



IRLE WORKING PAPER
#9-87
October 1987

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Cite as: Barry Eichengreen. (1987). "Juvenile Unemployment In 20th Century Britain: The Emergence of A Problem." IRLE Working Paper No. 9-87. <http://irle.berkeley.edu/workingpapers/9-87.pdf>



Title:

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Publication Date:

10-01-1987

Series:

[Working Paper Series](#)

Publication Info:

Working Paper Series, Institute for Research on Labor and Employment, UC Berkeley

Permalink:

<http://escholarship.org/uc/item/24g736fq>

Keywords:

Eichengreen, juvenile unemployment, Britain

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JUVENILE UNEMPLOYMENT IN INTERWAR BRITAIN:

THE EMERGENCE OF A PROBLEM

Abstract

During the 1980s youth unemployment rates have persistently exceeded unemployment rates for adults, in Britain as in other OECD countries. In the interwar period, youth unemployment rates in Britain were dramatically lower than those for adults. This paper explores possible reasons for the contrast, including demographic trends, changes in school attendance, changes in labor force participation, changes in the intensity of job search, macroeconomic conditions, shifts in the industrial composition of employment, and economy-wide changes in the share of juveniles employed (due to changes in youth/adult wage differentials, technologies or labor practices). Much of the explanation for the contrast turns out to lie in a rise in the cyclical sensitivity of youth unemployment between the interwar and postwar periods, apparently attributable to changes in hiring and redundancy practices.

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This paper is part of a project on interwar unemployment, for which the Earhart Foundation, the National Science Foundation and the German Marshall Fund provided financial support. I am grateful to Julie Cohen for research assistance and to Charles Feinstein, Carol Heim and Peter Lindert for comments and discussions.

Youth unemployment is universally regarded as one of the most disturbing features of a slack labor market. Recent school leavers, if out of work for an extended period, may never develop the attitudes and habits needed to retain steady employment or acquire the experience and training needed for advancement to more desirable jobs. Instead, they may fail to develop an attachment to a particular employer and remain permanently on the fringes of the labor market, growing accustomed to recurrent spells of unemployment.¹

In Britain, much concern has been elicited by the recent rise of youth unemployment rates to more than 20 per cent. Yet many observers fail to appreciate how very recently this problem emerged. Youth unemployment, while never wholly neglected, attracted considerably less attention prior to the middle of the 1970s. One might conjecture that youth unemployment has always been more volatile than unemployment among adults so that the problem only emerges during periods of recession or depression like that afflicting the British economy over much of the last decade. The contrasting experiences of the 1930s and 1980s do not support this conclusion, however. In the 1980s, youth unemployment rates have persistently exceeded unemployment rates for adults, in Britain as in other OECD countries.² In the interwar period, in contrast, youth unemployment rates were dramatically lower than those for adults. Where the overall unemployment rate among insured persons averaged a staggering 14 per cent between 1920 and 1938, juvenile unemployment averaged only five per cent. Although youths have suffered disproportionately from the Thatcher recession, as labor force participants they appear to have suffered less than their fathers from the effects of the Great Depression.

What accounts for the reversal in the youth-adult unemployment differential between the 1930s and the 1980s? One can think of a long list of supply- and demand-side factors which could have played some role. On the supply side these include:

1. Demographic trends (changes in the ratio of juveniles to adults);
2. Changes in the share of juveniles leaving school;
3. Changes in the share of school leavers entering the labor force;
4. Changes in the intensity of job search (due perhaps to the provision of unemployment benefits).

To these should be added demand-side factors, including:

5. Macroeconomic conditions (changes in the rate of job creation relative to the rate of growth of the working-age population);
6. Shifts in the industrial composition of employment (from industries with a large share of juveniles in their workforce to those where the juvenile share is small);
7. Economy-wide changes in the share of juveniles employed by industry (due perhaps to changes in youth/adult wage differentials, technology or labor practices).

Finally, it is possible that the lower levels of youth unemployment in interwar Britain simply reflect a recording effect -- that to some extent the number of unemployed youths was more seriously underrecorded between the wars.

Despite the concern voiced over the recent rise in youth unemployment, the role of these factors in the contrasting juvenile labor market experiences of the 'thirties and 'eighties has received no systematic attention. This paper therefore analyzes the sources of youth unemployment and the rise in

juvenile unemployment rates between Britain's two major 20th century recessions.

It might be objected that the structure of the British labor market has changed so fundamentally as to vitiate any attempt to compare juvenile unemployment in the 1930s and 1980s. Before launching into an analysis of the sources of youth unemployment in the second section below, I offer in the first section an overview of the characteristics of the youth labor market in the interwar years. This will put readers familiar with recent experience in a position to judge the comparability of the two episodes.

A problem which threatens to frustrate any attempt to analyze youth unemployment is the woefully inadequate nature of the statistics. This is especially true of the interwar years. Jewkes and Winterbottom went so far as to suggest that "the appalling waste of fundamental national resources," by which they meant juvenile unemployment, "goes on because the nation wilfully refuses to take steps to acquaint itself with the truth of the present position by the collection of information."³ One purpose of this paper is therefore to apply two heretofore unutilized sources of information on juvenile unemployment: the annual reports of the London Advisory Council on Juvenile Employment, and the household record cards of the New Survey of London Life and Labor. The former provides detailed information on the labor market experience of juveniles, the latter exceptional detail on the family circumstances of both juvenile labor force participants and youths not in the labor market.

The Juvenile Labor Market Between the Wars

In the 1920s and 1930s, upwards of two-thirds of working-class youths entered the labor market upon reaching the school-leaving age of 14. Few continued their formal education beyond that age without obtaining financial assistance. Funds were available only to the minority: in the London borough of Greenwich, for example, only 143 children were awarded London County Council Scholarships in a typical year, and only 19 per cent of the pupils leaving elementary school did so for the purpose of continuing their education.⁴

The jobs of juveniles ranged from apprenticeship at one extreme to casual labor at the other. In most industries, formal apprenticeship was in decline by the interwar years and had been replaced by a system of "learnership" which resembled apprenticeship but did not involve a rigid period of service or extensive transfer of skills. Trade unions attempted to regulate apprenticeship and learnership through rules governing age at entry, conditions of training, and ratio of apprentices to journeymen. Strong unions, like those in the printing trades, were still able to insure that apprenticeship was the sole port of entry to the industry and to demand payments of £20 to £100 for the privilege.⁵

Entry into apprenticeship typically occurred at age 15½ for girls and age 16 for boys. Hence 14 year old school leavers desiring such a position faced a gap of up to two years during which they required temporary employment. While some found it in menial tasks that served as a stepping stone to apprenticeship, observers worried that in the interim many if not most juveniles would be demoralized by unemployment. A Ministry of Labor

survey conducted in 1925 found that 10 per cent of boys and 21 per cent of girls registered at Employment Exchanges and Juvenile Employment Bureaus in June and July of that year had been without any employment since leaving school. Yet, reassuringly, more than half of juveniles who had been in some form of work had secured their first position within a month of leaving school and three-quarters within six months. It would appear that unemployment among school-leavers, while far from negligible, posed a serious problem only for the minority.⁶

Other observers worried that even if recent school-leavers were not wholly unemployed, the only jobs they could secure were of a casual nature. In East London, obtaining casual work traditionally meant queueing up at the docks at 7:30 AM, hoping for a day's employment as a rivet boy or scaler.⁷ Other juveniles lined up outside factory gates, where the fortunate would be picked by foremen or spoken for by relatives or friends. Other casual occupations for juveniles included messengers, confectionery workers, little piecers in the cotton industry, seasonal fruit pickers, and toy-makers' helpers for the Christmas trade. Many of those so employed allegedly grew accustomed to the casual habit, permanently joining the army of irregular workers most at risk of unemployment.

Casual labor in fact characterized the situation of only a minority of school-leavers, albeit a substantial one. According to the same Ministry of Labour enquiry, 17 per cent of male school-leavers and 15 per cent of female school-leavers obtained their first situation in casual or seasonal work. Casual employment was exceptionally prevalent in London: according to the Liberal Industrial Inquiry, over 50 per cent of male school-leavers there

Table 1
 Labor Market Experience of School-Leavers
 (September 1930)

Age at time of enquiry	Left School in <u>Year Ending Dec. 1928</u> 15 years 8 months to 16 years 8 months	Left School in <u>Year Ending Dec. 1929</u> 14 years 8 months to 15 years 8 months
Time since leaving school		
Under 3 months	0.8	2.3
3-12 months	5.1	52.5
Over 12 months	94.2	45.2
Time in present job		
Under 3 months	7.5	11.2
3-12 months	22.0	55.1
Over 12 months	70.5	33.7
Number of jobs		
0	2.2	3.8
1	49.4	60.6
2	33.4	28.2
3	11.7	6.1
4 or more	3.2	1.4

Note: Percentages may not sum to 100 due to rounding.

Source: London Advisory Council for Juvenile Employment, Seventh Annual Report 1930 (1931).

secured employment as messengers, an irregular occupation in which "the privileges of physical exercise outweigh the opportunities of training."⁸ Yet even in London, as shown in Table 1, employment instability befell only a minority. Of juveniles who had left full-time education in 1928 (nearly all of whom had been out of school for more than 12 months at the time of inquiry), half had relied on one job only. Only 15 per cent had experience in more than two jobs, only 3 per cent in more than three.⁹

Contemporaries worried further that even those juveniles securing continuous employment at age 14 faced separation at 16.¹⁰ Since, once their employees turned 16, firms were required to make matching contributions to the unemployment insurance fund and, in Trade Board industries, to pay more generous minimum wages, some made regular practice of discharging 16 year old youths. Anticipating separation at age 16, neither employer nor employee was willing to invest in training. Many an employer, it was alleged, engaged in "soaking the best" out of its boy workers before discharging them. As a result, many unemployed juveniles were in poor health due to overwork.¹¹

The difficulty with attributing the incidence of unemployment among 16 year olds to unemployment insurance or Trade Board wages is that the problem of dead-end jobs predated both institutions. In the prewar period, dead-end jobs were attributed to work organization and industrial technology -- to the existence of jobs offering little scope for productivity advance through training and experience. As a boy grew older and demanded compensation for his experience, or simply expected to be paid more than his younger counterparts, his employer had an incentive to replace him with someone younger willing to do the same work for less.¹² If the rate of separation at

age 16 increased between prewar decades and the 1930s, this may have been due more to the slow growth of employment opportunities after World War I than to the Trade Board and unemployment insurance schemes. This certainly is the impression conveyed by Greenwood's famous fictional account of the problem.¹³

The only systematic evidence on the extent of this practice again comes from the Ministry of Labour's survey of juveniles on the registers of employment exchanges in 1925. That evidence, in Table 2, indicates that 6 per cent of boys and 4 per cent of girls were discharged upon reaching age 16 -- again, a small but significant minority. A larger share of the girls than of the boys had been employed in Trade Board industries. But there is little evidence that mandatory insurance contributions were associated with the practice.

Some might dismiss this problem on the grounds that juveniles and their parents understood the alternatives and demanded higher wages as compensation for the short duration of dead-end jobs.¹⁴ But the low incomes of many employed workers, particularly those on short time, and the sense of desperation caused by a parent's unemployment may have led them to overlook the longer-run consequences of accepting a readily-available position.¹⁵ In the words of Roker and Scott, "The unemployed juvenile lives under strong economic pressure; he has no time to think and he does not know of what he is capable. His code of honour demands that at the earliest possible moment he should help to support the large family. He wants work and he tries to get 'anything.'"¹⁶

Whether separation represented a serious social and economic problem depended in part on the ease of securing another position. Although there is

Table 2
Prevalence of Discharge on Reaching 16 Years of Age

	Boys		Girls	
	Number	%	Number	%
Trade Board Industries	206	2.9	347	7.8
Other Insurable Occupations	1893	6.6	1036	2.8
Other Occupations	73	8.2	101	4.0
Total	2172	6.3	1484	3.6

Source: Ministry of Labor, Report into an Enquiry..., June and July 1925.

a scarcity of evidence for the interwar period with which this question can be addressed, due to the availability of unusual sources of information an answer can be hazarded for London. Before doing so, it is important to note that the London market for juvenile labor was far from typical for Britain. The share of youths in the metropolitan population was less than the national average, while the demand for juvenile labor was exceptionally buoyant. As a result, unemployment rates for boys in London ranged from two-thirds to a half of those for Britain, while rates for girls fell to less than a third of the national average.¹⁷ Still, while experience in London was special, the richness of the information compensates for the difficulty of generalizing.

On the basis of evidence for London, it appears that the representative juvenile, upon becoming unemployed, found work rapidly. Of those registered as unemployed at exchanges in London in December 1928, shown in Table 3, over 50 per cent had been registered for a period of less than a week, 67 per cent for less than a month, 82 per cent for less than three months. This suggests that roughly half of registered juveniles exited unemployment in less than two weeks and two-thirds exited in less than two months.¹⁸ Evidence such as this led the Ministry of Labour to conclude that "[t]here is no indication of a large class of boys and girls, verging on the unemployable, who have deteriorated markedly in consequence of long-continued unemployment." At the same time, the Ministry distinguished a "residue of difficult cases" whose employability was in doubt.¹⁹

It was sometimes alleged that juveniles wished to be discharged upon qualifying for unemployment benefits -- in effect, that youth unemployment had a substantial voluntary component. The propensity to enter unemployment

Table 3

Duration of Unemployment of Unemployed Juveniles
on Registers of London Employment Exchanges

Duration to Date	(i) July 1927	(ii) Dec. 1927	(iii) July 1928	(iv) Dec. 1928	(v) July 1929	(vi) Dec. 1929	(vii) July 1930	(viii) Dec. 1930
Under one month	65.5	66.7	69.3	67.6	71.5	70.5	69.4	64.7
1-3 months	17.7	13.9	16.8	15.8	14.7	14.8	17.0	19.4
Over 3 months	5.3	3.7	3.5	4.1	4.1	2.7	4.7	5.2
Since leaving school	11.5	15.7	10.4	12.5	9.7	12.0	8.9	10.7

Source: London Advisory Council for Juvenile Employment, Annual Report
(various years).

voluntarily is frequently thought to be highest among the relatively young, who have the least invested in specific training and the most to gain from additional search. For example, Daniel found for postwar Britain that a majority of those under the age of 25 who entered unemployment did so voluntarily.²⁰

Tables 4 and 5 provide information on reasons for entry into unemployment in interwar London. They confirm that a significant number of juveniles -- but not more than 30 per cent -- entered unemployment voluntarily. In contrast, some two-thirds of juveniles who left employment did so due to redundancy or dismissal. It appears that, in comparison with postwar Britain, the extent of voluntary entry into unemployment was low.

The tables also indicate that 2½ to 5½ per cent of juveniles entering unemployment did so for reasons of health. But even if ill health was a problem for some, the contemporary characterization of juvenile emphasizing health problems -- that employers overworked their young laborers before discharging them -- appears to be overdrawn.

Table 6 presents evidence on determinants of exit from unemployment -- equivalently, on determinants of the length of completed spells. This table is consistent with those preceding it in terms of the extent of voluntary unemployment. Between 1927 and the summer of 1929, juveniles demanding high wages or awaiting special work comprised no more than 15 to 20 per cent of the total. That share declined in 1930 with the impact of the Depression. The residual of "hard cases" who the Ministry of Labour thought difficult to place show up as youths of "indifferent character" or "poor type" and account for a fifth to a quarter of the unemployed.

Table 4

Analysis of Boys on Registers of Juvenile Departments
of London Employment Exchanges

Reasons for Leaving Employment	(i) July 1927	(ii) Dec. 1927	(iii) July 1928	(iv) Dec. 1928	(v) July 1929	(vi) Dec. 1929	(vii) July 1930	(viii) Dec. 1930
<u>Involuntary</u>	74.9	78.7	72.2	77.9	69.0	75.8	73.2	80.3
Slackness of trade	35.6	43.5	35.6	41.4	29.8	40.8	38.3	42.7
Firm closed or moved	3.1	3.0	2.1	3.1	3.6	2.8	2.6	2.9
Job finished	8.0	8.0	7.1	8.0	9.8	7.8	8.4	10.5
Unsatisfactory conduct	12.8	10.4	13.7	13.2	11.3	12.3	12.2	11.1
Below average efficiency	6.1	7.8	5.0	6.8	6.3	6.9	3.9	7.0
Staff changes	0.8	0.5	1.0	1.2	2.6	1.4	1.0	1.6
Found unsuitable	2.7	2.3	1.9	2.1	1.7	0.7	3.5	1.1
Health (eyesight, etc.)	2.0	2.5	1.0	1.6	2.9	2.3	2.4	3.4
Unknown & misc.	3.8	0.7	4.6	0.6	1.0	0.8	0.9	0.0
<u>Voluntary</u>	25.1	21.3	27.8	22.1	31.0	24.2	26.8	19.7
No prospects or left to better self	6.7	5.1	5.4	5.3	7.5	5.0	6.4	6.3
Wages too low	6.7	4.3	6.1	6.0	7.0	6.9	5.3	4.3
Hours too long	3.8	1.7	3.9	3.8	2.7	2.8	3.4	2.5
Wanted work near home	0.5	0.3	0.2	0.1	0.2	0.4	0.3	0.7
Did not like work	3.8	5.6	6.3	2.4	9.1	5.9	7.2	3.9
Illness	2.0	2.9	2.3	2.1	2.6	1.7	3.0	1.3
Found work unsuitable	1.5	1.1	1.7	1.3	1.3	0.4	0.2	0.0
Miscellaneous	0.1	0.3	1.8	1.0	0.6	1.1	0.3	0.7
<u>Total</u>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Computed from London Advisory Council for Juvenile Employment, Annual Report (various years).

Table 5

Analysis of Girls on Registers of Juvenile Departments
of London Employment Exchanges

Reasons for Leaving Employment	(i) July 1927	(ii) Dec. 1927	(iii) July 1928	(iv) Dec. 1928	(v) July 1929	(vi) Dec. 1929	(vii) July 1930	(viii) Dec. 1930
<u>Involuntary</u>	75.6	82.3	71.4	78.7	66.2	75.6	69.0	75.2
Slackness of trade	46.2	57.9	45.5	55.2	40.2	52.4	42.9	52.6
Firm closed or moved	5.8	2.3	3.2	2.8	4.5	3.5	3.1	3.0
Job finished	6.7	6.7	4.4	5.2	6.4	4.8	8.9	5.7
Unsatisfactory conduct	4.7	3.8	5.2	4.8	6.4	6.3	5.4	4.8
Below average efficiency	6.9	5.3	4.8	7.0	4.8	4.2	4.5	5.6
Staff changes	1.4	0.4	0.6	0.4	1.7	1.4	1.4	1.0
Found unsuitable	1.1	1.2	3.0	1.8	1.0	0.6	0.7	0.3
Health (eyesight, etc.)	1.4	2.5	1.5	1.0	1.2	2.4	1.4	2.2
Unknown & misc.	0.9	0.4	3.2	0.4	0.0	0.0	0.7	0.0
<u>Voluntary</u>	24.4	17.7	28.6	21.3	33.8	24.4	31.0	24.8
No prospects or left to better self	3.2	3.5	4.3	3.0	4.4	3.5	2.2	4.4
Wages too low	3.9	2.9	4.1	4.4	4.5	4.3	5.4	5.7
Hours too long	4.2	2.2	2.6	2.1	3.3	2.0	4.4	2.3
Wanted work near home	1.0	1.5	2.2	1.0	4.1	0.9	2.2	2.4
Did not like work	6.4	2.8	8.5	3.4	9.8	8.1	10.9	6.7
Illness	3.3	3.6	2.6	4.3	4.2	3.9	3.6	2.8
Found work unsuitable	2.1	1.0	1.4	0.4	1.7	0.5	1.7	0.0
Miscellaneous	0.3	0.2	3.0	2.7	1.8	1.2	0.6	0.5
<u>Total</u>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Computed from London Advisory Council for Juvenile Employment, Annual Report (various years).

Even if juvenile unemployment had a voluntary component, it is not obvious that unemployment benefits played a significant role. Table 7 makes clear that only a minority of 16 to 18 year olds registered in London as unemployed in 1930 (four in ten boys, one in four girls) received benefits. Moreover, these figures should be interpreted as an upper bound, since those under the age of 16, most of those with insufficient contributions and many who would have been otherwise disqualified simply neglected to register with the authorities.

If juvenile unemployment was largely involuntary, then what were the characteristics of those juveniles particularly at risk? To address this question I analyzed a sample of juveniles drawn from the New Survey of London Life and Labour. This was a survey of working-class London households conducted by the London School of Economics between 1929 and 1931. One in 60 households were interviewed, from which I drew a 10 per cent sample.²¹ This 10 per cent sample contains 436 boys and 409 girls between the ages of 14 and 18. Those 84 per cent of the boys and 76 per cent of the girls reported as either employed or unemployed are referred to here as labor-force participants. The unemployment rate among the male participants was 3.5 per cent and among the females 2.9 per cent. For comparison, the Ministry of Labour's figures for London for the period 1929-31 averaged 2.8 for boys and 2.0 for girls.²²

Most discussions of juvenile labor force status between the wars have been organized around the determinants of the unemployment rate. This neglects the discouraged worker effect, which may have operated powerfully on juveniles, for whom staying in school was an option when unemployment rose. I therefore distinguish among three states in which juveniles were found:

Table 6

Factors Hindering Placement of Juveniles on
Registers of London Employment Exchanges

Factor	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
	July 1927	Dec. 1927	July 1928	Dec. 1928	July 1929	Dec. 1929	July 1930	Dec. 1930
Indifferent character, poor type	25.3	23.0	20.1	21.6	19.7	17.9	20.1	18.0
Waiting for special work, temporarily suspended, trade slackness	10.9	15.7	11.1	11.2	10.1	13.1	10.1	7.2
Inability to travel	9.9	10.4	6.5	7.9	8.0	6.2	6.1	7.1
Demand high wages	5.5	3.6	4.5	5.5	6.1	6.6	6.1	3.6
None	48.4	47.3	57.7	53.7	56.1	56.2	57.6	64.1

Source: London Advisory Council for Juvenile Employment, Annual Report
(various years).

employed, unemployed, and out of the labor force. In Table 8, probabilities of being employed, unemployed and not in the labor force are all specified as functions of an identical set of characteristics: age, family size and composition, and the income of other family members.²³

The results for males confirm that probabilities of labor force participation (both employment and unemployment) rose with age. Compared to 14 year olds, juveniles aged 15 through 17 had a greater tendency to find employment than to stay in school, but only those aged 16 and 17 had a higher probability of being in unemployment. Other family income, defined to include all income other than the earnings and unemployment benefits of the juvenile under consideration, was negatively associated with participation. Thus, juveniles from well-to-do households, presumably under the least pressure to leave school, had low probabilities of entering the labor force. Similarly, those from large households were most likely to enter the labor market, since such households were least able to defray the costs of education. While a mother's presence or absence seems to have had little impact on the labor market behavior of males, the father's absence was positively associated with employment, even when other sources of household income are held constant.

The results for females, while consistent with those for males, differ in important respects. Like males, females continue to enter employment in increasing numbers through age 18. Like males, those from large families were most likely to leave school for the labor market. But in contrast with males, other sources of household income have only a weak association with participation. And in contrast with males, for whom the father's absence appears to have provided a strong incentive for participation, among females

Table 7

Benefit Status of Juveniles Aged 16 to 18 on the Registers of
London Employment Exchanges on 19 July 1930

Status	Boys	Girls
Claiming benefit	41.6	25.4
Not claiming benefit	48.4	74.6
(i) Refusal to attend Junior instruction centre	(15.3)	(11.2)
(ii) Insufficient contributions	(23.8)	(43.4)
(iii) Refusal of suitable work, or otherwise disqualified	(3.6)	(2.1)
(iv) Miscellaneous	(15.7)	(17.9)
	<hr style="width: 50px; margin: 0 auto;"/> 100.0	<hr style="width: 50px; margin: 0 auto;"/> 100.0

Source: London Advisory Council for Juvenile Employment, Seventh Annual Report 1930 (London, 1931).

it is the mother's presence or absence that affected the participation decision. In principle, a mother's absence could have created pressure for a daughter to fill the traditional female role either within the household or outside it; there is no presumption, therefore, that a mother's absence necessarily increased daughters' labor-force participation. In practice, a mother's absence had a large positive impact on the labor force participation of her daughters.

Together, these findings support contemporary accounts suggesting that juveniles drawn from large households of limited means in which the parent of the same sex was absent were most inclined to enter the labor market. At the same time, they identify few significant determinants of unemployment risk for those already in the market. None of the estimated coefficients differs significantly across columns (i) and (ii) or across columns (iii) and (iv). There is no indication, for example, that unemployment risk for labor market participants was an increasing function of age. To the extent that 16 year olds in the sample were dismissed as soon as their continued employment required payment of insurance contributions or trade board wages, they do not appear to have remained out of work for a sufficient period to experience significantly greater unemployment than their younger counterparts. Similarly, although family size, family income and the presence of parents were all associated with tendencies toward labor force participation, for those already in the labor force none of these characteristics significantly affected the probability of unemployment relative to employment.

What overall picture of the interwar market for juvenile labor emerges from this evidence? It highlights the participation decision as the stage at

Table 8
Model of Juvenile Labor Force Status

Variable	Males		Females	
	Employed	Unemployed	Employed	Unemployed
Constant	-1.490 (2.44)	-4.247 (3.41)	-2.426 (4.22)	-13.02 (0.39)
Age 15	1.897 (5.02)	1.234 (1.16)	1.232 (3.45)	7.69 (0.23)
Age 16	2.616 (5.30)	2.579 (2.51)	2.029 (4.97)	10.096 (0.30)
Age 17	4.508 (4.33)	4.869 (3.67)	2.744 (5.64)	9.089 (0.27)
Age 18	12.144 (0.29)	12.272 (0.29)	2.722 (5.79)	10.250 (0.31)
Other Household Income	-0.007 (1.71)	-0.013 (1.68)	-0.003 (0.91)	-0.013 (1.30)
Mother Absent	0.412 (0.82)	0.588 (0.70)	0.998 (2.22)	1.234 (1.28)
Father Absent	1.145 (1.59)	-7.447 (0.10)	-0.223 (0.32)	-7.983 (0.10)
Household Size	0.359 (3.41)	0.392 (2.34)	0.418 (4.73)	0.546 (2.95)
Log-likelihood	-188.8		-214.3	
n	436		409	

Notes: Multinomial logit estimates with t-statistics in parentheses. Parameters for not in the labor force are normalized to zero. A coefficient's sign therefore indicates whether that characteristic is positively or negatively associated with the probability of the labor force status at column's head as opposed to not in the labor force.

Source: See text.

which the uneven incidence of juvenile unemployment was primarily determined. Participation had a strong element of economic necessity: those nearest the school-leaving age from small families with high incomes and both parents present were most likely to defer entry. But once in the labor market, unemployment had the character of a lottery. It fell almost randomly on juveniles of different ages from different family backgrounds. Most of those juveniles selected in this lottery were able to find their way back into employment relatively quickly. But for a significant minority, unemployment was an extended and potentially damaging experience.

On the basis of this evidence from London, juvenile unemployment emerges as neither catastrophic nor benign. For the vast majority of juveniles for whom unemployment durations were short and re-employment prospects were good, there was no apocalyptic crisis "striking at the quality of future labor resources." At the same time, there was a significant minority of juveniles who passed through a sequence of casual positions or experienced extended spells of unemployment to which the paradigm of the smoothly functioning labor market is inapplicable.

The Rise in Youth Unemployment Between the 1930s and the 1980s

In 1981, for the first time since the 1930s, the unemployment rate in the United Kingdom reached double-digit levels. Yet youth unemployment rates had already reached double-digit levels in 1977 and by 1981 had risen to nearly twice adult rates. What accounts for this striking rise in the youth-adult unemployment differential?

The change in the youth unemployment rate can be decomposed into proximate determinants using the accounting identity at the foot of Table 9.

It shows the contribution of each of these factors to the doubling of youth unemployment rates between 1931 and 1981 (or, as in the table, to the 10 per cent fall in the youth employment rate). Since this analysis draws on the 1931 Census it is important to be aware of differences between Census and insurance definitions of unemployment. The Census excluded persons on temporary layoff expected to return shortly to their previous jobs but included those in occupations not covered by the unemployment insurance system. While Census levels of unemployment for all workers were considerably lower than concurrent unemployment insurance figures (12.7 versus 17.0 per cent for males, 8.6 versus 13.0 per cent for females), those for juveniles differed little between sources.

Several possible explanations for the rise in youth unemployment rates can be dismissed out of hand. On the demand side, macroeconomic conditions as reflected in the rate of job creation did not contribute directly to the rise in youth unemployment between 1931 and 1981. According to the definitions underlying Table 9, the rate of job creation exceeded the rate of growth of the working-age population over the half century by more than 25 per cent. Put another way, despite the severity of the post-1980 slump, overall unemployment rates remained below the levels of the early 1930s. On the supply side, demographic factors -- specifically, the share of juveniles in the working-age population -- have been of second-order importance. Interwar observers believed that Britain's falling birth rate was steadily reducing the flow of juveniles into the labor market.²⁴ Although the high birth rates of the late 1950s and early 1960s show up by the mid-1970s as a high share of juveniles in the working age population, that share still rose only slightly,

Table 9

Decomposition of Change in the Youth Employment Rate, Britain, 1931-81
(contribution of components to the total)

Contributing Factor	Contribution
Job creation	.266
Juvenile participation	-.142
Propensity to leave school	.527
Demographic effect	-.039
Shifts among industries	-.124
Share of Juveniles in industry employment	-.592
Total $\left(\frac{\Delta(E_j/L_j)}{E_j/L_j}\right)$	-.104

Note: Calculated from the equations $E_j/L_j = SE/(PDGT)$ and

$$e_j - l_j = (e-t) - p - d - g - \frac{1}{S} \sum_{i=1}^{11} (w_i \Delta \frac{E_{ij}}{E_i}) + \frac{1}{S_i} \sum_{i=1}^{11} (s_i \Delta \frac{E_i}{E}).$$

where E_j = employed juveniles (aged 14-19)
 L_j = juvenile labor force participants
 E = employed workers (aged 14-64)
 $S = E_j/E$.
 P = labor force participation rate among school-leavers aged 14-19
 D = school leavers as a share of juveniles aged 14-19
 T = population aged 14-64
 G = juveniles aged 14-19 as a share of population aged 14-64.

Lower case letters correspond to percentage changes in the above variables between 1931 and 1981.

i subscript refers to industry i
 j subscript refers to juveniles
 $w_i = E_i/E$ = weight of industry i in 1931 employment
 $s_i = E_{ij}/E_j$ = share of juveniles in industry i employment in 1931.

Due to the difficulty of establishing an industry concordance for 1931 and 1981, the measure of shifts among industries in this table is derived residually and therefore incorporates a small interaction effect.

Sources: 1981 Census Report, Great Britain, 1931 Census of England and Wales, 1931 Census of Scotland, Annual Abstract of Statistics (1985).

from 14.5 per cent in 1931 to 15.1 per cent in 1981, a change is far too small to have contributed significantly to the rise in youth unemployment.

Moreover, the share of juveniles aged 14-19 leaving school fell dramatically from 90 to 42 percent, eliminating increased school leaving as a contributor to youth unemployment. The rise in the school-leaving age from 14, where it remained for much of the interwar period, to 15 prior to 1973 and 16 thereafter worked to reduce the pool of potential labor-force participants.

Working in the other direction (to increase juvenile unemployment), juvenile participation rates as defined by the Census rose between periods, partially offsetting the greater tendency to remain in school. That the share of juveniles not in school who were recorded as either employed or unemployed was only 85 percent in 1931 (compared to 97 per cent in 1981) supports the suspicion that interwar sources such as the 1931 Census under enumerated unemployed juveniles. The problem is that it is hard to know to what extent the lower participation rate in 1931 reflects underreporting. Since the higher cost of schooling should have deterred juveniles who were discouraged from participating in the labor force from staying in school instead, it is plausible that the participation rate among recent school leavers would have been lower in the interwar years. But it is also plausible that Census investigators recorded youths desiring employment but who had not yet found their first job as neither employed nor unemployed. It appears, then, that some but not all of the lower levels of youth unemployment between the wars was due to a recording effect.

Upward pressure was placed on the juvenile unemployment rate by shifts in the industrial composition of employment. Shifts from sectors where juveniles

comprised a large volume of sectoral labor force to sectors where the share of juveniles in employment was small would have been sufficient by themselves to account for the rise in youth unemployment rates had they not been swamped by other factors. But both this factor and the recording effect are dwarfed by the last entry in Table 9, namely a dramatic fall in the share of juveniles in employment economy-wide. Thus, while the rise in recorded youth unemployment between 1931 and 1981 reflects a combination of forces including a small demographic effect, an enumeration effect, a shift in the industrial composition of employment from industries employing a large share of juveniles in their workforce to industries employing only a few, most importantly it reflects an economy-wide fall in the share of juveniles in total employment.

The economist's instinctual reaction to this last observation is to inquire into relative labor costs. Table 10 reports the ratio for juveniles and adults of average gross weekly earnings of full-time employees in the 1930s and 1980s.²⁶ For females under 18 years of age, the juvenile-adult earnings ratio actually fell between the periods. Thus, relative labor costs cannot account for the dramatic fall in the share of girls in female employment. Among males, in contrast, relative labor costs appear to have risen. But if relative labor costs were driving the fall in the share of juveniles in total employment, one would expect the share of males to have fallen more dramatically than the share of females, where the opposite is true. The share of girls in female employment fell by about a fifth between 1931 and 1981, the share of boys in male employment by less than half that amount. That the share of females falls so dramatically without any significant movement in relative labor costs indicates clearly that other factors were at work.

Table 10

Relative Wages and Relative Unemployment Benefits of
 Juveniles and Adults, 1938 and 1981

(values for juveniles as per cent of adult values)

	1938		1981		
	Males 14-20	Females 14-17	Males 16-17	Males 18-20	Females 16-17
Wages	38%	57%	39%	59%	53%
Benefits	26%	19%	24%	21%	26%

Source: Figures for 1938 are from R.B. Ainsworth, "Earnings and Working Hours of Manual Wage-Earners in the United Kingdom in October, 1938," Proceedings of the Royal Statistical Society (1949), and those for 1981 from Hansard, Written Answers for 21 December 1982, pp. 280-281.

Insofar as the relative wages of male youths increased between periods, some commentators have blamed rising unemployment benefits.²⁷ Comparisons are hampered by the limited availability of information on the wages and benefits of juveniles. Not only is there no consistent time series on the average weekly earnings of employed juveniles, but there is considerable uncertainty about their benefits both because of the extent of disqualification (Table 7 above) and because qualifying juveniles were entitled to very different benefits depending on whether or not they were classified as dependents. For those who lived independently, as assumed in constructing Table 10, the generosity of unemployment benefits, as measured by the benefit/wage ratio, fell between periods and cannot account for any rise in relative earnings. For those who received only dependent's benefits, both male and female replacement rates were lower during the interwar period than in the 1980s. But if a higher replacement rate raised relative labor costs by driving up the reservation wage, this should be evident for males and females alike. But as just noted, only the relative earnings of male youths showed any upward movement between periods.

This leaves two explanations for the falling share of juveniles in total employment: changes in technology and work organization on the one hand, changes in employment practice on the other. It could be that production processes have grown more complex over time in ways that have raised the demand for experienced labor. Whereas in the interwar period, it might be argued, recent entrants could be productively employed in a wide range of industries, after World War II the advantages of experience were greater, particularly in modern sectors such as motor cars, electrical goods,

scientific equipment, chemicals and rubber where technical knowledge was required. Insofar as the share of juveniles employed in the metals goods, engineering and vehicles industries declined between 1931 and 1981, the explanation is plausible. Yet the share of juveniles also declined in transportation, communication and other services, sectors to which the argument might be least thought to apply. In part this may reflect the spread of the telephone and the automobile, both of which reduced the demand for messengers, a prime form of juvenile employment between the wars. But the juvenile share falls discontinuously at particular junctures, notably the post-1970 era, that are difficult to associate with sudden transformations of technology. While the increasing complexity of some manufacturing technologies may have contributed to the declining share of overall employment accounted for by the least experienced workers, it is hard to assign this factor a major role.

Heim has argued that the demand for juvenile labor is likely to be particularly buoyant in periods when industry structure is rapidly transformed. Employers in new industries prefer to take on workers without previous experience in other sectors. Workers with prior experience might demand higher wages (particularly if their previous experience was in a skilled job), import entrenched attitudes about work pace and organization, or be more inclined toward trade union membership. New industries hence might be led to "seek elements that are relatively unhampered by existing productive structures or existing ideas about the production process."²⁸ Since the pace of structural change is thought to have been particularly rapid during the interwar years, when the staple trades (coal, iron and steel, textiles,

shipbuilding, general engineering) began to be superceded by new industries (vehicles, electrical goods, rayon, scientific equipment, rubber, chemicals and diverse light manufacturing), the demand for new workers, notably juveniles, may have been unusually strong.

Measures of sectoral shift generally confirm that structural change was more rapid during the interwar period than subsequently.²⁹ Moreover, Heim finds that the share of male and female employees under the age of 16 was higher in industries where employment rose between 1923 and 1937 than in industries where it fell. But this may simply reflect normal differences in labor force composition across expanding and contracting sectors. The first response of a firm forced to shift from growth to retrenchment is to halt new hiring, certainly not to lay off current employees in order to continue hiring. Since new hires tend to be younger than long-time employees, this will tend to reduce the share of youths in the firm's workforce. Moreover, young workers are less inclined to seek employment in declining industries, where long-term prospects are dim, while older workers with specific training are least inclined to seek work in other sectors. Consequently, one should expect the workforce to age in declining industries regardless of the pace of structural change.

This discussion of hiring practices during periods of expanding and contracting employment and of their implications for the composition of employment suggests a final explanation for the rise in the ratio of juvenile to adult unemployment rates, namely that policies affecting hiring and redundancy have changed in ways that render juvenile unemployment increasingly sensitive to macroeconomic fluctuations. For the 1970s and 1980s the argument

runs as follows.³⁰ Juveniles are likely to be particularly vulnerable to separation when an employer declares redundancies. Redundancy payments, where they exist, are usually calculated on a length-of-service basis, giving employers a financial incentive to lay off juveniles rather than adults wherever possible. Sometimes inverse seniority rules are explicitly written into union contracts. Even where they are not, trade unions frequently express a preference for employers to follow "last hired, first fired" employment policies. Senior employees are likely to be senior union members, on whose behalf unions lobby for preferential treatment.³¹ Long-standing employees have exceptionally low turnover rates, so an employer wishing to minimize turnover costs will be disinclined to lay off workers with more service with the firm. The social costs of redundancy may be perceived as lower for young persons without a family to support. Hence in the 1980s juveniles have a much greater probability than more senior workers of entering unemployment when the labor market turns down.³² Juveniles are disproportionately represented among new hires and hence are especially prone to unemployment when the rate of accession turns down.

This explanation is buttressed by evidence for recent years that juvenile unemployment has been much more cyclically sensitive than unemployment among adults. In the post-1958 period, according to Table 11, the elasticity of youth unemployment with respect to adult unemployment has been 1.9 or more. This suggests that youth unemployment rates have risen so dramatically over the last decade because of slower employment growth. Young persons have been differentially affected by macroeconomic conditions because they suffer most from both the slowdown in new hires and the rise in separations.

In the interwar period, in contrast, youth unemployment rates do not appear to have been more cyclically sensitive than unemployment rates for adults. According to Table 11, the elasticity of youth unemployment rates with respect to adult unemployment rates was not above unity but below.³³ It does not appear that declines in employment growth were disproportionately borne by young workers. Part of the explanation may lie in different redundancy practices. It seems unlikely that the "last hired, first fired" rule was followed as rigidly between the wars. Trade unions were less influential than they have since grown and may have been less able to influence employers to favor their more senior members. Redundancy payments, which make laying off adults more expensive than laying off youths, are largely if not wholly a postwar innovation. Hence youths do not appear to have borne as large a share of the redundancy burden during the interwar years.

Moreover, there appear to have been important differences between periods in hiring practices as well. Once in unemployment, interwar juveniles had greater success in escaping it. While long-term unemployment was a considerable problem in the interwar years, as Table 3 above shows, unemployment durations were relatively short in London between the wars. Although durations were longer in higher unemployment regions, they were still remarkably short by postwar standards. In the 1980s, in sharp contrast to Table 3, the share of unemployed persons under 25 years of age out of work for more than half a year has never been less than 25 per cent and recently approached half of those out of work. In the 1980s firms may feel some pressure to take back previous employees when they have vacancies. In the

Table 11

Regressions of Cyclical Sensitivity of Youth Unemployment,
1923-38 and 1959-85

(dependent variable is male or female youth unemployment rate)

Independent Variable	Males		Females	
	1923-38	1959-85	1929-38	1959-85
Constant	0.5 (1.1)	-2.4 (4.3)	1.8 (4.9)	-1.1 (1.4)
Overall unemployment rate for same sex	0.3 (10.8)	1.9 (26.1)	0.3 (8.9)	2.5 (16.1)
R ²	.89	.96	.85	.91

Notes: t-statistics in parentheses. For 1923-38 overall unemployment rates, for the last week of July, are from Ministry of Labour, Gazette (various issues); youth unemployment rates (for 16 and 17 year olds) are from Garside, "Juvenile Unemployment." For 1959-77, youth unemployment rates (for those under 20) and overall unemployment rates are from Richard Layard, "Youth Unemployment in Britain and the United States Compared," in Richard B. Freeman and David A. Wise, The Youth Labor Market Problem (Chicago, 1982), p. 505. For 1978-85 these rates are taken from Department of Employment, Employment Gazette (various issues).

1930s this appears to have been less the case, which worked to the advantage of recent labor-market entrants.

Conclusion

Youth unemployment rates in Britain have risen over the last decade for the same reasons that aggregate unemployment has risen: a macroeconomic downturn of exceptional severity. Youths have borne a disproportionate share of the unemployment which has resulted. Because of their high turnover rates and recent entry to the labor force, juveniles tend to be disproportionately represented among new hires; hence they are disproportionately affected when the rate of hiring falls. Because of "last in, first out" redundancy practices, they are also disproportionately represented among job losers.

Comparisons with Britain's interwar experience reveal that this has not always been the case. During the macroeconomic downturn beginning in 1929, youths did not bear a disproportionate share of the unemployment burden. In comparison with recent decades, youth unemployment was much less cyclically sensitive between the wars. The explanation for this fact appears to lie in different hiring and redundancy practices.

Thus, the recent rise in juvenile unemployment is both a macroeconomic problem and a structural problem. It is macroeconomic insofar as juveniles are only one group among many affected by the Thatcher recession. It is structural insofar as the structure of labor-market practices causes youth unemployment rates to be more sensitive to macroeconomic conditions than unemployment rates for other workers. All observers can agree on the desirability of reducing youth unemployment by restoring the macroeconomy to a

stable footing. There is less agreement on whether it is desirable to reduce the youth-adult unemployment differential by shifting more of the burden of redundancies onto adults. The costs of adult unemployment, particularly those borne by other family members dependent on their incomes, may be as high or higher than the costs of youth unemployment. But the very large margins by which youth unemployment rates exceed the rates for adults suggest that these questions warrant serious consideration.

Footnotes

1. "Even if the economy did revive, the wasted years could never be offset for the individual by subsequent employment. This is particularly true of the school leaver. Some will never fulfill their work potential because of the absence of opportunities to develop skills in the formative years. Some will be psychologically affected by their apparent rejection by society: though the adult may experience greater financial hardship, it is for the juvenile that the experience is likely to be most traumatic because he is at the most vulnerable age emotionally. Many will doubtless settle later into formal patterns of work and life, but some will remain permanently scarred." F.F. Ridley, "View From a Disaster Area: Unemployed Youth in Merseyside," in B. Crick, ed., Unemployment (London: Methuen, 1981), p.27. On the social and psychological effects of youth unemployment, see also Michael Banks and Phillip Ullah, "Unemployment and Less Qualified Urban Youth," Employment Gazette (June, 1986).

2. In 1984, for example, when the overall U.K. unemployment rate averaged 12.8 per cent, the rate among those under 18 was 23.0 per cent and among those aged 18-19 27.2 per cent. David Bloom and Richard Freeman, "The 'Youth Problem': Age or Generational Crowding," Harvard Institute of Economic Research Discussion Paper No. 1223, 1986, p. 15.

3. J. Jewkes and A. Winterbottom, Juvenile Unemployment (London: Allen and Unwin, 1933), pp. 15-16.

4. E.W. Bakke, The Unemployed Man (London: Nisbet, 1933), pp. 171-172.

5. Bakke, The Unemployed Man, p. 24; I.N.T. Diepenhorst, Juvenile Unemployment and How to Deal With It (Amsterdam: Drukkerij Holland, 1931), p. 43.

6. See Ministry of Labor, Report into an Enquiry into the Personal Circumstances and Industrial History of 3,331 Boys and 2,701 Girls Registered for Employment at Employment Exchanges and Juvenile Employment Bureaus, June and July 1925 (London: HMSO, 1926). These ratios may understate the extent of the problem because juveniles who had previously been in employment were most likely to qualify for unemployment benefits and hence to register with an exchange. It is interesting to contrast these figures with those for the late 1970s and early 1980s. In the latter period, the January count of school leavers (most of whom had graduated the previous spring) showed that unemployment among school leavers was higher than unemployment among all those under 18. Michael P. Jackson, Youth Unemployment (London: Croom-Helm, 1985), pp. 40-41.

7. The opportunities for juveniles in dock labor during the 1920s were considerably reduced by the system of worker registration utilized to reduce the extent of casualization.

8. Diepenhorst, Juvenile Unemployment, p.95.

9. Contrast the situation in the 1970s: in a study of young people in Sheffield, Baxter found that no more than 4 per cent of males and 3 per cent of females were chronic job changers, who switched jobs at less than six month intervals. J.C. Baxter, "The Chronic Job Changer: A Study of Youth Unemployment," Social and Economic Administration 9 (1975).

10. In some cases, it was argued, separation was delayed until age 18, when the compulsory contribution to the unemployment insurance fund increased. Bakke, Unemployed Man, p.4.

11. See P. Roker and H.C. Scott, "Juvenile Unemployment in West Ham," Economica VI (1926), pp. 58-77; H.W. Singer, Unemployment and the Unemployed (London: P.S. King, 1940), pp. 135-137.

12. W.R. Garside, "Juvenile Unemployment and Public Policy Between the Wars," Economic History Review XXX (1977), p. 324.

13. Walter Greenwood, Love on the Dole (London: 1933).

14. This is the argument of D. Benjamin and L. Kochin, "What Went Right With Juvenile Unemployment Policy Between the Wars," Economic History Review XXXII (1979), pp. 523-528.

15. Singer, Unemployment, p.75.

16. Roker and Scott, "West Ham," p.64.

17. As a metropolitan center and a relatively prosperous local economy, London attracted adult migrants from other regions; in consequence, juveniles under the age of 21 were underrepresented in the regional population. Complementing factors on the supply side, the demand for juvenile labor was stimulated by the sectoral composition of activity. Relative to the rest of Britain, London was distinguished by the negligible importance of the staple trades, by the prevalence of light industry engaged in consumption-goods manufacture, and by the size of the tertiary sector. That tertiary sector had a voracious appetite for juvenile labor, employing juveniles in domestic service, in distribution, and as messengers. Opportunities for industrial employment were mixed. On the one hand, a high proportion of workers in the millinery trades were under age 18; on the other, the share of juveniles was low in the building trades, where the practice was to recruit adults from the provinces, and in dock labor, where entry was for most of the period restricted by a system of worker registration. On balance, however, the situation was favorable. For further details and analysis, see Barry Eichengreen, "Unemployment in Interwar Britain: New Evidence From London," Journal of Interdisciplinary History XXVII, pp. 333-358.

18. This procedure of doubling the length of incomplete spells as an estimate of the length of completed spells is valid only if the unemployment rate was roughly constant. Since juveniles unemployment rates in London had been falling gradually in the preceding period, here that rule will tend to overestimate completed spell length.

19. Ministry of Labour, Report, 1925 (London: HMSO, 1926), pp. 74-75.
20. W. Daniel, A National Survey of the Unemployed (London: PEP, 1974).
21. Information on the New Survey is provided H. Llewellyn Smith, New Survey of London Life and Labour (London: P.S. King, 1930-35). The 10 per cent sample is described by Barry Eichengreen and Susan Freiwald, "From Survey to Sample: Labor Market Data for Interwar London," Historical Methods 19 (1985), pp. 125-136.
22. The discrepancy is consistent with the widely-held view that the Ministry's figures underestimated the juvenile unemployment rate due to the tendency of juveniles ineligible for benefits not to register with the authorities. At the same time, the two sources of information differ in other respects that render the unemployment rates they generate less than fully comparable.
23. Since these three probabilities sum to unity, one only need estimate the determinants of two. Because only 14 through 18 year olds are included in the sample, the dummy variable for 14 year olds is omitted. Thus the coefficients on the dummy variables for 15 year olds, for example, indicate the change in the probability of employment or unemployment between 14 and 15 year olds.
24. William Beveridge, Unemployment: A Problem of Inudstry (London, 1930), p. 395.
25. Some recent investigators have defended insurance counts of unemployed juveniles on the grounds that they coincide with independent Census enumerations. Benjamin and Kochin observe for example that the Census unemployment rate for boys aged 16-17 was 7.6 per cent and for girls aged 16-17 it was 6.8 per cent, while the corresponding unemployment insurance figures were 7.9 and 7.1 per cent. Hence they ignore the possibility that low Census participation rates reflect undercounting roughly matching that which characterizes unemployment insurance rates. Daniel Benjamin and Levis Kochin, "Searching for an Explanation for Unemployment in Interwar Britain," Journal of Political Economy 87 (1979), pp. 456-457.
26. While there is a number of reasons why these estimates are not strictly comparable, the difference in age groups covered is not one. Had the postwar figures been computed for those 14 and over, they would look the same; since the rise in the school-leaving age prevented 14 and 15 year olds from entering the labor force on a full-time basis, no 14 and 15 year olds would be included among full-time employees.
27. Benjamin and Kochin, "Juvenile Unemployment Policy."
28. Carol E. Heim, "Structural Transformation and the Demand for New Labor in Advanced Economies: Interwar Britain," Journal of Economic History XLIV (1984), p. 586.

29. As calculated by N.F.R. Crafts, M. MacKinnon and M. Thomas, "International Trade and Structural Unemployment in Interwar Britain," paper presented to the Meetings of the American Economic Association (December, 1984).

30. Jackson, Youth Unemployment, p.70.

31. See for example Olivier Blanchard and Lawrence Summers, "Hysteresis and the European Unemployment Problem," NBER Macroeconomics Annual 1 (1986), pp. 15-75.

32. For 1984, for example, the Department of Employment estimated that the probability of entering unemployment was nearly five times as high for males under 18 as for those 45 and over. See K.G. Knight, Unemployment: An Economic Analysis (Totowa, NJ: Barnes & Noble, 1987), p. 48.

33. Hence Benjamin and Kochin's characterization of the cyclical behavior of youth unemployment is somewhat oversimplified. "During the years for which we have a consistent time series (1924-35), the cyclical pattern of unemployment among juveniles (persons aged 16 and 17) was much like that of the overall unemployment rate. It declined during the twenties, rose in 1930-31, and fell again from 1932 onward." Benjamin and Kochin, "Searching for an Explanation," p. 456.