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The Length of Spells of Unemployment in Ireland

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Abstract: This paper examines the average length of a spell of unemployment in the Irish Republic. The analysis is conducted using two measures, one emphasising the flow of persons into unemployment and the other concentrating on the stock of currently unemployed individuals. These measures imply long average durations for the unemployed in Ireland both in absolute terms and relative to their British counterparts. Some of the traditional structural aspects of Irish unemployment, i.e., the high proportion of unskilled, elderly or regionally disadvantaged persons among the unemployed, provide a partial explanation of these long spell lengths.

I INTRODUCTION

The unemployment rate is typically used as an indicator of labour market conditions. However, it is an ambiguous indicator since a given annual average unemployment rate could be consistent both with a large number of persons unemployed for short durations and a much smaller number unemployed for very long periods of time.

To overcome this ambiguity economists have in recent years focused on the length of a typical spell of unemployment. The measures of the average duration of unemployment which have emerged are the subject of this paper. The next section contains a brief review of the literature on unemployment duration. Section III applies the measures of spell length to Irish data and Section IV looks at some additional information on the characteristics of the long-term unemployed.

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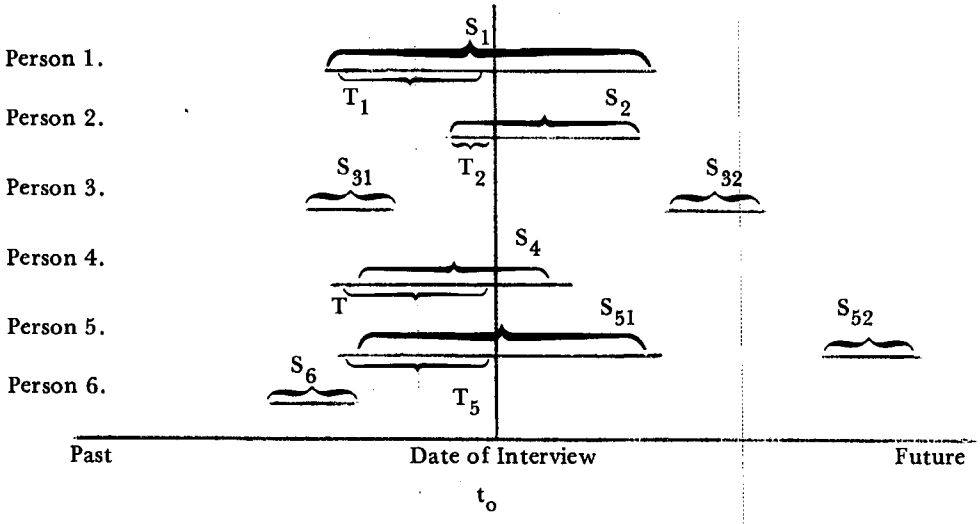
II SUMMARY MEASURES OF UNEMPLOYMENT DURATION

In the literature on unemployment duration, three measures of spell length have emerged. The relationship between these three statistics can best be illustrated with the aid of Figure 1 which is adapted from a similar diagram contained in Salant (1977).

Figure 1: *The Length of Unemployment Spells*



The first measure is the *average duration of interrupted spells of unemployment*. This can be directly derived from the published data which are a quarterly sample of the unemployment experience to date of the unemployed. In terms of Figure 1 the average duration of interrupted spells is given by:

$$T = \frac{T_1 + T_2 + T_4 + T_5}{4}$$

This measure is considered to be unsatisfactory by most economists since the relevant indicator of how long unemployment lasts is the duration of completed rather than interrupted spells,[1] i.e., the data are subject to "interruption bias".

There is also an offsetting bias in the data since persons with longer than average spells are more likely to be sampled; this is known as "length bias".

1. A case has been made for using T as the relevant indicator by Layard (1981) based on the weekly cost of unemployment. For a discussion of this approach see Main (1981).

To overcome this bias it has been argued (e.g., by Salant (1977)) that the most appropriate statistic to use is the *average duration of spells of unemployment which terminate over a given period of time*. In Figure 1 this measure is equal to:

$$S = \frac{S_1 + S_2 + S_{31} + S_{32} + S_4 + S_{51} + S_{52} + S_6}{8}$$

Salant has shown that the means of these two measures of spell length T and S can be related in the following way:

$$\frac{E(T)}{E(S)} = \frac{1}{2}\left\{\frac{VAR(S)}{E^2(S)} + 1\right\}$$

This implies that as long as the variance of S is negligible, i.e., length bias is unimportant, the expected value of interrupted spells is equal to half the expected value of S. On the other hand, if length bias is sufficiently large, the average duration of interrupted spells can actually exceed the average duration of all completed spells over a period of time. As shown below, this situation is predominant in Ireland, Britain and the United States.

The statistic S concentrates on the flow of persons into and out of unemployment. Akerlof and Main in a series of articles proposed a third measure which concentrates on *the stock of currently unemployed individuals*. In Figure 1 this is given by:

$$\hat{S} = \frac{S_1 + S_2 + S_4 + S_{51}}{4}$$

Akerlof and Main suggest that length bias, which motivated the use of S, should not be ignored since it contains valuable information on the unemployment experience of the current stock of unemployed. If all spells were of equal length, then $\hat{S}$ would equal S. However, if length bias is large, then $\hat{S}$ could be considerably larger than S.

The two measures of completed spells have quite different implications for the operation of the labour market. Concentration on the flow of unemployment, S, dominated the literature in the early 1970s, (e.g., Hall (1970, 1972), Feldstein (1973)). This view of the labour market pointed to the rapid turnover of jobs and to the large number of individuals who are unemployed for very short durations in the American economy, i.e., to the high level of frictional unemployment. The primary emphasis of policy according to the proponents of this view should be on lowering the natural rate of unemployment. One reason for the high natural rate is the high level of unstable

employment among young entrants to the labour force and among various disadvantaged groups who move from one dead-end job to another. Another explanation is provided by search theory which says that an unemployed person will continue to search for a job until the value of an offer exceeds the return to continued search. Frequently persons are misinformed about the true real wage on offer and so continue to search for a job longer than they would if they were properly informed. The duration of search could be reduced by increasing the flow of information available to individuals.

Probably the most influential paper written on this view of the labour market is Feldstein (1973) where he states that "The picture of a hard core of unemployed persons unable to find jobs is an inaccurate description of our economy and a misleading basis for policy. A more accurate description is an active labour market in which almost everyone who is out of work can find his usual type of job in a relatively short time."

In recent years there have been a number of articles written emphasising the stock of unemployment at any point in time, $\hat{S}$ (e.g., Clark and Summers (1979), Akerlof (1979), Akerlof and Main (1980, 1981) and Main (1981)). According to these economists, focusing on the flow can be misleading since the burden of unemployment is felt by a relatively small number of individuals who are unemployed for very long durations. This point can be illustrated by the following simple example. Suppose that over a given period of time there were eleven completed spells of unemployment, ten of which lasted one week and one which lasted for ten weeks. While the average duration of completed spells over this period equals 1.8 weeks, half of all unemployment is experienced by the one spell lasting ten weeks. The S statistic does not capture this unemployment experience.

It is not possible to choose one of the measures over the other since the forms of unemployment each emphasise occur simultaneously. Any analysis of the duration of unemployment should take account of both the flow over a period of time and the stock at a given point of time. Both measures contain information which is relevant to an analysis of labour-market conditions. Therefore in what follows we present estimates of both measures for Ireland.

The one problem which these two measures do not address is the possibility of multiple spells as is the case for persons 3 and 5 in Figure 1. In the calculation of S each spell is treated as if it were experienced by different persons. Although there is likely to be a considerable incidence of multiple spells (for evidence of the large numbers of multiple spells in the American economy see Akerlof and Main (1980)), lack of data restricts us from taking account of this bias.

III ESTIMATES OF THE AVERAGE DURATION OF UNEMPLOYMENT IN IRELAND

Although there are no data available on the duration of completed spells of unemployment, it is possible to derive estimates of both measures from the published data. Our basic data are the quarterly Live Register Statements showing the duration of continuous registration for persons aged under 65 receiving unemployment benefit (UB) or unemployment assistance (UA) (excluding farmers, farmers' relatives assisting and persons signing for credits).

Table 1 presents weekly and five-weekly flow data where the weekly flow is the number unemployed for less than one week and the outflow is calculated from the previous week's Live Register Statement as:

$$\text{Outflow}_t = \text{Inflow}_t + \text{Live Register}_{t-1} - \text{Live Register}_t$$

The five-weekly flows are calculated in a similar manner.

Table 1 illustrates the considerable dynamics in the Irish labour market. On average, throughout the period 1967 to 1979 there were between 2,000 to 3,000 males and 500 to 1,500 females flowing into and out of the Live Register each week. If we take the average of the four-weekly flows in each year, we can get an estimate of the annual number of unemployment spells. Thus, there were approximately 109,000 spells of male unemployment in 1972 and 139,000 in 1978. In the same years the number of spells of female unemployment were approximately 33,000 and 52,000 respectively. The average number of males on the Live Register at any time in 1972 was approximately 44,000 and in 1979 was 68,000; in 1972 and 1979 the average number of females unemployed at any time was 10,000 and 16,000 respectively. Therefore, the average number of persons on the Live Register in any year considerably *underestimates* the true number who experience unemployment at some stage during that year. This situation is complicated by the fact that there could be a considerable incidence of multiple spells. However, multiple spells are unlikely to account for all of the large discrepancies between these two sets of figures.

One method of determining the magnitude of the number of spells lasting less than five weeks is to compare five times the average weekly inflow with the average five-weekly flows in Table 1. The five-weekly flows would be an accurate indicator of weekly flows if no one joined and left the Register in the previous five weeks. Calculations for a number of years suggest that the five-weekly flows underestimate the weekly flows by about 20-40 per cent, indicating that there is a considerable number of persons who are unemployed for less than five weeks.

Estimates of S have been estimated for Britain using a method analogous to the Life Tables derived by demographers (Fowler (1968)). However, since

Table 1: *Estimated flows in the Live Register for males and females on Unemployment Benefit or Unemployment Assistance, excluding farmers, relatives assisting and over 65s, 1967-1979*

Year and quarter	Males						Females					
	Weekly flow			Monthly flow			Weekly flow			Monthly flow		
	Inflow	Outflow	Net flow	Inflow	Outflow	Net flow	Inflow	Outflow	Net flow	Inflow	Outflow	Net flow
1967												
I	2899	2894	+5	13965	5677	+8288	741	2325	−1584	2761	1726	+1035
II	2444	2602	−158	8406	11230	−2824	585	721	−136	1872	2645	−773
III	2327	3445	−1118	8055	6922	+1133	698	1308	−610	2344	2343	+1
IV	2472	2133	+339	9272	6457	+2815	703	685	+18	2681	2002	+679
1968												
I	2327	2680	−353	9082	9635	−553	588	741	−153	2340	2543	−203
II	1975	2765	−790	6613	10113	−3500	654	711	−57	1782	3065	−1283
III	1823	2605	−782	6600	5936	+664	489	795	−306	1909	2151	−242
IV	2401	1847	+554	8157	5787	+2370	639	644	−5	2204	1894	+310
1969												
I	2411	2084	+327	9625	7082	+2543	814	823	−9	2771	2045	+726
II	1404	2003	−599	5710	8803	−3093	343	469	−126	1286	2304	−1018
III	1428	2258	−831	5530	4958	+572	297	669	−372	1345	1671	−326
IV	1922	1546	+376	7383	4491	+2892	527	433	+94	2059	1817	+242
1970												
I	2388	1480	−908	9043	6179	+2864	452	465	−13	1927	2238	−311
II	–	–	–	–	–	–	–	–	–	–	–	–
III	1759	2556	−797	5924	7810	−1886	502	546	−44	2079	2171	−92
IV	2179	1972	+207	7449	7123	+2149	708	596	+112	2144	2025	+119
1971												
I	–	–	–	–	–	–	–	–	–	–	–	–
II	1807	2318	−511	7001	9610	−1355	655	994	−339	2038	3022	−984
III	1684	2453	−769	6805	7405	+1001	603	795	−192	2326	2236	+90
IV	2875	2194	+681	10073	9304	+4661	743	683	+60	2785	2564	+221
1972												
I	2376	2171	+205	9072	8461	+611	706	935	−229	2624	3449	−825
II	1805	2379	−574	6960	14900	−7940	551	725	−174	2136	4420	−2284
III	1945	2673	−728	6993	6294	+699	657	588	+69	2340	2242	+98
IV	2265	1724	+541	8028	5608	+2420	588	737	−149	2390	2550	−160
1973												
I	2305	2124	+181	8250	7826	+424	609	701	−92	2229	2645	−416
II	1661	1991	−330	5520	8348	−2828	510	887	−377	1730	2838	−1108
III	1545	1787	−242	5705	4599	+1106	518	781	−263	2046	2281	−235
IV	1866	1546	+320	6317	4721	+1596	556	592	−36	2189	1840	+349

Year and quarter	Males						Females					
	Weekly flow			Monthly flow			Weekly flow			Monthly flow		
	Inflow	Outflow	Net flow	Inflow	Outflow	Net flow	Inflow	Outflow	Net flow	Inflow	Outflow	Net flow
1974												
I	1983	2147	−164	7041	6907	+134	724	935	−211	2282	2895	−613
II	2161	1881	+280	6155	6971	−816	586	526	+60	2311	2825	−514
III	2031	2170	−139	7080	5127	+1953	1002	885	+117	2924	2224	+700
IV	2614	2043	+571	9998	4851	+5147	1273	902	+371	4809	2415	+2394
1975												
I	2664	2259	+405	12359	8375	+3984	1185	1730	−545	5052	5245	−193
II	2577	2260	+317	10707	10033	+674	1044	1040	+4	3993	4503	−510
III	2824	3214	−390	10477	8283	+2194	1137	1559	−422	3879	4504	−625
IV	3585	3081	+504	12090	9841	+2249	1030	1164	−134	4045	3721	+324
1976												
I	3261	3547	−286	12173	11470	+703	1054	1727	−673	3864	5107	−1243
II	2535	3797	−1262	10151	13115	−2964	1114	1502	−388	3844	5073	−1229
III	2538	3732	−1194	9890	10318	−428	1229	1134	+95	4008	4107	−99
IV	2796	2682	+114	10430	9147	+1283	1032	877	+155	3923	3350	+573
1977												
I	3126	3133	−7	11177	11647	−470	1018	1223	−205	3899	4381	−482
II	2763	3431	−668	9741	11862	−2121	861	997	−136	3280	4107	−827
III	2666	3452	−786	9503	8990	+513	1164	1218	−54	4126	4313	−187
IV	3102	2831	+271	10852	9105	+1747	1200	935	+265	3907	3466	+441
1978												
I	3142	2963	+179	10351	10989	−638	930	1284	−354	3478	4041	−563
II	2339	3418	−1079	8145	12317	−4172	937	1427	−490	3293	4264	−971
III	2548	3330	−782	9464	8901	+563	939	1136	−197	3497	3612	−115
IV	2666	2470	+196	9575	6783	+2792	1171	1168	+3	4385	3453	+932
1979												
I	2566	3090	−524	9073	11427	−2354	994	1061	−67	3432	4089	−657
II	–	–	–	–	–	–	–	–	–	–	–	–
III	–	–	–	–	–	–	–	–	–	–	–	–
IV	2171	2007	+164	7765	6050	+1715	856	911	+55	3508	3150	+358

these derivators assume a steady state of four to five years, which is not a reasonable assumption for labour market conditions of the 1970s, we decided to use the following simple method which is due to Kaitz (1970).

Since in a steady state, the total Live Register equals the weekly inflow by the average duration of unemployment, an estimate of S can be obtained by dividing the total Register by the weekly inflow.

The rationale behind this estimation is as follows. Suppose the weekly inflow is U_1, after one week part of this inflow will leave the Register with U_2 remaining. After the nth week there will be U_{n+1} left on the Register. Since the duration distribution is constant the Live Register at any point in time will be equal to:

$$LR = U_1 + U_2 + \ldots . + U_{n+1}$$

The number of people with spells lasting n weeks is given by:

$$U_n - U_{n+1}$$

and the average duration for the constant inflow is average duration:

$$\sum_{n=1} \frac{n(U_n - U_{n+1})}{U_1}$$

Therefore, the inflow by the average duration is given by:

$$\sum_{n=1} n(U_n - U_{n+1})$$

and expanding this term yields:

$$U_1 - U_2 + 2(U_2 - U_3) + \ldots . + n(U_n - U_{n+1}) = LR$$

This method assumes a steady state over the relatively short period of thirteen weeks.

An approximation to a steady state can be derived by using the average weekly inflow over a quarter. Unfortunately, Irish flow data are available for only one week in each quarter. Therefore, our measure will be biased if the week in question experienced an abnormal inflow. However, this is unlikely to introduce a systematic bias into the calculations.

The measure $\hat{S}$ is not directly observable since the unemployment spells are still in progress at the time of the survey. Akerlof and Main suggest that, since in a steady state individuals are on average halfway through their current spell, $\hat{S}$ can be calculated as twice T. This will yield an underestimate of $\hat{S}$ when unemployment is rising since the unemployed are, on average, less than halfway through their current spell, and for similar reasons an under-

Table 2: *Summary measures of the length of spells of male unemployment in Great Britain and Ireland, 1967-1979*

Year and quarter	Ireland				Great Britain					Year and quarter	Ireland				Great Britain			
					S		$\hat{S}$								S	$\hat{S}$		
	S	$\hat{S}$	Percentage unemployed for more than one year	Male unemployment rate	Bowers and Harkness (1979)	Dept. of Employment Gazette	Main (1981)	Percentage unemployed for more than one year	Male unemployment rate		S	$\hat{S}$	Percentage unemployed for more than one year	Male unemployment rate	Dept. of Employment Gazette	Main (1981)	Percentage unemployed for more than one year	Male unemployment rate
1967*										1974								
I	13	34	6.3	8.9	10.2	–	55	11.0	3.3	I	23	83	24.0	9.5	9	–	–	3.7
II	12	45	9.2	7.7	–	–	56	12.2	3.1	II	19	78	26.0	8.7	9	68	22.2	3.5
III	11	41	10.0	7.3	9.1	–	53	14.2	2.7	III	21	77	25.5	9.0	9	70	23.5	3.3
IV	13	51	11.4	7.8	–	–	55	14.8	3.1	IV	20	70	21.2	10.5	–	78	22.4	3.7
1968										1975								
I	17	45	10.0	9.1	11.2	–	55	14.6	3.4	I	25	72	18.6	14.3	–	–	–	4.4
II	16	54	13.0	7.9	–	–	57	16.1	3.2	II	26	70	20.0	14.2	12	61	16.8	4.8
III	15	54	15.3	7.3	9.5	–	57	18.0	2.9	III	24	68	20.1	14.7	13	59	15.9	5.4
IV	13	53	14.5	7.6	–	–	58	17.8	3.1	IV	20	65	19.4	15.6	17	67	16.9	6.1
1969										1976								
I	17	53	13.4	9.0	10.7	–	58	16.7	3.4	I	24	72	20.4	15.0	16	71	16.7	7.0
II	21	58	17.0	7.3	–	–	60	17.9	3.2	II	30	76	23.3	14.6	15	75	19.4	6.8
III	19	60	18.0	6.9	9.1	–	57	19.2	3.0	III	29	81	25.7	14.2	–	65	19.6	7.3
IV	16	59	16.8	7.4	–	–	64	19.2	3.2	IV	26	85	27.2	13.7	–	–	–	6.9
1970										1977								
I	17	57	14.9	8.9	10.7	–	59	17.0	3.7	I	25	85	26.6	14.3	–	77	23.5	7.2
II	–	–	–	10.0	–	–	62	18.0	3.6	II	27	87	28.7	13.7	16	80	25.1	6.9
III	19	70	19.5	8.4	9.5	–	59	19.0	3.3	III	27	90	30.1	13.2	16	73	23.4	7.5
IV	16	66	20.4	8.0	–	–	64	19.3	3.4	IV	23	86	29.5	12.7	19	82	25.8	7.1
1971										1978								
I	–	–	–	8.9	11.2	10	56	16.8	4.1	I	24	94	29.0	13.4	17	86	25.0	7.4
II	19	63	17.7	7.9	–	11	62	16.6	4.4	II	29	96	32.3	12.4	18	83	27.1	7.0
III	19	62	18.9	8.0	11.5	11	62	17.2	4.5	III	26	92	32.4	11.7	17	73	25.4	7.2
IV	14	63	17.4	8.9	–	13	65	17.4	4.9	IV	24	96	32.8	11.2	17	83	28.2	6.6
1972										1979								
I	20	60	15.8	19.7	14.7	14	66	16.7	5.6	I	26	107	32.6	11.5	18	88	27.2	6.3
II	24	67	19.3	9.8	–	12	72	18.5	5.5	II	–	–	–	10.3	17	–	30.2	6.4
III	21	68	21.2	9.4	12.3	12	68	22.2	4.7	III	–	–	–	9.9	16	–	28.8	6.5
IV	19	70	22.0	9.3	–	13	78	24.7	4.7	IV	25	111	34.7	9.4	–	–	–	–
1973																		
I	20	70	20.9	9.7	12.8	11	74	24.5	4.6									
II	23	76	24.9	8.3	–	10	76	27.2	3.9									
III	24	75	25.4	8.1	9.5	9	76	29.2	3.2									
IV	21	79	25.1	8.0	–	10	81	30.7	3.1									

*The Irish figures refer to end February, May, August and November. The British figures refer to mid January, April, July and October.

Note: The unemployment rate is calculated as the number of insured males on the Live Register divided by the insured labour force. This method yields a considerable overestimate of the unemployment rate but is likely to be a reasonable indicator of trends.

estimate when unemployment is falling.

In calculating the value of $\hat{S}$ we replicate the methodology used in Main (1981). We assume a uniform distribution within each duration category. In a steady state the unemployment experience to date of the open-ended 53 weeks and over category can be calculated as:

$$\frac{1}{P} \times 13 + 53$$

where P is the quarterly exit probability[2] and is given by

$$1 - \frac{(U_{52+})_t}{(U_{39+})_{t-1}}$$

where U_{n+} is the number unemployed for n weeks and over.

Table 2 presents estimates of S and $\hat{S}$ for unemployed males in Ireland and also shows recent estimates for Great Britain. The estimates for both countries indicate considerable length bias in the data. In Ireland the ratio $\hat{S}/S$ has remained fairly stable throughout the period, whereas in Great Britain this ratio has declined, showing a relative worsening in the short end of the duration scale. Akerlof and Main (1981) also found considerable length bias in the American data with the ratio $\hat{S}/S$ between 3 and 5 throughout the period 1948 to 1978.

In Ireland the average expected duration of unemployment on joining the Register increased from about 15 weeks in the late 1960s to about 25 weeks by end-1979. The British estimates, although lower than the Irish, showed a similar increase over the period. On the other hand, the typical week of unemployment in both countries was spent in a spell lasting well over one year. The estimates of $\hat{S}$ were similar in both countries up to the mid-1970s. However, the growth in the Irish figure was considerably greater after 1976 so that by 1979 the Irish figure was 19 weeks higher than the British estimate. The reason for this divergence was the large upward trend in the proportion of the total Irish Live Register who were long-term unemployed (i.e., for 53 weeks and over).

Table 3 presents estimates of the average duration of female unemployment. Again, the estimated values of S are smaller than $\hat{S}$, although both measures show that the average length of female unemployment is considerably smaller than the average spell lengths experienced by males. Part of

2. The above formula implies a constant exit probability for each thirteen-week period beyond one year. However, in practice there is evidence (e.g., Hughes and Walsh (1983), Nickell (1979)) that the exit probability declines with increasing length of unemployment. Therefore, this formula yields an underestimate.

Table 3: *Summary measures of the length of spells of female unemployment in Ireland and Great Britain, 1967-1979*

Year and quarter	Ireland				Great Britain				
					S				
	S	$\hat{S}$	Percentage unemployed for more than one year	Female unemployment rate	Bowers and Harkness (1979)	Dept. of Employment Gazette	$\hat{S}$	Percentage unemployed for more than one year	Female unemployment rate
1967*									
I	10	23	1.9	5.1	7.1	–	34	6.6	1.1
II	11	28	2.5	4.5	–	–	38	7.2	1.2
III	9	23	2.8	4.6	6.2	–	38	8.5	1.0
IV	10	23	2.7	5.0	–	–	36	8.6	1.1
1968									
I	14	30	2.8	5.3	7.0	–	37	8.8	1.1
II	10	32	3.8	4.6	–	–	39	9.7	1.0
III	13	30	4.3	4.5	5.7	–	40	10.9	0.8
IV	11	28	3.7	4.7	–	–	38	10.0	1.0
1969									
I	11	29	3.3	5.5	6.4	–	37	9.6	1.0
II	17	37	5.8	4.1	–	–	41	10.4	0.9
III	19	34	5.3	4.1	5.5	–	38	10.4	0.9
IV	13	28	3.8	4.4	–	–	36	9.5	1.0
1970									
I	17	33	4.3	4.6	6.5	–	38	9.7	1.0
II	–	–	–	4.5	–	–	40	9.8	1.0
III	14	33	4.6	4.5	6.1	–	38	10.1	0.9
IV	10	32	4.5	4.7	–	–	38	9.4	1.1
1971									
I	–	–	–	5.4	7.1	5	37	8.8	1.2
II	12	34	4.1	4.9	–	6	41	8.7	1.3
III	13	31	4.4	4.7	7.0	6	37	8.9	1.3
IV	12	29	3.2	5.6	–	7	39	8.5	1.6
1972									
I	15	33	3.7	6.0	8.7	7	39	8.3	1.7
II	16	36	5.0	5.3	–	7	42	9.0	1.8
III	14	34	5.0	5.2	7.3	6	41	10.3	1.6
IV	15	33	4.5	5.5	–	7	44	11.3	1.6
1973									
I	16	38	5.7	5.4	7.9	6	43	11.4	1.5
II	15	38	6.3	4.9	–	5	45	12.6	1.4
III	15	37	6.7	4.8	5.7	4	46	14.8	1.0
IV	15	33	5.5	4.7	–	5	50	16.0	0.9
1974									
I	13	35	5.0	5.3	5	–	–	–	1.0
II	15	37	5.8	4.9	5	37	10.8		1.3
III	10	32	4.8	5.2	4	40	12.0		1.0
IV	10	28	3.6	6.4	–	45	11.2		1.2
1975									
I	15	30	3.3	8.6	–	–	–		1.4
II	16	34	4.1	8.5	6	35	6.8		2.0
III	14	33	3.8	8.1	7	31	6.1		2.5
IV	15	33	4.4	8.2	10	38	6.9		2.8
1976									
I	16	37	5.3	9.1	10	35	7.0		2.9
II	14	38	6.3	8.5	10	49	9.1		2.9
III	13	38	6.9	8.6	–	37	7.5		4.0
IV	16	40	8.1	8.7	–	–	–		3.8
1977									
I	17	43	8.9	9.2	–	51	11.8		3.8
II	19	44	9.6	8.8	11	55	13.6		3.6
III	14	44	10.2	8.6	11	44	11.3		4.9
IV	14	45	11.0	8.8	13	54	13.9		4.5
1978									
I	18	42	9.5	8.7	12	59	14.8		4.4
II	16	47	11.2	8.2	–	59	16.0		4.1
III	16	46	11.4	7.9	–	48	13.6		5.0
IV	14	40	9.9	7.6	–	56	15.9		4.4
1979									
I	17	48	11.0	–	–	60	16.4		4.2
II	–	–	–	–	–	67	19.3		3.8
III	–	–	–	–	–	53	15.7		4.7
IV	20	57	14.0	–	–	–	–		4.3

*See footnote to Table 2.

the explanation for this is that there are restrictions on married women registering for unemployment benefit.

Table 3 has one interesting feature, which is also apparent in the early years in Table 2, and which highlights the importance of using both measures as indicators of the length of unemployment. The two measures give ambiguous answers to the question, "which country has the longest average spell length".[3] If we take S as the relevant indicator, then Irish females, on average, remain longer on the Register. However, if we use $\hat{S}$, British females fare worse. Thus, British female unemployment is characterised by a large flow who are unemployed for short durations coupled with a relatively large proportion of the current stock who are unemployed for short durations. On the other hand, Irish females are, on average, unemployed for medium-term durations.

Finally, in this section we examine some data from the Labour Force Surveys, since it could be argued that the Live Register is a poor indicator of the true average duration of unemployment as people registering for benefit may not be genuinely unemployed in the standard sense.[4] Table 4 presents data on the duration of search for employment in 1977 and 1979. The data

Table 4: *Percentage of unemployed* by duration of search for employment*

	1977			*1979*		
	M	*F*	*T*	*M*	*F*	*T*
Under 1 month**	8.3	14.3	9.5	12.0	22.3	15.4
1-2 months	14.9	22.2	16.4	17.2	24.3	19.6
3-5 months	14.0	17.9	14.8	11.1	14.6	12.3
6-11 months	19.4	22.6	20.1	15.0	13.4	14.5
12 months and over	43.4	23.0	39.2	44.6	25.3	38.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Eurostat.

* includes first job seekers

**including search not yet started.

3. In terms of interrupted spells Salant (1977) has shown the conditions under which a "duration reversal" can occur. For two groups A and B suppose $E(T_A) > E(T_B)$ but that:

$$\frac{VAR(S_A)}{2E(S_A)} - \frac{VAR(S_B)}{2E(S_B)} > E(T_A) - E(T_B)$$

Then Salant proves that $E(S_A) < E(S_B)$, i.e., the variance of the completed spell lengths of group A is large enough for a duration reversal. Since $\hat{S}$ is estimated as twice T, the above result also holds for S.

4. That is, a person without work, seeking work and available for work. Report of the Interdepartmental Study Group on Unemployment Statistics, CSO 1979.

in the table do not support the hypothesis that the Live Register overstates the true average duration of unemployment. The proportion in the long-term unemployed group is higher than for the Live Register (Tables 2 and 3), and the proportion in the under 1 month category is very similar to the proportion unemployed for less than 5 weeks in the Live Register.

The evidence from this section suggests that although there is likely to be a considerable number of persons in Ireland who experience short spells of unemployment, on average, individuals who become unemployed can expect to remain on the Register for a longer duration than their British counterparts.

IV SOME CHARACTERISTICS OF THE LONG-TERM UNEMPLOYED

One explanation for the long average duration of unemployment in Ireland is the structuralist hypothesis which maintains that there exists a hard core of "unemployables" on the Live Register. Below we examine some factors that may mitigate against a person being re-employed, e.g., age, occupation or area of residence, and determine if these factors have worsened over time.

Data on age by duration of unemployment were available up to end-1979 from the statement showing the employment experience in the previous twelve months of males on UB or UA who were resident in urban areas. In Table 5 we show the average number of weeks employment experienced in the previous twelve months. This measure concentrates on the stock of currently unemployed males but is not directly comparable with our earlier stock measure since the unemployment experienced by these individuals may not be continuous.

Table 5 shows that all age groups experienced a lower number of weeks employment at the end of the 1970s than they did in the early part of the period. Although the number of weeks employment experienced is negatively related to age, the highest percentage increase in the numbers with no employment in the previous twelve months was felt by the 25-30 and 30-40 age groups. In 1967 the age group 30-40 represented 14 per cent of the total long-term unemployed whereas by 1979 this proportion had risen to just under 30 per cent. One would expect that if there were an age dimension to the long-term unemployment problem, there would be an increasing proportion in the oldest age groups. The data in Table 5 do not support this hypothesis. Recently data have become available on age by duration of unemployment. However, we do not include an analysis of these data here as they include farmers and farmers' relatives assisting and so cannot be compared with our previous estimates.

The only information available on skill level by duration of unemployment is from a survey of long-term unemployed males (53 weeks and over)

Table 5: *Analysis by age group of the average number of weeks employment and the number with no employment experience in the previous twelve months of males on UB or UA who are resident in urban areas*

	Under 21		*21-25*		*25-30*		*30-40*		*40-50*		*50-60*		*60-65*		*Total*	
	Weeks employ-ment	*No employ-ment*	*Weeks employ-ment*	*No employ-ment*	*Weeks employ-ment*	*No employ-ment*	*Weeks employ-ment*	*No employ-ment*	*Weeks employ-ment*	*No employ-ment*	*Weeks employ-ment*	*No employ-ment*	*Weeks employ-ment*	*No employ-ment*	*Weeks employ-ment*	*No employ-ment*
1967	23	174	19	177	17	233	17	322	16	454	15	536	13	352	17	2,248
1968	22	133	17	196	17	236	16	342	15	476	15	523	14	382	16	2,288
1969	19	171	16	233	15	343	14	545	13	691	13	699	12	482	14	3,164
1970	18	304	15	410	15	587	14	763	14	907	13	890	13	582	15	4,443
1971	18	344	16	419	16	527	14	753	15	924	14	951	13	615	15	4,533
1972	17	457	16	478	16	647	15	988	14	953	14	1,076	13	732	15	5,331
1973	16	418	13	658	13	934	12	1,304	13	1,314	10	1,383	12	779	13	6,790
1974	20	455	18	686	16	1,233	12	1,513	14	1,381	14	1,423	14	716	16	7,407
1975	18	895	17	1,182	16	2,062	17	1,876	20	1,440	17	1,380	16	970	17	9,805
1976	14	1,620	15	1,446	13	2,884	13	2,857	11	2,686	11	2,325	12	1,477	13	15,295
1977	13	1,612	13	1,816	12	3,502	12	3,346	10	2,830	10	2,453	10	1,387	12	16,946
1978	15	1,300	14	1,467	13	2,693	10	3,553	9	2,979	10	2,482	10	1,311	12	15,785
1979	16	821	14	1,250	14	2,023	11	3,373	10	2,680	9	2,401	10	1,150	12	13,698

Source: The Trend of Employment and Unemployment, CSO.

on UA undertaken by Short (1980). He found that agricultural workers, general labourers, and unskilled building workers had been unemployed at the date of the survey for a longer period than the average for the entire sample (i.e., 4½ years). However, even the relatively more skilled occupations (i.e., skilled building workers, producers, makers and repairers, transport workers and service workers) also had been unemployed on average for very long periods of time (approximately 3½ years). However, these workers represented a lower proportion of the long-term group than of the total number of males on UA. Thus, the relatively skilled workers are less likely to be unemployed for over one year, but once in this group remain on the Register for a fairly long time.

Regional data on the duration of unemployment were derived from the individual returns of the 123 local employment offices. Since this process was time consuming it was decided to examine the data for just two points in time, February 1974, before the recession got under way and February 1979, after the full effects of the recession had been felt.

In Table 6 we present regional estimates of both measures of completed spells. This table suggests that there is a significant regional dimension to the long-tern unemployment problem in Ireland. Using both measures, the disadvantaged regions, in particular the north west and Donegal and west regions, had much higher than average durations of male unemployment. However, all regions showed very long lengths of unemployment and the position in the eastern regions showed a relative worsening in the period 1974 to 1979. The average length of female unemployment was also higher in the western regions. This table also illustrates the duration reversal problem referred to at the end of Section II, i.e., comparing the relative severity of the long-term unemployment problem in some regions (e.g., west and north west and Donegal) the estimates of the two measures give ambiguous answers.

Short (1980) used his survey data to estimate the significance of the factors mentioned above in explaining the long length of male unemployment in Ireland. His regressions show that age, skill level and region have a significant effect on the duration of unemployment with age having the least effect and region the largest effect. Although his data include agricultural workers, these findings give some support to our earlier remarks on the influence of these factors in increasing the average duration of unemployment. However, the adjusted R^2 in Short's equations are very low indicating that the structural factors explain little of the variance in the duration of unemployment.

Table 6: *Regional values of S and $\hat{S}$, 1974 and 1979*

	1974				1979			
	S	$\hat{S}$	*Number unemployed*	*Per cent unemployed for more than 1 year*	*S*	$\hat{S}$	*Number unemployed*	*Per cent unemployed for more than 1 year*
1. *Males*								
East	20	76	15,007	20.6	25	95	23,944	27.1
Dublin and Dun Laoghaire	21	78	12,961	21.2	23	91	19,847	25.1
Other east	13	64	2,046	16.8	33	115	4,097	36.3
South east	17	68	4,672	18.3	14	98	7,752	30.3
North east	24	81	2,950	22.5	18	104	4,448	31.3
Midlands	30	96	3,207	29.7	29	106	3,937	32.5
South west	17	75	6,314	21.8	32	106	8,416	32.0
Mid-west	32	89	4,771	27.8	42	122	7,107	39.8
West	45	91	3,270	26.8	47	119	4,488	38.1
North west and Donegal	40	108	4,829	34.0	49	137	6,605	45.3
Total	23	83	60,027	24.0	26	107	90,641	32.6
2. *Females*								
East	12	34	4,596	4.9	15	45	7,571	9.2
Dublin and Dun Laoghaire	12	33	4,042	4.3	14	43	6,478	8.6
Other east	11	39	554	9.6	24	54	1,093	12.5
South east	12	22	874	5.3	15	49	1,545	11.5
North east	11	32	512	4.7	12	58	882	15.3
Midlands	17	29	348	6.3	28	54	881	12.8
South west	13	35	1,250	5.2	16	50	2,545	12.3
Mid-west	30	39	744	4.4	26	57	1,395	16.8
West	31	34	465	3.0	45	43	996	6.9
North west and Donegal	14	36	781	6.4	27	49	1,072	11.0
Total	13	35	14,166	5.0	17	48	24,458	11.0

V CONCLUDING REMARKS

This paper has shown that Ireland faces a severe long-term unemployment problem. Although it is true that many persons experience very short spells, the average person on becoming unemployed in Ireland can expect to remain so for a fairly long duration and a sizeable proportion will remain unemployed

for very long periods of time. The problem seems to be less severe among females than males; however, the Labour Force Survey data given in Table 4 suggest that the Live Register probably understates the true average duration of female unemployment.

We have also shown that some characteristics of the unemployed, namely being old, unskilled or living in a disadvantaged area, have the effect of increasing the average duration of unemployment experienced by an individual. However, it is unlikely that these factors go anywhere near fully explaining why unemployment is so long in Ireland.

The upward trend in the long-term unemployed group can be explained in terms of both supply and demand considerations. On the supply side prolonged unemployment may discourage individuals from searching intensively for work and may also cause a deterioration in their physical and mental condition. Also, a long spell of unemployment could alter attitudes to work, making the possibility of renewed employment less attractive. On the demand side, a long spell of unemployment may make a person less attractive to employers. Both these considerations imply that the longer a person becomes unemployed the lower is his probability of leaving the Register. Hughes and Walsh (1983) provide evidence of a lower exit probability among the longer duration unemployed in Ireland. Nickell (1979) derived a similar result for Britain. Using cross-section data he found that the conditional probability of obtaining work in any given week declines steadily after the first six months of a spell of unemployment and eventually falls to a very low level. A declining escape rate function implies that after each downswing in the economy the number of long-term unemployed falls by proportionately less than the number of short-term unemployed, leading to an increasing proportion in the long-duration group over time.

Therefore, it is probably true that some of the above-mentioned factors have an effect on the duration of unemployment. The influence of these factors requires further research which would involve surveys of the unemployed and the hiring practices of employers.

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