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# Special Article

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## THE INDUSTRIAL DESTINATIONS OF SCOTTISH SCHOOL LEAVERS, 1977-81

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### 1 Introduction

The current recession has impinged heavily on the young job seeker and in particular on the school leaver. In Scotland in April 1979 there were 6,700 unemployed school leavers(1); by April 1981 the figure had risen to 18,700. The rise would have been even more dramatic had there not been an expansion in the Youth Opportunities Programme (YOP) during the same period, the result of which was significantly to depress the official unemployment statistics. The rise in unemployment (2) among school leavers in Scotland since 1971 is illustrated in Figure 1. The increasingly significant role played by YOP in moderating this rise in officially-recorded school-leaver unemployment can be seen in Table 1 which shows that the number of persons currently on YOP schemes in Scotland increased steadily from the introduction of the scheme in May 1978.

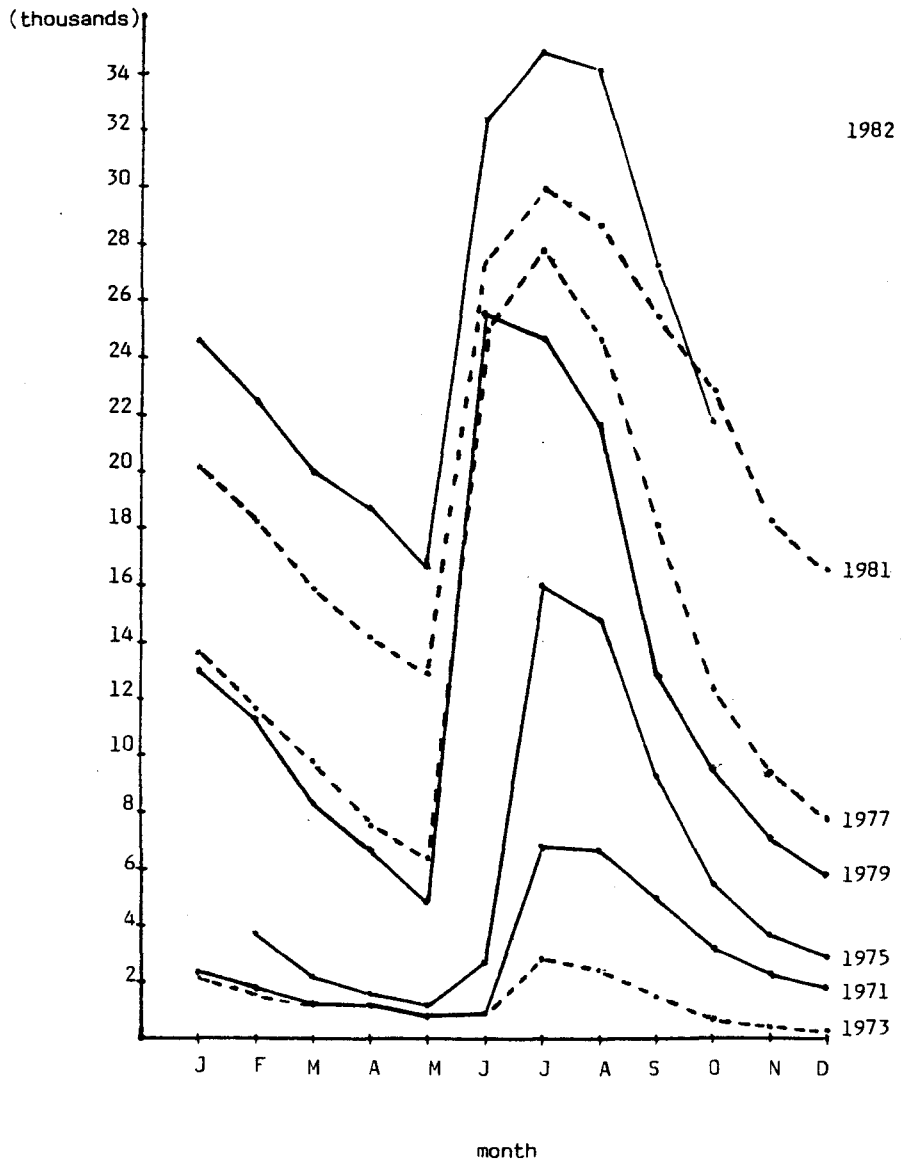
There are several reasons why the public policy response to unemployment has focussed largely on young people, and especially school leavers. Youth unemployment rates have been substantially higher than those for other age groups, and would have been even higher in the absence of policy measures. On the one hand, there may be feelings of compassion towards young people, and a sense that they are not to blame for the economic conditions which penalise them. On the other hand, youth unemployment may give rise to 'moral panics', and to fears of increased delinquency, crime, riots and political upheavals that are believed to result (3). Either way, the early years in the labour market are seen as particularly important. They can be viewed as a period of human capital formation, as an opportunity for entry to and progress within an internal labour market, or as a necessary stage in the occupational socialisation (and the more general social and psychological development) of young workers. However they are viewed, the implications are much the same: later 'success' in the labour market may be much influenced by this early period, and the school-leaver unemployment of today may have serious future repercussions both for the young people concerned and for other members of the economy and society.

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\* This paper uses data from the Scottish School Leavers Surveys, carried out by the Centre for Educational Sociology at the University of Edinburgh and stored in the Scottish Education Data Archive. The surveys were variously funded by the Social Science Research Council, the Scottish Education Department and The Manpower Services Commission. The opinions expressed in the paper are those of the authors, and not necessarily those of The Fraser of Allander Institute.

Figure I

Unemployed school leavers in Scotland



In this paper we examine the industrial destinations of Scottish school leavers over recent years. We use data from the biennial school leavers surveys conducted by the Centre for Educational Sociology (CES) at the University of Edinburgh. In due course the survey data will be used for a more detailed analysis of trends in the youth labour market, especially when data on the full sample covered in the most recent surveys are available (see below). However, the issues are timely, and the data currently available are more than adequate for an indication of the general patterns of change in recent years.

**TABLE 1 YOUTH OPPORTUNITIES PROGRAMME IN SCOTLAND**

**Numbers on a Youth Opportunities Programme Scheme in Scotland**

Month	1978	1979	1980	1981	1982
January	-	9,300	14,500	19,100	28,700
February	-	10,600	15,700	19,700	27,400
March	-	11,000	15,000	21,500	24,000
April	-	11,400	14,500	19,600	26,000
May	5,100	10,800	14,600	20,000	25,000
June	5,000	12,200	12,800	20,900	28,000
July	4,700	12,800	14,200	23,600	27,000
August	5,800	13,500	14,800	25,600	27,000
September	4,500	14,400	18,700	32,100	
October	5,400	14,500	21,700	33,000	
November	N/A	14,900	20,300	30,900	
December	N/A	14,100	18,400	27,700	

**Source:** Scottish Economic Bulletin and Fraser of Allander Institute Quarterly Economic Commentary, various issues. Revisions and additional data provided by the Manpower Services Commission, Scotland. Estimates should be regarded as approximate.

## 2 The Scottish School Leaver Surveys

Our data are obtained from the surveys of school leavers conducted by the CES in 1977, 1979 and 1981. Each survey covered a sample of young people who had left school in or at the end of the previous academic session; most of the sample members had been out of school for some nine or ten months when surveyed (4). Since the sample arrangements varied between surveys, we confine our attention in this paper to school leavers from education authority schools in Fife, Lothian, Strathclyde and Tayside, who were fully represented in all three surveys. These four Regions account for about three quarters of the Scottish population. The complicated nature of the sampling arrangements renders the computation of response rates somewhat problematic, but these were around 80%. The sampling fractions were 40% in 1977, 10% (20% for less qualified leavers) in 1979, and 37% in 1981. However, in this paper we use data from particular questionnaire versions that were sent to a random subsample of the 1977 sample; moreover, we describe only a random quarter of the 1981 sample whose data were prepared for early analysis. The data reported in this paper have been weighted to correct for disproportionate stratifications and for measurable non-response bias associated with sex and SCE attainment; reported sample sizes are unweighted.

## 3 Results

Table 2 illustrates the destinations of each of our three cohorts of school leavers at the time of the respective survey (about April of the survey year). Apart from a slight rise in the proportion staying on for full-time education, the story is one of falling employment. The dramatic fall is seen to occur between 1979 and 1981. Fewer than half the 1981 sample members were in employment, compared with 68% for males and around 63% for females in 1977 and 1979. The level of unemployment fell between 1977 and 1979, not because of any substantial rise in employment but because of the expansion of special employment schemes for young unemployed persons, such as YOP. Although the number of persons on such schemes continued to rise after 1979, more than doubling between 1979 and 1981, the fall in employment opportunities was so severe that unemployment itself nearly doubled.

It is unlikely that much if any of the decline in school leaver employment can be attributed to trends on the supply side of the youth labour market. Table 3 shows that the numbers leaving Scottish schools did not change very much in the period under consideration; there had been an increase in the annual flow of school leavers since 1966/67 (when there were 75 thousand school-leavers) but this bulge reached its peak in 1977/78 and cannot account for the substantial rise in school leavers unemployment after that date. Table 2 indicates a slight fall over time in the proportion of school leavers entering the labour market (although this might be partly a consequence of unemployment). Clearly, the fall in school-leaver employment between 1977 and 1981 cannot be attributed to an increase in the flow of school leavers onto the labour market.

**TABLE 2 DESTINATIONS OF SCHOOL LEAVERS WHEN SURVEYED (from EA schools in Fife, Lothian, Strathclyde and Tayside)**

left school:	males			females		
	1975/6	1977/8	1979/8	1975/6	1977/8	1979/80
surveyed:	1977	1979	1981	1977	1979	1981
	percentage					
full-time education, no job	12.0	13.6	16.9	20.3	20.1	23.7
job	68.0	67.6	49.3	62.5	64.1	46.3
unemployed	13.1	9.0	16.2	10.8	8.2	14.1
scheme	4.6	7.1	15.9	3.7	5.2	13.9
others	2.4	2.7	1.5	2.7	2.2	2.0
Total	100.1	100.0	99.9	100.0	99.8	100.0
Unweighted N	(3419)	(3232)	(1909)	(3527)	(3405)	(2091)

**Source:** Scottish School Leavers Surveys, 1977, 1979, 1981

**TABLE 3 SCHOOL LEAVERS IN SCOTLAND**

School Session	Number Leaving
1975/76	91,00
1976/77	91,600
1977/78	93,200
1978/79	91,700
1979/80	91,700
1980/81	87,500

**Sources:** Scottish Education Department, **Statistical Bulletins** No 4/E2/1978 (August 1978), No 10/E2/1980 (November 1980) and No 10/E3/1982 (October 1982)

Nor was there any observable change in the quality of school leavers entering the labour market. Table 4 suggests that the average qualification level fell among males and rose among females, but among both sexes the change was slight. It is of course impossible to say whether other, less directly observable, aspects of school leaver quality had changed over time, but this seems unlikely.

We therefore look to the demand side of the labour market for the explanation of the recent fall in school-leaver employment. There is of course, abundant evidence of a progressive job famine over this period. The annual average male unemployment rate in Scotland was 9.5% in 1977 and 9.0% in 1979, but it soared to 16.0% in 1981 (5). Much of the loss of employment over this period occurred in manufacturing industry.

Table 5 shows the destinations of the three cohorts of school leavers by industrial sector, in an attempt to establish whether particular sectors have been mainly responsible for the decline in school-leaver employment. Because of the change in industrial classifications (6), comparisons are possible only at a fairly aggregate level of analysis, but this is adequate for our present purposes. The destinations are shown separately for each sex, and are presented as percentages of all labour market entrants.

**TABLE 4 SCE QUALIFICATIONS OF SCHOOL LEAVERS ENTERING THE LABOUR MARKET**

Males	1977	1979	1981
	%	%	%
No A-Cs	52.1	49.1	51.8
1-3 A-Cs (O-grade)	23.9	22.9	25.2
4+ A-Cs	11.4	14.6	12.2
Highers	12.6	13.4	10.8
Total	100.0	100.0	100.0
Unweighted N	(2656)	(2803)	(1480)
Females			
No A-Cs	53.6	52.2	51.0
1-3 A-Cs (O-grade)	22.0	20.7	21.2
4+ A-Cs	10.3	12.6	12.2
Highers	14.0	14.5	15.5
Total	99.9	100.0	99.9
Unweighted N	(2395)	(2784)	(1473)

Source: Scottish School Leavers Survey 1977, 1979, 1981

**TABLE 5 INDUSTRY OF SCHOOL LEAVERS WHO ENTER THE LABOUR MARKET**  
(from EA schools in Fife, Lothian, Strathclyde and Tayside)

Divisions	as % of school leavers in the labour market		
	1977	1979	1981
<b>Males</b>			
0 agriculture, forestry and fishing	2.5	2.5	2.4
1,2 extraction, utilities metal and chemical manufacture	6.0	5.4	2.6
3 metal goods, engineering and vehicles	17.3	14.9	11.1
4 other manufacturing	11.6	8.1	5.9
5 construction	9.2	10.5	10.2
7 transport and communication	2.7	2.9	2.8
6,8,9 other services	27.6	30.4	21.5
not known or inadequately described	2.4	6.0	4.0
unemployed or on schemes	20.6	19.2	39.5
Total Unweighted N	99.9 (2656)	99.9 (2803)	100.0 (1480)
<b>females</b>			
0 agriculture, forestry and fishing	0.5	0.3	0.2
1,2 extraction, utilities, metal and chemical manufacture	2.0	1.4	1.4
3 metal goods, engineering and vehicles	4.9	5.7	2.5
4 other manufacturing	20.7	17.7	10.5
5 construction	1.1	0.9	1.2
7 transport and communication	0.9	1.3	1.3
6,8,9 other services	46.6	47.7	41.2
not known, or inadequately described	5.5	7.6	4.0
unemployed or on schemes	17.4	17.4	37.7
Total Unweighted N	99.9 (2395)	100.0 (2784)	100.0 (1473)

Source: Scottish School Leavers Survey 1977, 1979, 1981

To bring the issue into sharper focus a quasi-shift-share analysis is conducted by tracing the effects in 1981 that arose through the various industrial sectors not absorbing the same percentage of school leavers as in 1977. This is shown in Table 6. Columns (i) and (ii) are taken from Table 5: the percentages are adjusted by redistributing the 'not known or inadequately described' category among the industrial sectors in the same proportion as other employees. Column (iii) is found by subtracting column (ii) from column (i): this expresses the loss in employment in each industrial sector as a percentage of labour market entrants (7). The sum of these differences equals the decline in employment in percentage points. Column (iv) expresses the loss in each sector as a percentage of the total loss of employment.

Among females, more than half of this loss is accounted for by 'other manufacturing', a category which includes food, drink, clothing and textile manufacture. Females also lost jobs in other manufacturing sectors (divisions 1,2, and 3) but these accounted for a relatively small proportion of female employment to begin with. Manufacturing also accounts for the larger part of the job loss among males, but here the loss is spread more evenly over different manufacturing sectors - a fact which reflects the greater industrial dispersion of employment of young males compared with young females. For simplicity of presentation, Table 6 only compares 1977 and 1981. However, Table 5 reveals that the decline in manufacturing employment was already evident between 1977 and 1979, even though total school leaver employment held up over this period.

Between 1977 and 1981 school-leaver employment was relatively stable in agriculture (among males), in construction and in the transport and communication industries. However employment declined in 'other services', a heterogeneous sector which includes distribution, hotels and catering, banking, insurance and central and local government employment. Although in 1981 this sector accounted for almost twice as many females as males, it accounted for about the same proportion of the total job loss among each sex. It appears that the recession has encouraged the tendency for school-leaver employment in manufacturing to be disproportionately male, and for school-leaver employment in services to be disproportionately female.

Table 7 compares trends in school-leaver employment with the simultaneous trends in aggregate (all-age) employment. The first three columns show the industrial distributions of employees in employment at the middle of each of the three survey years. The next three columns show the industrial distribution of school leavers; the sample numbers have been grossed up to give population estimates. In comparing the two sets of figures one should bear in mind that compared to adult employees, very few school leavers are employed part-time, and a larger proportion are female. (Separate figures for each sex are not available for all employees). More important, perhaps, only about three quarters of Scottish school-leavers are included here, since only Fife, Lothian, Strathclyde and Tayside Regions are covered. To convert to national (Scottish) estimates each school-leaver total would need to be multiplied by an average coefficient of about 1.33, although this might vary slightly between industries (8). We have not, however, made this correction. The third set of columns shows the ratio of school leaver employment to all-age employment in each industrial category. It shows the number of the previous year's school leavers (from the four Regions) employed in each category, for every thousand employees in that category.



**TABLE 6 ANALYSIS BY INDUSTRIAL SECTOR OF THE SHIFT IN EMPLOYMENT, 1977 AND 1981 COMPARED**

industrial sector	Males				Females			
	% of labour market entrants employed by sector		Increase in unemploymnt due to non-hiring in sector		% of labour market entrants employed by sector		Increase in unemploymnt due to non-hiring in sector	
	1977	1981	%age points (i)-(ii)	As a % of inc in un-emp	1977	1981	%age points (i)-(ii)	As a % of inc in un-emp
	(i)	(ii)	=(iii)	(iv)	(i)	(ii)	=(iii)	(iv)
0 agricul. forestry fishing	2.6	2.6	0.0	0.0	0.5	0.2	0.3	1.5
1,2 extrac. utilities metal & chem.man	6.2	2.8	3.4	18.0	2.1	1.5	0.6	3.0
3 metal gds engin.& vehicles	17.8	11.9	5.9	31.2	5.3	2.7	2.6	13.1
4 other manfg.	12.0	6.3	5.7	30.2	22.2	11.2	11.0	55.3
5 constr-uction	9.5	10.9	-1.4	-7.4	1.2	1.3	-0.1	-0.5
7 transp. & comm.	2.8	3.0	-0.2	-1.1	1.0	1.4	-0.4	-2.0
6,8,9 other services	28.5	23.0	5.5	29.1	49.9	44.0	5.9	29.6
unemployed or on schemes	20.6	39.5			17.7	37.7		
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>18.9</b>	<b>100.0</b>	<b>99.9</b>	<b>100.0</b>	<b>19.9</b>	<b>100.0</b>

**Source:** Scottish School Leavers Survey 1977, 1981

The denominator of this ratio (total employment) is clearly a stock; the numerator, however, can be represented as a flow, since it shows the number of school leavers who joined the industry within a period of time. We therefore call this ratio the 'school-leaver recruitment ratio'. (Once again, the true ratios for all of Scotland are on average 1.33 times larger, but we have not made this correction.)

In 1977 the average recruitment ratio over all sectors of industry was 20.9 per thousand employees. It was substantially higher than this in the two largest manufacturing categories (divisions 3 and 4) and smaller in the extraction, utilities and metal and chemical manufacturing category, and smallest of all in transport and communication (where age limits are likely to be prevalent). The ratio in 'other services' was only slightly below the average; this is a large and heterogeneous category, and the single ratio probably conceals substantial variations among its constituent industries.

By 1981 the average recruitment ratio (over all industries) had fallen to 16.3 per thousand employees. The decline in this ratio indicates that school-leaver recruitment fell faster than adult employment over this period. Column (x) shows what school-leaver recruitment would have been in 1981 had the recruitment ratios remained constant since 1977 - that is, it makes the counterfactual assumption that school leaver recruitment changed in proportion to total employment within each industrial category. Total school leaver employment would then have been 39,499 - a decline since 1977 of 3,761, or less than one-third of the actual drop of 11,861. In other words, more than two-thirds of the decline in school leaver recruitment over this period can be attributed to its disproportionate sensitivity to changes in total employment (that is, to declining recruitment ratios).

Column (xi) shows another set of hypothetical estimates for 1981 based on slightly different counterfactual assumptions; that recruitment ratios remained constant since 1977, and so did the percentage distribution of total employment among industries. Total employment is assumed to have fallen by the 'actual' amount. The estimated total school leaver recruitment is 40,190. Comparing this with column (x) shows how much of the **proportionate** effect of total employment decline on school-leaver employment is due to the relative concentration of school leavers in the faster-contracting industries. In fact, relatively little of the effect can be explained in this way: the difference between columns (x) and (xi) accounts for only 6% of the total decline in school-leaver employment between 1977 and 1981.

However this does not totally rule out the importance of 'structural' aspects of school leaver unemployment. The three categories whose school leaver recruitment ratios declined by the greatest proportion between 1977 and 1981 are the three manufacturing categories. These also comprise three of the four categories in which total employment fell by the greatest proportion (the fourth being construction). There is a tendency for the industries in which total employment fell most also to experience the greatest falls in school-leaver recruitment ratios. This is not surprising, since in recessions firms tend to suspend recruitment, cut back on training and make workers redundant - and all of these affect young people most. This effect is disproportionate between industries, but it is nevertheless more appropriately identified as largely a cyclical effect rather than a structural one. Were the changes only structural (that is, were total employment to stay the same) school leavers would experience compensating gains in the expanding industries.

TABLE 7 INDUSTRIAL DISTRIBUTION OF EMPLOYMENT AND SCHOOL-LEAVER RECRUITMENT RATIOS

	All employees in employment in Scotland (thousands)			Employed school-leavers in Fife, Lothian, Strath- clyde and Tayside			School-leaver recruitment ratios			Counterfactual 1981 estimates (see notes)	
	(i) 1977	(ii) 1979	(iii) 1981	(iv) 1977	(v) 1979	(iv) 1981	(iv)/(i) =(vii) 1977	(v)/(ii) =(viii) 1979	(vi)/(iii) =(ix) 1981	(x)	(xi)
0 agriculture, forestry and fishing	49	48	45	908	843	753	18.5	17.6	16.7	834	844
1,2 extraction, utilities, metal and chemical manufacture	156	154	138	2336	2130	1129	15.0	13.8	8.2	2066	2170
3 metal goods, engineer- ing and vehicles	257	251	199	6576	6302	3858	25.6	25.1	19.4	5092	6109
4 other manufacturing	266	259	215	8868	7411	4391	33.3	28.6	20.4	7168	8239
5 construction	164	164	144	3115	3595	3294	19.0	21.9	22.9	2735	2894
7 transport and communication	134	134	128	1082	1287	1161	8.1	9.6	9.1	1034	1005
6,8,9 other services	1046	1071	1056	20375	22810	16813	19.5	21.3	15.9	20570	18929
all employees	2072	2081	1925	43260	44378	31399	20.9	21.3	16.3	39499	40190

SOURCE: (columns (i), (ii) and (iii)) Scottish Economic Bulletin, No.25, Summer 1982, p.43. All figures are subject to rounding. It has been assumed that employment in SIC XVI was 17 thousand in 1979 and 16 thousand in 1981, (this was not separately identified in the published table).

NOTES: Column (x) is the product of columns (iii) and (vii); it assumes the actual 1981 level and distribution of total employment, and the 1977 school-leaver recruitment ratio. Column (xi) is given by: (i)x(vii)x1925/2072; it assumes the 1981 employment total, the 1977 industrial distribution and the 1977 recruitment ratio.

In proportionate terms the largest drop in recruitment ratios was in the extraction, utilities and metal and chemical manufacturing category, followed by other manufacturing. Recruitment ratios actually rose in construction and in transport and communication - despite the decline in total employment. It is possible that the relatively high labour turnover, at least in construction, helped to shield school leavers from the usual cyclical effects.

#### 4 Conclusions

The recruitment of school leavers into employment declined over the period studied, especially between 1979 and 1981. This seems to have been mainly or entirely a consequence of changes on the demand side of the labour market. Analysis of the changing industrial composition of school leaver employment reveals, predictably, that manufacturing industry accounted for much of the net loss of employment. More than half the jobs lost by females were in the single category, 'other manufacturing industry' (excluding metal, chemical, metal goods, engineering and vehicles manufacturing). Males lost as much as females from the fall in service employment. Employment held up surprisingly well in construction and in transport and communication. Between 1977 and 1981 school-leaver recruitment fell more than three times as much, in proportionate terms, as total (all-age) employment in Scotland. The ratio of school-leaver recruitment to total employment declined in most industries, and declined most of all in manufacturing.

#### Notes

1. Unemployed school leavers are defined as persons under the age of 18 who are registered unemployed and have not had a job since leaving full-time education.
2. In inferring underlying trends one should take account of other changes which affect the official statistics. These include: the raising of the school-leaving age in 1973; changes in the school-leaving regulations in 1976, which brought forward the summer peak of school leaver unemployment; changes in benefit regulations in 1981, as a result of which many school leavers have delayed registering during the summer school holidays; and the change in October 1982 to a system of unemployment statistics based on Unemployment Benefit Offices rather than on Job Centres.
3. For a discussion of these fears and of the concept of a 'moral panic', see G Mungham, 'Workless Youth as a Moral Panic' in T Rees and P Atkinson, eds. **Youth Unemployment and State Intervention**, Routledge and Kegan Paul, London, 1982.
4. Documentation of the surveys, and a bibliography of research papers, are available from the CES. We have elsewhere analysed the impact of YOP on the employment chances of 1979 sample members, and described the early labour market experiences of the 1981 sample: B G M Main and D

Raffe, 'Determinants of Employment and Unemployment among School Leavers : Evidence from the 1979 Survey of Scottish School Leavers', **Scottish Journal of Political Economy**, Vol. 30, No.1, 1983, forthcoming, and B G M Main and D Raffe, 'The Transition from School to Work' in 1980/1 : A Dynamic Account', **British Educational Research Journal**, Vol.9, No.1, 1983, forthcoming. Trends in the labour-market experiences of school leavers, and in the relation between school certification and employment, are described by D Raffe, 'Youth Unemployment in Scotland since 1977', Centre for Educational Sociology, University of Edinburgh, 1982 (mimeo). An account of trends based on the same surveys, but using different assumptions and earlier data-sets, is provided by A Seatter, 'The Labour Market for Scottish School Leavers : 1977-1981', **Scottish Economic Bulletin**, Winter 1982/83.

5. **Employment Gazette**, Vol.90, No 8, August 1982: Table 2.3, p.S25.
6. The 1977 and 1979 data were originally coded into the Standard Industrial Classification of 1968; the 1981 data were coded using the revised classification of 1980. For details of the conversion between the two classifications see Central Statistical Office, **Standard Industrial Classification : Revised 1980**, HMSO, London, 1979.
7. Note that each estimate in column (iii), being the difference between two sample estimates, is necessarily less reliable than the equivalent estimate in column (i) or (ii).
8. For example, the agriculture, forestry and fishing category is under-represented in the four Regions. For this category, therefore the school leaver totals shown should be multiplied by more than 1.33 to get the Scottish total. Regional differences with respect to the other industrial categories are small at this level of aggregation.