Chapter 5 Occupational and Income Mobility

This chapter discusses the mobility patterns observed among the respondents. The discussion is limited to those who provide information about their first full time job after finishing their formal education and their current full time job. First, the general occupational mobility patterns as well as income mobility patterns are discussed. Then, the rest of this chapter evaluates how occupational mobility score and income mobility score vary across different variables, measuring the effect of demographic characteristics, family background, human capital investment and employment.

5.1 Mobility patterns

This section is divided into four parts. In the first part, occupational mobility across broad occupational groups is explored. The second part is a discussion regarding the first and current job ISEI score and income as well as the mobility patterns. The third part consists of a description of the directions of mobility. In the fourth part, occupational mobility patterns and income mobility patterns are looked into jointly.

5.1.1 Occupational mobility across occupational groups

As shown in Table 5.1, the professional group is less likely to change occupation, with 90% of them remaining in the group, followed by the administrative workers. Production workers are mostly likely to change occupation, which is more than 50%. This is followed by service and sales workers. Most of them who changed occupation chose to work in professional jobs, except for service and agricultural workers who moved into

production jobs. However, the sample size for agricultural workers is too small to draw any meaningful conclusion.

Table 5.1 Occupational mobility among different occupational groups

	First full time occupation							
Current full time occupation	Professio -nal	Adminis -trative	Clerical	Sales	Service	Agricul -ture	Product -ion	Total
Profession al	387 (90.2)	4 (14.8)	57 (19.4)	15 (20.0)	4 (15.4)		65 (24.3)	532 (47.4)
Adminis-trative	13 (3.0)	22 (81.5)	17 (5.8)	11 (14.7)			11 (4.1)	74 (6.6)
Clerical	21 (4.9)		185 (62.9)	6 (8.0)	4 (15.4)		42 (15.7)	258 (23.0)
Sales	2 (0.5)		18 (6.1)	38 (50.7)			10 (3.7)	68 (6.1)
Service		1 (3.7)	8 (2.7)	2 (2.7)	13 (50.0)		7 (2.6)	31 (2.8)
Agricul-ture						3 (60.0)	2 (0.7)	5 (0.4)
Product-ion	6 (1.4)		9 (3.1)	3 (4.0)	5 (19.2)	2 (40.0)	130 (48.7)	155 (13.8)
Total	429 (100.0)	27 (100.0)	294 (100.0)	75 (100.0)	26 (100.0)	5 (100.0)	267 (100.0)	1123 (100.0)

*It is noted that not all respondents answered all the questions.

5.1.2 First job, current job and mobility score

The distributions of the current job ISEI score and the first job ISEI score overlap one another, as shown in Figure 5.1. The first job ISEI score distribution is almost symmetrical while the distribution for current job ISEI score looked symmetrical. This means that the respondents' current job ISEI score has changed to concentrate at the higher end of the scale. The first quartile for the first job ISEI score distribution is lower than the corresponding in the current job ISEI score while the third quartiles for both plots almost lie on the same level. The lower 75% respondents' first and current job ISEI score are below a same level. The difference between the mean for the first and the

current job ISEI score is minimal, as shown in Table 5.2. The ISEI score for the first job is significantly lower than the status for the current job (t = -13.114, p-value = 0.000). The current job ISEI score is positively related to the first job ISEI score (r = 0.693, p-value = 0.000, r_s = 0.687, p-value = 0.000). The positive relationship is moderately strong. This means the higher the status of the first job, the higher will be the status of the current job.

As for the occupational mobility score, the centre half of the observations have occupational mobility score ranging from 0 to 6. The distribution is right-skewed, as shown in Figure 5.1. This implies that most of the observations are concentrated in the lower end of the scale. The average and standard deviation of occupational mobility score are 4.04 and 10.03 respectively. Using correlation, there is a significant negative relationship between the occupational mobility score and the first job ISEI score (r = -0.466, p-value = 0.000, r_s = -0.410, p-value = 0.000). This indicates that the lower the first job ISEI score, the greater will be the upward occupational mobility of an individual.

Both the distributions for the first job starting income and current job current income are right skewed, with the respondents' income level concentrate in the lower end of the scale. This is shown in Figure 5.1. As compared to the first and current job ISEI score distributions, the distribution for the first job and current job income overlap in a lesser degree. The third quartile for the first job starting income is almost on the same level as the current job current income distribution's median. The higher 50% respondents in the current income distribution is higher than the lower 75% observations in the first job starting income distribution. Current income is higher than the starting income for the first job (t = -27.607, p-value = 0.000). This is shown in Table 5.2. There

is a significant positive relationship between first job starting monthly income with current income (r = 0.615, p-value = 0.000, r_s = 0.601, p-value = 0.000). The positive relationship is moderately strong. This means the higher the starting income, the higher will be the current income.

The distribution for income mobility score is slightly right skewed with more respondents on the lower end of the distribution, as shown in Figure 5.1. The average and standard deviation of income mobility score is RM589.60 and RM709.50 respectively. As in the case for occupational mobility, there is a significant negative relationship between the first job starting income and income mobility (r = -0.101, p-value = 0.000, r_s = -0.207, p-value = 0.000). The lower the starting income an individual commands, the more upward income mobility he enjoys.

Figure 5.1 Box plots for first job ISEI score and income, current job ISEI score and income and occupational and income mobility

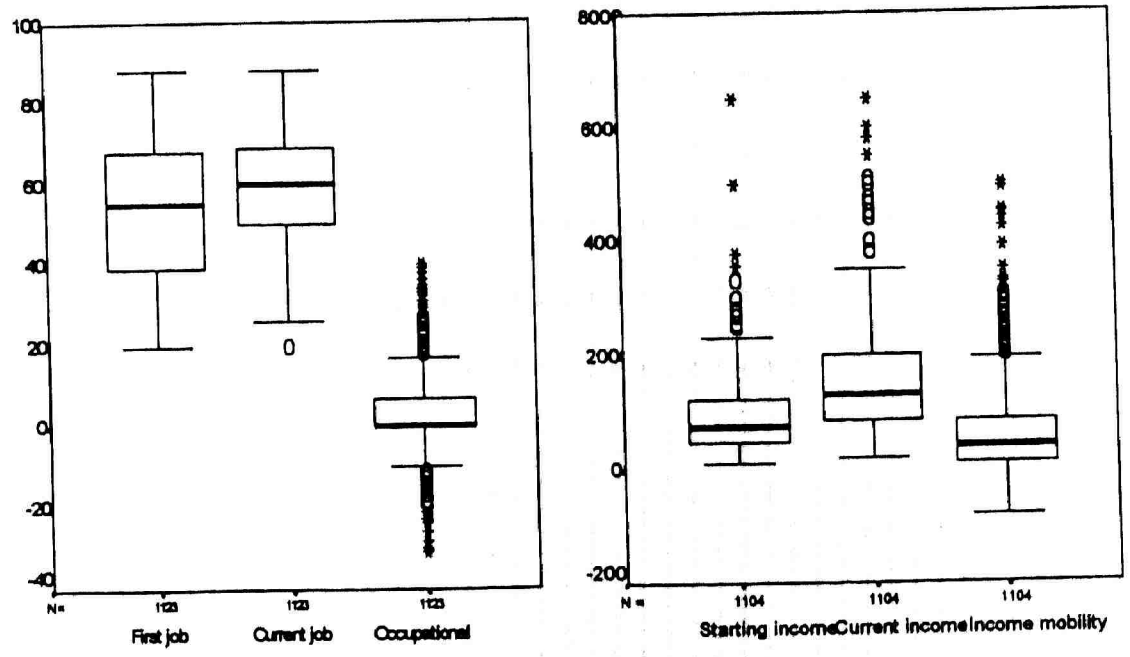

Table 5.2 Descriptive statistics for first job ISEI score and starting income; and current job ISEI score and current income

	First job		Current job	
	ISEI	Income (RM)	ISEI	Income (RM)
Mean	53.71	916.67	57.92	1504.75
Median	55	750	60	1300
SD	13.88	648.53	12.96	893.67

5.1.3 Mobility direction

More than half of the respondents is categorised into the horizontal occupational mobility group. Most of the remaining enjoys upward mobility. This is shown in Table 5.3. In Figure 5.2, most of the points are concentrated in the diagonal line, implying horizontal mobility. More points can be observed in the area above the diagonal line, compared to the area in the lower part. This indicates that upward mobility is more common than downward mobility.

Most of the respondents enjoy upward income mobility, compared to their first job. The proportion is higher than the proportion of respondents who enjoy upward occupational mobility, as shown in Table 5.3. This indicates that there is a group of people who enjoyed upward income mobility but no upward occupational mobility. Figure 5.2 shows that few of the points concentrate in the area below the diagonal line. This implies that downward income mobility is less common.

Figure 5.2 Scatter plots for first job ISEI score and current job ISEI score; and first job starting income and current job current income

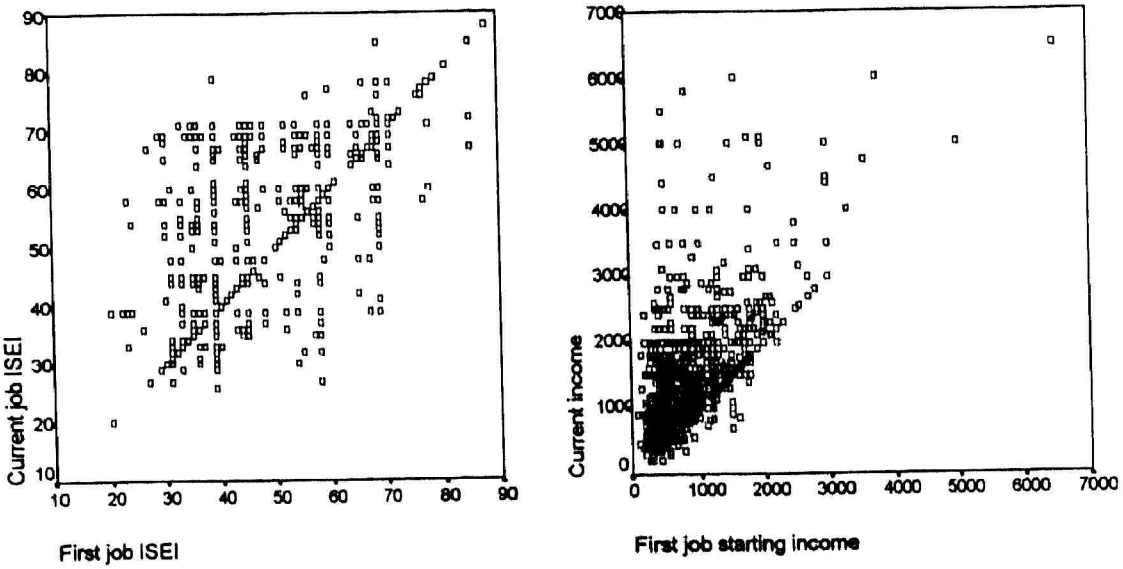

Table 5.3 Distribution of occupational mobility score and income mobility score

	Occupational mobility		Income mobility	
	Frequency	Percentage	Frequency	Percentage
Downward	128	11.4	57	5.2
Horizontal	621	55.3	166	15.1
Upward	374	33.3	881	79.8
Total	1124	100.0	1104	100.0

Certain variables are examined to give an insight regarding the respondents' characteristics for each mobility direction, as shown in Table 5.4 and Table 5.5. Females are more likely to enjoy upward occupational mobility. Males are more likely to suffer downward mobility, compared to females. Indian appears to be more prone to suffer downward mobility while Bumiputera and Chinese are more likely to enjoy upward occupational mobility. Nevertheless, the sample size for Indian is relatively small to draw any definitive conclusion.

For individuals who have a degree or higher qualifications, they are less likely to enjoy upward occupational mobility, compared to other groups. Among secondary school

and professional and semi-professional graduates, the percentage who suffer downward mobility is highest, compared to other qualification groups.

Individuals who work as professional and administrative workers in their first job are more likely to experience horizontal occupational mobility. Service and production workers are more likely to enjoy upward mobility. For clerical and sales workers, the chances of experiencing horizontal mobility and upward mobility are almost the same. For individuals who get their dream job in their first job, they are more prone to experience horizontal mobility. For individuals who do not get their dream job, they are more likely to enjoy upward mobility. About half of them who experience horizontal mobility get their dream job in their first job.

For length of working experience, on average, individuals who experience horizontal occupational mobility have the least experience, which is about one year less than others. This is shown in Table 5.5. There is a significant difference in the length of working experience among all three groups ($F = 35.301$, p-value = 0.000). The average number of days of working experience for those who suffer downward mobility is significantly less than the average for the other two groups. The difference between the group with upward mobility and downward mobility is minimum.

For income mobility patterns, referring to Table 5.4, the distribution of the direction of income mobility for male and female does not differ greatly. Bumiputera are more likely to suffer downward mobility or horizontal mobility, compared to other groups.

For human capital investment, referring to Table 5.4, individual with a degree or higher qualifications is more likely to experience horizontal income mobility and least

prone to enjoy upward mobility, compared to other groups. The certificate group has the highest percentage of respondents who suffer downward mobility.

Administrative workers are least likely to enjoy upward income mobility and most likely to experience horizontal mobility, as shown in Table 5.4. Production, clerical and service workers are more prone to enjoy upward mobility. Individuals who take their first job as their dream job are more inclined to experience horizontal mobility while those who do not take it as their dream job are more likely to enjoy upward mobility. More than half of them who experience horizontal mobility get their dream job as their first job.

For length of working experience, the average number of days of working experience possessed by the horizontal income mobility group is about half the experience owned by the upward mobility group. This is shown in Table 5.5. On average, the former group has less than two years of working experience while the latter group has more around 3.8 years of working experience. The difference of length of working experience among these three groups is statistically significant ($F = 64.874$, p-value = 0.000). Individuals who experience horizontal mobility have less working experience than others. There is no significant difference of length of working experience among individuals with upward mobility and downward mobility.

Table 5.4 Certain demographic characteristics, human capital investment and employment by mobility direction

	Occupational mobility			Income mobility		
Variable	Downward	Horizontal	Upward	Downward	Horizontal	Upward
[redacted]						
Male	76 (13.8)	311 (56.3)	165 (29.9)	31 (5.6)	90 (16.3)	430 (78.0)
Female	43 (9.2)	310 (54.1)	210 (36.6)	25 (4.5)	76 (13.8)	450 (81.7)
[redacted]						
Bumiputera	79 (11.0)	388 (54.1)	250 (34.9)	53 (7.5)	115 (16.3)	539 (76.2)
Chinese	36 (10.1)	205 (57.3)	117 (32.7)	3 (0.9)	49 (14.2)	293 (84.9)
Indian	13 (26.5)	28 (57.1)	8 (16.3)	1 (1.9)	2 (3.8)	49 (94.2)
[redacted]						
Secondary school	69 (16.10)	196 (46.0)	163 (37.9)	22 (5.2)	50 (11.7)	354 (83.1)
Certificate	22 (10.8)	103 (50.5)	79 (38.7)	20 (10.3)	29 (14.9)	145 (74.7)
Diploma	12 (7.0)	100 (58.1)	60 (34.9)	3 (1.7)	19 (10.9)	153 (87.4)
Professional or semi-professional	13 (16.3)	41 (51.3)	26 (32.5)	1 (1.2)	4 (4.8)	78 (94.0)
Degree or higher	13 (5.5)	179 (75.5)	45 (19.0)	12 (5.3)	65 (28.6)	150 (66.1)
[redacted]						
Professional	46 (10.7)	321 (74.8)	62 (14.5)	17 (4.3)	99 (24.9)	281 (70.0)
Administrative	2 (7.1)	22 (78.6)	4 (14.3)	2 (7.4)	9 (33.3)	16 (59.3)
Clerical	40 (13.6)	133 (45.2)	121 (41.2)	17 (5.6)	24 (7.9)	261 (86.4)
Sales	7 (9.5)	33 (44.6)	34 (45.9)	2 (2.9)	13 (18.8)	54 (78.3)
Service		10 (38.5)	16 (61.5)	1 (3.6)	3 (10.7)	24 (85.7)
Agricultural		3 (60.0)	2 (40.0)			5 (100.0)
Production	32 (12.0)	99 (37.1)	136 (50.9)	18 (6.7)	18 (6.7)	232 (86.6)
[redacted]						
Yes	33 (8.1)	299 (73.8)	73 (18.0)	21 (5.5)	85 (22.1)	278 (72.4)
No	76 (14.5)	202 (38.6)	245 (46.8)	29 (5.4)	49 (9.0)	464 (85.6)
Not sure	17 (9.6)	108 (61.0)	52 (29.4)	7 (4.1)	30 (17.5)	134 (78.4)

Table 5.5 Descriptive statistics for days of working experience by mobility direction

	Occupational mobility			Income mobility		
	Downward	Horizontal	Upward	Downward	Horizontal	Upward
Sample size	124	582	356	55	158	840
Minimum	60	7	67	37	7	21
Maximum	3040	3472	3650	3472	3183	3650
Mean	1478.86	1107.49	1469.67	1254.80	708.48	1391.88
Median	1636.50	940	1460	1289	484	1396
SD	683.94	729.16	667.40	808.60	618.60	695.97
Skewness (Statistics)	-0.231	0.512	-0.012	0.379	1.454	0.063
Skewness (SE)	0.217	0.101	0.129	0.321	0.193	0.084

5.1.4 Occupational mobility versus income mobility

Less than one percent suffers downward movement in occupational mobility and income mobility, as shown in Table 5.6. Most respondents enjoy upward income mobility but only experience horizontal occupational mobility. The second most common combination is upward mobility in both occupational scale and monthly income. Less than half of the respondents have the same movement direction for occupational and income mobility.

Table 5.6 Occupational mobility direction by income mobility direction

Income Mobility	Occupational Mobility			Total
	Downward	Horizontal	Upward	
Downward	9	29	16	54
Horizontal	3	156	7	166
Upward	108	399	319	826
Total	120	584	342	1046

5.2 Demographic characteristics and mobility

5.2.1 Gender and mobility

The distributions of occupational mobility score for both gender groups are right skewed with median zero, as shown in Figure 5.3. The spread of the female distribution is greater than the male's distribution. The variance for these two groups is significantly different. Comparing the occupational mobility score across gender groups, there is significant difference. The average occupational mobility score for female is higher than the average occupational mobility score for male, as shown in Table 5.7.

The distribution of income mobility score is right skewed for both gender groups, sharing the same level of median. This is shown in Figure 5.3. The dispersion of distribution is greater for male compared to female. Levene test shows that there is significant difference in variance of these two groups. The average income mobility enjoyed by each gender group is not significantly different, as shown in Table 5.7.

Figure 5.3 Box plots for occupational mobility and income mobility score by gender

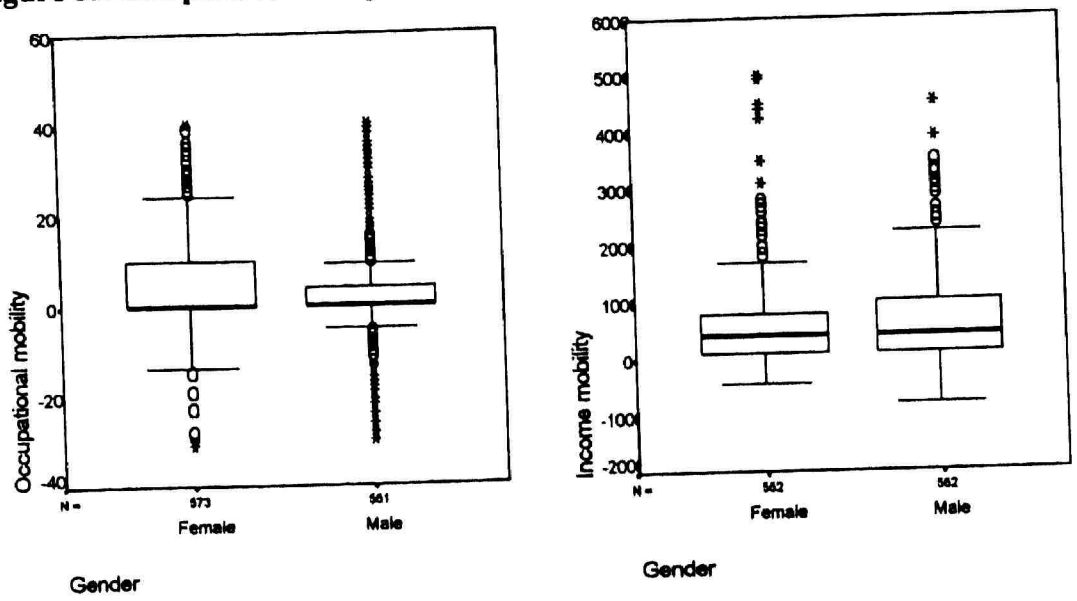

Table 5.7 Descriptive statistics for occupational mobility score and income mobility score by gender

	Occupational mobility score			Income mobility score (RM)		
Gender	Mean	SD	Median	Mean	SD	Median
Female	4.81	10.70	0	561.24	703.23	400
Male	3.24	10.08	0	617.94	715.23	400
Levene statistics/ p-value	8.749	0.003		7.660	0.006	
t-statistics/ p-value	2.528	0.012		-1.328	0.184	

5.2.2 Ethnicity and mobility

For the distribution of occupational mobility score for each ethnic group, all are right skewed, except for the Indian's, which is left skewed. All median are zero, as shown in Figure 5.4. On average, Indian is the only ethnic group who suffers downward mobility while Bumiputera enjoys the most upward mobility. This is shown in Table 5.8. Levene test shows that there is significant different in the variance for each ethnic group. There is a significant difference in the average occupational mobility score for each ethnic group.

For income mobility, all the distributions are right skewed, with the Chinese having the widest spread of observation. This is shown in Figure 5.4. Using average as a

barometer, Chinese enjoys the most upward income mobility, followed by the Indian and the Bumiputera. This is shown in Table 5.8. There is significant difference in the variance for each ethnic group. The average income mobility score for each ethnic group is significantly different.

Figure 5.4 Box plots for occupational mobility and income mobility score by ethnicity

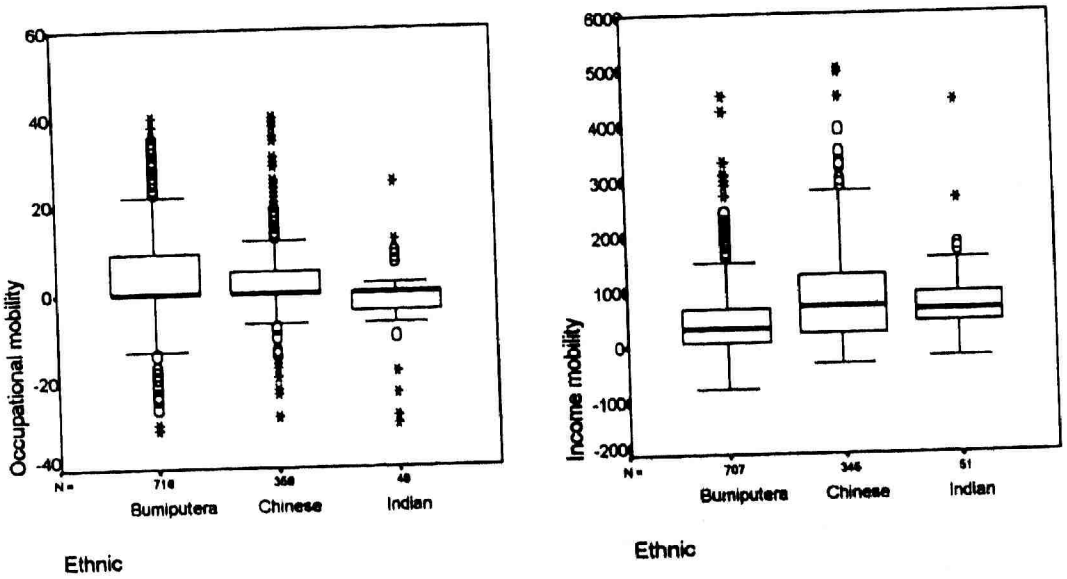

Table 5.8 Descriptive statistics for occupational mobility score and income mobility score by ethnicity

Ethnicity	Occupational mobility score			Income mobility score (RM)		
	Mean	SD	Median	Mean	SD	Median
Bumiputera	4.67	10.73	0	418.89	535.53	300
Chinese	3.60	9.75	0	915.65	887.82	714.24
Indian	-1.92	8.74	0	747.63	670.55	600
Levene statistics/ p-value	6.975	0.001		42.828	0.000	
Kruskal-Wallis/ p-value	11.964	0.003		105.002	0.000	

5.2.3 Age and mobility

The distributions of occupational mobility for both age groups look indistinguishable, as shown in Figure 5.5. Both distributions are right skewed with zero median, in addition, the dispersion is also similar. Levene test supports that there is no significant difference

in the variance for these two groups. Furthermore, there is no significant difference in the average occupational mobility score enjoyed by these two age groups, as shown in Table 5.9.

The distributions of income mobility score for the two age groups are right-skewed. This is shown in Figure 5.5. The variance for these two age groups is not significantly different. The difference of average income mobility score for these two groups is not statistically significant, as shown in Table 5.9.

Figure 5.5 Box plots for occupational mobility and income mobility score by age

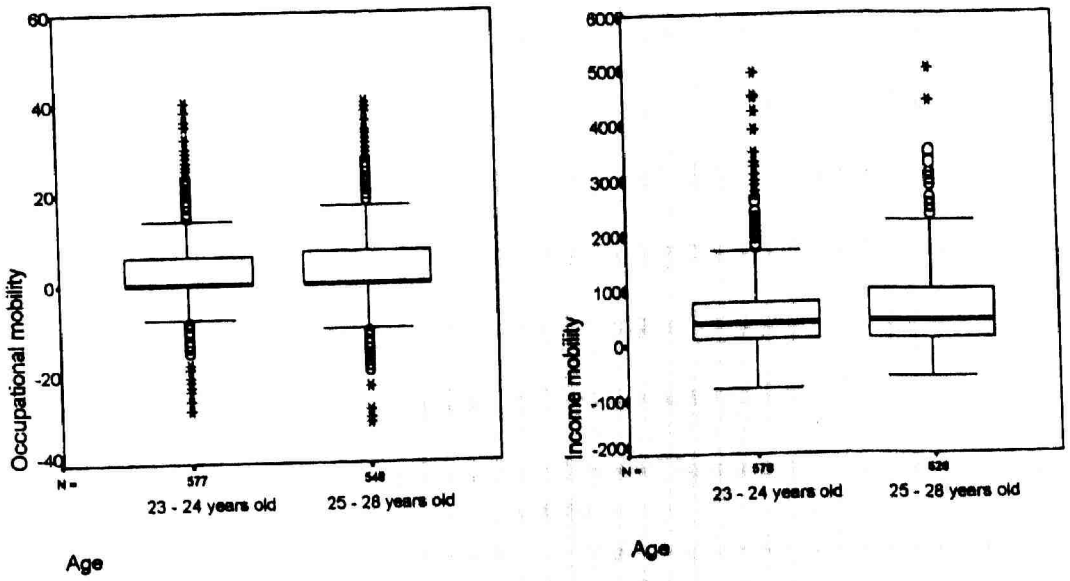

Table 5.9 Descriptive statistics for occupational mobility score and income mobility score by age

Age	Occupational mobility score			Income mobility score (RM)		
	Mean	SD	Median	Mean	SD	Median
23 – 24 years old	3.62	10.13	0	569.25	732.21	381.99
25 – 28 years old	4.48	10.72	0	611.99	683.63	420.80
Levene statistics/ p-value	1.596	0.207		0.233	0.629	
t-statistics/ p-value	-1.393	0.164		-1.003	0.316	

5.2.4 Marital status and mobility

For occupational mobility score, both the distributions for single and married are right skewed and have a median of zero. This is shown in Figure 5.6. Generally, the distribution for individuals who are married is more wide spread than the distribution for individuals who are still single. There is significant difference in the variance for these two groups. The difference of average occupational mobility score between these two categories is significant, as shown in Table 5.10. The average occupational mobility score for married individuals is higher than the average for single individuals.

For income mobility score, both the distributions are right skewed with median taking the value of RM400. This is shown in Figure 5.6. The distribution of income mobility score for single is slightly more dispersed than the distribution for married individuals. Nevertheless, the variance for these two groups is not significantly different. Although the average income mobility score for single is slightly higher than for married, the difference is not statistically significant. This is shown in Table 5.10.

Figure 5.6 Box plots for occupational mobility and income mobility score by marital status

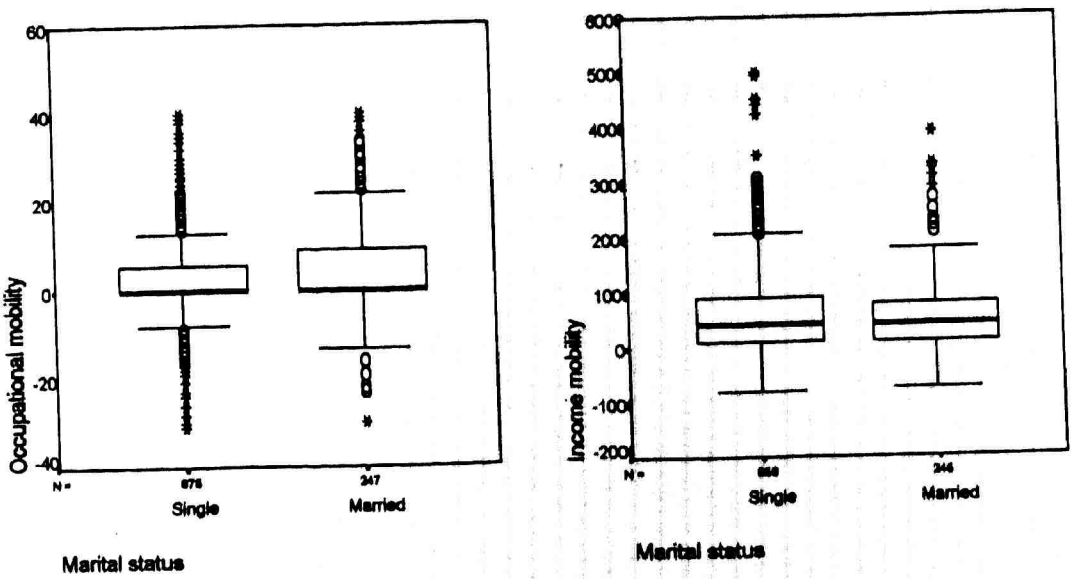

Table 5.10 Descriptive statistics for occupational mobility score and income mobility score by marital status

Marital status	Occupational mobility score			Income mobility score (RM)		
	Mean	SD	Median	Mean	SD	Median
Single	3.61	10.16	0	592.41	714.28	400
Married	5.60	11.23	0	572.78	689.18	400
Levene statistics/ p-value	6.605	0.010		0.781	0.377	
t-statistics/ p-value	-2.510	0.013		0.382	0.702	

5.2.5 Location in which an individual grew up and mobility

The distributions of occupational mobility for all location groups are right skewed with zero median. This is shown in Figure 5.7. The dispersion for individuals who grew up in rural area is more dispersed than the dispersion for others. The distribution for small town and large town is similar. There is significant difference in the variance for each location. The difference of average occupational mobility score among these three groups of respondents is not statistically significant, as shown in Table 5.11.

All the distributions of income mobility score for different location in which an individual grew up are right skewed. This is shown in Figure 5.7. The measure of central tendency (median and mean) and dispersion (standard deviation) for income mobility increases as the location change from rural to urban area. The variance for each location is significantly different. Comparing across groups, there is significant difference in the average income mobility for each location, as shown in Table 5.11.

Figure 5.7 Box plots for occupational mobility and income mobility score by location in which an individual grew up

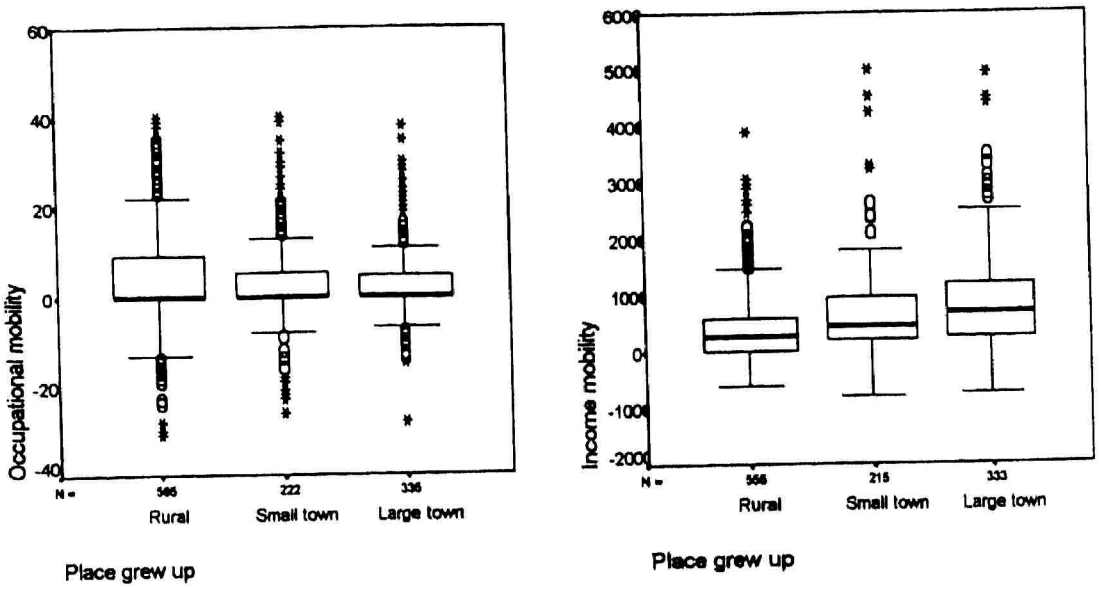

Table 5.11 Descriptive statistics for occupational mobility score and income mobility score by location in which an individual grew up

	Occupational mobility score			Income mobility score (RM)		
Place grew up	Mean	SD	Median	Mean	SD	Median
Rural	4.69	11.50	0	419.28	560.85	277.51
Small town	3.76	10.12	0	654.53	727.46	450
Large town	3.15	8.53	0	834.16	834.40	700
Levene statistics/ p-value	14.830	0.000		19.732	0.000	
Kruskal-Wallis/ p-value	0.729	0.694		84.927	0.000	

5.3 Family background and mobility

5.3.1 Parent's education level and mobility

All the distributions for occupational mobility score are right skewed and have median on the zero level. This is shown in Figure 5.8. The variance for each group is significantly different. The central 50% respondents whose parents with upper secondary education and above experience horizontal mobility. The difference of average occupational mobility score among parent's education group is statistically significant. This is shown in Table 5.12.

All the distributions of income mobility score are right skewed. This is shown in Figure 5.8. In general, the average income mobility score and the dispersion of distribution increase as the level of parents' education increases. This is shown in Table 5.12. There is significant difference in the variance of income mobility score for each group. Using statistical analysis, there is a significant difference of average income mobility score among different parent's education group.

Figure 5.8 Box plots for occupational mobility and income mobility score by parent's education level

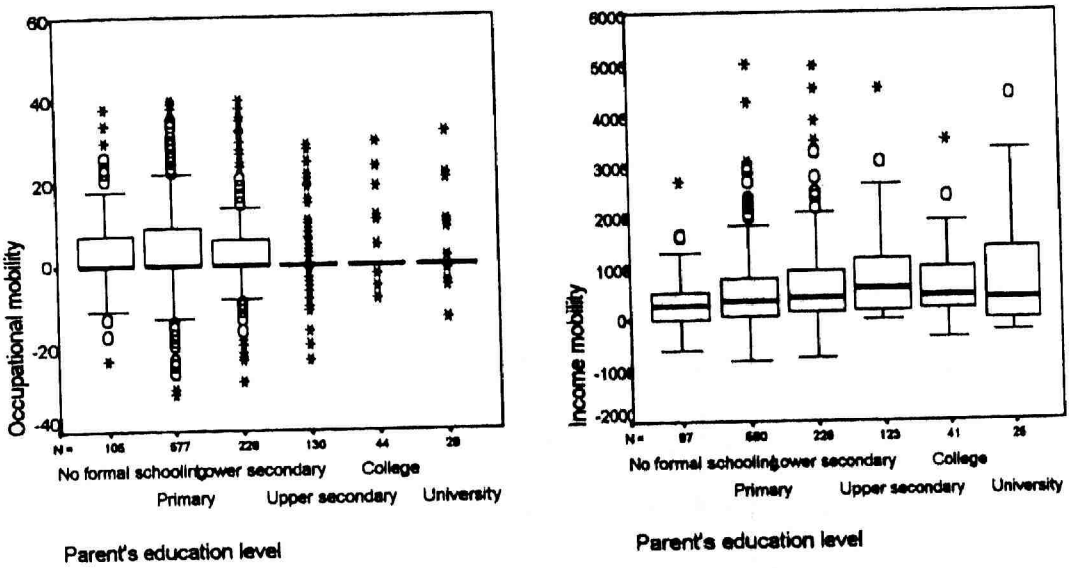

Table 5.12 Descriptive statistics for occupational mobility score and income mobility score by parent's education level

	Occupational mobility score			Income mobility score (RM)		
Parent's education level*	Mean	SD	Median	Mean	SD	Median
No formal schooling	4.54	10.55	0	344.02	455.59	272.13
Primary	4.87	11.06	0	524.19	627.29	350
Lower secondary	2.94	10.39	0	681.38	804.52	420
Upper secondary	2.44	8.29	0	769.30	780.27	608
College	2.16	7.08	0	766.35	846.42	456.55
University	3.18	8.93	0	1002.80	1183.48	400
Levene statistics/ p-value	6.797	0.000		8.809	0.000	
Kruskal-Wallis/ p-value	16.534	0.005		24.052	0.000	

* For respondents whose guardian is both father and mother, father's information is used. For respondents with single parent, the single parent's information is used. If the respondents' present guardian is not their parent, then the guardian's information is taken.

5.3.2 Parent's occupation and mobility

(A) Occupational groups

The occupation mobility score distributions for all parent's occupational groups are right skewed with median taking the value of zero. The central 50% observations of the administrative and clerical group are moving horizontally. This is shown in Figure 5.9. Furthermore, the dispersions for these two groups are relatively small compared to other groups. The variance of occupational mobility score for each occupational group is significantly different. There is no significant difference of average occupational mobility among parent's occupational group, as shown in Table 5.13.

For income mobility score, the distributions for each parent's occupational group are right skewed, with the distribution of administrative slightly right skewed and closer to symmetric. This is shown in Figure 5.9. The administrative has the highest average income mobility score, followed by the sales group; while individuals in the agriculture enjoy the lowest average upward income mobility. This is shown in Table 5.13. The income mobility score variance for each group is significantly different. There is significant difference in the average income mobility score among parent's occupational group.

Figure 5.9 Box plots for occupational mobility and income mobility score by parent's occupational group

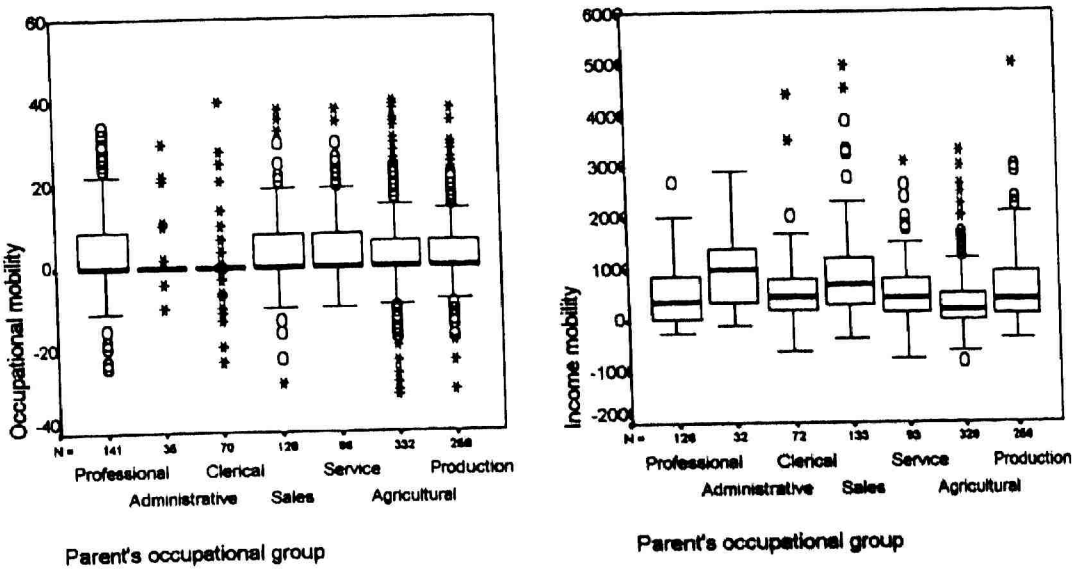

Table 5.13 Descriptive statistics for occupational mobility score and income mobility score by parent's occupational group

Parent's occupational group*	Occupational mobility score			Income mobility score (RM)		
	Mean	SD	Median	Mean	SD	Median
Professional	4.79	11.95	0	533.35	587.71	350
Administrative	2.70	7.71	0	1053.95	843.96	1000
Clerical	1.86	8.70	0	597.60	687.42	450
Sales	4.07	10.42	0	924.72	950.41	700
Service	5.15	9.54	0	679.48	777.99	449.37
Agricultural	4.29	11.39	0	364.13	531.35	200
Production	3.24	8.90	0	604.46	643.41	405
Levene statistics/ p-value	4.569	0.000		7.983	0.000	
Kruskal-Wallis/ p-value	7.444	0.282		96.632	0.000	

* For respondents whose guardian is both father and mother, father's information is used. For respondents with single parent, the single parent's information is used. If the respondents' present guardian is not their parent, then the guardian's information is taken.

(B) ISEI score

Compared to the other two groups, the distribution of occupation mobility score for the group with their parents having occupation ISEI score between 31 – 50 is least spread out. This is shown in Figure 5.10. The variance for each group is significantly different. All the distributions are right skewed with median zero. The difference of average

occupational mobility score is minimal and the difference among different groups is statistically insignificant. This is shown in Table 5.14.

As for income mobility score, all the groups have right-skewed distribution. This is shown in Figure 5.10. The mean, median and standard deviation increases as the parent's occupation ISEI score is higher. This is shown in Table 5.14. Levene test shows that the variance of income mobility score is significantly different for each group. The difference of average income mobility score is statistically significant.

Figure 5.10 Box plots for occupational mobility and income mobility score by parent's occupation ISEI score

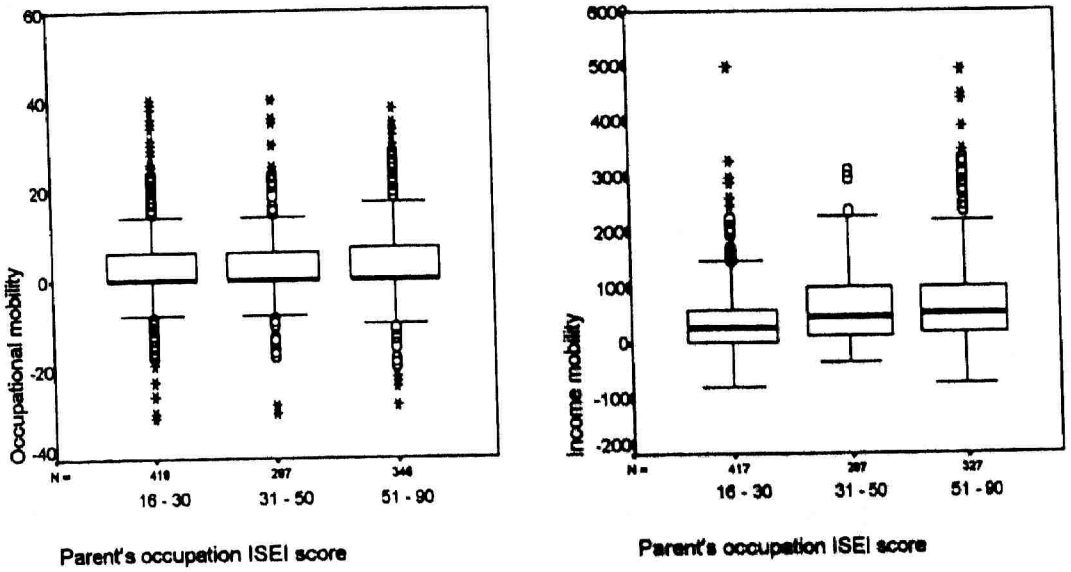

Table 5.14 Descriptive statistics for occupational mobility score and income mobility score by parent's occupation ISEI score

Parent's occupation ISEI score*	Occupational mobility score			Income mobility score (RM)		
	Mean	SD	Median	Mean	SD	Median
16 – 30	4.19	10.90	0	403.03	579.49	260
31 – 50	3.54	9.03	0	643.67	628.80	489.82
51 – 90	4.05	10.81	0	749.14	840.39	526.79
Levene statistics/ p-value	4.343	0.013		16.653	0.000	
Kruskal-Wallis/ p-value	1.073	0.585		58.691	0.000	

* For respondents whose guardian is both father and mother, father's information is used. For respondents with single parent, the single parent's information is used. If the respondents' present guardian is not their parent, then the guardian's information is taken.

5.3.3 Parent's income level and mobility

On average, every group enjoys upward occupational mobility, except the group with the parents' income level RM3000 or more. The distribution of the central 50% observations is the tightest for individuals whose parents have income RM2000 or more. This is shown in Figure 5.11. There is significant difference in variance of occupational mobility score for each group. Comparing across parents' income levels, there is significant difference in the average occupational mobility score. This is shown in Table 5.15.

For income mobility, all the distributions are right skewed. This is shown in Figure 5.11. The average income mobility enjoyed by individuals whose parents have income more than RM3000 is the highest, compared to other group, as shown in Table 5.15. Levene test shows that the variance of income mobility score is different for each group. There is significant difference in the average income mobility score across different income levels.

Figure 5.11 Box plots for occupational mobility and income mobility score by parent's income level

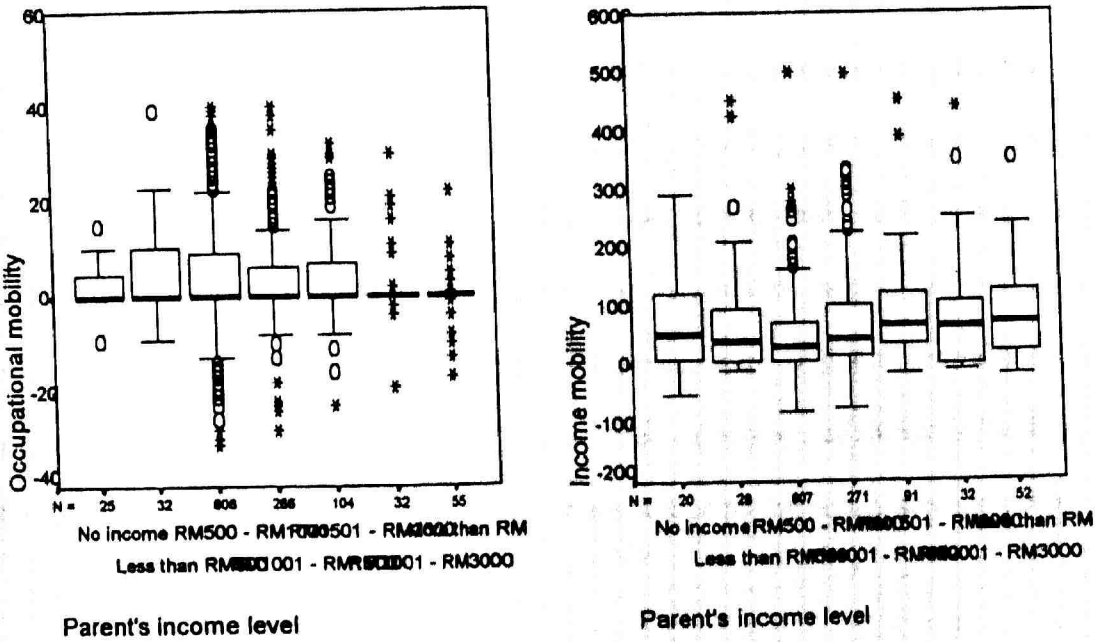

Table 5.15 Descriptive statistics for occupational mobility score and income mobility score by parent's income level

Parent's income level*	Occupational mobility score			Income mobility score (RM)		
	Mean	SD	Median	Mean	SD	Median
No income	2.63	5.37	0	808.07	965.92	500
Less than RM500	4.99	9.26	0	686.97	916.36	400
RM500 – RM1000	4.62	11.45	0	448.47	547.79	300
RM1001 – RM1500	3.35	9.61	0	691.62	803.23	420
RM1501 – RM2000	5.15	9.64	0	894.36	822.23	650
RM2001 – RM3000	2.71	8.24	0	837.95	1009.66	677.30
More than RM3000	-0.14	4.97	0	897.77	807.99	740.05
Levene statistics/ p-value	9.686	0.000		9.678	0.000	
Kruskal-Wallis/ p-value	11.229	0.082		59.759	0.000	

* For respondents whose guardian is both father and mother, father's information is used. For respondents with single parent, the single parent's information is used. If the respondents' present guardian is not their parent, then the guardian's information is taken.

5.3.4 Family size and mobility

For occupational mobility, each group distribution is right skewed with zero median. This is shown in Figure 5.12. The observation is least wide spread for individuals who have 4 siblings or less in their family. The variance for occupational mobility score is significantly different for each group. The average occupational mobility score increases as the family size grows. This is shown in Table 5.16. The difference of average occupational mobility score accomplished by each group is statistically insignificant.

On the other hand, the distributions of income mobility score for each group are right skewed. This is shown in Figure 5.12. The dispersion for individuals coming from a family with four or less siblings is the greatest. The variance of income mobility score is different for each group. Comparing across categories, there is significant difference in the average income mobility score among these three categories, as shown in Table 5.16. The average and median of income mobility score reduce as the family size increases.

Figure 5.12 Box plots for occupational mobility and income mobility score by family size

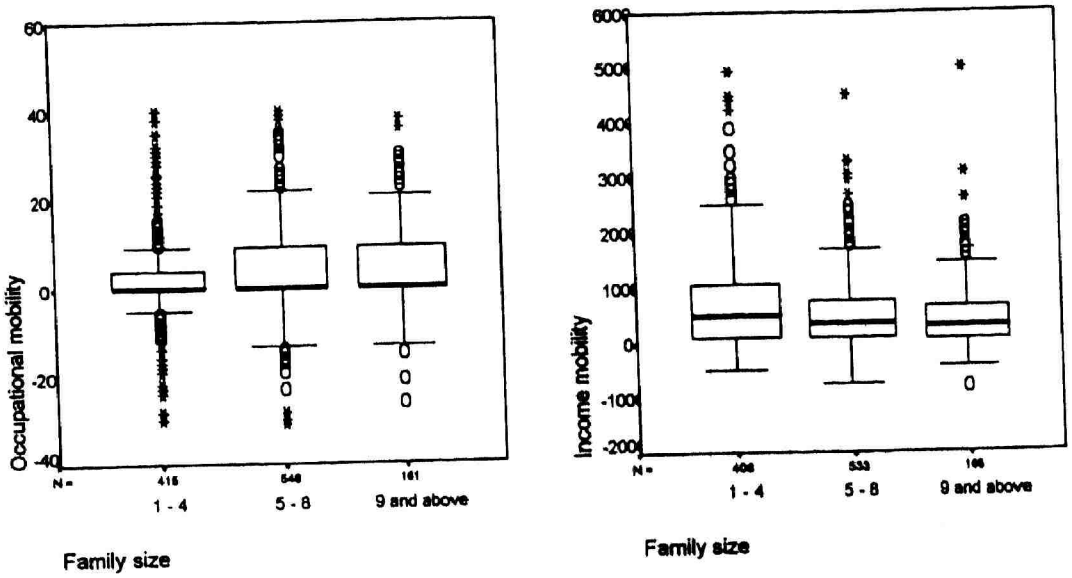

Table 5.16 Descriptive statistics for occupational mobility score and income mobility score by family size

	Occupational mobility score			Income mobility score (RM)		
Family size	Mean	SD	Median	Mean	SD	Median
1 – 4	3.13	9.50	0	740.49	836.91	500
5 – 8	4.48	10.93	0	509.63	590.02	350
9 and above	4.89	10.84	0	477.06	661.10	300
Levene statistics/ p-value	8.740	0.000		17.482	0.000	
Kruskal-Wallis/ p-value	2.256	0.324		20.526	0.000	

5.3.5 Birth order and mobility

Both the distributions are right skewed with median taking the value of zero. This is shown in Figure 5.13. Although the sample size is smaller for individuals who are the eldest in a family, the dispersion is greater in this group, indicating the occupational mobility they experienced are more varied. Levene test shows that there is significant difference in the variance of occupational mobility score for different group. There is no significant difference of average occupational mobility score between these two groups, as shown in Table 5.17.

The distributions of income mobility score for these two groups look similar, as shown in Figure 5.13. They share the same level of median. The variance of income mobility score is not significantly different. As in the case of occupational mobility, these is no significant difference in the average income mobility score between these two groups. This is shown in Table 5.17.

Figure 5.13 Box plots for occupational mobility and income mobility score by birth order

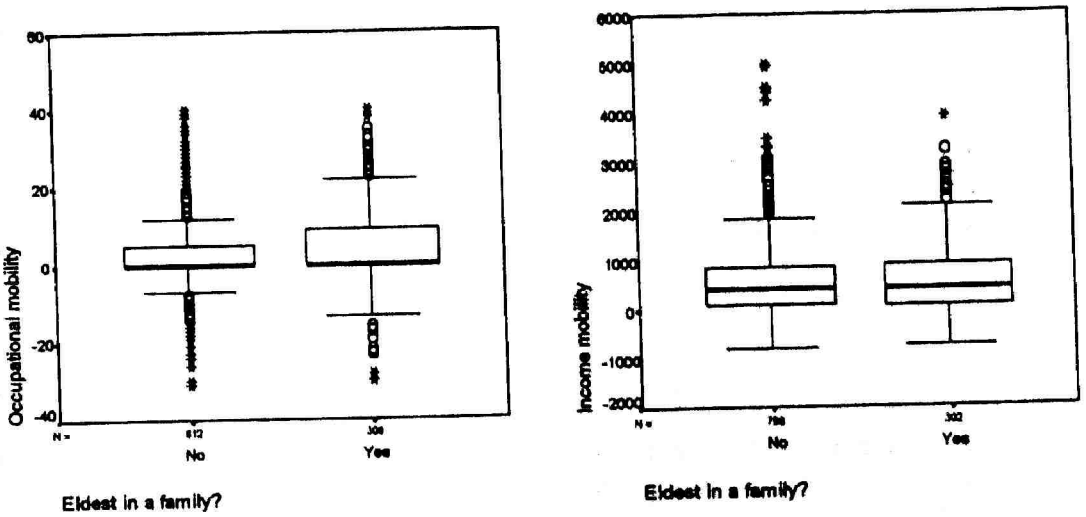

Table 5.17 Descriptive statistics for occupational mobility score and income mobility score by birth order

	Occupational mobility score			Income mobility score (RM)		
Birth order	Mean	SD	Median	Mean	SD	Median
Not the eldest	3.81	10.11	0	593.50	722.90	400
Eldest	4.70	11.24	0	582.19	675.97	400
Levene statistics/ p-value	4.753	0.029		0.013	0.910	
t statistics/ p-value	-1.209	0.227		0.236	0.814	

5.4 Human capital investment and mobility

5.4.1 Years of academic education and mobility

The distribution for individuals having 11 to 13 years of academic education is most widely spread while the mobility score for individuals with 16 years or more education has a tide range. All the distributions are right skewed with median taking the value zero,

as shown in Figure 5.14. The variance of occupational mobility score for each group is significantly different. The average occupational mobility achieved by different group is significantly different, as shown in Table 5.18. In general, the average occupational mobility score has an adverse relationship with the years of academic education.

As for income mobility score, all the distributions for different academic education groups are right skewed while the median for different groups is very close to one another. This is shown in Figure 5.14. The higher 75% of the respondents in all different education groups, except individuals having 16 years or more of academic education, enjoyed upward income mobility (income mobility score is more than zero). The variance of income mobility score for each group is not significantly different. Comparing the mean of income mobility score, there is no significant difference across the education groups. This is shown in Table 5.18.

Figure 5.14 Box plots for occupational mobility and income mobility score by years of academic education

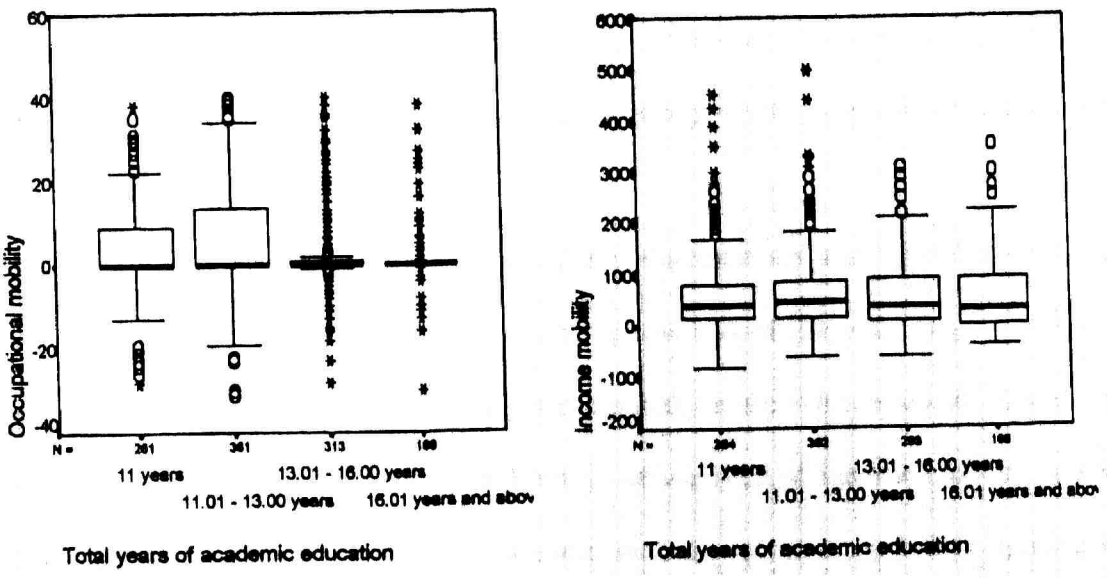

Table 5.18 Descriptive statistics for occupational mobility score and income mobility score by years of academic education

Years of academic education	Occupational mobility score			Income mobility score (RM)		
	Mean	SD	Median	Mean	SD	Median
11 years	4.06	10.34	0	603.44	752.45	400
11.01 – 13 years	5.99	12.45	0	624.25	752.87	450
13.01 – 16.00 years	3.10	9.18	0	587.23	661.55	350
16.01 years and above	1.83	7.13	0	506.21	626.57	300
Levene statistics/ p-value	35.190	0.000		0.204	0.894	
F statistics* / p-value	13.303	0.004		1.179	0.317	

* For occupational mobility score, Kruskal-Wallis test is used as the hypothesis of variance homogeneity is rejected in Levene Test.

5.4.2 Highest qualification acquired and mobility

The occupational mobility score distributions for respondents with secondary school, certificate and diploma education level are more widely spread, compared to individuals with degree or higher qualifications. This is shown in Figure 5.15. The variance of occupational mobility score for each group is significantly different. All the distributions are right skewed and have a median of zero. Comparing among different level of education, the average occupational mobility score achieved is significantly different, as shown in Table 5.19. The general trend is that the occupational mobility score reduces, as the level of education is higher.

As for the income mobility score, all the distributions are right skewed, which means most of the observation concentrate in the low end of the scale. This is shown in Figure 5.15. However, the group with professional or semi-professional courses has almost symmetrical distribution. The difference of variance of income mobility score is statistically insignificant. The average income mobility score recorded is significantly different across education qualification groups, as shown in Table 5.19. The average income mobility score for individuals with professional or semi-professional qualification

is higher than the average income mobility score for individuals with secondary school, certificate and degree or higher level of education. The average income mobility score for individuals with diploma qualification is higher than the average income mobility score for individuals with certificate or degree or higher qualification.

Figure 5.15 Box plots for occupational mobility and income mobility score by highest qualification acquired

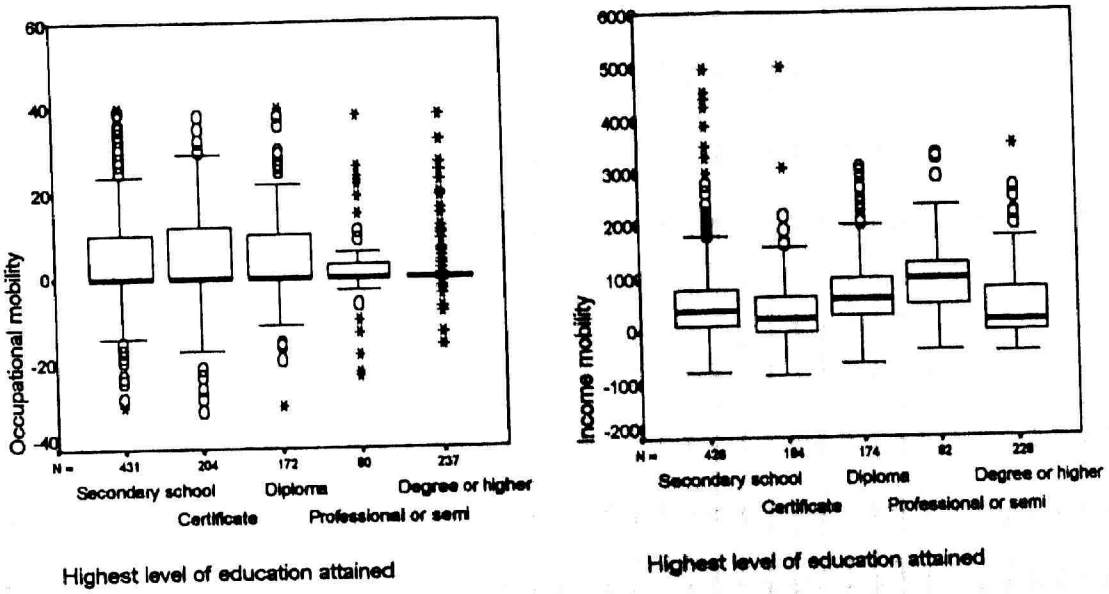

Table 5.19 Descriptive statistics for occupational mobility score and income mobility score by highest qualification acquired

Highest qualification acquired	Occupational mobility score			Income mobility score (RM)		
	Mean	SD	Median	Mean	SD	Median
Secondary school	5.02	11.82	0	588.40	744.41	394.38
Certificate	4.94	11.41	0	414.12	648.80	250
Diploma	4.40	9.97	0	751.08	705.01	600
Professional or semi-professional courses	2.56	10.30	0	1005.40	689.41	1000
Degree or higher	1.72	5.90	0	467.56	614.93	200
Levene statistics/ p-value	30.527	0.000		1.097	0.357	
F statistics* / p-value	17.773	0.001		14.639	0.000	

* For occupational mobility score, Kruskal-Wallis test is used as the hypothesis of variance homogeneity is rejected in Levene Test.

5.4.3 Academic performance and mobility

(A) SRP aggregate

Generally, the spread of the occupational mobility score increases as the result for SRP worsen. . This is shown in Figure 5.16. For each SRP aggregate group, most of the observations concentrate in the lower end of the scale. All the groups share the same median, i.e. 0, indicating horizontal occupational mobility. The variance of occupational mobility score for each group is significantly different. The difference of average occupational mobility score among different SRP aggregate groups is statistically significant, as shown in Table 5.20. In general, the average occupational mobility score is higher as SRP aggregate increases.

Studying income mobility score, all the distributions are right skewed and the spread of the distribution is generally lower for individuals with higher SRP aggregate. This is shown in Figure 5.16. The variance of income mobility score is significantly different for each SRP aggregate group. On average, individuals with SRP aggregate 5 – 10 enjoy most upward income mobility. This is shown in Table 5.20. There is significant difference of average income mobility among SRP aggregate categories.

Figure 5.16 Box plots for occupational mobility and income mobility score by SRP aggregate

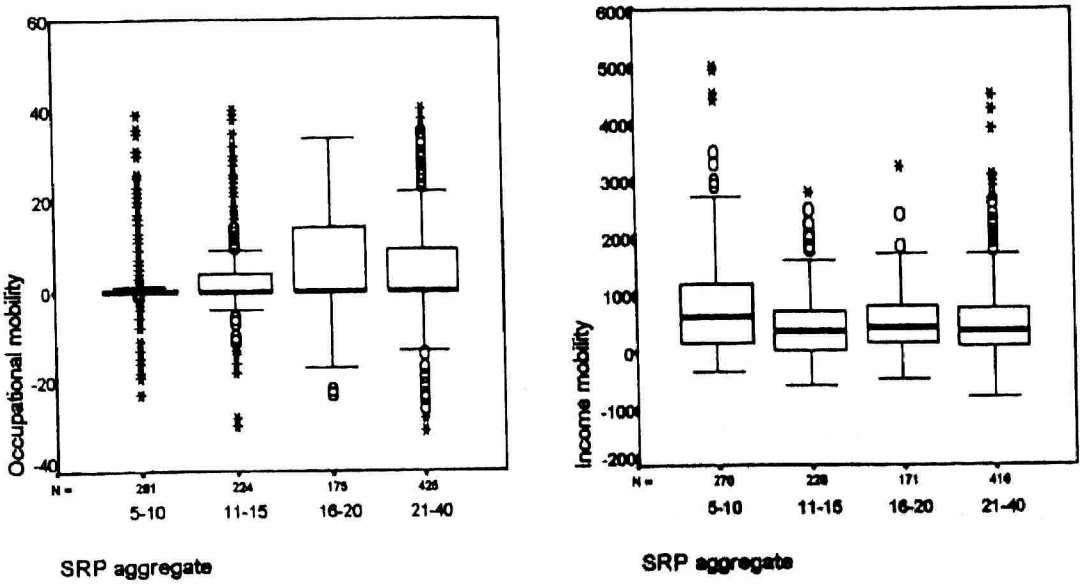

Table 5.20 Descriptive statistics for occupational mobility score and income mobility score by SRP aggregate

SRP aggregate	Occupational mobility score			Income mobility score (RM)		
	Mean	SD	Median	Mean	SD	Median
5 – 10	2.32	7.83	0	815.62	877.72	600
11 – 15	4.03	11.41	0	467.52	546.14	350
16 – 20	5.60	11.09	0	546.22	544.63	416.49
21 – 40	4.54	11.05	0	532.13	692.20	350
Levene statistics/ p-value	19.395	0.000		12.761	0.000	
Kruskal-Wallis / p-value	10.258	0.016		36.408	0.000	

(B) SPM aggregate

The distribution of occupational mobility score for individuals who got excellent result in SPM (6 – 18 aggregate) is in a tight range in term of interquartile range. This is shown in Figure 5.17. All the groups' distribution is right skewed, indicating most of the observation concentrate in the lower end of the scale. Besides, all the distributions have zero as a median (zero which means horizontal mobility). The difference of varinace of occupational mobility score for each group is statistically significant. Using Kruskal-

Wallis test to check the difference of average occupational mobility score among different SPM aggregate categories, there is significant difference among them (p-value close to 0.10). This is shown in Table 5.21.

Looking into income mobility, all the distributions who took SPM are right skewed. This is shown in Figure 5.17. The group with SPM aggregate 6 – 18 has the highest average upward income mobility, as shown in Table 5.21. However, this group also has the largest dispersion, compared to other categories. The difference of variance of income mobility score for different group is statistically significant. The difference of average income mobility score among SPM aggregate categories is statistically significant.

Figure 5.17 Box plots for occupational mobility and income mobility score by SPM aggregate

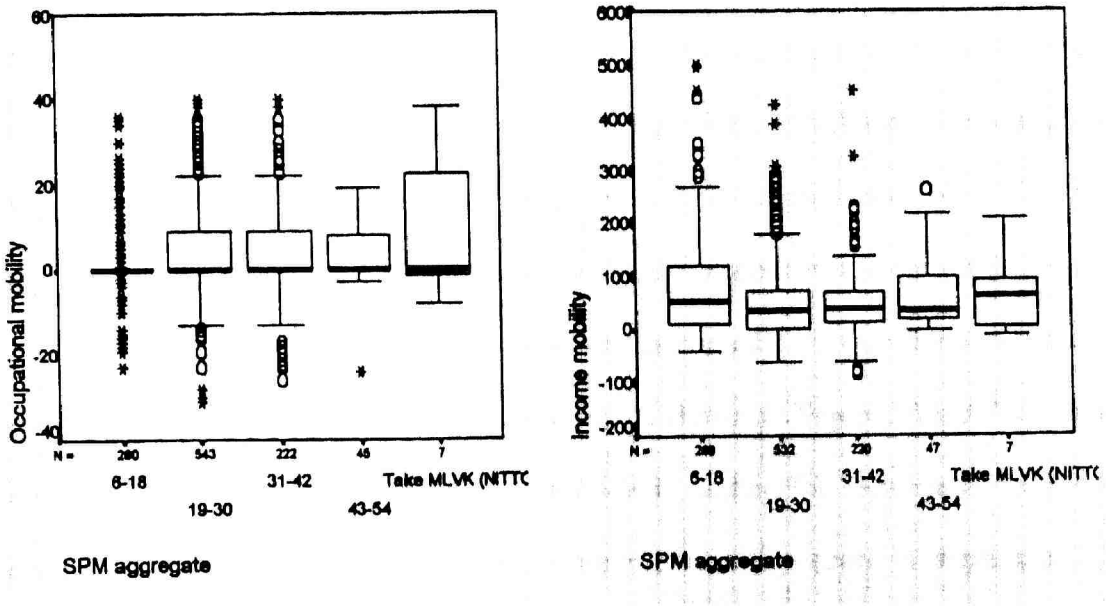

Table 5.21 Descriptive statistics for occupational mobility score and income mobility score by SPM aggregate

SPM aggregate	Occupational mobility score			Income mobility score (RM)		
	Mean	SD	Median	Mean	SD	Median
6 – 18	2.56	8.32	0	792.15	905.56	550
19 – 30	4.64	11.28	0	503.02	619.32	350
31 – 42	4.51	10.95	0	517.12	600.31	398.10
43 – 54	2.97	7.66	0	656.52	691.59	360
Take MLVK	9.28	17.24	0	667.49	660.38	700.12
Levene statistics/ p-value	13.701	0.000		13.114	0.000	
Kruskal-Wallis / p-value	7.436	0.115		14.019	0.007	

(C) Pre-university result

The distribution of occupational mobility for individuals with average result in pre-university is the most disperse compared to any other groups while the distribution for individuals with excellent result is the least scatter. This is shown in Figure 5.18. All the distributions are right skewed with median taking the value of zero. Levene test shows that there is significant difference in the variance of occupational mobility score for each group. The average occupational mobility score is significantly different from category to category, as shown in Table 5.22. Generally, the average occupational mobility recorded rose as the pre-university result become less excellent, except for the poor result group.

For income mobility, the distribution for individuals with excellent result is the most diversified, compared to other groups. This is shown in Figure 5.18. All categories have a right-skewed distribution. The dispersion is higher for individuals with better result. The difference in the variance of income mobility score is significant. The observed difference in average income mobility score is statistically significant, as shown in Table 5.22. Generally, the average income mobility score is higher for the group with better result.

Figure 5.18 Box plots for occupational mobility and income mobility score by pre-university result

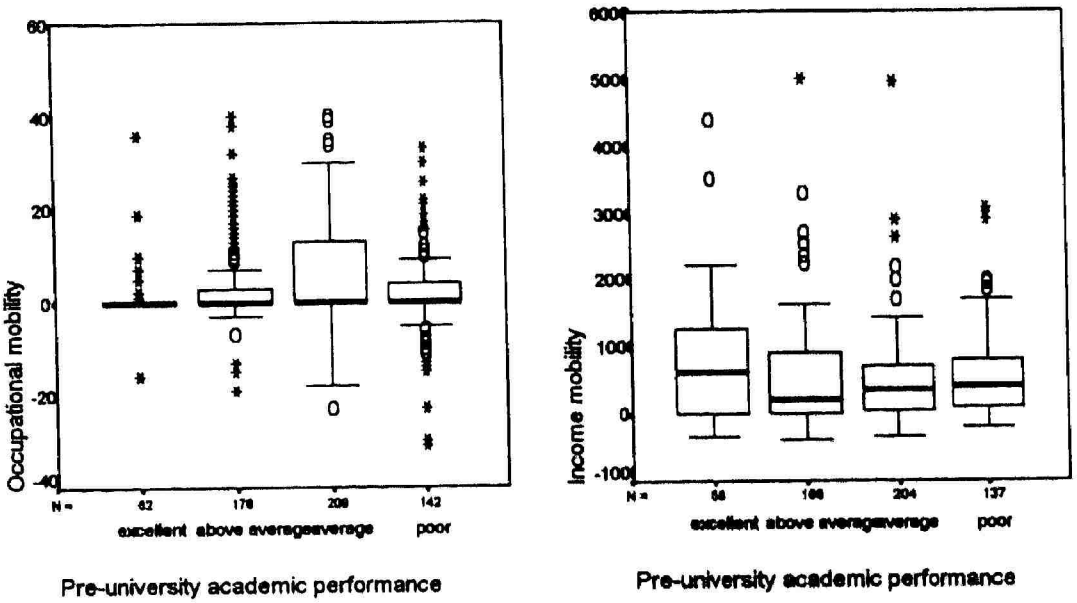

Table 5.22 Descriptive statistics for occupational mobility score and income mobility score by pre-university result

Pre-university academic performance	Occupational mobility score			Income mobility score (RM)		
	Mean	SD	Median	Mean	SD	Median
Excellent	1.69	5.03	0	820.76	810.45	662.65
Above average	3.49	8.60	0	534.59	754.25	200
Average	6.28	12.44	0	501.62	657.75	350
Poor	2.03	10.61	0	556.30	621.01	393.42
Levene statistics/ p-value	22.090	0.000		5.775	0.001	
Kruskal-Wallis / p-value	9.095	0.028		8.268	0.041	

5.4.4 Vocational training and mobility

For the distribution of occupational mobility score, the group with 241 days or more vocational training is most widely spread out while the group with 121 – 240 days of training has a very tight range (interquartile range = 0.00). This is shown in Figure 5.19. All the distributions are right skewed with median equal to zero, except the group with 241 days or more vocational training (median = 6). Levene test shows that the variance of occupational mobility score for each group is significantly different. The average

occupational mobility score is significantly different among vocational training groups, as shown in Table 5.23. The average occupational mobility score for the group receiving 241 days or more of vocational training, on average, is higher than the average for other groups.

For income mobility, all the distributions are right skewed, except the distribution for the group with 121 – 240 days of vocational training that is almost symmetrical. This is shown in Figure 5.19. Overall, the distribution for each vocational training categories is more similar than in the case for occupational mobility. The difference in the variance of income mobility score is statistically insignificant. The difference of average income mobility score observed among groups of vocational training is not statistically significant, as shown in Table 5.23.

Figure 5.19 Box plots for occupational mobility and income mobility score by days of vocational training

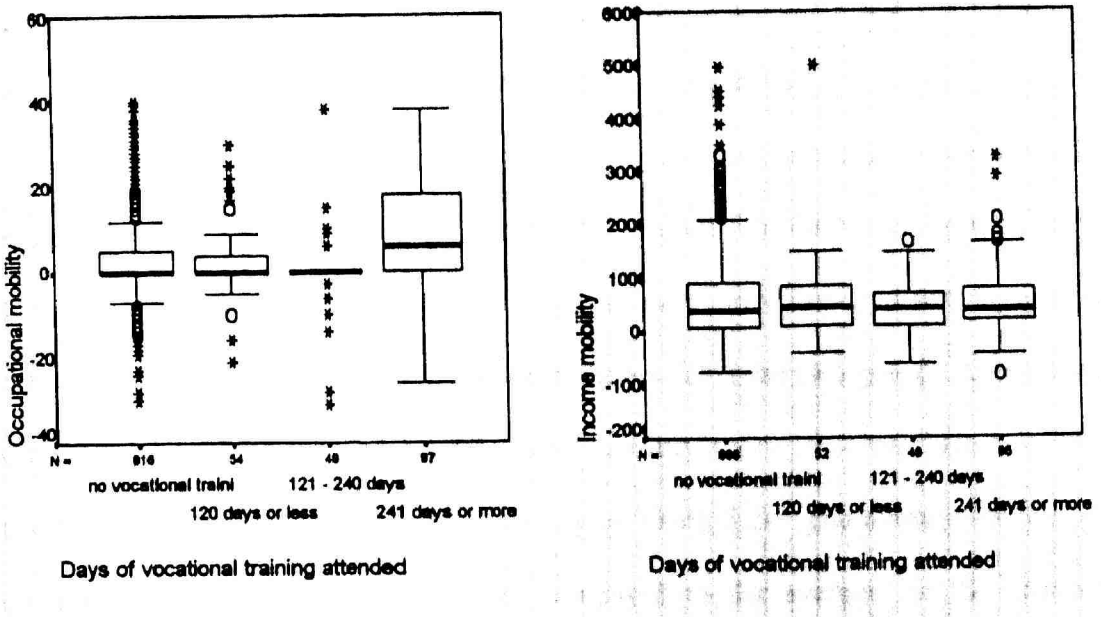

Table 5.23 Descriptive statistics for occupational mobility score and income mobility score by days of vocational training

Days of vocational training	Occupational mobility score			Income mobility score (RM)		
	Mean	SD	Median	Mean	SD	Median
No vocational training	3.85	10.18	0	594.01	711.35	394.06
120 days or less	3.35	9.60	0	564.15	801.94	450
121 – 240 days	0.89	11.79	0	440.68	504.58	439.29
241 days or more	7.65	11.50	6	576	589.68	405
Levene statistics/ p-value	4.224	0.006		4.847	0.137	
F-statistics* / p-value	22.071	0.000		0.769	0.511	

* For occupational mobility score, Kruskal-Wallis test is used as the hypothesis of variance homogeneity is rejected in Levene Test.

5.4.5 Training provided by employer and mobility

For occupational mobility score, all the categories' distribution is right skewed with median taking the value of zero. This is shown in Figure 5.20. On average, individuals with training enjoy more upward mobility than individual with no training. The difference in variance of occupational mobility score for each group is statistically significant, as shown in Table 5.24. However, there is no significant difference in the average occupational mobility score between these two groups.

The distributions for income mobility score for each group of on-the-job training are right skewed. This is shown in Figure 5.20. The median for the group with training, regardless of duration, is higher than the group with no training. There is significant difference in the variance of income mobility score for these two groups. Using t-test to verify the difference in the average income mobility score between these two groups, there is significant difference. This is shown in Table 5.24. The average for the group with no training is significantly lower, compared to the average for the group with training.

Figure 5.20 Box plots for occupational mobility and income mobility score by training provided by employer

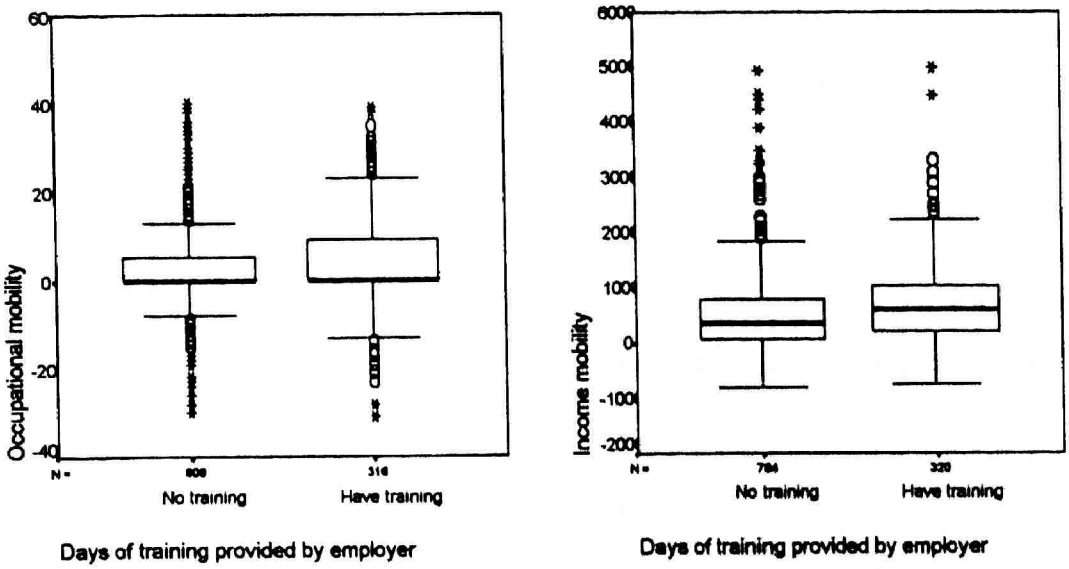

Table 5.24 Descriptive statistics for occupational mobility score and income mobility score by training provided by employer

Training provided by employer	Occupational mobility score			Income mobility score (RM)		
	Mean	SD	Median	Mean	SD	Median
No training	3.86	10.01	0	529.41	683.27	350
Have training	4.50	11.43	0	737.20	750.99	600
Levene statistics/ p-value	8.236	0.004		3.194	0.074	
t-statistics / p-value	-0.874	0.382		-4.452	0.000	

5.4.6 First job tenure and mobility

All the distributions of occupational mobility score in each first job tenure group are right skewed with median taking the value zero. This is shown in Figure 5.21. The dispersion for the score reduces as the tenure in the first job lengthened. In the other extreme, for individuals who stayed more than 2 years, the central 50% observation is moving horizontally. The variance of occupational mobility score for each group is significantly different. The average occupational mobility score decreases as the first job tenure increases, as shown in Table 5.25. In addition, the difference among categories is highly significant.

For income mobility, all the distributions are right skewed. This is shown in Figure 5.21. The dispersion of distributions in each category does not differ significantly. Levene test shows that there is no significant difference in the variance of income mobility score for each group. The distributions' median lie on similar level. The difference of average income mobility score observed among categories is insignificant, as shown in Table 5.25.

Figure 5.21 Box plots for occupational mobility and income mobility score by first job tenure

Table 5.25 Descriptive statistics for occupational mobility score and income mobility score by first job tenure

	Occupational mobility score			Income mobility score (RM)		
First job tenure	Mean	SD	Median	Mean	SD	Median
6 months or less	5.76	12.47	0	657.79	736.72	500
7 – 12 months	4.89	11.09	0	566.60	732.91	360
13 – 24 months	3.83	9.82	0	608.39	721.60	430
More than 2 years	1.76	7.17	0	555.00	648.93	350
Levene statistics/ p-value	32.334	0.000		1.170	0.320	
F statistics*/ p-value	23.880	0.000		1.272	0.283	

* For occupational mobility score, Kruskal-Wallis test is used as the hypothesis of variance homogeneity is rejected in Levene Test.

5.5 Employment and mobility

5.5.1 First job occupation and mobility

(A) Occupational group

All the distributions are right skewed and median zero or close to zero, except the service group has almost symmetrical distribution and has a median of 15. This is shown in Figure 5.22. Professional and administrative groups have the most concentrated distribution, with central 50% of the observations experiencing horizontal mobility. Administrative is the only category having downward occupational mobility score on average, as shown in Table 5.26. Service group is the only group enjoying a double-digit average upward occupational mobility. The difference in the variance of occupational mobility score is significant. Comparing across first job occupational groups, there is significant difference in the average occupational mobility score.

As for income mobility, most of the groups have right-skewed distribution. The distribution for service workers is near to symmetrical. This is shown in Figure 5.22. The distribution for sales workers is most widely dispersed based on the highest value of standard deviation. There is no significant difference in the variance of income mobility score for each group. Comparing across occupational groups, there is significant difference of average income mobility score, as shown in Table 5.26. The average income mobility score for sales workers is the highest while the average for professional workers is the lowest.

Figure 5.22 Box plots for occupational mobility and income mobility score by first job occupational group

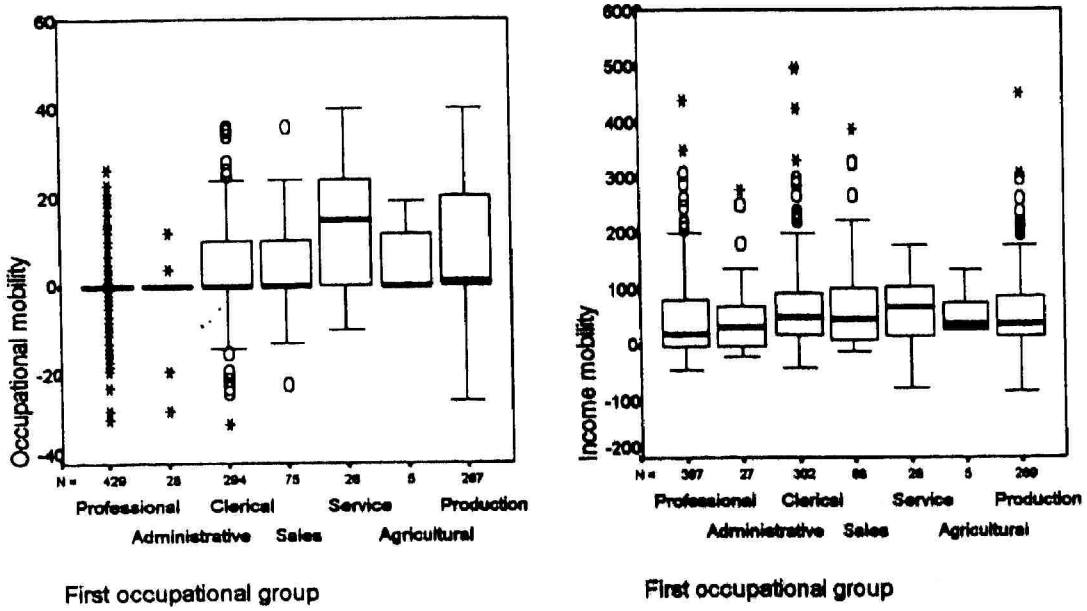

Table 5.26 Descriptive statistics for occupational mobility score and income mobility score by first job occupational group

First job occupation group	Occupational mobility score			Income mobility score (RM)		
	Mean	SD	Median	Mean	SD	Median
Professional	0.20	6.00	0	498.73	675.71	210.29
Administrative	-0.60	7.33	0	585.17	812.96	387.90
Clerical	4.22	10.31	0	682.31	757.01	500
Sales	5.72	10.26	0	738.40	884.73	500
Service	14.08	13.97	15	635.95	534.78	700
Agricultural	5.69	9.42	0	565.27	314.37	460.80
Production	9.00	12.96	1	587.76	656.39	405
Levene statistics/ p-value	67.239	0.000		1.581	0.149	
F statistics*/ p-value	102.343	0.000		2.470	0.022	

* For occupational mobility score, Kruskal-Wallis test is used as the hypothesis of variance homogeneity is rejected in Levene Test.

(B) ISEI score

The distribution of occupational mobility shows different patterns for each first job ISEI score group. This is shown in Figure 5.23. The dispersion of distribution decreases as the first job ISEI score increases. There is significant difference in the variance of

occupational mobility score for each group. The central 50% respondents in the 61 – 90 group experience horizontal mobility while this group suffered slight downward mobility on average. All the distributions have a zero median, except the group with 16 – 40 ISEI score in their first job (median = 6). The first two groups have a right skewed distribution. Testing across first job ISEI score groups, the difference in the average of occupational mobility score is highly significant, as shown in Table 5.27.

All the distributions for income mobility are right skewed, as shown in Figure 5.23. The median for the first two groups lie in almost the same level while the median for individuals with first job ISEI score between 61 – 90 is lower. The same pattern can be observed for the mean of these three groups, as shown in Table 5.27. The difference in the variance of income mobility score is significant. There is significant difference in the average income mobility score for different first job ISEI score group.

Figure 5.23 Box plots for occupational mobility and income mobility score by first job ISEI score

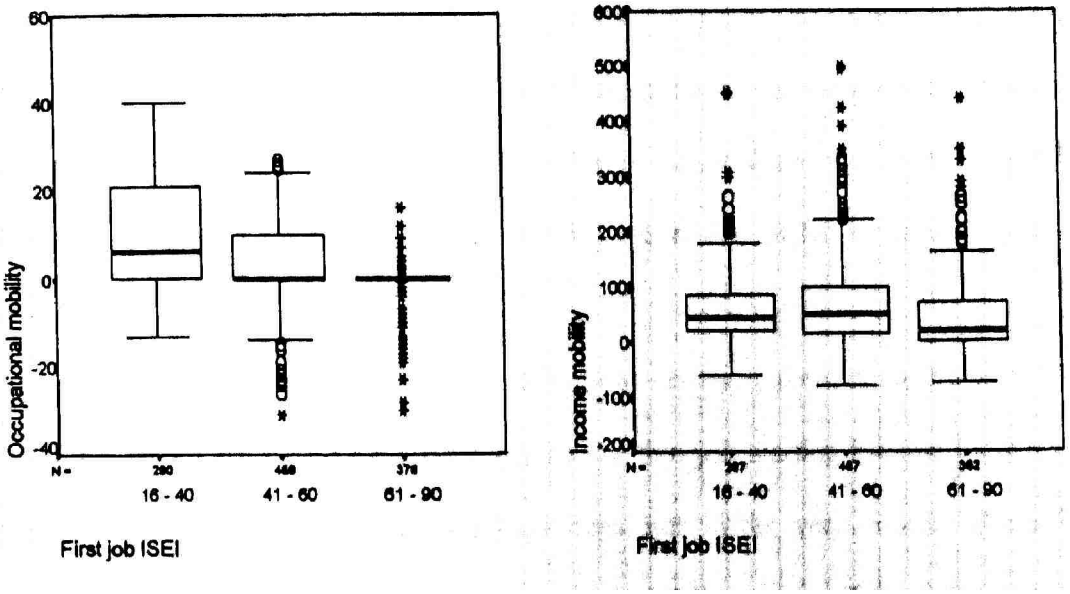

Table 5.27 Descriptive statistics for occupational mobility score and income mobility score by first job ISEI score

First job occupation ISEI score	Occupational mobility score			Income mobility score (RM)		
	Mean	SD	Median	Mean	SD	Median
16 – 40	10.58	12.98	6	617.77	629.26	450
41 – 60	3.93	9.72	0	672.70	772.09	500
61 – 90	-0.88	4.82	0	465.88	675.87	200
Levene statistics/ p-value	217.444	0.000		4.017	0.018	
Kruskal-Wallis/ p-value	157.499	0.000		32.314	0.000	

5.5.2 First job starting income and mobility

The distribution of occupational mobility score for each group of first job starting income is right skewed. This is shown in Figure 5.24. The distribution of occupational mobility score for individuals with a starting income of more than RM1000 is more concentrated while the distribution for individuals with RM500 or less is the most diverse. The central 50% observations belonging to the groups with RM1001 – RM1500 and RM1501 or above starting income experience horizontal mobility. The average occupational mobility recorded reduces as the starting monthly income increases, as shown in Table 5.28. Levene test shows that there is a significant difference in the variance of occupational mobility core for each group. Using Kruskal-Wallis test, it shows that there is significant difference in the average occupational mobility score for different groups of starting income.

As for income mobility, all the distributions are right skewed, as shown in Figure 5.24. The median and mean generally drop as the first job starting income increase. The dispersion of distribution for each group does not differ very much. There is no significant difference in the variance of income mobility score. The difference in the average income mobility score for different categories of first job starting income is

significant, as shown in Table 5.28. The average for the group with starting income less than RM500 is higher than the average for the group with starting income ranging from RM1001 and above.

Figure 5.24 Box plots for occupational mobility and income mobility score by first job starting income

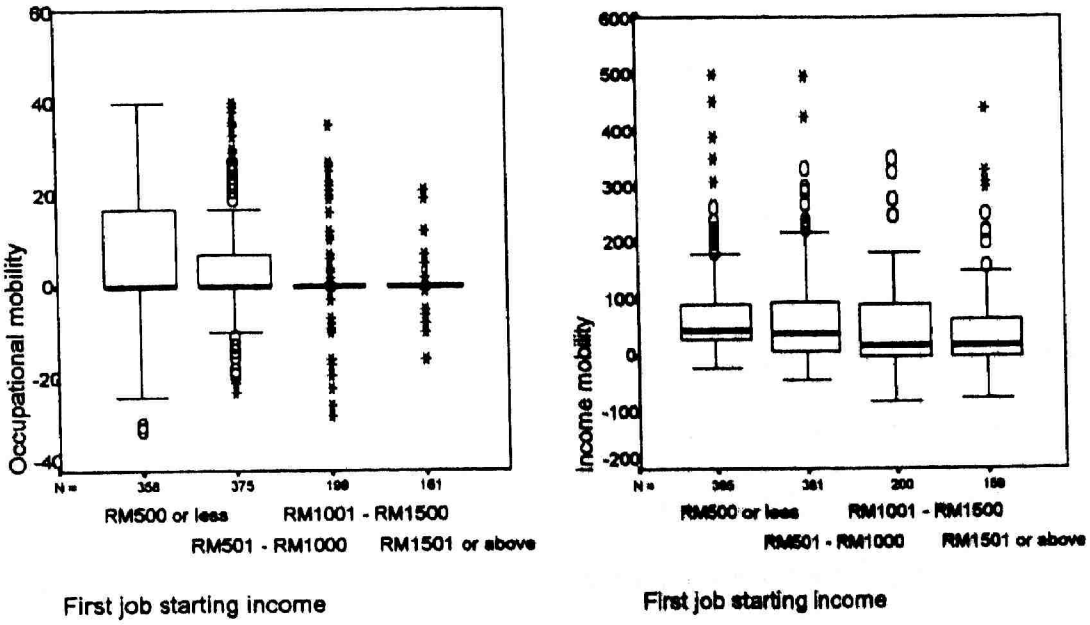

Table 5.28 Descriptive statistics for occupational mobility score and income mobility score by first job starting income

First job starting income	Occupational mobility score			Income mobility score (RM)		
	Mean	SD	Median	Mean	SD	Median
RM500 or less	6.76	13.11	0	672.82	697.09	450
RM501 – RM1000	4.33	9.85	0	612.35	721.33	400
RM1001 – RM1500	1.68	8.24	0	486.91	683.37	202.94
RM1501 or above	0.28	2.64	0	472.55	716.89	200
Levene statistics/ p-value	103.445	0.000		1.719	0.161	
F statistics*/ p-value	42.114	0.000		4.683	0.003	

* For occupational mobility score, Kruskal-Wallis test is used as the hypothesis of variance homogeneity is rejected in Levene Test.

5.5.3 Years of working experience and mobility

For occupational mobility, generally the dispersion of observation increases as the duration in the workforce increases, as shown in Figure 5.25. For individuals with one

year or less working experience, the central 50% respondents are moving horizontally. All the distributions are right skewed with median zero. The variance of occupational mobility score for each group is significantly different. Generally, the average occupational mobility score increases as years of working experience increases, as shown in Table 5.29. Nevertheless, the trend reverted for the group having six years or more working experience. Testing across different duration categories, there is significant difference of average occupational mobility score.

For income mobility, the dispersion of distribution is the smallest for individuals with less than one year working experience. This is shown in Figure 5.25. All the distributions are right skewed. The difference in the variance of income mobility score is significant. The average upward income mobility enjoyed by each category increases as the duration in the workforce increases, as shown in Table 5.29. The difference of average income mobility observed among categories is highly significant.

Figure 5.25 Box plots for occupational mobility and income mobility score by years of working experience

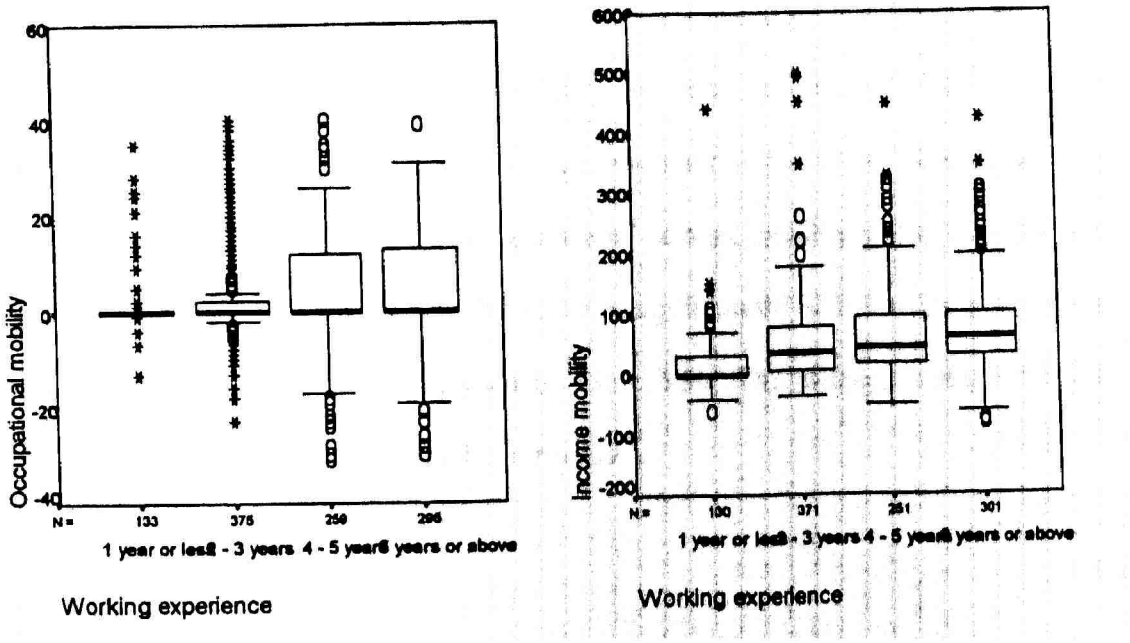

Table 5.29 Descriptive statistics for occupational mobility score and income mobility score by years of working experience

Years of working experience	Occupational mobility score			Income mobility score (RM)		
	Mean	SD	Median	Mean	SD	Median
1 year or less	1.59	6.67	0	221.38	482.27	0
2 – 3 years	3.26	9.39	0	532.42	660.50	350
4 – 5 years	5.34	12.54	0	693.83	759.83	450
6 years or above	4.87	10.84	0	733.31	705.82	600
Levene statistics/ p-value	29.293	0.000		8.717	0.000	
Kruskal-Wallis/ p-value	21.620	0.000		97.553	0.000	

5.5.4 Number of jobs held and mobility

All the distributions of occupational mobility score are right skewed with zero median, as shown in Figure 5.26. The dispersion of the central 50% observations in each category increase as the number of jobs held increase. The same trend can be observed for the average occupational mobility score. For individuals holding only one job, majority of them are experiencing horizontal mobility. The variance of occupational mobility score for each group is significantly different. The difference of average occupational mobility score among all categories is highly significant, as shown in Table 5.30. Generally, the average occupational mobility score increases as the number of jobs held increases.

All the distributions of income mobility are right skewed, as shown in Figure 5.26. The dispersion of distribution and average income mobility score increases as more jobs are held before. The difference in variance of income mobility score is statistically significant. The average income mobility score is significantly different for groups with different number of jobs held, as shown in Table 5.30. The average income mobility score increases as the number of jobs held increases.

Figure 5.26 Box plots for occupational mobility and income mobility score by number of jobs held

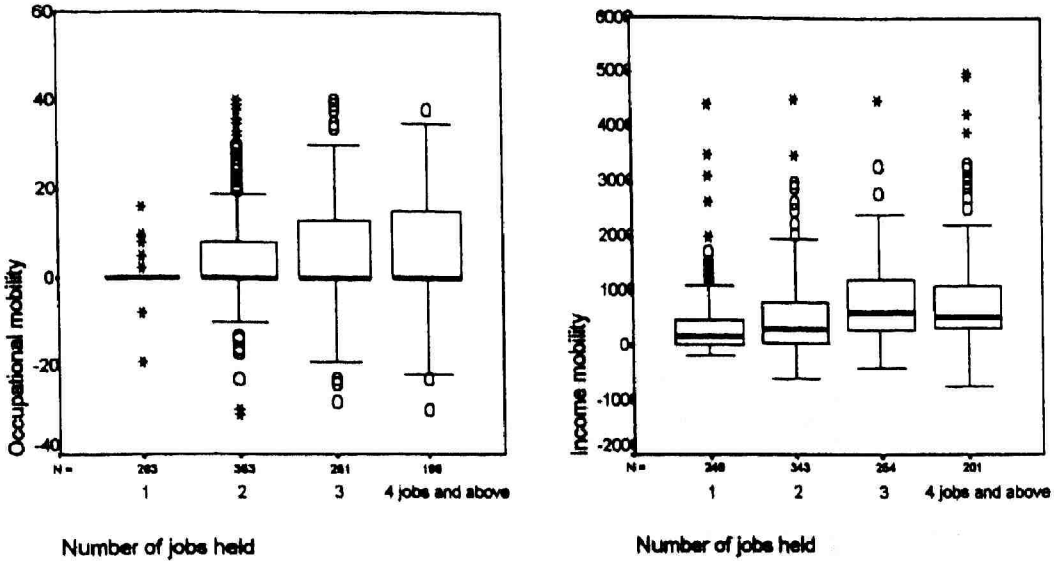

Table 5.30 Descriptive statistics for occupational mobility score and income mobility score by number of jobs held

	Occupational mobility score			Income mobility score (RM)		
Number of jobs held	Mean	SD	Median	Mean	SD	Median
1	0.30	1.92	0	348.49	580.93	150
2	4.88	11.40	0	493.06	595.38	307.43
3	4.93	12.12	0	781.20	742.85	600
4 jobs and above	5.67	11.64	0	801.28	888.75	542.10
Levene statistics/ p-value	113.276	0.000		11.608	0.000	
Kruskal-Wallis/ p-value	48.775	0.000		106.736	0.000	

5.5.5 Job changing pattern and income mobility

The distributions of income mobility score for all groups are right skewed, as shown in Figure 5.27. The median for individuals who stay in the same occupation with the same employer is less than the other three groups. Besides, the distribution for this group is more concentrated. The average income mobility score for this group is the lowest among all the groups, as shown in Table 5.31. The variance of income mobility score is significantly different for different job changing category. The average income mobility enjoyed by individuals who change occupation with the same employer is the highest.

However, the sample size for this group is relatively small. The difference in the average income mobility score for each category is statistically significant.

Figure 5.27 Box plot for income mobility score by job changing pattern

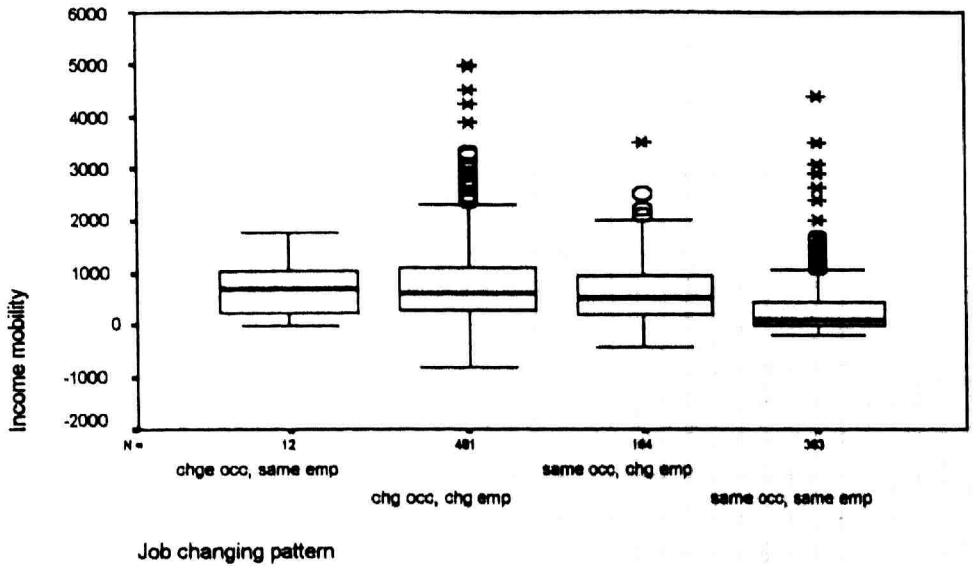

Table 5.31 Descriptive statistics for income mobility score by job changing pattern

	Income mobility score (RM)		
Job changing pattern	Mean	SD	Median
Change occupation, same employer	812.87	601.65	700
Change occupation, change employer	773.82	807.06	599.99
Same occupation, change employer	607.54	547.49	515.15
Same occupation, same employer	339.56	594.69	100
Levene statistics/ p-value	12.027	0.000	
Kruskal-Wallis/ p-value	147.991	0.000	

5.6 Summary

In this chapter, we have examined the patterns of occupational mobility score and income mobility score across different categories in a variable. This is a univariate analysis. Table 5.32 provides a summary to show whether there is a different mobility patterns among categories in a variable.

Table 5.32 Summary of the patterns of occupational mobility score and income mobility score among different categories in a variable

Variable	Occupational mobility	Income mobility
Demographic variables		
Gender	/	X
Ethnicity	/	/
Age	X	X
Marital status	/	X
Location in which an individual grew up	X	/
Family background		
Parent's education level	/	/
Parent's occupation		
(A) Occupational group	X	/
(B) ISEI score	X	/
Parent's income level	/	/
Family size	X	/
Birth order	X	X
Human capital investment		
Total years of academic education	/	X
Highest qualification acquired	/	/
Academic performance		
(A) SRP aggregate	/	/
(B) SPM aggregate	/	/
(C) Pre-university result	/	/
Vocational training	/	X
Training provided by employer	X	/
First job tenure	/	X
Employment		
First job occupation		
(A) Occupational group	/	/
(B) ISEI score	/	/
First job starting income	/	/
Years of working experience	/	/
Number of jobs held	/	/
Job changing pattern	-	/

Note: '/' means categories in the variable are significantly different while 'X' means categories in the variable are not significantly different.

5.6.1 Occupational mobility

Professional workers are most likely to stay in the same occupational group while production workers tend to job hop to other occupational groups. If an individual changes

occupational group, he is more likely to choose a job in the professional group. Using ISEI as a measurement scale, most of the respondents only move horizontally along the scale. A high status first job is usually linked to less upward mobility.

Female enjoys more upward movement than male. The same is for married persons. Bumiputera enjoys the most upward movement, followed by Chinese and Indian.

An individual enjoys less upward movement if he comes from a good education background family. If the parents have good education, it is more likely that they spend more on the human capital investment on their offspring. With a better human capital investment in hand, he starts off his career with a better job. This in turn may limit the upward distance that he can move up to.

The more years of academic education an individual received, the less upward mobility he experienced. In addition, the more years an individual studied, the higher his education level is going to be. Hence, the same pattern can be observed for the level of education achieved. The pattern prevailing may be due to the reason that they started off their career with a high status occupation or they have just finished studies and the duration in the workforce is relatively short. Due to the short time frame of the longitudinal survey, there is pattern showing that the higher the qualification acquired, the less working experience an individual possesses. This is shown in Table 5.33.

Table 5.33 Descriptive statistics for first job ISEI score and days of working experience by highest qualification acquired

Highest qualification Acquired	First job ISEI score			Days of working experience		
	Mean	SD	Median	Mean	SD	Median
Secondary school	48.70	13.95	45	1600.63	824.06	1691
Certificate	51.90	13.99	51	1426.48	596.64	1371
Diploma	52.96	10.50	54	1282.15	635.54	1112
Professional or semi-professional courses	56.22	11.17	58	1250.90	592.61	1312
Degree or higher	64.42	10.26	67	657.55	499.79	508
Levene statistics/ p-value	31.220	0.000		24.887	0.000	
Kruskal-Wallis / p-value	215.242	0.000		227.240	0.000	

On the other hand, the better an individual performed in academic, the less distance he is able to climb up on the occupational ladder. Better-performed individual may have higher education level. The longer education duration may limit their working experience and also the upward movement. Vocational training affects the occupational mobility individual experiences. On the other hand, training provided by employer does not affect the mobility experiences by an individual.

First job tenure is another form of significant human capital investment. The longer an individual stays in the first job, the less he is going to move up. The longer he stays in the firm, the less likely he is going to job-hop to find a better job. He may be enjoying the security that the firm provides and reluctant to explore the choices available.

First job characteristics are more important variable affecting occupational mobility. The first occupational group is an important variable. Jobs in the professional and administrative categories lead to less upward movement compared to jobs in service and production. The lower is the first job ISEI score, the more an individual is going to move up. The same pattern can be noted for the first job starting income.

The more years of working experience an individual possesses, the more he is going to move up. The same pattern applies to the number of jobs held. As he joins the work force earlier, he has less academic education. Hence, he has started with a low status job and has tried more jobs. This helps him to move up more when he is exploring the choices available. There is more rooms for him to move up. For an individual who just joined the workforce, he is still exploring his choices. The duration is too short for any major movement and the number of jobs held is relatively limited. Furthermore, if he was studying before joining the work force, he may start off with a better job as he achieved higher educational level. So, the upward movement enjoyed is more limited.

5.6.2 Income mobility

Upward income mobility is the most common pattern. A high starting income does not help in gaining more income increment. Most of the respondents enjoyed upward income mobility, either coupled with upward or horizontal mobility along the occupational scale.

Chinese enjoy the most income increment, followed by Indian and Bumiputera. Growing up in an urban area helps an individual to enjoy more upward income mobility.

The higher the parent's education levels, the more income increment an individual is going to enjoy. Parent's occupational group affects the income mobility of an individual. An individual enjoys more upward income mobility if his parent's occupation has occupation with high ISEI score. The same pattern can be detected for the case of parent's income level. Coming from a small family helps an individual to enjoy more upward income mobility.

Income mobility is not affected by the amount of academic education received but it is strongly affected by the education qualification acquired. Professional qualification holder enjoys most upward income mobility while degree holder enjoys the least. Generally, the better an individual's academic performance, the more upward income mobility he is going to experience. Training by employer influences the upward income mobility enjoys by an individual positively. The training received helps him to strengthen his bargaining power in getting higher pay.

The first job occupational group affects the income mobility. An individual enjoys more income mobility if he starts his career as a sales or clerical personnel. An individual also enjoys more income increment if he starts off his career with a lower income job.

The longer an individual has worked, the more upward income mobility he is going to enjoy. The longer he in the work force, the more working experience he can gain. Hence, the experience accumulated enables him to bargain for higher pay. The same pattern is for the number of jobs held. Normally, an individual only job-hops if he find the prospect in the new company is more attractive, like better pay. So, if he changes more jobs, he may gain more income increment. Job changing pattern also influences income mobility. On average, an individual benefits less upward income mobility if he stays in the same occupation with the same employer since he joins the work force.