



# THE ECONOMIC AND SOCIAL RESEARCH INSTITUTE

EARLY SCHOOL LEAVERS:  
REFORM OF THE JUNIOR  
CERTIFICATE, EDUCATIONAL  
ACHIEVEMENT AND  
EMPLOYMENT CHANCES

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**November 1995**

**Working Paper No. 67**

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## **Section 1: Introduction**

The main objective of this paper is to attempt to assess the likely impact of the recently introduced Junior Certificate on the education and employment outcomes of school leavers. To date, little work has been undertaken into the experiences of post 1992 Junior Certificate holders compared with their Group and Intermediate Certificate predecessors. Given the introduction of new "Foundation Levels", it is of particular interest to examine how such students fare in subsequent education and labour market outcomes.

The three-year Junior Certificate Programme was introduced in 1989, the first examinations being sat in 1992. The new programme integrates the older (2 year) Group Certificate and (3 year) Intermediate Certificate curricula and examination systems in order to reduce both existing schooling differentiation and failure rates at the Junior Cycle level. In common with previous examinations the Junior Certificate curriculum includes a compulsory core of subjects taken over the three years, with a wide range of optional subjects. During the first two years pupils are allowed to "taste" a variety of subjects and discover their aptitudes and inclinations. In addition to higher and ordinary level courses/papers, a "Foundation Level" was introduced for three of the core subjects: Irish, English and Mathematics. A more integrated curriculum - less subject bound and more experientially based - and a broader and more continuous-assessment based system was designed. This was done to cope with the wider ability and aptitude range of pupils than was previously catered for; and to decrease "failure" rates amongst low achieving pupils. Essentially, the primary aim of the new programme is to provide a curriculum which is relevant, combined with balance and breadth.

This paper presents data from two principal sources. Firstly at the aggregate national level, data available from the Department of Education shall be examined with a view to assessing the extent and nature of change (if any) that occurred in the proportions staying on to sit the Junior Certificate, Leaving Certificate and higher examinations. Secondly, the paper utilizes four sets of data from the Annual School-Leavers Surveys 1991 to 1994, drawn randomly from populations of young people who left full-time education from the academic year 1989/90 to the year 1992/93.

Given that the Junior Certificate examination was first taken at the end of the academic year 1991/92, analysis is based on the comparison of the joint surveys 1991 & 1992 (school leavers from 1989/90 and 1990/91) and 1993 & 1994 (school leavers from 1991/92 and 1992/93), giving sample sizes of 3845 and 4147, respectively. All respondents leaving school at Junior Cycle level in the 1991/92 surveys sat the Group or Intermediate Certificate (pre 1992) examinations, while half of the corresponding school leaving cohort in 1993/94 sat the Junior Certificate.

Analysis of the effects of the new Junior Certificate focuses on three main areas:

- 1) The extent to which its introduction led to a decline in the proportion of the school-leaving cohort who left school: (a) before taking the Junior Cycle examination, and (b) without achieving at least 5 D's in foundation level or ordinary level papers.
- 2) The extent to which its introduction led to a higher 'staying on' or retention rate in the cohort: either to complete the Leaving Certificate or in the proportion entering VPT or Post-Leaving Certificate courses.
- 3) The extent to which employers' perceptions and use of the new examination levels and grades in making employment decisions, reflect differences in the weighting of the new foundation / ordinary levels, and grades achieved at these levels, as against the older common / higher level grades of the preceding Group and Intermediate Certificate examinations. Essentially, we are interested in the extent to which employers place a different value on these new qualifications, levels and grades. Such employment decisions largely refer to employment outcomes such as (un)employment rates, wage rates, occupational status, and so on.

The report has the following format. Section Two presents data pertaining to the aggregate national population. Utilizing data from the Department of Education, along with Census figures, we review the changing rates of participation in full-time education and failure rates in the core subjects. Some of the main education and labour market experiences of young people are the subject of Section Three, utilizing data from the Annual School Leavers Surveys. Section Four presents detailed multivariate analyses of labour market experiences of school leavers in the pre and post Junior Certificate years. Finally, Section Five summarises the main findings.

## Section 2: National Population Figures on Participation Rates and Examination Results

We focus initially on aggregate national population data, particularly participation rates in full-time education among 14, 15, 16 and 17 year-olds. Subsequently we focus on attainment levels in the pre and post Junior Certificate years. Specifically, rates of failure in the core subjects (Irish, English and Mathematics) shall be presented with a view to identifying any changes arising from the introduction of the new foundation levels.

### *Participation Rates<sup>1</sup>*

Regarding participation rates in full-time education among 14 year-olds, the only clear trend emerging over the 14 year period 1981 to 1994 (Figure 1) appears to be an overall rise in participation rates from 97 to 99 per cent. Fluctuations arising from year to year probably relate more to varying inaccuracies in estimating total population parameters than to any real changes, and should not be given a great deal of attention.

Figure 2 displays rates of participation among 15 year-olds. Immediately observable are the considerably lower rates of participation among 15 year-olds compared with their 14 year-old counterparts. In addition, a significant upward trend in participation rates emerges over the period. A total of 87 per cent of 15 year-olds participated in 1981, rising to 92 per cent in 1984, 95 per cent in 1990 and 97 per cent in 1993. The introduction of the Junior Certificate in 1992 does not appear to have substantially altered the upward trend in participation rates. The participation rate in 1990 stood at 95.4 per cent, 1992 displaying an identical rate, while 1993 witnessed a rise of more than 1.3 percentage points to 96.7 per cent, a figure which was maintained in 1994. Whether this rise can be attributed to changes brought about by the new Junior Certificate or to the rising participation over time, it would be futile to speculate at this stage.

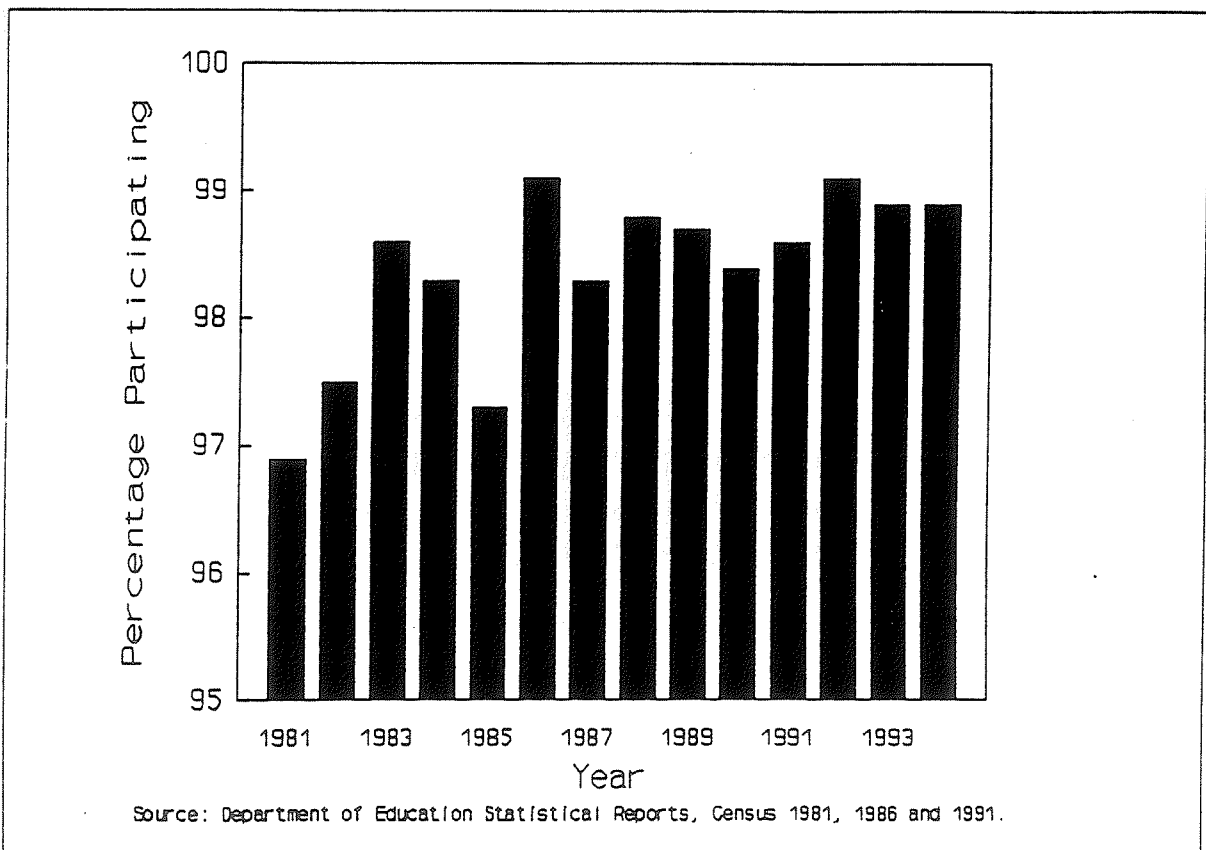
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<sup>1</sup> Throughout this section population parameters are estimates based on Department of Education estimates and Census figures (utilizing forward and backward estimation of population size): for the years 1981 to 1986, 1981 and 1986 Census figures were used; for 1987 to 1991, 1986 and 1991 Census figures were used; and for 1992 to 1994, 1991 Census figures were used.

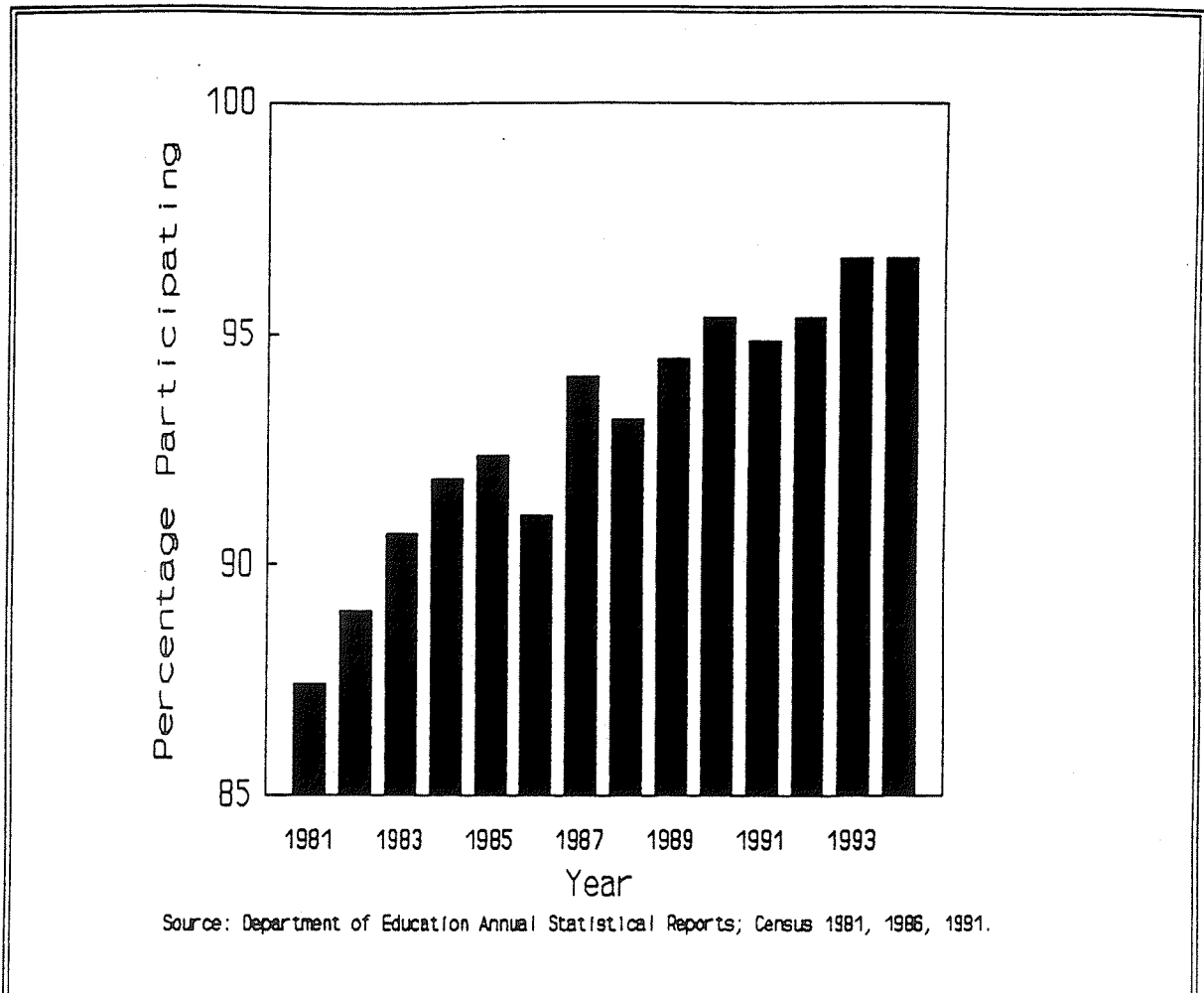


Finally, among 16 and 17 year-olds a significant growth in participation rates is once more in evidence (Figures 3 and 4). A total of 71 per cent of 16 year-olds participated in 1981, while 86 per cent participated in 1988 and 94 per cent in 1994. Among 17 year olds participation rose from 52 per cent in 1981 to 69 per cent in 1988 and 82 per cent in 1994. Participation among 16 year olds appears to have remained relatively constant with the introduction of the Junior Certificate examination in 1992. Subsequent years, however, did experience significant rises to 91 and 94 per cent in 1993 and 1994, respectively. In contrast, 17 year olds experienced continuing growth with the introduction of the Junior Certificate - participation rising from 73 per cent in 1991 to 76 per cent in 1992 and 79 per cent in 1993.

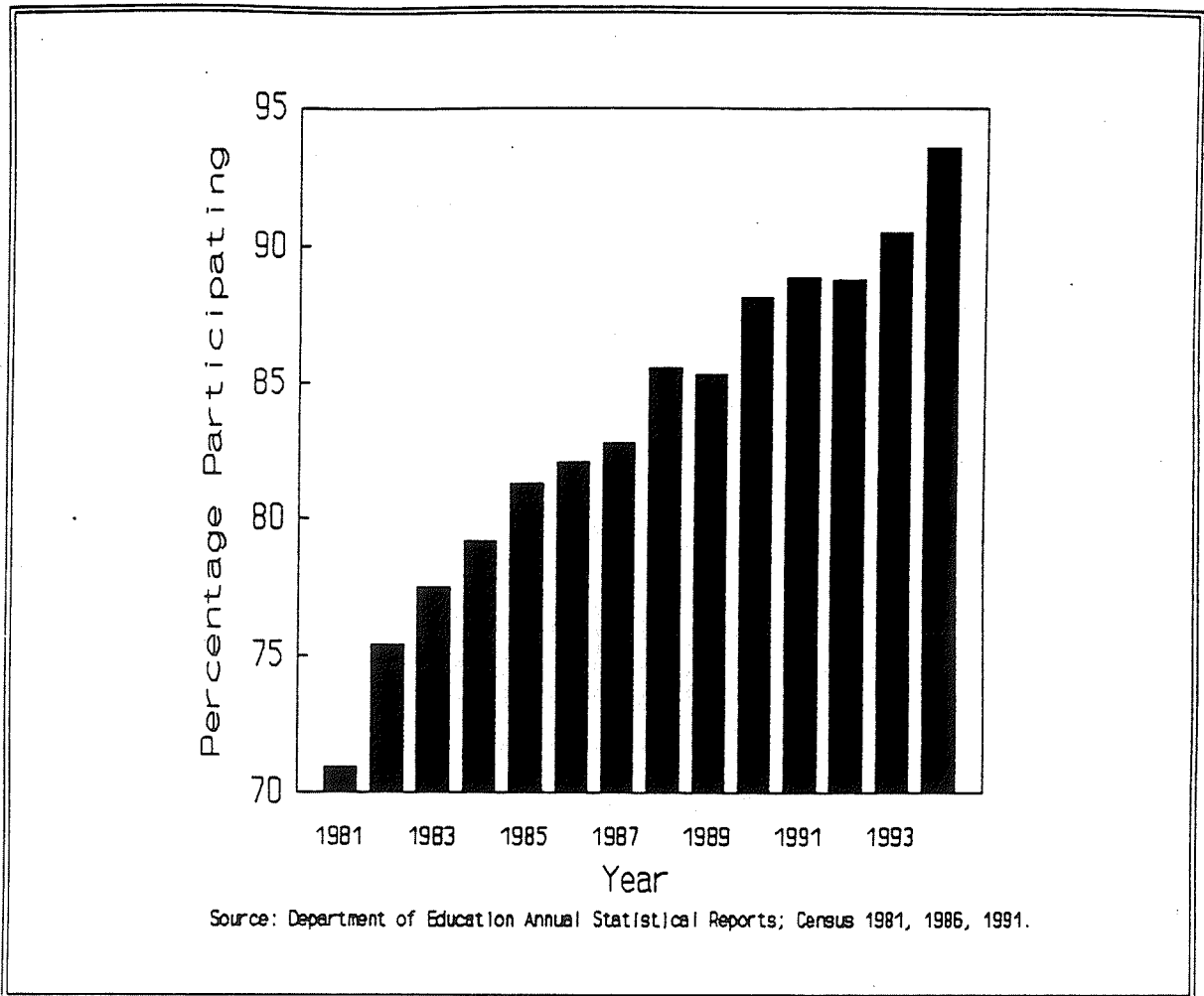
**Figure 1: Percentage of 14 Year Olds Participating in Full Time Education**



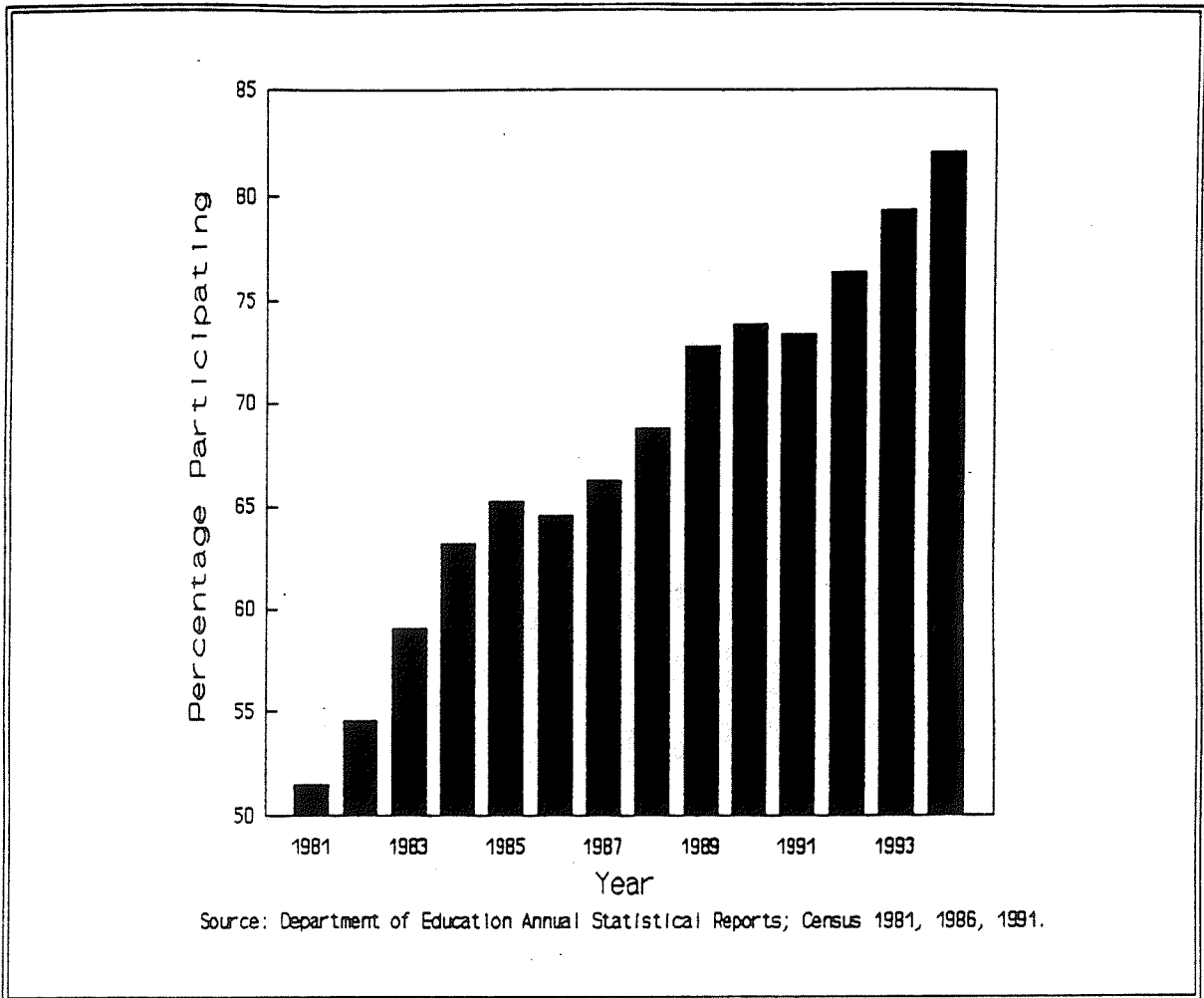
**Figure 2: Percentage of 15 Year Olds Participating in Full Time Education**



**Figure 3: Percentage of 16 Year Olds Participating in Full Time Education**



**Figure 4: Percentage of 17 Year Olds Participating in Full Time Education**



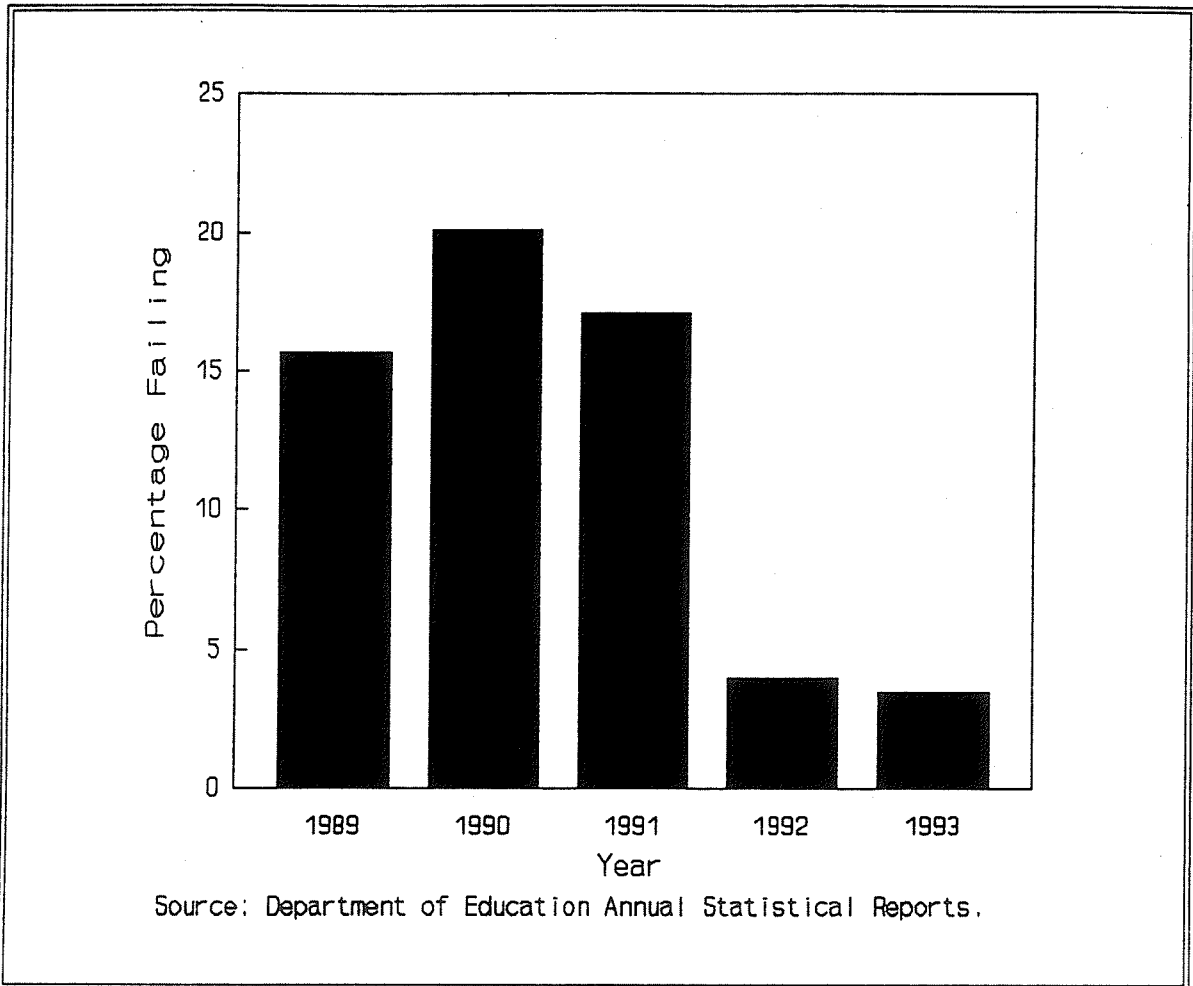
## ***Examination Results***

Turning to the outcome of examinations sat at the Junior Cycle level, the proportions of students "failing" (< D) the core subjects shall be reviewed, again drawing on data at the aggregate national level. Figures 4 and 5 present data pertaining to Irish results. Clearly 1992, the first year of the Junior Certificate examination, saw overall failure rates plummet from 15 to 20 per cent in previous years to less than 4 per cent in the operation of the Junior Certificate. This suggests that the introduction of the new foundation level, in addition to changes in the curriculum, have succeeded in lowering failure rates.

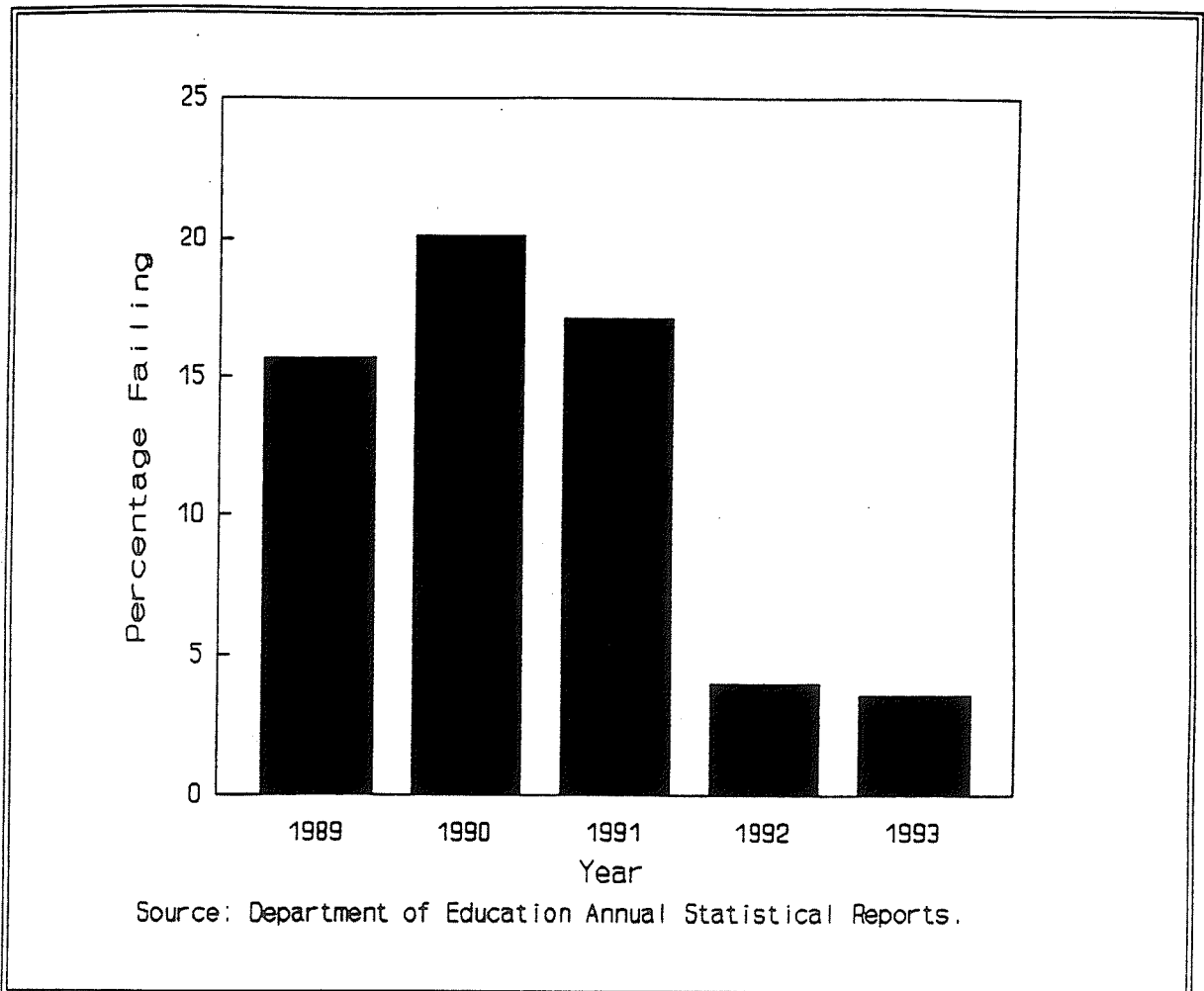
A similar, if less dramatic decline occurs for English failure rates. As Figure 6 demonstrates, a largely constant failure rate of 5 per cent for Ordinary and Higher level papers during the operation of Group and Intermediate Certificate examinations, drops to between 3 and 3.5 per cent with the introduction of the Junior Certificate. As Figure 7 illustrates, this pattern prevails when consideration is also given to foundation level papers.

Finally, as Figure 8 indicates, an entirely different picture arises in the case of Mathematics. Failure rates fluctuate between 5 and 9 per cent, with no clear pattern emerging. However, Mathematics is distinct in that the three levels (Higher, Ordinary and Foundation) were in operation in the Intermediate Certificate examination from the year 1990. Comparing 1988/89 to 1990/91 there is some decline in the failure rates - from over 8 per cent to around 6 per cent; subsequently, in 1992, the failure rate grew to over 8 per cent again. Hence, no discernible pattern emerges.

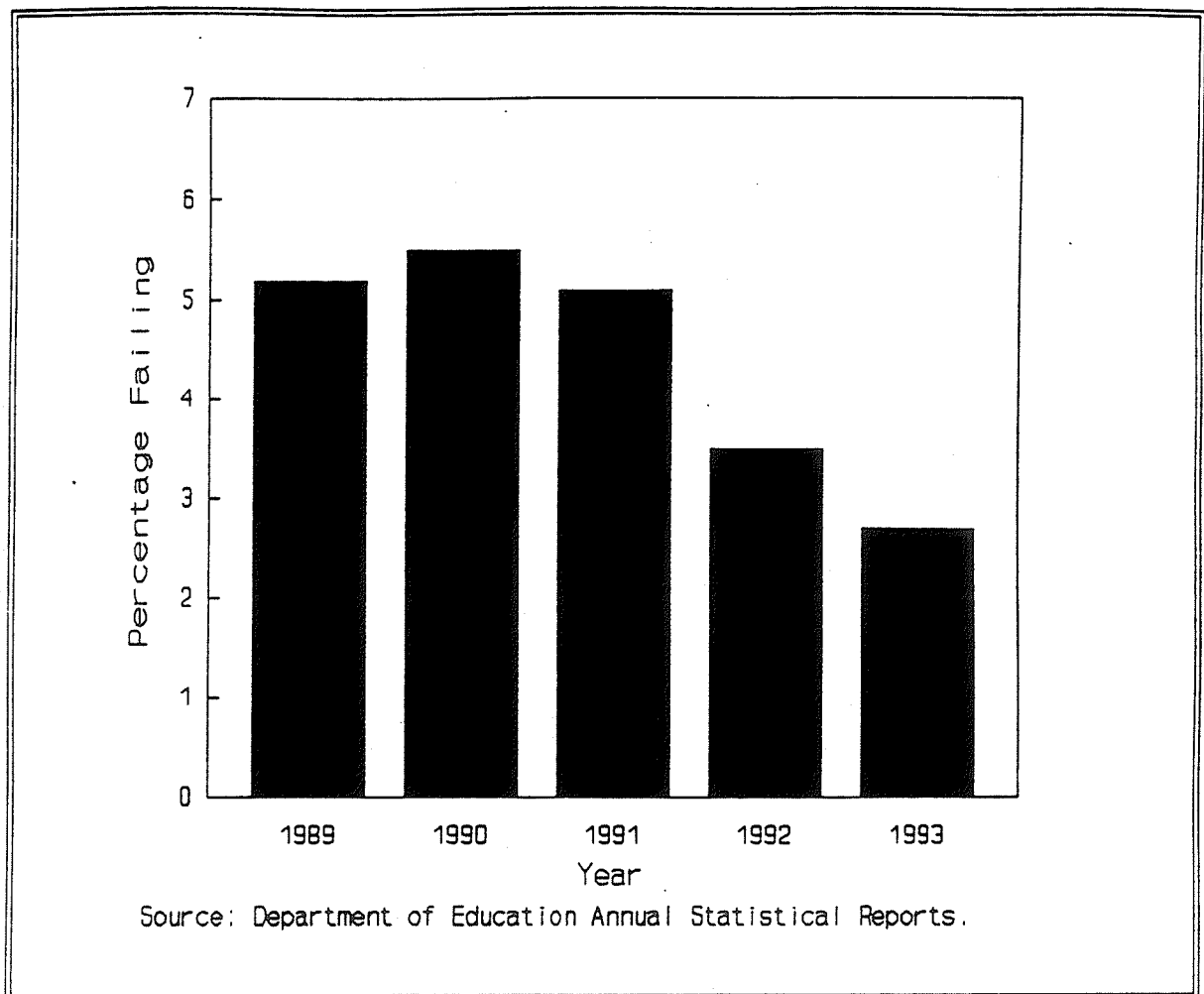
**Figure 5: Percentage of Students Failing Honours and Ordinary Level Irish in the Junior Cycle**



**Figure 6: Percentage of Students Failing Higher, Ordinary and Foundation Level Irish in the Junior Cycle**

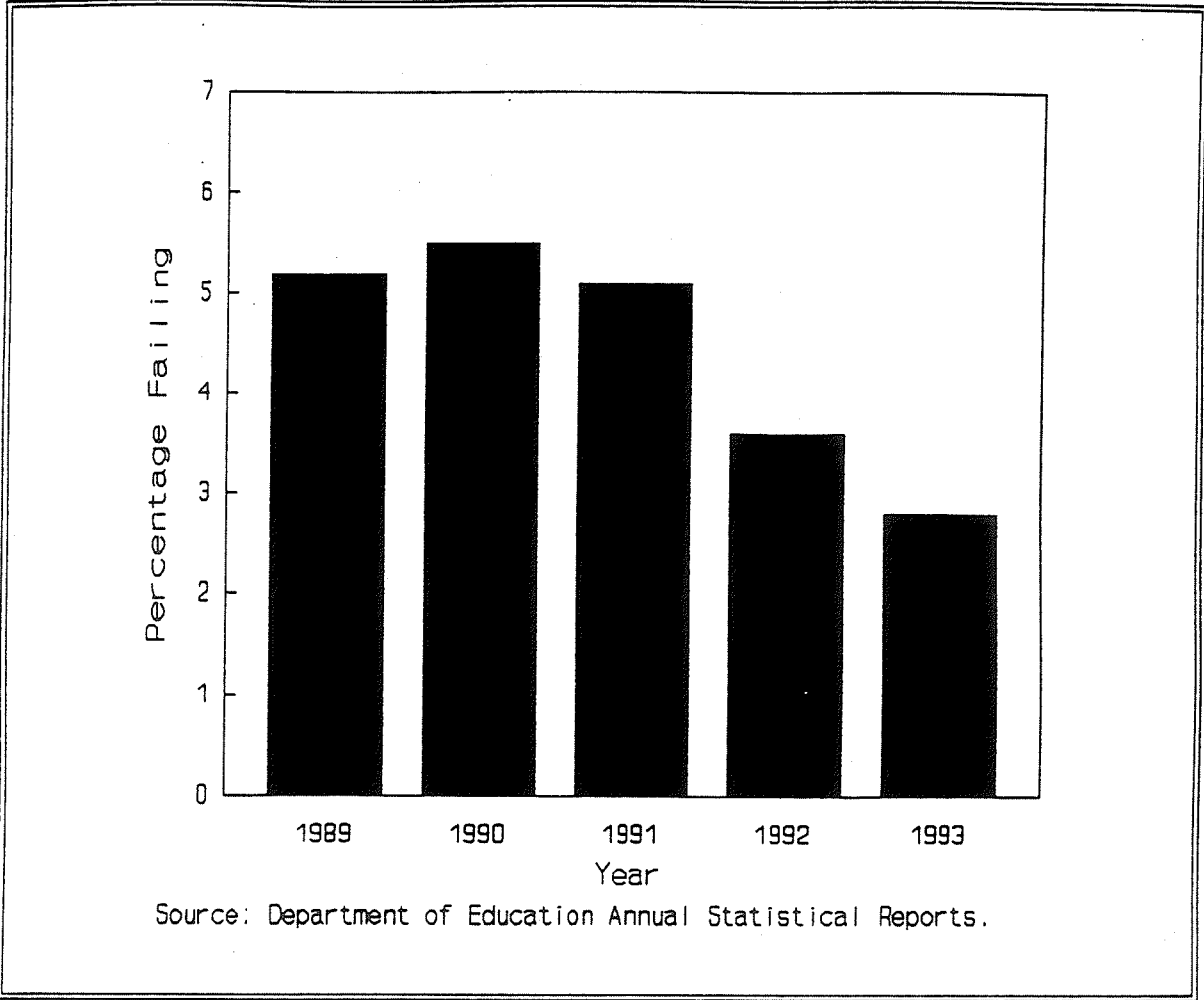


**Figure 7: Percentage of Students Failing Higher and Ordinary Level English in the Junior Cycle**

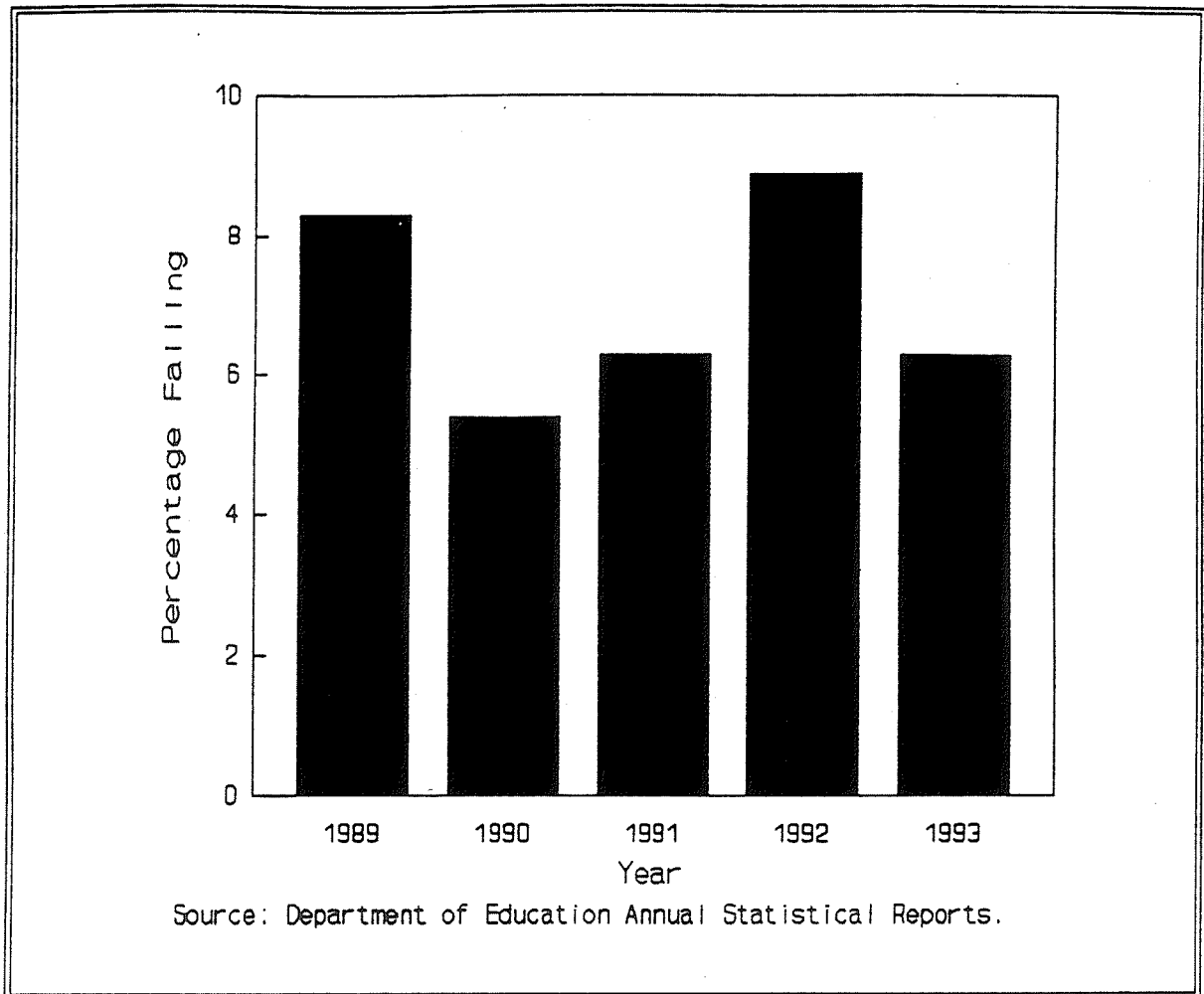




**Figure 8: Percentage of Students Failing Higher, Ordinary and Foundation Level English in the Junior Cycle**



**Figure 9: Percentage of Students Failing Higher, Ordinary and Foundation Level Mathematics in the Junior Cycle**



## *Summary*

In summary, while overall participation rates rise steadily over the 14-year period 1981 to 1994, substantial differences emerge among age categories. Participation rates rise slightly among 14-year olds, in contrast to significant upward trends among 15, 16 and 17 year olds. Among the 15 and 16 year old cohorts, however, the introduction of the Junior Certificate examination in 1992 does not appear to have altered this upward trend - the trend in participation rates remaining relatively unchanged upon its introduction. In contrast, participation rates continue to rise substantially among 17 year olds with the introduction of the Junior Certificate examination in 1992.

Regarding examination results, 1992 saw overall failure rates in both Irish and English fall. At its most dramatic, the proportion failing Irish declined from an average of 15 - 20 per cent prior to 1992 to 4 per cent in the operation of the Junior Certificate. No clear pattern emerges for Mathematics, with failure rates fluctuating between 5 and 9 per cent.

### **Section 3: School Leavers Samples - Descriptive Statistics on their Educational Characteristics and Employment Rates in 1991/92 and 1993/94.**

This section presents the descriptive statistics relating to the four Annual School Leavers Surveys 1991 to 1994. Since these surveys are carried out approximately one year subsequent to leaving school the relevant examination year is the one preceding the survey. Given that the Junior Certificate Programme was introduced in September 1989, the first examinations being sat in June 1992, analysis shall focus on comparison of the joint surveys 1991/92 (leaving school in 1989/90 and 1990/91) and 1993/94 (leaving school in 1991/92 and 1992/93), giving sample sizes of 3845 and 4147, respectively. While all respondents leaving school at the Junior Cycle level in the 1991/92 surveys sat Intermediate or Group Certificate examinations, half of the corresponding cohort in 1993/94 sat the Junior Certificate. The other half sat the Intermediate or Group Certificate having sat for their examinations mainly in 1991. While OLS and Logistic Regression analyses will be undertaken and the results presented in subsequent sections, this section is purely a descriptive one from which causal interpretations cannot be made.

#### ***Stage Leaving Full-Time Education***

Focusing initially on the last examination respondents sat before leaving school (Figure 1), the number leaving without qualifications remains relatively constant over the period. However, a notable fall, of 3 percentage points, in the proportion leaving school at the Junior Cycle level and a corresponding rise in the proportion leaving at the Leaving Certificate, is evident. As Table 2.1 displays these results are consistent with a general rise in retention rates over the last decade. The proportion leaving school both at and prior to the Junior Cycle stage has gradually declined with a corresponding rise in the proportion completing the Leaving Certificate. To exemplify, the proportion leaving school without qualifications fell from 11 to less than 5 per cent between 1981 to 1994, while the numbers attaining the Leaving Certificate rose from 59 to 83 per cent in the interim. There is no evidence, however, that the introduction of the Junior Certificate led to any significant changes in that upward trend.

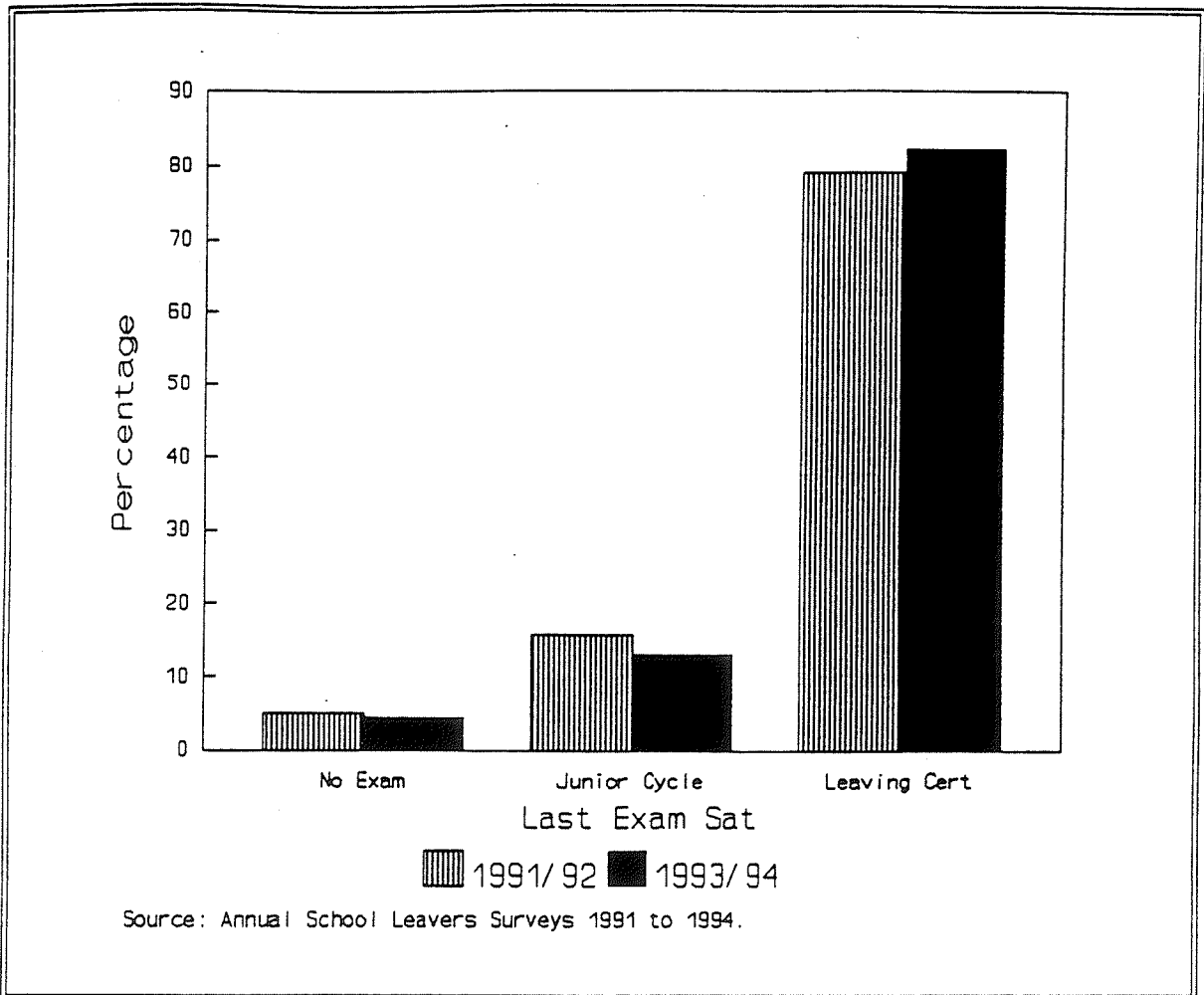
When consideration is given to respondents' success in their last examination, it is interesting to note that the composition of respondents leaving at the Junior Cycle level has shifted slightly from pass to at least one honour. In 1991/92 over 64 per cent of those leaving at the Junior Cycle passed their examination and 7 per cent received honours. By 1993/94 just half passed and almost 20 per cent received honours (Figure 2). These figures indicate a greater proportion of Junior Certificate leavers studying, and successfully completing, higher level papers than had previously been the case (in the operation of Group and Intermediate Certificate examinations). These figures should be interpreted with some caution, however, given the small numbers involved. A similar but less notable trend occurs at the Leaving Certificate stage where the proportion of students receiving honours rises by 3 percentage points: results corresponding to published national population figures<sup>1</sup>.

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1 Department of Education published (Annual Statistical Reports) figures show the rising proportions of students passing and achieving honours at the Leaving Certificate level (percentages):

	1991	1992	1993
Minimum 5 D's at any level	81.3	87.8	89.4
Minimum 6 D's - inclu 2 C's at higher level	39.5	45.7	47.4
Minimum 6 D's - inclu 4 C's at higher level	21.7	20.7	26.6
Minimum 6 C's at higher level	8.8	9.8	11.2

**Figure 1: Last Examination Sat**

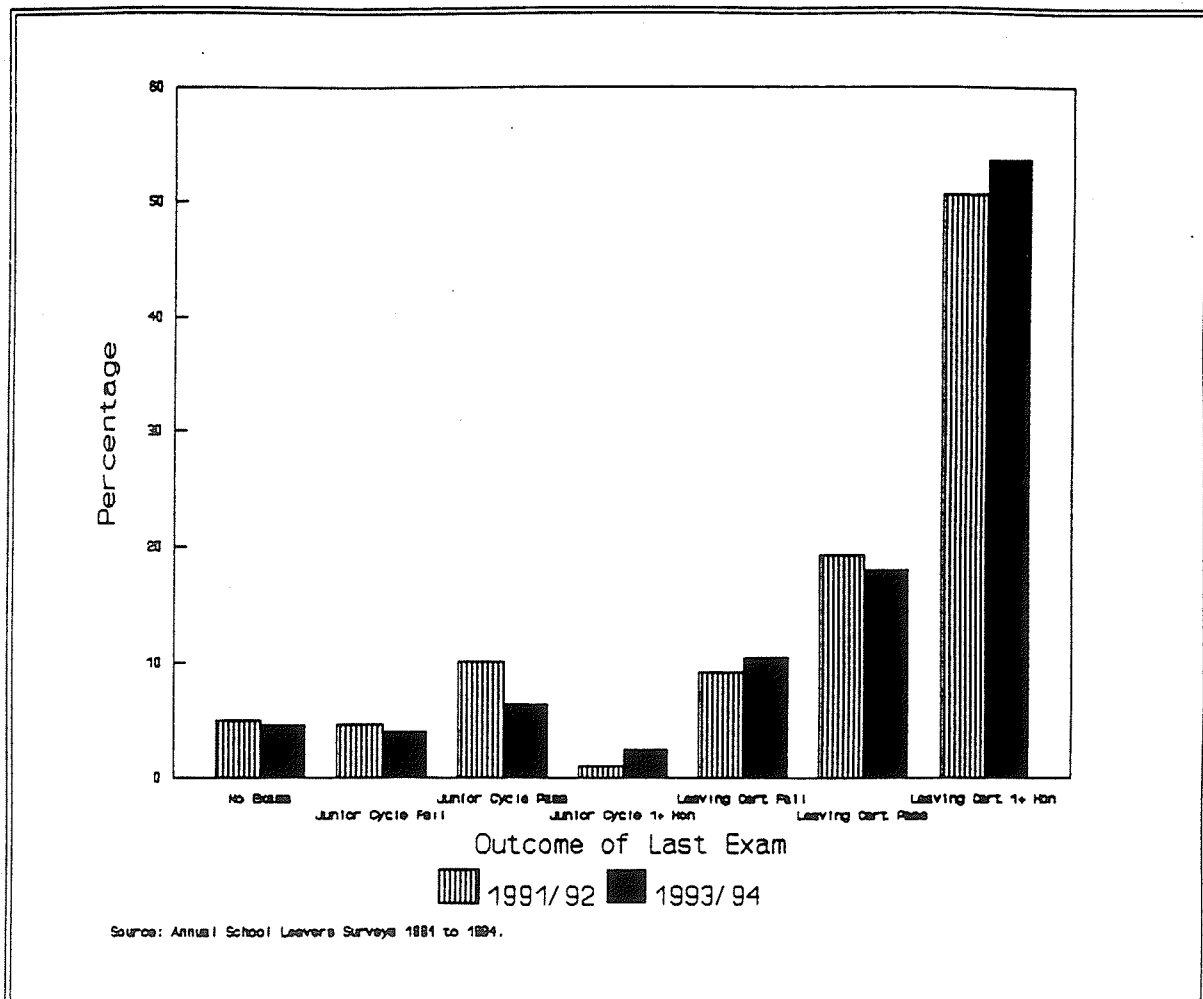


**Table 2.1: Last Examination Sat by School Leavers 1980 to 1994 Surveys**

Year	No Examination	Junior Cycle Examination	Leaving Certificate
1980	9.0	31.1	59.9
1981	11.0	29.6	59.4
1982	7.8	25.8	66.4
1983	10.3	27.3	62.4
1984	7.5	25.6	66.9
1985	7.6	23.8	68.6
1986	7.1	22.9	70.0
1987	7.9	24.4	67.8
1988	7.2	23.3	69.5
1989	6.0	22.5	71.4
1990	6.4	18.0	75.6
1991	4.5	16.5	79.0
1992	5.5	15.1	79.4
1993	4.4	13.7	81.8
1994	4.7	12.5	82.8

Source: Annual School Leavers Surveys, 1980 to 1994.

Figure 2: Outcome of Last Examination Sat





## *Employment Status*

Figure 3 displays the employment status of school leavers one year after leaving school. At the time of the 1991/92 surveys 19 per cent of school leavers were unemployed, a figure which remains constant through the 1993/94 surveys. However, this figure can be misleading since it is calculated on the basis of all school leavers rather than those in the labour force only. On these latter grounds, unemployment rates were calculated as 32 per cent at the time of the 1991/92 surveys compared with 36 per cent for 1993/94, an increase of 4 percentage points (Figure 4): an increase corresponding to Labour Force estimates<sup>2</sup>. The proportion of school leavers in employment fell by 6 percentage points over the period, with a corresponding rise of 5 percentage points in the number of unemployed school leavers (Figure 3). This, however, corresponds with rising overall unemployment rates since 1990, evident in Figure 5. Differences in status according to gender are unremarkable, with the exception of those unemployed and those unavailable for work. It is not surprising to observe females outnumbering their male counterparts in their unavailability for work, while males are somewhat more likely to be unemployed: by 4 percentage points (Figure 1 in Appendix).

As Table 2.2 indicates, these total figures conceal considerable differences in terms of educational level achieved. As expected, levels of unemployment were substantially higher among those with low or no qualifications. While 61 per cent of those leaving school without qualifications in 1991/92 were unemployed one year later, 39 per cent of those with a Junior Cycle examination and 27 per cent of those with the Leaving Certificate were in a similar situation (Table 2.3). While the unemployment rate increased for each educational category in 1993/94 the relative change is roughly equal; though with a somewhat greater increase for those leaving with a Junior Cycle qualification.

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2 National Unemployment Figures published by the Central Statistics Office in their Annual Labour Force Surveys are as follows:

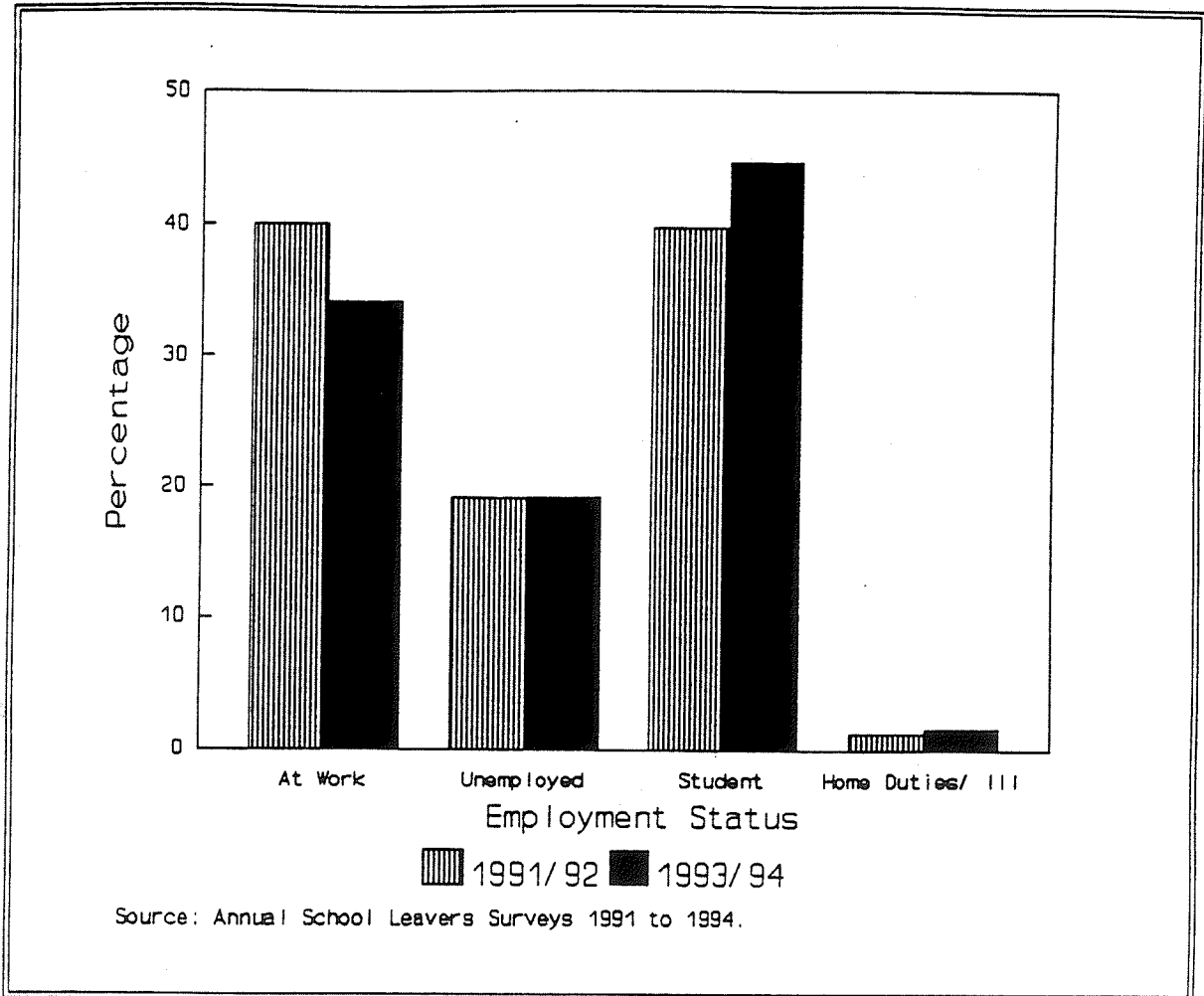
1990 - 13.4%  
1991 - 15.6%  
1992 - 16.3%  
1993 - 16.7%

The proportion of school leavers participating in full time education is substantially higher among those who attained the Leaving Certificate: half of those who achieved the Leaving Certificate are participating in full time education relative to 1 per cent of those without qualifications and 6 per cent of those who obtained a Junior Cycle Certificate (Table 2.2).

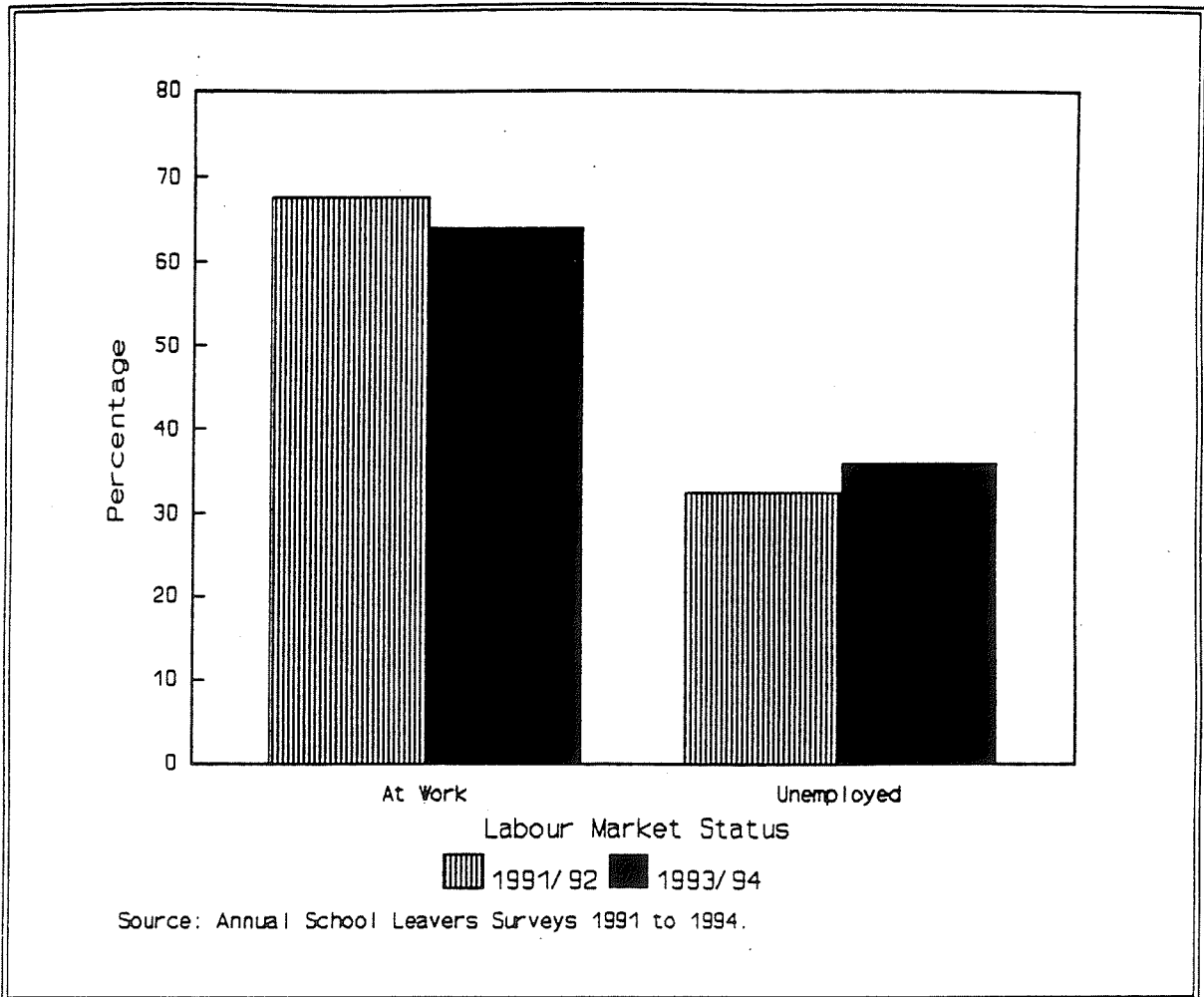
It can also be observed that employment success in the labour market among those leaving school at the Junior Cycle level appears to have deteriorated over time. As Table 2.3 indicates, an unemployment rate of 46 per cent among Junior Cycle school leavers in 1993/94 compares poorly with a corresponding rate of 39 per cent in 1991/92. However, it is important to recognise that since the proportion leaving school after the Junior Cycle declined in the interim, it is likely that those who are leaving at this stage in 1993/94 are those less academically successful and less well equipped for the labour market.

Finally, examination of Table 2.4 indicates that, for both Junior and Senior Cycle, employers appear to have much less distinction between students "failing" and "passing" their examinations in making their selections in 1993/94 than in 1991/92. While in 1991/92 the unemployment rate differed significantly between Leaving Certificate pass and fail students, no such differences emerged in 1993/94. Similarly, among Junior Cycle school leavers in 1991/92, those who failed experienced an unemployment rate 11 percentage points greater than those who attained at least five D's. By 1993/94 this difference was less than 2 percentage points. This result is unexpected: when the overall unemployment rate rises employers are expected to use credentials to a greater extent, not to a lesser extent. In overall terms, however, comparing the top (Honours Leaving Certificate) and bottom (No Qualifications) leavers, the gross difference in unemployment rates is much the same in 1993/94 as in 1991/92; though the finer (pass/fail) distinctions appear to have disappeared. However, this change is equally great for the Leaving Certificate as for the Junior Certificate - consequently no conclusions about changes in Junior Certificate "levels" and "grades" can be drawn.

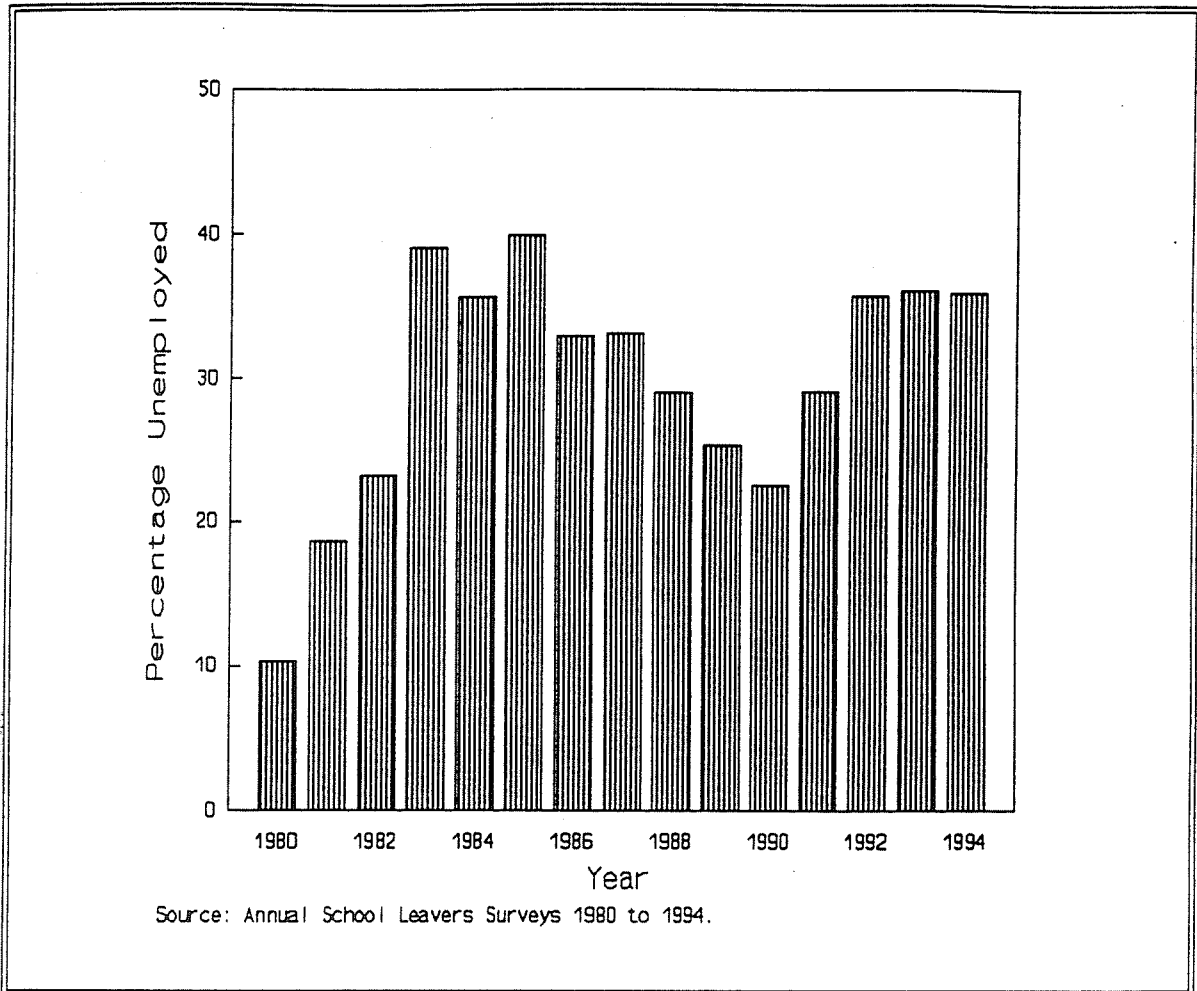
**Figure 3: Employment Status of School Leavers One Year After Leaving School**



**Figure 4: Labour Market Status of School Leavers One Year After Leaving School**



**Figure 5: Unemployment Rates Among School Leavers One Year After Leaving School**



**Table 2.2 : Employment Status of School-Leavers By Last Exam Sat,  
controlling for Year of Survey**

Employment status	No exam		Junior Cycle		Leaving Cert		Total
	1991/2	1993/4	1991/2	1993/4	1991/2	1993/4	
	%(N)	%(N)	%(N)	%(N)	%(N)	%(N)	
At Work	36.1 (69)	28.0 (53)	56.6 (344)	48.8 (265)	36.7 (1117)	31.9 (1090)	36.8
Unemployed	56.5 (108)	57.1 (108)	35.9 (218)	40.7 (221)	13.3 (406)	13.6 (464)	19.1
Student	1.0 (2)	2.1 (4)	5.1 (31)	6.6 (36)	48.8 (1486)	52.9 (1807)	42.1
Home duties/ Ill	4.7 (9)	8.5 (16)	2.0 (12)	3.7 (20)	0.8 (23)	0.8 (30)	1.4
Other	1.6 (3)	4.2 (8)	0.5 (3)	0.2 (1)	0.5 (14)	0.6 (22)	0.6
N	191	189	608	543	3046	3413	7990

**Table 2.3 : Labour Market Status of School-Leavers by Last Exam Sat,  
controlling for Year of Survey**

Status	No exam		Junior Cycle		Leaving Cert		Total
	1991/2	1993/4	1991/2	1993/4	1991/2	1993/4	
	At work	39.0	32.9	61.2	54.5	73.3	
Unemployed	61.0	67.1	38.8	45.5	26.7	29.9	34.2
N	177	161	562	486	1523	1554	4463

**Table 2.4 : Labour Market Status of School-Leavers by Outcome of Last Exam Sat, controlling for Year of Survey**

Last exam	At work		Unemployed		Total
	1991/2	1993/4	1991/2	1993/4	
	%	%	%	%	%
No exam	39.0	32.9	61.0	67.1	7.6
Junior Cycle- Fail	52.8	52.2	47.2	47.8	7.2
Junior Cycle- Pass	64.2	53.9	35.8	46.1	13.7
Junior Cycle- Hon	69.7	60.7	30.3	39.3	2.6
Leaving Cert- Fail	64.1	66.4	35.9	33.6	12.9
Leaving Cert- Pass	70.7	68.2	29.3	31.8	27.7
Leaving Cert- Hon	79.9	73.8	20.1	26.2	28.4
Total %	67.6	64.0	32.4	36.0	4463

## *Occupational Status and Earnings<sup>3</sup>*

The occupational status of school leavers in employment also closely reflects educational level attained (Table 2.5). While those leaving school at the Leaving Certificate are strongly represented in intermediate non-manual and lower professional occupations, those of lower educational attainment are concentrated in manual occupations. Of those in employment, over 46 per cent of those who attained the Leaving Certificate in 1991/92 were employed in non-manual or "white collar" occupations relative to 19 per cent of those without qualifications. Changes over time are largely unremarkable, although a slight shift towards semi- and unskilled occupations among those who acquired Junior and/or Senior Cycle Certificates, does appear to have occurred. While 50 per cent of employed Junior Cycle school leavers were employed in semi- and unskilled occupations in 1991/92, by 1993/94 this had risen to 55 per cent.

In terms of earnings, overall the situation of school leavers has improved over the period (Figure 6). Female school leavers benefited from higher hourly pay rates both in 1991/92 and 1993/94, receiving on average 25 pence more per hour than their male counterparts in 1991/92 and 16 pence more in 1993/94 (partly due to declining non-manual jobs for males). As expected, average earnings rise steadily with additional educational attainment, regardless of the year in which the survey was conducted (with the exception of those without qualifications receiving more than those leaving at the Junior Cycle level in 1993/94). As Figure 7 illustrates, in 1991/92 those without second level qualifications receive an average of £2.06 per hour, those with a Junior Cycle qualification receive £2.18 while those who attained the Leaving Certificate receive £2.85 per hour. The relative positions of those leaving without qualifications and Junior Cycle school leavers appear to have improved in the interim. While overall average hourly earnings rose by 13 pence over the period, those leaving school without qualifications experienced a rise of 45 pence per hour while those leaving at the Junior Cycle stage experienced a rise of 28 pence per hour (Figure 7).

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<sup>3</sup> Throughout this section attention is confined to those currently in full-time employment.



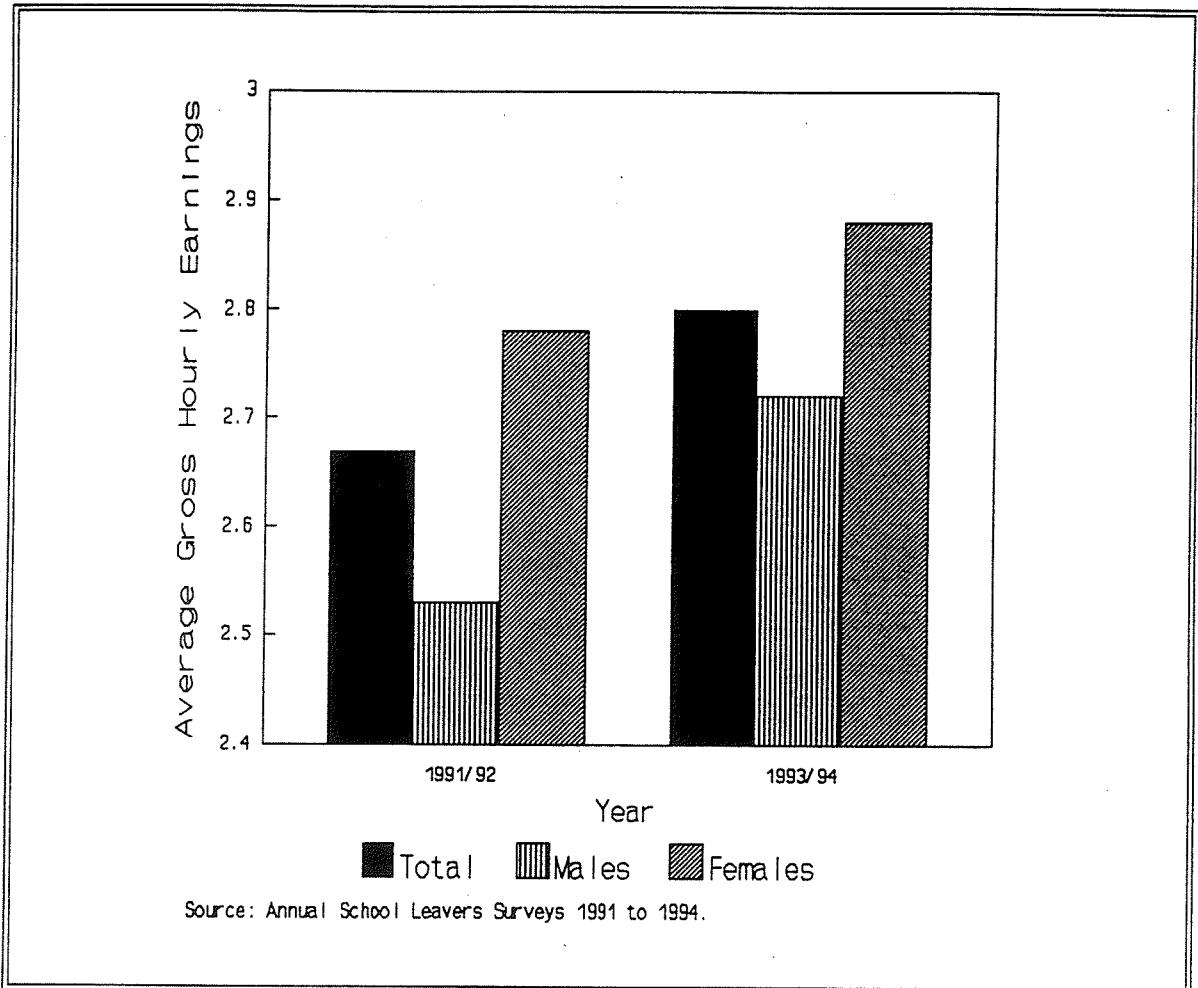
Regardless of educational level attained male workers are at a disadvantage compared with females when it comes to gross hourly pay rates (Table 2.6). Only in 1993/94 among those who have attained Junior Cycle qualifications do male wage rates exceed those of females and by a statistically significant amount. In addition, among Junior Cycle school leavers the average earnings of males has improved considerably more than that of females over the period concerned. As Table 2.5 displays, male school leavers at the Junior Cycle level experienced an increase of 42 pence in average gross hourly earnings compared to an unchanged figure for females.

In terms of the results of the last examination sat, overall earnings rise progressively with additional attainment, regardless of the year in which the survey was conducted (Figure 8). Among those whose last examination was at the Junior Cycle, average hourly earnings of £2.36 in 1993/94 among those failed, rose to £2.37 among those who passed and £2.81 among those receiving one or more honours.

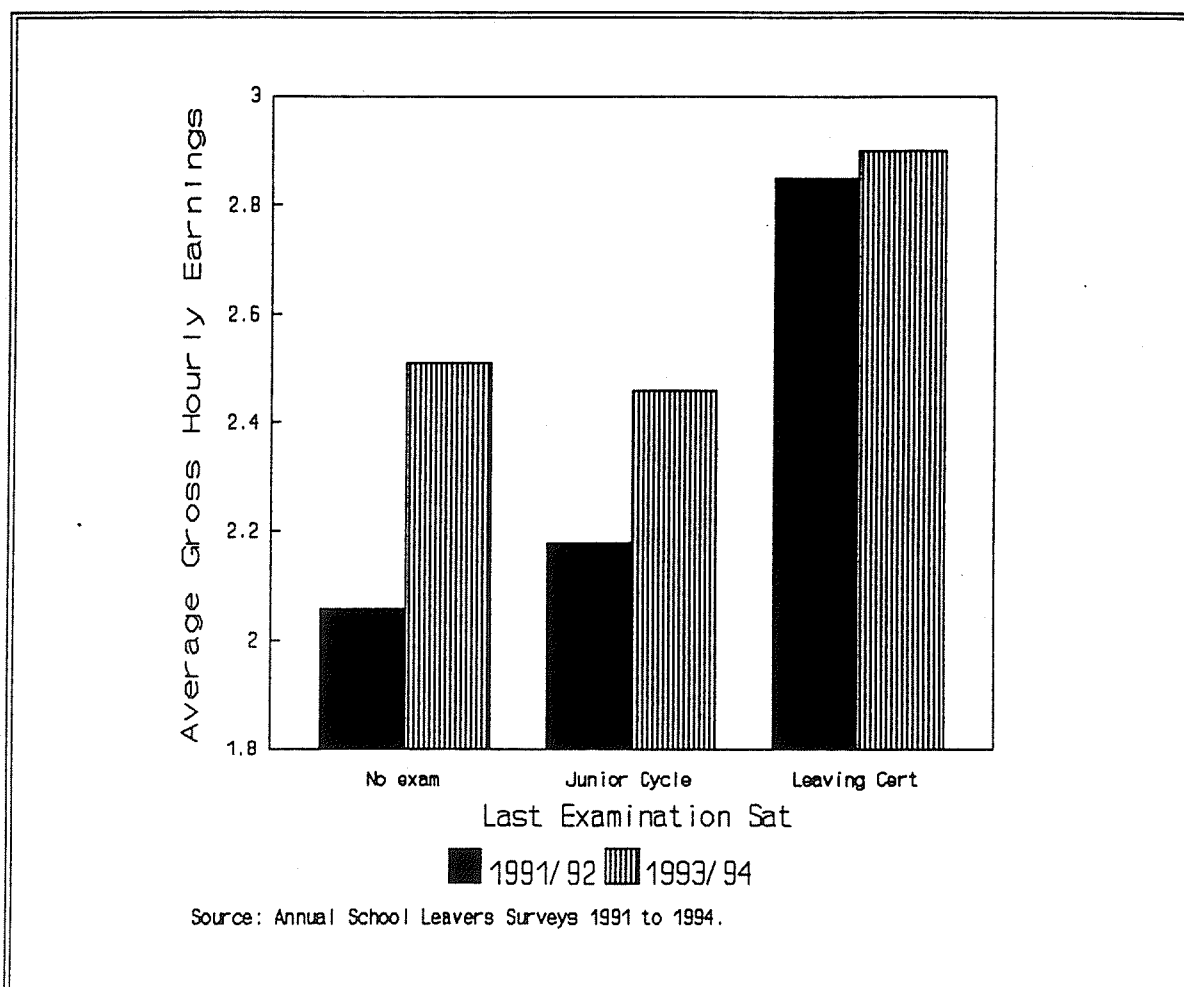
**Table 2.5 : Current Occupational Status of School Leavers by Last Exam Sat,  
controlling for Year of Survey**

Occupational Status	No Exam		Junior Cycle		Leaving Cert	
	1991/92	1993/94	1991/92	1993/94	1991/92	1993/94
	%(N)	%(N)	%(N)	%(N)	%(N)	%(N)
Higher	0.0	0.0	0.0	0.0	0.7	0.5
Professional					(8)	(5)
Lower	5.9	1.9	3.8	2.7	11.9	7.8
Professional	(4)	(1)	(13)	(7)	(132)	(85)
Intermediate	13.2	11.3	14.9	17.8	33.8	22.9
Non-Manual	(9)	(6)	(51)	(47)	(376)	(248)
Skilled Manual	13.2	17.0	31.0	24.2	12.7	16.7
	(9)	(9)	(106)	(64)	(141)	(181)
Semi-skilled	32.4	45.3	35.4	36.7	31.9	39.5
Manual	(22)	(24)	(121)	(97)	(355)	(429)
Unskilled	35.3	24.5	14.9	18.6	9.1	12.6
Manual	(24)	(13)	(51)	(49)	(101)	(137)
Total	68	53	342	264	1113	1085

**Figure 6: Average Gross Hourly Earnings of School Leavers in Employment (£)**



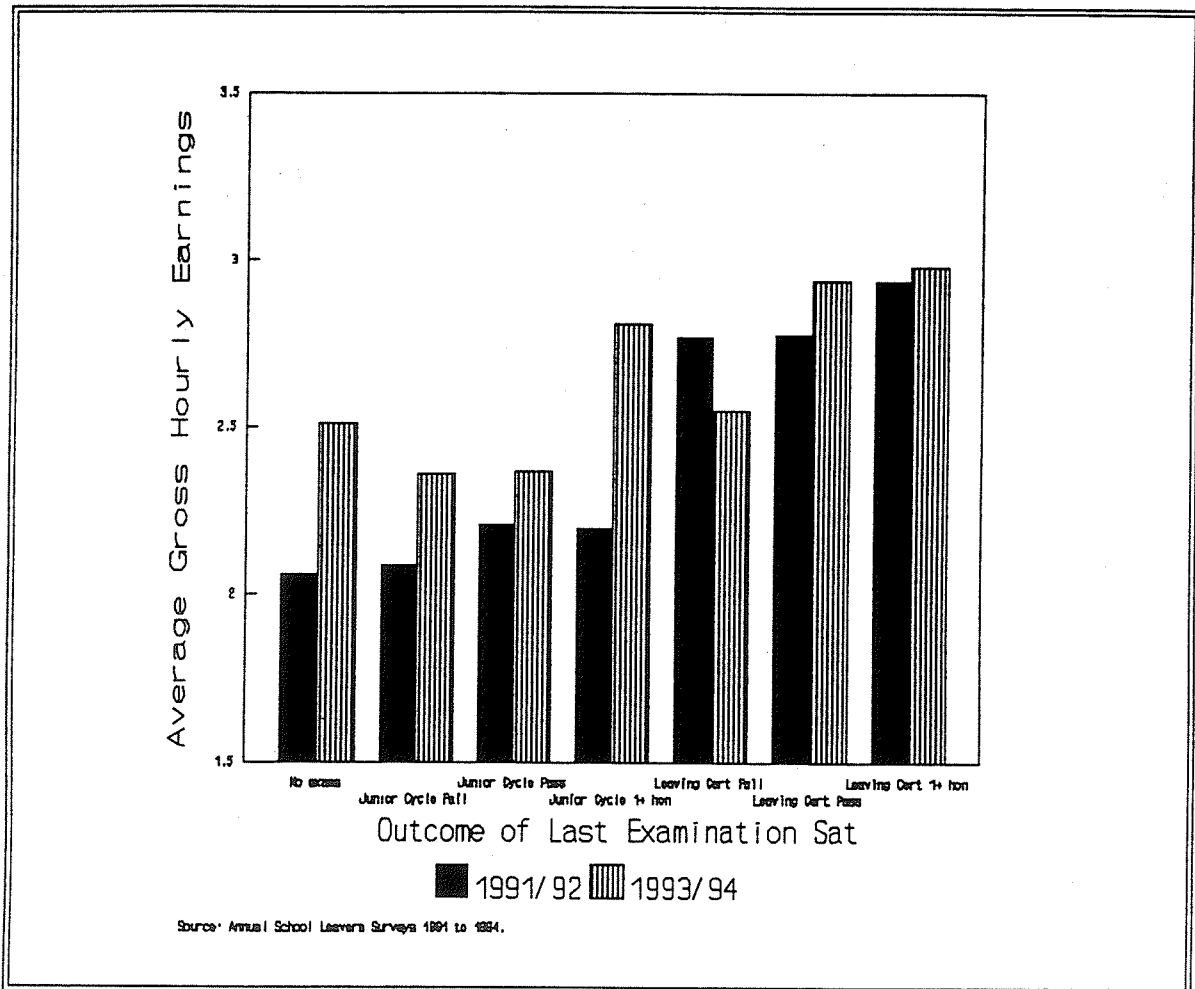
**Figure 7: Average Gross Hourly Earnings of School Leavers (£) by Last Examination Sat**



**Table 2.6 : Average Gross Hourly Earnings of Males and Females (£) by Last Examination Sat**

Year	No Exam		Junior Cycle		Leaving Cert	
	Males	Females	Males	Females	Males	Females
1991/92	1.92	2.23	2.09	2.36	2.81	2.88
1993/94	2.42	2.65	2.51	2.36	2.82	2.97

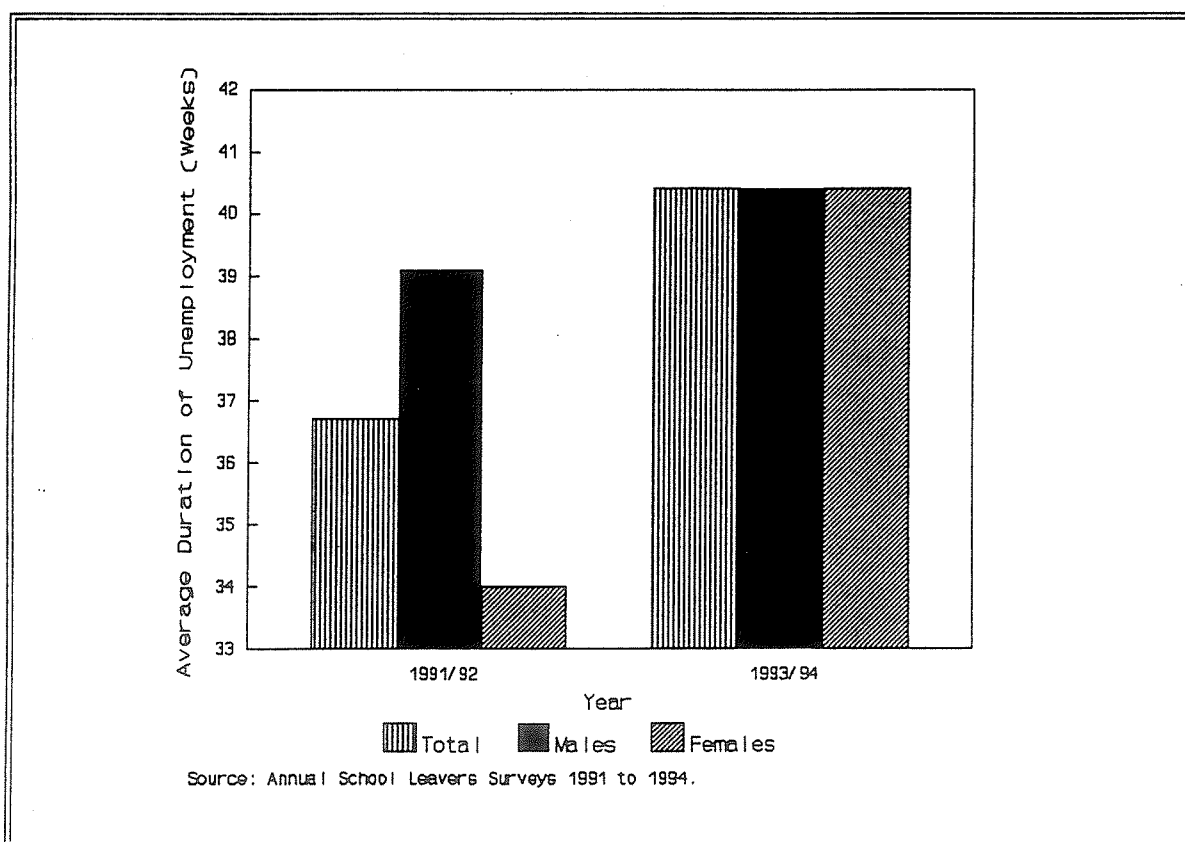
Figure 8: Average Gross Hourly Earnings (£) by Outcome of Last Examination Sat



## *Duration of Unemployment<sup>4</sup>*

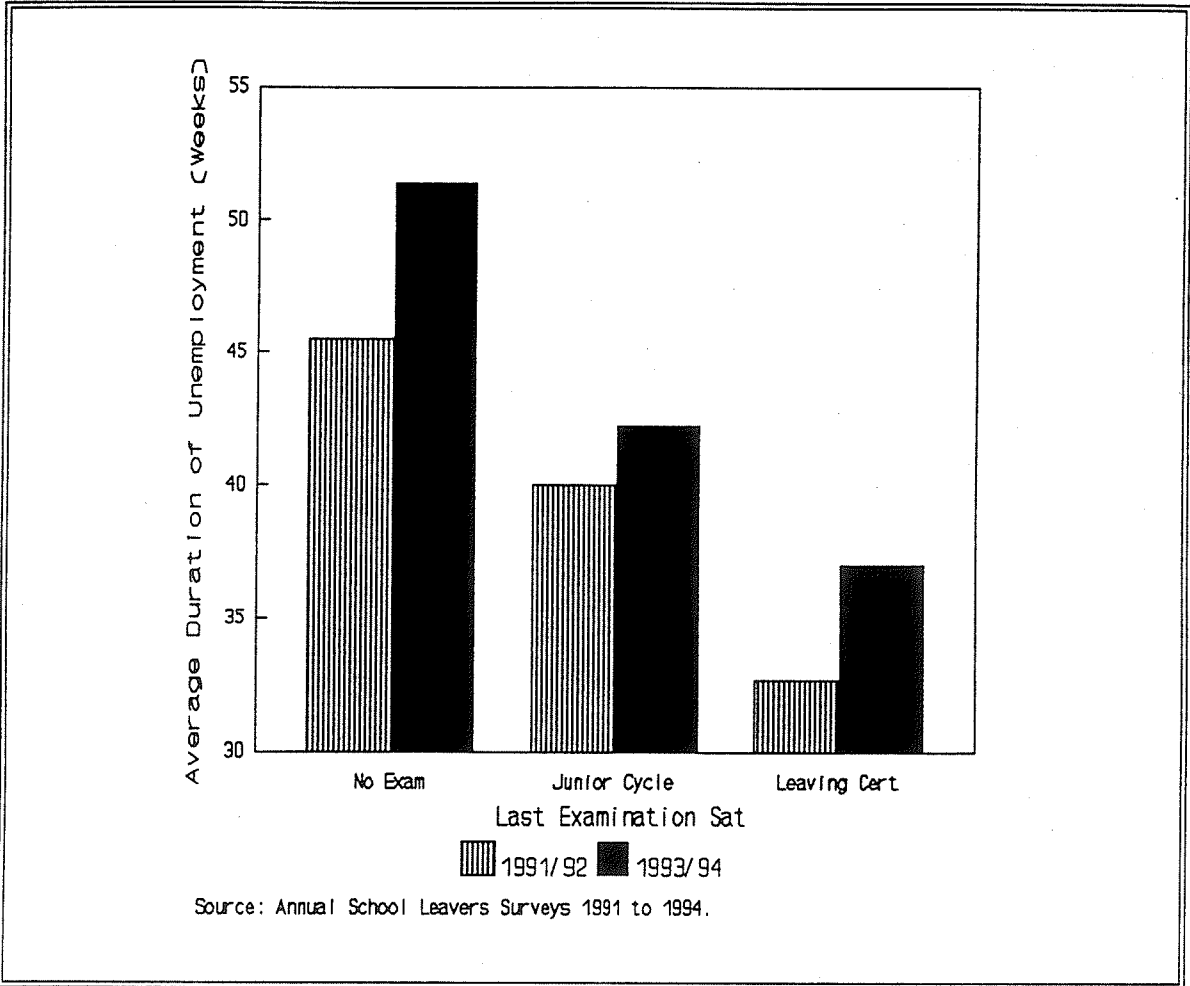
As Figure 9 illustrates, the average duration of unemployment among those currently unemployed rose by four weeks over the period. Males experienced substantially longer duration of unemployment than their female counterparts in 1991/92; no such difference occurred in 1993/94. Additional educational attainment corresponds with shorter spans of unemployment, as Figure 10 indicates. A somewhat more irregular pattern arises in terms of the outcome of the last examination sat. As Figure 11 illustrates, among those leaving at the Junior Cycle level, those acquiring honours experienced a fall in unemployment duration of 7 weeks over the period, while those passing suffered a longer average span of 6 weeks.

**Figure 9:** Average Duration of Unemployment of those Currently Unemployed

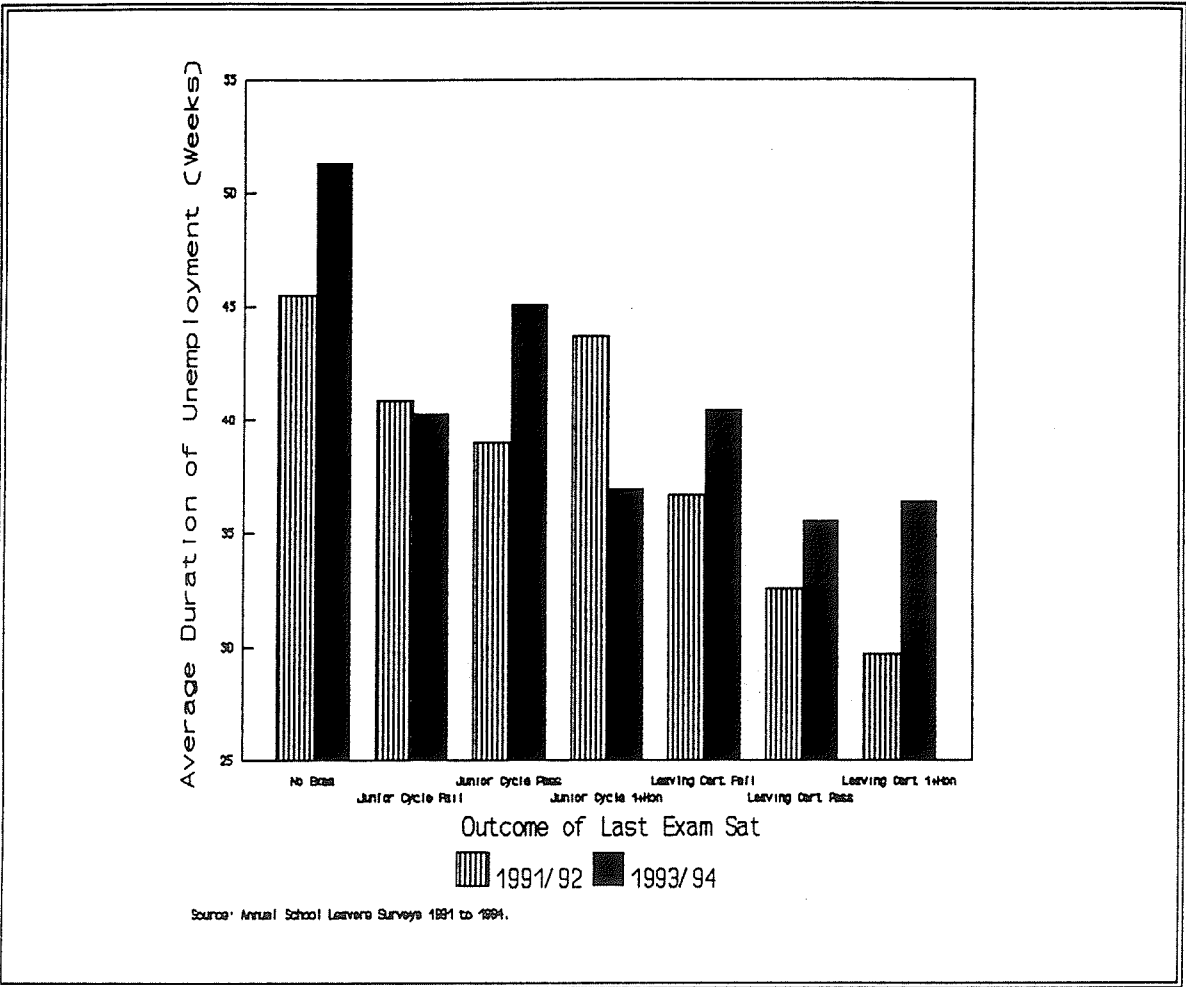


<sup>4</sup> Throughout this section attention is confined to those currently unemployed.

**Figure 10: Average Duration of Unemployment of those Currently Unemployed by Last Examination Sat**



**Figure 11: Average Duration of Unemployment of those Currently Unemployed by Outcome of Last Examination Sat**





## *Participation in Further Education*

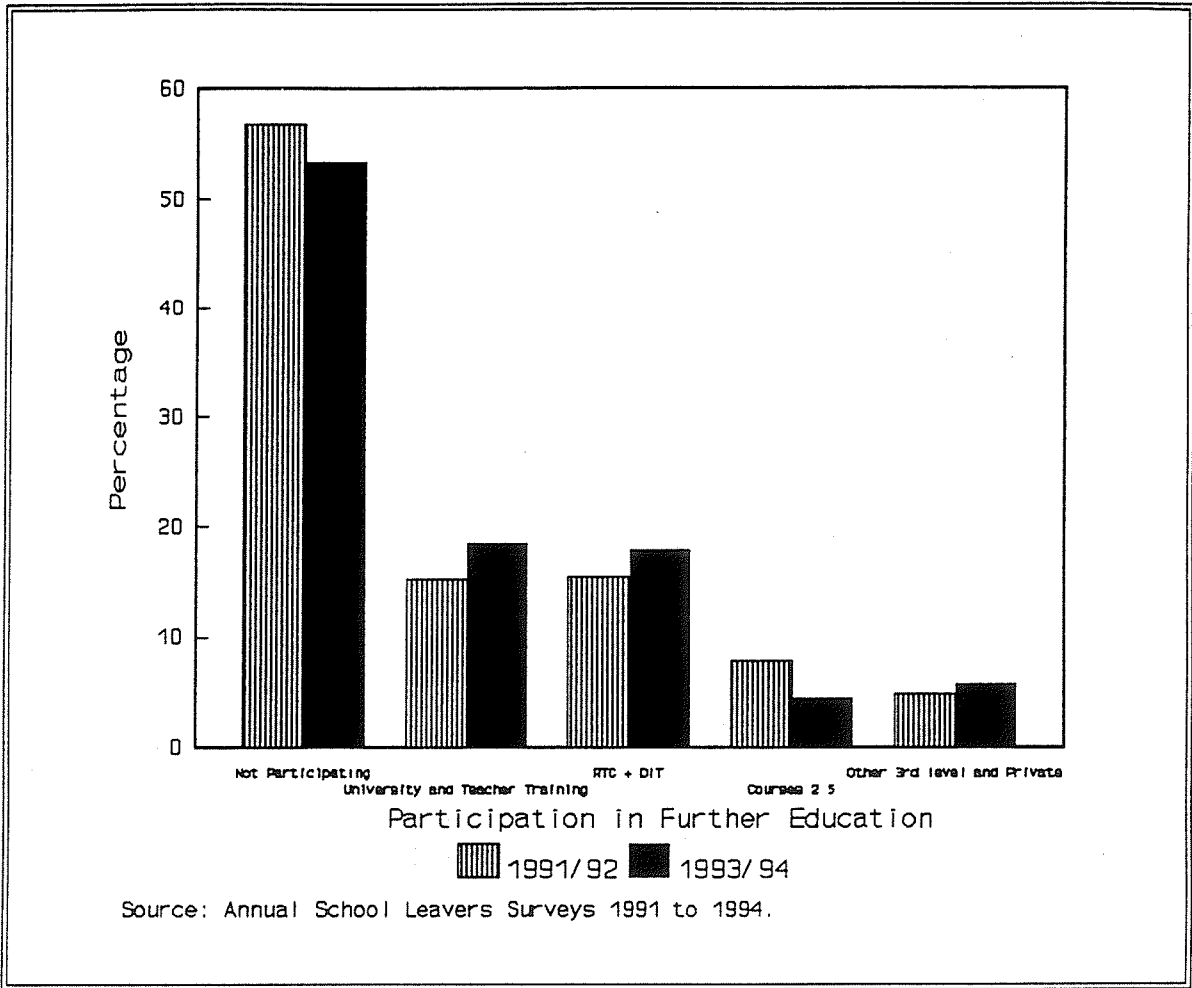
Participation in further full-time education increased by 3 percentage points in the interim. Growth was most prominent in University, Teacher Training, RTC and DIT courses; participation rates rising on average by 3 percentage points. Participation in "2.5" courses<sup>5</sup> declined slightly (Figure 12). Gender differences in rates and types of participation are largely unremarkable, as Table 2.7 illustrates. While males had slightly stronger rates of participation in 1991/92, the reverse occurred in 1993/94.

Striking differences in participation rates by level of education attained at second level are clearly observable. Essentially, Table 2.8 illustrates the extent to which further education reinforces initial disadvantage. Evidently, those who participate in third level courses are overwhelmingly comprised of those who attained the Leaving Certificate upon leaving school. In addition, holders of the Leaving Certificate experienced a growth in participation over the pre and post Junior Certificate years while those who did not attain the Leaving Certificate experienced a decline. Those without second level qualifications are not represented at all among third level participants. In terms of overall participation rates, however, those leaving school at the Junior Cycle appear to fare little better than those without any qualifications: while 89 per cent of those leaving school without qualifications in 1993/94 failed to participate in further education, the corresponding figure for those who attained a Junior Cycle Certificate was 90 per cent. The position of school leavers without qualifications appears to have disimproved over the period. A participation rate of 20 per cent among school leavers without qualifications in 1991/92 declined to 11 per cent in 1993/94. This decline occurred predominantly in "2.5" courses. The position of Junior Cycle school leavers did not change significantly over the period. However, the overall downward shift in participation in "2.5" level courses (particularly by those without qualifications) should be a cause for concern if it continues into 1995.

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<sup>5</sup> "2.5" Courses refer to post second level training courses not considered third level courses. These include courses run by FÁS, CERT and TEAGASC.

**Figure 12: Participation in Further Full-Time Education**



**Table 2.7: Participation in Further Education by Sex**

Participation	Males		Females	
	1991/92	1993/94	1991/92	1993/94
	%(N)	%(N)	%(N)	%(N)
Not Participating	56.2 (1023)	53.9 (1126)	57.2 (1154)	52.9 (1066)
University & Teacher Training	13.4 (244)	17.1 (356)	16.7 (337)	19.9 (401)
RTC & DIT	17.0 (309)	19.5 (408)	14.0 (282)	16.1 (325)
"2.5" Courses	9.3 (169)	4.8 (100)	6.7 (135)	4.1 (83)
Other Third Level & Private Courses	4.1 (74)	4.7 (98)	5.4 (109)	6.9 (139)
Total	1819	2088	2017	2014

**Table 2.8: Participation in Further Education by Last Exam Sat at Second Level**

Participation	No Exam		Junior Cycle		Leaving Cert	
	1991/92	1993/94	1991/92	1993/94	1991/92	1993/94
	%(N)	%(N)	%(N)	%(N)	%(N)	%(N)
Not Participating	80.0 (152)	89.5 (162)	87.5 (532)	90.1 (482)	49.1 (1493)	45.7 (1548)
University & Teacher Training	0.0	0.0	0.0	0.8 (4)	19.1 (581)	22.2 (753)
RTC & DIT	0.0	0.0	0.8 (5)	0.9 (5)	19.3 (586)	21.5 (728)
"2.5" Courses	20.0 (38)	10.5 (19)	9.7 (59)	5.4 (29)	6.8 (207)	4.0 (135)
Other Third Level & Private Courses	0.0	0.0	2.0 (12)	2.8 (15)	5.6 (171)	6.6 (222)
<b>Total</b>	<b>190</b>	<b>181</b>	<b>608</b>	<b>535</b>	<b>3038</b>	<b>3386</b>

## *Summary*

Between 1991/92 and 1993/94 a fall of 3 percentage points in the proportion leaving school at the Junior Cycle level, and a corresponding rise in the proportion leaving at the Leaving Certificate, occurred. The composition of respondents leaving at the Junior Cycle, however, shifted from pass to at least one honour - the proportion receiving honours growing by 13 percentage points. The numbers leaving without qualifications remained unchanged over the period.

As the proportion of school leavers in employment fell by 6 percentage points in the interim, with a corresponding rise of 5 percentage points in the number unemployed, it is almost impossible to establish the role played by changes in the Junior Certificate in employment chances. Among Junior Cycle school leavers unemployment rates rose substantially over the period. However, differential rates of unemployment among "pass" and "fail" students at the Junior Cycle and Leaving Certificate levels in 1991/92 had virtually disappeared by 1993/94. These results are unexpected. Given the growth in unemployment over the period, one would expect a greater use of credentials in employment selection in 1993/94. However, in terms of unemployment duration, those acquiring honours at the Junior Cycle experienced a decline in unemployment duration of 7 weeks over the period, while those passing suffered a longer average span of 6 weeks. The sample numbers, however, are very small and results should be interpreted with caution.

Average hourly earnings rise steadily with additional educational attainment, regardless of year (with the exception of those leaving without qualifications in 1993/94). In addition, the relative position of Junior Cycle school leavers appears to have improved over the period. Overall average gross hourly earnings rose by 13 pence, while those leaving at the Junior Cycle experienced a rise in average hourly earnings of 28 pence. However, the occupational composition of the (reduced) employed had changed significantly between 1991/92 and 1993/94. Consequently, these results need to be interpreted cautiously.

Finally, participation in further full-time education grew by 3 percentage points, growth being most prominent in University, Teacher Training, RTC and DIT courses. As expected, participants are overwhelmingly comprised of those who attained the Leaving Certificate. Among Junior Cycle holders and those without qualifications however, participation in "2.5" courses declined by 6 percentage points between the combined two-year cohorts; showing a relative worsening of post-school education/training provision and participation.

## Section 4: Regression Analyses: Estimating the Main Effects of Changes in Levels/Grades in the Junior Certificate on Employment Chances of School Leavers

The statistics presented thus far are descriptive ones from which causal interpretations should not be made. We now undertake more detailed bivariate and multivariate analyses in an attempt to identify any changes in labour market outcomes amongst school leavers resulting from changes in the Junior Cycle examination in 1992. Since attention is focused on school leavers' experiences in the labour market, for the purposes of these analyses those who did not enter the labour market on leaving school are excluded. This excludes those 40 per cent of the cohort continuing their education at a higher level.

### *Measures*

Three principle measures of returns to education are the subject of this section:

- (1) Whether or not a young person had a job at the time of the survey (approximately one year after leaving school). This variable shall be termed *Working*, a dummy variable with 1 representing those in employment and 0 representing those unemployed.
- (2) The occupational status of those young people in employment. This variable, labelled *Occup*, is a six-point Social Class Scale, ranging from Unskilled Manual to Higher Professional<sup>1</sup>.
- (3) The earnings per hour of those young people in employment. This variable, named *Logearn*, is calculated as the logarithm of the respondent's gross earnings per week divided by the number of hours worked in the week.

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<sup>1</sup> The six Classes (with their numeric scores) are as follows:

6 = Social Class 1: Higher Professional and Higher Managerial; Large Scale Proprietors and Farmers owning 200 acres or more.

5 = Social Class 2: Lower Professional and Lower Managerial; Small Scale Proprietors and Farmers owning 100-199 acres.

4 = Social Class 3: Other Non-Manual and Farmers owning 50-99 acres.

3 = Social Class 4: Skilled Manual and Farmers owning 30-49 acres.

2 = Social Class 5: Semi-Skilled Manual and Farmers owning less than 30 acres.

1 = Social Class 6: Unskilled Manual workers.

In attempting to account for these three outcomes a number of explanatory (or 'causal') models are specified. These models incorporate a number of social background variables as follows:

A) Father's social class, again utilizing the six-point CSO 'Social Class Scale'. This variable is termed *Fathstat*.

B) Whether or not the respondent's father is unemployed at the time of the survey, represented by a dummy variable *Fathunem*.

C) Whether or not the respondent's mother is employed at the time of the survey, represented by a dummy variable *Moempst*.

D) A dummy variable indicating respondent's *Sex*, with 1 symbolizing male respondents.

E) Whether respondent lived in a rural or urban area while at school. The dummy variable *Rural* shall indicate this with 1 representing those of rural origin and 0 representing those from Dublin, Galway City, Limerick City, Cork City and Waterford City.

F) A dummy variable, labelled *Appren*, indicating whether respondent is currently employed as an apprentice (in which case wages are lower).

G) A dummy variable, labelled *Schvoca*, indicating whether respondent participated in some form of vocational preparation, secretarial or PLC course in a second level school.



In examining the effects of educational attainment and specifically, the effects of changes in the Junior Certificate, a number of measures of education shall be utilized. The first reflects educational level and the remaining measure examination performance:

(1) The highest second level examination taken by respondents. This uses two dummy variables - *JC* representing respondents who left after sitting for a Junior Cycle examination and *LC* representing those who left after sitting for the Leaving Certificate. The excluded variable is those who left before sitting a Junior Cycle examination.

(2) The first measure of examination performance is grade point average (*GPAV*). This is calculated by assigning points to pupils on the basis of examination levels and grades<sup>2</sup> and then dividing by the total number of subjects sat. Since foundation level scores are only assigned to respondents leaving school at the Junior Cycle level in 1993/94, the two combined two year cohorts are not directly comparable. Essentially, points ranging from 4 to 10 were assigned to school leavers in 1991/92 compared to points ranging from 1 to 10 in 1993/94. On these grounds *GPAV* scores were standardised to take account of these differing ranges. For the purpose of this paper, only those respondents who sat at least four subjects in their last examination are included. Those who sat no examinations are assigned a 0 score.

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2 Points are assigned to examination results as follows:

Grade	Higher Level	Common Level	Ordinary Level	Foundation Level
A	10	8	7	4
B	9	7	6	3
C	8	6	5	2
D	7	5	4	1

(3) As an alternative to (2) we include variables which measure both the last examination and levels taken and grades received in terms of "fail", "pass" and "honours". In addition, among respondents leaving school after the Junior Certificate (1993 & 1994 surveys) we distinguish between those depending on foundation level papers in passing in their examination and those passing independent of foundation level papers. This gives seven values: four for the Junior Certificate: "fail" (*Jcfail*), pass with one or more foundation level passes (*Jcpasfnd*), pass independent of foundation level papers (*Jcpass*) and one or more honours (*Jchon*). At the Leaving Certificate level three equivalent distinctions are used: *Lcfail*, *Lcpass*, *Lchon* (one or more honours).

### *Models*

Excluding those who did not enter the labour market from school (primarily those continuing their education at a higher level with a small number engaged in home duties), and omitting all those who had missing values on one or more of the measures (background and education variables), leaves us with sample sizes of 1995 and 1856 in 1991/92 and 1993/94, respectively. Of these totals, 1354 and 1203 were in employment in 1991/92 and 1993/94, respectively. The means and standard deviations of the variables used in subsequent analyses are displayed in Table 3.1.

**Table 3.1: Means and Standard Deviations of Background, Education and Employment Variables.**

Variable	1991/92		1993/94	
	Mean	Standard Deviation	Mean	Standard Deviation
Fathstat	3.60	1.50	3.56	1.55
Fathunem	0.13	0.34	0.14	0.35
Moempst	0.21	0.41	0.25	0.43
Sex	0.47	0.50	0.51	0.50
Rural	0.65	0.48	0.68	0.47
Appren	0.02	0.15	0.02	0.15
Schvoca	0.13	0.33	0.15	0.36
JC	0.16	0.37	0.13	0.34
LC	0.79	0.41	0.82	0.38
Gpav (std. scores)	0.00	1.00	0.00	1.00
Jcfail	0.05	0.21	0.04	0.20
JcPasfnd	-	-	0.01	0.09
Jcpass	0.10	0.30	0.06	0.23
Jchon	0.01	0.11	0.02	0.15
Lcfail	0.09	0.29	0.11	0.31
Lcpass	0.19	0.40	0.18	0.39
Lchon	0.51	0.50	0.54	0.50
Working	0.68	0.47	0.64	0.48
Occup	2.90	1.23	2.65	1.17
Logearn	0.38	0.21	0.40	0.22

The present analyses are divided into three main sections. The first focuses on the probability of having a job (*Working*), which we model using Logistic Regression. The second looks at the factors explaining the occupational status of school leavers, and the third examines gross earnings per hour. These latter two analyses use OLS Regression Models. Two models shall be run for each section, both models incorporating the specified background variables. In addition, Model 1 includes last examination sat and grade point average. Model 2 distinguishes the respondent's last examination, disaggregating it in terms of "fail", "pass" and "honours" criteria.

Before progressing to these analyses it is necessary to examine relationships between the independent variables and dependent variable at the bivariate level. The following two correlation matrices show both the direction and the strength of association between these variables. Regarding the background variables, both having an unemployed father and being male are negatively associated with employment likelihood and earnings, the remaining variables holding positive associations for both two-year combined cohorts. The main outcome is showing that the intercorrelations are not such as to concern us about multicollinearity.

**Table 3.2: Pearsons Correlation for 1991/92**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1)Working	.									
(2)Occup	.054	.								
(3)Logearn	.	.006	.							
(4)JC	-.079	-.148	-.228	.						
(5)LC	.175	.194	.272	-.846	.					
(6)GPAV	.276	.279	.167	-.218	.525	.				
(7)Jcfall	-.089	-.078	-.117	.508	-.430	-.249	.			
(8)Jcpass	-.032	-.114	-.171	.772	-.653	-.123	-.074	.		
(9)Jchon	.005	-.021	-.059	.245	-.208	.037	-.023	-.037	.	
(10)Lcfall	-.028	-.030	.028	-.138	.163	-.284	-.070	-.107	-.034	.
(11)Lcpass	.041	-.051	.092	-.212	.251	-.215	-.108	-.164	-.052	-.156
(12)Lchon	.163	.271	.148	-.439	.519	.724	-.223	-.339	-.108	-.323
(13)Fathstat	.157	.190	.078	-.188	.267	.391	-.129	-.139	-.000	-.053
(14)Fathunem	-.164	-.104	-.066	.188	-.271	-.253	.137	.137	-.012	-.016
(15)Moempst	.068	.018	-.047	-.024	.045	.086	-.020	-.014	-.001	-.012
(16)Sex	-.060	-.156	-.137	.138	-.141	-.099	.052	.126	.013	.038
(17)Rural	.027	-.011	-.182	-.032	.052	.027	-.037	-.008	-.016	-.003
(18)Appren	.116	.007	-.218	.050	-.027	-.070	.042	.031	.001	.037
(19)Schvoca	.044	.097	.107	.157	-.126	-.114	.103	.123	-.011	.006
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	
(11)Lcpass	.									
(12)Lchon	-.496	.								
(13)Fathstat	-.124	.343	.							
(14)Fathunem	.006	-.215	-.320	.						
(15)Moempst	-.041	.076	.113	-.044	.					
(16)Sex	-.050	-.097	-.021	-.006	-.006	.				
(17)Rural	-.017	.057	-.060	-.021	-.021	.009	.			
(18)Appren	.064	-.093	.005	-.006	-.006	.117	.059	.		
(19)Schvoca	.072	-.162	-.115	.071	.005	-.117	-.091	.020	.	

Table 3.3: Pearsons Correlation for 1993/94

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1)Working	.									
(2)Occup	.040	.								
(3)Logearn	.	-.002	.							
(4)JC	-.105	-.069	-.145	.						
(5)LC	.199	.095	.155	-.838	.					
(6)GPAV	.237	.159	.139	-.228	.543	.				
(7)Jcfall	-.068	-.046	-.086	.535	-.449	-.204	.			
(8)Jcpasfnd	.017	-.057	-.092	.234	-.196	-.102	-.019	.		
(9)Jcpass	-.085	-.035	-.107	.632	-.530	-.149	-.051	-.022	.	
(10)Jchon	-.014	-.001	.018	.409	-.342	.006	-.033	-.014	-.039	.
(11)Lcfall	.021	-.033	-.061	-.133	.159	-.252	-.071	-.031	-.084	-.055
(12)Lcpass	.055	-.056	.110	-.183	.218	-.256	-.098	-.043	-.116	-.075
(13)Lchon	.130	.180	.070	-.418	.499	.726	-.224	-.098	-.264	-.171
(14)Fathstat	.184	.115	-.016	-.197	.268	.376	-.115	-.037	-.140	-.051
(15)Fathunem	-.201	-.054	-.054	.155	-.246	-.262	.065	.032	.118	.060
(16)Moempat	.066	.006	.024	-.062	.087	.129	-.025	-.009	-.046	-.030
(17)Sex	-.045	-.119	-.093	.104	-.132	-.108	.060	.047	.067	.022
(18)Rural	.079	-.066	-.173	-.035	.051	.003	-.066	.016	-.007	.011
(19)Appren	.156	.060	-.170	-.032	.039	-.066	-.032	-.014	-.018	.006
(20)Schvoca	.018	.133	.132	.121	-.060	-.128	.080	.030	.117	-.031
	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(11)Lcfall	.									
(12)Lcpass	-.161	.								
(13)Lchon	-.369	-.506	.							
(14)Fathstat	-.036	-.127	.323	.						
(15)Fathunem	.002	.033	-.216	-.336	.					
(16)Moempst	-.027	-.017	.096	.140	-.064	.				
(17)Sex	.009	-.055	-.064	.009	.005	.019	.			
(18)Rural	-.011	.007	.041	-.083	-.038	-.068	.028	.		
(19)Appren	.050	.079	-.062	-.015	-.018	-.009	.102	.058	.	
(20)Schvoca	-.002	.173	-.179	-.095	.032	-.029	-.183	-.033	-.025	.

## Section 1: Probability of Having a Job

Table 3.4 displays the goodness of fit statistics for the two models. Model Log Likelihood values refer to the fit of the model containing all variables. The difference between the -2LL for the model with only a constant and -2LL for the full model is captured by the Model Chi-Square. Essentially the Model Chi-Square tests the null hypothesis that the coefficients for all of the terms in the model, except the constant, are 0. As Table 3.4 demonstrates, significant log likelihood values for both models emerge across both two-year cohorts. For these samples of school leavers, the designated background and educational variables combined add significantly to the explanatory power of the models, indicated by significant Model Chi-Square values ranging from 162 to 189. However, the overall fit of the Models is not very good - indicated by high -2LL values (ranging from 2240 to 2545) and low predictive power for the unemployed group (with "percentage correctly classified" figures for the unemployed ranging from 19.3 to 27.6 per cent) - though assignment to the "employed" category (89 to 94 per cent) is very high.

**Table 3.4 : Logistic Regression Models, Log-likelihood Values**

	1991/92				1993/94			
	Model -2LL	Signif -2LL	Model Chi- Square	Signif Chi- Square	Model -2LL	Signif -2LL	Model Chi- Square	Signif Chi- Square
Model 1	2334	0.00	189	0.00	2240	0.00	167	0.00
Model 2	2545	0.00	162	0.00	2532	0.00	175	0.00
Percentage Correctly Classified								
	Employed	Unemployed	Overall		Employed	Unemployed	Overall	
Model 1	92.42	24.57	70.54		89.19	27.57	67.51	
Model 2	94.09	19.30	70.55		91.00	25.14	68.11	

Some notable changes and distinctions among variables both within and between models can be observed over the period. In Table 3.5, we can see the impact of the designated background variables on the dependent variables using consistent measures for the two cohorts. Both father's unemployment status and father's occupational status significantly influence the probability of being employed, the former being negatively related and latter being positively related as expected. Those from unemployed families and from working class backgrounds are less likely to be employed controlling for all relevant educational achievement variables. There is, however, no significant difference between male and female employment rates. On the other hand, educational level has a very strong effect. In 1993/94 relative to those without qualifications, Leaving Certificate holders are substantially more likely to be employed - even controlling for Grade Point Average (problems arising from multicollinearity (GPAV and LC) may explain why the probability is not significant in 1991/92). Likewise, increasing grade point average corresponds with increasing probability of employment, the Beta scores being highly significant for both cohorts. It appears however that as employment rates declined in 1993/94 employers appear to have paid relatively more attention to level achieved and less to grades achieved than in 1991/92.

Table 3.6 shows the influence of differential educational performance levels on employment probability more clearly, using ordinal categories of levels/grades as dummy variables. Those leaving school before the Junior Certificate level have the lowest probability of employment. After this, and regardless of examination level in 1991/92, students failing their last examination (JC or LC) emerge as having the lowest probability of employment with those attaining honours having the highest. Significant Beta values of .55 among Junior Cycle school leavers failing in 1991/92, for example, rise to .92 and .99 among those passing and those achieving honours, respectively. Among those who have completed the Leaving Certificate a similar pattern occurs. Finally, Leaving Certificate "fails" in 1991/92 have lower coefficients than those passing the Junior Certificate, although this pattern does not hold for 1993/94.



Regarding those taking foundation level papers in 1993/94, and using these to attain at least 5 passes in their examination, they appear to be no worse off than those who attained their examination on ordinary level papers only - indeed their coefficients are slightly more positive (Table 3.6). There is a relative decline in the predictive power of educational attainment over the period. To illustrate, a positive Beta value of 0.92 among Junior Cycle school leavers passing in 1991/92 declines to 0.61 in 1993/94, while Leaving Certificate honours declines from 1.45 to 1.23. As expected this corresponds to our findings on the effects of GPAV on employment in Table 3.5. It appears that as unemployment rates increased, employers discriminations amongst examination levels and grades declined - and, it appears, discrimination on the basis of father's employment and occupational status increased.

Finally, participation in Post Leaving Certificate courses does not emerge as significantly influencing the probability of being employed, with Beta scores insignificant in both models for both cohorts.

**Table 3.5 : Probability of Being Employed - Logistic Regression Model 1<sup>3</sup>**

Variable	1991/92			1993/94		
	Beta	Standard Error	Significance (p)	Beta	Standard Error	Significance (p)
Constant	0.733	0.184	0.000	0.288	0.191	0.131
Fathunem	-0.571	0.131	0.000	-0.640	0.129	0.000
Sex	-0.110	0.104	0.289	-0.039	0.110	0.722
Fathstat	0.112	0.039	0.004	0.158	0.039	0.000
LC	0.109	0.120	0.363	0.296	0.127	0.020
GPAV	0.519	0.063	0.000	0.358	0.067	0.000
Schvoca	0.175	0.134	0.191	0.037	0.124	0.767

3: The background variables Moempst and Rural were removed from this and subsequent models due to insignificance. In addition, JC was removed to reduce multicollinearity problems arising from high correlations amongst the JC, LC and GPAV variables.

**Table 3.6 : Probability of Being Employed - Logistic Regression Model 2**

Variable	1991/92			1993/94		
	Beta	Standard Error	Significance (p)	Beta	Standard Error	Significance (p)
Constant	-0.465	0.202	0.022	-0.589	0.220	0.007
Fathunem	-0.543	0.124	0.000	-0.685	0.121	0.000
Sex	-0.108	0.100	0.278	-0.105	0.103	0.307
Fathstat	0.128	0.037	0.001	0.163	0.036	0.000
Jcfail	0.545	0.234	0.020	0.528	0.246	0.032
Jcpasfnd	-	-	-	1.194	0.448	0.008
Jcpass	0.923	0.202	0.000	0.608	0.232	0.009
Jchon	0.990	0.419	0.018	0.840	0.294	0.004
Lcfail	0.754	0.212	0.000	0.989	0.222	0.000
Lcpass	1.073	0.190	0.000	1.119	0.205	0.000
Lchon	1.451	0.199	0.000	1.231	0.208	0.000
Schvoca	0.219	0.128	0.087	-0.045	0.118	0.703

## *Section 2: Occupational Status*

We use the same set of predictor variables (Models 1 and 2) to predict variations in occupational status achieved - of those currently employed. As already described, "occupational status" has 6 values (1 = Higher Professional to 6 = Unskilled Manual). OLS Regressions for the two specified equations gave the following results (Table 3.7). Regarding Model 1 and focusing on the model as a whole, the F-test indicates that the chosen background and education variables collectively have a significant impact on the occupational status of school leavers in employment - explaining a moderate 11 to 12 per cent of the overall variance in occupational status levels achieved (Table 3.7).

Regarding the effects of individual/social background variables only the social class status of origin and respondent's sex are found to have a significant impact in both 1991/92 and 1993/94. Being of middle class origin and being female have a significant impact on occupational status achieved - independent of educational level achieved; having a slightly greater impact in 1993/94 than in 1991/92. In terms of last examination sat, those sitting the Leaving Certificate examination emerge as having significant advantage in 1991/92, the association being insignificant in 1993/94. Given that the LC correlates significantly with occupational status at the bivariate level, these insignificant Beta scores (for 1993/94) partly arise from the high correlation between LC and GPAV, (exceeding .52 in 1993/94). It appears, however, that as unemployment increased - grades achieved became relatively more significant than examination level achieved: but both decreased in significance in 1993/94. Underlying this result is the lower occupational status mean and variance in 1993/94 relative to 1991/92 - and the lower differential in status achieved by educational level - clearly evident in the bivariate crosstabulation (Table 2.5). As expected, Grade Point Average is found to significantly influence occupational status, at the bivariate level and, controlling for other variables, at the multivariate level, regardless of the year in which the survey was conducted.

**Table 3.7: OLS Regression - Occupational Status Model 1**

	1991/92			1993/94		
	Beta	T	Sign T	Beta	T	Sign T
Fathstat	0.126	3.944	0.000	0.146	4.132	0.000
Sex	-0.103	-3.303	0.001	-0.107	-3.039	0.002
Fathunem	-0.004	-0.131	0.896	-0.020	-0.567	0.571
LC	0.091	2.719	0.007	0.001	0.009	0.993
GPAV	0.205	6.225	0.000	0.158	4.224	0.000
Schvoca	0.066	2.169	0.030	0.153	4.485	0.000
(Adjusted) R-Square		0.122			0.105	
F		24.282			17.125	
P<		0.001			0.001	
df		997			818	

One further result seems worth highlighting at this stage. Participation in Post Leaving Certificate courses also emerges as positively associating with occupational status, with Beta scores significant for both 2-year cohorts. Hence, although such training does not appear to be predictive of employment chances, it appears to be predictive for occupational status achieved.

Consideration shall now be given to Model 2 which attempts to identify the impact of differential examination and performance levels on occupational status (Table 3.8). Once again, while the model as a whole is significant, indicated by significant F values, adjusted R-Square values indicate the model accounts for less than 12 per cent of the variance, for both cohorts. In general, higher educational performance levels correspond with higher Beta scores - though only consistently so in 1991/92. To illustrate, Beta scores among Junior Cycle school leavers in 1991/92 rise from insignificant scores of .036 and .070 among those failing and those passing, respectively, to a significant score of .065 among those attaining one or more honours. Similarly, among Leaving Certificate school leavers in 1991/92, (significant) Beta scores increase from .113 and .175 among those failing and those passing, respectively, to .362 among those attaining one or more honours. The higher the level of examination and grade achieved the higher the occupational status score.

Once again, the relative importance of such qualifications/grades declined in 1993/94 - indicated by lower Beta scores at each successive performance level. Although in 1991/92 there is a constantly increasing rate of return to ever higher levels of qualification/grades - most of which are statistically significant - there is no statistically significant impact of such increasing qualification/grade levels up to honours Leaving Certificate in 1993/94. Even for honours Leaving Certificate categories returns are substantially higher in 1991/92. Hence, the growth in unemployment was not only widely shared amongst qualification/grade levels in 1993/94 but also had some impact on occupational status levels - pushing the lower qualified into manual jobs. In both years, however, having done a vocational training course at second level had a significant impact - though more so in 1993/94.

**Table 3.8: OLS Regression - Occupational Status Model 2**

	1991/92			1993/94		
	Beta	T	Sign T	Beta	T	Sign T
Fathstat	0.130	4.211	0.000	0.127	3.694	0.000
Sex	-0.093	-3.046	0.002	-0.101	-2.988	0.003
Fathunem	-0.004	-0.132	0.895	-0.009	-0.266	0.791
Jcfail	0.036	0.844	0.399	0.016	0.313	0.755
Jcpasfnd	-	-	-	-0.039	-1.018	0.309
Jcpass	0.070	1.138	0.255	0.050	0.918	0.359
Jchon	0.065	1.970	0.049	0.048	1.086	0.278
Lcfail	0.113	2.177	0.030	0.030	0.511	0.609
Lcpass	0.175	2.393	0.017	0.050	0.599	0.549
Lchon	0.362	4.768	0.000	0.225	2.681	0.008
Schvoca	0.083	2.795	0.005	0.162	4.856	0.000
<hr/>						
(Adjusted) R-Square	0.111			0.099		
F	14.224			9.782		
P<	0.001			0.001		
df	1049			873		

### *Section 3: Gross Earnings Per Hour*

In this section we evaluate the effects of differential educational attainment and performance levels on gross earnings per hour, again controlling for specified background variables. As Table 3.9 displays, the set of Model 1 variables have significant overall effects, illustrated by significant F values for both periods. Total variance explained (R-Square), however, is much smaller in 1993/94. In 1991/92 this set of variables account for almost 13 per cent of the variance in respondents' earnings, while the corresponding figure for 1993/94 is less than 7 per cent. None of the background variables emerge as significantly influencing earnings in either year.

Considering the last examination sat by school leavers, relative to those without qualifications, Leaving Certificate holders emerge as positively associated with gross hourly earnings, the effects being significant for both cohorts. Interestingly, Grade Point Average does not significantly influence earnings for either cohort. Hence, although Grade Point Average has significant effects on both employment chances and occupational status achieved, it has no significant effect on earnings per hour. It would appear that early career and promotion "position" in the occupational hierarchy are poor predictors of general wage levels in an occupation - at least without controls for career "length".

Two further observations can be noted. Firstly, while participation in VPT or Post Leaving Certificate courses was not found to significantly influence the probability of being employed, both occupational status achieved and gross earnings are significantly associated with such participation: significantly influencing the "quality" of the job/occupation achieved. Secondly, participation in apprenticeship training has a significant impact on gross earnings in both years - with the direction of association being negative - as expected in the first year of an apprenticeship.

When we use the more elaborated set of level/grade performance indicators (Model 2) the amount of variance explained is slightly greater, but also declines from 13 per cent in 1991/92 to 8 per cent in 1993/94 (Table 3.10). As envisaged, in 1991/92 those who achieve honours in their last examination have a stronger association with earnings than those passing, who in turn have a stronger association than those who fail. However, and supporting previous findings, such examination level/performance differences are not significant for gross hourly earnings in 1993/94. While all examination performance variables at the Leaving Certificate level are significantly correlated with earnings in 1991/92, only one (Lcpass) is significant in 1993/94: though such performance distinctions do affect employment chances and, to a lesser extent, occupational status achieved.

**Table 3.9: OLS Regression - Log of Gross Earnings Per Hour Model 1**

	1991/92			1993/94		
	Beta	T	Sign T	Beta	T	Sign T
Fathstat	0.353	1.102	0.271	-0.070	-1.936	0.053
Sex	-0.025	-0.788	0.431	0.018	0.493	0.622
Fathunem	0.009	0.290	0.772	-0.029	-0.801	0.423
LC	0.228	6.807	0.000	0.162	4.239	0.000
GPAV	0.053	1.590	0.112	0.064	1.668	0.096
Appren	-0.204	-6.745	0.000	-0.144	-4.243	0.000
Schvoca	0.102	3.349	0.001	0.125	3.587	0.000
(Adjusted) R-Square		0.125			0.069	
F		21.064			9.635	
P<		0.001			0.001	
df		980			815	



Table 3.10: OLS Regression - Log of Gross Earnings Per Hour Model 2

	1991/92			1993/94		
	Beta	T	Sign T	Beta	T	Sign T
Fathstat	0.040	1.282	0.200	-0.053	-1.522	0.129
Sex	-0.029	-0.944	0.345	0.013	0.381	0.703
Fathunem	0.013	0.412	0.681	-0.049	-1.427	0.154
Jcfail	0.048	1.106	0.270	-0.056	-1.091	0.276
Jcpasfnd	-	-	-	-0.079	-2.061	0.040
Jcpass	0.107	1.714	0.087	-0.084	-1.509	0.132
Jchon	0.022	0.658	0.511	0.051	1.149	0.251
Lcfail	0.227	4.335	0.000	0.025	0.419	0.676
Lcpass	0.375	5.027	0.000	0.181	2.158	0.031
Lchon	0.387	5.022	0.000	0.113	1.337	0.182
Appren	-0.207	-7.008	0.000	-0.150	-4.598	0.000
Schvoca	0.095	3.198	0.001	0.120	3.553	0.000
(Adjusted) R-Square	0.126			0.082		
F	14.646			7.511		
P<	0.001			0.001		
df	1030			869		

### ***Summary: Employment Chances, Occupational Status Achieved and Wage Levels***

Using Model 1 estimates, having a Leaving Certificate examination and higher grades substantially improved employment chances in 1991/92 and 1993/94 - with examination level being somewhat more important in the former period. Using the more elaborated categories of grades/levels in Model 2, it is quite clear that those leaving school before the Junior Certificate or those failing their last examination have the lowest probability of employment, with those attaining honours having the highest; a differentiation which prevails over both periods. Essentially, increasing educational performance and attainment levels correspond with increasing employment probability, with those attaining one or more honours in the Leaving Certificate most likely to be employed. The results suggest that, despite the small numbers involved, dependence on Foundation levels for passing the Junior Certificate was at the least not disadvantaging: in fact having a significantly greater return than those failing the examination, or leaving school before taking it, while at least equalling other "pass level" grades.

These results are further supported by our analyses of the effects of the chosen variables on occupational status and earnings achieved - though only for 1991/92. Essentially, those attaining one or more honours at the Leaving Certificate level again emerge as most advantaged, in both years: with those without qualifications or "failing" grades as least successful. These educational achievement based inequalities in occupational/income achievement are least evident in 1993/94 - with increasing overall unemployment rates. There is no evidence that passing with the use of Foundation levels has any significant negative impact on occupational status or income achieved.

Finally, participation in VPT or PLC courses was not found to significantly influence the probability of being employed, once the social background and educational attainment variables are controlled for. However, both gross hourly earnings and occupational status achieved are significantly related to such participation, for both cohorts; indeed with some indication that such training was more important in 1993/94 than 1991/92.

## **Section 5: Summary and Conclusions**

This report sought to assess some of the likely "after-effects" of the new Junior Certificate Programme, introduced in 1989 and first examined in 1992. Drawing on data from the Department of Education and the Annual School Leavers Surveys, education and labour market outcomes of school leavers over the pre and post Junior Certificate years were analysed. This section summarises the results emerging from these analyses.

### *National Population Figures*

Overall participation rates among 14 to 17 year olds rise steadily over the 14-year period 1981 to 1994. While a slight rise is evident among 14-year olds, a significant upward trend in participation rates emerges among 15, 16 and 17 year olds. However, 1992 to 1994 did not witness notable deviations from these trends, participation rates increases remaining relatively constant.

In terms of examination results, failure rates for Higher, Ordinary, and Foundation level papers in both Irish and English fell dramatically in 1992. No clear pattern emerges for Mathematics. Given that three levels were in operation in the Intermediate Certificate for Mathematics since 1990, this latter result is not unexpected.

### *Characteristics of School Leavers*

While the period 1991 to 1994 saw a fall of 3 percentage points in the proportion leaving school at the Junior Cycle level and a corresponding rise in the proportion remaining in school to the Leaving Certificate, these trends are in line with the gradual rise in retention rates occurring over the past decade. Hence, it is not possible to distinguish the effects of the new Junior Certificate from the overall time trend effects. However, the educational composition of students leaving school at the Junior Cycle level did shift upwards significantly from pass to at least one honour over the period concerned.

Given rising unemployment rates among school leavers as a whole since 1990, it is not unexpected to find a decline in the proportion of school leavers in employment and a corresponding rise in the numbers unemployed. However, unemployment rates were higher in 1993/94 than in 1991/92. Unexpectedly, and partly, perhaps, as a result, differential rates of unemployment among "pass" and "fail" students at the Junior Cycle level in 1991/92 had virtually disappeared by 1993/94. One would have expected a greater use of credentials in employment selection in periods of growing unemployment, but this does not appear to have occurred: in fact the opposite appears to have occurred with some evidence of greater attention to family background factors. However, these results are based on descriptive data and should be interpreted cautiously.

In terms of average hourly earnings, the relative position of Junior Cycle school leavers improved over the pre and post Junior Certificate years. Overall average gross hourly earnings rose by 13 pence, while those of Junior Cycle school leavers rose by 28 pence. Regarding participation in further education, a somewhat less positive picture emerges for Junior Cycle school leavers. Participation rates among Junior Cycle school leavers fell by 3 percentage points between the two cohorts, while overall participation rates rose by 3 percentage points.

### *Regression Analyses*

Focusing on the probability of having a job, using logistic regression models, the designated background and educational attainment and performance variables significantly influence the probability of having a job. As expected, increasing educational attainment and performance levels correspond with increasing probability of employment, for both cohorts. At both Junior and Senior Cycle levels, students failing their last examination emerge as having a lower employment probability than those passing, who in turn are less likely to be employed than those attaining honours. In both cases, those taking and "failing" the Junior Cycle examination have higher employment chances than previous dropouts. Those achieving one or more honours at the Leaving Certificate level emerge most likely to be employed.

Interestingly, among Junior Cycle school leavers those utilising foundation level papers in attaining five or more passes in their examination appear to be no worse off - if not better off - than those securing their examination independently of foundation level papers.

Regarding occupational status and gross hourly earnings, while both examination level and grades are as equally important in 1991/92 as for employment, this is not so for 1993/94. While increasing levels/grades have progressively greater effects in 1991/92, those with Leaving Certificate honours grades are at a significant advantage in occupational status in 1993/94. However, no clear pattern of returns to educational qualifications/grades is obvious for wage levels for 1993/94. For both outcomes, however, there are no substantial differences in occupational status or wages for "foundation pass" and ordinary pass school leavers.

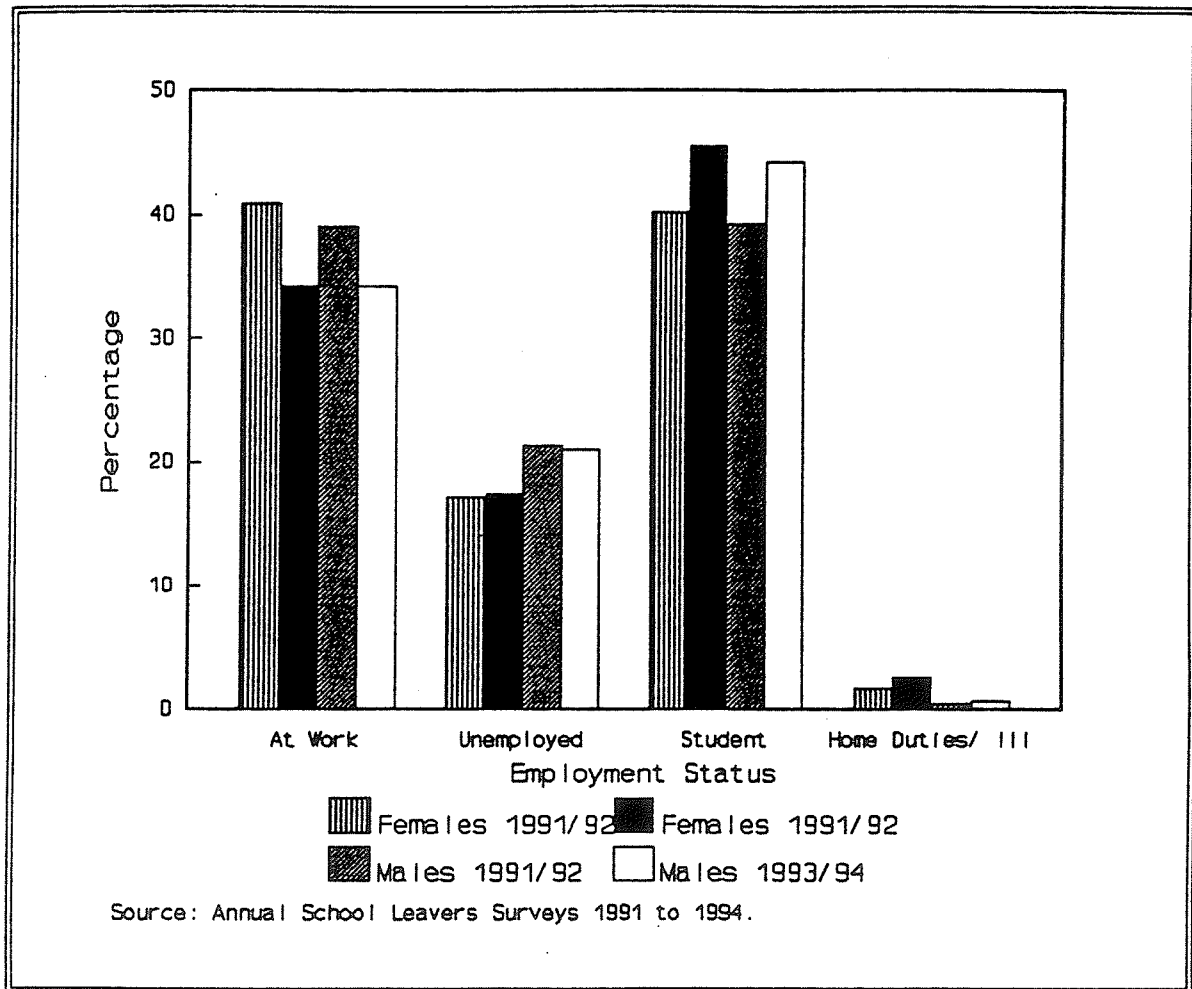
Both examination attainment and performance measures repeatedly emerge as strong predictors of both occupational status and hourly earnings in the years prior to the introduction of the Junior Certificate. The change in 1993/94 may relate more to growing unemployment since 1991 than to any change in the employment value of credentials - particularly given the persistence of such effects for employment chances.

Participation in VPT or Post Leaving Certificate courses, while insignificant in predicting the probability of being employed, emerged as significantly correlated with gross hourly earnings and occupational status, for both cohorts.

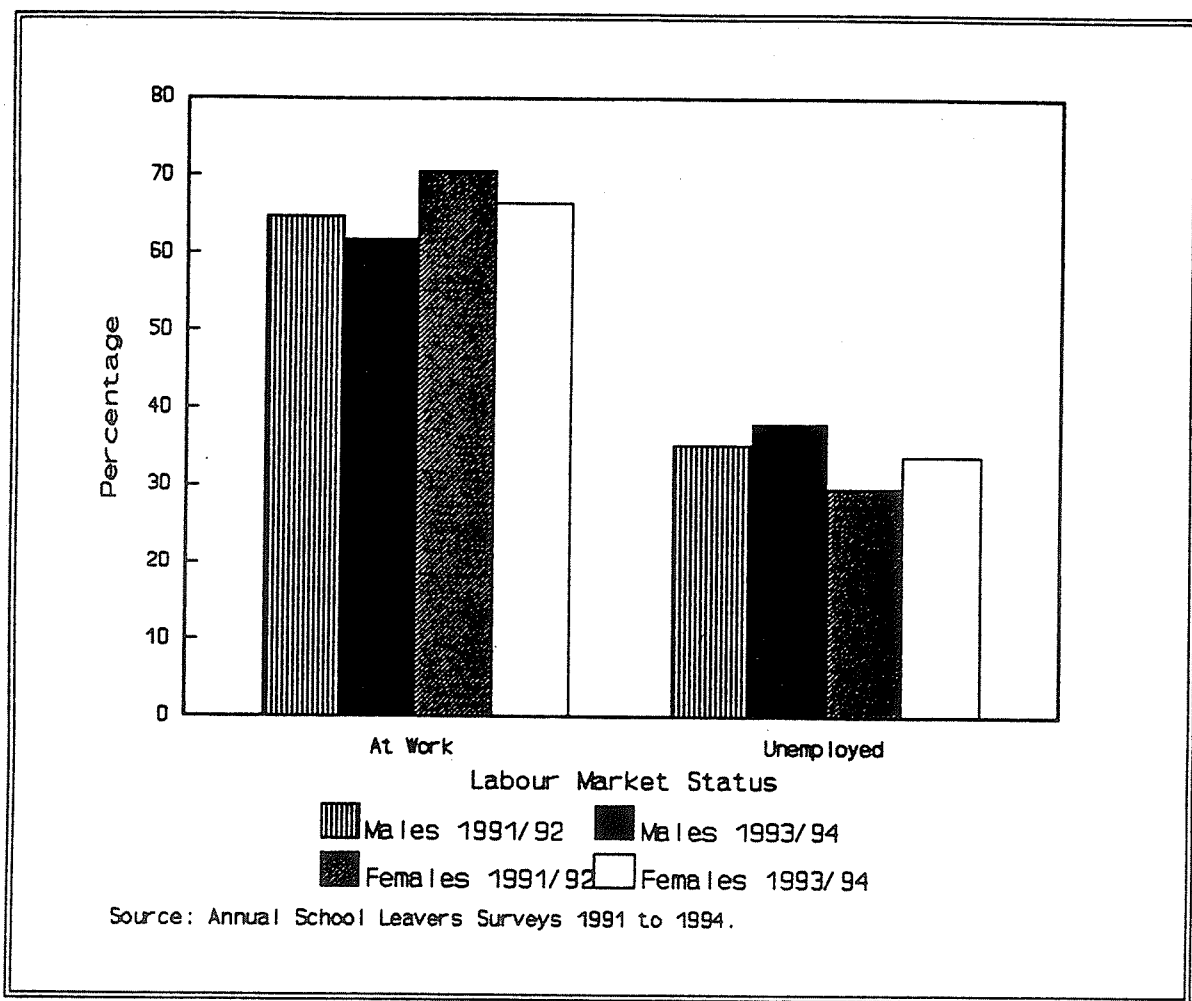
To conclude, therefore, and taking into consideration the disimproving labour market position after 1992, it appears that the changes in grades and the introduction of "foundation levels" with significantly increasing "passing rates" in examinations, does not appear to have significantly hurt the employment chances of the lower "pass level" achievers. However, because these educational return effects cannot be effectively disentangled from rising unemployment effects over the same period, these conclusions should be taken with caution. We need a longer period of observation and periods with improved employment chances to be more certain of our conclusions.

# Appendix A

Figure 13: Employment Status of School Leavers One Year After Leaving School by Sex



**Figure 14: Labour Market Status of School Leavers One Year After Leaving School by Sex**



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