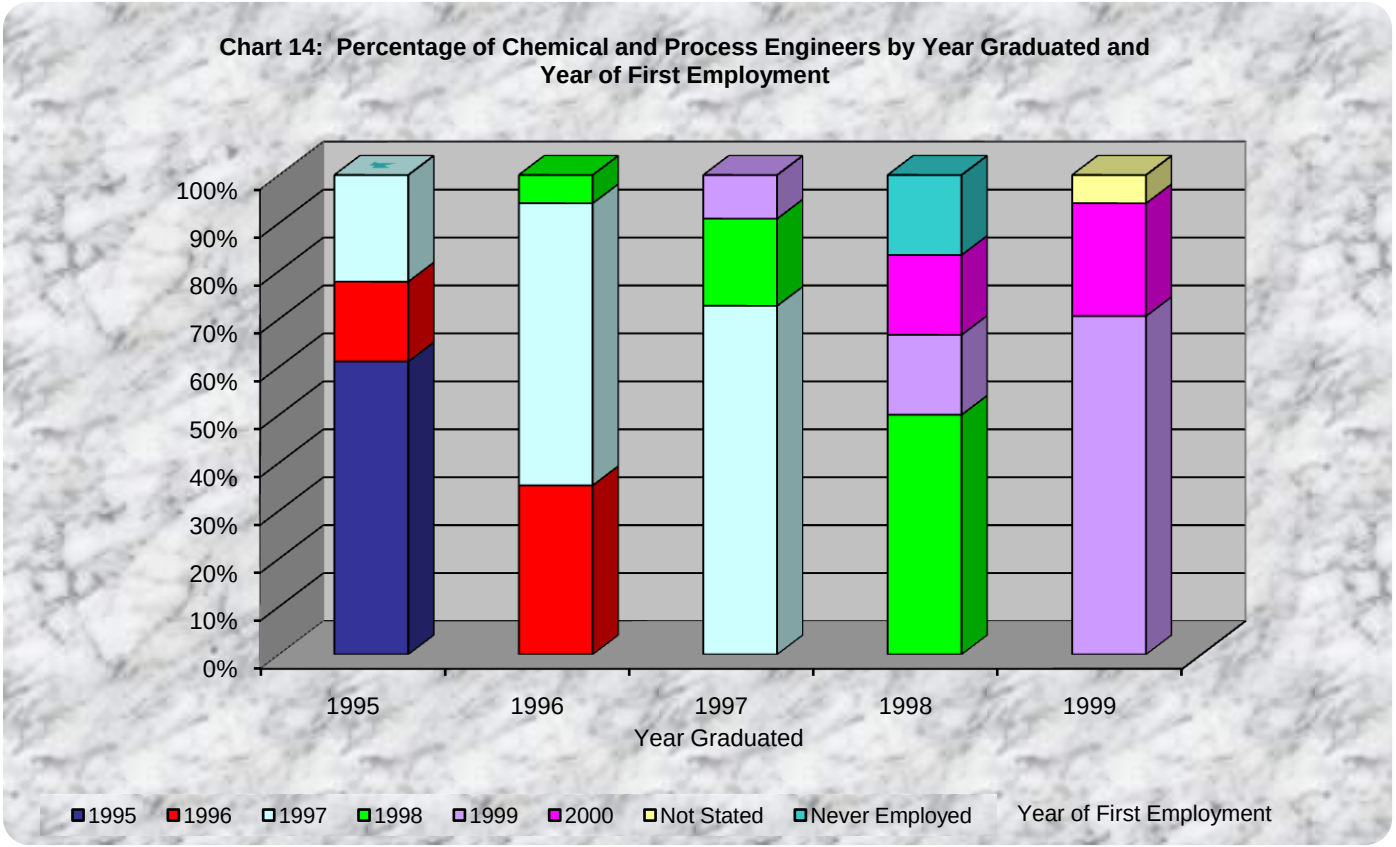


Table 10: No. of Engineers by Area of Specialisation, Year Graduated and Year of First Employment (continued

Civil

Year Graduated	Total	Year of First Employment					
		1995	1996	1997	1998	1999	2000
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
All Years	48	4	4	10	14	15	1
1995	4	4	0	0	0	0	0
1996	4	0	4	0	0	0	0
1997	11	0	0	10	1	0	0
1998	14	0	0	0	13	1	0
1999	15	0	0	0	0	14	1

Table 10c: Percentage of Civil Engineers by Year Graduated and Year of First Employment

Year Graduated	Total	Year of First Employment					
		1995	1996	1997	1998	1999	2000
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
All Years	100	8	8	21	29	31	2
1995	100	100	0	0	0	0	0
1996	100	0	100	0	0	0	0
1997	100	0	0	91	9	0	0
1998	100	0	0	0	93	7	0
1999	100	0	0	0	0	93	7

Chart 15: Percentage of Civil Engineers by Year Graduated and Year of First Employment

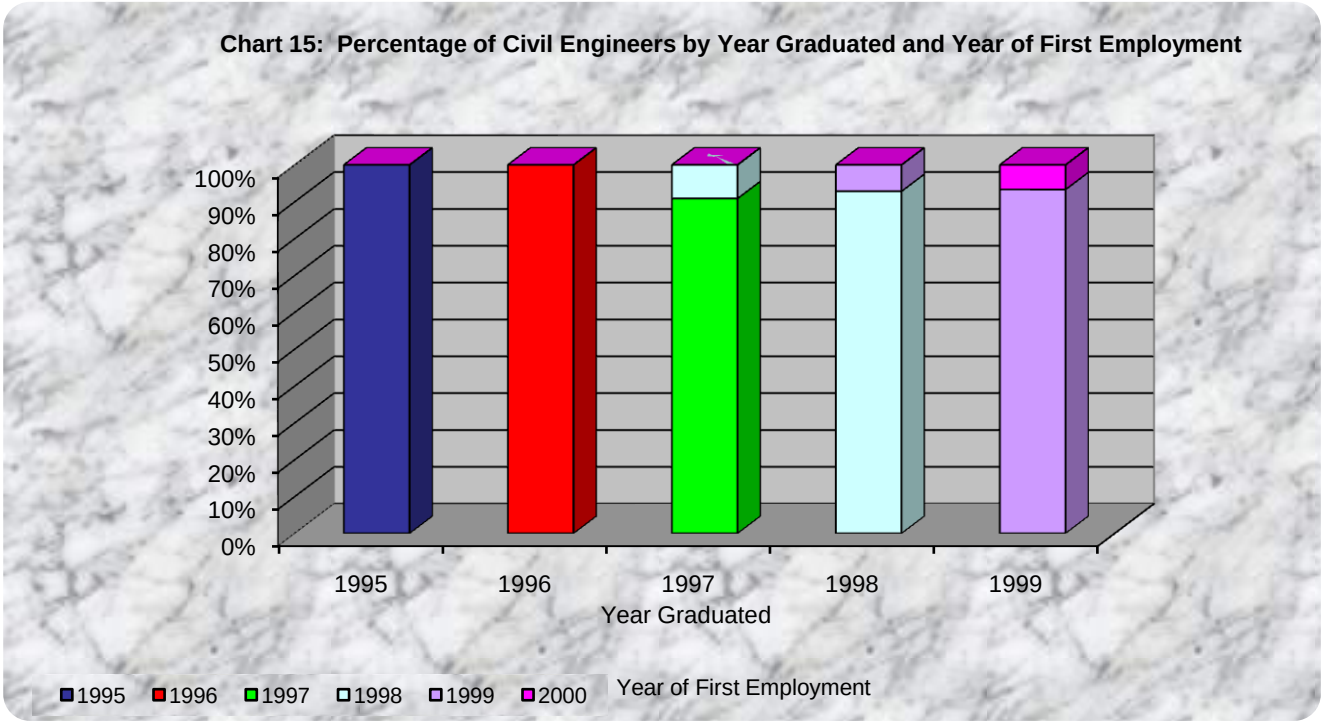


Table 10: No. of Engineers by Area of Specialisation, Year Graduated and Year of First Employment (continued)

Electrical and Computer

Year Graduated	Total	Year of First Employment							
		1995	1996	1997	1998	1999	2000	2001	Never employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Years	105	14	29	15	26	10	8	2	1
1995	21	14	7	0	0	0	0	0	0
1996	26	0	22	1	3	0	0	0	0
1997	16	0	0	14	1	0	0	1	0
1998	24	0	0	0	22	1	1	0	0
1999	18	0	0	0	0	9	7	1	1

Table 10d: Percentage of Electrical and Computer Engineers by Year Graduated and Year of First Employment

Year Graduated	Total	Year of First Employment							
		1995	1996	1997	1998	1999	2000	2001	Never employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Years	100	13	28	14	25	10	8	2	1
1995	100	67	33	0	0	0	0	0	0
1996	100	0	85	4	12	0	0	0	0
1997	100	0	0	88	6	0	0	6	0
1998	100	0	0	0	92	4	4	0	0
1999	100	0	0	0	0	50	39	6	6

Also, in Electrical and Computer engineering, 33% of the 1995 graduates were employed after an average waiting period of 9 months. Of the 1999 graduates, only 50% got jobs in the same year of graduation while 39% obtained their first employment after 9 months (Table 10d).

Chart 16: Percentage of Electrical and Computer Engineers by Year Graduated and Year of First Employment

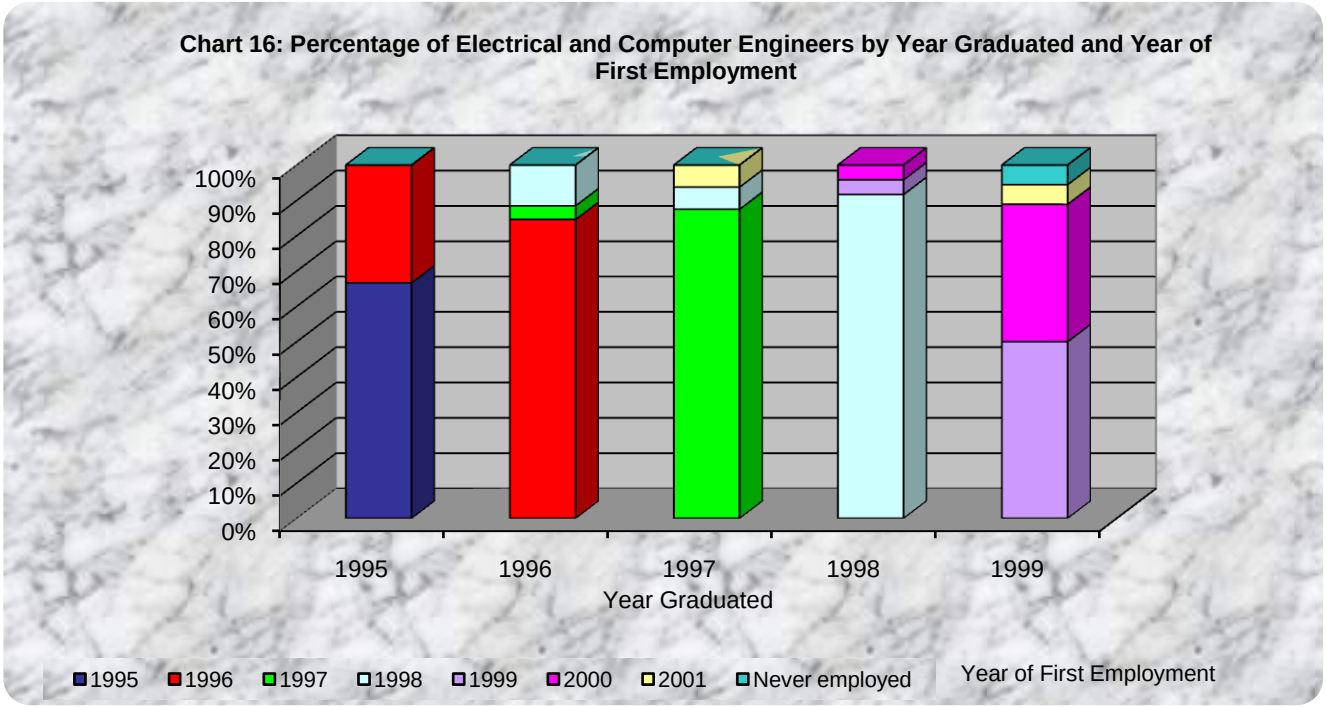


Table 10: No. of Engineers by Area of Specialisation, Year Graduated and Year of First Employment (continued)

Industrial

Year Graduated	Total	Year of First Employment					
		1995	1996	1997	1998	1999	2000
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
All Years	37	3	4	9	7	12	2
1995	3	3	0	0	0	0	0
1996	6	0	4	1	1	0	0
1997	8	0	0	8	0	0	0
1998	7	0	0	0	6	0	1
1999	13	0	0	0	0	12	1

Table 10e: Percentage of Industrial Engineers by Year Graduated and Year of First Employment

Year Graduated	Total	Year of First Employment					
		1995	1996	1997	1998	1999	2000
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
All Years	100	8	11	24	19	32	5
1995	100	100	0	0	0	0	0
1996	100	0	67	17	17	0	0
1997	100	0	0	100	0	0	0
1998	100	0	0	0	86	0	14
1999	100	0	0	0	0	92	8

Chart 17: Percentage of Industrial Engineers by Year Graduated and Year of First Employment

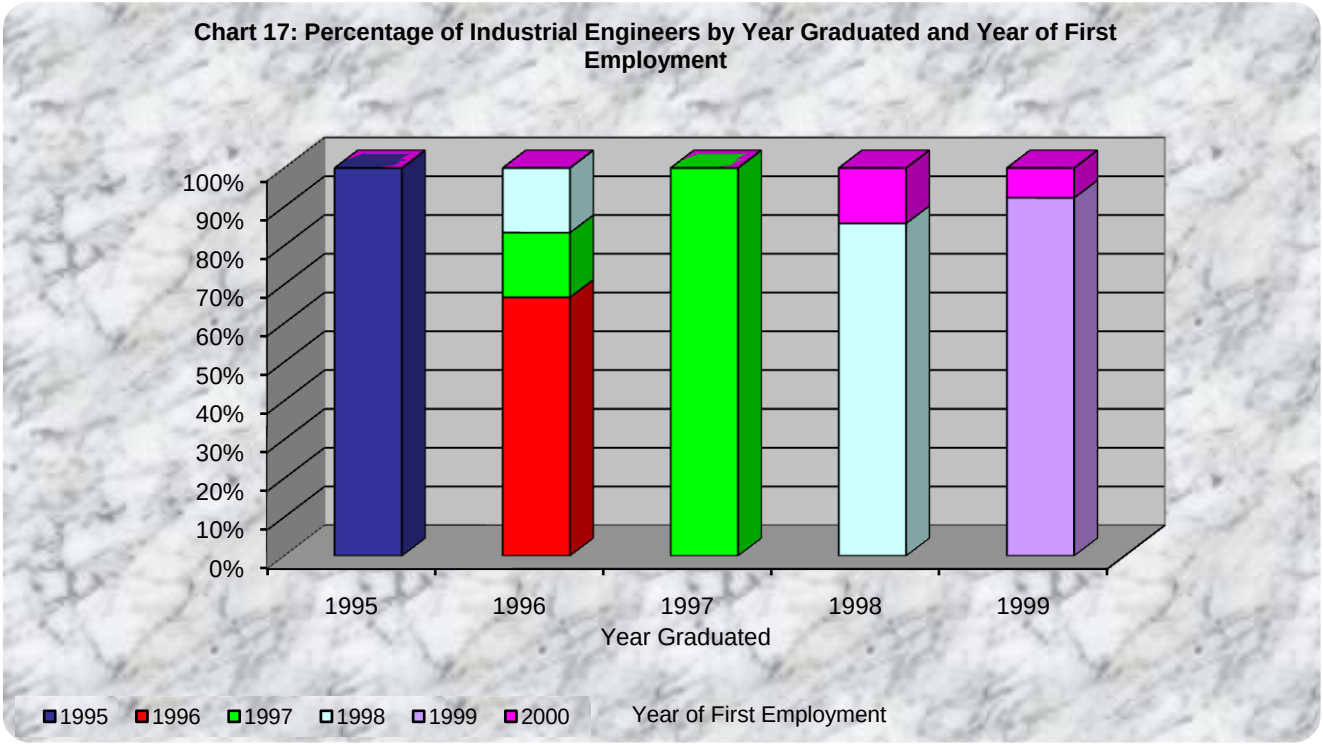


Table 10: No. of Engineers by Area of Specialisation, Year Graduated and Year of First Employment (continued)

Mechanical

Year Graduated	Total	Year of First Employment							
		1995	1996	1997	1998	1999	2000	2001	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Years	117	15	24	19	23	22	12	1	1
1995	17	15	1	0	0	0	1	0	0
1996	25	0	23	2	0	0	0	0	0
1997	21	0	0	17	2	1	0	1	0
1998	22	0	0	0	21	1	0	0	0
1999	32	0	0	0	0	20	11	0	1

Table 10f: Percentage of Mechanical Engineers by Year Graduated and Year of First Employment

Year Graduated	Total	Year of First Employment							
		1995	1996	1997	1998	1999	2000	2001	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Years	100	13	21	16	20	19	10	1	1
1995	100	88	6	0	0	0	6	0	0
1996	100	0	92	8	0	0	0	0	0
1997	100	0	0	81	10	5	0	5	0
1998	100	0	0	0	95	5	0	0	0
1999	100	0	0	0	0	63	34	0	3

Chart 18: Percentage of Mechanical Engineers by Year Graduated and Year of First Employment

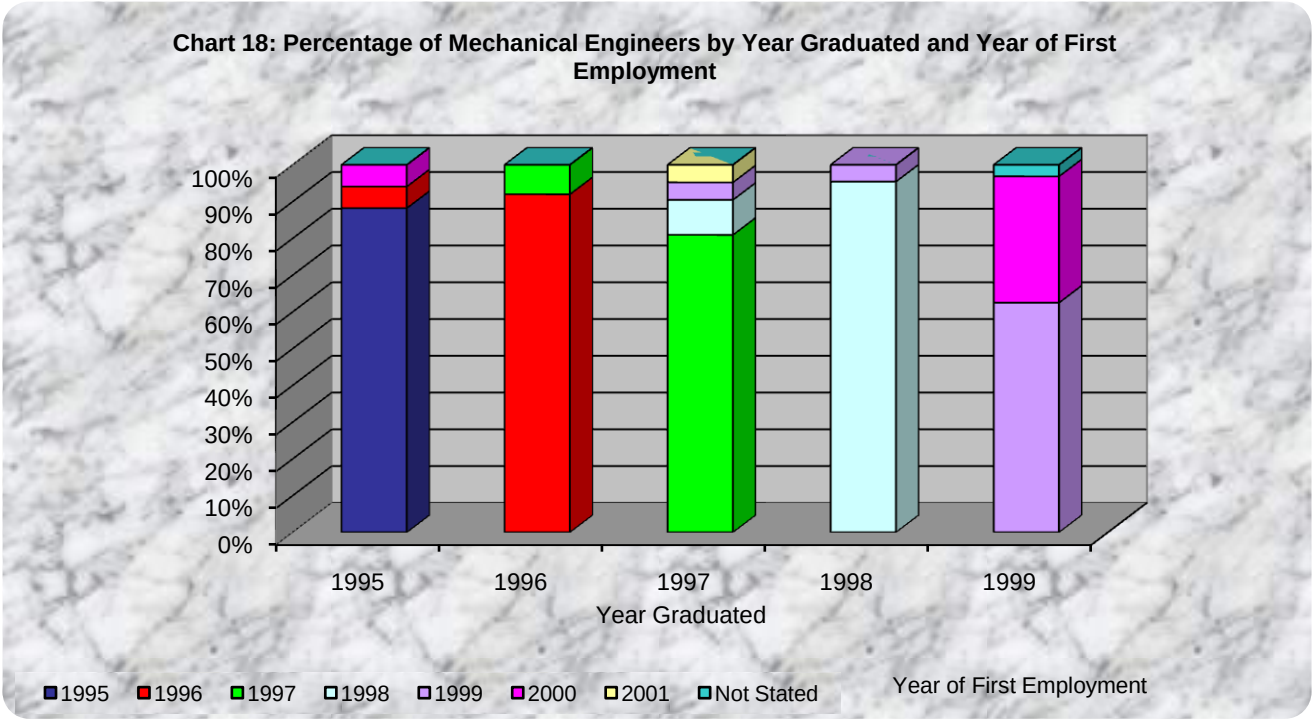


Table 10: No. of Engineers by Area of Specialisation, Year Graduated and Year of First Employment (concluded)

Surveying

Year Graduated	Total	Year of First Employment						
		1995	1996	1997	1998	1999	2000	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Years	32	5	7	8	6	4	1	1
1995	6	5	0	1	0	0	0	0
1996	8	0	7	1	0	0	0	0
1997	6	0	0	6	0	0	0	0
1998	6	0	0	0	6	0	0	0
1999	6	0	0	0	0	4	1	1

Table 10g: Percentage of Surveyors by Year Graduated and Year of First Employment

Year Graduated	Total	Year of First Employment						
		1995	1996	1997	1998	1999	2000	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Years	100	16	22	25	19	13	3	3
1995	100	83	0	17	0	0	0	0
1996	100	0	88	13	0	0	0	0
1997	100	0	0	100	0	0	0	0
1998	100	0	0	0	100	0	0	0
1999	100	0	0	0	0	67	17	17

Chart 19: Percentage of Surveyors by Year Graduated and Year of First Employment

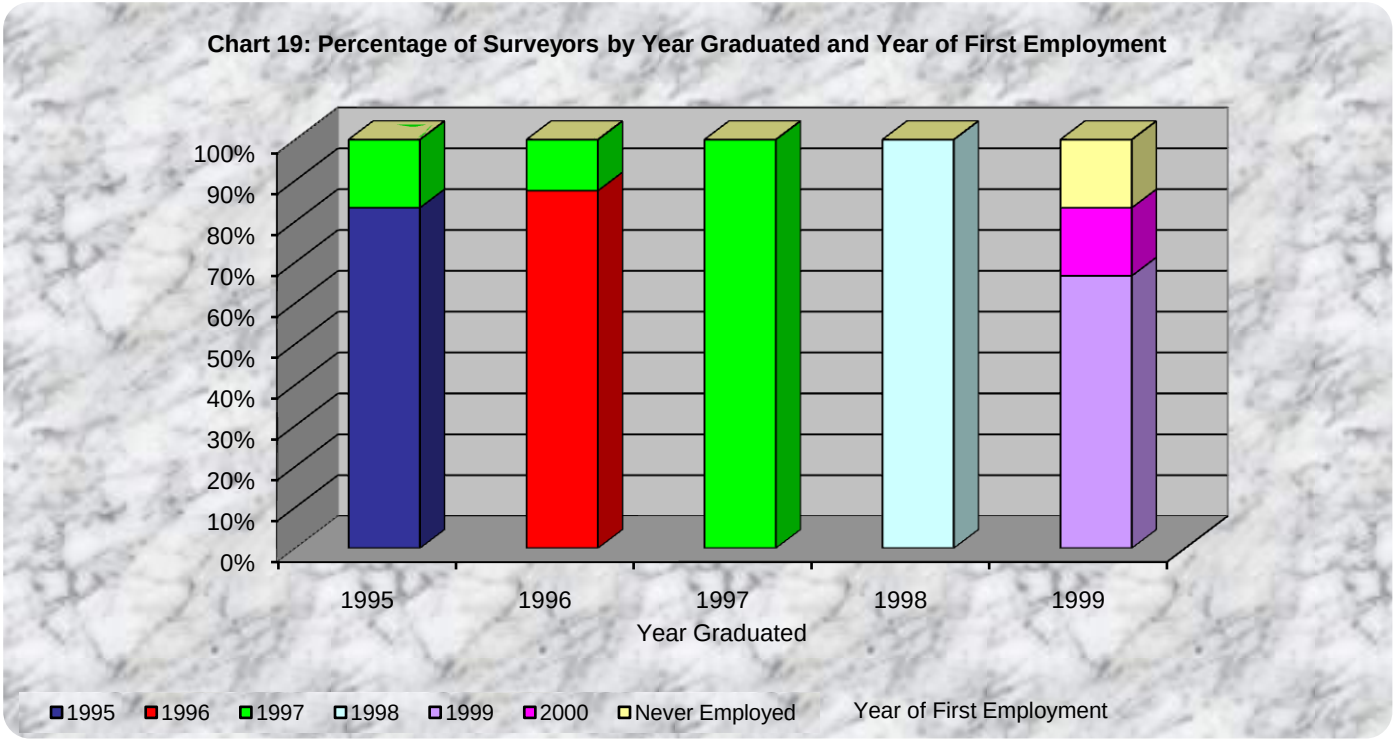


Table 11: No. of Engineers by Year Graduated and Monthly Income of First Job

Year Graduated	Total	Monthly Income of First Job (TT$)							
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Years	411	130	133	63	21	30	12	19	3
1995	70	28	14	7	4	11	1	5	0
1996	86	40	20	7	4	7	2	6	0
1997	74	23	25	10	4	5	5	2	0
1998	80	13	29	19	7	4	3	4	1
1999	101	26	45	20	2	3	1	2	2

Of the 411 engineers who responded to the survey, 32% in each case earned monthly incomes of less than $4,000 and between $4,000-$5,999 in their first job (Table 11a). Whereas, the majority of engineers who graduated in 1995 (40%) and 1996 (47%) reported monthly incomes of under $4,000 in their first jobs, the larger proportion of graduates from 1997 onwards was in the $4,000-$5,999 income range. In 1999, 45% of the graduates earned this level of income. Further, a substantial proportion, 24% and 20% of the 1998 and 1999 graduates respectively, received between $6,000 and $7,999 per month in their first job.

Table 11a: Percentage of Engineers by Year Graduated and Monthly Income of First Job

(Row percentage of Table 11)

Year Graduated	Total	Monthly Income of First Job (TT$)							
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Years	100	32	32	15	5	7	3	5	1
1995	100	40	20	10	6	16	1	7	0
1996	100	47	23	8	5	8	2	7	0
1997	100	31	34	14	5	7	7	3	0
1998	100	16	36	24	9	5	4	5	1
1999	100	26	45	20	2	3	1	2	2

Chart 20: Percentage of Engineers by Year Graduated and Monthly Income of First Job

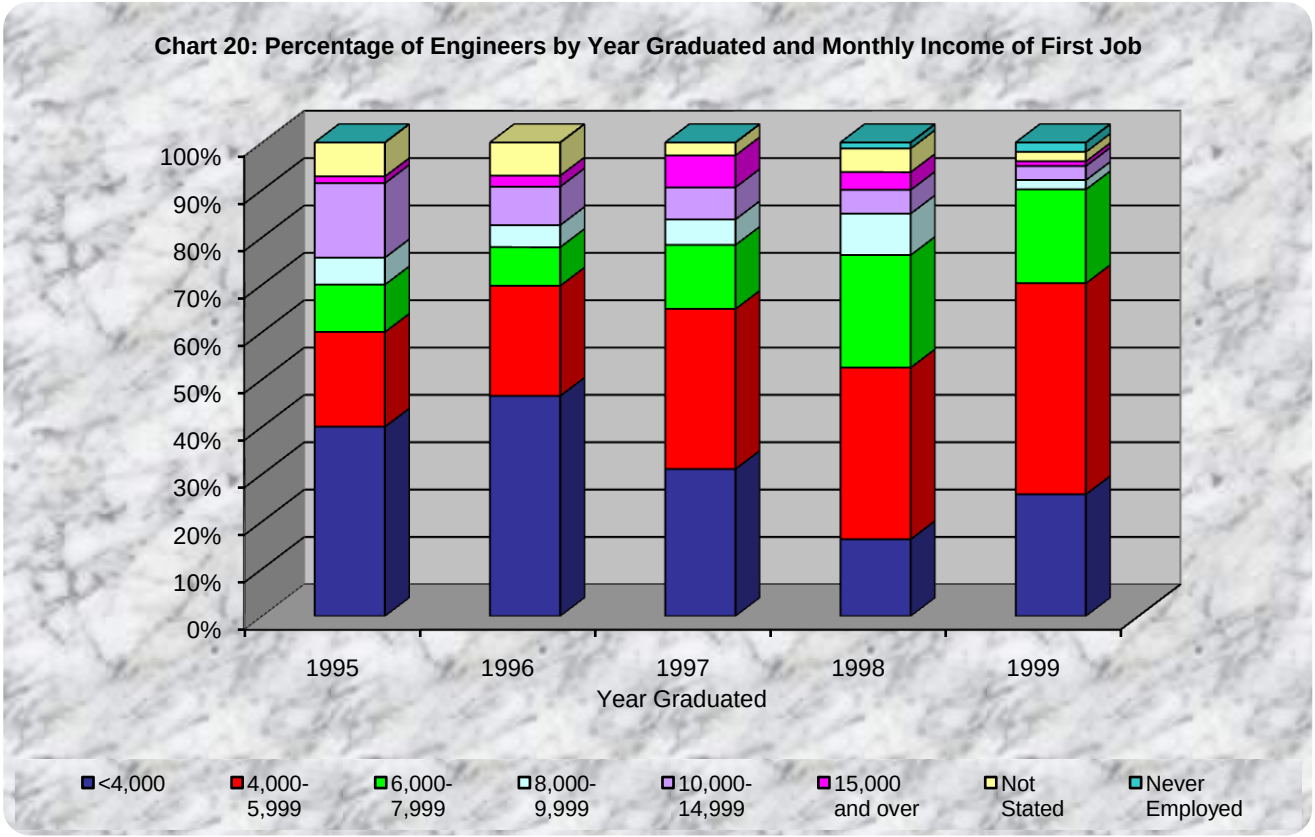


Table 11b: Percentage of Engineers by Year Graduated and Monthly Income of First Job

(Column percentage of Table 11)

Year Graduated	Total	Monthly Income of First Job (TT$)							
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Years	100	100	100	100	100	100	100	100	100
1995	17	22	11	11	19	37	8	26	0
1996	21	31	15	11	19	23	17	32	0
1997	18	18	19	16	19	17	42	11	0
1998	19	10	22	30	33	13	25	21	33
1999	25	20	34	32	10	10	8	11	67

Chart 21: Percentage of Engineers by Year Graduated and Monthly Income of First Job

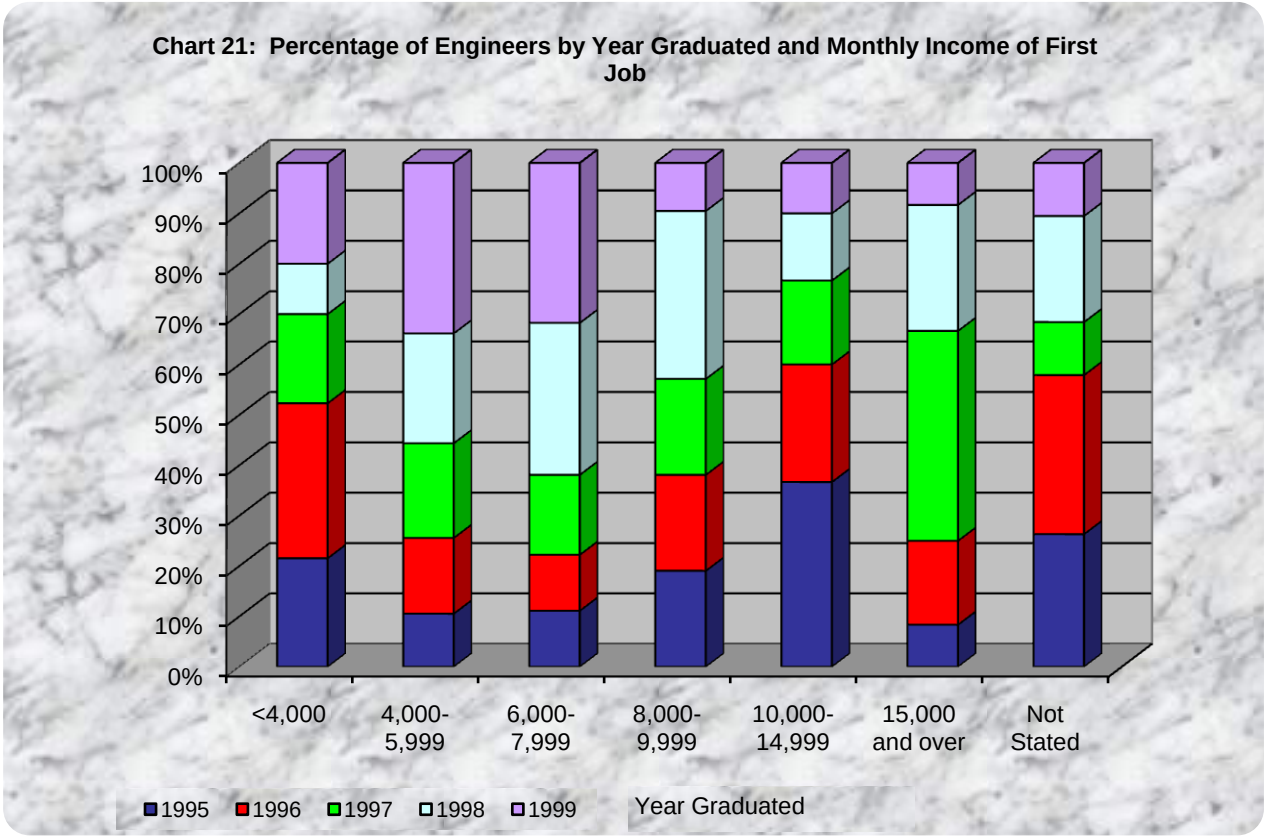


Table 11c: No. of Engineers by Year Graduated and Monthly Income of First Job - Males

Year Graduated	Total	Monthly Income of First Job (TT$)							
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Years	317	101	103	46	17	22	11	14	3
1995	56	20	12	7	3	10	1	3	0
1996	65	31	14	4	4	4	2	6	0
1997	60	23	16	8	4	4	4	1	0
1998	64	9	26	15	5	3	3	2	1
1999	72	18	35	12	1	1	1	2	2

In terms of gender, the distribution of the male engineers mirrors that of the total number of engineers (Table 11d) where 32% each stated that they earned under $4,000 and between $4,000-$5,999 monthly in their first jobs. Between 1995-1997 most of the male graduates (36-48%) earned incomes of under $4,000 in their first job. However, in 1998 and 1999, the modal income increased to $4,000-$5,999 (Table 11d).

Table 11d: Percentage of Engineers by Year Graduated and Monthly Income of First Job - Males

(Row percentage of Table 11c)

Year Graduated	Total	Monthly Income of First Job (TT$)							
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Years	100	32	32	15	5	7	3	4	1
1995	100	36	21	13	5	18	2	5	0
1996	100	48	22	6	6	6	3	9	0
1997	100	38	27	13	7	7	7	2	0
1998	100	14	41	23	8	5	5	3	2
1999	100	25	49	17	1	1	1	3	3

Chart 22: Percentage of Engineers by Year Graduated and Monthly Income of First Job - Males

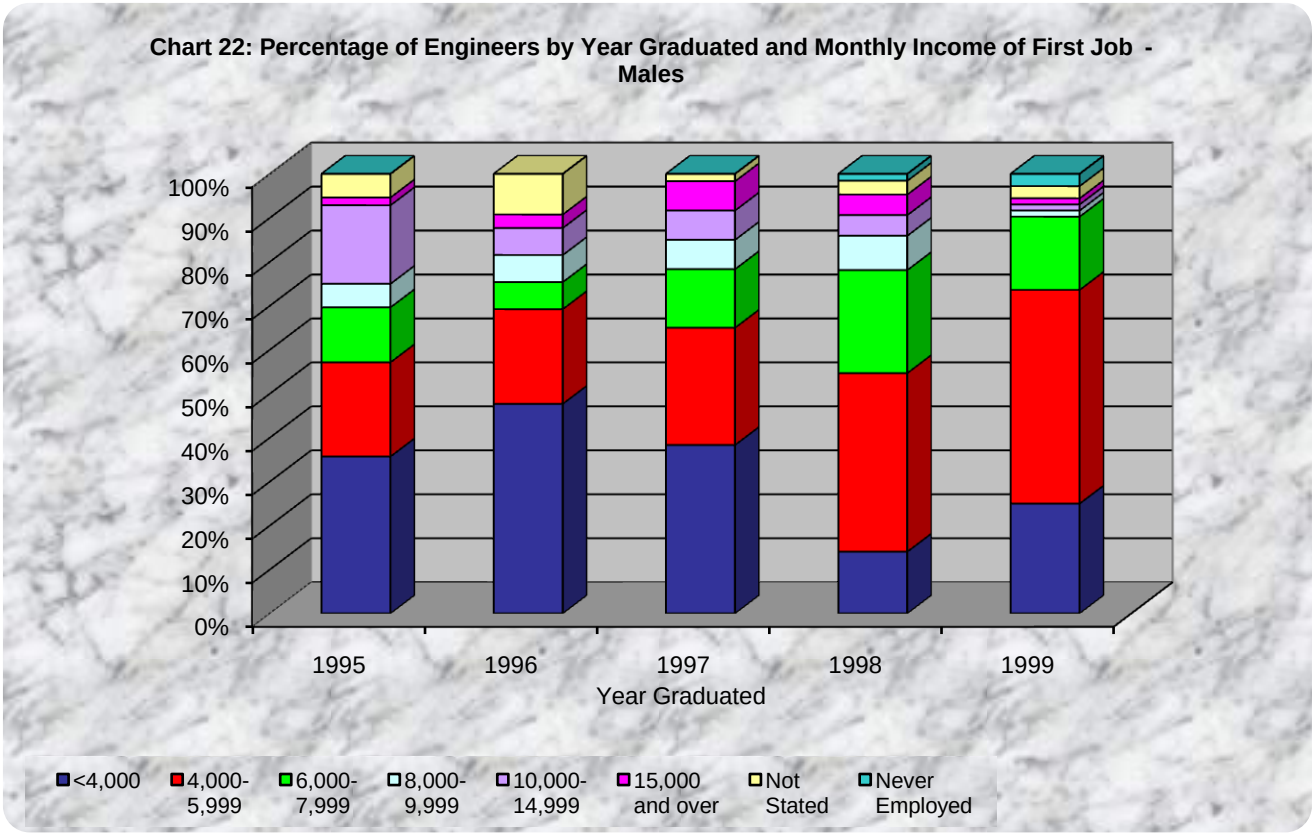


Table 11e: Percentage of Engineers by Year Graduated and Monthly Income of First Job - Males

(Column percentage of Table 11c)

Year Graduated	Total	Monthly Income of First Job (TT$)							
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Years	100	100	100	100	100	100	100	100	100
1995	18	20	12	15	18	45	9	21	0
1996	21	31	14	9	24	18	18	43	0
1997	19	23	16	17	24	18	36	7	0
1998	20	9	25	33	29	14	27	14	33
1999	23	18	34	26	6	5	9	14	67

Chart 23: Percentage of Engineers by Year Graduated and Monthly Income of First Job - Males

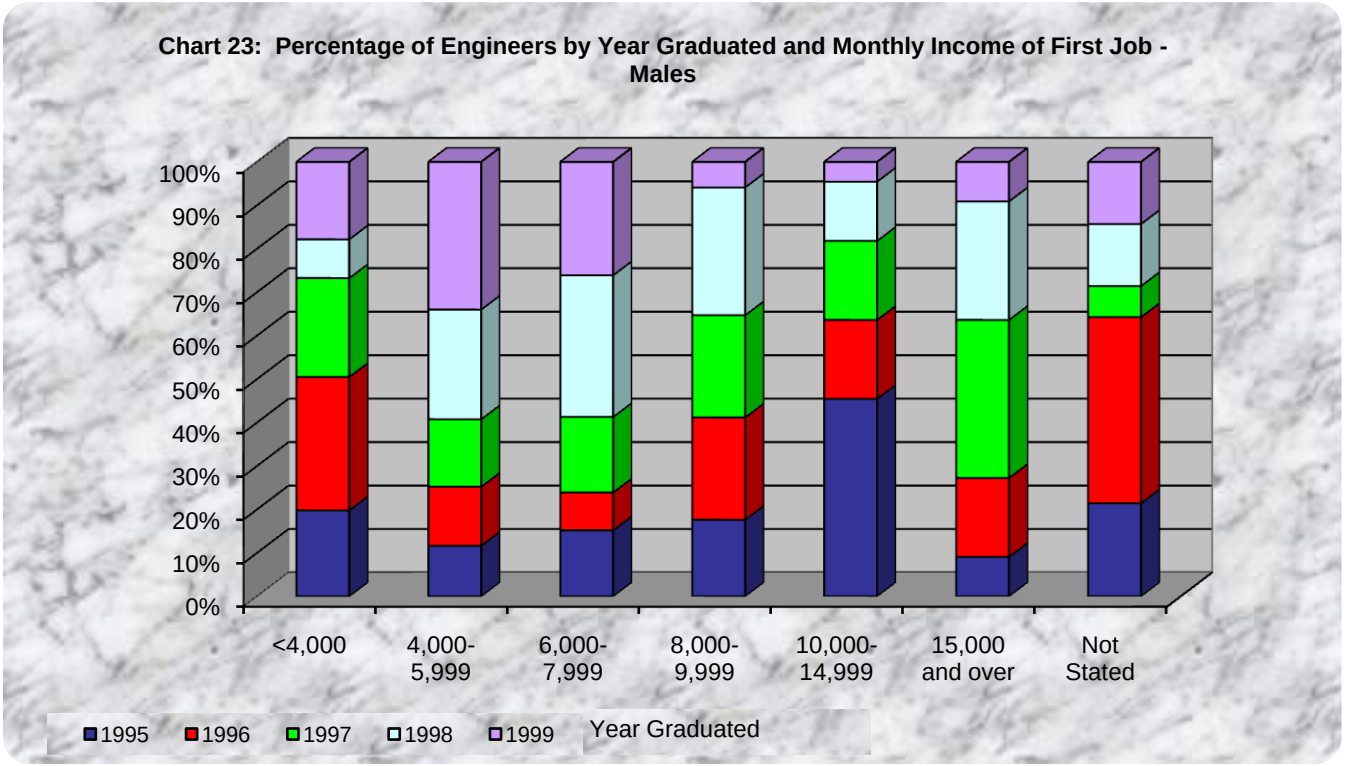


Table 11f: No. of Engineers by Year Graduated and Monthly Income of First Job - Females

Year Graduated	Total	Monthly Income of First Job (TT$)						
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Years	94	29	31	17	4	7	1	5
1995	14	8	2	0	1	1	0	2
1996	21	9	7	3	0	2	0	0
1997	14	0	9	2	0	1	1	1
1998	16	4	3	4	2	1	0	2
1999	29	8	10	8	1	2	0	0

Table 11g: Percentage of Engineers by Year Graduated and Monthly Income of First Job - Females

(Row percentage of Table 11f)

Year Graduated	Total	Monthly Income of First Job (TT$)						
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Years	100	31	33	18	4	7	1	5
1995	100	57	14	0	7	7	0	14
1996	100	43	33	14	0	10	0	0
1997	100	0	64	14	0	7	7	7
1998	100	25	19	25	13	6	0	13
1999	100	28	34	28	3	7	0	0

Table 11g shows a high level of similarity in the income distribution of the female engineers in their first jobs when compared to their male counterparts. The majority of the females who graduated in 1995 (57%) and 1996 (43%) earned less than $4,000 per month in their first jobs. In 1997 and 1999 most female engineers' incomes ranged between $4,000-$5,999 in their first jobs. In addition, 25% of the 1998 and 28% of the 1999 females graduates' incomes were between $6,000-$7,999 monthly in their first jobs.

Chart 24: Percentage of Engineers by Year Graduated and Monthly Income of First Job - Females

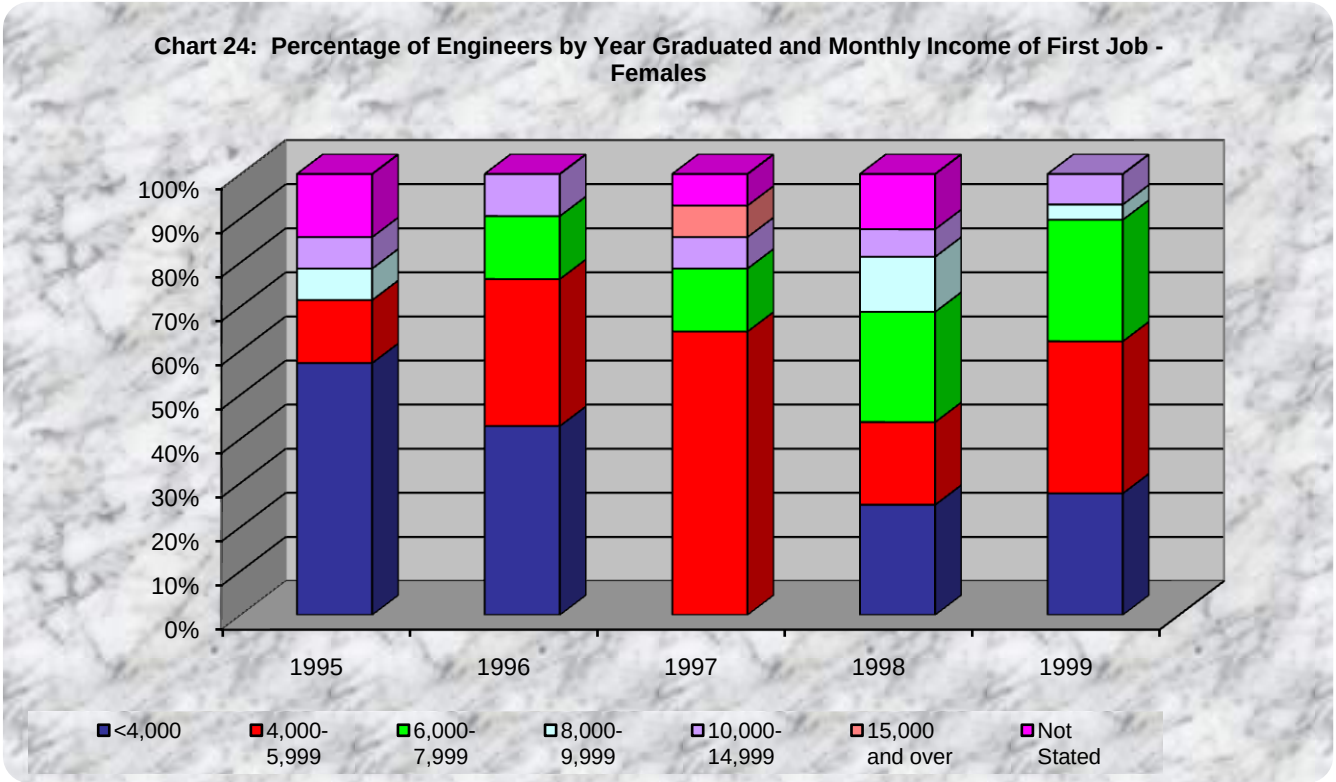


Table 11h: Percentage of Engineers by Year Graduated and Monthly Income of First Job - Females

(Column percentage of Table 11f)

Year Graduated	Total	Monthly Income of First Job (TT$)						
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Years	100	100	100	100	100	100	100	100
1995	15	28	6	0	25	14	0	40
1996	22	31	23	18	0	29	0	0
1997	15	0	29	12	0	14	100	20
1998	17	14	10	24	50	14	0	40
1999	31	28	32	47	25	29	0	0

Chart 25: Percentage of Engineers by Year Graduated and Monthly Income of First Job - Females

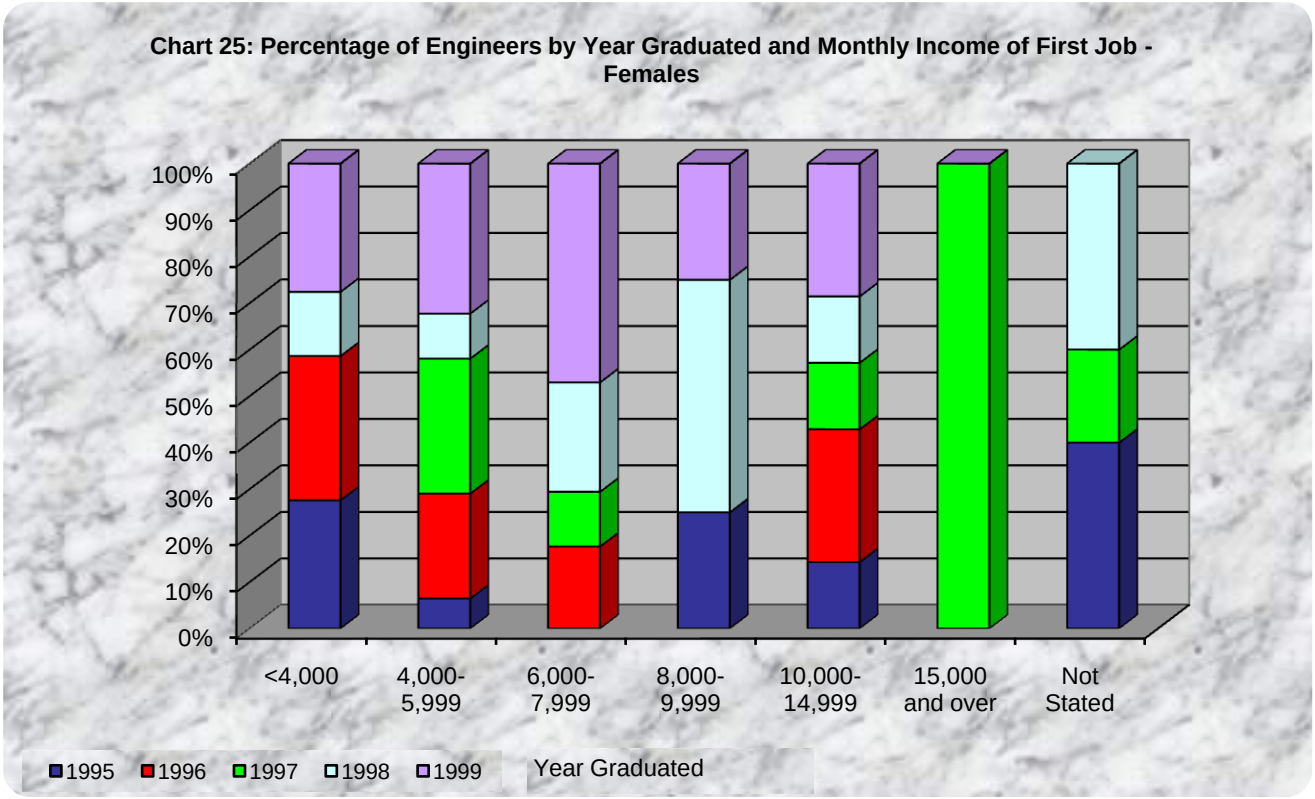


Table 12: No. of Engineers by Area of Specialisation and Monthly Income of First Job

Area of Specialisation	Total	Monthly Income of First Job (TT$)							
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Areas	411	130	133	63	21	30	12	19	3
Agric	3	0	2	1	0	0	0	0	0
Chem & Process	69	24	17	8	3	8	1	7	1
Civil	48	2	25	14	2	2	1	2	0
Elect & Comp	105	29	32	22	5	8	4	4	1
Industrial	37	13	15	3	1	3	0	2	0
Mechanical	117	47	34	13	7	8	4	4	0
Surveying	32	15	8	2	3	1	2	0	1

Table 12a: Percentage of Engineers by Area of Specialisation and Monthly Income of First Job

(Row percentage of Table 12)

Area of Specialisation	Total	Monthly Income of First Job (TT$)							
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Areas	100	32	32	15	5	7	3	5	1
Agric	100	0	67	33	0	0	0	0	0
Chem & Process	100	35	25	12	4	12	1	10	1
Civil	100	4	52	29	4	4	2	4	0
Elect & Comp	100	28	30	21	5	8	4	4	1
Industrial	100	35	41	8	3	8	0	5	0
Mechanical	100	40	29	11	6	7	3	3	0
Surveying	100	47	25	6	9	3	6	0	3

Table 12a illustrates that the majority of graduates in Civil engineering (52%), Industrial engineering (41%), and Electrical and Computer engineering (30%) earned a higher monthly income ($4,000-$5,999) in their first job, relative to their counterparts in the other areas of specialisation. The largest proportion of graduates in Surveying (47%), Mechanical (40%) and Chemical and Process engineering (35%) received a monthly income of under $4,000 in their first job. The data also show a starting monthly income of between $6,000-$7,999 for 29% and 21% of the Civil and Electrical and Computer engineers respectively.

Chart 26: Percentage of Engineers by Area of Specialisation and Monthly Income of First Job

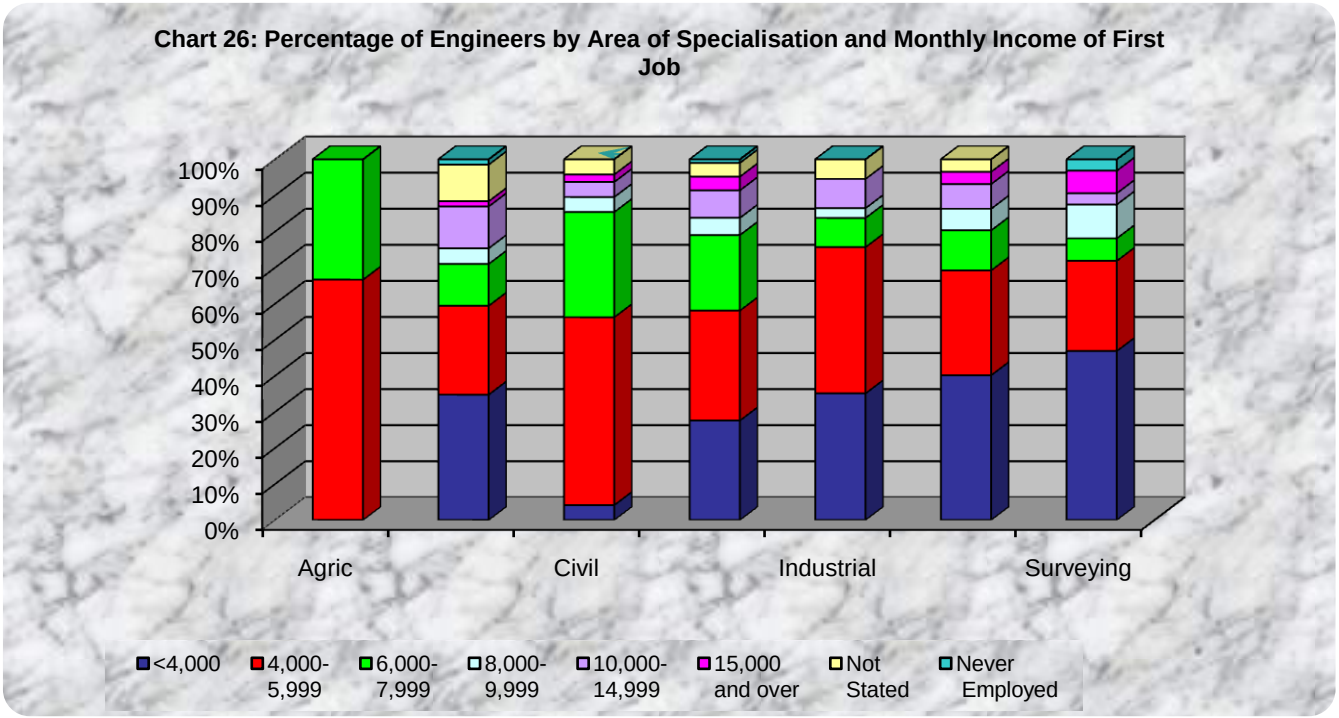


Table 12b: Percentage of Engineers by Area of Specialisation and Monthly Income of First Job

(Column percentage of Table 12)

Area of Specialisation	Total	Monthly Income of First Job (TT$)							
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Areas	100	100	100	100	100	100	100	100	100
Agric	1	0	2	2	0	0	0	0	0
Chem & Process	17	18	13	13	14	27	8	37	33
Civil	12	2	19	22	10	7	8	11	0
Elect & Comp	26	22	24	35	24	27	33	21	33
Industrial	9	10	11	5	5	10	0	11	0
Mechanical	28	36	26	21	33	27	33	21	0
Surveying	8	12	6	3	14	3	17	0	33

Table 12b shows that of the engineers earning a starting income of less than $4,000 monthly, the majority (36%) were graduates in Mechanical engineering, followed by 22% in Electrical and Computer engineering. Engineers in these two areas of specialisation also accounted for the largest percentage (33%) in the income group of $15,000 and over.

Chart 27: Percentage of Engineers by Area of Specialisation and Monthly Income of First Job

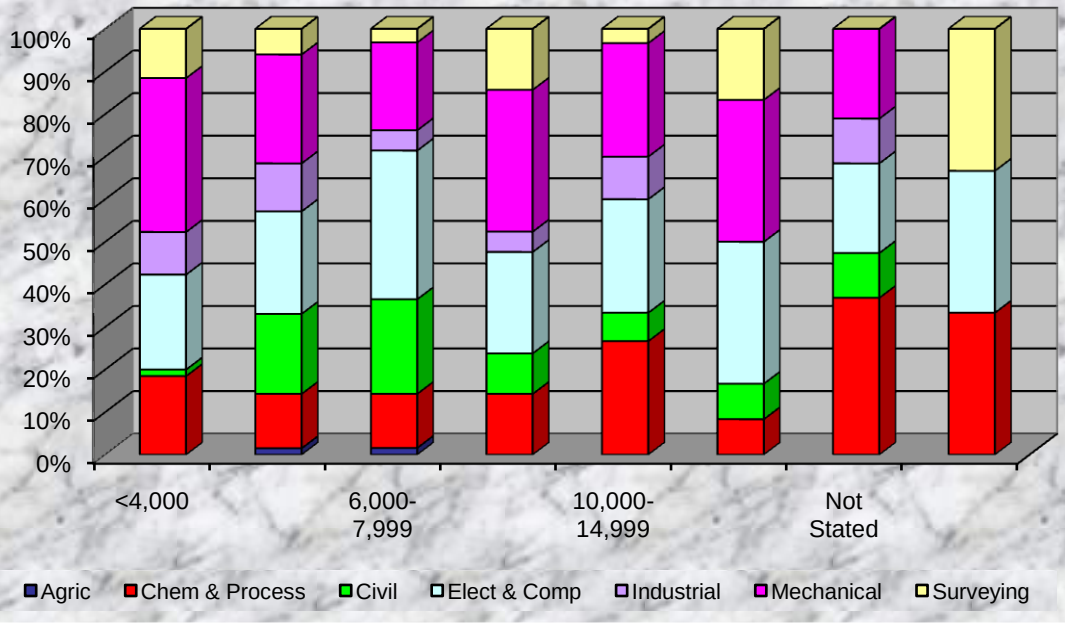


Table 12c: No. of Engineers by Area of Specialisation and Monthly Income of First Job - Males

Area of Specialisation	Total	Monthly Income of First Job (TT$)							
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Areas	317	101	102	46	17	23	11	14	3
Agric	1	0	0	1	0	0	0	0	0
Chem & Process	46	15	14	5	1	5	0	5	1
Civil	29	0	16	7	2	2	1	1	0
Elect & Comp	85	25	23	19	3	6	4	4	1
Industrial	25	11	11	0	1	1	0	1	0
Mechanical	105	40	31	12	7	8	4	3	0
Surveying	26	10	7	2	3	1	2	0	1

Table 12d: Percentage of Engineers by Area of Specialisation and Monthly Income of First Job - Males

(Row percentage of Table 12c)

Area of Specialisation	Total	Monthly Income of First Job (TT$)							
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Areas	100	32	32	15	5	7	3	4	1
Agric	100	0	0	100	0	0	0	0	0
Chem & Process	100	33	30	11	2	11	0	11	2
Civil	100	0	55	24	7	7	3	3	0
Elect & Comp	100	29	27	22	4	7	5	5	1
Industrial	100	44	44	0	4	4	0	4	0
Mechanical	100	38	30	11	7	8	4	3	0
Surveying	100	38	27	8	12	4	8	0	4

Generally, the male engineers in each area of specialisation earned under $4,000 monthly in their first job. The data, however, revealed that over half of the Civil engineers (55%) and 44% of the Industrial engineers earned incomes ranging between $4,000-$5,999 in their first job (Table 12d). Approximately, one tenth of the Chemical and Process engineers (11%) received monthly incomes of between $10,000-$14,999.

Chart 28: Percentage of Engineers by Area of Specialisation and Monthly Income of First Job - Males

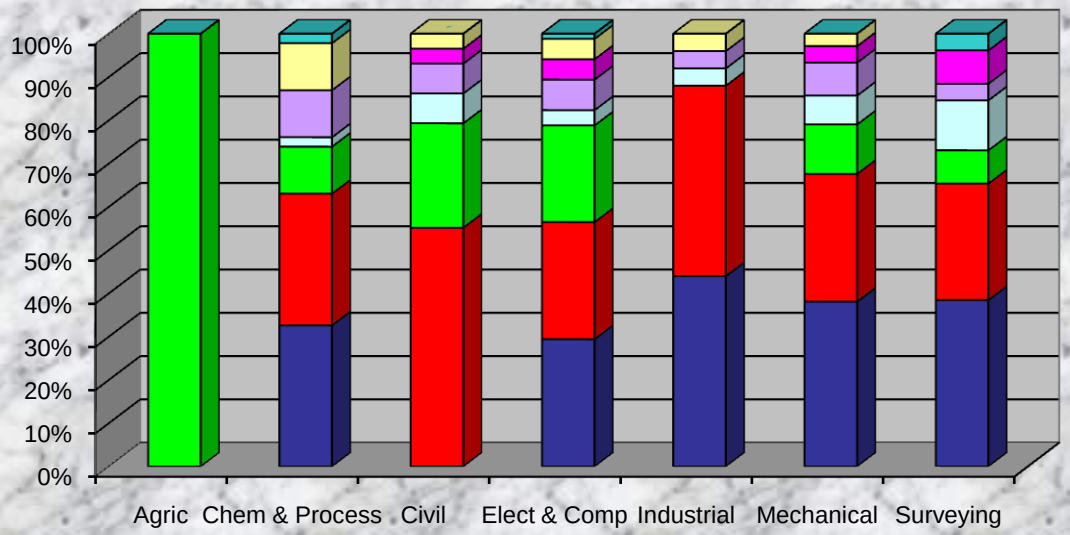


Table 12e: Percentage of Engineers by Area of Specialisation and Monthly Income of First Job - Males

(Column percentage of Table 12c)

Area of Specialisation	Total	Monthly Income of First Job (TT$)							
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Areas	100	100	100	100	100	100	100	100	100
Agric	0	0	0	2	0	0	0	0	0
Chem & Process	15	15	14	11	6	22	0	36	33
Civil	9	0	16	15	12	9	9	7	0
Elect & Comp	27	25	23	41	18	26	36	29	33
Industrial	8	11	11	0	6	4	0	7	0
Mechanical	33	40	30	26	41	35	36	21	0
Surveying	8	10	7	4	18	4	18	0	33

Chart 29: Percentage of Engineers by Area of Specialisation and Monthly Income of First Job - Males

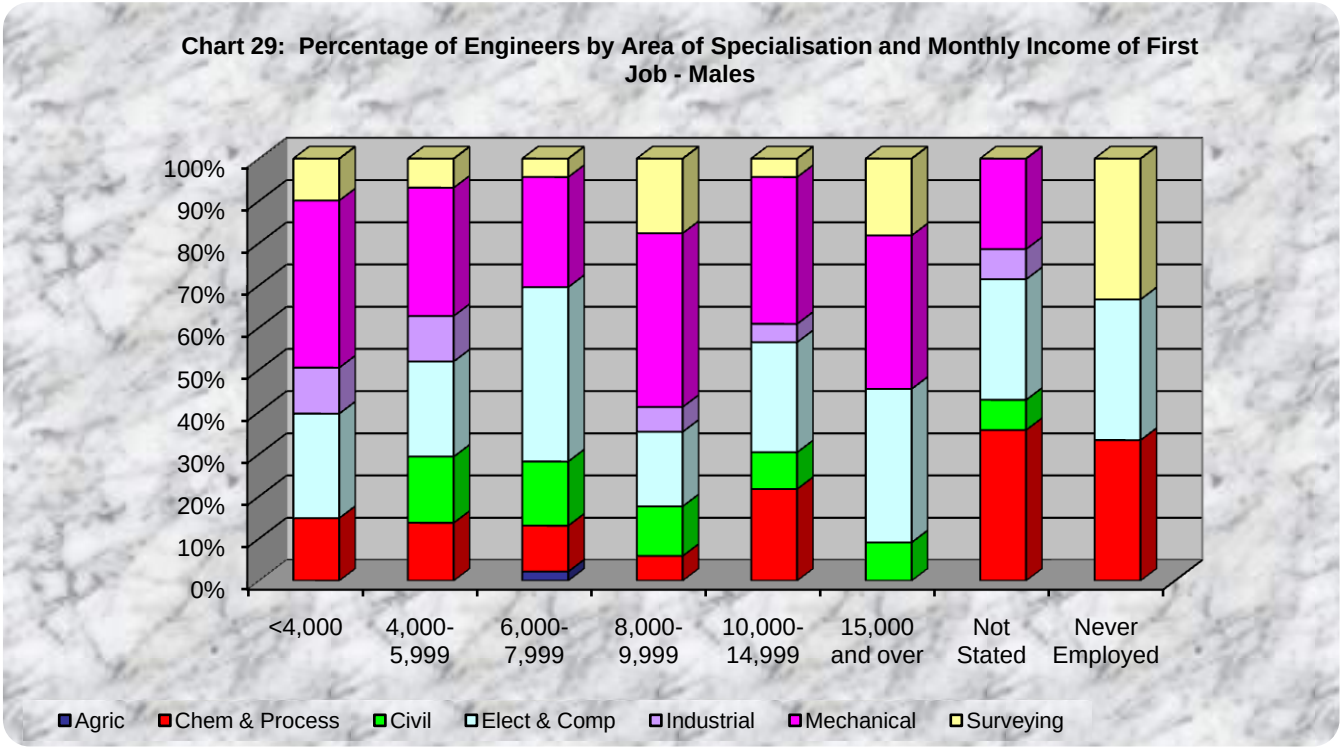


Table 12f: No. of Engineers by Area of Specialisation and Monthly Income of First Job - Females

Area of Specialisation	Total	Monthly Income of First Job (TT$)						
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Areas	94	29	31	17	4	7	1	5
Agric	2	0	2	0	0	0	0	0
Chem & Process	23	9	3	3	2	3	1	2
Civil	19	2	9	7	0	0	0	1
Elect & Comp	20	4	9	3	2	2	0	0
Industrial	12	2	4	3	0	2	0	1
Mechanical	12	7	3	1	0	0	0	1
Surveying	6	5	1	0	0	0	0	0

Table 12g: Percentage of Engineers by Area of Specialisation and Monthly Income of First Job - Females

(Row percentage of Table 12f)

Area of Specialisation	Total	Monthly Income of First Job (TT$)						
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Areas	100	31	33	18	4	7	1	5
Agric	100	0	100	0	0	0	0	0
Chem & Process	100	39	13	13	9	13	4	9
Civil	100	11	47	37	0	0	0	5
Elect & Comp	100	20	45	15	10	10	0	0
Industrial	100	17	33	25	0	17	0	8
Mechanical	100	58	25	8	0	0	0	8
Surveying	100	83	17	0	0	0	0	0

Unlike the male engineers, the majority of female engineers in three areas of specialisation, Civil (47%), Electrical and Computer (45%) and Industrial engineering (33%), obtained an income in the range of $4,000-$5,999 per month in their first job. A significant percentage of the female Land Surveyors (83%) and Mechanical engineers (58%) stated that they earned less than $4,000 monthly.

Chart 30: Percentage of Engineers by Area of Specialisation and Monthly Income of First Job - Females

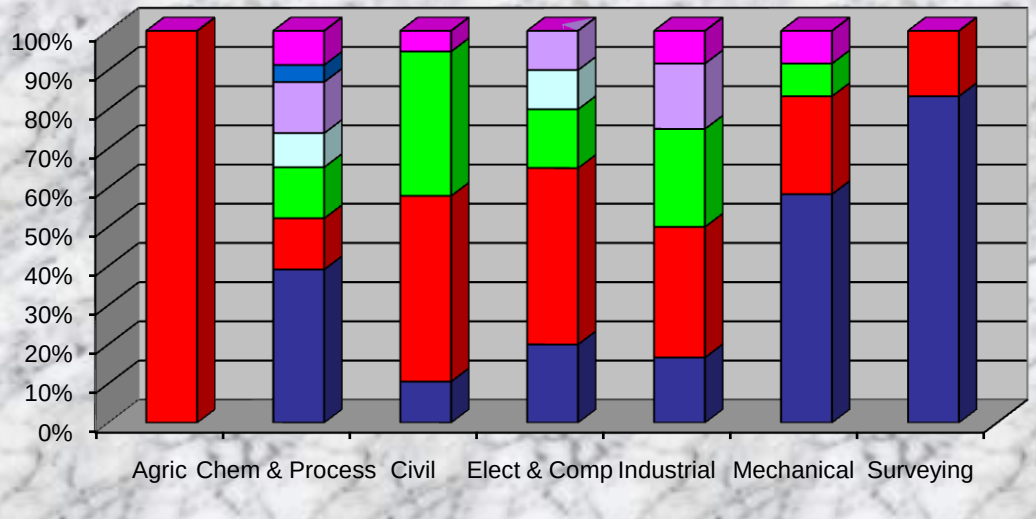


Table 12h: Percentage of Engineers by Area of Specialisation and Monthly Income of First Job - Females

(Column percentage of Table 12f)

Area of Specialisation	Total	Monthly Income of First Job (TT$)						
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Areas	100	100	100	100	100	100	100	100
Agric	2	0	6	0	0	0	0	0
Chem & Process	24	31	10	18	50	43	100	40
Civil	20	7	29	41	0	0	0	20
Elect & Comp	21	14	29	18	50	29	0	0
Industrial	13	7	13	18	0	29	0	20
Mechanical	13	24	10	6	0	0	0	20
Surveying	6	17	3	0	0	0	0	0

Chart 31: Percentage of Engineers by Area of Specialisation and Monthly Income of First Job - Females

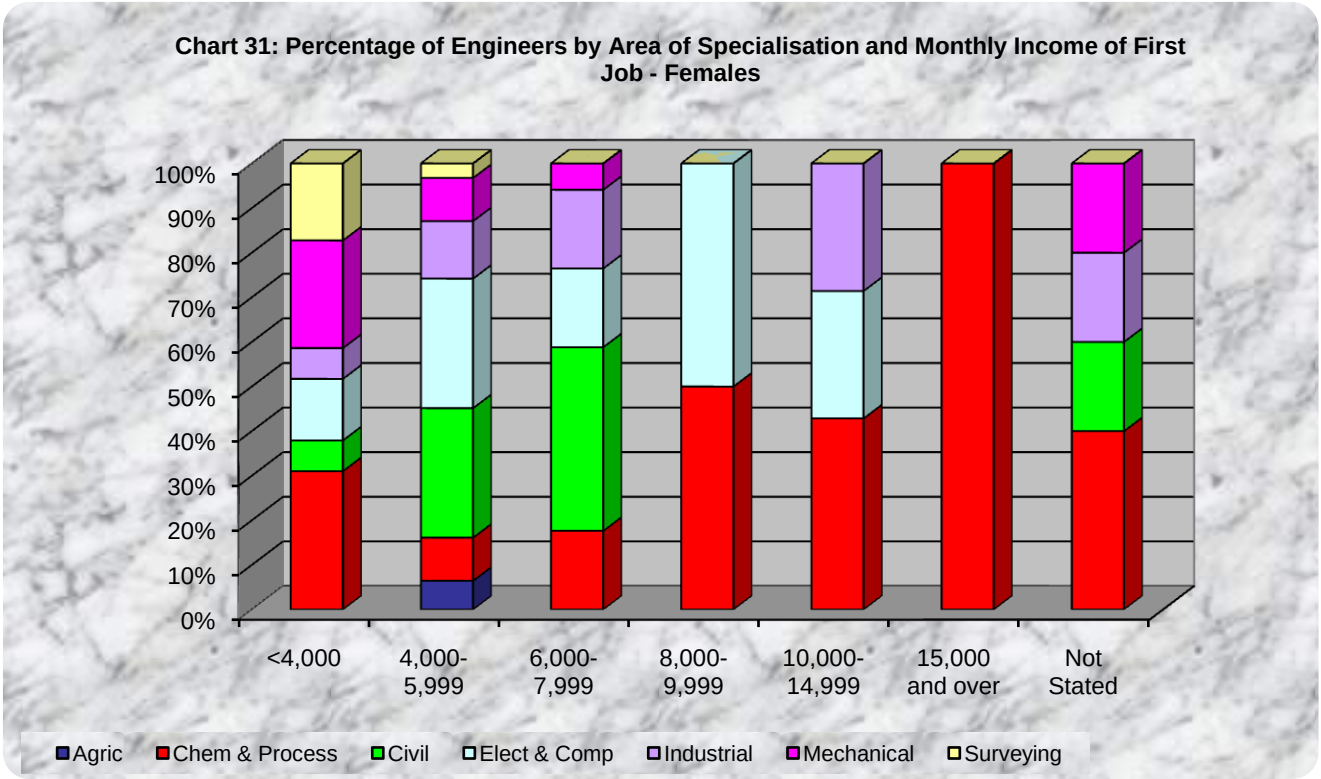


Table 13: No. of Engineers by Area of Specialisation and Monthly Income of Second Job

Area of Specialisation	Total	Monthly Income of Second Job (TT$)						
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Areas	283	20	94	65	41	37	11	15
Agric	1	1	0	0	0	0	0	0
Chem & Process	48	1	8	8	8	12	4	7
Civil	27	0	7	9	9	2	0	0
Elect & Comp	71	6	22	19	9	9	3	3
Industrial	27	2	11	6	4	3	0	1
Mechanical	88	9	34	19	8	10	4	4
Surveying	21	1	12	4	3	1	0	0

As engineers obtained job experience, they moved to positions with enhanced incomes. This is illustrated in the survey data which showed a substantial increase in the proportion of engineers in the higher income groups in the second and third job relative to the first, and a concomitant decline in the lower income groups.

Table 13a: Percentage of Engineers by Area of Specialisation and Monthly Income of Second Job

(Row percentage of Table 13)

Area of Specialisation	Total	Monthly Income of Second Job (TT$)						
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Areas	100	7	33	23	14	13	4	5
Agric	100	100	0	0	0	0	0	0
Chem & Process	100	2	17	17	17	25	8	15
Civil	100	0	26	33	33	7	0	0
Elect & Comp	100	8	31	27	13	13	4	4
Industrial	100	7	41	22	15	11	0	4
Mechanical	100	10	39	22	9	11	5	5
Surveying	100	5	57	19	14	5	0	0

Chart 32: Percentage of Engineers by Area of Specialisation and Monthly Income of Second Job

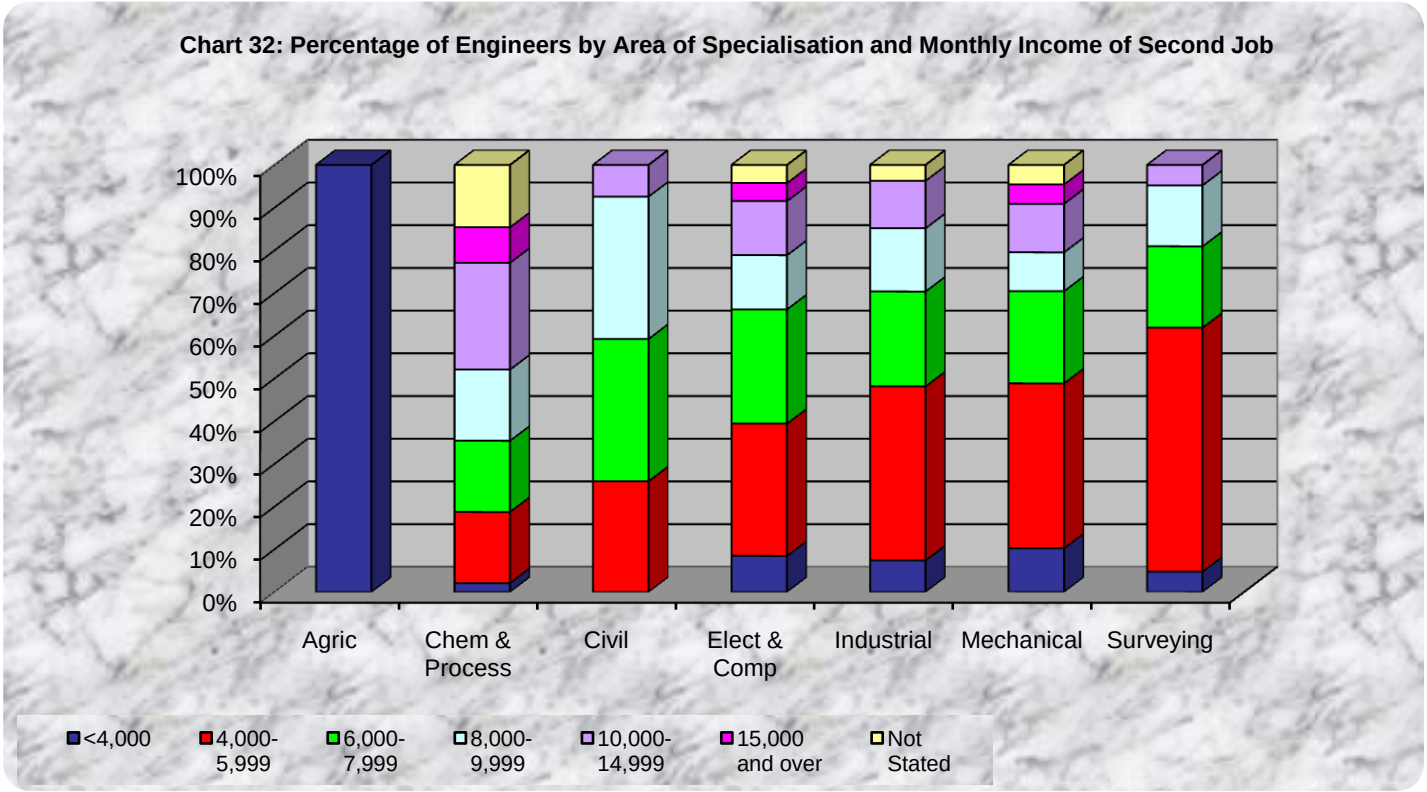


Table 14: No. of Engineers by Area of Specialisation and Monthly Income of Third Job

Area of Specialisation	Total	Monthly Income of Third Job (TT$)						
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Areas	134	8	26	26	22	27	19	6
Agric	1	0	1	0	0	0	0	0
Chem & Process	21	0	2	1	3	9	6	0
Civil	14	0	1	5	4	3	0	1
Elect & Comp	38	6	7	6	4	7	6	2
Industrial	7	0	2	1	3	1	0	0
Mechanical	43	2	9	10	7	5	7	3
Surveying	10	0	4	3	1	2	0	0

The proportion of engineers who earned less than $4,000 monthly decreased from 32% (Table 12a) in their first job to 7% (Table 13a) and 6% (Table 14a) in the second and third job respectively. However, in the $8,000-$9,999 income group the percentage of engineers rose from 5% in the first job (Table 12a) to 14% in the second job (Table 13a) and further to 16% in the third job (Table 14a). A similar pattern is depicted in the higher income groups. By area of specialisation, 25% and 43% of the Chemical and Process engineers earned $10,000-$14,000 in their second and third jobs respectively. In addition, 29% of the Chemical and Process engineers and 16% each of Electrical and Computer and Mechanical engineers earned $15,000 and over monthly in their third job.

Table 14a: Percentage of Engineers by Area of Specialisation and Monthly Income of Third Job

(Row percentage of Table 14)

Area of Specialisation	Total	Monthly Income of Third Job (TT$)						
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Areas	100	6	19	19	16	20	14	4
Agric	100	0	100	0	0	0	0	0
Chem & Process	100	0	10	5	14	43	29	0
Civil	100	0	7	36	29	21	0	7
Elect & Comp	100	16	18	16	11	18	16	5
Industrial	100	0	29	14	43	14	0	0
Mechanical	100	5	21	23	16	12	16	7
Surveying	100	0	40	30	10	20	0	0

Chart 33: Percentage of Engineers by Area of Specialisation and Monthly Income of Third Job

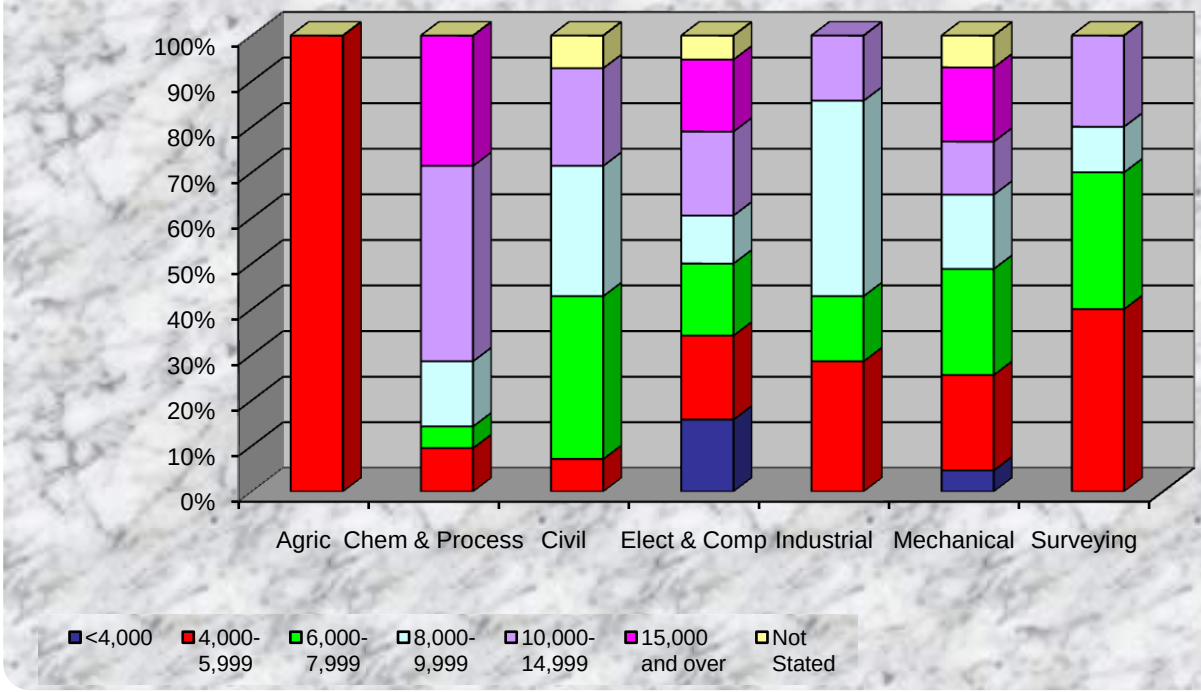


Table 15: No. of Engineers by Area of Specialisation and Monthly Income of Current Job

Area of Specialisation	Total	Monthly Income of Current Job (TT$) as at January 15, 2001							
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Areas	411	31	104	86	59	78	28	22	3
Agric	3	0	3	0	0	0	0	0	0
Chem & Process	69	2	6	10	9	24	7	10	1
Civil	48	1	14	18	9	4	1	1	0
Elect & Comp	105	8	23	24	13	23	9	4	1
Industrial	37	3	13	6	8	6	0	1	0
Mechanical	117	14	33	22	15	18	9	6	0
Surveying	32	3	12	6	5	3	2	0	1

Table 15 shows the monthly income of engineers in their current job as at January 15, 2001. The majority of the engineers (25%) earned between $4,000-$5,999 per month in their current job, 21% received between $6,000-$7,999 and 19% earned between $10,000-$14,999 (Table 15a).

Table 15a: Percentage of Engineers by Area of Specialisation and Monthly Income of Current Job

(Row percentage of Table 15)

Area of Specialisation	Total	Monthly Income of Current Job (TT$) as at January 15, 2001							
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Areas	100	8	25	21	14	19	7	5	1
Agric	100	0	100	0	0	0	0	0	0
Chem & Process	100	3	9	14	13	35	10	14	1
Civil	100	2	29	38	19	8	2	2	0
Elect & Comp	100	8	22	23	12	22	9	4	1
Industrial	100	8	35	16	22	16	0	3	0
Mechanical	100	12	28	19	13	15	8	5	0
Surveying	100	9	38	19	16	9	6	0	3

Approximately one third (35%) of the Chemical and Process engineers reported a monthly income of between $10,000-$14,999 while 10% received $15,000 and over. Thirty eight percent (38%) of the Civil engineers were in the income group $6,000-$7,999, and 35% and 38% of the Industrial engineers and Surveyors respectively earned between $4,000-$5,999 (Table 15a).

Chart 34: Percentage of Engineers by Area of Specialisation and Income of Current Job

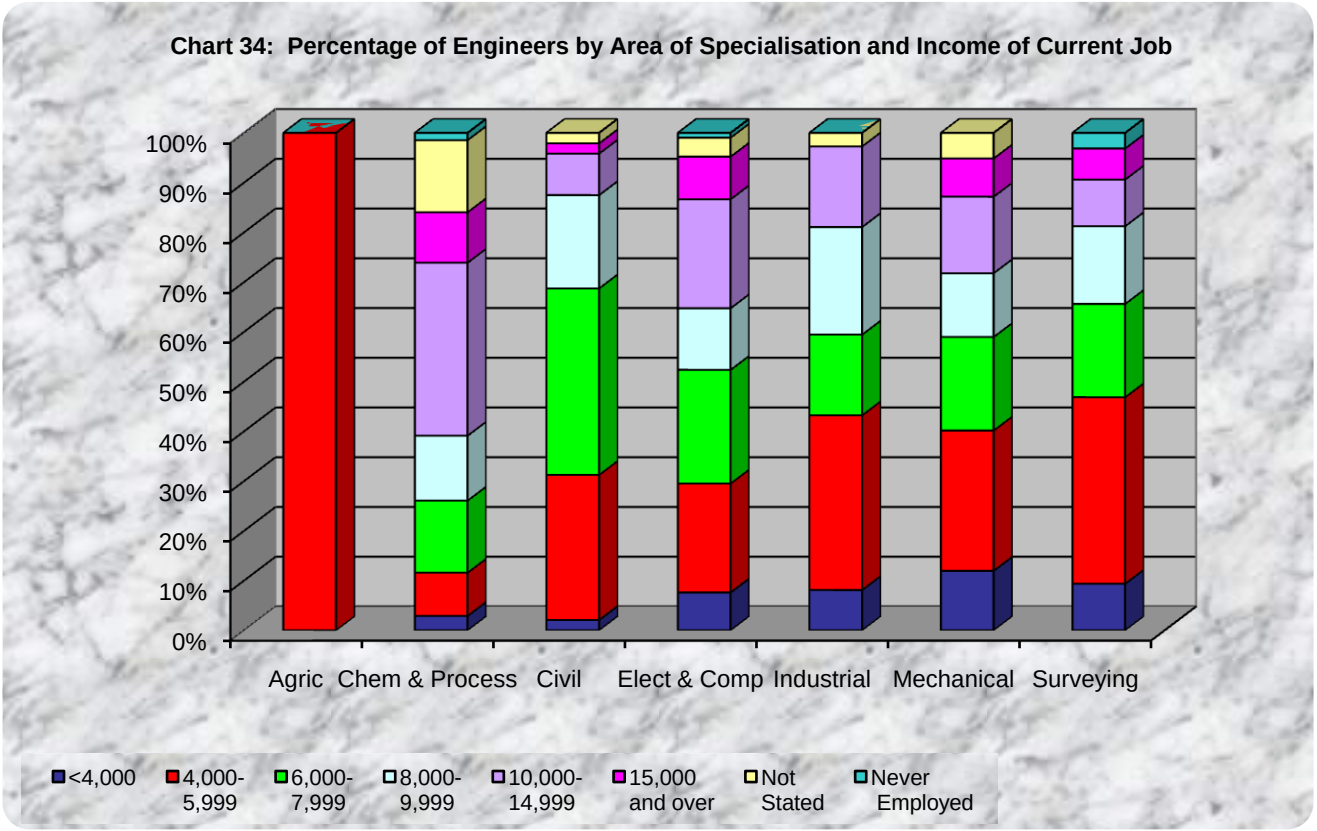


Table 15b: Percentage of Engineers by Area of Specialisation and Monthly Income of Current Job

(Column percentage of Table 15)

Area of Specialisation	Total	Monthly Income of Current Job (TT$) as at January 15, 2001							
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Areas	100	100	100	100	100	100	100	100	100
Agric	1	0	3	0	0	0	0	0	0
Chem & Process	17	6	6	12	15	31	25	45	33
Civil	12	3	13	21	15	5	4	5	0
Elect & Comp	26	26	22	28	22	29	32	18	33
Industrial	9	10	13	7	14	8	0	5	0
Mechanical	28	45	32	26	25	23	32	27	0
Surveying	8	10	12	7	8	4	7	0	33

Overall, Mechanical engineers comprised the largest group (45%) that earned less than $4,000 (Table 15b). In the higher income groups of $10,000-$14,999 and $15,000 and over, the largest proportion of engineers was from Chemical and Process, Electrical and Computer and Mechanical engineering.

Table 15c: No. of Engineers by Area of Specialisation and Monthly Income of Current Job - Males

Area of Specialisation	Total	Monthly Income of Current Job (TT$) as at January 15, 2001							
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Areas	317	28	78	62	40	65	24	17	3
Agric	1	0	1	0	0	0	0	0	0
Chem & Process	46	1	5	5	4	16	6	8	1
Civil	29	0	8	10	6	4	1	0	0
Elect & Comp	85	8	18	18	9	20	7	4	1
Industrial	25	3	10	4	4	4	0	0	0
Mechanical	105	14	28	19	13	18	8	5	0
Surveying	26	2	8	6	4	3	2	0	1

Table 15d: Percentage of Engineers by Area of Specialisation and Monthly Income of Current Job - Males

(Row percentage of Table 15c)

Area of Specialisation	Total	Monthly Income of Current Job (TT$) as at January 15, 2001							
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Areas	100	9	25	20	13	21	8	5	1
Agric	100	0	100	0	0	0	0	0	0
Chem & Process	100	2	11	11	9	35	13	17	2
Civil	100	0	28	34	21	14	3	0	0
Elect & Comp	100	9	21	21	11	24	8	5	1
Industrial	100	12	40	16	16	16	0	0	0
Mechanical	100	13	27	18	12	17	8	5	0
Surveying	100	8	31	23	15	12	8	0	4

Tables 15d and 15g show that the smallest percentage of male (9%) and female (3%) engineers who graduated between 1995-1999 was earning less than $4,000 monthly as at 15th January, 2002. The largest proportion of males (25%) and females (28%) was in the income group of $4,000-$5,999. However, 13% of the males compared with 20% of females earned between $8,000-$9,999. In the higher income groups of $10,000-$14,999 and $15,000 and over, the proportion of male 21% and 8% exceeded that of females, 14% and 4% respectively.

Chart 35: Percentage of Engineers by Area of Specialisation and Income of Current Job - Males

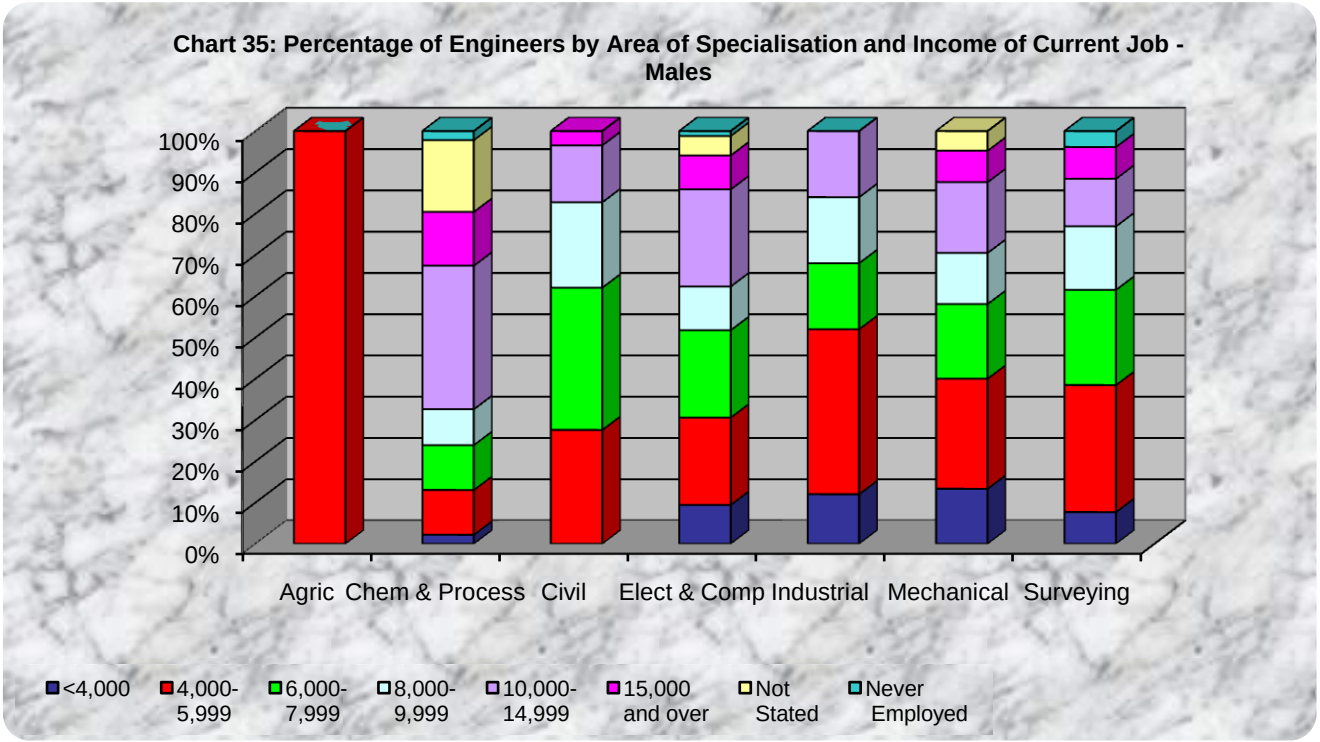


Table 15e: Percentage of Engineers by Area of Specialisation and Monthly Income of Current Job - Males

(Column percentage of Table 15c)

Area of Specialisation	Total	Monthly Income of Current Job (TT$) as at January 15, 2001							
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Areas	100	100	100	100	100	100	100	100	100
Agric	0	0	1	0	0	0	0	0	0
Chem & Process	15	4	6	8	10	25	25	47	33
Civil	9	0	10	16	15	6	4	0	0
Elect & Comp	27	29	23	29	23	31	29	24	33
Industrial	8	11	13	6	10	6	0	0	0
Mechanical	33	50	36	31	33	28	33	29	0
Surveying	8	7	10	10	10	5	8	0	33

By area of specialisation, males in Mechanical and Electrical and Computer engineering and females in Electrical and Computer and Chemical and Process engineering were the highest paid engineers. (Tables 15e and 15h).

Table 15f: No. of Engineers by Area of Specialisation and Monthly Income of Current Job - Females

Area of Specialisation	Total	Monthly Income of Current Job (TT$) as at January 15, 2001						
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Areas	94	3	26	24	19	13	4	5
Agric	2	0	2	0	0	0	0	0
Chem & Process	23	1	1	5	5	8	1	2
Civil	19	1	6	8	3	0	0	1
Elect & Comp	20	0	5	6	4	3	2	0
Industrial	12	0	3	2	4	2	0	1
Mechanical	12	0	5	3	2	0	1	1
Surveying	6	1	4	0	1	0	0	0

Table 15g: Percentage of Engineers by Area of Specialisation and Monthly Income of Current Job - Females

(Row percentage of Table 15f)

Area of Specialisation	Total	Monthly Income of Current Job (TT$) as at January 15, 2001						
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Areas	100	3	28	26	20	14	4	5
Agric	100	0	100	0	0	0	0	0
Chem & Process	100	4	4	22	22	35	4	9
Civil	100	5	32	42	16	0	0	5
Elect & Comp	100	0	25	30	20	15	10	0
Industrial	100	0	25	17	33	17	0	8
Mechanical	100	0	42	25	17	0	8	8
Surveying	100	17	67	0	17	0	0	0

Chart 36: Percentage of Engineers by Area of Specialisation and Monthly Income of Current Job - Females

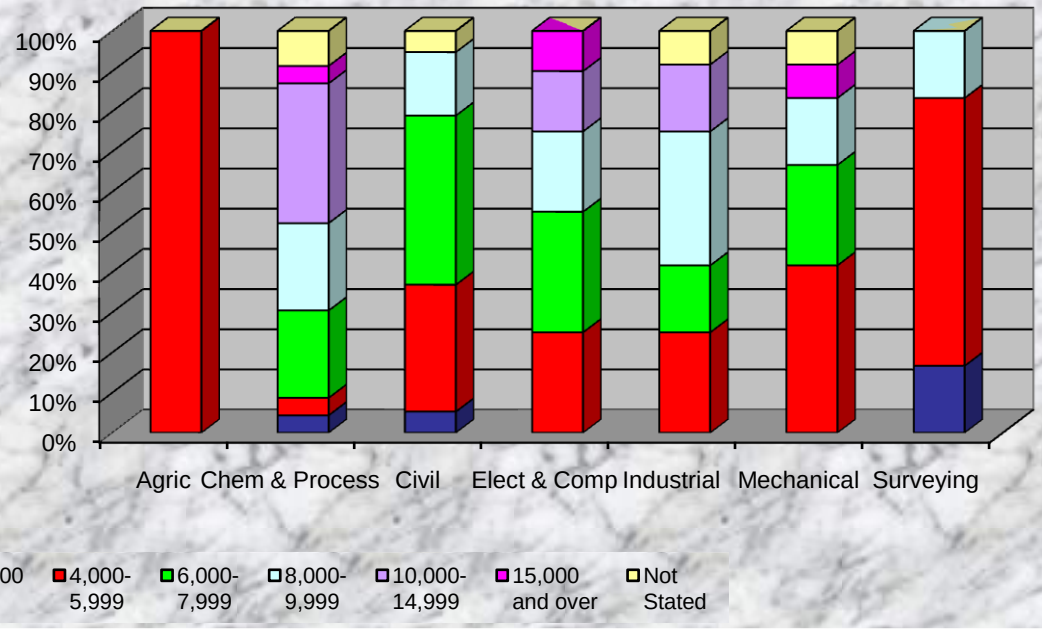


Table 15h: Percentage of Engineers by Area of Specialisation and Monthly Income of Current Job - Females

(Column percentage of Table 15f)

Area of Specialisation	Total	Monthly Income of Current Job (TT$) as at January 15, 2001						
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Areas	100	100	100	100	100	100	100	100
Agric	2	0	8	0	0	0	0	0
Chem & Process	24	33	4	21	26	62	25	40
Civil	20	33	23	33	16	0	0	20
Elect & Comp	21	0	19	25	21	23	50	0
Industrial	13	0	12	8	21	15	0	20
Mechanical	13	0	19	13	11	0	25	20
Surveying	6	33	15	0	5	0	0	0

Table 16: No. of Engineers by Sector, Area of Specialisation and Current Monthly Income

Government

Area of Specialisation	Total	Current Monthly Income (TT$)					
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
All Areas	37	5	17	9	5	1	0
Agric	3	0	3	0	0	0	0
Chem & Process	1	0	0	0	1	0	0
Civil	9	0	4	3	2	0	0
Elect & Comp	3	1	1	0	1	0	0
Industrial	1	0	0	1	0	0	0
Mechanical	13	3	5	4	0	1	0
Surveying	7	1	4	1	1	0	0

Table 16a: Percentage of Engineers by Sector, Area of Specialisation and Current Monthly Income

Area of Specialisation	Total	Current Monthly Income (TT$)					
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
All Areas	100	14	46	24	14	3	0
Agric	100	0	100	0	0	0	0
Chem & Process	100	0	0	0	100	0	0
Civil	100	0	44	33	22	0	0
Elect & Comp	100	33	33	0	33	0	0
Industrial	100	0	0	100	0	0	0
Mechanical	100	23	38	31	0	8	0
Surveying	100	14	57	14	14	0	0

Table 16: No. of Engineers by Sector, Area of Specialisation and Current Monthly Income (continued)

Research Institutions

Area of Specialisation	Total	Current Monthly Income (TT$)					
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
All Areas	3	0	3	0	0	0	0
Elect & Comp	1	0	1	0	0	0	0
Industrial	1	0	1	0	0	0	0
Mechanical	1	0	1	0	0	0	0

Table 16b: Percentage of Engineers by Sector, Area of Specialisation and Current Monthly Income

Area of Specialisation	Total	Current Monthly Income (TT$)					
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
All Areas	100	0	100	0	0	0	0
Elect & Comp	100	0	100	0	0	0	0
Industrial	100	0	100	0	0	0	0
Mechanical	100	0	100	0	0	0	0

Table 16 shows the engineers by sector, area of specialisation and current monthly income. The majority of engineers in Government (46%), Research Institutions (100%) and Educational services (73%) earned a monthly income of between $4,000-$5,999 in their current job. Forty six percent of the engineers (46%) in the Public Utilities earned an income of $6,000-$7,999 per month. In the Private Enterprises where the majority (71%) of engineers was employed, 22% were in the salary range of $4,000-$5,999. The incomes of a further 21% were between $6,000-$7,999 while the same percentage earned an income in the $10,000-$14,999 range.

Table 16: No. of Engineers by Sector, Area of Specialisation and Current Monthly Income (continued)

Educational Services

Area of Specialisation	Total	Current Monthly Income (TT$)					
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
All Areas	11	1	8	2	0	0	0
Civil	3	0	2	1	0	0	0
Elect & Comp	2	0	2	0	0	0	0
Industrial	1	1	0	0	0	0	0
Mechanical	2	0	2	0	0	0	0
Surveying	3	0	2	1	0	0	0

Table 16c: Percentage of Engineers by Sector, Area of Specialisation and Current Monthly Income

Area of Specialisation	Total	Current Monthly Income (TT$)					
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
All Areas	100	9	73	18	0	0	0
Civil	100	0	67	33	0	0	0
Elect & Comp	100	0	100	0	0	0	0
Industrial	100	100	0	0	0	0	0
Mechanical	100	0	100	0	0	0	0
Surveying	100	0	67	33	0	0	0

Table 16: No. of Engineers by Sector, Area of Specialisation and Current Monthly Income (continued)

Public Enterprises

Area of Specialisation	Total	Current Monthly Income (TT$)						
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Areas	61	2	12	7	11	20	2	7
Chem & Process	22	0	1	1	2	12	1	5
Civil	3	0	0	0	1	1	1	0
Elect & Comp	11	0	2	2	4	3	0	0
Industrial	3	0	0	1	1	1	0	0
Mechanical	21	2	8	3	3	3	0	2
Surveying	1	0	1	0	0	0	0	0

Table 16d: Percentage of Engineers by Sector, Area of Specialisation and Current Monthly Income

Area of Specialisation	Total	Current Monthly Income (TT$)						
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Areas	100	3	20	11	18	33	3	11
Chem & Process	100	0	5	5	9	55	5	23
Civil	100	0	0	0	33	33	33	0
Elect & Comp	100	0	18	18	36	27	0	0
Industrial	100	0	0	33	33	33	0	0
Mechanical	100	10	38	14	14	14	0	10
Surveying	100	0	100	0	0	0	0	0

Table 16: No. of Engineers by Sector, Area of Specialisation and Current Monthly Income (continued)

Private Enterprises

Area of Specialisation	Total	Current Monthly Income (TT$)						
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Areas	270	20	59	57	40	56	25	13
Chem & Process	44	2	5	9	6	12	6	4
Civil	33	1	8	14	6	3	0	1
Elect & Comp	73	7	16	13	5	19	9	4
Industrial	26	1	9	4	7	5	0	0
Mechanical	75	8	16	13	12	14	8	4
Surveying	19	1	5	4	4	3	2	0

Table 16e: Percentage of Engineers by Sector, Area of Specialisation and Current Monthly Income

Area of Specialisation	Total	Current Monthly Income (TT$)						
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Areas	100	7	22	21	15	21	9	5
Chem & Process	100	5	11	20	14	27	14	9
Civil	100	3	24	42	18	9	0	3
Elect & Comp	100	10	22	18	7	26	12	5
Industrial	100	4	35	15	27	19	0	0
Mechanical	100	11	21	17	16	19	11	5
Surveying	100	5	26	21	21	16	11	0

Table 16: No. of Engineers by Sector, Area of Specialisation and Current Monthly Income (concluded)

Public Utilities

Area of Specialisation	Total	Current Monthly Income (TT$)					
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
All Areas	24	3	5	11	3	1	1
Elect & Comp	14	0	1	9	3	1	0
Industrial	4	1	3	0	0	0	0
Mechanical	5	1	1	2	0	0	1
Surveying	1	1	0	0	0	0	0

Table 16f: Percentage of Engineers by Sector, Area of Specialisation and Current Monthly Income

Area of Specialisation	Total	Current Monthly Income (TT$)					
		<4,000	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000 and over
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
All Areas	100	13	21	46	13	4	4
Elect & Comp	100	0	7	64	21	7	0
Industrial	100	25	75	0	0	0	0
Mechanical	100	20	20	40	0	0	20
Surveying	100	100	0	0	0	0	0

Table 17: No. of Engineers by Area of Specialisation and Sector Employed - First Job

Area of Specialisation	Total	Sector Employed - First Job							
		Government	Research Institutions	Educational Services	Public Enterprises	Private Enterprises	Public Utilities	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Areas	411	41	2	13	38	293	18	3	3
Agric	3	2	0	1	0	0	0	0	0
Chem & Process	69	4	1	1	12	49	0	1	1
Civil	48	9	0	2	1	36	0	0	0
Elect & Comp	105	4	1	4	9	74	11	1	1
Industrial	37	1	0	2	2	29	2	1	0
Mechanical	117	12	0	2	13	87	3	0	0
Surveying	32	9	0	1	1	18	2	0	1

Of the 411 engineers who responded to the survey, 293 (71%) obtained their first job in the Private Enterprises sector. Further, over 50% of the engineers in each area of specialisation were employed in this sector (Table 17a). The majority of the engineers (30%) in the Private Enterprises sector were graduates in Mechanical engineering, followed by Electrical and Computer engineering (25%) shown in Table 17b. In the Public Utilities, a relatively large percentage of the engineers (61%) was in Electrical and Computer engineering.

Table 17a: Percentage of Engineers by Area of Specialisation and Sector Employed - First Job

(Row percentage Table 17)

Area of Specialisation	Total	Sector Employed - First Job							
		Government	Research Institutions	Educational Services	Public Enterprises	Private Enterprises	Public Utilities	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Areas	100	10	0	3	9	71	4	1	1
Agric	100	67	0	33	0	0	0	0	0
Chem & Process	100	6	1	1	17	71	0	1	1
Civil	100	19	0	4	2	75	0	0	0
Elect & Comp	100	4	1	4	9	70	10	1	1
Industrial	100	3	0	5	5	78	5	3	0
Mechanical	100	10	0	2	11	74	3	0	0
Surveying	100	28	0	3	3	56	6	0	3

Chart 37: Percentage of Engineers by Area of Specialisation and Sector Employed - First Job

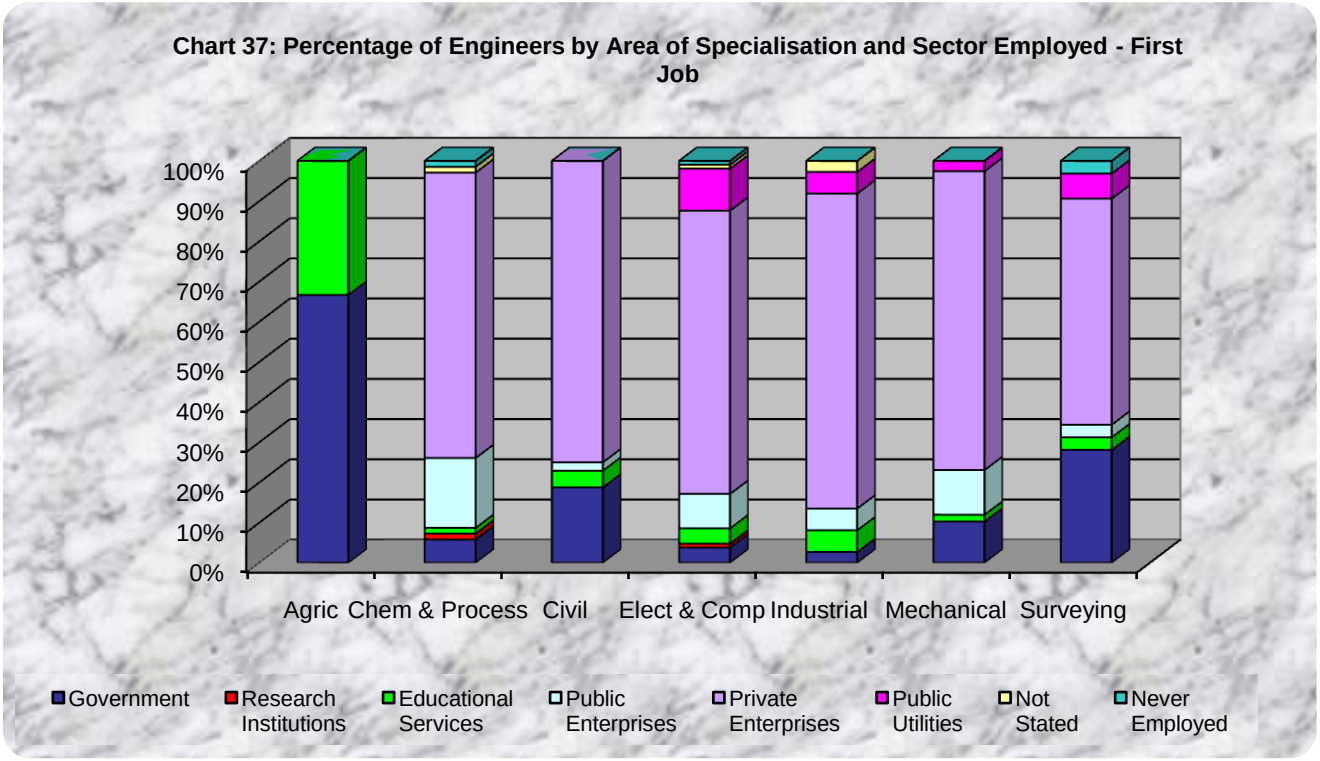


Table 17b: Percentage of Engineers by Area of Specialisation and Sector Employed - First Job

(Column percentage Table 17)

Area of Specialisation	Total	Sector Employed - First Job							
		Government	Research Institutions	Educational Services	Public Enterprises	Private Enterprises	Public Utilities	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Areas	100	100	100	100	100	100	100	100	100
Agric	1	5	0	8	0	0	0	0	0
Chem & Process	17	10	50	8	32	17	0	33	33
Civil	12	22	0	15	3	12	0	0	0
Elect & Comp	26	10	50	31	24	25	61	33	33
Industrial	9	2	0	15	5	10	11	33	0
Mechanical	28	29	0	15	34	30	17	0	0
Surveying	8	22	0	8	3	6	11	0	33

Chart 38: Percentage of Engineers by Area of Specialisation and Sector Employed - First Job

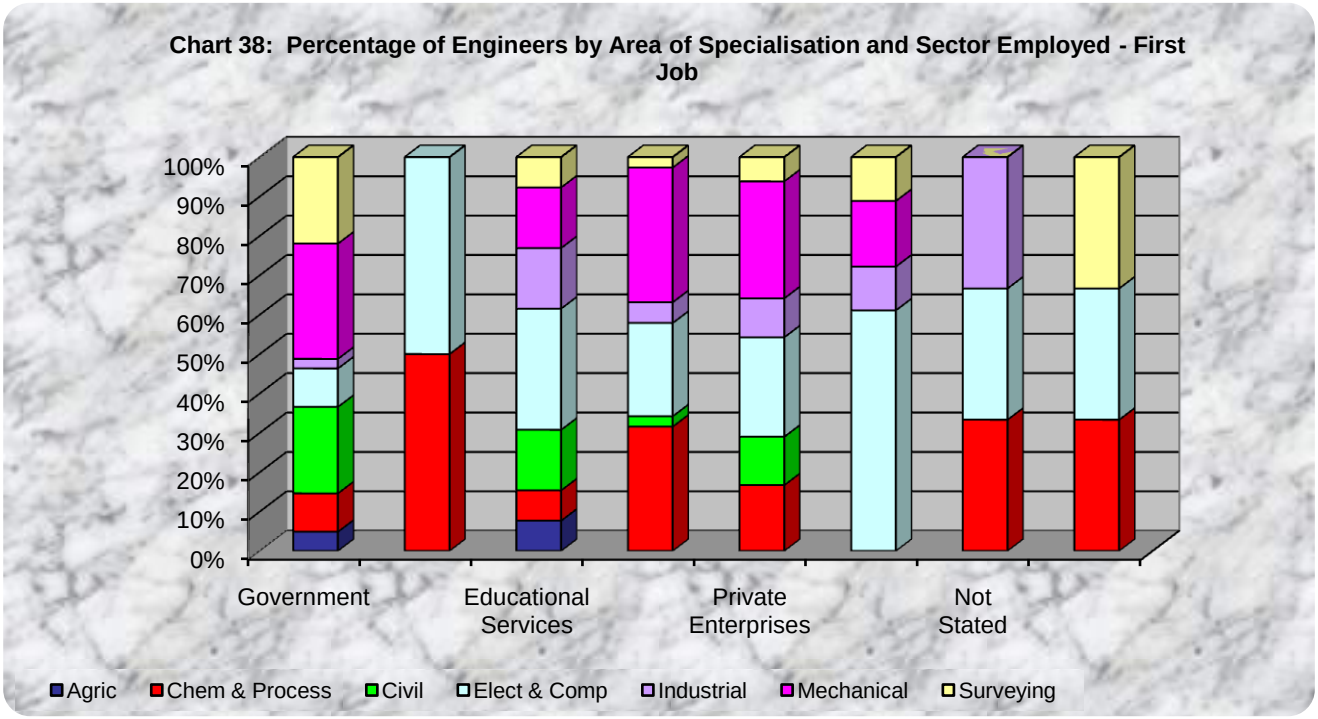


Table 18: No. of Engineers by Area of Specialisation and Sector Employed - Current Job

Area of Specialisation	Total	Sector Employed - Current Job							
		Government	Research Institutions	Educational Services	Public Enterprises	Private Enterprises	Public Utilities	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Areas	411	37	3	11	61	270	24	2	3
Agric	3	3	0	0	0	0	0	0	0
Chem & Process	69	1	0	0	22	44	0	1	1
Civil	48	9	0	3	3	33	0	0	0
Elect & Comp	105	3	1	2	11	73	14	0	1
Industrial	37	1	1	1	3	26	4	1	0
Mechanical	117	13	1	2	21	75	5	0	0
Surveying	32	7	0	3	1	19	1	0	1

The distribution of engineers shown in Table 18 is similar to that of Table 17, where the majority of engineers (66%) in their current job (as at 15th January, 2001) was employed in the Private Enterprises sector. Again, approximately 60% and more of the engineers in each area of specialisation were employed in this sector (Table 18a).

Table 18a: Percentage of Engineers by Area of Specialisation and Sector Employed - Current Job

(Row percentage of Table 18)

Area of Specialisation	Total	Sector Employed - Current Job							
		Government	Research Institutions	Educational Services	Public Enterprises	Private Enterprises	Public Utilities	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Areas	100	9	1	3	15	66	6	0	1
Agric	100	100	0	0	0	0	0	0	0
Chem & Process	100	1	0	0	32	64	0	1	1
Civil	100	19	0	6	6	69	0	0	0
Elect & Comp	100	3	1	2	10	70	13	0	1
Industrial	100	3	3	3	8	70	11	3	0
Mechanical	100	11	1	2	18	64	4	0	0
Surveying	100	22	0	9	3	59	3	0	3

Chart 39: Percentage of Engineers by Area of Specialisation and Sector Employed - Current Job

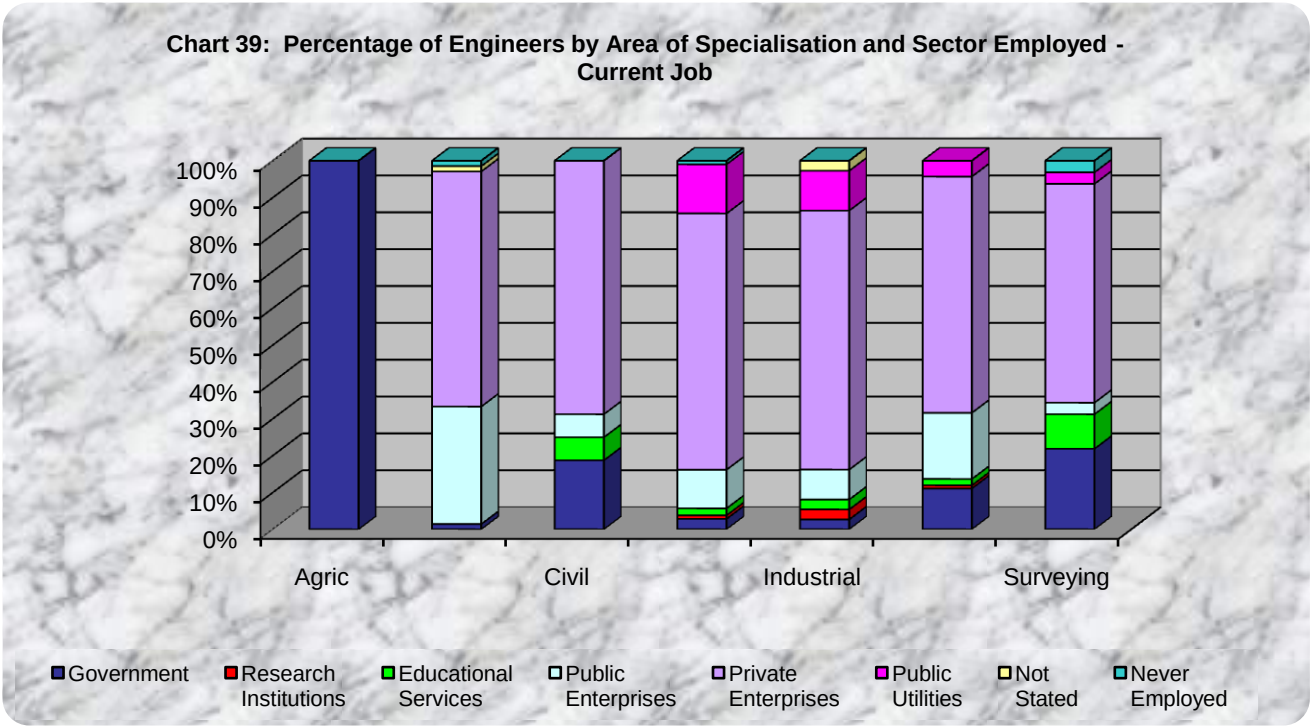


Table 18b: Percentage of Engineers by Area of Specialisation and Sector Employed - Current Job

(Column percentage of Table 18)

Area of Specialisation	Total	Sector Employed - Current Job							
		Government	Research Institutions	Educational Services	Public Enterprise	Private Enterprise	Public Utilities	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All Areas	100	100	100	100	100	100	100	100	100
Agric	1	8	0	0	0	0	0	0	0
Chem & Process	17	3	0	0	36	16	0	50	33
Civil	12	24	0	27	5	12	0	0	0
Elect & Comp	26	8	33	18	18	27	58	0	33
Industrial	9	3	33	9	5	10	17	50	0
Mechanical	28	35	33	18	34	28	21	0	0
Surveying	8	19	0	27	2	7	4	0	33

Chart 40: Percentage of Engineers by Area of Specialisation and Sector Employed - Current Job

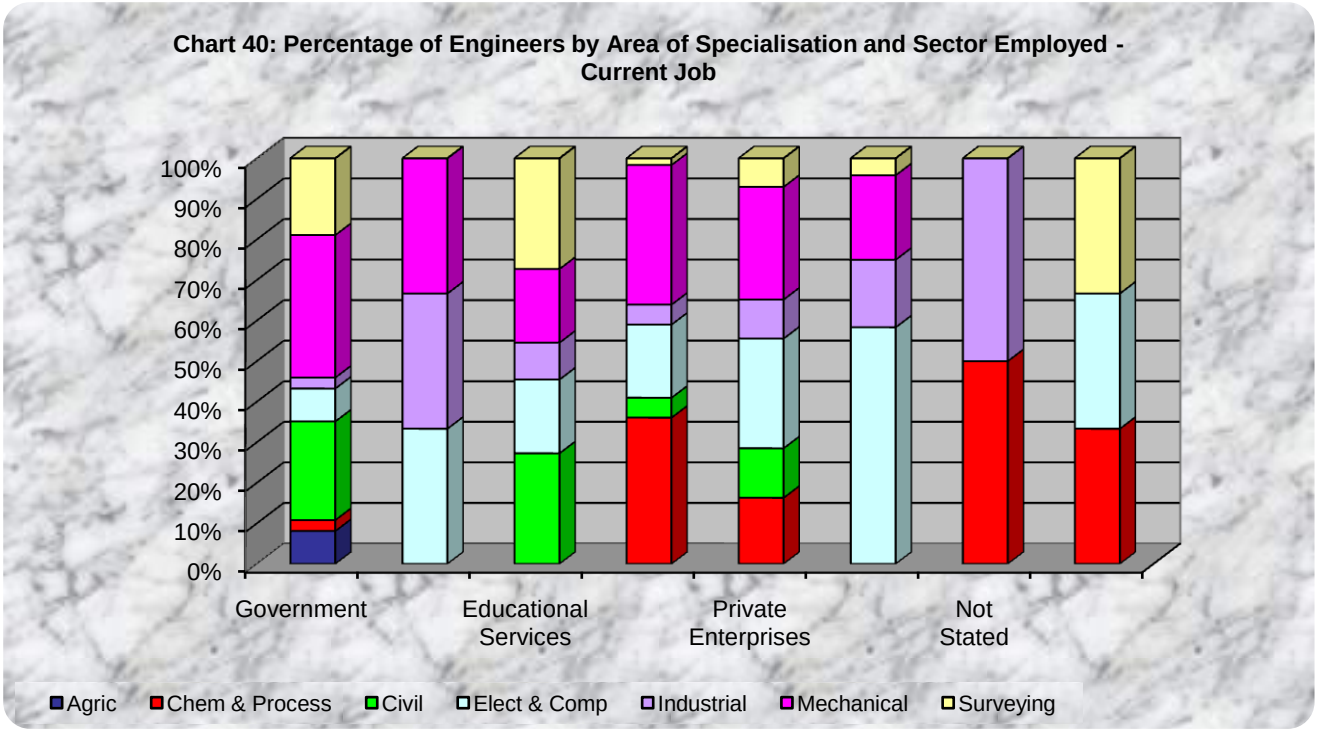


Table 19: No. of Engineers by Economic Activity and Area of Specialisation

Economic Activity Sector	Total	Area of Specialisation						
		Agric	Chem & Process	Civil	Elect & Comp	Industrial	Mechanical	Surveying
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Activities	411	3	69	48	105	37	117	32
Sugar Industry	5	0	0	0	2	0	3	0
Petroleum Industries	99	0	49	3	9	4	32	2
Manufacturing	62	0	11	2	11	13	25	0
Electricity and Water	22	0	0	1	9	3	7	2
Construction & Quarrying	58	0	1	12	13	6	19	7
Distribution Services including Restaurants	16	0	2	0	10	0	4	0
Transportation, Storage & Communication	48	0	0	1	32	5	7	3
Finance, Insurance, Real Estate & Business Servic	53	0	3	17	13	5	8	7
General Government	25	3	1	9	1	0	4	7
Education & Cultural Community Services	17	0	0	3	3	1	7	3
Personal Services	1	0	0	0	0	0	1	0
Not Stated	2	0	1	0	1	0	0	0
Never Employed	3	0	1	0	1	0	0	1

Table 19a shows that the largest percentage of engineers (24%) was employed in the Petroleum Industries. This is followed by 15% in Manufacturing, 14% in Construction and Quarrying, 13% in Business Services and 12% in Transport, Storage and Communication. By area of specialisation, a significant percent of the Chemical and Process engineers (71%) was employed in the Petroleum Industries. The majority of Mechanical engineers (27%) was also engaged in this economic activity sector. Moreover, most of the Civil engineers (35%) was employed in Business Services, 30% of the Electrical and Computer engineers were in Transportation, Storage and Communication, and 35% of the Industrial engineers were in Manufacturing.

Table 19a: Percentage of Engineers by Economic Activity and Area of Specialisation

(Column percentage of Table 19)

Economic Activity Sector	Total	Area of Specialisation						
		Agric	Chem & Process	Civil	Elect & Comp	Industrial	Mechanical	Surveying
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All Activities	100	100	100	100	100	100	100	100
Sugar Industry	1	0	0	0	2	0	3	0
Petroleum Industries	24	0	71	6	9	11	27	6
Manufacturing	15	0	16	4	10	35	21	0
Electricity and Water	5	0	0	2	9	8	6	6
Construction & Quarrying	14	0	1	25	12	16	16	22
Distribution Services including Restaurants	4	0	3	0	10	0	3	0
Transportation, Storage & Communication	12	0	0	2	30	14	6	9
Finance, Insurance, Real Estate & Business Servic	13	0	4	35	12	14	7	22
General Government	6	100	1	19	1	0	3	22
Education & Cultural Community Services	4	0	0	6	3	3	6	9
Personal Services	0	0	0	0	0	0	1	0
Not Stated	0	0	1	0	1	0	0	0
Never Employed	1	0	1	0	1	0	0	3

Table 20: Percentage of Engineers by Relevance of First Job to Area of Specialisation

Area of Specialisation	Total	Relevance of First Job					
		<25%	25-49%	50-74%	75% and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
All Areas	100	21	13	31	32	2	1
Agric	100	0	0	33	67	0	0
Chem & Process	100	19	22	38	19	1	1
Civil	100	4	4	19	71	2	0
Elect & Comp	100	30	10	31	26	2	1
Industrial	100	16	22	43	19	0	0
Mechanical	100	24	15	34	27	0	0
Surveying	100	16	3	9	56	13	3

There was a progressive increase in job relevance to area of specialisation between the engineers' first and subsequent second and third jobs. Overall, 32% of the engineers reported that their first job was 75% and over relevant to their area of specialisation (Table 20) while 38% and 44% indicated a similar degree of relevance between their second and third job respectively (Tables 21 and 22). A significantly large percentage of the Civil engineers (71%) and Agricultural engineers (67%) reported a high degree of relevance (75% and over) between their first job and area of specialisation.

Chart 41: Percentage of Engineers by Relevance of First Job to Area of Specialisation

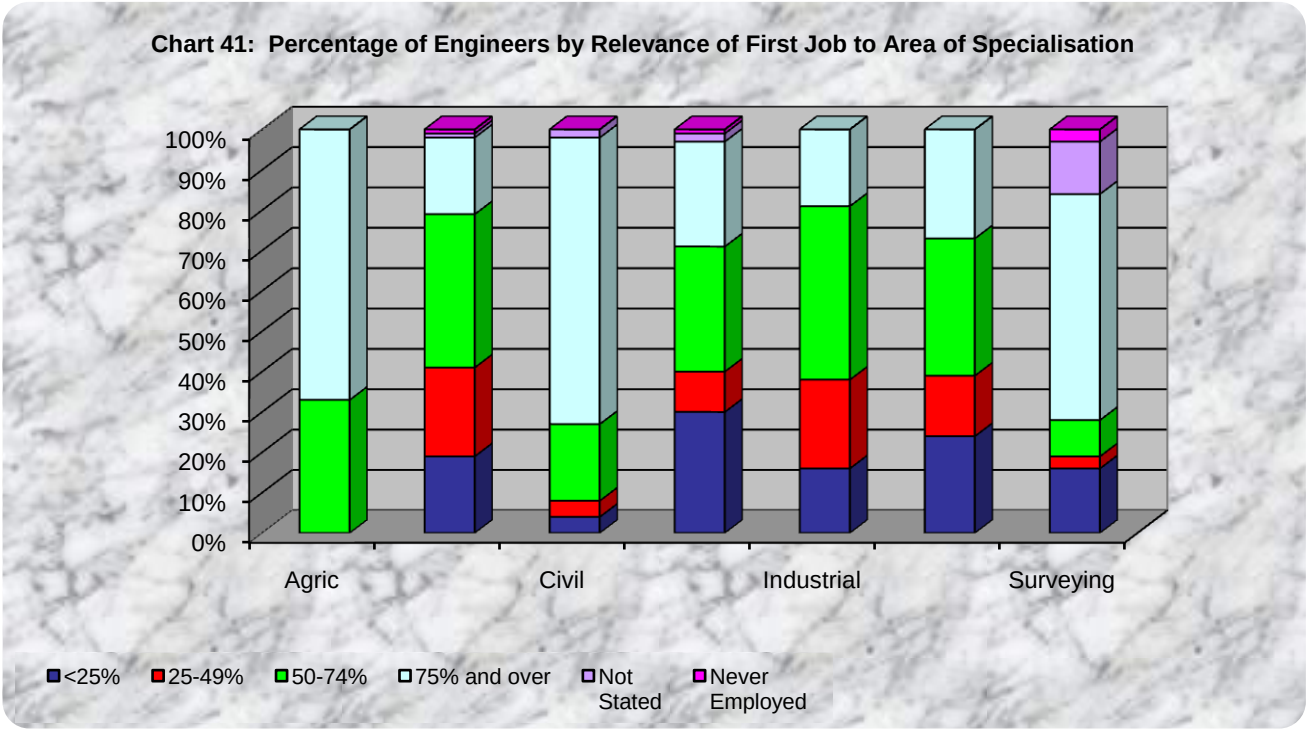


Table 21: Percentage of Engineers by Relevance of Second Job to Area of Specialisation

Area of Specialisation	Total	Relevance of Second Job				
		<25%	25-49%	50-74%	75% and over	Not Stated
	(1)	(2)	(3)	(4)	(5)	(6)
All Areas	100	12	19	29	38	2
Agric	100	0	0	100	0	0
Chem & Process	100	0	21	33	46	0
Civil	100	7	7	26	60	0
Elect & Comp	100	15	23	30	29	3
Industrial	100	7	22	30	41	0
Mechanical	100	22	20	26	32	0
Surveying	100	5	5	24	52	14

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Chart 42: Percentage of Engineers by Relevance of Second Job to Area of Specialisation

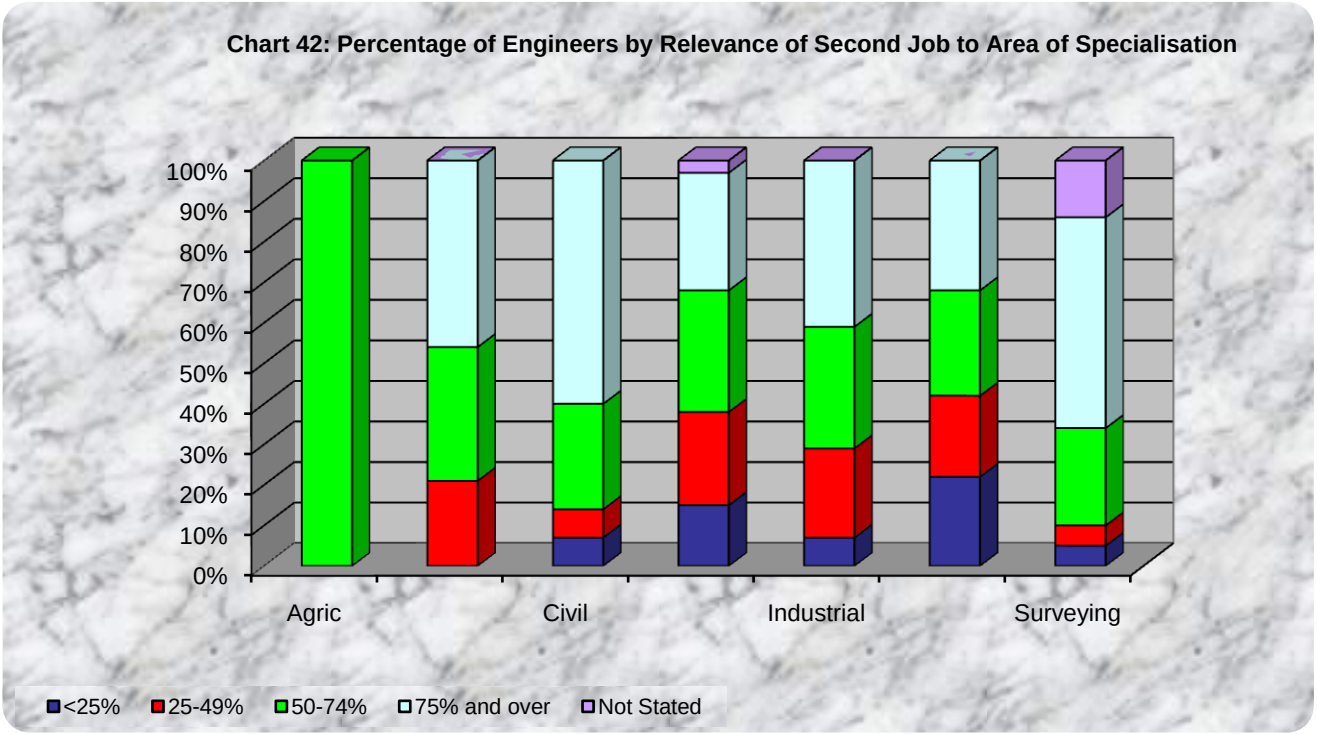

Table 22: Percentage of Engineers by Relevance of Third Job to Area of Specialisation

Area of Specialisation	Total	Relevance of Third Job			
		<25%	25-49%	50-74%	75% and over
	(1)	(2)	(3)	(4)	(5)
All Areas	100	10	17	29	44
Agric	100	0	0	100	0
Chem & Process	100	0	19	38	43
Civil	100	0	7	36	57
Elect & Comp	100	18	16	26	40
Industrial	100	0	14	57	29
Mechanical	100	12	19	23	46
Surveying	100	10	30	10	50

Chart 43: Percentage of Engineers by Relevance of Third Job to Area of Specialisation

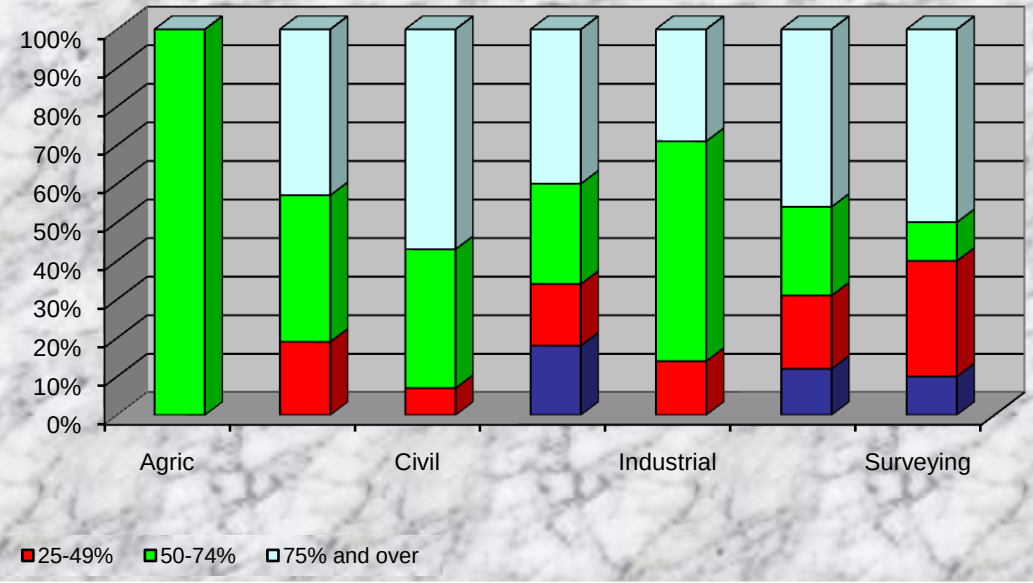

Table 23: Percentage of Engineers by Relevance of Current Job to Area of Specialisation

Area of Specialisation	Total	Relevance of Current Job					
		<25%	25-49%	50-74%	75% and over	Not Stated	Never Employed
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
All Areas	100	11	15	29	41	3	1
Agric	100	0	0	67	33	0	0
Chem & Process	100	0	17	35	44	3	1
Civil	100	2	6	19	71	2	0
Elect & Comp	100	16	14	33	32	4	1
Industrial	100	5	19	41	35	0	0
Mechanical	100	18	17	26	38	1	0
Surveying	100	9	9	19	51	9	3

As at 15th January 2001, approximately one quarter of the engineers (26%) indicated that their current employment was less than 50% related to their area of specialisation while a substantial proportion (70%) reported a degree of relationship of 50% and over (Table 23).

Chart 44: Percentage of Engineers by Relevance of Current Job to Area of Specialisation

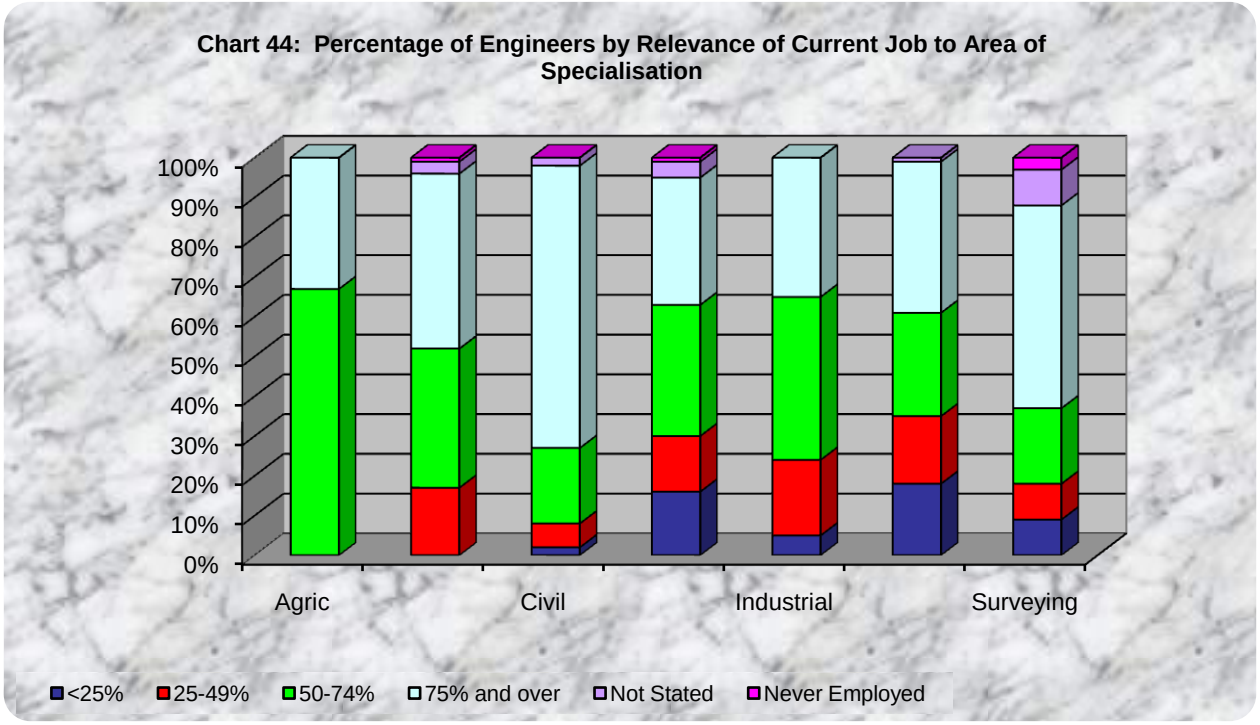

Table 24: Contribution of Component of Engineering Education to Engineer's Ability to Cope with Job

Component of Engineering Education	Degree of Contribution (Percentage of Engineers)			
	Least	Medium	Most	Not Stated
	(1)	(2)	(3)	(4)
Theory Content	19	50	28	3
Laboratory content	46	36	15	3
Project work	18	40	39	3
Industrial training	48	24	19	9
Guidance from Lecturers	50	35	11	4
Library Work	39	42	15	4
Seminars	50	31	12	7

In terms of the relevance of the engineering education, a substantial proportion of engineers indicated that Laboratory content (46%), Industrial training (48%), Guidance from lecturers (50%) and Seminars (50%) were the least helpful to them in their job. However, Theory content and Project work provided the most assistance.

Chart 45: Contribution of Component of Engineering Education to Engineer's Ability to Cope with Job

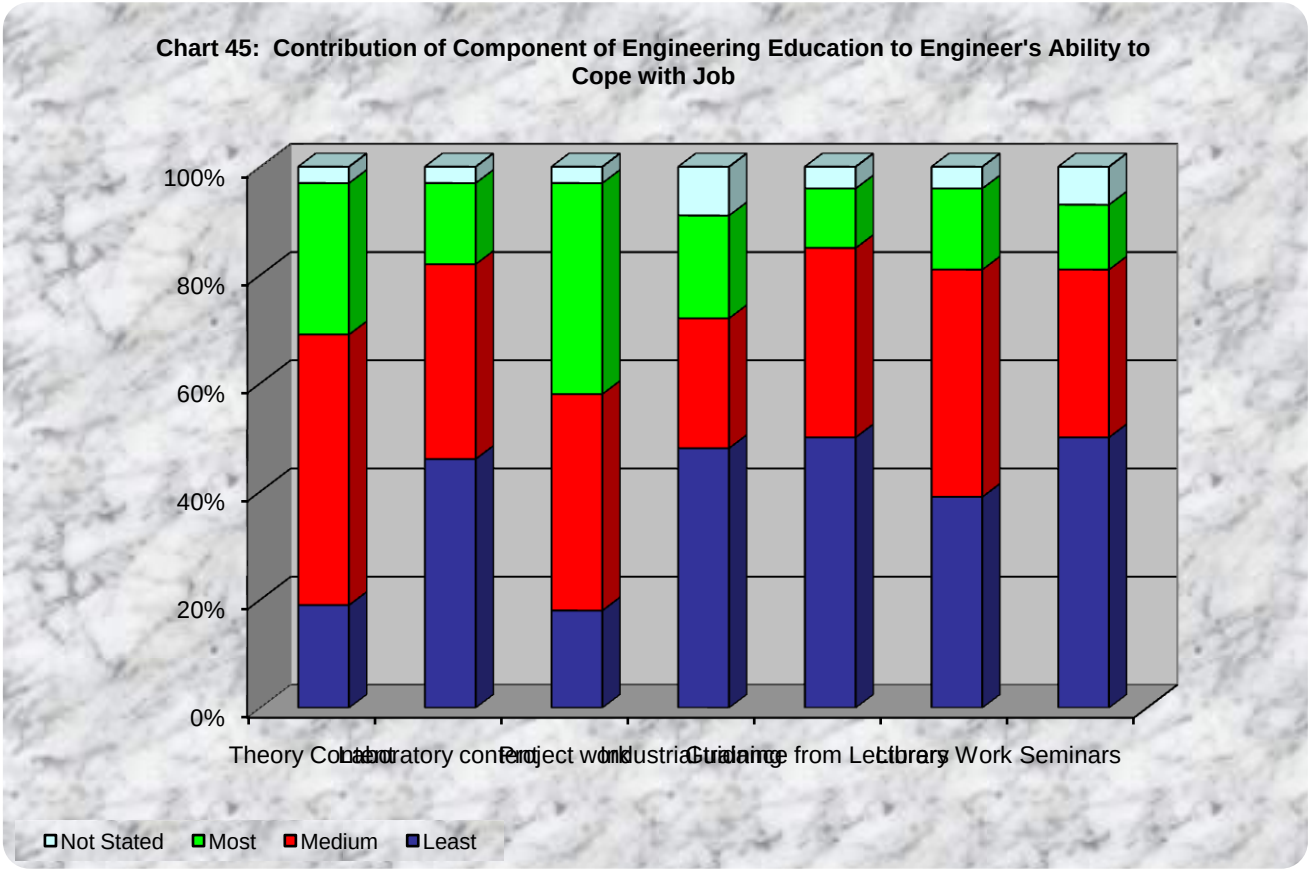

Table 25: Contribution of Engineering Education to Engineer's Ability to Cope with Job by Area of Specialisation

Theory Content

Area of Specialisation	Percentage of Engineers		
	Least	Medium	Most
	(1)	(2)	(3)
Agric	0	100	0
Chem & Process	13	51	36
Civil	19	27	54
Elect & Comp	21	56	23
Industrial	17	61	22
Mechanical	23	56	21
Surveying	13	55	32

In analysing the contribution of the different components of the engineering education to the graduates' ability to cope with their job, the majority of respondents in each area of specialisation gave a 'medium' ranking to Theory content. However, with respect to the Civil engineers, 54% ranked Theory content as most effective in assisting them with their job (Table 25). Except for Project work, the ranking of the remaining aspects of engineering education was 'least' as stated by a large proportion of the engineers. Industrial training and seminars received the lowest rating.

Table 25: Contribution of Engineering Education to Engineer's Ability to Cope with Job by Area of Specialisation (continued)

Laboratory Content

Area of Specialisation	Percentage of Engineers		
	Least	Medium	Most
	(1)	(2)	(3)
Agric	67	33	0
Chem & Process	39	39	22
Civil	46	37	17
Elect & Comp	37	44	19
Industrial	58	36	6
Mechanical	63	29	8
Surveying	33	33	33

Table 25: Contribution of Engineering Education to Engineer's Ability to Cope with Job by Area of Specialisation

Project Work

Area of Specialisation	Percentage of Engineers		
	Least	Medium	Most
	(1)	(2)	(3)
Agric	0	67	33
Chem & Process	12	40	48
Civil	23	48	29
Elect & Comp	27	34	38
Industrial	3	36	61
Mechanical	20	44	37
Surveying	19	47	34

Table 25: Contribution of Engineering Education to Engineer's Ability to Cope with Job by Area of Specialisation (continued)

Industrial Training

Area of Specialisation	Percentage of Engineers		
	Least	Medium	Most
	(1)	(2)	(3)
Agric	67	0	33
Chem & Process	39	31	30
Civil	69	26	5
Elect & Comp	65	16	19
Industrial	18	47	35
Mechanical	50	27	23
Surveying	79	14	7

Table 25: Contribution of Engineering Education to Engineer's Ability to Cope with Job by Area of Specialisation

Guidance from Lecturers

Area of Specialisation	Percentage of Engineers		
	Least	Medium	Most
	(1)	(2)	(3)
Agric	33	67	0
Chem & Process	56	35	9
Civil	27	50	23
Elect & Comp	63	29	8
Industrial	44	44	11
Mechanical	61	32	6
Surveying	19	55	26

Table 25: Contribution of Engineering Education to Engineer's Ability to Cope with Job by Area of Specialisation (concluded)

Library Work

Area of Specialisation	Percentage of Engineers		
	Least	Medium	Most
	(1)	(2)	(3)
Agric	67	33	0
Chem & Process	41	44	15
Civil	50	33	17
Elect & Comp	45	39	16
Industrial	33	50	17
Mechanical	32	53	15
Surveying	45	35	19

Table 25: Contribution of Engineering Education to Engineer's Ability to Cope with Job by Area of Specialisation

Seminars

Area of Specialisation	Percentage of Engineers		
	Least	Medium	Most
	(1)	(2)	(3)
Agric	67	33	0
Chem & Process	58	32	10
Civil	41	43	15
Elect & Comp	53	34	13
Industrial	47	47	6
Mechanical	58	28	14
Surveying	48	26	26

Table 26: Degree of Satisfaction Experienced in Job

Area of Job Satisfaction	Percentage of Engineers		
	Low	Medium	Most
	(1)	(2)	(3)
Interesting Work	5	36	59
Challenging Work	7	34	59
Learning Opportunity	7	30	63
Responsibility Level	6	34	60
Recognition/Status/Prestige	25	48	27
Job Security	15	46	38
Income	22	55	23
Autonomy & Independence	10	53	37
Fair Treatment	15	53	33
Physical Working Conditions	15	51	34
Relationship between Job & Academic Training & Experience	25	55	20
Contribution to Society	24	46	30
Career Advancement Policy	35	40	25
Creative/Innovative Work	21	47	31
Technically Proficient Colleagues	17	46	37

Table 26 shows that the majority of engineers ranked learning opportunity (63), responsibility level (60%), challenging work (59%) and interesting work (59%) as providing the most satisfaction. A relatively large proportion of engineers (38%) gave a ranking of 'most' to job security while 31% indicated the same level of satisfaction with respect to creative/innovative work. Approximately one third (35%) expressed a low level of job satisfaction in respect of career advancement policy of employers.

Table 27: Post-Graduate Qualification Obtained by Field of Study

Post-Graduate Qualification Obtained	Total	Field of Study (No. of Engineers)			
		Natural Science	Engineering	Agricultural Science	Business
	(1)	(2)	(3)	(4)	(5)
All Qualifications	22	1	15	1	5
Post-Graduate Certificate/Diploma	1	0	1	0	0
Master's Degree	16	1	10	0	5
M.Phil	5	0	4	1	0

Of the response from 411 engineers who graduated with a first degree between 1995-1999, only 5% (22) obtained post-graduate qualifications (Table 27). By field of study, 14 engineers or 64% obtained a master's level qualification in engineering while 5 or 23% received a similar qualification in business.

Table 28: Post-Graduate Qualification Pursued by Field of Study

Post-Graduate Qualification Pursued	Total	Field of Study (No. of Engineers)			
		Natural Science	Engineering	Business	Not Stated
	(1)	(2)	(3)	(4)	(5)
All Qualifications	134	2	102	23	7
Post-Graduate Certificate/Diploma	8	1	4	3	0
Master's Degree	111	1	90	20	0
M.Phil	6	0	6	0	0
Ph.D	2	0	2	0	0
Not Stated	7	0	0	0	7

The survey data indicate that of the 134 engineers (33%) who were pursuing post-graduate studies, the majority, 102 or 76%, was in the field of engineering and 23 or 17% in business studies.

Table 29: Country in which Post-Graduate Qualification Obtained/Pursed

Country	Post-Graduate Qualification (No. of Engineers)	
	Obtained	Pursued
	(1)	(2)
All Countries	22	134
Trinidad and Tobago (UWI)	14	110
United Kingdom	4	10
USA	1	3
Other	2	11
Not Stated	1	0

Table 29 shows that a significant number of graduate engineers (124) obtained/were pursuing a second degree qualification at the University of the West Indies (UWI). Only 14 of the total number of post-graduates studied in the United Kingdom and 4 in the United States of America.