

PDF hosted at the Radboud Repository of the Radboud University Nijmegen

The following full text is a publisher's version.

For additional information about this publication click this link.

<http://hdl.handle.net/2066/140704>

Please be advised that this information was generated on 2018-07-07 and may be subject to change.

ip. 59-87 From:

(ed.) Henk Flap.

Flexibilization of the labor market,
Utrecht, ISOR, 1989

ISBN 90-5187-000-06

FROM UNEMPLOYMENT TO UNEMPLOYMENT - FROM EMPLOYMENT TO EMPLOYMENT?

W.C. Ultee, J. Dessens, and W. Jansen

1 Introduction

This contribution addresses two questions on unequal outcomes of competitions for jobs between employed and unemployed persons over shorter and longer periods for sixteen western industrial nations at the end of the seventies and in the early eighties. The first question is whether, if the general level of unemployment in a country is higher, outcomes of contests for jobs are more strongly disadvantageous for those already unemployed, and whether, if the rise in a country's unemployment during a certain period is larger, for persons already unemployed the unfavorable competitive results during that period increase too. The second question is whether in nations where large-scale dismissals legally are more difficult, disadvantages for those already unemployed are larger, and whether these inequalities also are enhanced by a temporally slower decline of unemployment benefits of some general social minimum.

These two specific questions may be viewed as parts of a more general one on stratification and mobility in western industrial nations under condition of persistently high unemployment. In public debates in western industrial nations different key words are suggestive of these consequences. Dahrendorf (1984) stripped the term underclass of its U.S. connotations and applied it to Western Europe. In the Federal Republic of Germany the term "a twothird society" was coined, in France "the new poor" have emerged, the Netherlands has "the class of written offs", and the United Kingdom displays a north-south divide. With unemployment at a persistently high level, is a new class arising at the margin of society, a category of persons that are unemployed and tend to stay unemployed, whereas employed persons tend to keep jobs?

This contribution seeks to answer its two specific questions about social consequences of persistently high unemployment by approximating tables cross-classifying for a country an inhabitant's employment or unemployment at the beginning of a (shorter or longer) period by this person's employment or unemployment at the end of this period. These tables are obtained by combining stock data for the labor force and for unemployment in a country with data about duration of

unemployment. These data were taken from official statistical publications for western industrial nations. These publications contained results of labor force surveys or totals from registers of labor exchanges or social security agencies. Time series for sixteen countries were obtained. These countries were Austria, Australia, Belgium, Canada, the Federal Republic of Germany, Finland, France, the Irish Republic, Italy, Japan, the Netherlands, Norway, Spain, Sweden, the United Kingdom and the United States. For each country there are several tables pertaining to periods of differing length at the end of the seventies and in the early eighties.

The next section connects this chapter's questions with those on intergenerational occupational mobility current in sociology. Section 3 details how this chapter's questions supplement those about long-term unemployment from labor economics. Section 4 discusses data sources, difficulties in approximating (un)employment mobility tables from these sources, and comparability of tables. Section 5 empirically answers this chapter's first question, section 6 provides an answer to its second one. Section 7 reviews findings on both questions and returns to the theme of unemployment and social division.

2 Questions on Unemployment and Research on Social Mobility

In the past decade research in sociology on father-son occupational mobility has moved from recursive linear regression models incorporating father's and son's place on a ladder of occupational prestige to log-linear parameters for tables cross-classifying father's and son's position in a structure of occupational classes. One argument for this shift holds that a focus on classes is in line with the slackening performance of most western economies since the seventies (Goldthorpe 1985, p. 180). Indeed, double digit unemployment gives new credence to an old hypothesis on allocative effects of labor markets. It holds that every worker stands a permanent chance of unemployment and that labor markets do not clear, showing an oversupply of or an underdemand for labor (Engels 1845, p. 64 and p. 117).

Until recently, there were two ways of dealing with unemployed persons in mobility research. The first was deletion from the analysis. It seems to have been followed by Blau and Duncan in *The American Occupational Structure*. This practice might have led to misleading research results. An example is the finding "that the highly educated Negro suffers more from occupational discrimination than the less educated Negro" (Blau and Duncan 1967, p. 211). In the discussion of this result, there was no mention of the possibility that discrimination of less educated blacks cannot assume the form of lower occupational

prestige, but comes in the shape of higher unemployment. The second way was followed by Goldthorpe in *Social Mobility and Class Structure in Modern Britain*. It consists of assigning unemployed persons to the class of their last job (cf. Goldthorpe and Payne 1986, p. 15). This practice is admissible when unemployment is frictional.

In a recent analysis of class mobility tables for Britain in 1972 and 1983, Goldthorpe and Payne came up with a third way. They deemed it unacceptable to assign the nine percent unemployed in the 1983 sample to the class of their last job and proceeded by adding a category for unemployed persons to the well-known Erikson-Goldthorpe-Portocarero class scheme (Goldthorpe and Payne 1986, p. 15).

At first sight, the effect of Goldthorpe and Payne's decision is somewhat inelegant: as the scheme for father's class position was not expanded by an unemployed category, tables are unsquare. Although this addition to the scheme for fathers is in principle possible and for future mobility research desirable, a high unreliability is to be expected in answers to a retrospective survey question about father's unemployment at some specific date in the past. Apart from this practical difficulty, there is a more substantive difficulty with Goldthorpe and Payne's way of dealing with unemployment. Goldthorpe and Payne hint at a theoretical issue, as they treat the unemployed as having "so to speak" (Goldthorpe and Payne 1986, p. 15) a distinctive class position of their own. It is somewhat unorthodox to treat the unemployed as a special class, as within a class perspective unemployment is a risk continuously befalling all members of all non-property classes.

There is a rather simple way around this practical difficulty. Assuming the existence of a ladder of occupational prestige and a shift from ascriptive to achievement values, it is fitting to ask questions about intergenerational mobility on this ladder. A prime ascriptive characteristic, after all, is family origin. However, when asking questions about mobility within a class structure, a focus on intergenerational mobility is no longer obvious. If demand for labor continuously changes and labor markets do not clear oversupply or underdemand, there is less occasion to investigate intergenerational mobility. Market consequences are not postponed for a generation. This makes questions about intragenerational mobility appropriate (cf. Blossfeld 1986, p. 208). These questions need not be restricted to intragenerational mobility between occupations belonging to different classes, but may also focus on intragenerational mobility between employment and unemployment. Now governmental statistical bureaus in quite a few western industrial nations conduct periodic labor force surveys ascertaining size of the labor force, number of unemployed and duration of unemployment. Given these data, construction of reliable

tables for intragenerational mobility between employment and unemployment seems within reach. As unemployment duration data often are quite specific, construction of mobility tables for shorter periods (three months, six months) and longer periods (one year, two years) is possible. Analysis of short-period and long-period (un)employment mobility tables might be comparative (between countries) as well as historical (earlier and later periods within one country).

This solution to a practical difficulty with a third way of dealing with unemployment in mobility research leads to a solution of the theoretical difficulty associated with this method. This solution consists of limiting the scope of current hypotheses on distributive consequences of labor markets to times of full employment and of specifying additional hypotheses for times of persistently high unemployment. Under an assumption of permanent full employment and jobs differing in strength of market position, outcomes of competitions for jobs with a stronger market position, are favorable to persons whose parents already had these jobs compared to persons whose parents held jobs with a weaker market position. Assuming substantial unemployment at the beginning and end of a specified period, apart from these unequal outcomes, other unequal competitive results obtain: outcomes of competitions for jobs (any job, not only jobs with a stronger market position) at the end of this period, are advantageous for persons already having some job compared to persons unemployed at the beginning of this period. As jobs with a stronger market position show a tendency to stay within families and as jobs with a weaker market position tend to remain within other families, so there is a tendency for unemployed persons to stay unemployed and for employed persons to remain employed. This chapter's questions are about the latter tendency.

Answers to the question how unequal outcomes of competitions for jobs between employed and unemployed persons are, may be furnished by odds ratios for (un)employment mobility tables. Odds ratios form the backbone of log linear models recently used within sociology to analyze class mobility (Hout 1983). The focus of this chapter on unequal results of competitions between employed and unemployed persons over shorter and longer periods is therefore not only substantively, but also technically (Goldthorpe 1980, p. 77), in line with a revival of class analysis within sociology of stratification and mobility.

3 Questions on Mobility and Research on Duration of Unemployment

In the literature of labor economics, data on duration of unemployment

have been brought to bear on several questions. These data are originally published as absolute figures pertaining to one specific date. For instance, according to a labor force survey of the U.S. Bureau of Labor Statistics, in October 1985 the number of unemployed persons in the United States was 7,917,000. This number is broken down by duration of unemployment: 2,065,000 persons were unemployed for 15 weeks and over, 1,110,000 for 27 weeks and over and 699,000 for 52 weeks and over. The civilian labor force in October 1985 (employed persons plus unemployed persons) numbered 116,346,000 persons. Data on number of persons in the labor force, number of unemployed persons and duration of unemployment have been collected for some decades now and form splendid time series.

Cross-sectional data of the kind just presented do not refer to length of a completed spell of unemployment. They only pertain to length up till now of a spell of unemployment in progress. A question often posed within labor economics is what the distribution of the length of completed spells of unemployment looks like and how it is to be derived from these cross-sectional duration figures (for an overview of this literature, see Freiburghaus 1978). It is clear that the second part of this question cannot be answered without additional assumptions. This chapter will not enter into their nature, as it does not ask questions about duration of completed spells of unemployment. It asks questions about what happened (or not) to persons within fixed periods.

Another use of duration data is a comparison of a time series for absolute numbers of persons unemployed longer than a year with a time series for the number of all unemployed persons. These two graphs were presented, for instance, about a decade ago in a U.K. government publication (Department of Employment 1978, p. 678). The chart for long-term unemployment goes down a year later than that for all unemployed persons. It also rises a year later. A recent OECD study contained a regression analysis of time series for the Federal Republic of Germany, France, Great Britain and the United States. The absolute number of persons unemployed for more than a year was predicted well by the percentage of unemployment a year earlier and less well by the change in unemployment rate during that year (OECD 1983, pp. 95-96). These results underline the adage that a good answer to a forecasting question need not be a proper solution of a why-problem. This contribution seeks to explain. It does so, partly, by computing percentages.

It is tempting to express the absolute number of long-term unemployed persons at a certain date as a percentage of all unemployed persons at that date. For instance, the numbers for the United States just mentioned may be transformed into the following percentages: in October 1985 the unemployed formed 6.8 percent of the labor force;

of all persons unemployed at that date, 26.1 percent was unemployed for 15 weeks and over, 14.0 percent for 27 weeks and over and 8.8 percent for 52 weeks and over. Percentages of this type are printed in official statistical publications and have been computed in labor economics.

Cripps and Tarling warned more than a decade ago against "perverse composition effects" in interpreting percentages so obtained. Assume that at some point in time the probability for long-term unemployed persons to stay unemployed is lower than the probability for long-term unemployed persons to stay unemployed at some earlier point in time. Also assume that this decrease coincides with a lower number of employed persons becoming unemployed. Depending on the combined result of these two changes, it is quite possible that the number of long-term unemployed at a certain date as a percentage of all those unemployed at that date grows (Cripps and Tarling 1974, p. 296).

One also might say that in the example just given, absolute numbers of long-term unemployed persons are related to the wrong base. The number of persons unemployed in the U.S. for more than one year in October 1985, should have been divided by 7,989,000, the unemployment number in October 1984. The number of persons unemployed for 27 weeks or more is to be divided by 8,150,000 (the unemployment number for April 1985). The number of persons unemployed for 15 weeks and over might have been related to the number of unemployed persons in July 1985 (8,682,000). By performing these computations, transition probabilities are obtained, measures with a more substantive interpretation than simple percentages. An early instance of transition rates is Fowler (1968).

In labor economics time series of transition probabilities for unemployed persons have been constructed and analyzed (see, for instance, Cripps and Tarling 1974, pp. 298-299). However, even the finding that as the level of unemployment at the beginning of a period is higher, persons unemployed at the beginning of this period are more likely to remain unemployed during this period, is not very illuminating. After all, it is quite likely that as the level of unemployment becomes higher, the chances for the employed to become unemployed rise too. However, if it were to be found that, with rising unemployment, the probability of staying unemployed increases faster than the chances of becoming unemployed, a telling finding would have been made. In the same vein one might divide the probability for the unemployed persons to become employed by the chance of employed persons staying unemployed.

A more pertinent question therefore pertains to a table cross-classifying a person's employment or unemployment at the start of a period against this person's employment or unemployment at the end

of this period may be constructed. This table represents the result of a competition for jobs between unemployed and employed persons. This chapter's questions are on the outcome of these contests.

One reason why questions about unequal results of competitions for jobs between employed and unemployed persons have been neglected in labor economics is lack of data. Assumptions for approximation of tables cross-classifying a person's employment or unemployment at the beginning of a period against this person's (un)employment at the end of this period, are discussed in the next section of this chapter.

4 Approximation Difficulties, Data Sources and Comparability of Data

To construct an intragenerational (un)employment mobility table on basis of published governmental statistics, several types of data and additional assumptions are necessary. Requirements are best discussed by way of an example (see Tables 1a and 1b). Suppose one wishes to construct a table for the United States for mobility or lack of mobility

Table 1. How to construct (un)employment mobility tables from periodic labor force survey or administrative data; (a) published data from the U.S. Bureau of Labor Statistics, (b) cell frequencies obtained after subtraction and addition

(a)		October 1985		
		employed	unemployed	
em-	Octoberemployed	?	?	?
1984	unem- ployed	?	699	7,989
		?	7,917	116,346

- 116,346: number of persons in the labor force in October 1984
- 7,989 : number of unemployed persons in October 1984
- 7,917 : number of unemployed persons in October 1985
- 699 : number of persons unemployed for more than a year in October 1985 (all numbers in 1,000's)

(b)	October 1985		
	employed	unemployed	
em- Octoberemployed	101,139	7,218	108,357
1984 unem- ployed	7,290	699	7,989
	108,429	7,917	116,346

between the categories of employed and unemployed over the period October 1984 - October 1985. Knowing the number of unemployed persons for October 1984 and for October 1985, two marginal frequencies may be entered into Table 1a. For October 1985 it is also known also how many persons unemployed in that month have been unemployed for more than a year. This means that the frequency of the unemployed-unemployed cell may be entered into Table 1a. (There is a snag here, that will be discussed later.) Now suppose that the population of all persons employed or unemployed in October 1984 is closed. As the size of the labor force (persons employed or unemployed) for this date is also known, another figure may be entered into Table 1a. From these four given, it is possible to complete the (un)employment mobility table. For results obtained on basis of the entries in Table 1a, see Table 1b.

To generalize: (un)employment mobility tables may be constructed by combining stock data on size of labor force and numbers of unemployed persons with data about duration of unemployment. Following Freiburghaus' (1978, p. 148) nomenclature of methods for computing transition probabilities for short-term and long-term unemployed persons, this method will be called the "balance-sheet method".

(Un)employment mobility tables constructed by the balance-sheet method are approximations. The assumption of a closed labor force is clearly false. Whether this objection is a serious one, is less obvious. Inter- and intragenerational class mobility tables leave deaths and emigrations out of account too. Within labor economics the question whether "unemployed" and "out of the labor force" are distinctive states, has been answered by a qualified "yes" (Flinn and Heckman 1983).

The balance-sheet method lumps together persons that were employed at the beginning of a period, unemployed in the meantime, and employed again at the end, with persons employed for the whole period. This is not objectionable. The snag of the balance-sheet method is that it does not count persons unemployed at the beginning of a period, employed in the meantime, and unemployed again at the end of this period, as belonging to the unemployed-unemployed category. As the period over which mobility is determined lengthens, so this difficulty looms larger. In fact, the severity of the difficulty will vary from country to country and time to time. For this contribution, this difficulty could not be quantified. It is, in some way, part of a bargain and something to be taken in stride. It is desirable to analyze better (un)employment mobility tables, but they are hard to obtain in numbers sufficient for comparative and historical questions. Labor economists attempted to construct one-month mobility tables from matched records for successive U.S. labor force surveys. This effort led to a special conference so far without tangible results (Hogue and Flame 1986).

For some countries there are data on repeated spells of unemployment, and its incidence over periods of one year does appear worrying for the balance-sheet method adopted in this chapter. In the United States the number of persons with more than one spell of unemployment during one year as a percentages of all persons unemployed at some time during that year hovers around 30 (Bowers 1980, p. 29). However, the United States is a country for which common sense suggests one of the highest frequencies of repeated spells of unemployment (for some data supportive of this notion, see OECD 1985, p. 100). Yet, if an occasion arises, this difficulty of the balance-sheet method will be emphasized. Note that the snag of the balance-sheet method results in odds ratios for (un)employment mobility tables that are farther from one than they would be otherwise. They indicate too much in equality of results.

One defense of the balance-sheet method holds that persons unemployed for the full length of a period do differ from those unemployed at the beginning and the end and employed in between. The three specific questions asked in this chapter are part of a more general question about openness of societies and newly arising closed categories at their margin. Given the latter question, it is perhaps not objectionable for the balance-sheet method to separate persons unemployed at the beginning and end of a period and employed in between from those permanently unemployed. It is to the latter persons that the questions of this chapter pertain.

This argument leads up to a clear cut circumscription of the balance sheet method's applicability. The thesis that with double digit

unemployment in western industrial societies a closed group is arising, comes in two versions, and the balance sheet method is relevant for testing one of them. On the one hand it may be maintained that permanently high unemployment rates lead to a category of persons unemployed for indefinite periods. On the other hand it may be held that these rates do not lead to a division between those invariably unemployed and those working, but to a division between those having lasting employment and those continuously shifting between employment and unemployment. The first version of this thesis may be called the strong one, the second the weak one. By its nature the balance sheet method allows for testing the strong but not the weak version.

A method for constructing (un)employment mobility tables being specified, necessary data were to be collected. A list of western industrial nations was made, in effect the member countries of the Organization for Economic Cooperation and Development (OECD) minus Greece, Portugal and Turkey (because of their high percentage of labor force in agriculture) and Iceland and Luxembourg (as their number of inhabitants was deemed too small for inclusion in a comparative investigation). This left a total of nineteen countries.

The first goal in collecting data for these countries was to obtain as many data as possible on duration of unemployment. They were to be furnished by labor force sample surveys. If that source for a country was unavailable, bookkeeping data of labor exchanges, social security agencies etc. were to be used. If neither of these data were available in original sources, second-hand data from supra-national bodies like the European Communities and the OECD were allowed. The international collection of the library of the Dutch Central Bureau of Statistics was searched. For sixteen countries sufficiently long series of unemployment duration data were found. The three countries without enough available data were Denmark, New Zealand and Switzerland.

The high-high goal in collecting duration data was to construct four series of ten tables for each country: ten three-months tables, ten six-months tables, ten one-year tables and ten two-years tables. Earliest tables were to have 1975 as starting date, latest tables 1984. This goal only was met for Belgium and France. The low-low goal was at least six tables in the decade 1975-1984 for at least one short-period series (three-months or six-months tables) and at least six tables in this decade for at least one long-period series (one-year or two-years tables). Japan just made this goal, all other countries surpassed it. The high-low goal (four series of at least six tables) has been attained for six countries. The low-high goal (at least one complete short-period series and at least one complete long-period series) was reached for eleven countries. All in all, of all 640 possible tables for sixteen

countries, 474 tables were obtained, that is, 26 percent of all possible values were missing. The analysis of this chapter pertains to 127 three-months tables, 140 six-months tables, 144 one-year tables and 63 two-years tables.

A subsidiary goal in collecting duration data was that (un)employment mobility tables, whether short-period or long-period tables, should have the same starting month. In that case it remains possible, at a later date, to provide a direct answer to questions about inequalities in outcomes of contests between short- and long-term unemployed persons. This goal was met for six countries: Australia, France, the Netherlands, Spain, the United Kingdom and The United States.

The second goal in collecting data was to obtain the number of persons unemployed in a country at dates, given the dating of duration data, allowing for construction of (un)employment mobility tables. As stock data are more abundant than duration data, there were no specific difficulties in obtaining these numbers. In all cases except one, unemployment numbers were found in sources also yielding duration data. The odd one out was Japan. Duration data are from special yearly surveys, numbers on unemployment from monthly labor force surveys.

The third goal was to obtain the necessary numbers for size of the labor force. If no data from the same source as duration data were found, other sources were used. The latter were necessary for countries with administrative duration data. In most of these cases no monthly or quarterly and only yearly numbers for size of the labor force turned out to be available. Collection of data on legal obstacles against redundancies and of data for length of above minimum unemployment benefits, is discussed in section 6 of this chapter.

There are at least four points on which (un)employment mobility tables for different countries are not fully comparable. There are differences in data collection (labor force surveys or bookkeeping data), in seasonal influences on data, in starting months of short- and long-period (un)employment mobility tables, and in availability of monthly data on size of the labor force.

For eight nations included in this study, (un)employment mobility tables have been constructed on the basis of data from labor force surveys. All these surveys have been modelled on the original survey of the U.S. Bureau of Labor Statistics. These eight countries are Australia, Canada, Finland, Japan, Norway, Spain, Sweden and the United States. Time series for eight other countries are based on bookkeeping data. These countries are Austria, Belgium, the Federal Republic of Germany, France, The Irish Republic, Italy and the United Kingdom.

It has been stated (OECD 1983, pp. 53-54) that bookkeeping data

are less comparable from country to country than survey data. Most labor force surveys have been modelled on the U.S. one, so here comparability is large. However, as eligibility rules for unemployment compensation vary from country to country, so might administrative data on number of unemployed and duration of unemployment. Although some checks are possible, none will be performed here. (Since the early seventies the EC every two years conducts labor force surveys in its member countries, and their results may be compared with administrative data.)

It is quite possible that data for duration of unemployed, like numbers for unemployed persons, display seasonal influences. These had to be eliminated or equalized for all countries. The European Communities present time series for duration of unemployment in its member countries referring to October of each year. (The data of the Federal Republic of Germany, as they refer to the end of September, form an exception.) It was therefore decided to take October as the starting and ending month of one-year and two-year (un)employment mobility tables outside the EC. (For Australia the month of April was chosen.) However, this decision could not be fully implemented. Labor force surveys in Italy and Spain are held quarterly so in these cases the fourth quarter was chosen. Japanese data for duration of unemployment are taken from a special survey conducted once a year, usually in March. One-year (un)employment mobility tables for Norway and Sweden do not pertain to one specific month, as the necessary breakdowns of unemployment by duration only were available as annual averages.

Then there was the choice of a starting and ending date for three-months and six-months (un)employment mobility tables. If these duration data are only available for one month a year, there is not much to choose. This was the case for Austria, Belgium, the Federal Republic of Germany, Finland, the Irish Republic and Japan.

However, it was felt that this choice by necessity is not a happy one. It results in three-months, six-months, one-year and two-years (un)employment mobility tables having an identical ending date. As indicated, a common starting date is neater. It does not preclude the possibility of directly answering questions about unequal outcomes of competitions between short- and long-term unemployed persons. For this reason, for other countries (except Australia) October was chosen as starting date for three-months and six-months unemployment mobility tables. If one makes this choice, for construction of short-period (un)employment mobility tables, data for duration of unemployment have to be found for the months of January and April. For Australia, Canada, France, the Netherlands, Spain, the United Kingdom and the United States there were no difficulties in obtaining

these data. For Norway and Sweden data for the first quarter of a year were used.

A final point on which (un)employment mobility tables are not fully comparable between countries is availability of monthly or quarterly data on the size of the labor force. These data were not available for Austria, Belgium, France, the Federal Republic of Germany, the Irish Republic, Japan and the Netherlands. Here annual data were used instead. For other countries, monthly or quarterly labor force surveys provided the data on size of the labor force needed for the construction of (un)employment mobility tables. An appendix to this contribution gives a run-down on sources for all countries figuring in this contribution. It also contains specific comments on completeness, homogeneity and other aspects of time series for (un)employment mobility tables.

5 Level of Unemployment, Increase in Unemployment and Unequal Results of Competition for Jobs between Employed and Unemployed Persons

The first question of this contribution is whether, if the general level of unemployment in a country is higher, outcomes of competitions for jobs are more strongly disadvantageous for those already unemployed, and whether, if the increase in the general level of unemployment in a country over the period covered by an (un)employment mobility table is larger, unfavorable competitive results for persons already unemployed increase too.

A very simple hypothesis about competition for jobs between employed and unemployed persons holds that it is easier for employed persons to keep a job than it is for unemployed persons to find a job. This hypothesis may be expanded into a more interesting one: if - given the size of the labor force - the number of jobs competed for is smaller, the outcome of this contest is more unfavorable for unemployed persons. A more careful but also more tortuous wording of this augmented hypothesis holds that the higher the general level of unemployment in a country at a certain point time, the more disadvantageous for persons unemployed at that point in time is the outcome of a competitions for jobs at a later point in time between those employed and those unemployed at that earlier date. Another addition holds that the larger the increase in the general level of unemployment between two points in time, the more unfavorable for those unemployed at the earliest of these two points is the outcome of the competition for jobs at the later of these two points between those employed and unemployed at the earlier of these dates.

These hypotheses about inequalities in (un)employment mobility

tables may be compared with hypotheses prominent in sociology of stratification and mobility. These hypotheses are about relative chances in intergenerational occupational prestige mobility tables (Heath 1981), intergenerational class mobility tables (Grusky and Hauser 1984), or intergenerational standard of living mobility tables (Ultee and Luijkx 1986). With respect to each of these types of mobility, hypotheses have been tested about their determination by absolute level of economic development and by relative changes in these levels. A higher level of economic development and a more rapid pace of economic development were supposed to foster social fluidity. Here these hypotheses have been adapted to intragenerational (un)employment mobility tables. A lower percentage of the labor force unemployed might be analogous to a higher level of economic development, and a stronger decrease in percentage unemployed is supposed to correspond to a more rapid pace of economic development.

These hypotheses about absolute level of and increase in unemployment are tested by way of regression analysis. The variable to be explained is not the odds ratio of an (un)employment mobility table, but the log (ln) of this odds ratio. Models for logged odds ratios provided a somewhat better fit than models for odds ratios. Given the nature of the data, this was to be expected. One explanatory variable was the number of unemployed persons at the beginning of a period as a percentage of all persons in the labor force at that date. Another explanatory variable was the log of the fraction of the number of persons unemployed at the end of a period to the number of persons unemployed at the beginning of a period. In addition there were dummies for country name.

Table 2 presents R^2 s and degrees of freedom of models fitted. Models have been fitted separately for three-months (un)employment mobility tables, six-months tables, one-year tables and two-years tables. The general conclusion is that unemployment at the beginning of a period and increase in unemployment during a period each make their own small contribution. It may be added that the correlation between level of unemployment and increase in unemployment is rather low (-.10 for three-months tables, .20 for six-months tables, -.07 for one-year tables and -.28 for two-years tables).

To find out whether the effects of unemployment at the beginning of a period and increase in unemployment during a period go into the predicted direction, regression coefficients of the best-fitting model of Table 2a are presented in Table 2b. It is clear from the positive and mostly significant signs of coefficients for unemployment at the beginning of a period, that effects are as predicted. The higher unemployment, the more unequal outcomes of competitions for jobs between employed and unemployed persons. All coefficients for

increase in unemployment turn out to be insignificant.

Table 2. Regression of logs of odds ratios of (un)employment mobility tables on level of unemployment at the start of a period (SU), increase in unemployment during this period (IU) and dummies (C) for country name

(a)	three months tables	six months tables	one months tables	two years tables
models	R ² ndf	R ² ndf	R ² ndf	R ² ndf
(1) SU	.05 125	.06 138	.01 142	.03 61
(2) IU	.20 125	.03 138	.01 142	.01 61
(3) SU+IU	.24 124	.08 137	.02 141	.03 60
(4) C	.96 111	.95 124	.95 128	.84 47
(5) C+SU+I	.98 109	.96 122	.96 126	perverted

(b)	parameters	parameters	parameters	parameters
(5) constant	3.9	2.4	1.2	#
SU	4.9	3.5	3.3	#
IU	0.2 (ns)	-0.1 (ns)	-0.8 (ns)	#
C	*	*	*	#
	n=127	n=140	n=144	n= 63

* to save space, the fifteen dummies for country name are not reported.

no parameters obtained as model is perverted.

In the next section of this chapter, dummies for country name entered into models fitted in this section, are replaced by explanatory variables for specific aspects of legal arrangements in countries.

6 Obstacles to Redundancies, Unemployment Benefits and Unequal Results of Competition for Jobs between Employed and Unemployed Persons

The second question of this chapter is whether in nations where dismissal of employed persons is legally more difficult, disadvantages for those already unemployed are stronger, and whether these

inequalities also are enhanced by a temporally slower drop of unemployment benefits to some general social minimum.

Behind this question lie two everyday hypotheses on the consequences of legal arrangements for unequal competitive results. The first hypothesis holds that if it is legally more difficult for employers to dismiss employees, actual probabilities for employed persons to keep their jobs are higher, while chances for unemployed persons to find jobs are lower. The second hypothesis holds that the longer unemployment benefits are above some minimum level, the smaller the probability that unemployed persons within a fixed period will be employed again, and the more unequal results of competitions for jobs between employed and unemployed persons will turn out to be.

These hypotheses on legal arrangements and unequal results of competitions for jobs between employed and unemployed persons, are to be compared with hypotheses prominent in the analysis of tables for intergenerational social mobility. Hypotheses on the consequences of government by social-democratic and by communist parties (Heath 1981, Grusky and Hauser 1984, Ultee and Luijkx 1986), albeit vaguely, are hypotheses about consequences of legal stipulations too. In the present case of analysis of (un)employment mobility tables, these provisions have been circumscribed more precisely. One might say that specific laws have been scaled after something like their strictness.

There were no specific difficulties in obtaining country scores for legal obstacles to dismissal of employees. A recent OECD study contained detailed descriptions of laws on this matter in all of its member countries (OECD 1986b, pp. 100-105). On the basis of these depictions a scale with four categories was devised: a) no legal obstacles to large-scale redundancies, b) duty to inform unions, workers' council, etc. before large-scale redundancies, c) duty to inform and to consult unions, workers' council, etc., before large-scale redundancies, d) duty to inform and consult unions, etc., plus permission of authorities before large-scale redundancies.

As to the place of specific countries on this scale: The United States was the only country in category a), category b) was filled by Australia, Canada, Finland, the Irish Republic, the Netherlands and Norway, in category c) were Austria, Belgium, Italy, Spain, Sweden and the United Kingdom, while the Federal Republic of Germany, France and Japan populated category d). It was assumed that these legal arrangements have not changed during 1975-1984, the decade to which analyzed (un)employment mobility tables pertain. Although this explanatory variable is ordinal in nature, it was decided to enter it as three dummies into regression models.

It was more cumbersome to devise and obtain measures for legal

arrangements on the financial situation of unemployed persons. In the end it was decided to use one measure combining length of unemployment benefits and amount of unemployment benefits. This measure was the length of the period persons according to social security laws receive unemployment benefits above some general social minimum. To understand this measure, it is to be observed that unemployed persons for some time after having been made redundant, in most countries receive a percentage of their last income, whatever (up to a maximum) their income may have been, and that after this time everybody receives a general social minimum.

Three categories were distinguished on this explanatory variable: a) benefits drop to this minimum within 26 weeks, b) minimum reached after 26 weeks and within 52 weeks, and c) minimum attained after 52 weeks. Data were taken from various sources, that were checked against each other (International Labor Office 1976, Sorrentino 1976, U.S. Department of Health, Education and Welfare 1976, Commissie van de Europese Gemeenschappen 1977, OECD 1979, Euvrard et al. 1982, Garcia de Blas 1985). Countries in category a) were Australia, Italy and Spain, in category b) Canada, Finland, Ireland, Norway, Sweden, the United Kingdom and the United States, and in category c) Austria, Belgium, Federal Republic of Germany, the Irish Republic, Japan and the Netherlands. It was supposed that these legal stipulations in these sixteen countries remained the same during 1975-1984. This ordinal explanatory variable was entered as two dummies into regression models.

Table 3a presents R^2 s and degrees of freedom of models fitted. Models have been fitted separately for tables of different duration. Comparison with Table 2a makes clear that the two explanatory variables of this section make a substantial contribution to R^2 . It may be stated that the highest correlation between the three dummies for legal obstacles was -0.59. The correlation between the two dummies for above minimum benefits was -0.40. The highest correlation between a dummy for legal obstacles and a dummy for above minimum benefits was 0.30.

To see whether the explanatory variables display their supposed effects, constants and regression coefficients are to be consulted. They are, for the best-fitting model of Table 3a, presented in Table 3b. The signs and sizes of constants and dummies make clear that neither of the explanatory variables displays a monotonous relationship with the dependent variable, the log of the odds ratio of an (un)employment mobility table. In the case of obstacles to redundancies, the presence of a monotonous relationship seems evident going from the "no obstacles" by way of the "information" to the "consultation" category, but the relationship changes direction going on to the "authorities" category. In

the first two cases, the log of the odds ratio rises, in the last case it drops. For instance, if for all three-months tables, the log of the odds ratio for the "authorities" categories is made equal to the constant (4.2),

Table 3. Regression of logs of odds ratios of (un)employment mobility tables on unemployment at the start of a period (SU), increase in unemployment during this period (IU), dummies for legal obstacles to dismissals (LO₁, LO₂, LO₃) and dummies for duration of above minimum unemployment benefits (UB₁ and UB₂)

(a)	three- months tables	six- months tables	one- year tables	two- years tables
models	R ² ndf	R ² ndf	R ² ndf	R ² ndf
(6) SU+IU+LO ₁ +LO ₂ +LO ₃	.67 121	.50 134	.36 138	.38 58
(7) SU+IU +UB ₁ +UB ₂	.52 122	.50 135	.36 139	.12 58
(8) SU+IU+LO ₁ +LO ₂ +LO ₃ +UB ₁ +UB ₂	.90 119	.75 132	.57 136	.69 56
(b)	parameters	parameters	parameters	parameters
(8) constant	4.2	3.1	1.6	1.8
SU	4.0	3.6	-5.2	-2.8(ns)
IU	-2.1	2.2	-0.1 (ns)	0.7
LO ₁	-0.7	-0.8	-0.6	dropped
LO ₂	0.4	0.4	0.3 (ns)	1.1
LO ₃	1.4	1.0	1.0	1.9
UB ₁	-1.3	-1.2	-1.0	-1.2
UB ₂	-1.5	-1.6	-1.4	-0.9
	n=127	n=140	n=144	n= 63

the log of the odds ratio for the "no obstacles" category is 3.5, the log of the odds ratio for the "information" category is 4.6, while that for the "consultation" category is 5.6. There are, therefore, "two rights and one wrong". Forgetting the last category, the relationship is in the

predicted direction: the less legal obstacles to redundancy, the more equal outcomes of competitions between employed and unemployed persons.

It is more difficult to say something about the extent to which the direction of the effects of length of above minimum unemployment benefits, is and is not as predicted. Going from the category "at minimum within 26 weeks" to the category "at minimum between 26 and 52 weeks", the log of the odds ratio drops, which is not as expected. Going from the last-mentioned category to the category "minimum after at last one year", the log of the odds ratio rises, which is as predicted. Certainly, it would have been possible that in both cases changes went into the wrong direction, but "one right and one wrong" more strongly contradict an hypothesis than "two rights and one wrong".

Until now (un)employment mobility tables pertaining to periods of different lengths have been analyzed separately. In conclusion models for tables referring to all periods will be presented.

7 Conclusion and Discussion

The models presented in Table 4 allow for a review of all three specific questions asked in this chapter. The first question of this chapter was about consequences of level of unemployment and increase in unemployment for inequalities in competitive outcomes. According to the models in Table 4, the conclusion still holds that the higher the unemployment at the start of a period to which an (un)employment mobility table refers, the more unequal outcomes of competitions for jobs between employed and unemployed persons. Given the positive and significant coefficients for increase in unemployment, there now is some evidence that a larger increase in unemployment during the period of a mobility table, will lead to more unequal competitive results. It is not clear how this finding for all tables combined is to be squared with earlier findings for tables of different duration separately. The latter coefficients for increase in unemployment were insignificant. The second question of this chapter was whether legal obstacles to redundancies and above minimum unemployment benefits make outcomes of competitions for jobs between employed and unemployed persons more unequal. According to the models in Table 4, there is some indication that legal obstacles to redundancies makes competitive outcomes more unequal. However, this indication is not strong, as permission of authorities, the highest score on the scale for legal obstacles, is associated with somewhat lower unequal outcomes. It might be suggested that government permission tends to results in decisions in favor of employers and against unions. This explanation of

findings, though ad hoc, is in principle testable. Case-histories of large-scale redundancies in several countries might be useful here. According to the models in Table 4, indications that duration of above

Table 4. Regression of logs of odds ratios of (un)employment mobility tables on unemployment at the start of a period (SU), increase in unemployment during this period (IU), dummies for legal obstacles to dismissals (LO₁, LO₂, LO₃), dummies for duration of above minimum unemployment benefits (UB₁ and UB₂), dummies for country name (C), length of period over which unemployment is observed (LP) and dummies for length of period (LP₁, LP₂ and LP₃)

(a) models	R ²	ndf
(5) C+SU+IU	.36	456
(8) SU+IU+LO ₁ +LO ₂ +LO ₃ +UB ₁ +UB ₂	.20	466
(9) SU+IU+LO ₁ +LO ₂ +LO ₃ +UB ₁ +UB ₂ +LP	.82	465
(10) SU+IU+LO ₁ +LO ₂ +LO ₃ +UB ₁ +UB ₂ +LP ₁ +LP ₂ +LP ₃	.82	463
(11) C+SU+IU+LP	.95	455
(12) C+SU+IU+LP ₁ +LP ₂ +LP ₃	.95	453

N=474

(b) parameters	constant	SU	IU	LO ₁	LO ₂	LO ₃	UB ₁	UB ₂	C	L	LP ₁	LP ₂	LP ₃
(9)	5.1	5.1	0.9	-0.9	0.3	1.0	-1.0	-1.3	-1.2				
(10)	0.5	5.0	0.9	-0.8	0.3	1.1	-1.0	-1.3		3.4	2.3	1.0	
(11)	4.9	4.1	0.4						*	-1.2			
(12)	0.1	4.1	0.4						*	3.6	2.4	1.2	

* to save space, the fifteen dummies for country name are not reported

minimum unemployment benefits make for more unequal competitive outcomes, are even weaker. These findings tend to support the notion that for unemployed persons loss of employment is more decisive than loss of income.

The answers to this chapter's two specific questions are pertinent to the more general question at the background of this chapter, the question whether in contemporary industrial societies with permanently high levels of unemployment, new categories of persons are arising, a category of persons that are unemployed and tend to stay unemployed and a category of persons that are employed and tend to stay employed. The evidence of this contribution does not clearly point into the

direction of the making of a permanently unemployed underclass and a permanently employed more privileged class.

References

Bartholomew, D.J. 1967. *Stochastic Models for Social Processes*. London: Wiley.

Bjorklund, A. 1978. 'On the Duration of Unemployment in Sweden 1965-1976', *Scandinavian Journal of Economics*, 80: 421-439

Blau, P.M. and O.D. Duncan 1967. *The American Occupational Structure*. New York: Wiley.

Blossfeld, H. D. 1986. 'Career Opportunities in the Federal Republic of Germany: A Dynamic Approach to the Study of Life-Course, Cohort and Period Effects', *European Sociological Review*, 2: 208-225.

Bowers, N. 1980. 'Probing the Issues of Unemployment Duration', *Monthly Labor Review*, 103: 23-32.

Carlsson, G. 1958. *Social Mobility and Class Structure*. Lund: C.W.K. Gleerup.

Commissie van de Europese Gemeenschappen, 1977. *Vergelijkende Tabellen van de Stelsels van Sociale Zekerheid van Toepassing in de Lid-Staten van de Europese Gemeenschappen, 9e uitgave (1 juli 1976)*. Luxemburg: Bureau voor Officiële Publikaties der Europese Gemeenschappen.

Cripps, T.F. and R.J. Tarling 1974. 'An Analysis of the Duration of Male Unemployment in Great Britain 1932-73', *The Economic Journal*, 84: 289-316.

Dahrendorf, R. 1984. 'The Underclass - an Open Wound on Society's Belly', *International Herald Tribune*, April 17 and: 'Underclass: for Most, no Hope', *International Herald Tribune*, April 18.

Department of Employment, Statistics on Long-term Unemployment 1978. *Department of Employment Gazette*, pp. 676-681

Duncan, O.D. 1966. 'Methodological Issues in the Analysis of Social Mobility', pp. 51-97 in: N.J. Smelser and S.M. Lipset (eds.), *Social*

Structure and Mobility in Economic Development. Chicago: Aldine.

Duncan, O.D., D.L. Featherman, and B. Duncan 1972. *Socio-Economic Background and Achievement*. New York: Seminar Press.

Engels, F. 1845. *The Condition of the Working Class in England* (first ed. 1845), London: Panther, 1969

Euvrard, F., J. Lion, J.-P. Lehman, and V. Sandoval 1982. *L'Indemnisation du Chomage en France et a l'Etranger*. Paris: Centre d'Etudes des Revunus et des Cou^ts.

Flinn, C. and J. Heckman 1983. 'Are Unemployed and Out of the Labor Force Behaviorally Distinctive Labor Force States?', *Journal of Labor Economics*, 1: 28-42.

Fowler, R.F. 1968. *Duration of Unemployment on the Register of Wholly Unemployed*. London: Her Majesty's Stationary Office.

Freiburghaus, D. 1978. *Dynamik der Arbeitslosigkeit, Umschlagsprozess und Dauerverteilung der Arbeitslosigkeit in der Bundesrepublik 1966-1977*. Meisenheim am Glan: Verlag Anton Hain.

Garcia de Blas, A. 1985. 'Unemployment Benefits in Spain and Other European OECD Countries', *International Labor Review*, 124: 147-161.

Goldthorpe, J.H. 1980. *Social Mobility and Class Structure in Modern Britain*. Oxford: Clarendon Press.

Goldthorpe, J.H. and C. Payne 1986. 'Trends in Intergenerational Class Mobility in England and Wales, 1972-1983', *Sociology*, 20: 1-24

Goldthorpe, J.H. 1985. 'Soziale Mobilität und Klassenbildung. Zur Erneuerung einer Tradition soziologischer Forschung, S. 174-204 in: (Hrsg.) H. Strasser and J.H. Goldthorpe, *Die Analyse sozialer Ungleichheit, Kontinuität, Erneuerung, Innovation*. Opladen: Westdeutscher Verlag.

Grusky, D. and R.M. Hauser 1985. 'Comparative Social Mobility Revisited: Models of Convergence and Divergence in Sixteen Countries', *American Sociological Review*, 49: 19-38 (Erratum: 50(1985)132).

Heath, A. 1981. *Social Mobility*. London: Fontana.

Heckman, J.J. and G.J. Borjas 1980. 'Does Unemployment Cause Future Unemployment? Definitions, Questions and Answers from a Continuous Time Model of Heterogeneity and State Dependence', *Economica*, 4: 247-283.

Hodge, R. 1966. 'Occupational Mobility as a Probability Process', *Demography*, 3: 19-34.

Hogue, C.R. and P.O. Flaim 1986. 'Measuring Gross Flows in the Labor Force: An Overview of a Special Conference', *Journal of Business and Economic Statistics*, 4: 111-121

Hout, M. 1983. *Mobility Tables*. Beverly Hills: Sage.

International Labor Office 1976. *Social Security for the Unemployed*., Geneva: International Labor Office.

König, H. 1978. 'Zur Dauer der Arbeitslosigkeit: ein Markov-Modell', *Kyklos*, 31: 36-52

Matras, J. 1960. 'Comparison of Intergenerational Occupational Mobility Patterns: An Application of the Formal Theory of Social Mobility', *Population Studies*, 14: 163-169

McFarland, D.D. 1970. 'Intragenerational Social Mobility as a Markov Process, Including a Time-Stationary Markovian Model that Explains Observed Declines in Mobility Rates', *American Sociological Review*, 35: 463-476.

OECD 1983. *OECD Employment Outlook September 1983*. Paris: OECD.

OECD 1984. *OECD Employment Outlook September 1984*. Paris: OECD.

OECD 1985. *OECD Employment Outlook September 1985*. Paris: OECD.

OECD 1986a. *OECD Employment Outlook September 1986*. Paris: OECD.

OECD 1986b. *Flexibility in the Labor Market, the Current Debate, a Technical Report*. Paris: OECD.

OECD 1979. *Unemployment Compensation and Related Employment Policy Measures, General Report and Country Studies*. Paris: OECD.

Prais, S.J. 1955. 'The Formal Theory of Social Mobility', *Population Studies*, 9: 72-81.

Sorrentino, C. 1976. 'Unemployment Compensation in Eight Industrial Nations', *Monthly Labor Review*, 99: 18-24.

Svalastoga, K. 1959. *Prestige, Class and Mobility*. Copenhagen: Gyldendal.

Ultee, W.C. and R. Luijkx 1986. 'Intergenerational Standard-of-Living Mobility in Nine EEC Countries: Country Characteristics, Competitive Balance and Social Fluidity', *European Sociological Review*, 2: 191-206.

U.S. Department of Health, Education and Welfare 1976. *Social Security Programs Throughout the World, 1975*. Department of Health, Education and Welfare.

Van 't Eind, G.J. and A. van Ravenstein 1979. 'Een Dynamische Analyse van het Arbeidsbureaubestand', *Economisch-Statistische Berichten*, 64: 1161-1167.

APPENDIX ON DATA SOURCES

AUSTRIA

All tables have August as ending date and have been taken from *Statistisches Handbuch für die Republik Oesterreich*, several years. Data on the size of the labor force are yearly and have been taken from the same source. Monthly unemployment data were obtained from OECD, *Main Economic Indicators, Historical Statistics 1964-1983*, Paris, OECD, 1984, with additions for later years from the *Statistische Nachrichten* included in the *Statistische Uebersichten (Austria)*, several years. Constructed (un)employment mobility tables pertain to six-months and one-year periods. The ending date of the earliest table is 1976, of the latest one 1985. Series have no gaps. Duration data and employment numbers are administrative. The total number of three-months, six-months, one-year and two-years mobility tables is respectively 0, 10, 10 and 0, that is, 20 in all.

AUSTRALIA

(Un)Employment mobility tables generally have April as starting month and have been taken from reports on labor force surveys by the Australian Bureau of Statistics, published as *The Labor Force Australia*, monthly series. As these series were preceded by quarterly ones, tables starting in 1975, 1976 and 1977 have May as starting month. Data on number of unemployed in specific months and monthly size of the labor force, have been taken from the same source. Three- and six-months mobility tables are available from 1975 up to and including 1985, one-year tables from 1976. The earliest two-year tables starts in 1978, the latest one in 1984. Series have no gaps. Total numbers of tables: 10, 10, 9, 7 (36).

BELGIUM

Data on duration of unemployment are administrative. As series having October as a starting date, because of a strike, reveal a gap for 1977, tables having June as ending date were constructed. These duration data were taken from *Statistisch Jaarboek van België*, several years. Monthly unemployment data have been taken from the same source. Data on size of the labor force were yearly and have been taken from Eurostat, *Employment and Unemployment 1986*. There are three- and six-months and one-year and two-years tables and series for these tables have no gaps. Total number of tables: 10, 10, 10, 10 (40).

CANADA

Duration data for three-months tables stem from labor force surveys. They are taken from Statistics Canada, *The Canadian Labor Force*,

monthly series and have October as starting date. Because of unavailability of data for January 1976, the first table of the series has December 1975 as ending and September 1975 as starting date. The latest table of this series has October 1984 as a starting date. Data on number of unemployed and size of the labor force have been taken from the same source. This source gives no numbers for persons unemployed for more than six months and for more than a year. Data from the same labor force surveys are presented, as annual averages of monthly data, in OECD, *OECD Employment Outlook*, several years. Annual averages for number unemployed and size of the labor force, were taken from Statistics Canada, *Labor Force Annual Averages 1975-1983*, and later publications with annual averages. The earliest one-year mobility table has 1975 as starting date, the latest one 1984, the earliest six-month table starts in 1978, the latest in 1984. There are no gaps in series. Total number of tables: 10, 7, 10, 0 (27).

FEDERAL REPUBLIC OF GERMANY

Tables for three- and six months and one-year and two-years periods have end of September as ending date. The first three series are complete. The series for two-year tables lacks the latest one. Data on duration of unemployment have been taken from *Amtliche Nachrichten der Bundesanstalt für Arbeit*, special reports in several years. They are administrative in character. Data on numbers of unemployed in specific months and annual size of the labor force have been taken from Eurostat, *Employment and Unemployment 1986*. Total number of tables: 10, 10, 10, 9 (39).

FINLAND

Data for duration of unemployment only are available as annual averages. The source is Tilastokeskus, *Tilastotiedotus Surja Uro Ty*, several years. Data on annual averages for unemployment and size of the labor force have been taken from the same source. The first table of the series has 1977 as a starting date, the last one 1983. All data stem from labor force surveys. Total number of tables: 5, 8, 7, 7 (27).

FRANCE

Time series stem from bookkeeping of labor exchanges and have October as a starting date. Source is Ministère du Travail, de l'Emploi et de la Formation Professionnelle, *Statistiques du Travail, Bulletin Mensuel*, several years. Data on numbers of unemployed have been taken from the same source. The starting date of the earliest tables is October 1975, the starting date of the last tables is 1984. All series are complete. Data for the size of the labor force are yearly and have been taken from Eurostat, *Employment and Unemployment 1986*. Number of

cases: 10, 10, 10, 10 (40).

IRISH REPUBLIC

Duration data assembled in November 1975, 1976, 1977 and 1978 have been taken from Central Statistics Office (Irish Republic), *The Trend in Unemployment*, several years. Unemployment numbers were taken from the same source. Duration data collected in October 1980, 1981, 1982, 1983 and 1984 are Central Statistics Office, *Statistical Abstract of Ireland*, several years. Unemployment numbers are from the same source. Duration data for October 1985 are from Central Statistics Office, *Irish Statistical Bulletin*, 1986. Data on size of the labor force are from Eurostat, *Employment and Unemployment 1986*. Data on unemployment duration are administrative. There are three-months, six-months and one-year tables. Series have a gap for tables having 1979 as ending date. Number of tables: 9, 9, 9, 0 (27).

ITALY

Time series stem from administrative records. There are only two-years tables (with 1981 and 1982 as starting dates). Three-months, six-months and one-year tables have October as ending date, running from 1978 up and including 1984. Source is Eurostat, *Employment and Unemployment*, several years. Data for number of unemployed in specific months and annual size of the labor force have been taken from the same source. Number of tables: 7, 7, 7, 2 (23).

JAPAN

No original sources have been employed. Data on unemployment duration have been taken from OECD, *OECD Employment Outlook*, several years. These data in turn stem from labor force surveys conducted every year in March (except for 1983 when it was June, and 1984 when the survey took place in April-May). First survey year was 1978, last survey year 1984. Monthly data on numbers unemployed and yearly data on size of the labor force have been taken from OECD, *Main Economic Indicators, Historical Statistics 1096-1983*. Only six-months and one-year tables were constructed. Number of tables: 0, 6, 6, 0 (12).

THE NETHERLANDS

Series for three-months, six-months and one-year tables are complete. For 1975 and 1976 they have November as starting date, for 1976 and later October. Data are from Centraal Bureau voor de Statistiek, *Sociale Maandstatistiek*, several years. Unemployment numbers are from the same source. Two-years tables are based on annual averages and use data from Ministerie van Sociale Zaken en Werkgelegenheid,

Rapportage Arbeidsmarkt, several years. The earliest table of this series has 1978 as starting date. Data are administrative. Data on size of the labor force are from Eurostat, *Employment and Unemployment 1986*. Number of tables: 10, 10, 10, 7 (37).

NORWAY

Duration data, numbers unemployed and size of the labor force are labor force survey data. They were taken from Central Bureau of Statistics of Norway, *Statistical Yearbook*, several years, *Arbeidsmarkedstatistikk*, several years and *Statistisk Ukehefte*, several years. Duration data are annual averages. There are no two-years tables. The earliest table of each series is missing. Number of tables; 9, 9, 9, 0 (27).

SPAIN

Data are from quarterly labor force surveys *La Poblacion Activa*, conducted by the Instituto Nacional de Estadistica. Due to issues missing in the library of the Dutch Central Bureau of Statistics, there are gaps in series. Number of tables: 7, 7, 7, 6 (27).

SWEDEN

Data for three-months tables are based on quarterly figures from labor force surveys. Source is Sveriges Officiella Statistik, *Arbetskraftsundersokninga*, several years. Six-months and one-year tables are based on annual averages taken from OECD, *OECD Employment Outlook*, several years. There are no two-years tables. Series for three-months and one-year tables run from 1975 to 1984 and are complete. The earliest six-months table has 1977 as starting date. Number of tables 10, 7, 10, 0 (27).

UNITED KINGDOM

Data for three-months, six-months and one-year tables are from Department of Employment, *Department of Employment Gazette*, several years. All tables have October as a starting date. These three series are complete. Data are administrative. The first four tables of a series do not pertain to the United Kingdom, but to Great Britain. There are five two-years tables, the earliest one having October 1978 as starting date, the latest one having October 1982 as starting date. Data for these tables were taken from Eurostat, *Employment and Unemployment 1986*. Number of tables: 10, 10, 10, 5 (35).

UNITED STATES

Data were taken from U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings*, several years. Data are from labor

force surveys. All tables have October as starting date. Earliest tables having 1974 as starting date, latest 1984. There are no two-years tables, other series are complete. Number of tables: 10, 10, 10, 0 (30).