Is job insecurity on the increase in OECD countries?

A. INTRODUCTION AND MAIN FINDINGS

1. Introduction

Recently, the issue of job insecurity has come to the fore of the policy debate in a number of OECD countries. For example, the Chairman of the United States Federal Reserve Board, Alan Greenspan, is on record as attributing the fact that the United States economy has been experiencing a prolonged cyclical upswing in the 1990s without any noticeable inflationary pressures to a growing sense of job insecurity in the United States work force. In the past, most jobs were perceived as being stable and secure. This impression has been shaken by the experience of the past twenty years, with the advent of high and persistent unemployment in many countries, and worries about job insecurity have increased sharply in the 1990s. The purpose of this chapter is to evaluate the proposition that jobs are now less secure than they were in the past in OECD economies, using both measures of whether workers feel insecure about their jobs and measures of employer tenure and retention rates.

Section B examines evidence to identify those countries in which workers' perceptions of job insecurity are currently at a high level, and those countries where perceived job insecurity has increased. Such information is an important complement to standard objective measures, such as tenure and retention rates. Workers' perceptions of their job insecurity are determined by a complex mix of objective and subjective considerations which are difficult to quantify precisely. In addition, these perceptions are important in their own right. First, job insecurity is closely tied to individual well-being.[1] Second, as Chairman Greenspan has pointed out, it also has implications for the macroeconomy, sometimes being linked with lower levels of consumer expenditure and greater wage restraint. Third, insecurity can also play a role in the employer-employee relationship. As the duration of job matches decreases, and as insecurity rises, there may be less incentive to invest in training, a greater likelihood of problems of worker morale and effort [Burchell (1996)], and less of an opportunity to develop the various benefits of long-term attachments [US Department of Labor (1995)].

Section C evaluates the evidence on insecurity from the standpoint of job stability. It considers trends in average employer tenure and retention rates, following on from the analysis in OECD (1993). Special attention is paid to the analysis of turnover rates among those just starting jobs, as this is an obvious measure of the difficulty of establishing (or re-establishing) a fairly "long-term" match between the worker and the firm and, thus, is one important indicator in the debate on job insecurity. The section finishes with a discussion of the relationship between these retention rate and tenure figures and the perceived insecurity figures from Section B.

Section D looks beyond data on average tenures and retention rates to consider the *consequences* of job loss: the likelihood and duration of joblessness, unemployment benefit replacement rates, and the characteristics of the new job. The combination of the probability of separation and "what happens next" may help to explain why movements in measures of perceived job insecurity are generally much larger than those in job stability.

2. Main findings

A widespread and, in some countries, very sharp increase in the number of individuals perceiving employment insecurity took place between the 1980s and the 1990s. However, while job stability, as measured by retention rates, has fallen for certain groups, such as blue-collar and less-educated workers, overall, jobs seem as stable in the 1990s as they were in the 1980s. This apparent paradox can be resolved by considering job insecurity as resulting from *both* the risk of separation and its consequences.

There is evidence that the expected loss from separation has increased. Some part of job insecurity may reflect the general macroeconomic environment: countries with better economic performance have lower levels of perceived insecurity. There is also evidence of a rising risk of joblessness for the employed. Considering the characteristics of the new job, evidence from North America points to substantially lower earnings in the new positions,

and, in general, it now seems more difficult to find a satisfactory new match. Last, there is evidence that labour market institutions are important. Perceived job insecurity is significantly lower in countries where the unemployment benefit replacement rate is higher, where there is a higher level of collective bargaining coverage and where collective bargaining is more centralised. The former correlation may reflect the recognition of a safety net by workers when they feel that their jobs are under threat. The latter two are more difficult to interpret, but could reflect the ability of unions to protect their members against insecurity.

B.   WHAT DO WORKERS THINK ABOUT THEIR JOB SECURITY?

The early to mid-1990s have been characterised by increasing concern among workers over job security. This concern is widespread. It is not confined to countries with high and persistent unemployment. It is also noticeable in countries where the unemployment rate is low (Japan) or has been falling for some time (the United Kingdom and the United States).

One indicator of the intensity of the debate on job security is the amount of media attention devoted to it. Chart 5.1 presents data showing how media coverage of this topic has grown over the past fifteen years. The data in the chart show the number of stories per year referring to job insecurity (according to a rather restrictive definition[2]) in the G-7 countries found in the Reuters World Service and Associated Press databases. The top line in Chart 5.1 shows the total of the seven individual country counts. There is a great deal of yearly variation, but the upward trend is clear. The past year has seen a sharp upturn in the number of stories relating to job insecurity in Canada and the United States; there has also been a significant rise over the past two years for France. The spike for Germany in 1990 is associated with reunification.

Increased media coverage of an issue may not go hand-in-hand with an increase in the phenomenon itself.[3] This issue can be dealt with using the results of surveys which record what employees *think* about various aspects of their jobs and the labour market.

Workers rate job security as a very important characteristic of a job. The 1989 International Social Survey Programme (ISSP) survey asked workers in nine OECD countries (Austria, Hungary, Ireland, Italy, the Netherlands, Norway, the former western Germany, the United Kingdom and the United States) to rate nine different aspects of a job: security, income, promotion opportunities, leisure time, interest, independent work, being able to

help others, being useful to society and flexible working hours. A five-point scale was used, from "very important" to "not at all important". Overall, 59 per cent said that job security was very important, compared with an average of 27 per cent for the other eight attributes. In eight of the nine countries, job security had the highest percentage of respondents saying that it was very important (the exception being the Netherlands, where an interesting job came first).

While workers think job security is important, relative to other attributes, they are not very content with its level. International Survey Research (1995a) presents figures on average ratings of fifteen job attribute categories (such as pay, working conditions, training and management) across workers in seventeen European countries. Employment security comes only 11th out of these fifteen categories in terms of the percentage of employees responding favourably. There are, however, substantial differences in feelings of insecurity between countries.

1.   Differences in perceived job insecurity between countries

A number of surveys apply the same questions on job insecurity to workers in different countries. The first column of Table 5.1 shows the "norm" level of job insecurity reported by workers in 21 OECD countries in 1996.[4] This measure ranges from 31 per cent reporting "unfavourable" levels of insecurity in Norway to 50 per cent or more in France, Japan,[5] the United Kingdom and the United States. It may seem odd that perceptions of insecurity are so high in Japan, which has one of the lowest unemployment rates of OECD countries, and in the United Kingdom and the United States, both of which have experienced falling unemployment rates over the past four years. However, insecurity may reflect a number of other labour market trends in addition to unemployment (see Section D, below).

A single-item measure, the percentage of respondents who do not strongly agree with the statement that "my job is secure", is contained in the 1989 ISSP dataset. This is shown in the second column of Table 5.1. The levels of these two insecurity measures are not directly comparable, due to the different questions asked. However, despite the seven-year difference in survey dates, there are some similarities: Austria is a low-insecurity country and workers in the United Kingdom and the United States are more likely to report job insecurity. It is notable that Ireland, the Netherlands and Norway drop down the ranking of job insecurity between 1989 and 1996, while both Italy and Germany move up.

Chart 5.1.

Media references to job security/insecurity, 1982-1996

Number of references per year
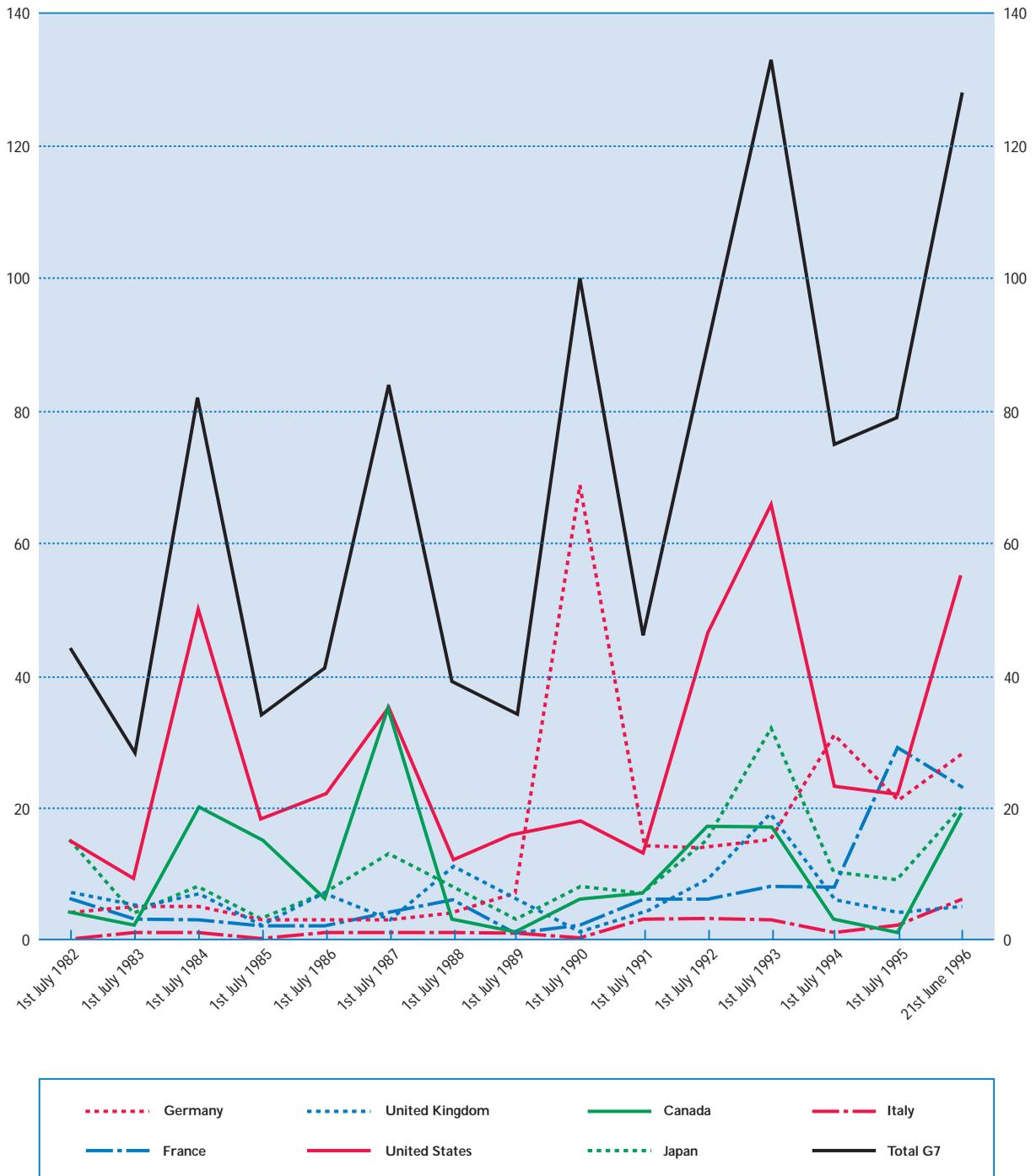
Table 5.1. **Three measures of workers' perspectives on job insecurity**

Percentage of employees

	"Norm" level of employment insecurity[a]	Percentage *not* strongly agreeing that "my job is secure"	
	1996	1989	1996
Australia	36	. .	. .
Austria	35	47	63
Belgium	45	. .	72
Canada	45	. .	. .
Denmark	38	. .	44
Finland	47	. .	69
France	53	. .	79
Germany	45	61[b]	72
Greece	38	. .	66
Hungary	. .	81	. .
Ireland	43	77	66
Italy	44	57	70
Japan	56	. .	. .
Luxembourg	. .	. .	61
Mexico	38	. .	. .
Netherlands	38	75	60
Norway	31	68	. .
Portugal	45	. .	75
Spain	46	. .	71
Sweden	47	. .	73
Switzerland	42	. .	. .
United Kingdom	54	82	67
United States	52	72	. .
Unweighted average	44	68	67

. .   Data not available.
a)   For the definition of the "norm" level, see footnote 4 in the text.
b)   Western Germany only.
Sources: Column 1: Data supplied by International Survey Research.
            Column 2: Secretariat estimates from the 1989 International Social Survey Programme dataset.
            Column 3: Secretariat estimates from the Eurobarometer 44.3 dataset (1996).

A similar single-item measure, the percentage of workers reporting that their job is other than very secure, is contained in the Eurobarometer 44.3 Survey, which was carried out in Spring 1996. This measure of insecurity is detailed in the third column of Table 5.1. Of the fifteen European Union countries, less than two-thirds of workers in Denmark, Luxembourg, the Netherlands and Austria perceived this degree of insecurity, whereas the highest percentage was found in Belgium, France, Germany, Portugal, Spain and Sweden. These numbers correlate at better than the 2 per cent level with the composite ISR data for 1996, although both the United Kingdom and Finland are in a noticeably higher position in the ISR data than in the Eurobarometer data.

2.   Differences in perceived job insecurity between workers

Perceptions of insecurity differ markedly between different groups of workers. Table 5.2 pro-vides a breakdown of perceived job insecurity in the 1996 Eurobarometer Survey by a number of individual and worker characteristics. Across all of the European Union, there is little difference between men and women in the percentage perceiving job insecurity. This percentage mostly falls with age, although in Finland, the Netherlands and the United Kingdom it is older workers who are most likely to report insecure jobs. In general, the relationship between education (proxied by the age at which the individual first left full-time education) and insecurity is negative, although weak. It is, however, noteworthy that in four European Union countries – Denmark, France, Italy and the United Kingdom – it is those with the highest level of education who are more likely to report their job as insecure. Job insecurity is generally perceived to be lower in white-collar than in blue-collar occupations. A noticeably lower percentage of Public Administration workers report that their job is insecure, but there is little difference in this percentage between industry and services.[6]

Table 5.2. **Workers' perspectives on job insecurity by individual and job characteristics, 1996**

Percentage of employees *not* strongly agreeing that ''my job is secure''

	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Luxembourg	Netherlands	Portugal	Spain	Sweden	United Kingdom	Weighted Average
Total	**62.8**	**71.5**	**43.9**	**68.7**	**78.7**	**71.8**	**66.0**	**66.5**	**69.6**	**61.5**	**60.3**	**75.2**	**71.2**	**73.3**	**66.9**	**70.2**
Men	63.4	70.9	43.8	66.4	75.2	71.9	70.6	68.3	70.9	68.0	63.3	76.7	65.2	73.4	66.9	69.6
Women	62.0	72.3	44.0	70.9	82.9	71.8	59.9	63.8	67.6	49.8	56.2	73.5	82.5	73.1	67.0	71.1
Age:																
16-24 years old	62.5	56.7	42.3	61.9	91.1	77.6	85.5	71.1	83.7	55.0	61.5	84.0	97.1	77.9	58.7	74.1
25-44 years old	63.7	79.3	46.3	68.1	77.9	71.6	60.6	64.8	71.5	64.2	53.6	79.1	78.1	74.4	64.6	70.6
45 years or older	61.0	57.9	41.0	71.5	76.3	70.0	66.1	67.2	59.5	57.8	74.0	66.4	45.2	70.6	75.4	67.9
Age first left full-time education:																
16 years or younger	60.0	74.4	33.4	69.9	77.3	76.4	75.5	72.8	68.7	79.4	61.1	80.1	71.8	80.2	70.4	72.5
17-18 years old	60.2	71.9	40.3	83.1	73.1	76.3	75.4	60.3	63.4	69.8	59.9	80.7	76.8	73.0	59.2	69.2
19 years or older	69.3	70.1	46.5	61.9	82.9	63.7	47.6	67.4	73.2	44.7	60.2	61.6	67.8	69.7	66.6	68.5
Occupation:																
White-collar	58.9	74.0	43.7	65.7	78.4	60.8	43.2	63.4	66.6	45.9	65.2	63.1	65.6	65.0	62.3	65.3
Blue-collar	70.3	73.3	44.1	72.7	78.6	81.3	76.0	69.2	69.3	72.3	56.8	83.3	76.9	79.1	71.4	74.3
Sector:																
Industry	65.7	82.5	43.6	71.0	80.8	73.3	82.1	72.5	80.2	78.6	55.5	83.2	73.5	70.2	64.8	72.7
Services	66.7	69.1	45.0	70.5	85.1	76.3	51.5	65.3	68.8	54.1	64.6	65.8	79.5	74.2	69.0	73.1
Public administration	42.4	45.2	40.7	63.7	44.7	46.4	26.7	43.9	24.2	31.8	50.1	75.2	28.6	85.2	59.4	44.7

Source: Secretariat estimates from the Eurobarometer 44.3 (1996) survey.

3.   Changes in perceived job insecurity over time

The top panel of Table 5.3 presents some evidence regarding the evolution of workers' perceptions of job security over time in seven European countries (Belgium, France, Germany, Italy, the Netherlands, Switzerland and the United Kingdom). The left-hand side of the panel shows the change between 1985 and 1995 in employees' evaluations of fourteen aspects of their job, including employment security. Employment security stands out as the aspect for which the percentage giving a favourable response has dropped the most over this period.[7]

The right-hand side of the top panel shows how the change in perceived employment security between 1985 and 1995 differs across the seven countries. The measure of security fell significantly in all seven, but with sharp differences in the magnitude of the decline. Security fell very notably in Germany and the United Kingdom, to a lesser extent in France and the Netherlands, and by the smallest amounts (although still significantly so) in Belgium, Italy and Switzerland.

The bottom panel of Table 5.3 presents detailed information on the 1992 and 1996 values of the four measures used to calculate the ISR "norm" level of employment security for 21 OECD countries. Again, the picture is of a general fall in perceptions of security, with only Finland recording a rise; particularly large declines were recorded in France, Italy and Switzerland. The sharpest falls come from the percentage not worried about the future of their company and the percentage satisfied with their job security. The other two, more company-specific, measures fall less, tending to give the lie to the suggestion that increased insecurity comes largely from a change in management practice. The evidence here points to a more general sense of insecurity.

Table 5.4 presents, for two countries, changes in perceptions of insecurity over time broken down by demographic characteristics. The top half considers data for Germany, based on the Socio-economic Panel. The measures of insecurity used are the percentage of respondents saying that they are worried about their job security and the percentage saying that there is some chance that they will lose their jobs over the next two years. The first measure falls from over 40 per cent in the mid-1980s to just under 30 per cent in 1991 and then rises sharply to over 40 per cent in 1994-95. This measure of job insecurity in Germany has risen the most for younger workers, for workers with lower levels of education, and for workers in blue-collar occupations.

The bottom half of Table 5.4 presents similar findings for the first five waves of the British Household Panel Survey, covering 1991 to 1995.[8] The measure here is the percentage of employees saying that they are not completely satisfied with their job security. This percentage jumped sharply in 1992 and has remained high since [similar results are obtained by Spencer (1996) from the British Social Attitudes Survey]. The rise in perceived insecurity is observed across all groups, although somewhat larger rises in insecurity are reported by older workers.

The last five rows of each panel of Table 5.4 show perceived job insecurity by tenure length. In Panel A, there was a clear negative correlation between insecurity and tenure in the German data up until the early 1990s, with workers with under five years of tenure being the most insecure. Recent figures reveal a more even distribution of insecurity across tenure groups; the same pattern is evident in the figures for perceived likelihood of job loss. In Panel B, the same flattening out has occurred in the British data. In both countries, there is now very little difference in insecurity perceptions across workers with up to fifteen years of tenure.

In sum, the evidence is clear-cut. Perceived employment insecurity has become more widespread in the 1990s in all OECD countries for which data are available.

4.   What might account for the growing perception of insecurity?

There is a tendency to equate job insecurity with the likelihood of losing one's current job. However, the numbers in the top panel of Table 5.4 hint that the two are not entirely equivalent: the percentage thinking it likely that they will lose their job is notably higher than the percentage worried about their job security. It is likely that feelings of insecurity reflect a wide range of labour market developments, of which the risk of job loss is only one, albeit important, component.

One useful way of characterising job insecurity is to express it as a function of the *expected loss* that would result from losing one's current job. Expected loss is the difference between the value of the current job (V_J), which depends on the current job's wages and non-pecuniary benefits, and the expected value of what would happen if the current job ends (V_F). Letting s be the probability of the current job ending:

$$\text{Expected loss} = V_J - [sV_F + (1 - s)V_J] = s(V_J - V_F).$$

V_F, the value of "what happens next", is itself dependent on the chance of finding another job, which is represented by r, the expected value of the next job that is found, V_N, and the expected value of

Table 5.3. **Changes in employees' responses over time concerning attributes of their jobs**

A. Selected European results

	Job attributes: European averages[a]	Employment security by country	
	Percentage point change in proportion responding favourably: 1985 to 1995		Percentage point change in proportion responding favourably: 1985 to 1995
Safety and working conditions	5*	Belgium	–6*
Immediate supervision	3*	France	–14*
Company management	2*	Germany	–18*
Communications	2*	Italy	–5*
Operating efficiency	1	Netherlands	–12*
Job satisfaction	0	Switzerland	–3*
Work organisation	–3*	United Kingdom	–22*
Working relationships	–4*		
Company identification	–8*		
Pay	–8*		
Benefits	–8*		
Training and information	–8*		
Performance and development	–10*		
Employment security	–12*		

*   Statistically significant change.
a)   European average data refer to the unweighted average of Belgium, France, Germany, Italy, the Netherlands, Switzerland and the United Kingdom.
Source: International Survey Research (1995*a*).

B. OECD results

	Recent developments in job insecurity in OECD countries									
	Percentage not worried about the future of their company		Percentage saying company offers job security as good as, or better than, that in most other companies in the industry		Percentage sure of a job with their company as long as they perform well		Percentage satisfied with their job security		"Norm" level of security	
	1992	1996	1992	1996	1992	1996	1992	1996	1992	1996
Australia	69	67	75	64	59	58	78	67	70	64
Austria[a]	79	77	75	74	59	50	66	60	70	65
Belgium	69	68	60	55	42	38	66	60	59	55
Canada	74	61	61	56	49	45	60	56	61	55
Denmark[b]	71	68	70	69	54	52	62	58	64	62
Finland[b]	46	53	63	63	39	37	45	57	48	53
France	72	58	70	59	32	28	56	41	58	47
Germany	73	64	54	60	51	46	62	48	60	55
Greece[a]	78	75	69	70	41	41	59	61	62	62
Ireland[a]	63	60	63	65	46	47	54	57	57	57
Italy	78	68	74	64	53	37	64	55	67	56
Japan	84	64	32	29	33	37	46	44	49	44
Mexico	87	82	72	74	21	25	71	67	63	62
Netherlands	71	66	58	62	59	60	74	61	66	62
Norway	. .	73	. .	77	. .	60	. .	66	. .	69
Portugal[a]	82	75	64	59	24	27	59	59	57	55
Spain	76	68	72	66	22	21	64	60	59	54
Sweden[b]	66	60	61	59	46	44	49	49	56	53
Switzerland	81	62	80	62	55	51	78	57	74	58
United Kingdom[b]	52	47	57	54	39	39	52	43	50	46
United States	60	52	58	55	46	38	57	47	55	48
Unweighted average	72	65	64	62	44	42	61	56	60	56

. .   Data not available.
a)   Data in 1992 columns refer to 1994.
b)   Data in 1992 columns refer to 1993.
Source: Data supplied by International Survey Research.

Table 5.4. **Changes in job insecurity over time:**
German and British panel results

A.　German results

	Percentage of employees worried about job security							
	1985	1987	1989	1991	1992	1993	1994	1995
Total	**41.2**	**41.1**	**34.8**	**29.2**	**37.5**	**36.5**	**44.0**	**42.3**
Men	42.8	41.1	35.6	31.3	39.9	39.5	47.6	45.2
Women	38.7	41.1	33.7	26.2	34.1	32.4	39.2	38.6
Age:								
16-24	52.8	46.6	37.7	32.9	40.6	39.0	48.5	54.1
25-44	38.9	41.2	34.6	27.7	36.7	36.2	44.1	42.6
45-69	37.8	37.7	33.6	29.9	37.4	35.9	42.4	38.3
Education:								
Secondary	54.8	53.9	44.5	37.6	49.2	48.3	54.5	52.7
Upper secondary	44.2	44.1	37.6	31.4	40.5	39.3	47.1	45.7
Tertiary	20.8	20.3	17.2	16.1	20.2	20.1	28.9	26.5
Occupation:								
White-collar	33.6	31.4	28.5	23.1	31.5	29.5	35.5	36.3
Blue-collar	51.7	52.5	45.1	39.0	49.0	49.9	59.8	55.6
Tenure (years):								
0-4	46.5	48.2	38.0	30.9	37.5	36.4	43.2	44.6
5-9	38.9	39.3	36.4	29.8	36.8	35.7	47.9	42.4
10-14	39.4	36.0	33.7	25.9	38.0	39.9	46.4	44.4
15-19	39.6	38.5	35.2	33.1	39.4	34.0	41.8	41.3
20+	33.1	30.9	25.7	25.2	36.8	36.0	40.4	37.1

	Percentage of employees saying there is some chance of losing their job over the next two years						
	1985	1987	1989	1991		1993	1994
Total	**47.4**	**46.9**	**46.2**	**47.6**		**54.1**	**63.7**
Men	47.2	46.9	46.5	47.6		56.5	64.1
Women	47.7	47.0	45.7	47.6		51.0	63.2
Age:							
16-24	62.1	57.1	55.4	52.2		58.3	71.5
25-44	47.2	47.8	49.6	50.7		58.4	67.3
45-69	39.2	39.6	36.4	40.4		45.8	55.3
Education:							
Secondary	52.8	56.5	48.2	49.1		52.7	66.0
Upper secondary	50.6	49.9	51.1	51.5		58.8	67.4
Tertiary	30.7	28.6	25.4	32.4		38.6	51.3
Occupation:							
White-collar	43.1	41.0	42.2	44.8		49.8	58.7
Blue-collar	51.6	54.4	52.8	51.5		63.1	71.9
Tenure (years):							
0-4	57.6	57.5	54.7	52.8		60.0	69.1
5-9	46.3	44.3	48.7	52.8		55.5	67.0
10-14	42.0	43.6	43.9	42.6		52.1	62.6
15-19	41.0	39.0	37.7	45.2		47.0	55.6
20+	31.4	32.0	29.2	34.8		45.9	54.4

Source:　Secretariat estimates from the German Socio-Economic Panel.

B.　British results

	Percentage of employees not completely satisfied with job security				
	1991	1992	1993	1994	1995
Total	**61.7**	**75.8**	**77.9**	**78.2**	**78.4**
Men	66.4	79.7	81.6	82.6	81.9
Women	56.7	71.8	74.2	73.9	75.0
Age:					
16-24	61.2	72.9	78.1	74.9	75.1
25-44	64.5	79.2	80.6	80.2	80.5
45-69	57.9	72.6	74.3	77.5	77.5
Education:					
Secondary	57.2	71.9	71.3	71.6	72.7
Upper secondary	62.2	75.9	79.8	78.5	77.7
Tertiary	66.5	79.8	81.3	82.9	83.2
Occupation:					
White-collar	60.5	75.3	78.3	78.0	77.7
Blue-collar	64.5	76.8	76.8	78.5	80.2
Tenure (years):					
0-4	63.0	76.5	79.2	79.1	78.7
5-9	61.1	76.7	77.0	77.7	79.1
10-14	59.4	75.1	75.0	79.2	80.8
15-19	58.4	69.9	71.3	74.4	77.4
20+	49.3	65.9	69.4	65.0	63.9

Source:　Secretariat estimates from the British Household Panel Survey.

being without a job, V_U. Substituting into the expression for expected loss above yields:

Expected loss = $s(V_J - rV_N - (1 - r)V_U)$.

The above equation makes it clear that the expected loss, and so job insecurity, increases as:

- s, the likelihood of the current job ending, increases (as long as $V_J > V_F$);
- r, the likelihood of finding a new job, falls (as long as $V_N > V_U$);
- V_N, the expected value of the new job, falls;
- V_U, the expected value of being without a job, falls; and
- V_J, the value of the current job, rises.

Rising job insecurity will indeed result from jobs which are more likely to end. However, according to the above taxonomy, it could also come about from reduced chances of finding another job (due to higher unemployment, for example), from less attractive new jobs (lower wages, temporary or part-time), or from a more unpleasant prospect of joblessness (which is partly dependent on the generosity of unemployment benefits). The remainder of this chapter will seek to relate the pervasive rise in insecurity reported by workers to the various components of expected loss outlined above, starting with the most obvious one, how long jobs last for and how likely it is that the current job will end.

C. WHAT DO PATTERNS OF TENURE REVEAL ABOUT JOB SECURITY?

1. Introduction

This section considers two standard measures of job stability, employer tenure and retention rates, as an additional dimension for assessing the debate on insecurity. The relationship between employer tenure and insecurity is not a simple one. In a booming job market, for example, many job losers may find new jobs fairly quickly, though not, perhaps, with an identical wage-benefit package. In addition, workers who voluntarily leave jobs often do so to improve their position. Moreover, there have always been segments of the labour market which are characterised by relatively insecure jobs and considerable labour turnover [Buechtemann (1993); Lindeboom and Theeuwes (1991)].

A number of analysts, however, have suggested that the links between business enterprises and workers nowadays are more short-term and tenuous then they were in the past, reflecting a more volatile business environment [Locke, Kochan and Piore (1995); Boyer (1990)]. To the extent that this is true, a more volatile environment would tend to increase

the costs of "guaranteeing" long-term employment relationships, leading to a shift in the relationship between employer tenure and insecurity. Largely anecdotal evidence suggests that businesses in some industries and countries respond to such "shocks" differently or to different degrees, sometimes by altering their human resource practices to rely more on the external labour market [Osterman (1987); Doeringer (1991); Dore (1996)].

2. An overview of employer tenure

The distribution of employer tenure, as well as average and median tenures,[9] provides a broad summary of patterns in job stability between countries and over time. OECD (1993) found significant differences in tenure across countries, with North America being characterised by relatively shorter tenures and many European countries and Japan having considerably longer tenures. Table 5.5 presents the tenure distribution in 1995 for 23 OECD countries. The OECD unweighted average is almost ten years. Some countries have noticeably shorter tenures (Australia, Canada, Denmark, the United Kingdom and the United States) than others (Belgium, Italy, Japan, Poland and Portugal). Germany is more or less the "average" European country in terms of its tenure distribution. When the distribution of employment across tenure classes is considered, the difference between countries is most pronounced for the shortest tenure categories. There are also significant differences in the share of workers with twenty or more years of tenure, with Australia, the United Kingdom and the United States having a noticeably lower percentage of such workers.

Multivariate analysis can provide a more precise estimate of differences in average tenure across countries by controlling for differences in the distribution of employment by gender, age and broad occupational category. The analysis, presented in Annex 5.A, generally confirms the pattern of cross-country differences presented in Table 5.5. Employer tenure is shortest in the United States, Australia and the United Kingdom, followed by Canada and Denmark. It is longest in Italy, followed by Belgium, Portugal and France.

Tenure profiles of different types of workers

Table 5.6 presents average tenure by demographic groups, industry, occupation and broad level of educational attainment. Comparing unweighted averages across countries, men have longer tenure than women, and tenure rises sharply with age. There is considerable variation across industries, the highest tenures being in electricity, gas and water supply, and the shortest being in

Table 5.5. **Distribution of employment by employer tenure, 1995**

Percentages

	Under 6 months	6 months and under 1 year	1 and under 2 years	2 and under 5 years	Under 5 years	5 and under 10 years	10 and under 20 years	20 years and over	Average tenure (years)	Median tenure[a] (years)
Australia[b]	15.8	9.4	12.6	21.6	*59.4*	19.5	14.3	6.8	6.4	3.4
Austria	7.6	5.0	8.9	21.2	*42.7*	19.0	22.5	15.7	10.0	6.9
Belgium	7.0	4.6	7.7	17.5	*36.8*	19.6	24.2	19.4	11.2	8.4
Canada[c]	14.8	7.9	..	28.0	*50.8*	19.8	18.1	11.3	7.9	5.9
Czech Republic[d]	10.1	9.1	24.4	12.3	*55.8*	12.0	14.8	17.4	9.0	2.0
Denmark	15.5	9.6	11.4	16.2	*52.7*	18.2	17.7	11.4	7.9	4.4
Finland	12.1	5.5	6.2	13.4	*37.2*	23.1	22.3	17.3	10.5	7.8
France	10.1	4.9	8.0	17.7	*40.6*	17.4	23.3	18.7	10.7	7.7
Germany	7.9	8.2	9.4	22.0	*47.5*	17.2	18.4	17.0	9.7	10.7
Greece	8.3	4.3	8.4	18.5	*39.6*	20.6	26.6	13.3	9.9	7.5
Ireland	9.3	8.5	11.0	20.1	*48.8*	18.1	21.2	11.9	8.7	5.3
Italy	4.5	4.0	7.0	18.1	*33.6*	20.8	26.1	19.5	11.6	8.9
Japan[e]	..	7.6	15.0	13.9	*36.5*	20.7	21.5	21.4	11.3	8.3
Korea[f]	7.8	6.0	21.5[g]	19.7[g]	*54.9*	15.9	14.1	15.1	8.7	2.5
Luxembourg	6.4	5.0	8.6	20.7	*40.7*	21.4	21.4	16.4	10.2	7.2
Netherlands	9.8	6.5	11.4	20.4	*48.1*	20.3	19.8	11.9	8.7	5.5
Poland	..	2.4[h]	3.3	7.1	*12.8*	12.5	30.9	43.9	17.5	17.0
Portugal	7.2	6.2	9.0	17.5	*39.9*	18.5	20.8	20.8	11.0	7.7
Spain	27.3	8.2	4.9	11.1	*51.4*	14.4	17.7	16.5	8.9	4.6
Sweden	8.6	6.2	7.4	15.1	*37.3*	23.0	22.7	17.0	10.5	7.8
Switzerland	8.5	7.2	9.0	20.8	*45.5*	22.9	18.3	13.3	9.0	6.0
United Kingdom	10.5	9.1	10.7	19.5	*49.8*	23.5	17.3	9.4	7.8	5.0
United States[b, i]	12.6	13.4	8.5	20.0	*54.5*	19.8	16.8	9.0	7.4	4.2
Unweighted average	10.6	6.9	10.2	17.9	*44.2*	19.1	20.5	16.3	9.8	6.7
Standard deviation	4.9	2.4	4.9	4.4	*10.0*	3.1	4.2	7.2	2.2	3.1
Coefficient of variation (%)	46.0	35.1	47.7	24.5	*22.7*	16.5	20.3	44.1	22.0	46.0

.. Data not available.
a) The median is calculated by taking the tenure class into which the middle observation falls and assuming that observations are evenly distributed by tenure within this class.
b) 1996.
c) 6 months or under; 7 to 12 months; 1 to 5 years; 5 years and under; 6 to 10 years; 11 to 20 years; more than 20 years.
d) Up to 6 months; more than 6 months to 1 year; more than 1 year to 3 years; more than 3 years to 5 years; more than 5 years to 10 years; more than 10 years to 20 years; more than 20 years.
e) Less than 1 year; 1 to 2 years; 3 to 4 years; 0 to 4 years; 5 to 9 years; 10 to 14 years; 15 to 19 years; 20 years or more.
f) 1992.
g) 1 to under 3 years; 3 to under 5 years.
h) Under 1 year.
i) Under 6 months; 6 months to 1 year; 13 months to 23 months; 2 years to under 5 years; under 5 years; 5 years to under 10 years; 10 years to under 15 years; 15 years to under 20 years; 20 years or more.
Sources: Data for Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom come from unpublished data provided by Eurostat on the basis of the European Community Labour Force Survey. For data for Australia, Canada, the Czech Republic, Japan, Korea, Poland, Switzerland and the United States, see Annex 5.A.

hotels and restaurants. Wholesale and retail trade are also characterised by short average tenures. Generally, higher-skilled white-collar occupational groups (*e.g.* legislators, senior officials and managers) have longer tenures, while lower-skill white-collar occupations (*e.g.* service workers, shop and market sales workers) and blue-collar workers have shorter tenures. The degree of dispersion of tenure by industry and occupation across countries is similar. These differences in simple averages are generally confirmed by multivariate analysis.

Average tenures by educational attainment do not show a consistent pattern across countries: in some countries (the United Kingdom, Portugal, Italy and Germany), high-education workers have longer tenures than low-education workers; in other countries (Belgium, Finland, France), the reverse is true. However, multivariate analysis for countries of the European Union reveals that, controlling for differences in gender and age distributions, individuals with the lowest level of education have the shortest tenure, while those with a middle level of education have the longest.[10]

Trends in employer tenure

Table 5.7 shows the proportion of short-tenure workers (tenure of less than one year) and average

Table 5.6. **Average employer tenure by gender, age, industry, occupation and education, 1995**

Years

	Australia[a,b]	Austria	Belgium	Canada[b,c]	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Japan[b,d]	Korea	Luxembourg	Netherlands	Poland	Portugal	Spain	Sweden	Switzerland[b]	United Kingdom	United States[a,b]	Unweighted average
Total	**6.4**	**10.0**	**11.2**	**7.9**	**7.9**	**10.5**	**10.7**	**9.7**	**9.9**	**8.7**	**11.6**	**11.3**	**5.2**	**10.2**	**8.7**	**17.5**	**11.0**	**8.9**	**10.5**	**9.0**	**7.8**	**7.4**	**9.6**
Men	7.1	11.0	11.7	8.8	8.3	10.5	11.0	10.6	10.9	9.8	12.1	12.9	5.9	11.7	9.9	18.2	11.1	9.8	10.7	10.4	8.9	7.9	10.4
Women	5.5	8.6	10.4	6.9	7.5	10.4	10.3	8.5	8.2	7.2	10.6	7.9	3.4	7.6	6.9	16.6	10.9	7.2	10.4	7.1	6.7	6.8	8.4
Age:																							
15-24 years	1.9	2.8	1.9	1.6	1.5	1.7	1.6	2.4	2.1	2.2	2.8	2.5	..	2.3	1.8	2.7	2.8	1.0	2.2	2.4	2.2	1.6	2.1
25-44 years	5.9	8.8	9.4	6.5	6.3	8.2	9.0	7.7	8.2	8.5	9.4	9.5	..	8.4	7.6	14.9	9.5	7.3	8.2	6.7	7.0	6.2	8.2
45 or more years	11.1	17.8	19.4	13.8	14.5	16.6	17.5	16.2	17.0	15.4	19.2	18.0	..	18.8	16.0	29.3	17.9	16.1	15.9	14.6	12.2	12.4	16.7
Industry:																							
Agriculture, hunting, forestry and fishing	6.6	12.1	6.3	13.0	5.3	7.9	7.8	8.0	10.3	8.0	8.8	..	..	7.2	6.0	..	10.1	4.8	9.8	8.7	8.9	6.6	8.2
Mining and quarrying	7.2	14.0	12.9		7.2	15.0	15.5	13.8	11.7	12.5	11.3	12.8	..	10.4	11.8	15.4	..	9.0	9.6	..	9.0	9.6	11.5
Manufacturing	7.0	10.6	11.8	8.9	7.8	12.3	12.1	10.8	9.0	8.3	11.2	13.1	..	14.7	10.3	..	10.4	10.9	11.5	10.6	9.0	9.2	10.5
Electricity, gas and water supply	12.2	15.5	14.5	12.7	13.2	15.8	15.3	13.1	13.2	16.4	16.4	17.3	..	15.8	13.6	..	15.2	15.9	15.1	13.6	13.5	..	14.7
Construction	6.5	9.2	8.1	6.8	7.1	9.2	8.7	7.9	10.3	8.8	8.6	11.2	..	7.8	9.0	..	6.9	4.7	11.0	9.4	8.2	5.7	8.2
Wholesale and retail trade	4.5	7.8	8.8	6.1	5.8	8.2	8.0	6.4	7.0	8.8		10.6	..	7.6	6.8	..	8.9	6.9	8.9	7.4	5.9	5.0	7.5
Hotels and restaurants		5.7	4.5	4.3	3.3	6.9	5.1	4.8	5.8	4.2	7.4		..	4.2	3.5	..	6.4	4.8	3.3		4.1	..	5.0
Transport, storage and communication	8.6	12.0	13.7	10.5	9.1	12.0	13.1	12.1	12.6	12.4	14.4	13.0	..	13.1	10.1	..	15.9	12.3	11.7	11.2	9.2	9.3	11.8
Financial intermediation	5.7	12.2	13.7	7.8	11.5	14.5	14.2	11.1	11.3	9.7	14.1	11.5	..	9.5	11.0	..	15.3	14.1	12.4	8.0	8.7	5.9	12.2
Real estate, renting and business activities		7.6	7.5		7.3	7.8	7.9	7.1	5.8	6.1	7.7	8.1	..	6.3	6.8	..	6.0	5.1	8.1		5.7		6.9
Public administration	7.3	13.4	13.2	11.8	12.3	11.9	13.8	11.6	13.9	14.0	14.7	..	..	12.4	11.4	..	15.0	12.3	13.8	11.3	11.2	10.3	12.7
Community, social and personal services		9.7	11.5	8.8	8.1	9.9	10.4	9.1	9.9	8.8	12.6	8.8	..	10.2	8.8	..	12.1	9.0	10.5	8.0	7.6	6.2	9.4
Occupation:																							
Legislators, senior officials and managers	9.8	12.8	11.9	10.3	9.6	..	11.8	11.6	14.6	11.6	17.0	..	9.9	11.3	11.7	..	11.4	12.2	..	11.1	9.5	9.0	11.5
Professionals	7.6	12.1	12.1	9.5	10.4	..	12.0	11.2	11.0	10.3	13.7	..	6.2	11.7	10.0	..	12.2	10.8	..	8.8	9.2	8.5	10.6
Technicians and associate professionals		10.0	11.8		8.9	..	11.8	10.2	9.7	8.5	12.6	..	5.8	10.6	9.0	..	14.1	10.4	..	9.5	8.1	7.6	9.8
Clerks	6.6	10.9	12.4	7.4	9.2	..	11.5	10.0	10.5	9.0	12.4	..	5.2	10.9	8.7	..	13.1	10.6	..	8.9	7.2	7.2	9.5
Service and shop and market sales workers	4.1	7.9	9.0	5.5	5.7	..	8.0	7.6	7.8	6.5	9.5	..	4.1	6.4	6.2	..	9.0	7.1	..	6.6	5.3	5.4	6.8
Skilled agricultural and fishery workers		13.3	8.1		5.4	..	7.3	7.4	11.2	9.4	10.2	..	4.8	9.0	7.9	..	10.8	7.0	..	7.9	7.6	7.0	8.4
Craft and related trades		9.6	10.4	7.7	7.8	..	10.5	9.8	10.2	7.8	10.3	..	4.9	10.3	9.3	..	9.7	8.8	..	10.0	8.9	8.9	8.9
Plant and machine operators and assemblers	6.0	10.5	10.8	8.3	7.8	..	11.3	10.6	9.9	9.3	11.8	..	4.6	13.3	10.0	..	11.1	10.4	..	10.8	8.5	8.0	9.8
Elementary occupations		8.1	9.6	10.5	5.5	..	8.2	7.5	8.3	7.0	9.8	..	4.1	7.9	6.8	..	8.6	5.7	..	8.0	5.9	5.0	7.4
Salaried employees												13.9											
Production workers												12.5											
Education:																							
Primary/Lower Secondary	6.8	9.3	12.5	9.3	6.5	13.3	11.6	8.4	10.3	9.5	11.6	15.3	5.3	9.7	8.2	17.5	10.9	8.9	13.1	9.1	7.8	5.8	10.0
Upper secondary/ secondary diploma	5.9	10.1	10.7	8.2	7.9	9.6	10.5	9.7	9.2	8.0	11.2	11.4	4.9	10.7	8.9	17.6	9.1	8.2	9.7	8.9	7.5	7.9	9.3
Some or completed tertiary education	6.7	10.7	10.4	7.8	9.1	9.5	9.8	10.5	10.4	8.6	13.0	9.5	5.6	11.0	8.5	17.2	12.9	9.3	10.0	9.1	8.3	7.4	9.8

.. Data not available.

a) 1996.
b) Data for industry and occupations use the national classification systems and are regrouped to correspond approximately to NACE (Rev. 1) and ISCO-88 for purposes of this table. See Annex 5.A for details.
c) Averages for education are based on weighted averages of mid-points of tenure classes.
d) Data for salaried and production workers are for manufacturing only.
Source: See Table 5.5.

Table 5.7. **Employees with tenure of under one year and average tenure: developments over time**

	1980		1985		1989		1990		1995	
	Tenure <1year (percentage)	Average tenure (years)	Tenure <1year (percentage)	Average tenure (years)	Tenure <1year (percentage)	Average tenure (years)	Tenure <1year (percentage)	Average tenure (years)	Tenure <1year (percentage)	Average tenure (years)
Australia	$22.3^{a,b}$	$6.6^{a,b}$	26.6^c	5.5^c	..	..	22.7^d	6.3^d	25.2^e	6.4^e
Canada	26.4	7.0	25.7	7.4	27.5	7.2	26.0	7.2	22.7	7.9
Finland	17.9	7.9	18.5	8.4	22.2	8.0	18.7	8.4	18.0	9.2
France	13.8^f	9.5^f	12.2	10.1	..	..	16.7	9.7	14.4	10.4
Germany	..	..	11.3^g	9.8^g	11.2	10.2	..	..	9.8^h	10.8^h
Japan	10.4	9.3	9.4	10.3	9.5	10.8	9.8	10.9	7.6	11.3
Netherlands	..	..	11.6	9.4	..	..	20.3	8.2	13.1^h	9.6^h
Spain	..	..	$15.2^{b,i}$	$11.5^{b,i}$	..	..	24.6	9.1	24.8	9.1
United Kingdom	..	..	17.7	8.3			21.2	7.8	18.6	8.3
United States^j	28.2^k	7.1^k	27.3^l	7.5^l	28.8^i	7.3^i	28.8^d	7.2^d	26.0^e	7.4^e

.. Data not available.
a) 1979.
b) Data are not strictly comparable with subsequent data as they include the self-employed and unpaid family workers.
c) 1986.
d) 1991.
e) 1996.
f) 1982.
g) 1984.
h) 1994.
i) 1987.
j) Data for 1991 and 1996 are for wage and salary workers only, while data for 1978, 1983 and 1987 and for those with tenure < 1 year for 1991 are for all employed persons.
k) 1978.
l) 1983.
Sources: For Australia, Canada, Japan and the United States, see Table 5.5 and OECD (1993). See Annex 5.A for Finland, France, Germany, the Netherlands, Spain and the United Kingdom.

tenure for selected years and countries. Average tenure is taken as an indicator of long-term or overall job stability, while the proportion of short-tenure workers reflects short-term turnover [OECD (1993)]. Between 1985 and 1995, there was an increase in short-term turnover in France, the Netherlands, Spain and the United Kingdom, and a decline in Australia, Canada, Finland, Germany, Japan and the United States. Average tenure remained broadly unchanged in the Netherlands, the United Kingdom and the United States, while it increased in Australia, Canada, Finland, France, Germany and Japan, and declined in Spain

These broad patterns could simply reflect changes in the demographic composition of employment. Although not shown here, multivariate analysis, controlling for changes in the age and gender mix of employment, indicates that average tenure did not change between 1985 and 1995 in nine of the ten countries; the sole exception is Spain, where average tenure fell. Tenure is also affected by the economic cycle through changes in hiring, layoffs and quits, declining in upswings and increasing in downturns [ILO (1996)]: supporting this hypothesis, the average tenure figures in Table 5.5 are significantly negatively correlated with the output gap, defined as the ratio of actual to potential GDP. How-

ever, repeating the analysis for workers with tenures of five years or more, which reduces the effect of recent macroeconomic conditions, leaves the results unchanged.

3. Staying with the same employer: developments in retention rates

Another measure of the stability of the employer-employee match is the so-called "retention rate". The five-year retention rate, for example, is defined as the percentage of employees in a certain year who will still be with their current employer five years later. In this chapter, retention rates are calculated by age, gender, length of tenure, level of education and occupation in an attempt to identify the groups of workers for whom changes have been the most pronounced.

The calculations are based on a so-called "synthetic cohort" analysis, involving a comparison of the number of workers classed by five-year tenure and age groups at five-year intervals. Thus, for a particular tenure group, such as those with 0 to 5 years of tenure, the retention rate measures the percentage of those workers who remained with their employer for a further five years, thus entering the tenure group of five to ten years [see Annex 5.A].

Tables 5.8 and 5.9 present these calculations for Australia, Canada, Finland, France, Germany, Japan, Spain, Switzerland, the United Kingdom and the United States. Estimates refer to five-year retention rates, except for the United States, where four-year rates are calculated over the period 1979-1991. There are significant differences across countries, with the highest retention rates being found in Japan and Germany and the lowest in Finland, Spain and Australia.

A key issue is what has happened over time. The overall retention rate has declined in some countries and remained stable in others. It declined somewhat in Germany and Japan. The biggest declines were registered in Finland, France and Spain.[11] The United States experienced a decline in the overall retention rate between 1983-1987 and 1987-1991, though this rate had apparently increased a bit by 1991-1996.[12] The retention rate increased slightly in Australia, Canada and the

United Kingdom. Retention rates are less influenced by recent developments in the economic cycle than is average tenure.[13] The overall picture is of fairly stable average tenure and retention rates.

There are more marked patterns when different groups are considered. The decline in retention rates is concentrated among men in Germany and Japan. Among employed women it has risen in all countries, except Finland, France and Spain. Increased maternity leave provisions in legislation and in collectively bargained contracts, allowing women to continue working for the same employer, have likely had a positive influence on women's retention rates – as has been suggested for the United Kingdom [Gregg and Wadsworth (1996b)]. In most countries, retention rates increase from young through to prime-age workers and then decline as employees approach retirement. This curve is more pronounced in Japan, which reflects the traditional pattern of older workers leaving an employer prior

Table 5.8. **Retention rates by worker characteristics, 1980-1985, 1985-1990 and 1990-1995**

Percentages

	Australia[a]	Canada	Finland	France	Germany[b]	Japan	Spain	Switzerland[c]	United States (1)[d]	United States (2)[e]
Total									50.9	..
1980-1985	..	46.7	52.3	..	..	67.2	..	..	54.8	..
1985-1990	38.5	45.5	45.4	56.7	62.1	64.8	57.9[f]	..	50.8	..
1990-1995	41.3	47.9	42.8	49.9	60.7	64.2	42.8	55.2	..	48.6
Gender:										
Men									51.9	..
1980-1985	..	49.0	53.2	..	..	77.0	..	..	58.6	..
1985-1990	40.2	48.4	47.0	57.3	64.1	73.5	59.4[f]	..	53.5	..
1990-1995	42.4	49.1	45.8	50.5	60.2	71.9	43.0	60.9	..	49.8
Women									49.6	..
1980-1985	..	43.8	51.3	..	..	50.4	..	..	50.7	..
1985-1990	36.3	42.1	43.7	56.2	59.3	50.5	54.8[f]	..	47.9	..
1990-1995	40.0	46.5	39.3	49.5	61.4	51.8	42.4	49.0	..	47.4
Age:										
15-24 years									28.7	..
1980-1985	..	28.0	21.7	..	..	48.7	..	..	30.6	..
1985-1990	23.0	22.3	13.9	32.7	43.7	49.0	19.9[f]	..	25.6	..
1990-1995	25.4	25.1	14.5	24.0	43.4	50.8	14.8	35.4	..	24.6
25-44 years									55.1	..
1980-1985	..	55.0	57.3	..	..	77.9	..	..	59.6	..
1985-1990	45.0	53.8	49.5	64.7	68.1	73.5	60.0[f]	..	55.5	..
1990-1995	47.0	55.2	47.2	56.4	66.3	71.1	50.0	57.7	..	54.2
45+ years									67.2	..
1980-1985	..	54.9	50.7	..	..	58.9	..	..	66.8	..
1985-1990	45.6	54.3	49.3	51.4	71.5	60.8	63.6[f]	..	61.2	..
1990-1995	48.1	51.9	40.6	47.6	65.4	62.8	45.7	69.8	..	56.2

.. Data not available.
a) 1986-1991 and 1991-1996.
b) 1984-1989 and 1989-1994.
c) 1991-1996.
d) Four-year retention rates are calculated over 1979-1983, 1983-1987 and 1987-1991.
e) Estimates for 1991-1996 are five-year retention rates.
f) Data are for 1987-1992 and include the self-employed and unpaid family workers.
Sources and notes on estimation method: See Annex 5.A.

Table 5.9. **Retention rates by length of tenure, education and occupation, 1980-1985, 1985-1990 and 1990-1995**

Percentages

	Australia[a]	Canada	Finland	France	Germany[b]	Japan	Spain	Switzerland[c]	United Kingdom[d]	United States (1)[e]	United States (2)[f]
Length of tenure											
[5-10]/[0-5]										45.9[g]	..
1980-1985	..	35.1	39.2	..	..	55.9	..	..	..	49.1[g]	..
1985-1990	28.5	31.6	33.0	36.5	53.7	56.4	41.0[h]	..	35.5	45.1[g]	..
1990-1995	33.1	36.4	35.5	28.1	49.9	58.2	28.6	46.5	37.7	..	39.7
[10-15]/[5-10]										68.3[g]	..
1980-1985	..	69.5	66.0	..	..	74.9	..	..	..	69.9[g]	..
1985-1990	58.2	67.9	57.0	88.6	71.8	70.6	78.7[h]	..	..	64.5[g]	..
1990-1995	63.0	71.3	55.9	90.2	73.9	68.3	73.7	72.1	..	..	64.6
[15-20]/[10-15]										75.5[g]	..
1980-1985	..	76.6	73.0	..	..	84.0	..	..	..	81.4[g]	..
1985-1990	73.4	74.8	68.0	73.2	71.7	77.8	79.7[h]	..	..	76.6[g]	..
1990-1995	61.8	76.0	62.9	77.6	74.2	75.6	73.0	72.8	..	..	68.3
Education											
(employees 25 years or over)											
Primary/lower secondary										52.2	..
1980-1985	..	50.0	..	..	..	64.6	..	..	..	55.2	..
1985-1990	41.3	43.5	..	..	69.1	62.1	..	..	..	46.7	..
1990-1995	49.4	42.3	..	46.2	54.4	62.2	40.7	53.4	..	..	42.7
Upper secondary education										59.5	..
1980-1985	..	53.1	..	..	..	76.2	..	..	..	62.4	..
1985-1990	49.6	44.4	..	..	67.3	72.2	..	..	..	56.4	..
1990-1995	56.1	51.4	..	58.1	63.3	67.9	62.5	57.2	..	..	46.1
Some or completed tertiary										59.9	..
1980-1985	..	..	..	..	..	82.6	..	..	..	62.5	..
1985-1990	46.3	..	..	..	75.4	75.3	..	..	..	59.8	..
1990-1995	35.7	61.1	..	58.8	81.4	74.4	71.0	65.1	..	..	64.1
– Non-university tertiary education										54.9[i]	..
1980-1985	..	59.2	..	..	..	71.7	..	..	..	61.4[i]	..
1985-1990	47.6	..	..	..	80.0	70.3	..	..	..	57.6[i]	..
1990-1995	24.6	59.1	..	..	80.0	66.6	..	..	..	..	67.8[i]
– University tertiary education										64.4[i]	..
1980-1985	..	..	..	..	..	85.4	..	..	..	63.4[i]	..
1985-1990	44.2	..	..	..	70.8	76.8	..	..	..	61.8[i]	..
1990-1995	54.6	65.6	..	..	78.6	77.5	71.0	..	..	..	61.1[i]
Occupation											
White-collar											
1980-1985	..	48.1	..	..	..	74.7[j]	..	..	..	54.2	..
1985-1990	..	44.8	..	59.6	62.2	73.4[j]	..	..	..	51.2	..
1990-1995	44.8	48.4	..	53.0	66.0	73.4[j]	33.1[k]	55.7	..	..	49.3
Blue-collar											
1980-1985	..	45.5	..	..	..	67.6[j]	..	..	..	57.6	..
1985-1990	..	47.0	..	51.7	62.9	62.8[j]	..	..	..	49.9	..
1990-1995	35.6	48.9	..	44.5	51.6	63.7[j]	39.9[k]	54.0	..	..	46.8

..   Data not available.
a)   1986-1991 and 1991-1996.
b)   1984-1989 and 1989-1994.
c)   1991-1996.
d)   Retention rates presented for the United Kingdom refer to the intervals of less than 5 years, to 5 to less than 10 years.
e)   Four-year retention rates are calculated over 1979-1983, 1983-1987 and 1987-1991, and for occupations, only over 1983-1987 and 1987-1991.
f)   Estimates for 1991-1996 are five-year retention rates.
g)   Weighted averages of two four-year retention rates. See Annex 5.A.
h)   Data are for 1987-1992 and include the self-employed and unpaid family workers.
i)   Non-university tertiary education comprises persons who have less than a completed college degree, while university education comprises individuals with a completed degree.
j)   For manufacturing only.
k)   Estimates for both occupational groups are below the overall retention rate as a result of missing observations.
Sources and notes on estimation method: See Annex 5.A.

to retirement to work elsewhere until they reach the official retirement age [Dore, Bounine-Cabalé and Tapiola (1989)]. There are no consistent patterns over time for the different age groups in these countries.

Table 5.9 shows retention rates by tenure, education and occupation. From 1985-1990 to 1990-1995, the retention rate between 0-5 years and 5-10 years declined on average by 0.5 percentage points, while that between 5-10 and 10-15 years was stable on average, and that from 10-15 to 15-20 years declined by 2.5 percentage points. Since the early 1980s, five of the eight countries considered have experienced declines in the 10-15 to 15-20 year retention rate, with the falls being most pronounced in Australia, Finland, Japan and Spain.

The largest changes in retention rates are recorded for those with different levels of education. To begin with, there are already sharp differences in levels across countries. For those with no more than lower-secondary education, the retention rate is particularly low in Canada, Spain and the United States. This group experienced falling retention rates in Canada, Germany, Japan and the United States, but a rising retention rate, albeit from a low level, in Australia. Similar cross-country patterns also apply to those who have only completed upper-secondary education. Retention rates for those with at least some tertiary education decreased in Australia and Japan, although they increased in Germany. Except in Japan, the retention rate for those with a university education has increased over recent years.[14] Taken at face value, these results suggest some tendency for low-educated workers to be less secure in their jobs over time in the majority of countries for which data are available.

4. Short-term job instability

It is likely that one key component for assessing job instability comes very early into the job match and so will not be well-captured by the broad retention rates presented above. This subsection analyses both the incidence of very short tenure and turnover and its evolution over time in order to ascertain the extent to which jobs have become more insecure for those trying to establish, or re-establish, matches. This focus can be thought of as examining the available evidence on both the *s* and *r* sources of insecurity outlined in Section B.4.

Gregg and Wadsworth (1995) have proposed a measure of very short-term turnover or separation rates, based on a comparison of the number of workers with three or fewer months tenure relative to those with 3-6 months tenure; they argue that the difference represents unsuccessful matches. This index is presented in Table 5.10. Caution should be

exercised in its interpretation, as estimates can be subject to considerable measurement error.[15] The rate of short-term turnover (column six) varies from 7 per cent in Denmark to over 50 per cent in Spain and Sweden, with an average figure of 33 per cent. The United Kingdom, where the growth of short-term turnover has been noted as a prominent development, actually has a relatively low turnover rate compared with most other countries.

Table 5.10 also presents historical (*i.e.* using synthetic cohorts) separation rates between one and two years of tenure, which run from 20 per cent in Luxembourg, up to 85 per cent in Spain. On average, 43 per cent of those with tenure of less than one year in 1994 failed to last beyond two years with the firm.[16]

Estimates over the period 1980 (or 1985) to 1995 in Table 5.11 show that turnover between the first and second year of an employment match rose greatly in Spain, increased somewhat in Australia, Germany, the United Kingdom and the United States, and was stable in Finland and Canada. However, it is difficult to draw firm conclusions about trends since data on short-term turnover are very sensitive to the cycle and it is not possible with so few observations to correct for this effect.

The initial stage of the employment relationship is a key moment in the process of integration into a longer-term stable employment relationship, through which both new labour market entrants and established workers, who are changing jobs, must pass. The data presented suggest that many job matches "fail" at this moment, though the extent of this failure varies greatly across countries, and evidence for a general increase in "failures" over time is fairly weak. Key questions are why so high a proportion of matches fail early on and whether this matters for assessments of insecurity.

5. Implications of the observed trends in tenure for insecurity

The evidence points to substantial differences in tenure, turnover and retention rates across countries. There is, however, only weak evidence that these figures are correlated with the perceived job insecurity described in Section B. Although the short average tenure figures for the United Kingdom and the United States tie in with their relatively high perceptions of insecurity, in general there is no significant cross-country correlation between perceptions of insecurity and either median tenure ($\rho = 0.21$, N = 19)[17] or average tenure ($\rho = 0.23$, N = 19). The same is true for the smaller number of countries with retention rate information ($\rho = 0.51$, N = 8): Japan, the country with the highest retention rate, also has the highest level of perceived employ-

Table 5.10. **Measures of employment turnover, 1995**

	Employer tenure					Estimates of short-term employment turnover	
	Percentage of total employment					Percentages	
	1 month or under	3 months or under	Greater than 3 months and under 6 months	6 months but under 1 year	1 year and under 2 years	Separations from the first quarter to the second quarter[a]	Separation rate from 1 year to 2 years[b]
Australia[c, d]	..	9.7	6.1	9.4	12.6	37.6	49.7
Austria	1.7	4.3	3.3	5.0	8.9	22.7	29.5
Belgium	2.4	4.4	2.6	4.6	7.7	41.6	28.4
Canada[d]	..	6.4	6.7	8.8	10.3	30.1[e]	53.0
Denmark	2.5	8.1	7.5	9.6	11.4	7.0	51.2
Finland	3.0	8.5	3.6	5.5	6.2	25.2[f]	58.0[f]
France	2.4	5.3	4.7	4.9	8.0	11.6	41.6
Germany	2.1	4.6	3.3	8.2	9.4	26.5	31.4
Greece	1.6	5.3	3.0	4.3	8.4	43.1	30.7
Ireland	1.6	5.0	4.3	8.5	11.0	12.5	30.4
Italy[g]	1.2	..	6.1	3.8	6.0	47.2[h]	45.9
Luxembourg	1.4	4.3	2.1	5.0	8.6	50.0	20.0
Netherlands	3.5	6.2	3.6	6.5	11.4	42.1	26.1
Portugal	2.4	4.5	2.7	6.2	9.0	39.4	36.4
Spain	8.8	18.4	8.9	8.2	4.9	51.5	85.1
Sweden	2.1	5.8	2.8	6.2	7.4	52.2	50.1
Switzerland	..	4.9	3.6	7.2	9.0	26.4	42.6
United Kingdom	1.8	5.7	4.8	9.1	10.7	16.0	41.2
United States[c, i]	..	6.3	6.3	13.4	8.5	17.2[j]	65.9[j]
Unweighted average	2.6	6.5	4.5	7.1	8.9	32.5	43.0

.. Data not available.

a) This rate is calculated as the difference between the number employed with tenure 3 months or under, which is an indicator of new hires, and tenure over 3 months and under six months, as a percentage of new hires. The formula used is [100*((≤ 3 months) – (3 > and < 6 months))/(≤ 3 months)] based on Gregg and Wadsworth (1995).

b) This rate is calculated as the difference between the number employed with tenure less than 1 year in 1994, which represents the source population, *less* the number with 1 and under 2 years tenure in 1995 as a percentage of the source population. The formula used is [100*((< 1 year (1994)) – (≥1 year and < 2 years (1995)))/(< 1 year (1994))]. Estimates for Australia, Austria, Canada, Finland, Sweden, Switzerland and the United States refer to contemporaneous separation rates.

c) 1996.

d) Periods are as follows: under 3 months, 3 months and under 6 months, 6 months and under 1 year, 1 year and under 2 years.

e) The formula is modified to [100*((< 3 months*3/2) – (3 ≥ and < 6 months))/(< 3 months*3/2)] as data are rounded to the nearest month.

f) The formulae are modified to [100*((< 3 months*3/4) – ((3 ≥ and < 6 months)*4/3))/(< 3 months*3/4)] and [100*((< 1 year*11/12) – ((≥ 1 year and < 2 years)*12/11))/(<1 year*11/12)].

g) Periods are as follows: under 1 month, 1 month to 6 months, over 6 months to 1 year, over 1 year to 2 years.

h) The formula is modified to [100*((1 month*6) – (6 > and ≤ 12 months))/(1 month*6)].

i) Periods are as follows: under 3 months, 3 months and under 6 months, 6 months to 1 year, over 1 year to 23 months.

j) The formulae are modified to [100*((< 3 months*3/2.5) – (3 ≥ and < 6 months))/(< 3 months*3/2.5)] and [100*((≤ 1 year) – ((> 1 year and ≤ 23 months)*12/11.5))/(≤ 1 year)] as data are rounded to the nearest month.

Sources: See Table 5.5. Data for Italy are from Gennari and Sestito (1996).

ment insecurity. Last, there is no evidence of significant cross-country correlations between either the first to second quarter or one to two year separation rates presented in Table 5.10 and perceived job insecurity ($\rho = -0.20$ and $\rho = 0.36$, respectively, N = 18): see the high turnover and low insecurity in Australia and Greece, and the low turnover and high insecurity in France and the United Kingdom.

Across groups of workers, however, the picture is more consistent. Blue-collar workers typically report greater job insecurity than do white-collar workers, and it is, indeed, the former who have shorter tenure and lower retention rates. Similarly, in most countries, younger workers feel more insecure than older workers, a pattern which is repeated in the calculated retention rates. The picture with respect to education is less clear. Retention rates generally rise with education and less-educated workers are somewhat more likely than more-educated workers to perceive their job as insecure. Moreover, retention rates for the less educated have generally fallen over time. On the other hand, more detailed data for two countries (Table 5.4) show that,

Table 5.11. **Trends in employment turnover, 1980-1995**

	Separation rate from 1 year to 2 years (per cent of estimated hiring)			
	1980	1985	1990	1995
Australia	..	46.9[a]	38.9[b]	49.7[c]
Canada	52.1	58.2	52.0	53.0
Finland[d]	44.9	46.2	31.5	45.1
Germany	..	25.0[e]	24.0[f]	27.2[g]
Spain	..	15.6[h]	62.4	85.0
United Kingdom		40.5	43.3	42.9
United States[i]	58.9[j]	60.5[h]	63.4[b, k]	65.9[c, l]

.. Data unavailable.
a) 1986.
b) 1991.
c) 1996.
d) This rate is calculated as $[100*((\leq 11\ months*12/11) - (\geq 1\ year\ and < 2\ years))/(\leq 11\ months*12/11)]$ as data are rounded to the nearest month.
e) 1984.
f) 1989.
g) 1994.
h) 1987.
i) Data for 1991 and 1996 are for wage and salary workers only, while data for 1983 and 1987 are for all employed persons.
j) 1983.
k) This rate is calculated as $[100*((< 1\ year*12/11.5) - (\geq 1\ year\ and < 2\ years))/(< 1\ year*12/11.5)]$ as data are rounded to the nearest month.
l) This rate is calculated as $[100*((\leq 1\ year) - ((> 1\ year\ and \leq 23\ months)*12/11.5))/(\leq 1\ year)]$ as data are rounded to the nearest month.
Source: See Annex 5.A.

while perceived job insecurity falls with education in Germany, the reverse is true in Britain.[18]

The picture given by tenure and retention rates is of little deterioration in overall job stability, even though certain groups, such as the less-educated, have experienced notable declines. One important point is that changes in measures of tenure and retention rates understate the "true" developments as they are endogenous, being to an extent determined themselves by what individuals think of their chances in the job market. For example, widespread feelings of insecurity could discourage individuals from quitting jobs, which, all other things unchanged, would have the effect of increasing tenure and retention rates above what they would have been otherwise.[19] Another perspective, as discussed in Section B.4., is that rising job insecurity may also have come from a deterioration in the consequences of job loss.

D. THE LABOUR MARKET AND JOB INSECURITY

Reported perceptions of job insecurity reflect individuals' reactions to a potentially wide range of economic and social factors. As it is extremely difficult to accurately gauge all of the elements that might influence such perceptions, it is *a priori* problematical to establish any empirical relationship between them and objective measures of the same phenomenon.[20]

The tenure and retention rate information in Section C does not give a full picture of the rise in insecurity, nor of its different levels across countries. For example, Chairman Greenspan, in his testimony before the Senate Banking Committee, suggested that the high level of job insecurity in the US economy, despite its tight labour market, may come from workers' fear that their skills have become inadequate for them to find another good job if they lose their current position. This section, based on the model of expected loss outlined in Section B.4, considers the relationship between job insecurity and workers' wider labour market experience. First, the relationship between insecurity and the general macroeconomic situation, which undoubtedly informs the "what happens next" part of job insecurity, is considered. Particular attention is paid to how long it takes to find another job and the characteristics of the job that is found. Last, the potential relationship between institutional features of the labour market and job insecurity is considered.

1. The transition to a new job

The key element of this transition is the ease with which another job can be found, as measured by r in Section B.4. This probability is strongly dependent on the economic cycle. With respect to the 1996 ISR data presented in Table 5.1, it is possible to appeal to macroeconomic developments to explain the higher-than-average levels of job insecu-

rity reported in Belgium, Finland, France, Spain and Sweden. It is, however, also obvious that the cycle alone cannot completely account for the inter-country distribution of perceptions of job insecurity. The countries with the highest reported levels of insecurity are Japan, the United Kingdom and the United States. In 1996, unemployment had been falling for about four years in the latter two countries. On the other hand, unemployment had been rising for five years in Japan, but was still only just over 3 per cent. The correlations between this measure of reported job insecurity and both unemployment and employment rates are, in fact, insignificant ($\rho = 0.16$ and $\rho = 0.09$, respectively, N = 21). There is, however, a significant negative correlation between insecurity and the output gap ($\rho = -0.45^*$,

N = 20). This conclusion is confirmed by the analysis of changes in the level of perceived job insecurity between 1992 and 1996 in Table 5.3.[21]

Chart 5.2 presents an additional hybrid measure of the difficulty of transition from one job to another: the proportion of currently unemployed or inactive persons who lost their jobs due to layoff (job losers) and those who left their jobs voluntarily (job leavers) within the previous six months as a percentage of employment. They represent *unsuccessful* separations, in that they have not yet found another job. The proportions charted are a function of two of the elements of insecurity discussed in Section B.4: the separation rate (which shows how many individuals lose or leave their jobs) and the ''re-employment rate'', which determines how

Chart 5.2.

Job losers and job leavers (currently jobless) and the proportion of employees engaged in job search because they fear their job is at risk, selected European countries

Percentage of employment
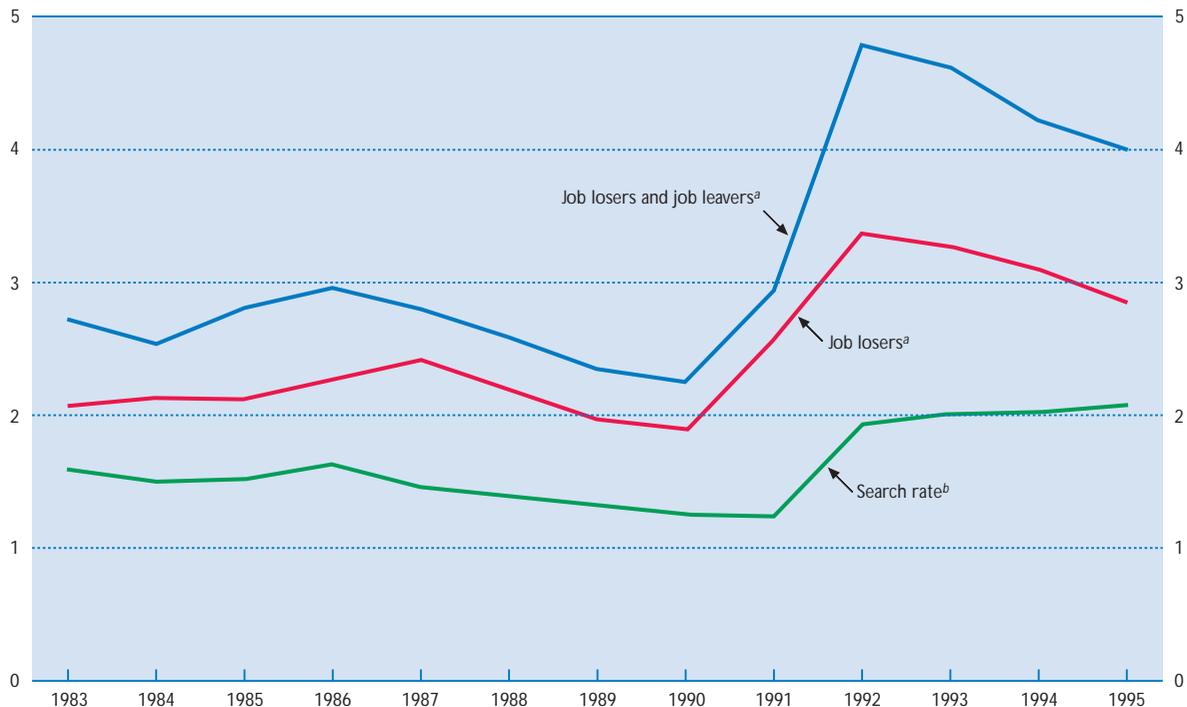
a)   For those currently unemployed or not in the labour force, who left their job within the past six months. Weighted average for the following countries: Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands and the United Kingdom. For Germany, 1984 instead of 1983; for the Netherlands, 1985 instead of 1984 and 1987 instead of 1986; and for Luxembourg, 1993 instead of 1992.

b)   Employed individuals searching for a job because of the risk or certainty of loss or termination of their present job, or because their present job is considered as a transitional job. Weighted average for the following countries: Belgium, Denmark, France, Germany, Greece, Ireland, Italy and the United Kingdom.

Source: Unpublished data provided by Eurostat on the basis of the European Community Labour Force Survey.

quickly they find another job. As the measure of job losers and job leavers is increasing in s and decreasing in r, it should be positively correlated with job insecurity.[22]

Estimates are plotted for 1983-1995 for a weighted average of ten European Union countries. There are significant issues of cross-country comparability of these data, as well as problems of accurate measurement of layoffs and quits. These are outlined in Box 1, and they suggest considerable caution in interpreting these calculations. Given the caveats in Box 1, there is a significant increase in the proportion of unsuccessful separations, stemming from an increase in job losers beginning in 1992 which might, therefore, be considered as partly cyclical. Though the increase is proportionately large, even in 1992 it was just 5 per cent of employment and stood at 4 per cent in 1995.[23]

Table 5.12 presents more detailed data on the employment prospects of job losers and job leavers. In an attempt to control for the effects of the business cycle, it compares the trough of the 1980s to that of the 1990s. Bearing in mind conceptual and measurement problems, during the 1990s trough the proportion of job losers without work was highest in Spain, followed by Denmark, Australia, Canada, Finland and France. It was lowest in Japan, followed by Portugal, the Netherlands and Austria. Job loss stemming from dismissals or redundancies may have a particularly strong effect on employment security. During the 1990s, this "rate" was highest in

Denmark, Greece, Finland, Germany, Ireland and the United Kingdom, while between the downturn of the 1980s and that of the 1990s, it increased the most in Denmark, Germany, Belgium and Greece.[24]

A more detailed multivariate analysis for nine EU countries reveals that there has been a significant increase in the proportion of job losers currently without work, over and above that expected on the basis of the cycle, of approximately 1 percentage point on average across all the countries. This rise began in 1991 and has persisted through to 1995.[25] There has also been a smaller absolute, but *larger* proportional, increase in the percentage of job leavers currently without work. Indeed, this rise was large enough to bring about a significant decline in the share of job losers in total separations, as measured here. Overall, the 1990s have witnessed an increase in the numbers of both unsuccessful job losers and unsuccessful job leavers.

Across countries and over time, the differences shown in Table 5.12 may indicate real differences in the probability of losing or leaving a job (s), real differences in the likelihood of finding a new job (r) or some combination of each. Unfortunately, little data on either are available separately. Another measure which reflects both s and r is the proportion of workers who are currently searching for another job because they believe their current one is at risk. This is also graphed in Chart 5.2. The level of this type of search has increased notably during the 1990s, as compared with the 1980s.[26] This rise could

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Box 1. **Job losers and job leavers: measurement issues**

Table 5.12 and Chart 5.2 present data on those currently either unemployed or not in the labour force who left their job due to layoff (job losers) and those who left voluntarily (job leavers). The number of currently jobless job losers and job leavers are expressed as a percentage of employment (usually an average of the current and previous periods). As such, these percentages represent one measure of the risk that employed workers will become jobless. These data are not measures of either the probability of being laid off or the probability of quitting a job. Both probabilities are flows over a given period of time, whereas the available data are stocks. Conceptually, the probability of layoff is the proportion of workers at time t who, one period later, had lost that job and are either unemployed, not in the labour force or had found another job. However, the data presented here concern only *former* employees who are currently without a job.

There are considerable differences in measurement across countries. The most marked are between the countries of the European Union and all others. In the former, job losers and job leavers who last worked within the previous six months are included. In Australia, only individuals who are currently unemployed and left a full-time job within the previous two years are included. In Canada, individuals who are currently unemployed or not in the labour force and who worked within the previous twelve months are included. In Japan, only the currently unemployed are included and no time limit is specified as to when they last worked. Finally, in the United States, only the currently unemployed who last worked within the past five years are included. These differences clearly restrict the comparability of the data.

Table 5.12. **Estimated separation rates by reason for leaving last job**

For those currently unemployed or not in the labour force who left jobs within the past 6 months

| | Layoffs and quits (per cent of total employment) | | Layoffs (per cent of total employment) | | | | | | [(Layoffs)/ (Layoffs + Quits)] (percentages) | |
| | | | All | | Dismissals and redundancies | | Temporary contracts | | | |
	Trough 1980s[a]	Trough 1990s[a]	Trough 1980s[a]	Trough 1990s[a]	Trough 1980s[a]	Trough 1990s[a]	Trough 1980s[a]	Trough 1990s[a]	Trough 1980s[a]	Trough 1990s[a]
European Union										
Austria	..	3.1	..	1.9	..	1.1	..	0.2	..	61.6
Belgium	1.1	4.1	1.1	3.0	0.5	1.7	0.4	0.8	96.9	73.7
Denmark	5.1	8.6	4.3	7.1	2.2	4.0	2.0	2.5	82.7	82.2
Finland	..	6.1	..	5.5	..	2.0	..	3.5	..	89.7
France	3.2	5.9	2.9	5.0	1.3	1.8	1.4	3.1	91.7	85.9
Germany[b]	1.6	4.3	1.1	2.8	0.7	2.0	0.2	0.3	70.4	65.5
Greece	4.5	7.7	4.1	4.9	1.7	2.8	2.3	1.3	91.4	63.1
Ireland	3.7	5.2	3.4	3.3	2.5	1.8	0.9	1.4	90.8	64.4
Italy	1.5	2.7	1.4	2.3	0.5	0.8	0.8	1.4	91.9	85.7
Netherlands	3.4	2.5	3.1	1.7	2.8	1.2	0.0	0.1	89.6	68.6
Portugal	3.1	1.1	2.9	0.8	0.5	0.3	2.3	0.2	91.9	69.6
Spain	7.7	14.8	7.2	12.8	1.5	1.7	5.7	10.8	94.3	86.7
Sweden	..	5.9	..	4.1	..	1.3	..	2.6	..	68.7
United Kingdom	4.4	4.4	2.7	2.7	1.8	1.8	0.8	0.8	61.6	60.5
Weighted average[c]	2.7	4.4	2.2	3.2	1.2	1.7	0.9	1.2	81.0	72.1
Other countries										
Australia	..	7.9	..	5.7	..	..	..	..	..	72.1
Canada	9.9	9.2	5.9	5.7	..	..	..	..	59.3	62.0
Japan	1.9	2.4	0.6	0.7	..	..	..	..	29.1	27.3
United States	5.1	4.0	4.3	3.1	..	..	..	..	83.8	79.1

a) For countries, periods are as follows: Australia (1991-1992); Austria (1995); Belgium (1987-1988, 1993-1994); Canada (1982-1983, 1992-1993); Denmark (1984, 1993-1994); Finland (1995); France (1984-1985, 1993-1994); Germany (1984, 1993-1994); Greece (1983-1984, 1993-1994); Ireland (1983-1984, 1993-1994); Italy (1984-1985, 1993-1994); Japan (1987-1988, 1996); the Netherlands (1983, 1993-1994); Portugal (1986, 1994-1995); Spain (1987, 1993-1994); Sweden (1995); the United Kingdom (1983, 1993-1994); and the United States (1982-1983, 1991-1992).
b) Prior to 1991, data refer to former western Germany.
c) Includes only Belgium, Denmark, France, Germany, Greece, Ireland, Italy, the Netherlands and the United Kingdom.
Sources: Data for the countries of the European Union are from unpublished data provided by Eurostat on the basis of the European Community Labour Force Survey. Data for Australia are from the Australian Bureau of Statistics, *The Labour Force, Australia,* various years. Data for Canada are from Statistics Canada, *Labour Force Historical Review.* Data for Japan are from the Statistics Bureau, Management and Coordination Agency, *Report on the Special Survey of the Labour Force Survey,* various years. Data for the United States are from the Bureau of Labor Statistics, *Employment and Earnings,* various years. See Annex 5.A for definitions.

come about from an increased risk of layoff in the 1990s or, equivalently, from greater perceived difficulty in finding a new job.

Further statistical evidence on the duration of joblessness following layoff is available for European Union countries. Beginning in 1993, there was an increase in the number of job losers who had been jobless for between one and three years, expressed as a percentage of employment. The number rose from a low of 0.42 per cent in 1990 to 0.79 per cent by 1995.[27] Both youth and older workers are more at risk of this long duration of joblessness following layoff. Its incidence is highest in Spain, followed by Ireland, France and Denmark, and is lowest in the Netherlands and the United Kingdom.

2. The characteristics of the next job

The discussion above has shown that there is some evidence of a rise over recent years in the number of job separations leading to joblessness, and of an increase in the likely duration of that joblessness. Both phenomena may well have contributed to increased feelings of job insecurity. However, the risk of employed workers becoming jobless is not the only issue in the debate on insecurity. The characteristics of the next job that is expected to be found, as represented by V_N in Section B.4, are likely important, too.

One key characteristic of the next job is how long it lasts. The figures in Table 5.10 show that almost half of those with tenure of less than

one year do not last into the second year. This high turnover reflects real barriers to finding a stable job: those laid-off have to restart the process of attempting to establish themselves with a new employer, while quits so early in the match could reflect the difficulty of finding a satisfactory job.

Another important aspect of the next job is how much it pays. It is difficult to obtain cross-country data on the wages that those who separate will earn in subsequent positions. In the United Kingdom, real wages of entry-level jobs fell relative to other jobs between 1979 and 1991 [Gregg and Wadsworth (1996*a*)]. One summary indicator of the distribution of wages is overall earnings inequality. The correlation between the "norm" level of insecurity in 1996 in Table 5.1 and the level of earnings inequality figures reported in OECD (1996) is positive but weak ($\rho = 0.17$, N = 15), whereas that with the change in earnings inequality between 1980 and 1990 is stronger ($\rho = 0.41$, N = 16).

Detailed evidence on the process of transition from one job to another is available from studies of displaced workers (*i.e.* workers who were laid-off from a permanent job match). North American results show that there are substantial costs associated with this displacement. Displaced workers are less likely to be employed subsequently than those who quit, those who are re-employed are less likely to be employed in full-time jobs and, finally, even if re-employed in full-time jobs, they tend to earn substantially less than equivalent non-displaced workers, and less than their own pre-displacement earnings [Crossley, Jones and Kuhn (1994); Farber (1993, 1996); Podgursky and Swaim (1987)].[28] Moreover, studies for the United States have shown that these earnings losses are persistent [Topel (1990); Ruhm (1991); Jacobsen, Lalonde and Sullivan (1993); Huff Stevens (1997); Schoeni and Dardia (1996)].

Overall, the evidence suggests that job displacement is associated with significant costs in the short-term, which may persist for some groups. Over time, Farber (1993, 1996) concludes that there has been no change in the costs of displacement in the United States between the 1980s and the 1990s. However, Polsky (1996) finds that the costs of layoff increased significantly between 1976-1981 and 1986-1991. It is, however, very difficult to obtain cross-country evidence on these costs and on their evolution over time.

3.   Institutional features of the labour market

The analysis so far has sought to explain job insecurity in terms of the likelihood of separation (*s*), the difficulty of finding a new job (*r*) and the likely characteristics of the new job (V_N). This subsection considers whether insecurity may also be related to institutional features of countries' labour markets.

One obvious feature is the degree of employment protection legislation (EPL), which measures the extent of legal protection given to workers in case of layoff [see OECD (1994)]. Three measures of EPL were considered: the number of weeks of advance notice required for individual dismissals; an aggregate index of EPL for all workers; and an aggregate index of EPL for permanent workers. All correlations with perceptions of insecurity were negative ($\rho = -0.24$, N = 20; $\rho = -0.09$, N = 20; and $\rho = -0.15$, N = 18, respectively), in line with prior expectations, but none were significant. A second feature is the extent of temporary employment, which depends to a large degree on labour market regulations [OECD (1996)]. There is, however, no cross-country relationship between the extent of temporary employment in the labour market and reported job insecurity ($\rho = -0.17$, N = 16); nor is there strong evidence that those countries where temporary employment has expanded the most are also those where insecurity has risen the most.

A third relevant institutional factor is the unemployment benefit replacement rate, which provides an indication of the degree of financial hardship associated with job loss – as represented by V_U in Section B.4. The OECD summary measure of benefit entitlements – which is computed as an average of 18 gross replacement rates [Martin (1996)] – declined in 13 of 20 countries between 1985 and 1995, though by no more than 8 percentage points, while it increased in the remaining seven by up to 19 percentage points. However, this index does not take full account of changes in other aspects of UI systems, such as programme eligibility requirements or benefit duration [see OECD (1996)]. Considering the distribution of replacement rates, it is of interest to note that the three countries with the lowest summary measures of gross replacement rates (Japan, the United Kingdom and the United States) figure among the four countries with highest levels of perceived employment insecurity. Considered across all countries with available data, there is a negative correlation between the two ($\rho = -0.42^*$, N = 20).

Last, a number of commentators have suggested that the collective bargaining system may play an important role in moderating employer-employee relationships. One objective of unions is likely to improve their members' job security [Freeman and Medoff (1984); Polivka (1996)]. In fact, the correlations between insecurity and variables measuring aspects of the collective bargaining system yield some of the most significant results. Specifically, the 1996 "norm" levels of job insecurity are significantly negatively correlated with the level of

collective bargaining coverage (ρ = −0.44*, N = 18), but not significantly with union density (ρ = −0.30, N = 18). Further, negative correlations are also found between the 1985–1995 change in insecurity in seven European countries in Table 5.3 and both the 1980-1994 change in trade union density (ρ = −0.70*, N = 7) and the change in collective bargaining coverage (ρ = −0.49, N = 5). One possible explanation of this finding is that workers not covered by union agreements may feel more exposed to changes in the macroeconomic environment. Also, the rank correlation between the centralisation of the collective bargaining system and insecurity is statistically significant (ρ = −0.47*, N = 18): workers in countries with more decentralised bargaining report higher job insecurity.

This section has considered a range of measures of the *consequences* of job loss as a potential explanation for rising job insecurity. As a general measure of the chances of re-employment, job insecurity across countries partly reflects differences in the business cycle. In addition, there is a rising risk of joblessness for the employed, over and above that predicted by the business cycle, stemming either from an increase in separations or from a fall in the probability of re-employment, or both. Considering the characteristics of the new job, high and rising short-term turnover points to increased difficulty in establishing a satisfactory new match. Further, numerous studies have highlighted that displaced workers face substantial and persistent earnings losses, although evidence is limited to North America. Last, some institutional features of the labour market are correlated with job insecurity. Most notably, workers in countries with higher levels of unemployment benefit replacement rates and higher, or more centralised, union coverage are less likely to feel insecure.

E. CONCLUSIONS

There has been a widespread and, in some countries, very sharp increase in individuals' perceptions of job insecurity between the 1980s and the 1990s. One point of note is the high levels of insecurity reported in countries where unemployment is low or falling: Japan, the United Kingdom and the United States. Job insecurity may well result from a wide range of different objective factors. In addition to measures of job stability, tenure and retention rates, insecurity also depends on the consequences of separation, such as the ease of obtaining a new job, the characteristics of the new job, and the experience of being jobless. It is likely that various combinations of these factors lie behind different countries' experiences of increased insecurity.

In terms of data on average job tenures with the same employer and the likelihood of remaining with the same firm, there is little overall evidence of increased job instability. This apparent paradox can be resolved in a number of ways. One critical point is that tenure and retention rates are less-than-ideal measures of insecurity as they are endogenous, being to an extent determined job insecurity itself; another is that the consequences of separation have worsened. Considering the latter, some part of job insecurity seems to come from the general macroeconomic environment, which impacts upon the ease of obtaining a new job: countries with better economic performance have lower levels of insecurity. The sensitivity of measures of tenure to the cycle (countries with weak hiring having, *ceteris paribus*, longer tenure) helps to explain why increasing job insecurity is found at the same time as one observes little movement in average tenure. In addition, in European Union countries there is a rising risk of joblessness for the employed, although accurate measurement of this phenomenon is difficult, and the levels seem small relative to the extent of perceptions of job insecurity.

In addition, workers' perceived job insecurity is correlated with some labour market institutions. Insecurity is significantly lower in countries where the unemployment benefit replacement rate is higher, where there is a higher level of collective bargaining coverage, and in countries where collective bargaining is more centralised. The former may well reflect the recognition by workers of a safety net ameliorating the experience of being unemployed when they feel that their jobs are under threat. The latter two are more difficult to interpret, but could reflect the ability of unions to protect their members against insecurity.

For some groups of workers there is no paradox. Less-educated and less-skilled workers report both higher levels of job insecurity, compared with their more educated and skilled counterparts, and have lower tenure and retention rates, as well as declines in both. One important consideration is the extent to which declines in their retention rates might reflect changes in human resource management practices and the demand for less-skilled workers. The process of finding a new job and a durable match may be much more difficult for these groups, as there is likely greater competition for entry-level jobs, though this chapter has not examined this question. These are also the workers most likely to experience considerable time in low-paying jobs or to cycle between jobs and no work at all.

Notes

1. For example, information contained in wave five of the British Household Panel Survey shows a very strong link between satisfaction with job security (measured on a one to seven scale) and self-reported general happiness, depression, strain, feelings of self-worth and problems sleeping. Darity and Goldsmith (1996) note that feelings of insecure employment are correlated with stress and depression, and can reduce the worker's commitment to the employer. Burchell (1993) uses British panel information to show that the insecurely employed had psychological well-being levels closer to those of the unemployed than to those of employees; in addition, men who moved from unemployment at the time of the first survey to insecure employment at the time of the second survey showed no improvement in their psychological health.

2. The search was for paragraphs in stories which included: 1) one of the G7 country names; 2) the words "job" or "employment" and; 3) "fear", "uncertain!", "secur!" or "insecur!". The "!" in 3) picks up all trailing letters, so that "secur!" will find both secure and security. The databases were searched from the 1st of January 1982 to the 12th of December 1996, with the number of stories found per year being imputed to the midpoint (July 1st) of each year, except for 1996, for which the midpoint of the dates examined was the 21st of June. The data presented are underestimates, as many stories about job insecurity will not mention a country name (*e.g.* a story in a US newspaper about US job insecurity), and because stories referring to countries in the adjectival form were not picked up (the problem being that "American" picks up stories about Southern and Central America, as well). There is, however, no reason to believe that developments in this number over time are not representative. The data were very kindly supplied by David Fan, of the University of Minnesota. Further details regarding the method of content analysis are contained in Fan (1994).

3. Indeed, it is possible that increased media coverage fuels perceptions of insecurity. This chapter's finding of very sharp increases in such perceptions across almost all OECD countries, in spite of obvious differences in media coverage between countries, argues against this hypothesis.

4. The "norm" level of employment security is calculated as the simple average of the percentage reporting favourable answers (as shown in the parenthesis) to the following four questions: 1) I am frequently worried about the future of my company. (Disagree/Tend to disagree); 2) My company offers a level of job security as good as, or better than, the job security offered in most other companies in our industry. (Agree/Tend to agree); 3) I can be sure of a job with my company as long as I perform well. (Agree/Tend to agree); and 4) How satisfied are you with your job security? (Very satisfied/Satisfied).The norm level of employment insecurity is then 100 per cent minus the norm level of employment security.

5. Alternative information on job insecurity in Japan shows that 43 per cent of workers in 1996 reported that they tend to disagree that they feel sure of their job security, or that they feel unsure of their job security (National Survey on Lifestyle Preferences Fiscal Year 1996, Economic Planning Agency). This figure was 27 per cent in 1982 (Public Opinions Survey, Prime Minister's Office). The percentage saying that they were sure of their job security fell from 22 per cent to just under ten per cent over the same period.

6. The same broad patterns of insecurity among workers are found in the 1989 ISSP dataset and in a number of single-country datasets [the 1994 International Social Science Survey for Australia [Evans and Kelley (1995)], the 1995 wave of the German Socio-economic Panel (GSOEP), the 1995 wave of the British Household Panel Survey for Great Britain and the 1993 Survey of Working Conditions for Norway]. More detailed relationships between individual and job characteristics and self-reported job insecurity for British workers are described in Clark (1997) and International Survey Research (1995*b*).

7. It is of interest to note that several other aspects of the job, training, company identification, and performance and development, all of which might be identified with longer-term employment matches, are also evaluated by workers as having deteriorated over the same period.

8. Panel data allows those who express worries about their job security to be followed. 27 per cent of those with the lowest level of satisfaction with their job security at wave one of the BHPS had separated from their employer by wave two (late 1992), compared to only 12 per cent of those with the highest satisfaction level. By wave five (late 1995), these figures were 51 and 35 per cent, respectively. It is also of interest to find out where those who separated went. At wave two, 22 per cent of the separators who reported wave one satisfaction of 4 or below (on the 1 to 7 scale) were unemployed, compared to 15 per cent of the separators who had wave one satisfaction of 5 to 7. By wave five, 35 per cent of the separators whose wave one satisfaction with job security was 4 or below had experienced at least one spell of unemployment, compared to 25 per cent of those with wave one satisfaction of 5 to 7.

9. The tenure figures presented in this chapter refer to the average length of incomplete spells, as reported

by workers in household surveys: employees are saying how long they have been with their current employer. As they can expect to remain with their current employer for some time further, the average duration of a completed employer-employee match is greater than the average duration of an incomplete spell. In a steady state, it is twice as large [OECD (1984)].

10. This difference persists when only workers aged 25 and over are considered.

11. The Finnish decline reflects the sharp recession and steep rise in unemployment at the beginning of the 1990s. The fact that average tenure in the early 1990s in both France and Finland rose while retention rates declined could stem from both weak hiring and from a likely concentration of layoffs on shorter-tenure workers. Although the Spanish decline partly reflect a change in the sample, it is largely due to an increased use of temporary contracts. The earlier period, 1987-1992, includes the self-employed and family workers while the period 1990-1995 covers only employees. The self-employed typically have longer tenure than employees, so the change in sampling leads to an overestimate of the decline in retention rates.

12. The comparisons of the four-year retention rates for 1979 through 1991 with the five-year rate in 1991-1996 are carried out by multiplying the historical five-year retention rate for 1991-1996 in Table 5.8 (48.6 per cent) by the ratio of the average four-year contemporaneous retention rate in 1991 and 1996 (49.7 per cent) to the average five-year contemporaneous retention rate over the same two years (43.3 per cent). This yields an estimate of 55.8 per cent.

13. Changes in hiring activity during the five-year period between observations do not affect the retention rate, but they do affect average tenure. However, changes in separations over the economic cycle will affect both.

14. The 0-5 to 5-10 year retention rate in the United Kingdom, the only one which can be calculated, has fallen for the less-educated but risen for the higher-educated.

15. One check on the reliability of the three months or under tenure data is to compare them with hiring rates from administrative sources [OECD (1996)]: the results are similar in a number of countries, but the tenure data underestimate hiring in others.

16. The difference between these figures and the separation rates presented above between the first and second quarter sometimes appears too low. This is because the one to two-year separation rate misses out a number of separations during the course of the first year, which are captured in shorter-term separation rates.

17. For all of the correlations, a "*" after the correlation coefficient will indicate significance at the ten per cent level.

18. It is, however, true that the retention rate for those with a university education in the United Kingdom is lower than that for those with other kinds of tertiary education.

19. Another possibility is that job loss amongst certain, high-profile, groups may have contributed to a general feeling of job insecurity. For example, if long-tenure was once perceived as indicating complete job security, declining retention rates amongst long-tenure workers may have brought about feelings of insecurity for all workers; evidence for or against this is not available.

20. There is a significant cross-country correlation ($\rho = 0.52^*$, N = 13) between the percentage of employees searching for a job because they believe their current job to be at risk or because they have a temporary contract which is ending, which might be thought of as an objective indicator of insecurity, and the ISR measure of reported insecurity.

21. One reason for the weaker correlation with unemployment may be that its nature differs significantly across countries, in particular in terms of its duration. The incidence of long-term unemployment, which is one indicator of the degree of difficulty associated with labour market transitions, has not increased between the 1980s and the 1990s. Experiments with the incidence of long-term unemployment did not yield any significant correlations.

22. Another issue, which it is difficult to address here owing to the lack of good comparable data, is that an increase in the proportion of separations due to layoffs, rather than quits, may bring about greater insecurity due to a feeling of loss of control over separation. Available evidence shows that, in Canada, the permanent layoff rate was unchanged while quits fell [Picot and Lin (1997)], and layoffs rose, while quits fell in France [Chambin and Mihoubi (1995); Audirac, Barthelemy and Jaulent (1996)] and the United States [Polsky (1996)].

23. The correlation between the norm level of job insecurity in 1996 and these measures of layoffs and quits is insignificant.

24. Considering only currently unemployed individuals in countries of the European Union, which makes these data more comparable with those of some other countries, does not alter the pattern of results in Table 5.12 and Chart 5.2.

25. The estimated equation for the proportion of job losers currently jobless in country i at time t is:

(Job losers/employment)$_{it}$ = α_i + β_1Year$_t$ + β_2Output gap$_{it}$ + β_3Gender$_{it}$ + β_4Age$_{it}$ + β_5Country$_i$ + E$_{it}$

where:

Year$_t$ = a vector of twelve dummy variables covering 1983 to 1995, with 1985 being the omitted category;

Output gap$_{it}$ = the difference between actual and potential output;

Gender$_{it}$ = a gender dummy variable;

Age$_{it}$ = a vector of nine dummy variables covering ages 15 to 64 years in five-year bands, with age 40-44 years being the omitted category;

Country$_i$ = a vector of eight dummy variables, with Germany being the omitted category; and

E$_{it}$ = a stochastic error term.

The results, using weighted least squares with employment as the weight, are as follows:

(Job losers/ employment) = 0.47** + 0.14(1983) − 0.02(1984) + 0.13(1986) + 0.33*(1987) + 0.10(1988) − 0.11(1989) − 0.19(1990) + 0.49**(1991) + 1.45**(1992) + 1.36**(1993) + 1.20**(1994) + 0.93**(1995) + 0.004(Output gap) + 0.12(Women) + 2.52**(15-19 years) + 2.69**(20-24 years) + 1.12**(25-29 years) + 0.47**(30-34 years) + 0.21(35-39 years) + 0.06(45-49 years) + 0.44**(50-54 years) + 2.48 **(55-59 years) + 4.12**(60-64 years) − 0.01(Belgium) + 2.43**(Denmark) + 1.83**(France) + 1.77** (Greece) + 1.09** (Ireland) + 0.03 (Italy) − 0.46**(Netherlands) + 0.36**(United Kingdom)

Adjusted R^2 = 0.48, N = 2 270

where ** and * indicate significance at the 1 and 5 per cent level, respectively, using a two-tailed T-test. These results were unchanged when missing data for Germany (1983) and for the Netherlands (1984 and 1986) were replaced by data for the subsequent year, as in Chart 5.2.

26. It may seem rather striking that only 2 per cent of employees are searching for fear of losing their current jobs. However, this percentage represents search in one given month only and, depending on how quickly the subsequent quit or layoff occurs, the annual figure will be much higher.

27. Multivariate analysis confirms an increase, beginning in 1993, in the percentage of currently unemployed job losers who have been jobless for between one and three years. The estimated equation is:

$(\sum_{k=1}^{3} \text{Job losers}_{it-k} / \sum_{k=1}^{3} \text{Employment}_{it-k})$ = α$_i$ + β$_1$Year$_t$ + β$_2$Output gap$_{it}$ + β$_3$Gender$_{it}$ + β$_4$Age$_{it}$ + β$_5$Country$_i$ + E$_{it}$

where:

k = 1 refers to joblessness of 12 to 17 months, k = 2 refers to joblessness of 18 to 23 months, and k = 3 refers to joblessness of 24 to 35 months;

Employment$_{it-k}$ = employment with an appropriate lag

Year$_t$ = a vector of eight dummy variables covering 1987 to 1995, with 1987 being the omitted category;

Output gap$_{it}$ = the ratio of the difference between actual and potential output;

Gender$_{it}$ = a gender dummy variable;

Age$_{it}$ = a vector of nine dummy variables covering ages 15 to 64 years in five-year bands, with 40 – 44 years being the omitted category;

Country$_i$ = a vector of ten country dummy variables, with Germany being the omitted category; and

E$_{it}$ = a stochastic error term.

The year dummy and output gap results, from a weighted least squares regression with the sum of lagged employment as the weight, are as follows:

$(\sum_{k=1}^{3} \text{Job losers}_{it-k} / \sum_{k=1}^{3} \text{Employment}_{it-k})$ = − 0.06(1988) − 0.10**(1989) − 0.18**(1990) − 0.16**(1991) − 0.08*(1992) + 0.11**(1993) + 0.26**(1994) + 0.14*(1995) − 0.02**(Output gap) + 0.13**(Women) + age dummy variables + country dummy variables

Adjusted R^2 = 0.60, N = 1 897

where ** and * indicate significance at the 1 and 5 per cent level, respectively, using a two-tailed T-test.

28. Studies find that earnings losses, as well as the duration of post-displacement unemployment, are positively correlated with age but negatively correlated with education, and that women may experience longer spells of unemployment [Gray and Grenier (1997)]. Burchell (1996), however, uses British work history data to show that men are both more likely to move from secure to insecure jobs, and less likely to move from insecure to secure jobs.

ANNEX 5.A

Sources and definitions of data on enterprise tenure and estimates of job losers and job leavers

1.   Data sources

Enterprise tenure statistics generally refer to the amount of time a worker has been continuously employed by the same employer. Sometimes the tenure question is: "When did you start working with your present employer?". Sometimes it is phrased: "How long have you been working continuously for your present employer?". Differences in the wording can result in different responses. Usually, tenure questions are asked in a household survey; the only exceptions, for this chapter, are Japan, where most of the data come from employer responses, and Finland, where most come from an administrative source. Unless otherwise noted, the data refer to wage and salary employment.

Australia

Unpublished data on tenure for 1984, 1986, 1991 and 1996 from a supplement to the monthly Labour Force Survey, conducted each February since 1975 by the Australian Bureau of Statistics. Industry data were supplied on the basis of the International Standard Industrial Classification ISIC (Rev. 2) and were regrouped into the Nomenclature générale des activités économiques dans les communautés européennes (NACE) as follows: Trade, restaurants and hotels combines wholesale and retail trade and hotels and restaurants. Finance, insurance, real estate and business services combine financial intermediation and real estate, renting and business activities. Community, social and personal services combine public administration and community, social and personal services. Data on occupations have been converted from the Australian Standard Classification of Occupations (ASCO) to International Standard Classification of Occupations [ISCO-88 (com)], with some re-grouping. Professionals and para-professionals is equivalent to professionals and technicians and associate professionals. Tradespersons, plant and machine operators, labourers and related workers is equivalent to the combined total of skilled agricultural and fishery workers, craft and related trades workers, plant and machine operators and assemblers and elementary occupations.

Estimates of job losers and job leavers are taken from issues of the Australian Bureau of Statistics, *The Labour Force, Australia*, Catalogue No. 6203.0. These estimates represent individuals who were currently unemployed, but had worked in full-time jobs for two weeks or more during the past two years. Job losers were laid off or retrenched from their job, left because of ill health or injury, left because the job was a temporary one, or, if self-employed, the business closed because of financial difficulties. Persons who were stood down (waiting to be recalled to a full- or part-time job) are excluded. Job leavers left their job because of unsatisfactory work arrangements, pay or hours, to return to studies or, if self-employed, they closed the business for other than financial reasons.

Canada

Unpublished annual average household data from the monthly Labour Force Survey for 1980, 1985, 1990 and 1995, as well as data from the *Labour Force Historial Review*, were provided by Statistics Canada. Canadian data, classified using the national Standard Industrial Classification (SIC), were regrouped into the NACE as follows: Agriculture and other primary industries are equivalent to the combination of agriculture, hunting, forestry and fishing, and mining and quarrying. Electric power, gas and water utilities is equivalent to electricity, gas and water supply. Transportation, pipelines, storage and warehousing and communication are equivalent to transport, storage and communication. Finance, insurance and real estate and business services are equivalent to financial intermediation and real estate, renting and business activities. Educational services, health and social services and other services are equivalent to community, social and personal services. Data on occupations using the national Occupational Classification Manual (1980) were regrouped into the ISCO-88 as follows: Medicine and health, other professionals and teaching and related are grouped as professionals and technicians and associate professionals. Construction trades and primary occupations correspond to the combined total of skilled agricultural and fisheries workers and elementary occupations. Processing, machining and fabricating and transport equipment operating are equivalent to plant and machine operators and assemblers. Material handling and other crafts is equivalent to craft and related trades workers.

Estimates of job losers and job leavers are based on individuals either currently unemployed or not in the labour force, and who had separated from their last job within the previous year. Unemployed job losers refers to dismissal for economic reasons or to the end of a seasonal or temporary job. Individuals temporarily laid-off are excluded. For those not in the labour force, job losers are as defined above, except that individuals temporarily laid off are included. Job leavers are individuals who left their job because of personal responsibilities, school or other

reasons. Individuals who left their job because of illness or who retired are not included.

Czech Republic

Data for 1995 are from the Czech Statistical Office, Labour Force Sample Survey.

European Union

Unpublished data from the European Community Labour Force Survey provided by EUROSTAT are used for tenure estimates for 1992-1995 for the following countries of the European Union: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom. The month and year when each employed person began their current employment is recorded. They are assumed to have begun employment on the 15th day of the month. Tenure is then calculated in days, based on the difference between this and the survey reference week.

Unpublished data from the same survey are used to calculate the estimates of job losers and job leavers over the period 1983 to 1995. This is based on survey questions concerning individuals currently unemployed or not in the labour force who were previously employed. The sample was limited to those whose last job ended within the previous six months. For the period 1983-1991, job losers comprise: dismissals and redundancies, the end of a job of limited duration and early retirement for economic reasons. Job leavers consist of resignations, separations for personal reasons and separations for other reasons. Persons who have retired for other than economic or health reasons, those who left work for illness or incapacity, and individuals called up for compulsory military or community service are excluded. For the period 1992-1995, job losers comprise: dismissals and redundancies, the end of a job of limited duration and early retirement. Job leavers include separations for personal or family responsibilities, education or training and other reasons. Persons who left because of normal retirement, illness or disability and compulsory military or community service are excluded. The number of job losers and job leavers is divided by the average of the current and the previous period's level of employment.

Finland

Data are from the Register of the Central Pension Security Institute, published annually in the *Työeläkejärjestelmän tilastollinen vuosikirja*, Osa II (Statistical yearbook of the Employees' Pension Scheme, Part II). Data used are for 1980, 1985, 1990 and 1995. Data refer to persons covered by the private sector's main pension scheme, *i.e.* the Employees' Pensions Act (TEL). This scheme covers 85 per cent of all employees.

France

Unpublished household data from the annual Enquête sur l'Emploi conducted in March were provided by the Institut national de la statistique et des études économiques (INSEE) for 1982, 1985, 1990 and 1995.

Germany

Unpublished household data from the Socio-economic Panel, a representative longitudinal survey of the resident population, conducted by the Sonderforschungsbereich 3 of the Universities of Frankfurt and Mannheim and the Deutsches Institut für Wirtschaftsforschung in Berlin. Data used in this chapter refer to the former western Germany only. Data are for 1984, 1989 and 1994.

Japan

Tenure data are from *Chingin Kozo Kihon Tokei Chosa Hokoku* (Basic Survey on Wage Structure), Policy, Planning and Research Department, Ministry of Labour for 1980, 1985, 1990 and 1995. This is a yearly survey of private sector enterprises and public corporations under the National Enterprise Labour Relations Law or the Local Public Corporation Labour Relations Law. It includes establishments with ten or more regular employees and excludes agriculture, forestry and fisheries. Regular employees include persons hired for an indefinite period, as well as those hired for a fixed period longer than one month and temporary or daily workers hired for eighteen days or more in April and May. Industry data are classified using the national SIC which were regrouped into the NACE as follows: Mining is equivalent to mining and quarrying. Electricity, gas, heat supply and water is equivalent to electricity, gas and water supply. Wholesale and retail trade, eating and drinking places is equivalent to the combination of wholesale and retail trade and hotels and restaurants. Transport and communication is equivalent to transport, storage and communication. Finance and insurance is equivalent to financial intermediation. Real estate is equivalent to real estate, renting and business activities. Services is equivalent to community, social and personal services.

Job losers and job leavers are estimated using published data in the *Report on the Special Survey of the Labour Force Survey*, Statistics Bureau, Management and Co-ordination Agency, published in February of each year. Only unemployed individuals are included and no time limit is specified as to when the individual last held a job. Job losers are those who previously held a job and left it for one of the following reasons: personnel reduction, dissolution or bankruptcy of the company, business prospects were poor, and other reasons relating to the business or employer. Job leavers are those who left a job for one of the following reasons: to look for a more favourable job, to keep house, to attend school or for health reasons, for marriage or maternity or to take care of children and for other reasons. Excluded are retirements or departures due to old age.

Korea

Data in Table 5.6 are from the Ministry of Labour, *Yearbook of Labour Statistics* for 1995, while data in Table 5.5 are from the National Statistics Office, *Report on the Employment Structure Survey*, 1992, which is published quinquennially.

The Netherlands

Unpublished household data from the *Arbeidsaanbodspanel*, a longitudinal survey, provided for 1985, 1989, 1990 and 1994 by the Organisatie voor Strategisch Arbeidsmarktonderzoek (OSA).

Poland

Data are from the Labour Force Survey, which is conducted quarterly, for November 1995, and were provided by the Central Statistical Office.

Spain

Unpublished household data from the quarterly Labour Force Survey, provided for the second quarters of 1987, 1990, 1992 and 1995 by the Instituto Nacional de Estadistica (INE). Self-employment is included in the estimates for 1987 and 1992, but not in the estimates for 1990 and 1995.

Switzerland

Unpublished household data from the annual Swiss Labour Force Survey, provided for 1991, 1995 and 1996 by the Federal Statistical Office. Apprentices are excluded. Industry data based on the national classification were recoded to the NACE as follows: Crafts and trades/manufacturing is equivalent to manufacturing. Energy and water is equivalent to electricity, gas and water supply. Construction and civil engineering is equivalent to construction. Trade, restaurants/hotels and repair services are equivalent to the combination of wholesale and retail trade and hotels and restaurants. Banks, insurance and real estate, etc. is equivalent to the combination of financial intermediation and real estate, renting and business activities. The combination of other services and work in private households is equivalent to community, social and personal services.

United Kingdom

Unpublished household data from the annual (now quarterly)Labour Force Survey, conducted in the Spring, provided for 1985, 1990 and 1995 by the Office of National Statistics.

United States

Data on employer tenure are unpublished estimates derived from supplements to the Current Population Survey in January 1979, 1983, 1987, 1991 and 1996. United States data classified, using the national Standard Industrial Classification [SIC (1987)], were regrouped into the NACE as follows: Hotels and restaurants are included in both wholesale and retail trade, and community, social and personal services. Transportation, communications and other public utilities (which includes electricity, gas and water supply) is equivalent to electricity, gas and water supply, and transport, storage and communication. Finance, insurance and real estate, and business and repair activities are equivalent to the combined total of financial intermediation and real estate, renting and business activities. Personal services, private households, entertainment and recreation services, and professional and related services (including legal and engineering services) are equivalent to community, personal and social services. Data on occupations using the national Standard Occupational Classification [SOC (1980)] were regrouped into the ISCO-88 as follows. Technicians and related support is equivalent to technicians and associate professionals. Administrative support, including clerical, is equivalent to clerks. Sales occupations and service occupations is equivalent to service workers and shop and market sales workers. Farming, forestry and fishing is equivalent to skilled agricultural and fishery workers. Precision production, craft and repair is equivalent to craft and related trades workers. Machine operators, assemblers and inspectors and transportation and material moving occupations are equivalent to plant and machine operators and assemblers. Handlers, equipment cleaners, helpers and labourers is equivalent to elementary occupations.

Job losers and job leavers are based on annual averages from the Current Population Survey published in *Employment and Earnings* for persons currently unemployed who lost their jobs within the previous five years. The reasons for job loss are: discharged for cause (fired), plant permanently shut down, company moved, reduction in staff, job came to an end, forced to retire or temporary job ended. Workers laid off temporarily (who had been given a date to return) or indefinitely (who expect to return within six months) are excluded.

2. Calculations of average tenure and historical retention rates

Average current enterprise tenure for Canada, Korea (Table 5.6) and Japan was taken directly from the source alone. For other countries, it was calculated by using the mid-points of each closed tenure interval. For the tenure group of twenty years and over, a common mid-point of 27.5 years was used.

Historical retention rates are estimated for five-year periods: (1986-1991, 1991-1996) in Australia; (1985-1990, 1990-1995) in Canada, Finland, France, Japan and the United Kingdom; (1984-1989, 1989-1994) in Germany; (1987-1992, 1990-1995) in Spain; and (1991-1996) in Switzerland. In the United States, retention rates are cal-

culated over four-year intervals (1979-1983, 1983-1987, 1987-1991), as well as for one five-year interval (1991-1996).

The calculation of historical retention rates is straightforward. Imagine that a representative survey in 1990 finds that there are 100 people with employer tenure of less than 5 years. Five years later, a similar survey finds 52 people with employer tenure of five years or more but less than ten years. All of these latter must have had tenure of under five years in 1990. The five-year retention rate for workers with less than five years of tenure from 1990 to 1995 is then 52 per cent.

To facilitate the presentation of data in Tables 5.8 and 5.9, different tenure groups have been combined to create a wider retention rate figure. For example, assume that the survey found 60 people with tenure of five years or more but less than ten years in 1990, and 39 people with tenure of ten years or more but less than fifteen years in 1995. The retention rate for this group of workers is then 65 per cent. The retention rate for workers with less than *ten* years of tenure is simply a weighted average of the retention rate for the under-five year group and the five-to-ten year group, with the weights being given by their relative shares of employment for workers with less than ten years of tenure in 1990 (which, in the example above, was 160):

$$rr_{0-10} = (100/160)rr_{0-5} + (60/160)rr_{5-10} = 56.9\%.$$

Further tenure groups can be added analogously. If all of the tenure groups in the economy are considered together, the result is the overall retention rate (*i.e.* for all workers in the economy), as presented in the first three rows of Table 5.8. Overall retention rates can be calculated in the same way by gender, education, and any other demographic characteristic for which information is available. Retention rates in this chapter refer to workers who were no older than 65 at the time of the second survey.

One potential difficulty which affects the calculation of some retention rates, and in particular the five-year retention rates computed in this chapter, is that of "data heaping". This arises from the tendency of individuals being surveyed to report round numbers when recalling events, such as the length of time spent with their current employer. Thus, there is a tendency to find reported tenure durations clustered around quinquennial points. A number of methods have been proposed to adjust the data to compensate for this [Ureta (1992); Swinnerton and Wial (1995)]. This issue remains the subject of considerable debate as to the best method to smooth the data and is beyond the scope of the present chapter.

3.   Econometric analysis of employer tenure

Comparisons of average tenure across countries may be influenced by cross-country differences in the demographic or occupational structure and other factors. Multivariate analysis can take these effects into account and give a more accurate picture of differences in average tenure across countries.

Data on average tenure is available for each country for four years (1992-1995), by gender and by ten five-year age groups. The number of occupation groups varies. Four common occupation groups have been created, with the other groups representing the omitted categories. Data is available for sixteen countries, yielding a total of 8 956 observations.

The estimated equation for average tenure in country i at time t is:

$$\text{Average tenure}_{it} = \alpha_i + \beta_1 \text{Gender}_{it} + \beta_2 \text{Age}_{it} + \beta_3 \text{Country}_i + \beta_4 \text{Occupation}_{it} + \beta_5 \text{Year}_t + E_{it}$$

where:

Gender$_{it}$ = a (1,0) gender dummy;

Age$_{it}$ = a vector of nine (1,0) age dummy variables covering ages 15 to 64 years in five-year bands;

Occupation$_{it}$ = a vector of four (1,0) occupation dummy variables;

Country$_i$ = a vector of fifteen (1,0) country dummy variables;

Year$_t$ = a vector of three (1,0) year dummy variables; and

E_{it} = a stochastic error term.

The econometric method employed is weighted least squares, using employment as the weight. The adjusted R-squared and many of the T statistics are unusually high, which reflects the use of grouped average data. Because of grouping, much of the variability in the dependent variable is lost. Each observation is, in fact, a unique combination of the independent variables. As a consequence, most of the variation in the dependent variable is across groups (explained by the regression equation), while within-group variation (unexplained variation) is relatively low.

Results are presented in Table 5.A.1. Individual coefficients are interpreted as follows: Women have on average tenure which is 1.5 years shorter than men. As expected, average tenure rises with age. There is no significant difference in average tenure across the four years. For occupation, legislators, senior officials and managers have somewhat longer tenure than professionals and technicians and associate professionals (the omitted category). Clerks have the same tenure as this group, service workers and shop and market sales workers have tenure which is on average 1.6 years shorter and blue-collar workers have tenure which is on average 1.1 years shorter.

Estimates of differences in average tenure across countries are with reference to Germany, which has tenure close to the average of European countries. The longest average tenure is in Italy, followed by Belgium, Portugal and France, while Austria, Greece, Ireland and Luxembourg all have average tenure similar to that of Germany. Tenure is shorter in the Netherlands, Spain, Canada, Denmark and the United Kingdom, and is shortest in the United States and Australia. A separate regression including Finland, Japan and Sweden, for which data on occupations are not available, indicates that Japan has the third longest tenure, while tenure in Finland and Sweden is not significantly different from that in Germany.

Table 5.A.1. **Econometric estimates of average tenure**

	Average tenure (years)	
Women	−1.54**	(0.028)
(Comparison group men)		
15-19 years	−8.70**	(0.248)
20-24 years	−5.68**	(0.047)
25-29 years	−4.44**	(0.047)
30-34 years	−3.12**	(0.047)
35-39 years	−1.64**	(0.047)
45-49 years	1.67**	(0.048)
50-54 years	3.16**	(0.054)
55-59 years	4.17**	(0.065)
60-64 years	5.93**	(0.087)
(Comparison group 40-44 years)		
Australia[a]	−3.00**	(0.134)
Austria[b]	0.81	(0.597)
Belgium	1.18**	(0.353)
Canada[b]	−1.53**	(0.321)
Denmark	−1.52**	(0.351)
France	0.59**	(0.154)
Greece	−0.23	(0.377)
Ireland	−0.34	(0.551)
Italy	1.51**	(0.172)
Luxembourg	0.28	(1.370)
Netherlands	−0.72**	(0.236)
Portugal	0.86**	(0.301)
Spain	−0.83**	(0.198)
United Kingdom	−2.04**	(0.147)
United States[a]	−2.82**	(0.616)
(Comparison with Germany)		
Legislators, senior officials and managers	0.59**	(0.050)
Clerks	−0.020	(0.039)
Service and shop and market sales workers	−1.65**	(0.041)
Blue-collar workers[c]	−1.13**	(0.034)
(Comparison group professionals and technicians and associate professionals)		
1992	0.038	(0.142)
1993	0.070	(0.141)
1994	0.048	(0.141)
(Comparison with 1995)		
Constant	12.45**	(0.139)
Adjusted R^2	0.91	
N	8 956	

** and * indicate significance at the 1 per cent and 5 per cent levels, respectively, using a two-tailed T test. Standard errors are in parentheses.
a)   1996 only, treated as 1995.
b)   1995 only.
c)   Comprises skilled agricultural and fishery workers, craft and related trades, plant and machine operators and assemblers and elementary occupations.
Source: See Table 5.5.

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