

DOCUMENT

PROGRAMME OF RESEARCH AND ACTIONS ON THE DEVELOPMENT OF THE LABOUR MARKET

Costs of unemployment

Main report



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Cataloguing data can be found at the end of this publication

Luxembourg: Office for Official Publications of the European Communities,
1986

ISBN 92-825-6084-8

Catalogue number: CB-46-86-452-EN-C

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Printed in Belgium

Commission of the European Communities

PROGRAMME OF RESEARCH AND ACTIONS ON THE DEVELOPMENT OF THE LABOUR MARKET

COSTS OF UNEMPLOYMENT

MAIN REPORT

By

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Document

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The research (study 84/12) on which these reports were based was financed by the Commission of the European Communities as part of its programme of Research and Actions on the Development of the Labour Market.

The analysis and conclusions are the responsibility of the authors. They do not necessarily reflect any views held within the Commission of the European Communities nor do they commit it to a particular view of the labour market or any other policy matters.

COSTS OF UNEMPLOYMENT

SUMMARY

The study evaluates the conceptual and measurement problems involved in estimating the costs of unemployment for the Federal Republic of Germany, France, Italy and the United Kingdom. Different methods are used to estimate the output loss costs and are found to be over ten percent of GDP. The fiscal costs are estimated to be of the order of about five percent of GDP. The costs to the individual (financial, physical and mental health) are judged to be very serious and get worse with duration of unemployment. The social costs (increased mortality, crime) are reckoned to be important. The study concludes by suggesting policies for a coordinated reflation as well as various job creation measures.

Acknowledgements

This study was begun while I was at the Institute for Employment Research, University of Warwick. I am grateful to the University of Warwick for giving me leave to work on this project. I was assisted in the preparation of this study by Dr. Sue Bowden and would like to thank her. She is not responsible for the remaining errors or views expressed. I should also like to thank Mark Conaty who helped me with Chapter 4. The views expressed in this report are solely my responsibility.

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Chapter 1 Introduction and Summary

1.1 Introduction

In the past few years unemployment has grown rapidly and reached post war record levels in most of the European countries. The total registered unemployment in the European Community in July 1985 was 12.5 millions (approximately) while the total in the big four countries (Federal Republic of Germany, France, Italy and the United Kingdom) was 10.6 millions. This report looks at the costs of this unemployment in terms of output loss, fiscal costs and individual and social costs. The aim of this report is to provide some quantitative estimates of the output loss costs, the fiscal (exchequer) costs and the financial costs to the individual. In addition the report looks at some studies on the costs to the individual in terms of mental and physical health and the costs to society in terms of morbidity, mortality and crime.

In this report an underlying assumption is that a large proportion of the unemployment is involuntary and that economic policies can be devised to reduce the level of unemployment. In carrying out our estimation of the costs of unemployment we have relied on published statistical sources (Eurostat and OECD and some national sources) and we discuss the limitations of the data on unemployment in Chapter 2. In Chapter 3 we discuss broad analytical issues involved in evaluating the costs of unemployment. In particular, we list a whole range of costs (and potential benefits) of unemployment and suggest that it is difficult to aggregate them into a single measure. In Chapter 4 we discuss alternative methods of estimating the real costs of unemployment in the output loss costs. The alternative methods are: the average product, average wage, trend and Okun's law methods. To provide these estimates, we have to make one critical assumption: do we assume unemployment can be brought down to zero or to some other level? We assume that unemployment is brought down to the average levels of 1968-73 or 1974-79. We provide estimates for each different method mentioned above. Chapter 5 discusses the problems involved in estimating the costs of unemployment to the Government in terms of its expenditures and revenues: the fiscal (or Exchequer) costs. Besides the actual expenditures on various unemployment compensation schemes, the Government loses in terms of direct and indirect taxes because unemployed people do not earn an income and spend less than usual. Various assumptions need to be made, in particular, the earnings if the unemployed were working. Chapter 6 is a wide ranging one which looks at the financial costs to the individual (in terms of lost income net of unemployment benefits), the mental and physical health problems associated with unemployment and finally the costs to society in terms of morbidity, mortality and crime. Chapter 7 concludes the report with the constraints on economic policies and a brief discussion of policy issues.

The report has been produced in the space of nine months and, in an attempt to cover four countries and several different issues, we are sure to have been superficial and perhaps made some mistakes. I have been assisted in the work for this report by Dr Sue Bowden and am grateful to her for her help. I have had help from Dr. Maureen Pike, Mr Mike Rosser, Mr Mark Conaty and Dr Mono Chatterji. They are not responsible for the remaining errors. Various people in Continental European countries helped

in making this report possible: Dr. Robert Salais, INSEE, Paris; Dr. E Spitznagel, Institute for Employment Research, Nürnberg; Dr. B.Reissert, Institute of Management and Labour Market Policy, Berlin; Dr. Paolo Garonna, University of Padua; Professor E. Pugliesi, University of Napoli. None of them has seen the report and are clearly exonerated from any mistakes or prejudices in the report.

1.2 Summary

1.2.1 Introduction

1.2.2 Growth of Unemployment

After a brief discussion of the peculiarities of the labour market and some explanations of the growth of unemployment, the Chapter reviews the evidence on various aspects of growth of unemployment, including participation rates, long term and youth unemployment. Finally, it discusses some problems with published statistics on unemployment and provides some estimates of unregistered or 'hidden' unemployment

1.2.3 Analytical Framework

This is a wide ranging chapter that outlines the costs of unemployment in terms of lost output, costs to the Government and costs to the individual and why Governments may ignore these costs of unemployment. It argues that to evaluate the costs of unemployment we need to specify all the costs and all the benefits (and who bears the costs and who benefits) and then to find some way of quantifying and aggregating these into some social welfare function. However, since there is no agreement about an appropriate social welfare function, we simply list the costs. To obtain quantitative estimates we need to specify what caused the unemployment to rise, how this unemployment is to be lowered (i.e. what policies are employed and, finally, what is the target rate (level) of unemployment. A few comments are made about the inappropriateness of the concept of the 'natural' rate of unemployment.

1.2.4 Real Costs of Unemployment: Output loss

After a discussion of the economic costs in terms of static and dynamic (i.e. short term and long term) losses of output due to unemployment, we discuss some of the measurement problems. Alternative methods of estimating this loss are discussed (a) average product method, i.e. ascribing to the unemployed the average product of the employed worker; (b) average wage method, using the average earnings as an index of the average productivity (strictly speaking as an estimate of marginal productivity); (c) trend method, postulating an exponential trend in the growth of output and ascribing the deviations from this trend to the unemployment and (d) Okun's law method which relates the gap (differences between potential and actual output, GDP) to unemployment. Two arbitrary levels of unemployment were assumed: average levels of 1968-73 and of 1974-79. A summary of these results is given in Table 1.1.

These results provide evidence for a substantial real economic cost of unemployment. The final part of the chapter discusses some qualifications.

Table 1.1

Output Loss Costs

	<u>FRG</u>		<u>France</u>		<u>Italy</u>		<u>UK</u>	
	<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>
1980	1.90	4.41	4.24	6.74	2.84	4.24	3.50	5.15
1981	4.51	7.18	6.77	9.34	5.68	7.15	8.11	9.83
1982	8.24	10.91	8.45	11.00	8.22	9.75	9.91	11.65
1983	11.00	13.71	9.91	12.50	10.95	12.53	10.71	12.46

- Notes:
1. Based on Tables 4.10 to 4.13
 2. These are 'average' estimates, as percentages of GDP.
 3. 'Low' refers to bringing unemployment to 1974-79 levels and 'high' refers to 1968-73 unemployment levels.

1.2.5 Fiscal (Exchequer) Costs

The fiscal costs of unemployment are the additional expenditures by the Government due to unemployment (e.g. on unemployment benefits, supplementary benefits, free school meals, rate and rent rebates etc.) as well as the decreased revenues collected from national insurance (social security) contributions and from income (direct) and sales (indirect) taxes. After a discussion of the methodology and assumptions made, estimates are provided for the big Four. A summary of results is provided below in Table 1.2.

Table 1.2

Fiscal Costs

	<u>FRG</u>	<u>France</u>	<u>Italy</u>	<u>UK</u>
1980	-	4.5	2.3	3.3
1981	-	5.8	3.0	4.9
1982	2.8	6.5	3.4	5.7
1983	3.3	6.5	3.4	5.5

- Notes:
1. Based on Tables 5.1, 5.2, 5.4 and 5.5
 2. Figures for UK are for 1980/81, 1981/82, 1982/83, 1983/84.

It is argued that these are underestimates since they include only first-round effects and ignore the effects of a Keynesian multiplier. In any case, they suggest that policies to stimulate the economy would have a much smaller net public finance cost because of these fiscal costs.

1.2.6 Individual and Social Costs

This chapter begins with a discussion of the financial costs of unemployment to the individual. It outlines the problems of estimating these costs because unemployment benefits vary according to various individual characteristics (e.g. employment history, marital status etc.) In addition net earnings are affected by tax deductions which are also affected by individual characteristics. The concept of a replacement ratio (the ratio of unemployment benefits to net earnings) is defined and various versions of this are discussed. Other financial costs are the lower future incomes that an unemployed person is likely to receive. Estimates of Replacement Ratios (RR) are provided and a summary is provided below.

Table 1.3

Individual Costs: Replacement Ratios, 1982

		<u>Percent</u>
	<u>Married Man with 3 Dependents</u>	<u>Single Person</u>
FRG	75.0	68.0
France	90.0	90.0
Italy	47.0	42.2
UK	47.0	26.0

Source: Tables 6.1 and 6.2

It is argued that there are a range of RRs and, it is difficult to define a 'typical' RR. However, it is clear that there are substantial financial costs to the individual. In addition employed individuals also suffer from the existence of unemployment.

The next section discusses the psychologically and physically demoralising effect of unemployment on individuals. Reviewing the evidence it is argued that employment provides a structure to the day and social life of an individual: unemployment is disruptive. Unemployment leads to increased morbidity and increases the probability of mortality. These results are tentative and require further longitudinal studies. A final section reviews the costs to society in terms of time series evidence on the association of unemployment and mortality and unemployment and crime. It is argued that unemployment may lead to social strife and civil riots.

1.2.7 Conclusions

The report emphasises that the costs of unemployment are very high and recommends policies to stimulate the economy.

Footnotes to Chapter 1

1. Source: Eurostat Unemployment 7/85 (20 August 1985)

Chapter 2 The Growth of Unemployment

2.1 Introduction

This Chapter reviews some of the evidence on the growth of unemployment in the Federal Republic of Germany, France, Italy and the United Kingdom. There has been a rapid growth in unemployment since 1979 in almost all the EEC countries with one of the biggest increases in the U.K. The international recession (perhaps sparked off by the second oil price shock followed by restrictive Government monetary and fiscal policies) has led to a decline in employment, in participation rates and a dramatic increase in youth unemployment and in long term unemployment. Discussions about the functioning of the labour market lie at the centre of controversy in Macroeconomic theory.

It is important to remember that the labour market is very special: it is unlike any other market in the economy. Firstly, there are several labour markets differentiated by region, skill, occupation, age, industry, gender, race etc. In one view, the labour market is segmented into 'primary' (highly paid, security of tenure, etc.) and 'secondary' (poorly paid, short term contracts with frequent spells of unemployment in between) markets⁽¹⁾. In recent literature similar concepts are referred to as 'insiders' and 'outsiders' in the labour market⁽²⁾. Secondly, labour markets have several forms of institutional constraints: trade unions, agreed wage bargaining procedure, minimum wage legislation, equal rights legislation, Factory Acts, employment protection legislation and general social conventions or custom⁽³⁾.

There are three main explanations of the growth of unemployment:

- (i) the neoclassical school who argue that labour markets have institutional rigidities (especially in real wages) which prevent labour market clearing. It is argued that the oil price shock led to rapid growth of unemployment because real wages did not adjust quickly, e.g. due to the pressure of unions, minimum wage legislation, employment protection, high social security benefits, etc.
- (ii) The Keynesian school who argue that the growth of unemployment has been caused by inadequate aggregate demand (perhaps triggered by the oil shock) which was aggravated by tight monetary and fiscal policy.
- (iii) the radical school who argue that structural and technological change leads to increasing unemployment.

In recent years there has been a growth of the New Classical school who argue that all unemployment is voluntary and due to misperceptions.

To obtain estimates of the Costs of Unemployment we have to assume that unemployment (or a part of it) is involuntary and that 'appropriate' Government policies can help to reduce unemployment levels. This is discussed further in the next Chapter.

2.2 The Evidence

The worsening of the labour market is reflected in a decline in employment, participation rates, average hours worked and, of course, a rise in unemployment. Before we present some statistics, it is worth noting that it is very difficult to make cross-country comparisons due to differences in definitions, in institutional practices, etc. Even comparisons over time are sometimes misleading due to changes in (say) data collection methods, or changes in legislation. We have relied on OECD data which makes an attempt to standardise definitions.

Table 2.1 illustrates changes in the Employment Population ratios (total employment divided by population of working age, 15-64 years).

Table 2.1

	<u>Employment Population Ratios^a</u>					
	<u>1975</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983^b</u>
Federal Republic of Germany	65.2	64.6	64.4	63.0	61.1	59.4
France	64.5	64.0	63.3	62.1	61.4	60.6
Italy	55.5	55.8	56.4	56.2	55.3	54.7
U.K.	71.4	71.0	70.6	67.0	65.6	64.6

Notes a. Defined as total employment divided by population of working age (15-64)

b. Secretariat Estimates

Source: OECD Employment Outlook 1984

The impact of the recession can be clearly seen in the fall of these ratios for each country. However, these do not reflect the fall in full time working as there has been a rapid growth of part-time working, especially amongst women⁽⁴⁾. The differences across countries may reflect differences in educational opportunities (or policies), for example a smaller proportion of the school-leaving age group stay on in higher education in Britain compared to other EEC countries. The low Italian ratios may reflect the larger informal sector in the economy. However, the trends are clearly downward in each case except for Italy where it is a very gentle trend.

A similar picture emerges if we look at the participation rates, see Table 2.2.

Table 2.2

	<u>Participation Rates^a</u>					
	<u>1975</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983^b</u>
Federal Republic of Germany	67.9	66.8	66.6	66.1	65.4	64.7
France	67.3	67.9	67.6	67.0	66.7	65.9
Italy	58.9	60.3	60.9	61.3	60.7	60.6
U.K.	73.8	74.5	74.8	73.6	73.2	72.7

Notes a. Defined as total labour force divided by population of working age (15-64) at mid year

b. Secretariat Estimates

Source: OECD Employment Outlook 1984

These participation rates again reflect a gentle downward trend. However, the male participation rates fall faster, while female rates fall except for a middle age range. Participation rates for older male workers have fallen significantly over the recession. Total employment fell in the Federal Republic of Germany, France and the U.K. but rose slightly in Italy. However, industrial employment fell in all countries with a dramatic fall in the U.K. (almost 6% per annum from 1979-1982). These falls in industrial employment were offset partially by a growth in the Services sector (of mainly part-time female employment).

The dramatic rises in unemployment rates over this recession are illustrated in Table 2.3.

Table 2.3

	<u>Unemployment Rates^a</u>						
	<u>1975</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
Federal Republic of Germany	3.6	3.2	3.0	4.4	6.1	8.0	8.6
France	4.1	5.9	6.3	7.3	8.0	8.0	9.7
Italy	5.8	7.6	7.5	8.3	8.9	9.7	10.2
U.K.	4.6	5.6	6.9	10.6	12.3	13.1	13.2

Notes a. Standardised Unemployment Rates

Source: OECD Employment Outlook 1984 and Economic Outlook June 1985.

As this has been one of the deepest and longest recessions since the 1930s there has been an enormous increase in long term unemployment.

Table 2.4

Long Term Unemployment (Percentage of Total Unemployment)

	<u>1979</u>		<u>1980</u>		<u>1981</u>		<u>1982</u>		<u>1983</u>	
	a	b	a	b	a	b	a	b	a	b
F.R.G.	39.9	19.9	36.2	17.0	38.1	16.2	46.4	21.2	54.1	28.5
France	55.1	30.3	56.1	32.6	55.8	32.5	66.5	39.8	67.3	42.6
U.K.	39.7	24.5	34.2	19.0	45.7	21.6	54.6	33.3	57.8	36.2

Notes: a. 6 months and over

b. 12 months and over

c. Source: OECD Employment Outlook 1984

These are data on what are called incompleated durations. It is clear from this table that, as the recession has continued, the long term unemployment problem has worsened. In fact these statistics underestimate the true figures because, in many States, especially in France and the U.K. older people who have been unemployed for a certain length of time are given early retirement so that they disappear from the unemployment statistics.

Another worrying aspect of this recession has been a very rapid increase in youth unemployment (less than 25 years old) and long term unemployment amongst youths. This is illustrated in Table 2.5.

Table 2.5

Youth Unemployment^a

	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
Federal Republic of Germany	3.4	3.9	6.5	9.6	10.8	10.1
France	13.3	15.0	17.0	20.2	21.0	26.1
Italy	25.6	25.2	27.4	29.7	32.0	34.1
U.K.	10.6	14.1	18.1	23.1	23.2	21.8

Notes: a. Percentage of total youth labour force

b. Source: OECD Employment Outlook 1984.

There have been several labour market policies targeted at young people and, but for these policies, the youth unemployment problem would have been much worse. In spite of these policies, youth (less than 25 years) unemployment as a proportion of total unemployment was, in July 1985, 24.7%, 36.6%, 46.2% and 38.7% in the Federal Republic of Germany, France, Italy and the U.K. respectively⁽⁵⁾.

2.3 Some Measurement Problems

In the previous section we provided statistics compiled by the OECD based on official definitions and on published national statistics. However, for several reasons the published data, especially on Unemployment are seriously inadequate. These limitations are discussed below:

(i) France⁽⁶⁾

The increase in unemployment would have been faster without the introduction of important legislative changes (e.g. UNEDIC) that led to the withdrawal of a substantial number of older people from the labour force. Various early retirement schemes in the 1980s led to 420,000 receiving special income supplements while only 250,000 were working of the 60-64 age group in March 1982. The retirement age was lowered to 60 in March 1982 so that in 1983, almost half of the 60-64 age group was outside the labour force either under the Income Support scheme or the general old age pension arrangements.

In an attempt to alleviate unemployment, several youth training and apprenticeship schemes were introduced, e.g. the community work scheme (Travaux d'Utilité Collective). These schemes lead to a decline in unemployment as long as the employers do not simply substitute these new trainees for normal workers.

Another reason for the inadequacy of the unemployment data is the growth of part-time working, especially amongst women. Over half of the employment created in France between 1973 and 1983 consisted of part-time work mainly amongst women. To what extent this reflects voluntary desire for part-time work and to what extent it is involuntary part-time unemployment is difficult to estimate.

(ii) Federal Republic of Germany⁽⁷⁾

In the Federal Republic of Germany, the Institute for Labour Market Policy (IAB, Nürnberg) publishes a time series on the hidden unemployed (Stille Reserve). The hidden unemployed include heterogeneous groups like housewives, people who took early retirement, those on various job creation schemes, etc. These estimates are given below in Table 2.

Table 2.6

Estimates of Hidden Unemployment (000s)

	<u>Registered Unemployment</u>	<u>Hidden Unemployment</u>	<u>Total</u>
1979	876	634	1510
1980	889	622	1511
1981	1272	748	2020
1982	1833	950	2783
1983	2258	1181	3439
1984	2270	1349	3619

Source MittAB 4/84 p. 437

The estimates of the hidden unemployed are very high: for example, in 1984 they are about 60 percent of the registered unemployment.

(iii) Italy⁽⁸⁾

The statistics on Italian unemployment are seriously inadequate for two main reasons: firstly because of the existence of the Cassa Integrazione Guadagni (CIG) and secondly because of employment in the informal sector. Under the CIG workers in manufacturing industries who are "temporarily" stopped, receive 80 percent of their regular gross earnings. Workers have their hours worked reduced (sometimes even to zero) and figures are published on hours "liquidated" by CIG. This makes it difficult to estimate the precise effect on the unemployment figures in terms of persons. Using a simple full time equivalent idea of 50 weeks and 40 hours per week, we can derive some estimates.

Table 2.7

The Effect of Cassa Integrazione Guadagni

	<u>Full Time Equivalent Workers (000s)</u>	<u>Change in Unemployment %</u>
1979	102.8	0.5
1980	122.5	0.5
1981	249.8	1.1
1982	281.7	1.2
1983	345.5	1.5
1984	400	1.7

Source: Rosser (1985)

It is, by its very nature, difficult to get accurate estimates of employment in the informal sector. Some estimates put employment in this sector at about 25% of the workforce and producing 25% of GNP! However, there is a high level of double job holding and many of those who work in the informal sector also have employment in the formal sector. Many of the jobs in the informal sector are precarious and part-time so that the official estimates of unemployment may not give such an inaccurate picture.

(iv) U.K.

The statistics on U.K. unemployment, it is argued, underestimate the real unemployment for various reasons. Since 1982 the published figures only include those people who are claiming unemployment (or other) benefits. It is estimated that this leads to an under-estimate of approximately 200,000. In addition, since 1981, men over 60 years who had been unemployed for more than a year were offered high rates of benefits if they took early retirement. Since 1983 for certain, men over 60 years were removed from the register and early retired. These are estimated to reduce the unemployment

figures by about 200,000. Married women, who are often not eligible for unemployment or supplementary benefits, are also excluded from the unemployment count; this number is estimated to be about 300,000. Some people argue that young people on various training schemes should also be counted as unemployed. This is a more controversial suggestion. However, if we made a correction for all these "missing" groups, the unemployment total would be increased by upwards of 750,000⁽⁹⁾.

There is unlikely to be any 'agreed' estimates of this hidden unemployment. However, the Unemployment Unit in the U.K., in their Statistical Supplement for July 1985 have the real unemployment to be at least 400,000 more than the registered unemployment. This is simply by making an estimate for registered unemployment on the old basis as opposed to the new basis of claimant unemployment (i.e. those claiming some benefits). If some allowance is made for those young people on training schemes, the Department of Employment estimate that 425,000 were removed from the Unemployment totals.

There are no accepted or well established time series estimates of the hidden unemployed in the U.K. so we have not used these estimates in our calculations in the rest of this report. However, it is clear that the official statistics are an underestimate of the true unemployment level in the U.K.

2.4 Conclusions

In this Chapter, we discussed very briefly some of the reasons for the rapid growth of unemployment in the EEC. The evidence, based on published official sources, show a dramatic worsening of the labour market with soaring unemployment rates and a frightening growth in youth and long term unemployment⁽¹⁰⁾. We argued that, for several reasons, published official figures were an underestimate of the true unemployment problem.

Footnotes to Chapter 2

1. See Piore (1979)
2. See Oxford Review of Economic Policy Vol. 1. No. 2, Summer 1985.
3. See Akerlof (1980) and Solow (1980).
4. See OECD Employment Outlook, 1983.
5. Source: Eurostat Unemployment 7, 1985
6. See OECD Economic Surveys: France, July 1985.
7. The Institute for Employment Research (IAB) at Nürnberg has done much work on this and this discussion is based on it.
8. This discussion is based on an unpublished paper by M. Rosser (1985) prepared especially for this project.
9. Based on an article in the Observer (16. Sept. 1985) about a Labour Party report.
10. Figures for Great Britain provide food for thought: in April 1985, 1,273,000 people were unemployed for more than one year (40% of the total unemployed), 750,000 for more than two years (24% of the total unemployed) and 458,000 for more than three years (15% of the total unemployed). (Source: MSC Labour Market Quarterly Report: Great Britain, May 1985). Because of legislative changes, many older unemployed people are taken off the register and, hence, the duration figures given above are underestimates of the true picture.

Chapter 3. Analytical Framework

3.1 Introduction

In this Chapter we shall discuss some of the analytical problems involved in evaluating the costs of unemployment. The costs of unemployment are economic, social and political. These costs are borne (to differing extents) by individuals (both unemployed and employed), by their families, by social groups or classes, by the Government and, of course, society in general. The economic costs faced by the individual depend on whether (s)he is employed or unemployed. If the individual is employed, the overall level of unemployment may affect the increases in (real) earnings as well as decreasing the probability of moving to better paid or more satisfying employment. For the unemployed person the economic costs are obviously the loss of income (less any social security benefits). The economic costs to society are the loss of potential output both in the current period (static costs) and in the future (dynamic costs). The economic costs to the Government involve the extra social security payments plus the loss of tax revenue due to lower incomes and expenditure. The social (psychological) costs to the individual are the loss of status and esteem for the unemployed person while the social costs to society are due to increased social tension, civil strife, increased crime, morbidity and mortality. The social and political costs to groups (classes) are in altering the balance of power (both in industrial relations and in the political process) away from workers towards the employers (capitalists). Governments may find that their political base is eroded by growing unemployment and may be forced to alter course.

Underlying all these aspects is the implicit (sometimes explicit) belief that the levels of unemployment currently faced by the European Community are avoidable. It is assumed and, in our opinion, this is valid, that an alternative set of social and economic policies can generate more employment (and hence decrease unemployment) and lead to a growth of national income. If this is true, why do Governments not take appropriate action to stimulate the economy and reduce unemployment? The answer to this question is, in a sense, trite: they do not think any policies they can feasibly introduce would lead to an improvement of society as they perceive it. A deeper answer to this question, however, must require an answer to the question why do they perceive that no improvement can be made? The ostensible answer to this is that any policy measures that the Government can feasibly enact would lead to a growth in the rate of inflation and this is (so it is argued) such an overwhelming social evil that society (and, of course, the individuals who make up that Society) must suffer the unemployment. Another reason may be that intermittent bouts of unemployment are necessary to engender a 'suitable' industrial relations environment to be able to obtain a pliable workforce that does not demand higher and higher wages, hence threatening the profit rate. If wages increased too rapidly, profit rates would fall and hence industrial investment would be adversely affected.⁽¹⁾ In recent years there has been a growth of the "New Classical" school of Economics which claims that if all people have "rational expectations" and markets adjust instantaneously, then the Government cannot influence the level of economic activity, employment or unemployment.⁽²⁾ The existence of unemployment is a voluntary choice and hence not a cost to society.

The remainder of this Chapter will discuss Social Welfare and the Natural Rate of Unemployment.

3.2 Social Welfare

In evaluating the costs of unemployment we need to aggregate the various costs and benefits of running an economy with a certain level of unemployment. In fact many of the costs and benefits are difficult (if not impossible) to quantify. However, even if we could obtain a numerical estimate for the different costs and benefits, it is not clear how these should be 'weighted' to obtain some aggregate measure of the costs of unemployment. Let us enumerate the different costs and benefits:

- (a) Current Output loss (static costs);
- (b) Future Output loss (dynamic costs);
- (c) Costs to the unemployed individual (loss of income minus social security benefits, loss of future income because of decreased probability of obtaining a future job);
- (d) Costs to the unemployed individual (increased morbidity - illness, increased probability of mortality, psychological costs);
- (e) Costs to the employed individual (lower rate of increase of wages/earnings);
- (f) Costs to employed individual (increased amount of labour services extracted because of the threat of losing one's job, decreased job mobility leading to dissatisfaction);
- (g) Costs to the family of unemployed individuals (both monetary and social - psychological stress, arguments, separation/divorce);
- (h) Costs to the Government Revenue Department (Exchequer) (higher social security payments, less taxes collected from lower incomes and lower expenditure);
- (i) Costs for society (greater social tension, strife, crime etc.);
- (j) Costs (benefits?) to society in terms of changed balance of power between workers and capitalists (weakening of trade union power);
- (k) Benefits of lower rates of inflation;
- (l) Benefits of leisure to an unemployed individual⁽³⁾ ;
- (m) Benefits of a revitalised capitalist economy by weeding out of inefficient firms and helping the concentration of economic power; and
- (n) Macroeconomic effects on earnings and investment of large Government expenditures on social security and declining tax revenues.

Clearly this is a wide range of costs and benefits to try to estimate and in many cases, they would be impossible to quantify. Even if we could quantify each of them we would have to avoid an element of double counting. For example, we cannot add together the output loss costs and the Fiscal (Exchequer) costs. In a sense these fiscal costs are purely a notional, not a real, cost. In an ideal world we would aggregate all these costs and benefits by attaching weights to the costs and benefits obtained by different individuals or groups (classes). However, this would require making a series of value judgements which would very likely be questioned.

In fact, what we shall do is simply provide some estimates for the output loss costs, the exchequer costs and the costs to the individual. For the costs to society we are unable to provide any quantitative estimates.

To be able to properly evaluate the costs and benefits of unemployment we need to specify:

- (i) What caused unemployment to rise;
- (ii) What lower level of unemployment we consider; and
- (iii) How this lower level of unemployment is to be achieved, i.e. what specific policies generate the lower unemployment level.

We stated earlier in 3.1 that the implicit assumption in this work (by others and by this author) is that unemployment is avoidable, i.e. an alternative set of policies would lead to a lower unemployment rate. The view taken by this author is that the main reason for the growth in unemployment is due to a lack of effective demand. Some authors have argued that high real wage rates, high social security benefits, or increased power of trade unions etc. have caused the growth of unemployment. Clearly one's view of the causes of unemployment affects the evaluation of the costs of unemployment. For example, if higher unemployment was caused by increased social security benefits, the unemployment is voluntary and therefore has no costs. This is clearly an issue which cannot be discussed in this Report.

In order to specify which lower rate of unemployment to consider we need to evaluate whether there is a 'feasible' or 'frictional' or 'natural' rate of unemployment. It may be possible to decompose actual unemployment into 'frictional', 'structural' and 'demand deficient' components. If so, we can consider bringing unemployment down to the frictional (or frictional plus structural) level by appropriate demand management policies. Alternatively, we can consider bringing the unemployment rate to the 'natural' rate - we consider this in the next section.

Although we should specify the 'policy scenario' that leads to the lower unemployment rate to evaluate the costs of unemployment, we shall assume this problem away. For example the costs of unemployment associated with increased public investment and an incomes policy would be very different from increased job creation schemes (targeted job subsidies) or from the abolition of trade unions. This is in fact a very important issue but to be able to handle this issue properly we need well specified macroeconomic models (preferably multisectoral) with clearly defined policy variables. This may be worth exploring at some future date.

3.3 On Natural Rates⁽⁴⁾

The 'natural rate' of unemployment is a misnomer: there is nothing natural about it. Although it is often treated as an 'equilibrium' rate, it is not even necessarily an equilibrium rate in the sense that there are forces in the system that are leading the unemployment rate to this 'natural' level. Recent estimates of the 'natural' rates have them increasing pari passu with the actual rates of unemployment. To quote Solow (1985),

"'natural rate' has very little basis either in theory or in data analysis" (p. 4)

Milton Friedman's (1968) definition of the natural rate is

"the level that would be ground out by the Walrasian system of general equilibrium equations ..."

Friedman's work led to numerous estimates of expectations augmented Phillips curves with the natural rate being defined as one where inflationary expectations were realised. It is argued that if unemployment is less than the natural rate it will lead to accelerating inflation. However, as Solow (1985) very correctly points out, it should also imply that if unemployment exceeds the natural rate, there should be accelerating deflation: at present most estimates of natural rates are below the actual rates!(5)

Hargreaves Heap (1980) in an interesting article, discussed the concept of hysteresis: a high rate of unemployment today leads to a higher rate of unemployment in the future.

With so much controversy over the theoretical concept of a natural rate as well as differing empirical estimates, we decided to ignore them. Instead we used arbitrary levels of unemployment which had been achieved in the past.

3.4 Conclusions

In this Chapter, we discussed the concept of costs (and benefits) of unemployment and outlined various aspects of these costs. We argued that to discuss the Welfare aspects of unemployment would be an extremely complicated exercise. Instead we would discuss a sub-set of the costs of unemployment without any attempt at aggregation. Finally, we discussed some of the limitations of the concept of the natural rate of unemployment.

Footnotes to Chapter 3

1. See Kalecki (1943) and Junankar (1985).
2. This view is put across forcefully in several papers in Lucas and Sargent (1981)
3. See Feldstein (1978).
4. See Johnson & Layard (1984), Hargreaves Heap (1980) and Solow (1985).
5. For example Johnson & Layard (1984) estimate the natural (equilibrium) rates for France, Germany and U.K. as 8.1, 3.5 and 6.5 percent respectively. The actual unemployment rates were 8.0, 8.0 and 13.1 respectively.

Chapter 4. The Real Costs of Unemployment: Output Loss

"Focus on the gap helps to remind policymakers of the large reward associated with ... an improvement." Okun (1970)

4.1 Introduction

The real economic cost to society of the high levels of unemployment lies in the loss of current and future potential output. If all (or perhaps more accurately, many) of the unemployed found work today, they would be producing more goods and services and National Income would be higher today. Clearly an interesting question is how much higher would National Income have been if the unemployment levels in the EEC were at a lower level (say that before the oil price shock). If the answer to this question is that the order of magnitude is in excess of 10% of National Income, then society is paying a very high price for this unemployment. If the answer were less than 1%, perhaps we would be justified in saying that it is not worth making such a fuss about unemployment. In addition, an interesting (but difficult) question is to what extent future output is affected by current high levels of unemployment. A slack economy lowers the rate of real investment in new capital goods and new technology. In addition skills of unemployed workers deteriorate and they would be less productive in the future. However, quantitative estimates of this future loss are difficult to obtain. Implicit in our approach is that the unemployment levels of the past decade are not "natural" or "God-given" - Society and Governments can lower the unemployment level by alternative social and economic policies.

Having emphasised the importance of measuring the output loss costs of unemployment, we enter the problematic area of estimating this cost. Ideally, we would like to estimate the potential output (that level of output which would have been produced) if the unemployment level was at some lower level. Two problems appear immediately: firstly, which particular lower rate of unemployment do we assume and secondly, how do we estimate the increased output from the increased employment (decreased unemployment)? In Chapter we discussed the analytical problems of defining the so-called natural rate of unemployment or the "Non-Accelerating Inflation Rate of Unemployment" (NAIRU). Even if there were agreement on an analytical definition, there are several different estimates (or for some countries none) of this rate and hence there is no obvious rate to choose. As mentioned earlier, the concept of a natural rate is very unhelpful, especially when the natural rate seems to increase, pari passu with the actual rate of unemployment.⁽¹⁾ An alternative to using the natural rate concept is to use an ad hoc procedure: what would National Income have been if unemployment levels were that experienced in (say) 1968-73 (prior to the first oil shock) or 1974-79 (prior to the recent international recession). In our discussion below we shall use these alternative definitions.

There are several different methods of estimating the output level if an economy experienced a lower rate of unemployment (higher level of employment). The most commonly used methods are:

(a) the average product method which assumes that the unemployed, if given employment would produce the average product of the existing employed population;

(b) the average wage method which assumes that the marginal contribution (marginal product) of a worker is equal to the wages paid and uses the average wages to calculate the extra output created by increasing employment;

(c) The trend method which estimates trends for output growth over time and then measures the deviation of actual output levels from the trend levels;

and (d) Okun's law method which attempts to evaluate the output loss resulting directly from unemployment and indirectly from lower average hours worked and lower participation rates.

Each of these methods is subject to various qualifications. However, in each case the estimates of output loss we obtain are so large that, even allowing for any measurement problems, the magnitudes are far too serious to ignore. The EEC would be much better off if policies were instituted to lower the rate of unemployment.

The remainder of this chapter discusses in more detail the different methods of estimating output loss and provides some estimates. A final section summarises the evidence.

4.2 Measuring the Output Loss

As mentioned earlier, there are short-run (static) and long-run (dynamic) costs of unemployment. The static costs of unemployment are the opportunity cost of unemployment: what is the alternative level of national income (Gross Domestic Product) if the unemployment level were lower? To answer this question completely correctly we need to know how this alternative level of unemployment would be achieved (i.e. what alternative policies or alternative values of exogenous variables would lead to this outcome) since this would provide us with information about which sectors' employment would increase (and with knowledge of the sectoral output response or elasticity) we could then evaluate and aggregate the increased national income⁽²⁾. For example, if the current level of unemployment is 3 million and we want to know the loss of output due to this we can ask how much extra output would be produced if unemployment were reduced to (say) 1 million. The extra output produced would depend on whether the policies were stimulating labour intensive but low-valued products (say handcrafted toys) or capital intensive but high valued products (say radio-telescopes). Again, if the unemployment were to be reduced by assuming alternative values of exogenous variables, we would get different estimates of lost output depending on the different assumptions e.g. a faster rate of growth of GDP (or higher rates of inflation) in America would stimulate exports and hence decrease unemployment. This sectoral information is particularly relevant since the recent growth of employment has been mainly in the services sector while the decline has been mainly in the industrial sector. However, this would require multi-sectoral econometric models of the economy with an amount of information and data which were unavailable to us. To reiterate, to get precise estimates we need a well specified multi-sectoral model and a well specified alternative 'scenario': for each different scenario, we would get a different estimate.

In fact, what we have done (in line with previous investigators) is to assume that by some unspecified method, unemployment is lower and the previously unemployed are employed in different industries in the same proportions as the existing stock of employment. In some cases we have assumed that the unemployed would find work in the industries from which they had lost their jobs. We know that both these assumptions are approximations to reality and the longer the period over which we calculate these losses, the less precise the estimates become. This is because over the years the structure of the economy has changed enormously.

The dynamic costs of unemployment may be far greater than the static costs. However, they are difficult to estimate. As mentioned earlier, the dynamic costs of unemployment are the future output losses due to current high levels of unemployment. A high level of unemployment, a low level of capacity utilisation, depressed expectations of aggregate demand and profitability lead to lower levels of investment in real capital goods and slow down the introduction of new technology (via the new capital goods)⁽³⁾. This lower investment implies lower levels of future output and hence much greater economic losses. However, opposed to this view is the one put across by the UK Government that the high unemployment is leading to a weeding out of inefficient firms and industries and increasing productivity of workers due to a "new realism in industrial relations". In a recent paper Shapiro and Stiglitz (1983) have argued that high unemployment may increase the product-

ivity of workers because of the threat of being fired and joining a long line of the unemployed. Muellbauer and Mendis (1983) have attempted to study the evidence for Britain and find that although there has been an increase in productivity, it is simply a "once-for-all" phenomenon. This is also the argument put forward in Buiter and Miller (1981 and 1983). Again, it is difficult to quantify these long-term costs although, in principle, they are quantifiable.

Perhaps an equally important dynamic (long-term) cost of unemployment is the deterioration of human capital due to (especially) long duration of unemployment. People who have been unemployed for long periods would lose their skills and, in some cases due to technological change, their previous skills would be obsolete. Of course, there is a high proportion of the unemployed who are unskilled workers without any formal training. But even so-called unskilled workers learn on the job and are more efficient than a complete newcomer. The recent recession has seen a big increase in unemployment of older (presumably more skilled) workers and an increase in early retirement schemes. These schemes are equivalent to "early-scraping" schemes for physical capital goods. In addition, because of the growing problem of youth unemployment, investment in human capital has declined (at least in work-experience related human capital). This means that future levels of production would be lower if and when the young of today find work.

There are several reasons why any estimate of the output loss cost is subject to measurement error⁽⁴⁾. Some of these factors might lead to an underestimate and some to an overestimate or with some small probability these two biases might just cancel out. The factors that might lead to an estimate of output loss being an under-estimate are:

(a) Because the measured unemployment rate excludes certain categories of potential workers, e.g. married women, young people who have never had jobs, early retirement of workers and, in Italy, those covered by the Cassa Integrazione Guadagni (C.I.G). In this chapter we have relied on published statistics on unemployment so that, in general, we have made no allowance for these "hidden unemployed". Some of the methods of estimating output loss make no allowance for the fall in average hours worked, decreases in participation rate and lower rate of utilisation, which usually accompany the increase in unemployment.

(b) A particular problem, especially for West Germany, is that the unemployment figures do not take account of returned migrants.

(c) In general, the dynamic output loss costs are not quantified.

The factors that might lead to an over-estimate of output loss are:

(a) The measured unemployment rate includes the voluntarily unemployed (which for the New Classical school includes all the unemployed). In addition a large proportion, so it is argued, of the unemployment rate is a "natural rate" and hence should be deducted from the measured unemployment rate.

(b) It is argued that a proportion (for some economists a very high one) of the unemployed is engaged in the "informal sector" (or the "underground economy") so that, if unemployment is reduced via growth in the formal sector, the informal sector would decline. Hence the net increase in real GDP (as opposed to measured GDP) would be small. Work done on the informal sector by some sociologists, however, suggest that participants in the informal sector are more likely to have formal sector employment as well. Employment in the formal sector provides the workers with a network of contacts as customers as well as intermediate producers. In addition, employees in the formal sector have access to tools and equipment for use in the evenings or at weekends (e.g. a garage mechanic).

(c) Unemployed people are usually less skilled and often work in industries (occupations) with low productivity. To ascribe to the unemployed average productivity in the economy would lead to an upward bias. Some of the methods listed below attempt to make some correction for this bias.

(d) The high level of unemployment may lead to increased productivity of the employed labour force due to the threat of being fired (made redundant). Hence, if unemployment were decreased, productivity may decrease: an estimate based on unchanged productivity would then be biased upwards.

Thus we see that there are some conceptual problems as well as several measurement problems involved in estimating the output loss costs of unemployment. In other words, the numerical estimates we provide give a rough indication of the magnitudes of the costs. We shall provide a range of alternative estimates (as well as some average estimates) which we believe give an indication of the seriousness of the problem⁽⁵⁾.

For purposes of comparability we have used annual OECD time series data on employment, unemployment and GDP. Diagrams 4.1 to 4.8 illustrate output (GDP) and Unemployment in France, West Germany, Italy and U.K. In general, we have used the published series on unemployment although we shall comment on the limitations in our discussion below. Appendix discusses the sources and definitions of the data.

Diagram 4.1 France: Gross Domestic Product (1980 Prices)

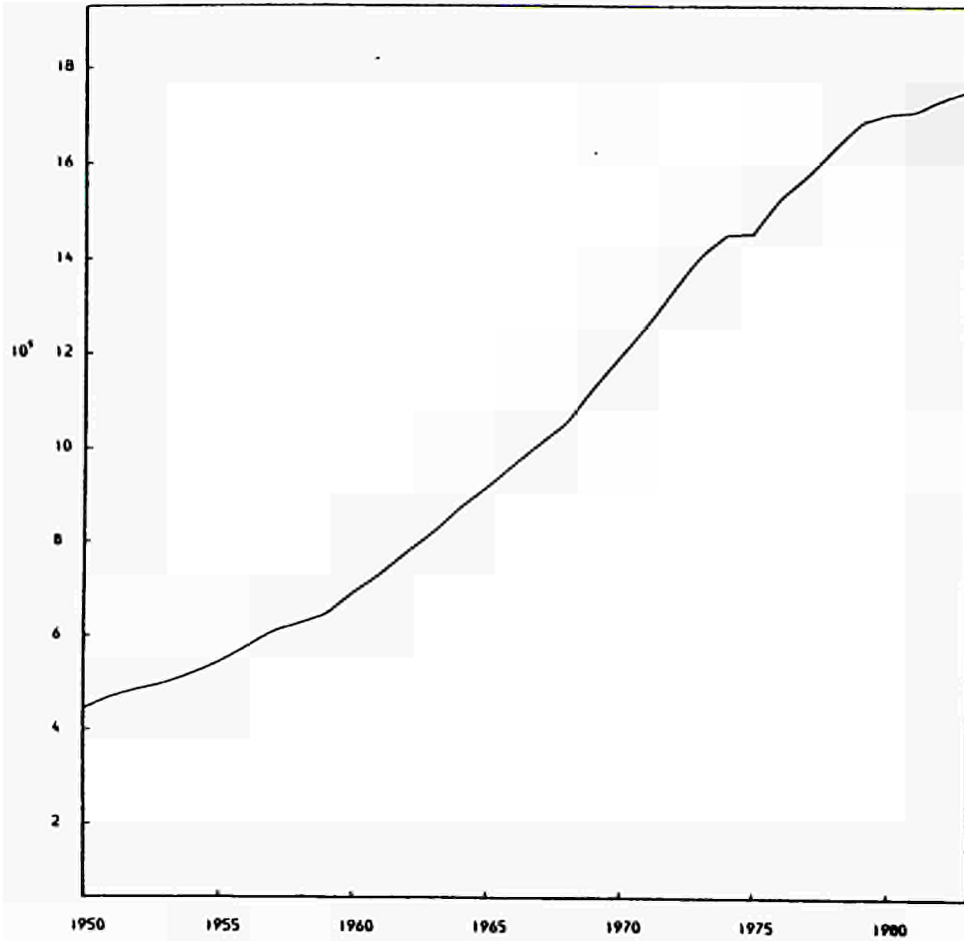


Diagram 4.2 West Germany: Gross Domestic Product (1980 Prices)

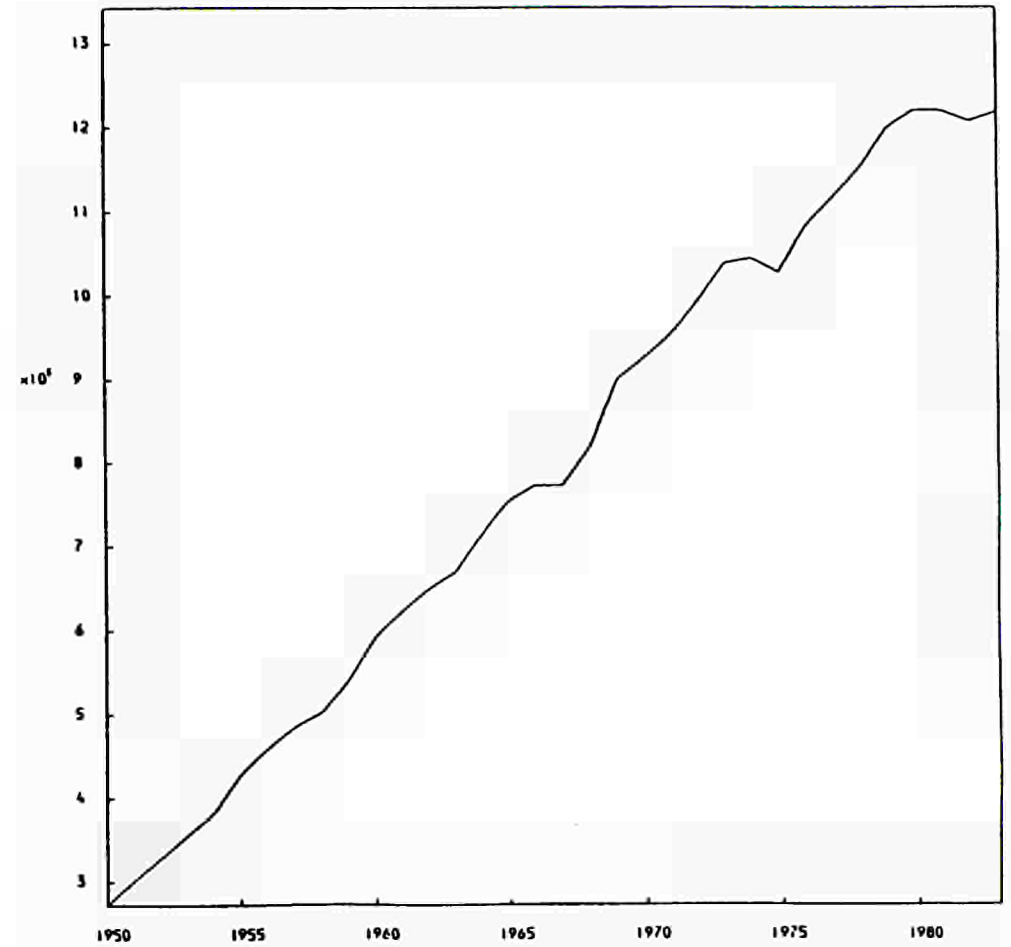


Diagram 4.3 Italy: Gross Domestic Product (1980 Prices)

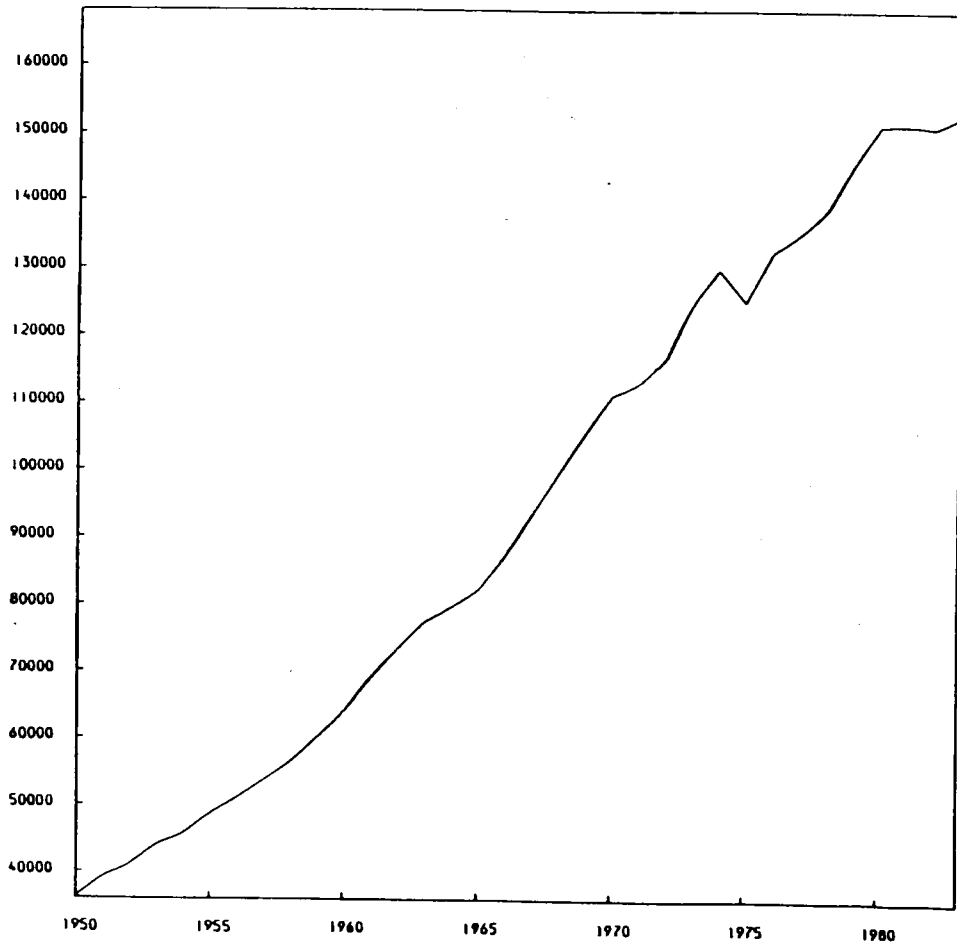


Diagram 4.4 U.K: Gross Domestic Produce (1980 Prices)

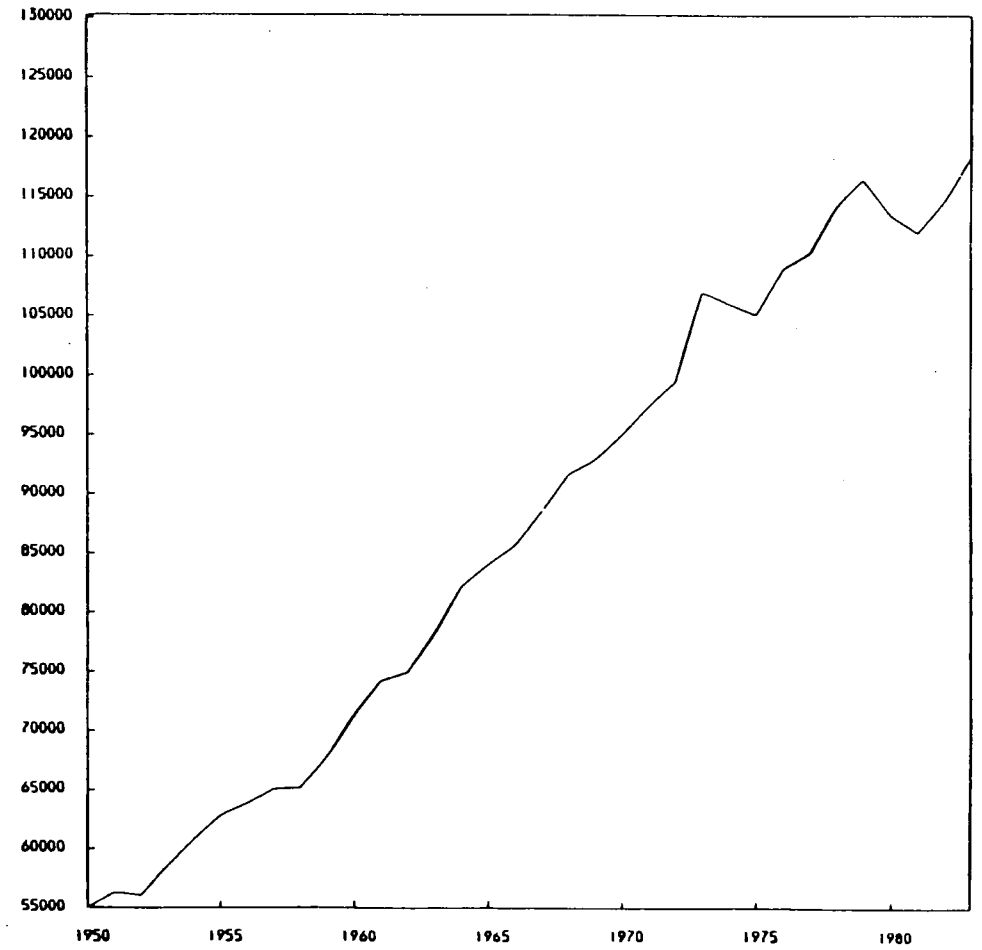


Diagram 4.5 France: Total Unemployment (Thousands)

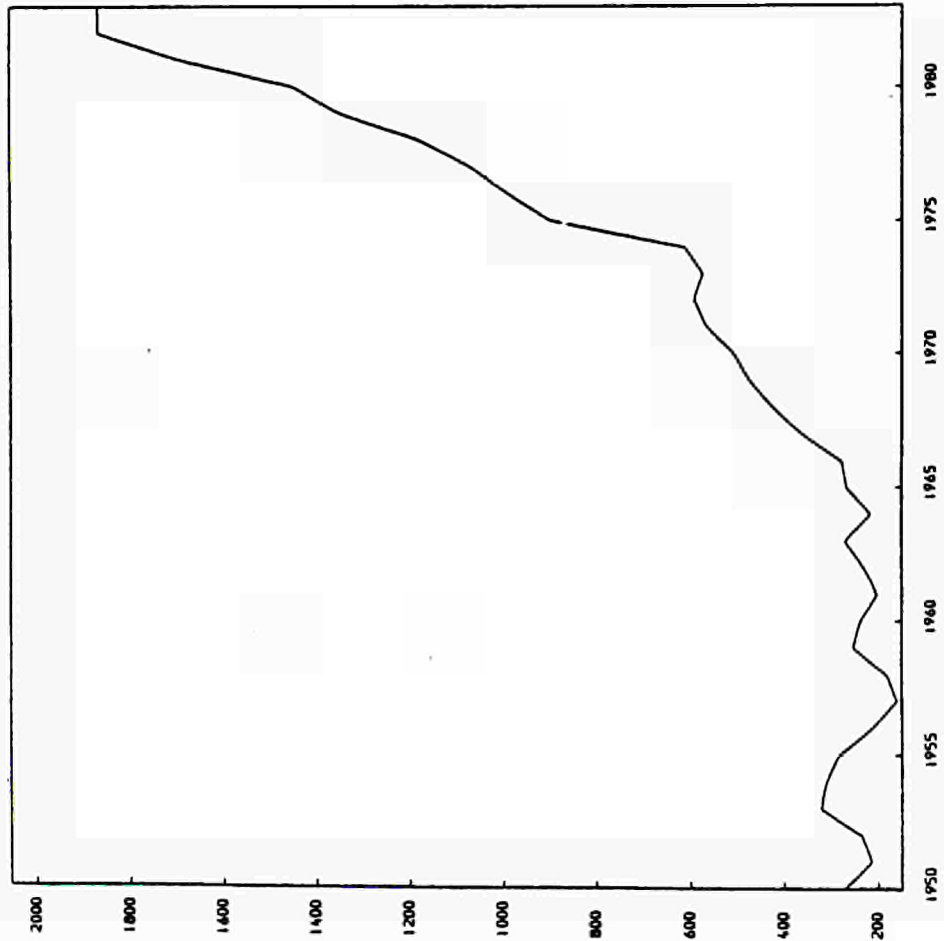


Diagram 4.6 West Germany: Total Unemployment (Thousands)

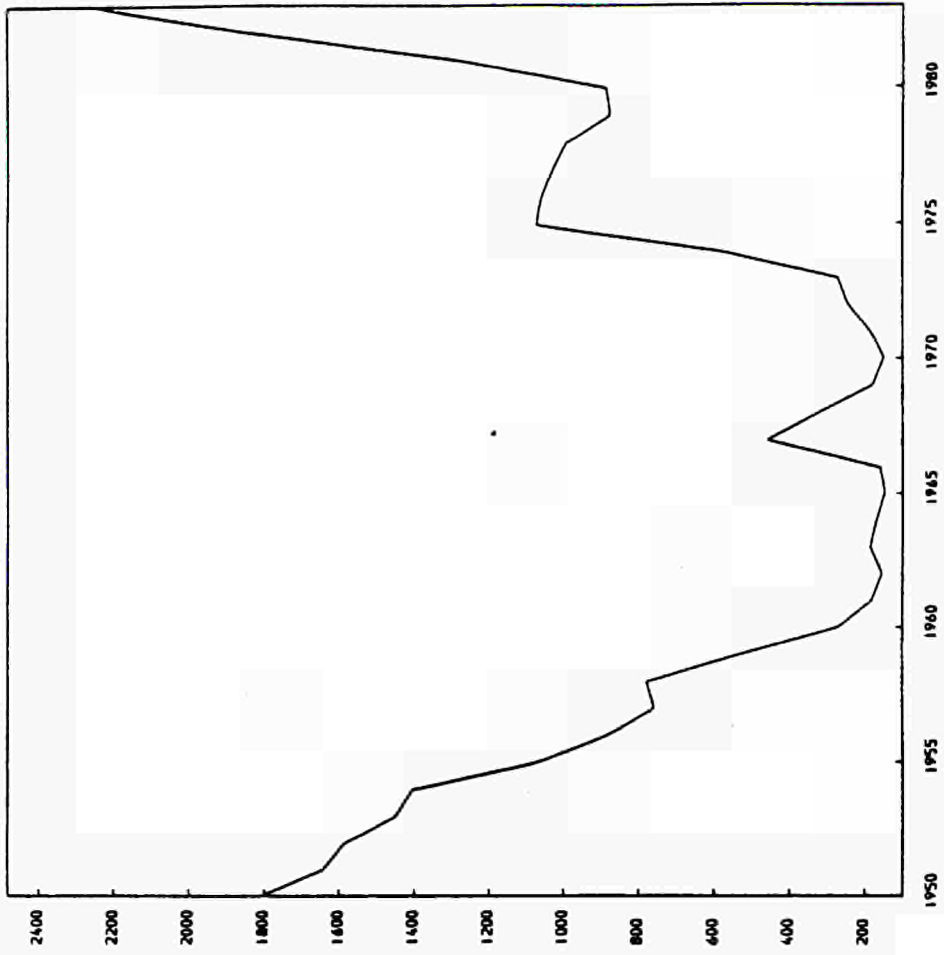


Diagram 4.8 U.K. Total Unemployment (Thousands)

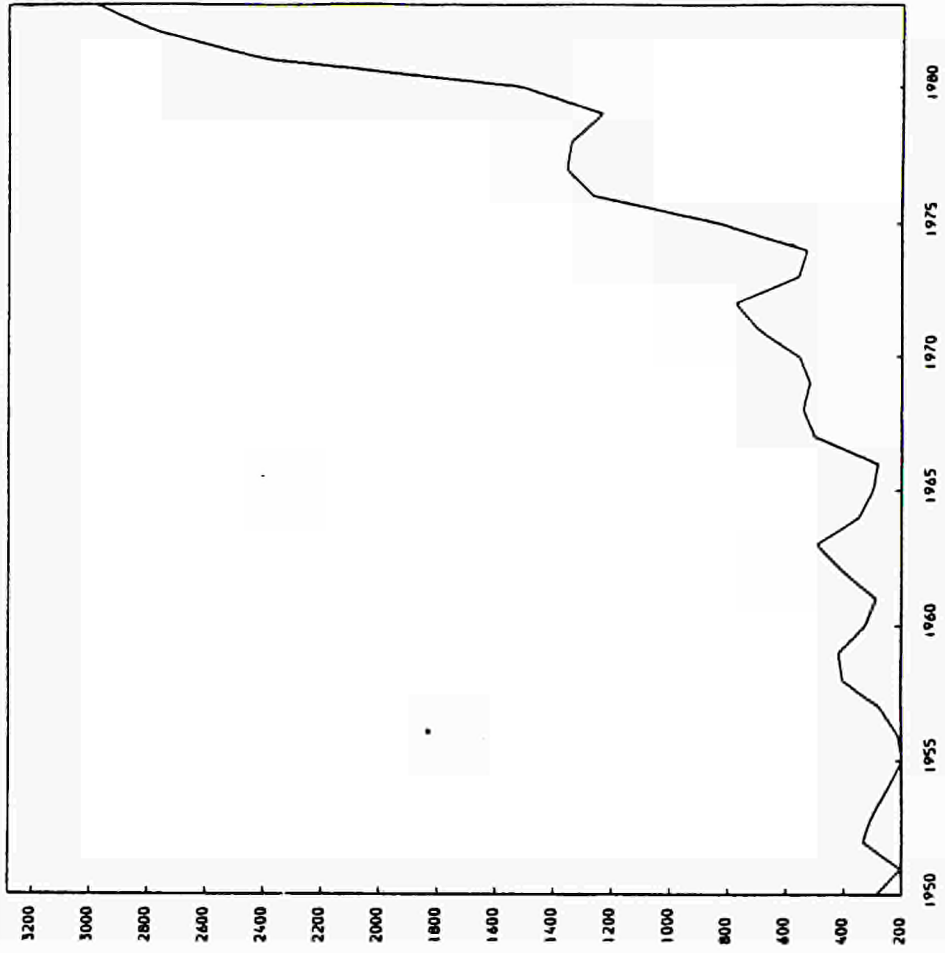
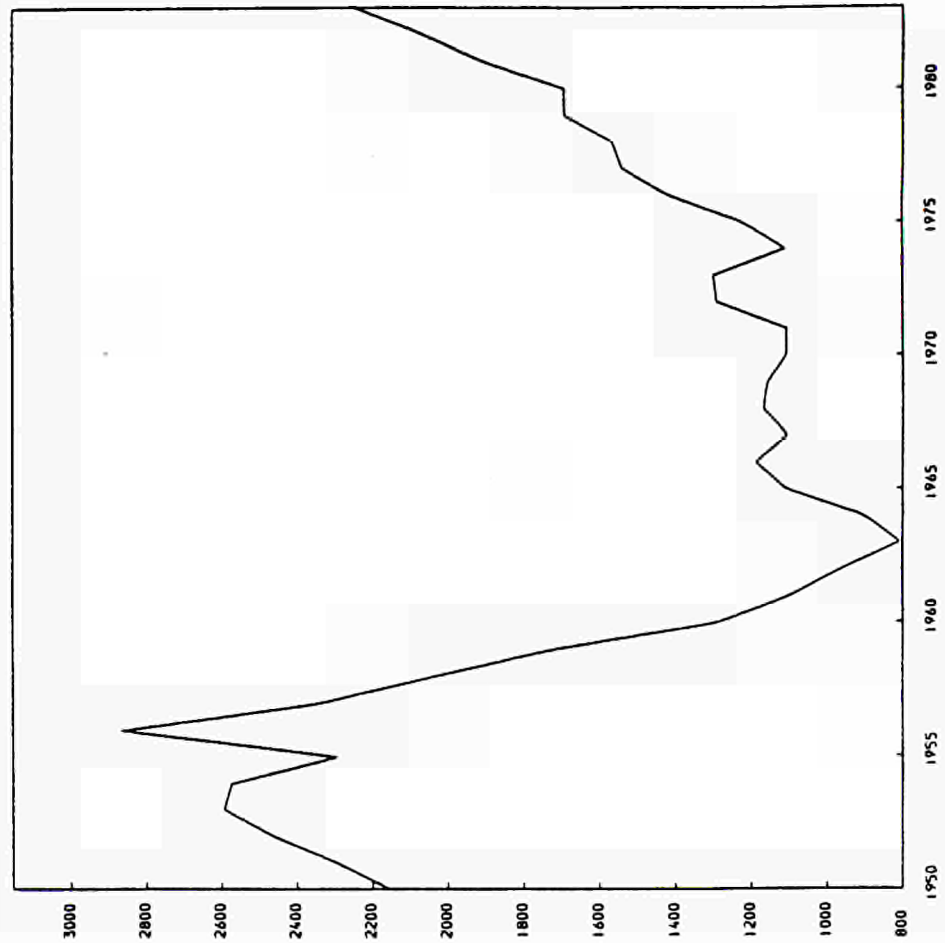


Diagram 4.7 Italy: Total Unemployment (Thousands)



4.3 The Average Product Method

In this section we outline the method employed, provide some estimates, and discuss its limitations. The method we used was to obtain the average product of the employed worker and assume that each of the unemployed would potentially be capable of producing the same amount. In the first instance we simply divided the Gross Domestic Product by the numbers employed to give an estimate of average product. In general, the average product in a recession is an underestimate of the average product in a full employment situation. This means we are likely to under-estimate the true costs of unemployment for this reason alone. As mentioned earlier we assumed that by some unspecified means unemployment is reduced from the actual level to a hypothetical level which may be a level of "frictional", "natural" or "feasible" (in the short run) unemployment. The two arbitrary levels of unemployment we assumed (in this section and for the rest of this Chapter) were the average of the 1968-73 level and the average of the 1974-79 level (a 'low' and 'high' level of unemployment which gives a 'high' and 'low' estimate of costs respectively)⁽⁶⁾.

Table 4.1

Output Loss Estimates: Average Product Method (Percentage of GDP)

	<u>Federal Republic of Germany</u>		<u>France</u>		<u>Italy</u>		<u>U.K</u>	
	<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>
1980	0.46	2.52	2.49	4.27	1.42	2.40	2.08	3.59
1981	1.93	4.00	3.63	5.42	2.43	3.40	5.83	7.40
1982	4.01	6.04	4.24	5.95	3.17	4.15	7.49	9.09
1983	5.92	7.76	4.28	6.01	4.03	5.00	8.45	10.04

Notes: 1. The estimates are derived as follows:

$$\text{Output Loss} = \frac{\text{GDP}}{\text{Employment}} \times (\text{Unemployment in period } t - \text{Average Unemployment})$$

2. All estimates are percentages of GDP: $(\frac{\text{Output Loss}}{\text{GDP}} \times 100)$

3. The 'Low' estimates used the average of 1974-79 unemployment levels and the 'high' estimates used the 1968-73 average unemployment level.

These are very crude estimates of output loss and do not allow for changes in average hours worked, participation rates etc. However, leaving aside the measurement problems we observe dramatic increases in the costs of unemployment (as measured by this average product method) for each of the four countries. If we use the 'low' estimates the costs of unemployment have increased from 1980 to 1983 by 71% for France, 1,187% for the FRG, 184% for Italy and 306% for the U.K. The respective increase using the 'high' estimates are 41%, 208%, 108% and 180%.

These output loss figures estimates are substantial but, we believe, serious underestimates because we have used only published unemployment statistics. For example, in France, the numbers who have taken early retirement lead to an underestimate of unemployment, see for instance Lagrave (1983). For the FRG, the published unemployment figures exclude the so-called "hidden unemployed" (as well as the returned migrants). For Italy the unemployment figures exclude the industrial workers covered under the Cassa Integrazione Guadagni (CIG) scheme. In Britain, the unemployment figures until 1982 were for registered unemployment (and excluded many married women) and, since 1982, only include those in receipt of benefits. In addition, under recent legislation in Britain, unemployed men over 59 years of age are treated as retired workers. To avoid any charges of bias, we have decided to use only published statistics. The IAB, Nürnberg, publishes a series of 'hidden unemployment' which is not disputed by the FRG Ministry of Employment. Using this series, the estimates for the Federal Republic of Germany become:

Table 4.2

Output Loss Estimates for the Federal Republic of Germany: Average Product Method

	<u>Real Unemployment (Registered & Hidden)</u>	
	<u>Low</u>	<u>High</u>
1980	0.25	4.85
1981	2.20	6.91
1982	5.22	9.96
1983	7.91	12.66

- Notes: 1. All figures are percentages of GDP. See note to table 4.1
2. The data for hidden unemployment were obtained from MittAB 4/1984 published by IAB, Nürnberg. Not surprisingly, inclusion of the hidden unemployment figures increase the estimates of output loss quite substantially.

As mentioned earlier, estimates of output loss depend on which policy scenario is assumed to reduce the unemployment level. In particular, policies that stimulate high valued output sectors would lead to a larger increase in GDP. In the absence of any information, the average product method (as opposed to taking average productivity in the sectors from which the unemployed originate) may be a reasonable 'best' estimate.

4.4 The Average Wage Method

In this approach it is assumed that the wages paid reflect (to some extent) the marginal product of employment. It is then further assumed that the unemployed, if found employment, would receive the same wage and have the same marginal product. In the absence of knowledge of how and where the extra jobs would be created, it seems an average wage for the whole economy may be an appropriate assumption. In fact there is much evidence to suggest that the unemployed are, in general, less skilled and earn less than average. Some investigators have assumed (fairly arbitrarily) that the unemployed, if found employment, would receive 80% of the average wage. Since we believe the measured unemployment figures are substantially under-estimates, we have used the average wages (earnings), rather than a fraction of them, to provide our output loss estimates. Table 4.2 again provides 'low' and 'high' estimates based on assuming that unemployment is brought down to the 1974-79 average of the 1968-73 average, respectively. For purposes of comparability we have used data for the average annual earnings in manufacturing (all industries). Since many of the unemployed originated from this sector, it may be a plausible assumption.

Table 4.3

Output Loss estimates: Average Wage Method (Percentage of GDP)

	<u>Federal Republic of Germany</u>		<u>France</u>		<u>Italy</u>		<u>U.K</u>	
	<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>
1980	0.29	1.55	1.52	2.61	1.86	3.15	2.14	3.69
1981	1.25	2.59	2.71	4.05	3.76	5.31	6.51	8.27
1982	2.81	4.23	3.36	4.71	5.76	7.54	8.74	10.60
1983	4.01	5.46	3.65	5.12	8.33	10.34	9.92	11.81

Notes: 1. Output Loss = Average Annual Earnings × (Unemployment in period t - Average Unemployment)

2. All estimates are percentages of GDP: $\frac{\text{Output Loss}}{\text{GDP}} \times 100$.

3. See note 3, Table 4.1.

As in the average product method, these estimates are fairly high and increase very rapidly over the period. The estimates for France and the Federal Republic of Germany are lower and for Italy and the U.K. higher than the average product method. These differences may be due to our using the average manufacturing earnings.

In table 4.3 we provide estimates for the Federal Republic of Germany using the published series on hidden unemployment.

Table 4.4

Output Loss Estimates for Federal Republic of Germany: Average Wage Method
Real Unemployment (Registered & Hidden)

	<u>Low</u>	<u>High</u>
1980	0.15	3.00
1981	1.42	4.44
1982	3.52	6.74
1983	5.36	8.64

Notes: See notes to Tables 4.2 and 4.3

We have already discussed various reasons for under- or over-estimation involved in these estimates. However, even if we take the low estimates, the costs of unemployment are serious and have grown very rapidly.

4.5 The Trend Method

This method is based on assuming that the growth of production (GDP) continues at the same rate as in the nineteen sixties and seventies. In other words, assuming that capital stock growth (investment), employment growth, and technological change continued at the same rate, GDP in the nineteen eighties would have been at higher levels but for the recession and growth of unemployment. Thus we try to estimate "potential" GDP and then compare the actual level of GDP with it: the gap between potential GDP and actual GDP then measures the output loss costs of unemployment (and in fact, of under utilisation of capital, slowing down of investment and technological change). This method further assumes that this "gap" is due to unemployment and that any slow down in investment and technological change, changes in utilisation rates are due to the unemployment. In effect this method side-steps the problem of asking to which particular lower level of unemployment the economy is to be brought down or what are the 'frictional' or 'natural' rates of unemployment. In effect, it assumes that the current levels of unemployment should be brought down to the past levels. Before we discuss this method, it is worth stressing that this is a wider definition of the costs of unemployment since it allows for changing utilisation rates of capital and labour (average hours worked).

Although there are several different methods of estimating 'potential' output (see Briscoe, Smyth and O'Brien ()), we followed a method of estimating trend levels of output by Ordinary Least Squares.

We assumed that GDP increased at an exponential rate although we allowed for a structural break immediately after the oil price shock. The equations we estimated were:

$$\ln Y = \beta_0 + \beta_1 \text{ Time} + \beta_2 \text{ Dummy}$$

i.e. we fitted an exponential trend and allowed for a shift in the intercept by introducing a *Dummy* to capture the effects of the oil price shock. The equations were fitted on annual time series data from the 1950s up to 1979/80 (see Table 4.5) and then used to predict the (potential) GDP values from 1980 to 1983. The Output loss figures are then calculated by taking the difference between the predicted (potential) GDP and the actual GDP and are presented in Table 4.5 as percentages of potential GDP.

Table 4.5

Estimation of Trend GDP

<u>Country</u>	<u>Sample</u>	<u>Constant</u>	<u>Dummy</u>	<u>Time</u>	<u>R²</u>	<u>DW</u>
FRG	1950-80	12.605 (507.41)	-0.205 (-5.30)	0.054 (32.59)	0.980	0.40
France	1950-80	12.99 (1554.92)	-0.068 (-5.21)	0.051 (90.62)	0.998	0.45
Italy	1950-80	10.474 (1128.25)	-0.152 (-10.47)	0.053 (85.48)	0.997	0.88
U.K.	1950-80	10.865 (1540.46)	-0.046 (-4.29)	0.029 (58.27)	0.995	1.13

Notes: 1. The equation fitted was of the form

$$\ln y = \beta_0 + \beta_1 \text{Dummy} + \beta_2 \text{Time}$$

2. Dummy = 0 until 1974
 = 1 1975 and later

Table 4.6

Output Loss Estimates: Trend Method (Percentage of GDP)

	<u>Federal Republic of Germany</u>	<u>France</u>	<u>Italy</u>	<u>U.K.</u>
1980	6.86	6.82	4.63	6.78
1981	11.86	11.15	9.47	10.57
1982	17.39	14.21	14.47	11.08
1983	21.00	17.66	17.94	10.75

As in earlier estimates, the output loss costs of unemployment increase substantially over the period and for (say) 1983 are well over 10% of GDP, which is a very substantial cost.

As mentioned earlier this is a wider definition of the costs of unemployment and allows (to some extent) for changes in utilisation rates etc. The main problem with this method is the assumption that we can extrapolate the trend growth rates.

4.6 Okun's Law Method

In our estimates of output loss based on the average product or average wage method, we mentioned that they were likely to be underestimates because we assumed that when unemployment was reduced by (say) 1,000, employment would increase by 1,000 with unchanged average hours and average productivity. In fact when we decrease unemployment by some policy measures, average hours worked increase, capacity utilisation increases, participation rates increase (so that employment increases by more than 1,000) and average productivity increases. Okun's law asserts that "a reduction in unemployment, measured as a percentage of the labor force, has a much larger than proportionate effect on output". (Okun (1970) p. 140). Early estimates by Okun and others found (for the USA) that a fall in Unemployment of 1 percentage point led to a 3 per cent rise in GDP. Recent estimates by Gordon (1984) find that the increase in GDP would be closer to 2 per cent for a fall in unemployment by 1 percentage point.

Following Okun (1970) we estimated a relationship between the percentage unemployment rate and the percentage output "gap". This output gap is defined as the deviation of actual output (GDP) from "potential" output (GDP) expressed as a percentage of potential output (GDP). The procedure requires an estimate of "potential" output for which we followed an iterative procedure (see Appendix to this chapter). In effect we estimated an exponential trend for GDP allowing for a break as a result of the oil price shock. Given the estimated trend growth rate, we iterated in the neighbourhood of this value and chose that equation which gave the best fit (R^2) and Durbin Watson statistics in an acceptable range. The trends were estimated on annual data from 1950 to 1980 (in some cases from 1962 to 1980) and then unemployment was regressed on the gap over the whole sample 1950 to 1983. Implicitly we assume that the growth rate in the period up to 1980 continued into the 1980s.

The estimated equations were:

$$\text{Percent Unemployment Rate} = \text{Constant} + b \text{ Gap}$$

Having obtained a best fit and acceptable Durbin-Watson statistics, we used the estimated coefficient \hat{b} to obtain estimates of output loss if unemployment rates were brought down to the averages of 1968-73 and 1974-79 respectively. Thus if the estimated coefficient b is equal to 0.5, it means that a reduction in unemployment of 1 percentage point would increase GDP and hence reduce the gap by 2 percent, i.e. each percent of unemployment has an output loss cost of 2 per cent.

The results for our sample of European countries are presented in Tables 4.7, 4.8 and 4.9.

Table 4.7

Estimation of Potential GDP

<u>Country</u>	<u>Sample</u>	<u>Constant</u>	<u>Dummy</u>	<u>Time × Dummy</u>	<u>Time</u>	<u>\bar{R}^2</u>	<u>DW</u>
FRG	1962-80	13.35 (1242.0)	-0.087 (-5.57)	-	0.0414 (30.79)	0.991	1.68
France	"	13.52 (1641.0)	-0.08 (-6.70)	-	0.0515 (49.9)	0.997	0.96
Italy	"	11.15 (1104.0)	-0.07 (-3.66)	-0.014 (-2.58)	0.049 (38.50)	0.994	1.07
U.K.	1950-80	10.86 (1621.0)	-0.02 (-1.23)	-0.0079 (-2.07)	0.029 (61.48)	0.996	1.25

Notes: 1. The equation fitted was of the form

$$\ln Y = \beta_0 + \beta_1 \text{Dummy} + \beta_2 (\text{Time} \times \text{Dummy}) + \beta_3 \text{Time}$$

2. Dummy = 0 until 1974

= 1 1975 and later

Table 4.8

Final Estimates of Okun's Law (Iterative Method)

<u>Country</u>	<u>Sample</u>	<u>Constant</u>	<u>Gap</u>	<u>\bar{R}^2</u>	<u>DW</u>
FRG	1962-1983	66.65 (2.39)	0.366 (9.47)	0.809	0.76
France	1968-1983	27.19 (8.5)	0.29 (8.19)	0.815	0.49
Italy	1962-1983	4.94 (27.36)	0.248 (10.31)	0.842	0.88
U.K.	1962-1983	1.13 (4.47)	0.505 (16.47)	0.931	1.53

Notes: 1. In spite of the iterative solution the Durbin Watson statistics are very poor and suggest the existence of serial correlation except for the U.K.

2. The regressions were run on samples from the 1960s because data on percentage unemployment rates were not available for earlier periods.

Table 4.9

Output Loss Estimates: Okun's Law Method (Percentage of GDP)

	FRG		France		Italy		U.K.	
	Low	High	Low	High	Low	High	Low	High
1980	-	6.69	6.14	13.27	3.43	6.77	3.01	6.53
1981	3.00	10.25	9.59	16.72	7.06	10.40	9.54	13.07
1982	8.74	15.98	12.00	19.14	9.48	12.82	12.32	15.84
1983	13.38	20.63	14.06	21.20	13.51	16.85	13.70	17.23

As mentioned earlier, Okun's Law method provides a better estimate of the output loss since it takes account of changes in average hours, participation rates, utilisation rates etc. As Table 4.7 illustrates, even if we use the "low" estimates (i.e. using average 1974-79 unemployment rates) the output loss in 1983 is well over ten percent for each country. The "high" estimates give output loss figures of over twenty percent for France and the Federal German Republic and about seventeen percent for Italy and the U.K. These are truly staggering amounts and justify the quotation from Okun at the top of this chapter.

There are, of course, several reasons why we should be cautious of these estimates. Firstly, in fitting time trends to the GDP data, we eliminated some of the earlier data to obtain a better fit. Secondly, even though we followed an iterative procedure to obtain estimates of Okun's Law equations, the equations are still subject to serial correlation. Thirdly, although we have allowed for a break after the oil price shock, we have assumed that the trend growth rate remains unchanged thereafter. However, it is satisfying to see that our estimated Okun's Law coefficient for this set of countries is similar to the original one estimated by Okun.

4.7 Summary Results

This section summaries the various estimates and provides average estimates.

Table 4.10

Federal Republic of Germany⁽⁷⁾

	<u>Average Product</u>		<u>Average Wage</u>		<u>Trend</u>	<u>Okun</u>		<u>Average</u>	
	<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>		<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>
1980	0.46	2.52	0.29	1.55	6.86	-	6.69	1.90	4.41
1981	1.93	4.00	1.25	2.59	11.86	3.00	10.25	4.51	7.18
1982	4.01	6.04	2.81	4.23	17.39	8.74	15.98	8.24	10.91
1983	5.92	7.76	4.01	5.46	21.00	13.38	20.63	11.00	13.71

Table 4.11

France

	<u>Average Product</u>		<u>Average Wage</u>		<u>Trend</u>	<u>Okun</u>		<u>Average</u>	
	<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>		<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>
1980	2.49	4.27	1.52	2.61	6.82	6.14	13.27	4.24	6.74
1981	3.63	5.42	2.71	4.05	11.15	9.59	16.72	6.77	9.34
1982	4.24	5.95	3.36	4.71	14.21	12.00	19.14	8.45	11.00
1983	4.28	6.01	3.65	5.12	17.66	14.06	21.20	9.91	12.50

Table 4.12

Italy

	<u>Average Product</u>		<u>Average Wage</u>		<u>Trend</u>	<u>Okun</u>		<u>Average</u>	
	<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>		<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>
1980	1.42	2.40	1.56	3.15	4.63	3.43	6.77	2.84	4.24
1981	2.43	3.40	3.76	5.31	9.47	7.06	10.40	5.68	7.15
1982	3.17	4.15	5.76	7.54	14.47	9.48	12.82	8.22	9.75
1983	4.03	5.00	8.33	10.34	17.94	13.51	16.85	10.95	12.53

Table 4.13

United Kingdom

	<u>Average Product</u>		<u>Average Wage</u>		<u>Trend</u>	<u>Okun</u>		<u>Average</u>	
	<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>		<u>Low</u>	<u>High</u>	<u>Low</u>	<u>High</u>
1980	2.08	3.59	2.14	3.69	6.78	3.01	6.53	3.50	5.15
1981	5.83	7.40	6.51	8.27	10.57	9.54	13.07	8.11	9.83
1982	7.49	9.09	8.74	10.60	11.08	12.32	15.84	9.91	11.65
1983	8.45	10.04	9.92	11.81	10.75	13.70	17.23	10.71	12.46

Tables 4.10 to 4.13 illustrate the range of estimates we have obtained with the different methods. (The Trend estimate is included in both the averages in Tables 4.10 - 4.13). We had mentioned various reasons why we believe the average product and average wage method to be underestimates. In the final column we have provided averages of the various estimates as a 'compromise' estimate. On the basis of these compromise estimates, we can see that in almost each country the output loss costs of unemployment are about ten percent of GDP: this is a colossal loss of output for the EEC.

4.8 Some Qualifications

In this Chapter we provided estimates of the output loss costs of unemployment. It has been argued that these are over-estimates of the welfare costs to society since they ignore possible benefits of lower rates of inflation as well as the benefits of "leisure" for the unemployed. It is still debatable whether inflation is held down by high rates of unemployment (estimates of Phillips curves have been very unstable) and some economists (Monetarists and New Classicals) argue that there is no theoretical basis for a trade-off between inflation and unemployment. Even if there were a trade off, it is very difficult to quantify the benefits of a lower rate of inflation. It is also argued that since the unemployed are enjoying leisure (see Feldstein (1978)), these benefits would be lost if they were found employment: hence we should subtract them from the output loss estimates. It is possible to use the value of social security benefits as an index of the value to the unemployed of leisure. However, in our opinion, most of the unemployed are involuntarily unemployed and to find employment is not a disutility. A job provides them with a place in society, respect from their peer group and family and, in general, provides them with the raison d'etre. A complete welfare analysis would have to take account of the psychic loss as well as the loss due to ill health of the unemployed. In addition, the loss to society in terms of higher rates of social disturbance (civil strife) and crime would have to be taken account of. All these are difficult, if not impossible to quantify.

4.9 Conclusions

In this Chapter we discussed alternative methods of estimating output loss. We provided a whole range of alternative estimates and finally some "compromise" (average) estimates. We find that even on a conservative basis, the output loss figures are of the order of ten percent of GDP. This is an enormous loss of current output which could be used to tackle many of the pressing needs of society, e.g. better health, education, reducing poverty and inequality. We discussed the potential future loss of output but argued that these were difficult to quantify.

Footnotes to Chapter 4

1. See Solow (1985) and Hargreaves - Heap (1980).
2. See Feldstein (1978)
3. See, for example, an earlier paper by me, Junankar (1970) where I showed that there was some evidence to suggest that investment in Britain was lowered by low levels of capacity utilisation.
4. Some of these issues are discussed in OECD (1982).
5. We were surprised how little work had been done on estimating the output loss for the EEC. The European Trade Union Institute (1984) is one of the few places where we could find comparative tables of output loss. Also see OECD (1982, 1984), House of Lords (1982) and Sinfield and Fraser (1985).
6. Our 'high' estimates are very similar to those in Table 5 of the European Trade Union Institute (1984) for the year 1982. We have provided, in contrast, estimates for 1980-83 inclusive.
7. For Germany, Reyher, Koller and Spitznagel (1980) provide an estimate of output loss of 5.5% of GNP in 1978 (p. 61). Reyher and Spitznagel (in OECD 1984) provide an estimate of output loss of about 7% of GNP in 1982 (p. 152).

Appendix to Chapter 4

Estimation of Okun's Law Equations

4.A.1 Okun's Law

This is a relationship between the percentage unemployment rate and the percentage gap between potential and actual GDP. This requires estimates of potential GDP.

4.A.2 Method

We estimated the following regression

$$\ln Y = \beta_0 + \beta_1 \text{Dummy} + \beta_2 (\text{Time} \times \text{Dummy}) + \beta_3 \text{Time}$$

(where Y is GDP) by Ordinary Least Squares on annual data from 19 to 1980. The Dummy was to take account of the oil price shock.

With the estimates of $\hat{\beta} (= \hat{\beta}_0 \hat{\beta}_1 \hat{\beta}_2 \hat{\beta}_3)$ we constructed a time series for potential GDP and hence obtained a series for

$$\text{Gap} = \frac{\hat{Y} - Y}{\hat{Y}}$$

We then generated alternative Gap series for different values of the growth rate of GDP, allowing for two standard errors on either side of the estimated growth rate (at intervals of 0.25 of the standard error).

Each of these Gap series was used to estimate by Ordinary Least Squares

$$\text{UR} = \alpha_0 + \alpha_1 \text{Gap} (i)$$

where UR is the percentage rate of unemployment and Gap (i) is the ith series of Gap.

We selected that equation which gave us the highest \bar{R}^2 and best D.W statistic.

We then went through a second stage of iteration. Taking the estimated growth rate from the first iteration we searched at intervals of 0.05 near that value (up to two standard errors) and then selected the equation with the highest \bar{R}^2 . In general \bar{R}^2 and D.W improved together.

In summary, we estimated the Unemployment-Gap equation for alternative potential output series and chose the best fitting equation. This best equation was then used to generate estimates of output loss.

Chapter 5 Fiscal (Exchequer) Costs

5.1 Introduction

In the previous Chapter we discussed the real costs of unemployment in terms of lost output. In this Chapter we discuss the fiscal costs to the Government of increasing unemployment. The fiscal costs to the Government include the social security payments made to the unemployed plus any direct or indirect (cash or kind) help to unemployed people from the Government. In addition, they include the loss of tax revenue (from direct and indirect taxes) because people are unemployed and not earning an income and spending less on goods and services.

It is important to note that these are all "transfer payments" and, hence, do not directly involve any real economic cost. The only real direct cost would be if the social security/taxation system used up real economic resources. Of course, these may be indirect real costs in terms of affecting incentives to work, save and invest. However, the importance of evaluating these fiscal costs lies in the fact that we can consider some economic policies to stimulate employment which may have a low (or negative?) cost to the Government because of the saving on social security payments (as well as the gain in increased taxes collected). In this Chapter we discuss the methodology employed and then discuss some estimates for France, Germany, Italy and the U.K.

5.2 Methodology

The fiscal costs to the Government of the growth of unemployment provide an interesting insight into the Government's budget problems. During this recession, European Governments have met the crisis by tightening monetary and fiscal policy and attempting to curtail Government expenditure. However, as unemployment continues to rise, Government expenditure on social security payments rises rapidly. Some Governments are now attempting to tighten the conditions under which social security is made available to the unemployed, as well as reducing the rates of benefits paid out (for example in the U.K. the Earnings Related Supplement payable to the unemployed for up to six months was abolished in 1982). It is therefore important to study the costs to the Government public finance of the growth of unemployment.

The fiscal costs to the Government include

- (a) unemployment and other social security benefits;
- (b) loss of employer and employee contributions to national insurance schemes;
- (c) loss of direct and indirect taxes; and
- (d) administrative costs directly associated with unemployment.

If, for example, unemployment rose by 100,000 the Government would pay out unemployment benefits to the unemployed. In addition they may pay supplements for rent, free meals and milk to schoolchildren of the unemployed, rebates on (property) rates etc. The unemployed would now have lost their incomes so they would pay less in income taxes (in the U.K. unemployment benefits are now treated as taxable income) and, because of their lower spending power, buy fewer goods and services and hence pay less indirect taxes (e.g. value added tax). The employers no longer pay national insurance contributions for these unemployed people and the unemployed do not pay employee contributions. Most studies exclude any additional expenditures which may result from increased ill health (morbidity), social unrest etc. In evaluating these financial costs, it is usually assumed that the unemployed came from the private sector: if they were from the public sector the Government would, of course, save on their wages and salaries. Another important assumption made is that the Government does not react to the growth in fiscal costs by legislative changes to decrease unemployment benefits.

Most studies (including this one) ignore the macroeconomic implications. They ignore the Keynesian multiplier effects, i.e. second-round effects of lower consumer expenditure. They also ignore any effects of the income redistribution (towards those with a marginal propensity to consume) on aggregate savings, hence investment, employment and output. Similarly, these studies ignore the possible impact of the financing of the unemployment benefits (and the budget deficit) on interest rates and hence investment. Also ignored are any incentive (disincentive) effects on labour supply of benefits and taxes. All these may be estimated in a well specified macroeconomic model. However, to date this has not been done.

To calculate these fiscal costs to the Government, several assumptions have to be made:

- (a) The earnings that the unemployed individuals would have received had they been employed. Typically it is assumed that the unemployed would have received the average earnings (or some

arbitrary fraction of it);

- (b) The direct tax rates applicable to the unemployed: this is usually difficult because taxes charged often vary with personal circumstances (e.g. number of children, income of spouse etc.);
- (c) Indirect taxes depend on assumptions about average propensities to consume, as well as on the particular commodities consumed; and
- (d) Amount of benefits received by the individuals, especially "passport" benefits like free school meals etc.

Most of the studies discussed below calculate the costs of unemployment for all the unemployed. In fact, at present rates of unemployment, it is unrealistic to assume that all the unemployed could be found work within a year. In general, as unemployment falls, participation rates rise so that employment increases by more than the fall in unemployment. Some of the studies make some arbitrary adjustment for this problem. As discussed above we can see that there are several assumptions that need to be made to obtain estimates of these costs. Not surprisingly, the estimates obtained can be questioned on the basis of one assumption or another. However, the estimates provide a rough order of magnitude involved.

5.3 Fiscal Costs: Federal Republic of Germany

The Institute for Employment Research (IAB, Nürnberg) has made detailed studies of the costs of unemployment for the Federal Republic of Germany. These studies by Reyher, Koller and Spitznagel (1980) and by Reyher and Spitznagel (OECD 1984) and Spitznagel (MittAB 1/85) provide a comprehensive account of the financial (fiscal) costs of unemployment. A further study by Bruche and Reissert (1985) provides a convenient source which provides a brief time-series of these costs. In Germany there are two kinds of unemployment benefits: Arbeitslosengeld (Alg) and Arbeitslosenhilfe (Alhi). The former (Alg) is similar to unemployment benefits in the U.K. and is at a higher level (68% of net income) than the latter (Alhi) (58% of net income) which is similar to Supplementary benefits in the U.K. Alg is paid for a fixed duration depending on length of employment (a maximum of 312 days after employment for 2 years) after which Alhi is paid for an unlimited period.

Table 5.1 illustrates the Changing Fiscal Costs of Unemployment. (Unfortunately, we were unable to find data for estimates for 1979, 1980 and 1981). It is clear from these estimates that there was a big increase between 1978 and 1982 due to the recession (increase in unemployment from 1 to 2.3 million) and then a smaller increase between 1982 and 1983. Between 1983 and 1984 there is a small fall due to reduced payments to the unemployed without children and there is a smaller number entitled to benefits and more are moving on to Alhi from Alg as long term unemployment increases. These estimates of fiscal costs are for registered unemployment: Reyher and Spitznagel (in OECD 1984) estimate that if "hidden" unemployment is included, the costs in 1982 would increase from 45 billion DM to 54 billion DM.

It is interesting to note that the direct expenditures on unemployment benefits are about 30% and the tax loss (both direct and indirect) is about 25% of the total fiscal costs. The public assistance on housing, welfare, etc. (a category for which estimates are not precise) is of the order of only 2%. The remainder of the costs are via health and pension schemes (national insurance). Overall, the fiscal costs have escalated due to the rapid growth of unemployment. In fiscal terms it is expensive to allow unemployment to continue: some job creation schemes involve very low net costs and are discussed in Reyher, Koller and Spitznagel (1980).

Table 5.1

Changes in the Fiscal Costs of Unemployment 1978-84

	DM billions (Current prices)				%			
	1978	1982	1983	1984 *	1978	1982	1983	1984 *
1. Additional Expenditures	9.2	25.6	27.5	23.8	46.0	56.9	50.1	44.0
Unemployment compensation (UC) (Arbeitslosengeld)	4.7	11.3	14.1	15.4	23.9	25.1	25.6	28.5
Unemployment assistance (UA) (Arbeitslosenhilfe)	1.2	3.3	3.9		6.2	7.2	7.1	
Contributions to pensions system for UC-recipients	0.9	4.4	2.6	7.1	4.5	9.8	4.7	13.1
Contributions to health insurance for UC-recipients	1.5	3.0	3.8		7.4	6.7	6.9	
Contributions to pension system for UA-recipients	0.3	1.6	0.7		1.5	3.6	1.3	
Contributions to health insurance for UA-recipients	0.4	1.1	1.1		2.1	2.3	2.0	
Public assistance, housing allowances	-	0.9	1.4	1.3	-	2.0	2.6	2.4
2. Lost Revenues	10.8	19.4	27.4	30.3	53.9	43.1	49.9	56.0
Direct taxes	4.1	8.3	9.9	10.2	20.8	18.4	18.0	18.9
Indirect taxes	1.4	3.5	3.4	4.0	6.8	7.8	6.2	7.4
Contributions to FEI	0.8	2.1	2.9	3.0	3.9	4.7	5.3	5.5
Contributions to health insurance	1.0	2.1	2.8	3.8	4.8	4.7	5.1	7.0
Contributions to pension system	3.5	3.4	8.4	9.3	17.8	7.6	15.3	17.2
TOTAL	19.9	45.0	54.9	54.1	100	100	100	100
Percentage of GDP		2.8	3.3					
Average costs for each unemployed person approx DM	20.000	24.000	24.000	23.100				

SOURCE: Bruche & Reissert (1985)

* From Spitznagel, MittAB: 1/85

** Source: Eurostat Social Protection Statistical Bulletin 1/85

5.4 Fiscal Costs: France

As in Germany, the growth of unemployment has led to an escalation of fiscal costs for the French Government. As discussed earlier (see Chapter 2) a feature of the French policy has been a massive increase in policies for early retirement. This has implied a big increase in expenditures and hence on the fiscal costs of unemployment. In a recent paper Lagrave (1983) has estimated the fiscal costs of unemployment (see Table 5.2).

Table 5.2
Changes in the Fiscal Costs of Unemployment: France (billion FF)

<u>Types of Cost</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
I. <u>Direct financial cost (UNEDIC):</u>				
Unemployment benefits	-	35.0	44.3	51.0
Income guarantee	33.2	15.0	24.7	38.1
Other expenditure (admin. etc.)	1.3	4.7	4.7	9.3
	<u>34.5</u>	<u>54.7</u>	<u>76.2</u>	<u>98.4</u>
II. <u>Losses in receipts:</u>				
1. Social security	31.2	46.9	64.7	83.4
- remove 1 percentage point from sickness contribution for unemployment benefit above minimum wage (SMIC)	-	0.6	0.8	0.9
	<u>31.2</u>	<u>46.3</u>	<u>63.9</u>	<u>82.5</u>
2. Taxation				
Direct taxes	8.0	12.0	16.5	21.2
Indirect taxes	5.3	10.8	11.2	16.4
Total	<u>44.5</u>	<u>69.1</u>	<u>91.6</u>	<u>120.0</u>
III. <u>Related costs:</u>				
(Employment policy)	31.0	34.7	40.5	(40.5)
Overall total	<u>110.0</u>	<u>158.5</u>	<u>208.3</u>	<u>(258.9)</u>
In percentage of G.D.P.	4.5	5.8	6.5	-

Source : Michel Lagrave: Les difficultés de l'évaluation du coût du chômage, in Revue Française des Affaires Sociales, January-March 1983.

The expenditures on unemployment benefits increased rapidly from 35 billion to 51 billion French Francs from 1981 to 1983. Total direct costs increase from 34.5 billions to 98.4 billions of French Francs over the same period. In 1982, taking account of direct and indirect costs, the total is 6.5% of GDP. As mentioned earlier, these costs exclude additional costs for increased sickness, social disorders, crimes etc. which may be associated with higher levels of unemployment.

The OECD estimates the costs of employment policy:

Table 5.3
Costs of Employment Policy: France

	FF billion				
	1973	1980	1981	1982	1983
A. Unemployment compensation	1.89	26.41	39.16	49.35	45.53
B. Incentives to withdraw from labour market ¹	1.58	10.97	17.88	28.76	47.12
C. Employment support ²	0.14	2.36	2.99	3.93	4.70
D. Promotion of employment and job creation ³	0.50	2.67	4.26	4.27	4.69
E. Work encouragement measures ⁴	0.08	1.38	1.68	2.30	2.66
F. Vocational training ⁵	5.72	19.82	22.76	27.33	28.88
G. Improvement of labour market operation ⁶	0.26	1.07	1.33	1.72	2.00
Total	10.17	64.68	90.06	117.66	135.58
(as percentage of GDP)	0.9	2.3	2.9	3.3	3.4

1. Mainly pre-retirement
2. Compensation for short-time working, payment of allowances to certain categories of the population and the "employment/investment" contracts in the textiles and clothing industry provided for by the Order of March 1982
3. Aid to regions tax exemptions, assistance to out-of-work wage-earners to set up their own businesses, etc.
4. Mobility premiums, installation grants to young farmers, income maintenance for handicapped workers, etc.
5. Training of jobseekers and employed persons.
6. Mainly operating expenditure of the ANPE.

Source: OECD Economic Surveys: France, July 1985

The unemployment benefit scheme has been changing drastically over the period of this recession. Until 1979 the Central Government provided social assistance for an unlimited period while employer/employee trading associations managed an insurance scheme and distributed allowances for limited durations. In 1979 there was a major change and the Central Government contributed to the Scheme. In 1982, 72% of the registered unemployed (jobseekers) were drawing benefits but only 10% received the Special Allowance. 80% of those drawing the basic allowance (almost one-half of the jobseekers) received less than the minimum wage. In 1984, in response to the rapid rise in unemployment compensation, new legislation was brought in to link benefits with contributions and at a lower rate. This may stabilise the costs of unemployment compensation but at the expense of the unemployed.

5.5 Fiscal Costs: Italy

Our estimates for Italy are extremely crude as we had difficulties in finding adequate data. The estimates provided in Table 5.4 are therefore subject to an unknown margin of error. The direct tax loss was calculated using average earnings. For the indirect tax loss we calculated the average propensity to consume and applied it to net average earnings (after direct tax and national insurance) and assumed an indirect tax rate of 15%. The unemployment benefits include the CIG payments.

Table 5.4
Changing Fiscal Costs: Italy

	Billion Lire (Current Prices)				
	1979	1980	1981	1982	1983
<u>Lost Income/Revenue</u>					
Direct Taxation	3250	4316	6419	8590	9896
National Insurance	968	1191	1649	2064	2378
Indirect Tax (High)	800	959	1304	1578	1827
<u>Expenditure</u>					
Unemployment Benefit (total)	1580	1580	2589	3673	4341
Total	6598	8046	11961	15905	18442
% GDP Current Prices	2.44	2.38	2.98	3.37	3.44

- Notes:
1. Source for Unemployment Benefits: Annuario Statistico Italiano 1984 p. 63, Table 54
 2. Source for Direct Tax loss and National Insurance Contributions: OECD National Account Statistics and OECD Tax Benefit Position of a Typical Worker in OECD Member Countries (Paris 1983) p. 82.
 3. Source for Indirect taxes: 15% tax on consumer expenditure assuming average earnings.

According to our estimates the fiscal costs of unemployment increased from 2.44% to 3.44% from 1979 to 1983. Subject to the qualification made above, these estimates seem to be "plausible".

5.6 Fiscal Costs: U.K.

There have been a few studies of fiscal (Exchequer) costs for the U.K. An early study was done by H.M.Treasury (Economic Progress Report No. 130, February 1981) which carefully set out the assumptions required to carry out such an evaluation. The study estimated the fiscal costs of an additional 100,000 unemployed and it stressed that it would be misleading to simply "blow up" their estimates to estimate the costs for the total unemployment. This was because the assumptions made for a small change in unemployment would be invalid for a large change. (Notwithstanding their cautionary note, the estimates have been used by others to estimate the costs of unemployment for 2 or 3 millions unemployed people.) They assume that the unemployed receive 80% of average earnings and that, for an increase in unemployment of 100,000, there is a fall in employment of 133,000 (based on past relationships). Table 5.5 reproduces their results for 1980-81.

Table 5.5

Direct Exchequer Costs of an Increase of 100,000 in Registered Unemployment (Excluding School-Leavers) in 1980-81

At 1980-81 outturn prices

	Exchequer costs for 1980-81 (£m)
Current receipts	
Income tax ¹	115
National insurance contributions ²	75
National insurance surcharge	15
Total current receipts	205
Current expenditure ³	
National insurance benefits (including earnings related supplement)	65
Other social security benefits	55
Rent and rate rebates	5
Administrative costs	10
Total current expenditure	<u>135</u>
Exchequer cost	340

1. The fall in income tax is assumed to be 23 percent of the fall in wages and salaries. A six-week accruals lag has been allowed for.
2. Employee and employer contributions, including payments to the National Health Service, Redundancy and Maternity Pay Funds. The fall in accruals of national insurance contributions before allowing for employees who would be contracted out is £100 million at unchanged contributions rates. The estimate given here allows for accruals adjustment and assumes that 30 percent of the employees would have been contracted out of the state pension scheme.
3. Totals are the rounded sum of unrounded components.

In a detailed analysis using microeconomic data from the Family Expenditure Survey, Dilnot and Morris (1983) calculated the fiscal costs for the particular characteristics of the unemployed in 1977/78. Their results are more detailed in that they include passport benefits but less detailed in that they exclude administrative costs.

We have produced a set of estimates of fiscal costs using data on unemployment by industry and average earnings by industry. We used the appropriate tax schedules to calculate direct tax losses and the National Insurance rates to calculate NI losses. For indirect taxes we followed Dilnot and Morris in assuming that 18% of net earnings would be lost in indirect taxes. The direct benefit payments are from published sources. We estimated the expenditure on school meals by using information on unemployed people with children. The Rate and Rent Rebates were assumed to be the same as in Dilnot and Morris. Since 1982 the Government treats unemployment benefits as taxable income. According to an answer in Parliament by Mr Lawson (Chancellor of the Exchequer) the yield in a full year at 1984/85 levels from taxing benefits paid to the unemployed is estimated at £625 million. (Hansard, 28th February, 1985, Col. 264). We used this to work out the gain per unemployed person and then deflated it by the retail price index. This was then subtracted from the income tax loss. For purposes of comparison we extrapolated Dilnot and Morris' figures to 1982/83 and 1983/84 by assuming a proportional relationship between numbers unemployed and costs in each category.

These calculations are set out in Table 5.6. The first row of each category gives our estimates (labelled PNJ) and the second row of each category gives Dilnot and Morris' estimates (labelled D & M). The D & M figures for 1982/83 and 1983/84 are simple extrapolations and therefore placed in parentheses. According to our estimates, the fiscal costs increased from £4,447 millions to £16,768 millions from 1979/80 to 1983/84: an increase from 2.17% of GDP to 5.49% of GDP. This is not only a high fiscal cost but also a very large increase over this period. (Note that we have not made an estimate for administrative expenses).

Table 5.6

The Changing Cost of Unemployment: UK

		<u>£m. Current Prices</u>				
		<u>1979/80</u>	<u>1980/81</u>	<u>1981/82</u>	<u>1982/83</u>	<u>1983/84</u>
<u>BENEFITS</u>						
1.	Unemployment (PNJ)	681	1328	1758	1550	1540
	D & M	614	1038	1646	(1906)	(1874)
2.	Supplementary (PNJ)	770	1182	2091	3422	3468
	D & M	976	1659	2618	(2712)	(2667)
3.	School Meals (PNJ)	156	233	346	396	430
	D & M	83	141	227	(230)	(227)
4.	Rate & Rent Rebates (PNJ)	49	101	141	176	162
	D & M	49	101	141	(176)	(162)
	<u>Total Benefits (PNJ)</u>	<u>1658</u>	<u>2844</u>	<u>4336</u>	<u>5544</u>	<u>5600</u>
	D & M	<u>1722</u>	<u>2938</u>	<u>4632</u>	<u>(5024)</u>	<u>(4930)</u>
<u>TAXES</u>						
5.	Income Tax (PNJ)	935	1969	3396	(3581)	(3829)
	D & M	1065	1855	3137	(3376)	(3419)
6.	National Insurance (PNJ)	1024	1740	2923	3678	4095
	D & M	872	1617	2613	(3025)	(2974)
7.	Indirect Taxes (PNJ)	832	1251	2145	3465	3244
	D & M	584	1396	2565	(2282)	(2244)
8.	<u>Total Tax Loss (PNJ)</u>	<u>2791</u>	<u>4960</u>	<u>8464</u>	<u>10724</u>	<u>11168</u>
	D & M	<u>2521</u>	<u>4868</u>	<u>8315</u>	<u>(8683)</u>	<u>(8637)</u>
9.	<u>Overall Exchequer Cost (PNJ)</u>	<u>4447</u>	<u>7804</u>	<u>12800</u>	<u>16268</u>	<u>16768</u>
	D & M	<u>4243</u>	<u>7807</u>	<u>12947</u>	<u>(13707)</u>	<u>(13567)</u>
10.	<u>% of GDP (PNJ)</u>	<u>2.17</u>	<u>3.30</u>	<u>4.92</u>	<u>5.74</u>	<u>5.49</u>
	D & M	<u>2.07</u>	<u>3.30</u>	<u>4.98</u>	<u>(4.84)</u>	<u>(4.44)</u>

Notes: 1. Data for Rows 1 and 2 are from Annual Abstract 1985. T. 3.5 for UK (Current Prices)

2. Source for D & M estimates are Dilnot & Morris "Estimating the Cost of Unemployment". Institute of Fiscal Studies Working Paper No. 27 (undated, 1983?). Figures in parentheses were crude extrapolations.

3. Estimates for tax loss and National Insurance from average earnings (New Earnings Survey), Employment Gazette and Inland Revenue tax schedules.

4. Estimates of taxes collected from Unemployment benefits were derived crudely from a Parliamentary answer by Mr Lawson (28th Feb. 1985, Col. 264) by assuming a proportional relation between numbers unemployed and taxation of benefits and then deflated by the retail price index.

5. School meals estimates were derived from an estimate in Social Trends 15 that the cost per child was in 1982/83 £208.33. We used a retail price index to adjust this cost for other years. Estimates of number of children unemployed from Eurostat.

5.7 Conclusions

In this Chapter we discussed the importance of measuring the fiscal costs of unemployment and the methodology involved in estimating them. We provided estimates of these fiscal costs which have grown enormously over the recession. It is worth noting that these estimates are all under-estimates since they ignore second round effects via the multiplier. Economic policies that may be introduced at a certain ostensible public expenditure level would, in fact, cost less because of the gains from increased tax revenues and decreased expenditures on social security. The estimates provided in this chapter suggest that it may be worth considering economic policies to decrease the level of unemployment.

Chapter 6 Individual and Social Costs

"...we have tried to ... specify and measure precisely the replacement rates ... Since we have found this exercise difficult, and have used a large amount of computer time to do so, it is doubtful if the unemployed have actually performed the same calculations ..." Dilnot & Morris (1983)

6.1 Introduction

In this Chapter we look at the financial, psychological and health costs to the individual and finally discuss the social costs of unemployment. In spite of what popular accounts in newspapers might suggest, unemployment for an individual is a very serious and upsetting condition which imposes large costs on the individual as well as on his (her) family. It is worth stressing that many of the unemployed would have had low incomes when employed, would come from socially disadvantaged backgrounds (poor educational and financial resources, ethnic minorities, poor or low quality neighbourhoods, etc.) and, where spells of unemployment occur with unfortunate frequency. During this recession, the problem of long term unemployment has become very serious: during long spells of unemployment individuals suffer not only financially but also physically (health/ morbidity) and psychologically. The social costs of unemployment in terms of increased social disorder (civil strife/riots) and crime are more difficult to establish but, in our opinion, are nonetheless important.

6.2 Financial Costs to the Individual⁽¹⁾

When an individual becomes unemployed, he loses an income and has to rely on financial support from his family and/or on the state. The extent of state support varies from country to country as well as on various personal circumstances, including the industry/occupation of previous employment. Again, State support varies according to whether the individual has previous employment experience as well as the duration and earnings of that employment. Finally, State support may depend on whether the individual was made redundant or dismissed or whether (s)he left the job voluntarily (quit). Some State support comes as a fixed sum per week and some comes as a proportion of previous income. Some State support comes in the form of payments which are conditional on various personal characteristics as well as the individual making the effort (physical or psychological) to claim these discretionary benefits.

It is worth noting that when an individual becomes unemployed in the current period he loses not only his current income but may also find his future income lower than if (s)he had not experienced unemployment. There is some evidence to suggest that the probability of finding employment decreases with the duration of unemployment. This may be for one of two reasons: (a) the employer treats the duration of unemployment as a signal of 'negative characteristics' or (b) the worker gives up hope and looks less carefully (or frequently) for jobs (decreasing search intensity) or performs badly in interviews because of the length of the unemployment spell. It is also true that even if (when) an unemployed individual finds work, the individual accepts a job at a lower income and skill level. Another reason for the long term unemployed to obtain lower incomes is that their skills deteriorate with time and, in some cases, due to technological change their skills become obsolescent. It is difficult to find any quantitative information on this skill deterioration, other than information on lower post unemployment earnings (see Moylan, Millar and Davies (1984)). If the individual has had repeated spells of unemployment, then there is little progression (if any) in his (her) income profile. In other words, unemployment in the current period imposes a financial cost now as well as in the future.

Financial costs to the individual are often summarised in terms of a "replacement ratio" (RR): the ratio of earnings to benefits or, in general terms, income in work relative to income when unemployed. (Conventionally the financial costs are treated as a ratio rather than the difference between income in work and income when unemployed.) In some neoclassical maximising models, individuals are assumed to make a rational choice about whether to accept a job offer (which every individual receives, or receives with some non-zero probability) or to continue looking for a better offer while living on unemployment benefits. There are several conceptual and measurement problems involved:

- (i) Given that many state benefits (and taxes) are dependent on individual circumstances, a typical replacement ratio is difficult to define unambiguously. There are a range of those RRs for each different circumstance, e.g. single, married, married with 'n' children.
- (ii) Replacement ratios may be defined in terms of gross or net earnings (net of taxes and national insurance). As taxation is dependent on individual (family) circumstances a whole range of RRs can be calculated.
- (iii) Earnings in work clearly vary for each individual. Typically, the unemployed have low earnings.

- (iv) RRs may be defined as 'backward' or 'forward' looking RRs. If we take the individual's past (actual) net earnings and divide by the (actual) benefits received when unemployed for some unit of time, we get a backward looking RR. Alternatively, we can define a forward looking RR: the expected future earnings stream divided by the (expected) future benefits stream. This method requires us to define an appropriate time horizon (expected working life?) as well as an appropriate discount rate. Some RRs are defined as annual rates, i.e. income for part of the year worked plus unemployment benefits for part of the year divided by income from work for the whole year. In our opinion this latter RR is very misleading. Similarly, although a present value RR (discounted benefits divided by discounted earnings) may be theoretically satisfying to neoclassical economists it is empirically difficult to compute and, perhaps, not relevant to the unemployed individual.
- (v) If the RR is calculated on a 'backward' basis for monthly (or weekly) periods, then in some countries the RR falls with duration because some benefits are reduced or fall to zero after a certain length of time. This means we need to provide a time profile of RRs⁽²⁾.
- (vi) There may be a difference between average and marginal RRs, especially affected by various tax conditions⁽³⁾.
- (vii) There are difficulties with whether or not to include discretionary benefits (e.g. Free School Meals in the U.K). In some cases we may have information on actual benefits received but often authors assume a hundred percent take-up of these benefits although it is known that take up rates are not that high.
- (viii) Some authors argue that work expenses (e.g. expenses involved in getting to work and back) should be subtracted from after tax net earnings: this clearly increases an RR. However, work expenses are very person specific: do you take sandwiches for lunch or eat in the office/factory canteen?
- (ix) Sometimes, instead of an RR for a 'typical' individual, an RR is calculated for an average individual. In this latter case a weighted average of benefits of all the unemployed are divided by a weighted average earnings of all the employed. This is a "macro" measure.

To some extent, which RR is used depends on what model of individual behaviour is assumed and what the purpose is in estimating an RR. Given our comments above it is clear that a range of RRs exist and, if any estimates are provided, we need to look carefully at the assumptions made and to look at all the footnotes carefully!

6.3 Some Estimates of Replacement Ratios

In this section we provide some estimates produced by various sources. As mentioned earlier, there are several alternative definitions of RRs which may explain the differences in estimates.

In a recent paper, in the Economic Bulletin for Europe (September 1983, Vol 35, No. 3) the United Nations Economic Committee for Europe provided estimates of RRs for a 'typical' worker in manufacturing who remains unemployed for a whole year. Estimates are provided for two kinds of 'typical' workers: (a) Married man with 3 dependents and (b) single person. The RR is defined as the ratio of unemployment net (of tax) benefits (plus allowances) for a year divided by previous disposable income (gross earnings minus income tax and employee's social security contributions). These results are presented in Tables 6.1 and 6.2

Table 6.1

Replacement Ratios for Married Man with 3 Dependents

	Percent								
	<u>1972</u>	<u>1974</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
F.R.G.	70.0	70.0	75.2	75.0	74.7	74.7	74.7	74.9	75.0
France ^(a)	84.7	89.0	90.6	91.6	92.2	92.2	93.8	91.2	90.0
Italy ^(a)	43.6	41.4	43.6	45.1	46.4	47.7	46.7	47.6	47.0
U.K. ^(b)	75.0	70.0	74.5	74.8	69.0	66.5	59.4	56.7	47.0

Source: Economic Bulletin for Europe (Sept. 1983, Vol. 35, No. 3)T 3.1

Notes : (a) Benefits are those payable when redundancy is due to economic reasons. If the unemployment was due to other reasons, the RR for France would be 60.2 in 1972 and 64.0 in 1982. In Italy it would be 17.7 in 1972 and 19.0 in 1982. The figures for Italy include wife's allowances but exclude child allowance which was Lit 19,760 per child in 1981. If these were included, the 1981 RR would be 52.3 percent.

(b) Benefits exclude allowances for school meals, free milk, rent and tax rebates. Years are financial years.

Table 6.2

Replacement Ratios for Single Person

	Percent								
	1972	1974	1976	1977	1978	1979	1980	1981	1982
F.R.G.	62.5	62.5	68.0	68.0	68.0	68.0	68.0	68.0	68.0
France	84.7	89.0	90.6	91.6	92.2	92.2	93.8	91.2	90.0
Italy	39.0	37.6	38.6	38.9	39.9	40.5	41.2	42.0	42.2
U.K.	53.9	48.4	50.4	51.4	47.3	44.6	39.5	37.0	26.0

Source: Economic Bulletin for Europe (Sept. 1983, Vol. 35 No. 3) T 3.2

Notes : See Notes to T 6.1

There is quite a wide variation over countries and especially for the U.K. a substantial decline over the period in question. These RRs for so-called 'typical' workers may not be those relevant for many workers because they may not have the appropriate 'qualifications' (e.g. adequate employment history) to be eligible for these benefits. The estimates for Italy (presumably) include payments under the Cassa Integrazione Guadagni (CIG) as a footnote makes clear that the RR is very low in other cases. In Italy the unemployment benefits excluding CIG are very low and presumably family support has to take the place of State support.

P. Roberti (in OECD 1984) has provided estimates of an RR defined as income earned plus unemployment benefits in one year divided by annual income assuming unemployment spells of 3 and 6 months. These RRs are obviously higher because they include earnings for 9 and 6 months (respectively) in the numerator. These estimates are provided for 'typical' workers as in the UN estimates. These results are given in Table 6.3.

These RRs look surprisingly high but are misleading. They include earnings for part of the year in the numerator⁴ (in addition to unemployment benefits) and are annual RRs. It seems more appropriate, in our view, to quote an RR on a weekly or monthly basis where the numerator is solely unemployment (plus other) benefits.

In the OECD Employment Outlook 1984, RRs are presented on the basis of unemployment benefits to net earnings for different income levels and for different unemployment durations. (see Charts 18 & 19, pp. 94-95). In almost all cases the RRs fall substantially after 12 months unemployment duration as people move off the unemployment benefits to (the equivalent of) supplementary benefits. In Germany unemployment benefits (Arbeitslosengeld) are paid for a maximum of 312 days (depending on length of previous employment) after which the unemployed receive supplementary benefits (Arbeitslosenhilfe). In France the basic allowance is paid for three years while in Italy it is for 180 days a year (or 360 days in the building sector). In the UK, unemployment benefits are paid for a year after which individuals move on to means tested supplementary benefits. A recent report by the UK Department of

Table 6.3

Replacement Ratios: OECD estimates

<u>Unemployment</u> (Months)		<u>RR</u> Single	<u>RR Married & 3 Dependents</u>
1. <u>Federal Republic</u> <u>of Germany</u>	1978		
	3	96.3	94.0
	6	88.5	88.3
2. <u>France</u>	1980		
	3	98.9	98.9
	6	96.6	96.6
3. <u>Italy</u>	1978		
	3	77.9	85.0
	6	54.7	61.8
4. <u>U.K</u>	1980/81		
	3	86.7	91.8
	6	73.8	85.3

Source: Roberti in OECD (1984)

Notes : 1. These are ratios of annual disposable incomes of production workers experiencing 3 or 6 months of unemployment to those experiencing no unemployment. The estimates quoted above are for those on average earnings, for those on 66% or 200% of average earnings, see Source.

2. Figures for Italy exclude construction workers and CIG.

Health and Social Security (see Moylan, Millar and Davies (1984)) discusses the difference in replacement ratios for different families, and changes over time in the RRs.

To conclude this section, we quote from the OECD Employment Outlook 1984,

" ... the results of this analysis cast doubt on the popular belief that a spell of unemployment has little personal financial cost." (p. 96).

6.4 Physical and Mental Health Costs

In this section we briefly review the evidence of the impact of unemployment on the physical and mental health of individuals. One of the main problems in evaluating the evidence is that the direction of causation is difficult to determine: does poor health cause unemployment or does unemployment cause poor health? The other main point worth stressing is that there are a range of individual responses to the experience of unemployment. Although it is difficult to substantiate with evidence, our opinion is that the individual response to unemployment is affected by the global economic conditions: if all (or most) of your colleagues and friends are unemployed, then you may not feel as depressed as if you are one of the few experiencing unemployment: the stigma of unemployment may vary with the overall level of unemployment.

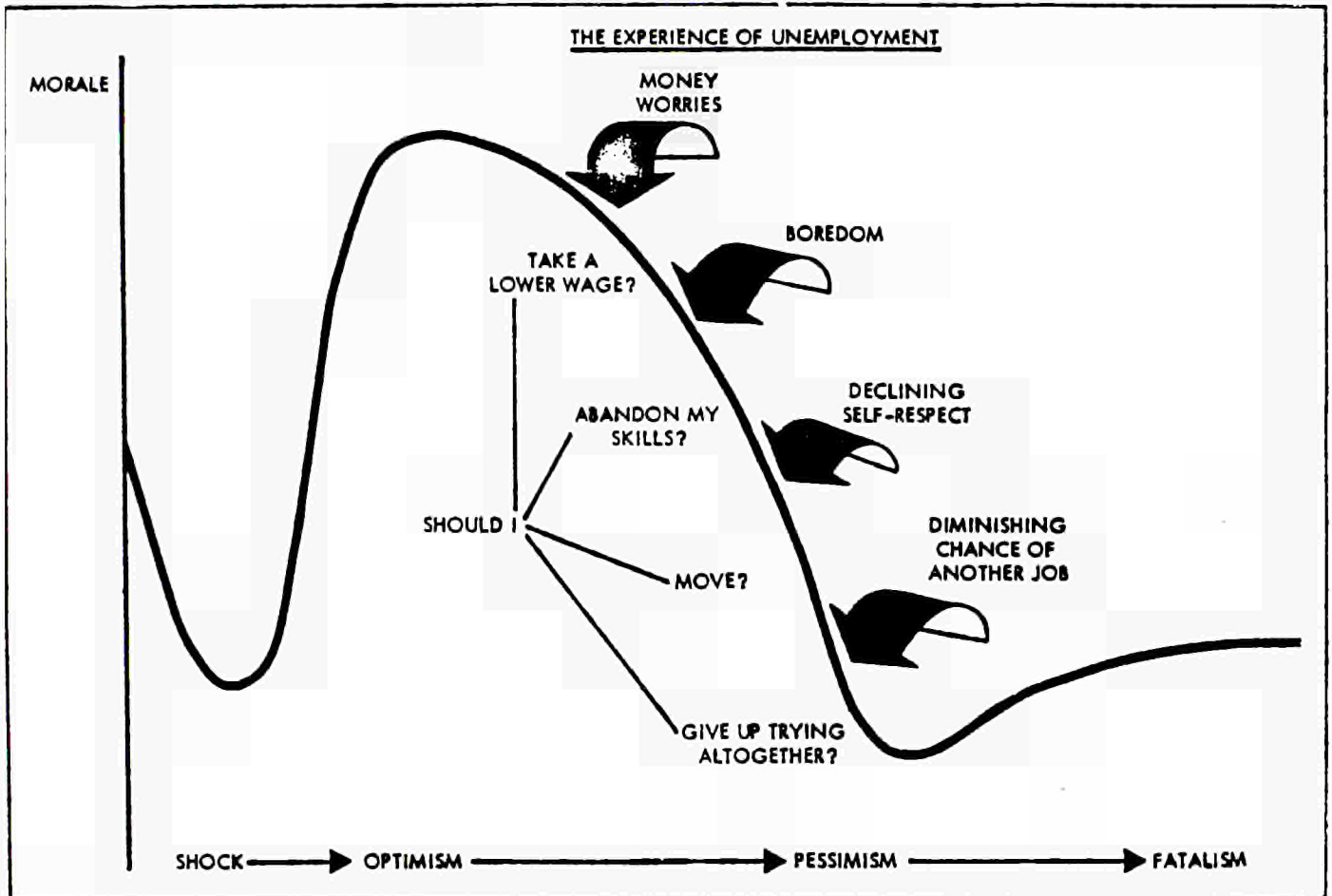
In modern industrial society, employment provides not only an income, but also a set of social relationships which provide a structure and meaning to life. Thus when an individual becomes unemployed (s)he loses an income and is usually worse off: these are the financial costs discussed above. However, the breakdown in social relationships can lead to the individual suffering mentally and physically. If life has no objective or purpose, the individual, in a sense, lets his (her) defences lapse and, as a result, may succumb more easily to physical illness.

In a recent paper Jahoda & Rush⁽⁴⁾ (1980) state the importance of employment thus:

"On the individual level the latent consequences of unemployment can be regarded as the absence of the latent consequences of employment. Five such consequences have been identified in the literature. Employment of whatever kind at whatever level makes the following categories of psychological experiences inevitable: it imposes a time structure on the waking day; it compels contacts and shared experiences with others outside the nuclear family; it demonstrates that there are goals and purposes which are beyond the scope of an individual, but require a collectivity; it imposes status and social identity through the division of labour in modern employment and, last but not least, it enforces activity."

In an interesting and much quoted paper, Harrison (1976) discusses the findings from some of the earlier studies. He states that those with a past history of employment go through a sequence of stages: shock → optimism → pessimism → fatalism. This is represented graphically:

Diagram 6.1



An appropriate way of studying the impact of unemployment on physical and mental health of the individual would be to carry out longitudinal studies of the unemployed with a control group of the employed. The UK Department of Health and Social Security Cohort Study⁽⁵⁾ was a short period of longitudinal study which inquired about health but did not have a control group. On the basis of self reporting the evidence does not support the view that health of the unemployed deteriorates with unemployment duration. They did find, however, that the probability of finding a job decreases with ill-health. However, as they are aware, this study has limitations because of the absence of a control group and the attrition rate of the cohort. Brinkmann, (1984) reporting on a longitudinal study by the Institute for Employment Research (IAB, Nürnberg) found that the long term unemployed showed increased signs of ill health, particularly mental health.

An as yet unpublished World Health Organisation Report concludes that:

"A significantly higher prevalence of mental disorders have been found in the unemployed..."

"Unemployment is therefore considered by many as a major source of stress."

"Chronic stress is now considered a major contributor to cardiovascular diseases, ulcers, asthma and other diseases."

In a study, Moser, Fox and Jones (1984) conclude on the basis of a longitudinal study for the UK that the mortality rates for unemployed men was higher than for all men. They also conclude that there is little evidence that this could be explained by ill-health leading to unemployment. Thus, we find that there is evidence that unemployment increases the probability of physical or mental illness⁽⁶⁾.

Most of the studies suggest that these problems increase with duration of unemployment. The long term unemployed suffer more than the short term unemployed.

Before concluding this section we should note that the individual costs (whether financial, physical or mental health) would depend to some extent on whether the unemployed individual was a young person who had never worked before, was made redundant or was a voluntary quit. Again, individual responses differ to the same circumstances: some manage to cope with the experience of unemployment and enjoy the leisure (at least for some time) while for some it is a shattering experience.

6.5 Social Costs

Most of the aggregative studies of the social costs of unemployment using time series data, have been controversial. As such all these results are tentative and subject to revision in the light of further work. In this section we briefly review the studies that find a relationship between unemployment and mortality and unemployment and crime.

Brenner (1979) argues that unemployment (and the risk of redundancy) leads to stress and cardiovascular morbidity and, hence, leads to increased mortality rates. He argues that trend factors like economic growth and improved public health, have decreased mortality rates. Using regression analysis on time series data on England and Wales, 1936 to 1973 he found a significant positive relation between age specific mortality rates and unemployment. A second degree polynomial lag structure on unemployment was used in the analysis. This study has been criticised severely by Gravelle, Hutchinson and Stern (1981) on statistical grounds. They argue Brenner's model is incorrectly specified, the variables are poorly measured and the results are a statistical artifact of the time period chosen. When tests of structural stability were carried out, Brenner's results break down. They argue that although they do not necessarily disagree with the view that unemployment affects morbidity and mortality, the time series evidence is not conclusive⁽⁷⁾.

An analysis of the links between unemployment and crime is especially difficult because the concept of crime itself depends on political and social attitudes in general and that of the police and judiciary in particular. Unemployment is said to lead to crime by economists because the opportunity costs of time are low for the unemployed so it is 'rational' to increase their incomes by (property) crimes. Sociologists and criminologists argue that unemployment leads to a sense of alienation or anomie which causes frustration and aggression which breaks out into crimes. Most of the time series and cross section work has been criticised severely and the results of a positive link are only suggestive. In an important work, Carr-Hill and Stern (1979) found that when variables, other than unemployment, were introduced (e.g. rateable values) that the results were weakened. In a preliminary paper by this author, Junankar (1984), the same support was found for a link between youth unemployment and youth crime in England and Wales. Overall, many authors believe there is a link but argue that to show this in econometric models is very difficult.

Another social cost of unemployment is the possibility of social strife and civil riots. Most of the civil riots in Britain in the post-war period have taken place in high unemployment areas: Liverpool, Brixton (in London), Bristol etc. The House of Lords Select Committee Report on Unemployment (1982) states

"We believe unemployment to be among the causes of ill health, mortality, crime or civil disorder" (p. 59)

6.6 Conclusions

In this chapter we discussed the costs of unemployment to the individual and to society. Unemployment imposes a substantial financial cost on the unemployed person and his (her) family. Although we have emphasised the costs to the individual, it is clear that the family suffers both financially and psychologically. There are increased tensions in the family which may lead to breakdown of marriages. Not only the unemployed individual suffers from unemployment: so does the employed individual. The employed individual finds it more difficult to find another better (more satisfying, better paid, etc.) job: job mobility is decreased. In addition, because of the threat of unemployment, the employed individual can be coerced into increased intensity of effort by the management. Because of the changed balance of power, employers may resist demands for increased wages (or not grant increases in line with inflation) and hence employed individuals suffer from unemployment. The longer the duration of unemployment, the greater these costs. In addition, long term unemployment is likely to increase mental and physical illness and, in extreme cases, lead to attempted suicides. Unemployment also leads to an increased mortality rate. There is evidence to suggest that unemployment leads to increased crime and possibly to social disorders and civil riots.

Footnotes to Chapter 6.

1. See P. Roberti "Unemployment Compensation Replacement Rates" in OECD (1984) High Unemployment: A Challenge for Income Support Policies. Also see OECD Employment Outlook 1984, Ch. 6.
2. See OECD Employment Outlook 1984, p. 95.
3. See Atkinson et al. (1984), Journal of Public Economics.
4. M. Jahoda and H. Rush "Work, Employment and Unemployment: An Overview of Ideas and Research Results in the Social Science Literature", University of Sussex, Science Policy Research Unit: Research Paper 1980 p. 11.
5. See S. Ramsden and C. Smee "The health of Unemployed Men: DHSS Cohort Study", Employment Gazette, September 1981, pp. 397-401.
6. S. Platt and N. Kreitman, "Parasuicide and Unemployment in Edinburgh, 1968-82", find that unemployment increases the parasuicide rate.
7. Also see Gravelle (1984) and Forbes and McGregor (1984). Jürgen John (1983) in a preliminary analysis for West Germany finds some support for a positive relation between mortality rates and unemployment.

Chapter 7 Conclusions

"Prolonged unemployment is for most people a profoundly corrosive experience, undermining personality and atrophying work capacities." Harrison (1976)

7.1 Introduction

In this Report we have discussed the costs of unemployment to society in terms of loss of output, to the Government in terms of lost revenue (fiscal costs) and to the individual (in terms of lost income as well as physical and mental health costs) and briefly costs to society in terms of morbidity, mortality and crime. There is overwhelming evidence that unemployment imposes a very high cost. In this Chapter we discuss some of the broader policy questions and implications for future research:

- (i) Why do Governments not take active policy measures to reduce unemployment?
- (ii) What policy measures can the Government introduce?
- (iii) Implications for future research

7.2 Constraints on Government Policy

Given that unemployment is so high and still increasing, why do Governments not engage in active policies to slow down or reverse this trend in unemployment? Unemployment imposes such high costs: a loss of output of at least 10 percent of GDP, a loss to public revenues of 3 to 6 percent of GDP and a financial loss to individuals of about 20 to 30 percent of earnings plus mental and physical health costs. Why do Governments not intervene to improve the situation? Do they think that these costs are not real or do they think they are exaggerated?

The answers to these questions lie in the realms of economics, politics and in the philosophy of social science. Some Governments believe in the ideas of a group of economists labelled the 'New Classical' school. This group of economists believes that the economy consists of perfectly competitive firms with individuals acting in a non-collusive manner. Prices are assumed to adjust instantaneously and individuals are assumed to have 'rational expectations' (that is individuals form expectations about various variables, e.g. inflation rates, which are on average correct). Under some very restrictive assumptions it can be shown that Government policy is ineffective⁽¹⁾. Some Governments have latched on to this economic model to justify their view that laissez faire free enterprise works wonders: all that is required is to remove institutional constraints imposed by Government economic policy and Trade unions. On the whole this extreme model in economics is losing adherents and most economists would accept that Governments can have some influence on the real variables in the economy (e.g. on unemployment, GDP, etc.).

A second reason why some (all?) Governments have not taken active steps to reduce unemployment is based on versions of "monetarism". Active Government policy, they argue, would lead to increased money supply and hence to increased inflation rates. Inflation is said to be a 'social evil' (although it is difficult to find what real economic costs are imposed by inflation in a monetarist economic model) and hence to be avoided at any cost.

A third reason, based on the idea that there is a trade-off between inflation and unemployment ("Phillips Curve") is that active Government policy would reduce unemployment but "stoke the fires of inflation". There is much debate in the theoretical and empirical literature about Phillips curves. However, the empirical evidence on Phillips curves is certainly questionable. In particular, with unemployment at historically unprecedented levels (except for the great depression of the nineteen thirties) it is unclear whether an increase in Government investment would have much effect on the inflation rates.

A fourth reason, for Government inaction, is that reflation by one country on its own would lead to a growth of imports, balance of payment deficits etc. This, however, suggests that there should be a coordinated response by the European Community to tackle the problem of unemployment.

A fifth reason is that bouts of unemployment may be necessary to alter the balance of industrial power between workers and management to stimulate the profit rate and hence investment. The post-war economic scene was one of high levels of employment which increased the power of unions and hence

led to increased earnings putting pressure on profit rates. Large corporations may be able to 'weather the storm' while small firms go under during a recession: weaker inefficient firms would close down in a Darwinian survival of the fittest.

Thus there are several reasons why a Government may not enact economic policies to expand the economy. However, we feel that the problem of unemployment is now so serious that a mild expansion of the economy would not entail any harmful effects. We now turn to some policy matters.

7.3 Policy Implications

Our report has stressed the very high costs of unemployment and we briefly consider some economic policies. Given the high level of unemployment we feel that there is need for a concerted and coordinated reflation of the economies of the European Community. These policies should involve an expansion of Government investment in projects that are labour intensive, use mainly unskilled workers, e.g. construction activities to replace old housing stock, hospitals, schools etc.

In addition to increased public investment, the Government should expand various job creation/training schemes. Studies by Reyher, Koller and Spitznagel⁽²⁾ (1980) demonstrate that the fiscal costs of these policies for West Germany are very low because of the savings on employment compensation and gains from increased tax revenues. The House of Lords⁽³⁾ (1982) found that the net costs of various economic policies were small relative to the Gross costs. Thus policies to provide employment subsidies to firms taking on long-term unemployed people would be especially important.

To evaluate alternative policies would involve some fairly detailed estimation but illustrative studies mentioned above show the feasibility of these schemes. Our estimates of the fiscal costs of unemployment are an important argument in favour of these policies.

7.4 Implications for Future Research

There are several avenues of future research implied by the work in this Report. Firstly, and ideally, we should evaluate the costs of unemployment to society in terms of a macroeconometric model specified for each country. Within the model structure, we simulate the impact of a particular economic policy (e.g. increased Government expenditure, decreased taxation etc.) on output, employment, fiscal revenues, inflation, etc. In this way we can estimate the output gain relative to the decrease in unemployment, the change in fiscal revenues relative to the decrease in unemployment and the increase (?) in inflation relative to the decrease in unemployment. Secondly, further research is necessary on how to aggregate the costs and benefits to society. Thirdly, much work needs to be done on the costs to the individual depending on how (s)he became unemployed: redundancy, dismissal or voluntary quit. In addition, these individual costs would be affected by family circumstance as well as by whether the peer group is similarly affected. Fourthly, the social costs in terms of increased morbidity, mortality and of crime is still a very controversial area which needs more longitudinal studies. Finally, much work needs to be done on dynamic costs of unemployment in terms of output loss, skill deterioration and, generally long-term consequences of a continued high rate of unemployment. The consequences on young people who have never had work since leaving school is an area of especial concern.

7.5 Conclusion

We believe that the continued high levels of unemployment impose a serious cost on individuals and society. In our opinion, Governments must intervene actively in the economy to bring down the levels of unemployment. Even if there is a slight increase in inflation rates, we feel it is a price worth paying. There is a way of running a society which does not condemn millions of people to a hopeless state of unemployment: the way forward is to have a coordinated and concerted expansion of the economies of the European Community.

Bibliography[1] G. AKERLOF

"A Theory of Social Custom, of which Unemployment may be the Consequence". Quarterly Journal of Economics June 1980, pp. 749-777

An important contribution to labour economics in providing a theoretical rationale for the binding nature of social customs. Social custom prevents an employer from hiring labour at a wage less than the current one even with the existence of unemployment.

[2] K. ALLEN & A. STEVENSON

An Introduction to the Italian Economy, Martin Robertson, London, 1974.

This book describes and analyses the main features and issues of the Italian economy and its development over the post-war period. Comparisons are made with other countries, particularly the UK. It examines the factors behind Italy's rapid post-war economic growth and success with its balance of payments (until 1972). Also studied are labour market changes and industrial relations, the problem of the underdeveloped South, and the contribution of the state industrial holding sector and fiscal and monetary policies, to overall economic performance.

[3] J. R. ARTUS

"Measures of Potential Output in Manufacturing for Eight Industrial Countries, 1955-1978" I.M.F. Staff Papers 198, p. 1-35.

Discusses concept of potential output and suggests that production function approaches (with appropriate estimation) is best method. Provides empirical estimates using quarterly data for Manufacturing Industry. Note he stresses that "potential output" is not necessarily "optimal output" because of social objectives in terms of controlling inflation or affecting balance of payments.

[4] A.B. ATKINSON

"Unemployment Benefits- Incentives" LSE Discussion
Paper no 11, July 1980.

Revised version of paper prepared for HM Treasury in Feb. 1978. Ch.5, Economics of Unemployment in Great Britain (ed. J. Creedy). Analysis of possible effect of unemployment benefit on role of unemployed. Claims that cross section evidence appears to find a significant effect of benefits on industrial probabilities of re-employment but magnitude relatively small. Says little ground to suppose introduction of Earnings Related Supplement led to any avalanche of claims or that its abolition will dramatically reduce level of unemployment.

[5] A.B. ATKINSON, J. GOMULKA, J. MICKLEWRIGHT & N. RAU

"Unemployment Benefit, Duration and Incentives in
Britain: How Robust is the Evidence? Journal of
Public Economics 23, 1984, pp. 3-26.

Reviews the evidence that unemployment benefits increase the duration of unemployment (as derived from search models). They find that substituting the hypothetical benefits by the actual the actual benefits received leads to a breakdown of the relationship between unemployment and benefits.

[6] (ed.) MARTIN N. BAILY & ARTHUR M. OKUN

The Battle Against Unemployment and Inflation:
Problems of the Modern Economy. W.W.Norton & Co. New
York, 1982.

Various essays on relationship between inflation and unemployment with 3 essays on fiscal and monetary policy. Main interest is the Okun paper "Potential GNP: Its Nature and Significance (pps. 11-20) in which he spells out "Okun's Law": "In the post-war period, on the average, each extra percentage point in the unemployment rate above 4% has been associated with about a 3% decrement in real GDP". He defines natural rate of unemployment as 4%.

- [7] BASEVI, G., O. BLANCHARD, W. BUITER, R. DORNBUSCH & R. LAYARD.

"Macroeconomic Prospects and Policies for the European Community", Commission of the European Communities Directorate General for Economic and Financial Affairs, Economic Papers No. 12, April 1985.

Argue that there is no evidence that unemployment is a real wage problem but is the outcome of monetary and fiscal policies. They argue for an expansion in demand.

- [8] G. BENEDETTI, B. GUI, F. NERI

"Discussioni e Attualita. La Cassa Integrazioni Guadagni nel mercato del lavoro Italiano: caratteristiche e costi degli interventi ordinari e straordinari". Revista di Politica Economica, Gennaio, 1985.

This article explains how the Cassa Integrazione Guadagni (Cig) operates and how it has altered from its original form, which was only intended to deal with temporary falls in labour demand. Some of the benefits and problems of the system are examined. In particular the rising cost to the government of payments through Interventi Straordinari. Projections of the estimated cost of the Cig through to 1990 are made under two different sets of assumptions regarding employment and unemployment levels. The political implications of the effect of the Cig on labour relations are also considered.

[9] G.BODO

"Demand for labour in Italian industry (1970-80",
Applied Economics Vol. 16, 1984, pp. 583-595.

Some alternative models of labour demand are applied to Italian industry, excluding construction, from 1970 to 1980. A traditional Cobb-Douglas specification performed satisfactorily. A generalized production function introduced to overcome some limitations in the estimation procedure for the simpler model implied positive but decreasing marginal productivity of labour. The results showed a rapid speed of adjustment of hours in Italy, 75 to 82% of the gap between desired and actual values is closed in two quarters, although there is very high rigidity of employment levels.

[10] BLANCHARD, O., R.DORNBUSH, J.DREZE, H.GIERSCH,
R.LAYARD and M.MONTI

"Report of the CEPS Macroeconomic Policy Group,
Employment and Growth in Europe: A Two-Handed
Approach. Commission of the European Communities,
Directorate General for Economic and Social Affairs,
Economic Papers No. 36, June 1985.

Argue that proximate cause of growth in unemployment is a lack of demand. Recommend expansion of demand and supply-side friendly policies.

[11] BLAUSTEIN, S.J & I.CRAIG

An Internation Review of Unemployment Insurance Schemes, Kalamazoo, Michigan: W.E.Upjohn Institute , 1977.

A review of the main features of social insurance benefits for most of the industrialised countries in the mid-seventies.

[12] BRENNER, M. Harvey

"Influence of the Social Environment on Psychopathology" in James E. Barrett et al. (eds.) Stress and Mental Disorder (Raven Press, N.Y. 1979).

[13] BRENNER, H

"Mortality & the National Economy: A Review of the Experience of England and Wales, 1936-76". The Lancet, September 15th, 1979, pp. 568-573.

An important paper that argues that economic instability leads to stress and affects cardiovascular mortality. Uses some cross-section data and some time series data to show that mortality rates increase with unemployment. See Gravelle, Hutchinson & Stern (1981) for a critique of statistical methods.

[14] BRENNER, H & Anne Mooney (1983)

"Unemployment and Health in the Context of Economic Change". Social Science and Medicine Vol 17:16, pp. 1125-1138.

[15] BRINKMANN, C

"Financial, Psycho-Social and Health Problems Associated with Unemployment" in The Future of Work: Challenge & Opportunity (ed.) G.Fragniere, Van Gorcum - Assen/Maastricht, Netherland 1984.

Reports on results from a longitudinal study begun in 1981 in Germany. Provides evidence of detrimental effects on health (particularly mental) of long term unemployment.

[16] G. BRISCOE, P. O'BRIEN & D. J. SMYTH

"The Measurement of Capacity Utilisation in the UK."
Manchester School, Vol. 38(2), June 1970, pp. 91-117.

This paper examines five different ways of measuring levels of capacity utilisation (including a Wharton method and production function method). There is a surprising degree of similarity in the different indices.

[17] BRUNO, M.

"Aggregate Supply and Demand Factors in OECD Unemployed: an Update". Conference on the Rise in Unemployment, White House Conference Centre, Chelwood Gate, Sussex, 27-31 May 1985.

Time series regression on OECD countries suggest a rise in the wage gap by 1% increases unemployment by 0.15% within 2 years, while a 1% fall in rate of growth of real money stock leads to a rise in unemployment by 0.06% after a year.

[18] BRUNO, S

"The Industrial Reserve Army, Segmentation and the Italian Labour Market". Cambridge Journal of Economics. Vol. 3, 1979, pp. 131-151.

[19] BUITER, W

"The Macroeconomics of Dr. Pangloss: A Critical Survey of the New Classical Macroeconomics", Economic Journal, Vol. 90, No.357, March 1980, pp.34-50.

An early paper that showed that the New Classical result of policy ineffectiveness was based on a very restrictive model.

[20] W.H. BUITER & M.MILLER

The Thatcher Experiment. Brookings Papers 2: 1981.

Analyse current recession in the UK under headings 1) production, aggregate demand and demand components; 2) unemployment & labour productivity; 3) wages & prices; 4) the current account competitiveness and the exchange rate. Then proceeds to discuss monetary control in UK, the medium term financial strategy, the monetary squeeze and fiscal policy, role of North Sea oil. Main interest is short section (p. 326-7) on unemployment & labour productivity where they note that both labour productivity & unemployment higher in 1981 than Okun's Law would suggest,. Suggest two explanations - increase in cyclically adjusted level of productivity (result of current policy) and labour hoarding that lessens measured productivity. May favour second explanation.

[21] W.H.BUITER & M.H.MILLER

Changing the Rules. Brookings Papers 2: 1983.

3 main sections 1) profile of recent economic levels in UK with a review of taxes & spending under MTFs 2) effectiveness of anti-inflation policy & of productivity breakthrough policy 3) probability of abandonment of stabilization policy. Main interest p. 337 which tabulates crude estimate of conventional output gap of c. 29 percentage point years of potential GDP by 1983.1.3% p.a.trend gap observed 1973-9. Then proceeds to discuss trade off between inflation & unemployment.

[22] MARK CASSON

Youth Unemployment, Macmillan, 1979

Coverage: W.Germany, Italy, UK mid 70's to late 70's. Ch. 4 useful in its analysis of theories of youth unemployment. Ch. 6 discusses some explanation of youth unemployment. Main point - uses biennial EEC Labour Force Sample Survey.

[23] CENTRE D'ETUDE DES REVENUES ET DES COUTS (CERC)

"L'Indemnisation du Chomage en France et
al'Etranger" Document no. 62,CERC 2e trimestre,
1982.

Replacement ratios calculated for Canada, France, Germany, Sweden and the UK.

[24] COMMISSION OF EUROPEAN COMMUNITIES

Rapid Information on Employment Benefits V/355/80 -
EN, Sept. 1978.

Cites number receiving which particular type of benefit
according to duration of unemployment.

[25] COOK, D.G., R.O. CUMMINS, R.O. BARTLEY & A.G. SHAPER
(1982)

"Health of Unemployed Middle-Aged Men in G.B". The
Lancet 5th June, 1982, pp. 1290-1294.

[26] (ED) BERNARD CRICK

Unemployment, Methuen 1981.

Selection of 12 essays covering socio-political aspects of
contemporary unemployment in this country. Strong regional
orientation with emphasis "on the extent of unemployment in
the different regions ... on its social effect and on its
probable political consequences".

[27] W.W. DANIEL

The Nature of Current Unemployment. British North
American Research Association Occasional Paper No.
6. Sept. 1981.

Coverage: GB 1970-1981. Discussion of composition &
characteristics of the unemployed, "Emphasis of the paper is
upon trends, developments & issues rather than upon
prescriptions" (p. 3).

[28] M. DARDI

"Contratto di lavoro, Licenziamenti e Cassa
Integrazione", Rivista Internazionale di Scienze
Sociale, Parts 2/3, 1983, pp. 375-401.

This article examines the effect of the Cassa Integrazione (CI) by building a theoretical model which assumes sackings and reduction of labour are two separate decisions. The main conclusions are that through the CI there is a transfer of funds from the state to firms which allows them to finance excess capacity. What is emphasised is not so much the insurance of workers' incomes but the almost free insurance of firm's incomes. It is recognised that not everyone would agree with the theoretical basis of this model which, instead of using comparative static analysis of the situations with and without the CI, assumes that in the absence of the CI workers and firms would develop private institutions that would avoid the problems arising from restrictive employment contracts.

[29] D.H.DAVIES, A.P.L.MINFORD & A.SPRAGUE

The IFS Position on Unemployment Benefits. Fiscal Studies No. 1.Vol. 4 March 1983.

Reiterate crucial role played by benefits. Maintains Kay & Morris underestimate this since they undervalue passport benefits. Calculate replacement income @ £119 p.w. and £114 for short term- long term unemployed respectively at Nov. 1982. Claim that 13% of the labour force not significantly better off out of work long term. Declare that vast mass of unemployed are involuntarily excluded from the union sector but voluntarily abstaining from entering the non union sector.

[30] A.W.DILNOT & C.N.MORRIS

The Exchequer Costs of Unemployment, Fiscal Studies.Vol. 2, No. 3,November 1981.

Published version of the IFS Discussion Paper No. 27.

[31] A.W.DILNOT & C.N.MORRIS

Estimating the Cost of Unemployment. IFS Working Paper No. 27.

Calculation of exchequer cost of unemployment using the Family Expenditure Survey 1977 and on the New Earnings Survey of 1977 as basic source material.

[32] A.W.DILNOT & C.N.MORRIS

"Private Costs and Benefits of Unemployment:
Measuring Replacement Rates" Oxford Economic Papers
Vol. 35(4) 1983 pp. 645-664.

Argue that although it is possible to define replacement rates in theory, in practice they are very difficult to measure. Distinguish between average, marginal, short and long term replacement rates. Emphasise differences in RR for different individual circumstances.

[33] "Employment and Concealed Economy" (Parts I & II)

Italy: Documents and Notes, Year XXX, Nos. 13 & 14,
1982

These two articles consider various aspects of the Italian economy related to education and labour supply. The Italian education system is not geared to the needs of industry and young people are not willing to enter skilled manual occupations. Some young people would prefer part-time working but employment legislation restricts its availability. Various aspects of the black economy and double job holding are described and the problems that these cause in estimating true unemployment levels are considered. Other problems of the Italian labour force and education system are examined, using illustrative material rather than a comprehensive national assessment, and some solutions are suggested.

[34] EUROPEAN TRADE UNION INSTITUTE

The Economic Costs of Unemployment in Western
Europe, Brussels, 1984.

Covers output costs, financial (exchequer) costs and the cost for the individual. Uses Okun's Law. Useful in providing comparative estimates for EEC countries.

[35] EUROSTAT

Employment and Unemployment Statistical Bulletin.
No. 2, 1983.

Data: structure of unemployment in EEC from Oct. 1979 to Oct. 1982.

[36] LEONARD FAGIN & MARTIN LITTLE

The Forsaken Families: The Effects of Unemployment on Family Life, Penguin, 1984.

Psychiatrists' analysis of effect of unemployment on family rather than individual life. Stress that effects differ according to life cycle point of family (i.e. if family undergoing transition from one stage to another in family life cycle, they are likely to suffer more from effects of unemployment). Little statistical information. Useful for case studies in details; on qualitative rather than quantitative basis only.

[37] D. FAUSTO

Il sistema italiano di sicurezza sociale, Il Mulino Bologna, 1978.

This book explains the essential elements of the Italian social security system. The system requires substantial structural reforms to overcome the crisis point which Italian society has reached. Diverse conceptions of social security are examined as well as the problems involved in provision of social insurance, health care and general assistance. The Italian system of assistance is compared with the systems operating in other EEC countries and the future prospects of the Italian system are assessed.

[38] M. FELDSTEIN

The Private and Social Costs of Unemployment.
American Economic Review, Vol. 68, No 2, May 1978,
pp. 155-158.

Private: experience differs very significantly from one individual to another. Claims low private cost due to high marginal tax rate and no tax on unemployment "implies that unemployment benefits replace a very high fraction of lost net income, typically about two thirds". Maintains that American system of taxes and transfers drastically lowers the relative private cost of unemployment and thereby induces a higher unemployment rate.

Social: Raises issue of layoffs - states that the social costs must be judged by considering the specific policy by which a worker would be re-employed.

[39] FORBES, J.F & A. MCGREGOR

"Unemployment and Mortality in Post War Scotland",
Journal of Health Economics, 3, 1984, pp.239-257.

An econometric study which finds a positive relation between age specific mortality rates and unemployment (current and lagged) in Scotland.

[40] FRANZ, W. and H. KONIG

"Nature and Causes of Unemployment in the Federal Republic of Germany since the Seventies: An Empirical Investigation". Conference on the Rise in Unemployment, White House Conference Centre, Chelwood Gate, Sussex, 27-31 May, 1985.

Paper reviews evidence for W.German labour market and outlines the problem of declining employment, increased participation rates for married women and increased unemployment rates especially for the young and for foreign workers. Analyses the dynamics of unemployment (inflows and outflows) and finds duration of those not receiving unemployment benefits (arbeitslosengeld) is greater than those receiving them. Estimates labour demand functions (for persons and hours) and finds unemployment is due to normal wages being too high and overtime rates too low.

[41] L.FREY

Economia Italiana e costo del lavoro, Coines, Rome
1977 (Original source unaavailable - findings taken
from secondary source)

According to the author a distinction must be made between the "explicit supply of labour", i.e. the official labour force and the "effective supply", including persons in casual and discontinuous forms of employment. The 1973 labour force was estimated at 35.5% of the total population but Frey calculated that the effective supply was equal to 44%. A further percentage needs to be added to include those who currently do not offer themselves on the labour market but would do so if conditions improved.

[42] L.GALLINO

"Politica dell' occupazione e seconda professione",
Economia & Lavoro, No. 1, 1975, pp. 81-95.

This article examines two features of the Italian labour market, the "guaranteed job" system and double job holding. Many positions offer job security, health insurance, a steady modest salary, a good pension and low official hours. Because of these advantages, people with such positions, when looking for a second job, have a wider choice than the wholly unemployed, who are usually searching for a secure main job. The characteristics of only those second jobs which provide at least as much income as primary occupations are examined. Suggestions for future research and data provision are made.

[43] GARONNA, Paolo

"The Theory and Practice of Employment Policy in Italy in the Seventies", in Job Creation and Job Maintenance - Experience from Western Countries in the 1970s (Eds.) F. Buttler, K. Gerlach and W. Sengenberger (Arbeitskreis Sozialwissenschaftlich Arbeitsmarktforschung (SAMF), University of Paderborn, Sep. 1980).

Growth of unemployment mainly of young and university graduates, importance of labour hoarding and internal labour markets to explain cyclical movements in productivity. Discusses importance of Cassa Integrazione Guadagi (CIG). Most important cause of unemployment is decline in aggregate demand.

[44] GARONNA, P. (1983)

"On the Heterogeneity and Instability of Italian Segmentation Classification Criteria". *Rivista Internazionale di Scienze Economiche e Commerciali*. Anno XXX N12, Dec. 1983

Discusses segmentation hypothesis for Italian labour market. From estimates of employment functions for the manufacturing sector he finds increasing rigidity of the labour market.

[45] P. GARONNA

(University of Padua) "Youth Unemployment, Labour Market Flexibility and Union Strategies in Italy" Conference on Youth Pay and Recruitment Practices, Farnham Castle, Surrey, June 1985.

This paper analyses recent changes in youth unemployment. It points out that the drop in the number of first job seekers in 1984 did not cause a drop in youth unemployment, because more young people were included in the total of unemployed who had lost a previous job. This has partly resulted from new measures to deregulate the labour market for young people, started in 1977 and revised in 1983, the revised measures being more effective. The author suggests a better solution to the problem of youth unemployment would entail internationally coordinated economic recovery programmes and greater worker participation in employment decisions.

[46] M.V. GINNEKEN & M. GARZUEL

Unemployment in France, the Federal Republic of Germany and the Netherlands: a Survey of Trends, Causes and Policy Options. ILO, Geneva.

Describe the trends in unemployment and discuss some explanations for its growth. Discuss earnings, earnings differentials and income distribution.

[47] GODLEY, W.A.H & J.R. SHEPHERD

Long Term Growth and Short Term Policy. NIER, August 1964. pp. 26-38.

An early paper trying to relate employment and unemployment to productive potential using GB data. Emphasise lagged adjustment of employment to output.

[48] ROBERT J.GORDON

Unemployment and Potential Output in the 1980's.
Brookings Papers on Economic Activity 2: 1984, pp. 537-564.

Uses Okun's Law method to explain rapid decline in US unemployment in the 1980s. A sophisticated analysis which estimates equations for employment, participation rates, hours, allowing for changes in trends. Estimates equations up to 1979 and then simulates for the 1980s.

[49] GRAVELLE, H.S.E.

"Editorial: Time Series Analysis of Mortality and Unemployment", Journal of Health Economics, 3, 1984, pp. 297-305.

An important contribution to problems of specification of time series econometric modelling of the relationship between mortality and unemployment.

[50] H.S.E. GRAVELLE, G. HUTCHINSON, J. STERN

Mortality and Unemployment: a Critique of Brenner's Time Series Analyses. The Lancet, Sept. 26, 1981. pp. 675-679.

They argue that Brenner's (1979) time series model is incorrectly specified, the data are not very good and that the results are a statistical artifact due to choice of period.

[51] HAKIM.C

"The Social Consequences of High Unemployment".

Journal of Social Policy. Vol. 11, no. 4, 1982. pp.
433-67.

[52] R.HARRISON

The Demoralising Experience of Prolonged

Unemployment. Dept. of Employment Gazette. pp. 339-
348, April 1976.

A review of the literature on social psychological aspects of unemployment. Emphasises the sequence of responses: shocks
optimism pessimism fatalism.

[53] JAHODA, MARIE

Employment & Unemployment: A Social-Psychological
Analysis, C.U.P. Cambridge 1982.

Discusses the destructive aspects of unemployment and argues that these are just as severe now as in the nineteen thirties. Emphasises the importance of employment in providing social-psychological support to the individual.

[54] J.M.M.HILL

The Social and Psychological Impact of Unemployment:
a Pilot Study. Tavistock Institute of Human
Relations. April 1977.

An investigation using interview techniques in London and Merseyside. Find inter alia that job loss leads to social isolation. Observe a sequence of feelings with duration of unemployment. A job provides economic and psychological support.

[55] M.J.HILL, R.M.HARRISON, A.V.SARGEANT & V.TALBOT

Men Out of Work: a study of Unemployment in Three
Towns, Cambridge, C.U.P, 1973.

[56] HOUSE OF LORDS

Written Answers

Unemployment: The Cost to the Exchequer, 12 Nov.1980

[57] HOUSE OF LORDS

Written Answers

Unemployment: Morbidity and Mortality Rates, 13 Nov.
1980.[58] HOUSE OF LORDSReport of Select Committee on Unemployment, Vol.1,
10 May 1982, London HMSO.[59] J.J.HUGHES & R.PERLMANThe Economics of Unemployment, Harvester, 1984.ILO Yearbook of Labour Statistics, International
Labour Office, Geneva.

A textbook which looks at the UK and US experience. Has a chapter reviewing the costs of unemployment - economic, fiscal and individual.

[60] ILOSocial security for the unemployed, International
Labour Office, Geneva, 1976.

This study describes the existing unemployment protection measures in member states of the ILO, together with an exposition and evaluation of the current situation. The latest trends are discussed and the emerging problems which governments are having to face in this vital area of social security are examined.

[61] M. JAHODA, H. RUSH

Work, Employment and Unemployment, University of
Sussex Science Policy Research Unit Occasional Paper
No. 12, 1980.

[62] JOHN, J

"Economic Instability and Mortality in the Federal
Republic of Germany" in J. John, D. Schwefel & H.
Zollner (eds.) Influence of Economic Instability on
Health. Sprinzer Verlag, Berlin 1983.

Provides some preliminary results which find a positive
relation between mortality and unemployment using time series
data on West Germany.

- [63] JOHN, J., D.SCHWEFEL, and H. ZOLLNER (eds)
Influence of Economic Instability on Health Vol. 21
 in Lecture Notes in Medical Informatics Ed. by
 D.A.B.Lindberg and P.L.Reichertz, Springer Verlag,
 Berlin, 1983.

Several interesting papers by Brenner, John, Brinkman, Fagin et al. which review aggregate and micro (individual level) studies.

- [64] G.E.JOHNSON & P.R.G.LAYARD
The Natural Rate of Unemployment: Explanation and Policy. Centre for Labour Economics, Discussion Paper
 No. 206, October 1984.

Surveys the theories behind an "equilibrium" or "natural" rate of unemployment and how policies might alter it. Consider how natural rates have changed in Europe using empirical models.

- [65] P.N.JUNANKAR
 "The Relationship between Investment and Spare
 Capacity in the UK, 1957-66", Economica, August 1970,
 pp. 277-292.

An econometric study of Investment in the UK that compares different models. It argues that spare capacity in the economy is injurious to investment and hence growth.

- [66] P.N.JUNANKAR
 "The Political Economy of Unemployment: Causes and
 Consequences", Political Quarterly, Vol. 56 No. 1,
 Jan-Mar 1985 pp. 56-67.

The paper evaluates the cost and benefits of unemployment: to different individuals and classes in society. Argues that unemployment weakens the bargaining power of the workers and strengthens that of the capitalists. Although unemployment imposes heavy costs, it provides an occasion for a rejuvenation of capitalism.

[67] P.N.JUNANKAR

"Youth Unemployment and Youth Crime: a Preliminary Analysis", Centre for Economic Policy Research, Australian National University Discussion Paper No.106, August 1984.

Using data on England and Wales the author finds some support for the hypothesis that unemployment is associated with crime.

[68] P.N.JUNANKAR & A.J.NEALE

Relative Wages and the Youth Labour Market, Institute for Employment Research, University of Warwick, Discussion Paper No. 29, Jan. 1985 to be published in School to Unemployment? The Labour Market for Young People, (ed) P.N.Junankar, Macmillan, forthcoming.

Surveys the evidence on the relationship between youth pay and employment. Using a disequilibrium model finds very little evidence for explaining youth unemployment by increased pay.

[69] P. KELVIN & J.JARRETT

Unemployment: Its Social Psychological Effects, (CUP forthcoming).

A thorough survey of the social-psychological aspects of unemployment. Contains a detailed bibliography.

[70] M. LAGRAVE

"Les difficultes d'evaluation du cout du chomage"
Revue Francaise des Affaires Sociales January-March
 1983.

A succinct account of the fiscal costs of unemployment in France.

[71] LAYARD, R & S. NICKELL

"The Causes of British Unemployment", National
 Institute Economic Review No.111, Feb. 1985, pp. 62-
 85.

Develop a structural macroeconomic model for GB. They find that demand factors are the main reason for the growth of unemployment.

[72] R.E.LUCAS & T.J.SARGENT (eds.)

Rational Expectations and Econometric Practice,
 London: Allen & Unwin 1981.

A series of papers which present the New Classical Economics where Governments are impotent in a world with perfectly functioning markets and with people who hold rational expectations.

[73] MALINVAUD, E

"The Rise of Unemployment in France", Conference on
 the Rise in Unemployment, White House Conference
 Centre, Chelwood Gate, Sussex, 27-31 May, 1985.

Main explanation for growth of Unemployment is the international recession., Increased real labour costs and decreased labour market flexibility are also partly responsible. Questions the use of Phillips curves estimates to obtain estimates of NAIRU. Discusses the importance of socio-political factors. "We may say that some of the presently unemployed now pay the price of what had to be done [in May 1968] in order to maintain the cohesion of French society...".

[74] MANPOWER SERVICES COMMISSION

Review of the Services for the Unemployed, London, MSC, 1981.

Discusses the Costs of Unemployment for Britain, describes the unemployment trends and various labour market policies. Find the output loss costs in 1979 to be 4% of GDP for the UK. Stress the importance of work to individuals for social psychological reasons.

[75] I.F.MARIANI

"Youth wages and enterprise recruitment practices: the Italian experience", Conference paper presented at Conference on Youth Pay and Recruitment Practices for Young Workers in Western Europe, Farnham Castle, Surrey, June 1985.

Minimum wage agreements negotiated in the late 1960's have largely eliminated wage differentials between youths and adults in jobs at the same grade, although on average youths earn less because relatively more are in lower grades. However, widening differentials would be unlikely to help the chronic youth unemployment that exists in Italy. Measures in 1977 which introduced a subsidy for firms taking on qualified young people, without being able to choose which ones, from a special unemployment register were largely unsuccessful. However, a new law in 1983 which allowed firms to choose which young people to employ, on fixed term contracts, was much more successful. This law only operated for a trial period of one year, and new rules introduced in 1984 were more restrictive and bureaucratic and less successful. Evidence shows that, although wage levels do matter, firms would prefer to take on workers without restrictive employment contracts and to be free to vary lengths of service, hours of work, job specifications and avoid bureaucratic interference.

[76] E.MASSACESI and M.GRAZIA FINSI

"The Labour Market in Italy", Review of Economic Conditions in Italy, Vol. XXXI, No. 3, May 1977, pp. 117-136.

This article examines various factors that may distort the officially recorded labour force figures. Historical trends in economic activity rates and unemployment are compared with other countries and the influences on the Italian situation of changing industrial structure, in particular the decline of agriculture and rise of the service sector, and emigration, are considered. The extent of the black economy and double job holding are assessed. The effects of restrictive employment legislation and the rigidity of the labour market and the problem of "intellectual unemployment" are also studied. Some proposals for reform of the labour market are put forward.

[77] METCALF David

"On the Measurement of Employment and Unemployment",
National Inst. Economic Review, No. 109, Aug. 18,
 1984.

Discusses problems of measurement of unemployment, estimates of long run (natural rates) unemployment and argues that macroeconomic policy is to blame for the growth of unemployment in the UK.

[78] MODIGLIANI, F., F.PADOA SCHIOPPA & N.ROSSI

"Unemployment in Italy: 1960-1983", Conference on
 the Rise in Unemployment, Chelwood Gate, Sussex, 27-
 31 May 1985.

Discusses institutional aspects of Italian Labour Market (including the Cassa Integrazione Guadagni). Uses a monopolistic competition macroeconomic model to simulate aspects of the labour market. Results include support for view of rigidity of labour market, decrease in non-frictional unemployment in the 80s, significant effects of real labour costs, increase in mismatch, etc.

After briefly reviewing the main characteristics of the Italian labour market a highly aggregated macroeconomic model is developed and used to investigate the nature of Italian unemployment. The frictional component of unemployment has been substantial and has varied over time and the temporal pattern of demand (net of labour augmenting technical progress) has influenced the increase in non-frictional

unemployment in the last decade. The most interesting result, however, is the observation of noticeable fluctuations of the unemployment rate net of its frictional component. A key variable in explaining these fluctuations is real labour cost in efficiency units, rather than unit real labour cost which has remained almost constant in the long run, slightly rising in the last few years.

[79] MOSEK, K.A., A.J.FOX & D.R.JONES

"Unemployment & Mortality in the OPCS Longitudinal Study", The Lancet, December 8, 1984.

The mortality rates of unemployed men was investigated in this longitudinal study, 1971-81 and found to be greater than for all men. There was limited support for the view that ill health led to higher unemployment.

[80] S.MOYLAN, J. MILLAR and R.DAVIES

For Richer, For Poorer? DHSS Short Study of Unemployed Men. DHSS Social Research Branch, Research Report No. 11, HMSO London 1984.

A report on an almost unique cohort study of unemployed men which discusses, inter alia, replacement ratios, spells of unemployment, reservation wages.

[81] MUKHERJEE, SANTOSH

"Unemployment Costs..." PEP, Vol. XLII Broadsheet No. 561, Feb. 1976.

[82] S.K.MUKHERJEE

"What does Unemployment Cost?" ILO Information Vol.15, No. 7 1979.

This is one of the earlier attempts at discussing the social and economic costs of unemployment. Provides estimates of the fiscal costs of unemployment for OECD countries.

[83] S.R.NILSEN

"Recessionary Impacts on the Unemployment of Men and Women", Monthly Labour Review May 1984, pp. 21-25.

[84] OECD

Quarterly Labour Force Statistics, OECD, Paris.

[85] OECD

"Unemployment Compensation and Related Employment Policy Measures", Paris 1799

[86] OECD

The Challenge of Unemployment: A Report to Labour Ministers, OECD, Paris 1982.

An interesting report that discusses several labour market issues: trends, flexibility, prospects and policies. Ch. 1-2 discusses the Macroeconomic costs of unemployment and provides an estimate of output loss (\$ US 340 billion in 1981 for OECD as a whole) and estimates of composition of financial (exchequer) costs. Statistical annex now updated in OECD Employment Outlook.

[87] OECD

High Unemployment: A Challenge for Income Support Policies, OECD, 1984.

A series of articles which focus mainly on the public finance costs, unemployment compensation and on replacement rates. A paper by Sinfield looks at wider costs of unemployment. A paper by Reyber and Spitznagel discusses job creation policies in relation to public finance costs for Germany.

[88] OECD

Economic Surveys: France (Paris OECD 1985).

Interesting discussion about the labour market. Includes information about early retirement schemes, job training schemes and unemployment benefit schemes.

[89] OKUN, A

"Potential GNP: Its Measurement & Significance",
Appendix in Political Economy of Prosperity,
(Brookings Institute, Washington DC, 1970)

Original source for "Okun's Law". Provides estimates of the relation between unemployment and the gap between potential and actual output for the US. Discusses alternative methods of estimating this relationship and finds each extra percentage point of unemployment leads to a 3 percent decrement in GNP.

•

[90] OLAFSSON, O and P-G SVENSSON

"Unemployment-Related Lifestyle Changes and Health Disturbances in Adolescents and Children in the Western Countries", WHO, Regional Office for Europe, Document 1801H, 22 May, 1985.

Reviews evidence linking unemployment to sickness (mental and physical) to life style (use of drugs, alcohol, tobacco, physical exercise, etc.), suicide etc. Stresses the impact on the family of the unemployed as well. Although there are problems of determining causality, unemployment (they argue) is clearly a major determining factor.

[91] C. PELLEGRINI

"Technical Change and Industrial Relations in Italy"
Bulletin of Comparative Labour Relations No. 12,

• 1983 pp. 193-210.

This paper examines the enormous changes which have taken place in the Italian industrial relations system since 1969. The growth of union strength has imposed many constraints on work organisation and has indirectly shaped management choices. Unions have dealt predominantly with the effects of the new technology on redundancies, health and safety and job classification, although conflictual relations with management have prevented a common effort towards technical innovation and new job design. Recently obtained disclosure rights could lead to agreements dealing more directly with the introduction of new technology and improvement of work content and environment.

[92] PILGRIM TRUST

Men Without Work, C.U.P., Cambridge, 1938.

A classic work on the impact of unemployment on physical and psychological state of individuals based on a study in the 1930s.

[93] M.J. PIORE (ed.)

Unemployment and Inflation (New York: M.E. Sharpe, 1979)

Several papers in this volume give a radical interpretation of macroeconomics, especially of the labour market.

[94] PLATT, S.

"Unemployment and Suicidal Behaviour: A Review of the Literature", MRC Unit, Dept. of Psychiatry, University of Edinburgh (unpublished paper) (1982).

[95] PLATT, S & N. KREITMAN

"Parasuicide & Unemployment in Edinburgh, 1968-82", ESRC Workshop on Employment and Unemployment, Oct. 1984.

A study of parasuicide rates in Edinburgh found a positive association with unemployment. The long term unemployed had a much higher risk than the rest of the unemployed

[96] A. RAJAN

Job Subsidies: Do they Work? Institute of Manpower Studies, University of Sussex, 1985.

Discusses the relative merits and costs of different targeted job subsidies in Britain (e.g. Young Workers Schemes).

97 RAMSDENES & SASMEE

"The Health of Unemployed Men: A DHSS Cohort Study". D.E.Gazette, Sept. pp. 397-401. (1981).

Using the DHSS cohort study of men who registered as unemployed, the authors find that the sick have a lower probability of employment. There was little evidence of increasing morbidity with unemployment. The authors caution about the peculiarities of the sample and suggest using a control group for a sample like the OPCS Longitudinal Sample.

- [98] REYHER, L., M.KOLLER and E. SPITZNAGEL
Employment Policy Alternatives to Unemployment in
the Federal Republic of Germany. (English
 Translation by Eileen Martin) Anglo German
 Foundation for the Study of Industrial Society,
 London 1980.

Provide estimates of loss of output for 1978 (5.5% of GNP) and loss of revenue to exchequer of DM 23 billion (or DM 18,000 per unemployed person). Show how work creation schemes can be financed out of expenditures on the unemployed and increase employment.

- [99] ROBERTI, P
 "Macroeconomic & Public Finance 'Costs' of High
 Unemployment". Economia & Lavoro Anno XVIII no.1
 1984, pp. 3-15.

Discusses various aspects of the cost of unemployment using OECD data. For 1980 estimates the output loss to be 3-4 percent of OECD output. Provides estimates of public finance costs for 1980.

- [100] SINFIELD, Adrian & Neil FRASER.
 "The Real Cost of Unemployment", March 1985, Dept.
 of Social Admin. University of Edinburgh.

Provides estimates of the exchequer costs for the UK. Also discusses output loss costs and wider social costs.

- [101] SOCIAL SECURITY NEWS
 "Italy: Improvement in family benefits",
International Social Security Review, Year XXXVII,
 No. 4, 1983, p. 532.

As part of the measures taken to limit labour costs and stimulate employment, new family benefits for children were introduced in Italy as from 1.7.1983 in addition to existing family allowances. Whereas the latter are financed by employers, and at a flat rate for each dependent, the new benefits are financed from the national budget, are subject to a means test and limited to four children.

[102] R. SOLOW

"On Theories of Unemployment" American Economic Review, Vol. 70, No. 1, March 1980, pp. 1-11.

An excellent discussion of the nature of the labour market including a critique of neoclassical flexible labour market notions.

[103] SOLOW, R.M.

"Unemployment: Getting the Questions Right",
Conference on the Rise in Unemployment. White House
Conference Centre, Chelwood Gate, Sussex 27-31 May
1985.

Emphasises distinction between nominal and real wage rates. Real wage rates and unemployment are jointly endogenous variables. Emphasises importance of aggregate demand in determining "involuntary" unemployment. Criticises concept of "natural rate": "has very little basis either in theory or in data analysis". "A natural rate that hops around from one triennium to another under the influence of unspecified forces, including past unemployment rates is not 'natural' at all".

[104] STATISTICAL OFFICE OF EUROPEAN COMMUNITIES.

"Definitions of Registered Unemployed", 1981.
Eurostat, Luxembourg.

[105] TARLING Roger.

"Unemployment & Crime", Home Office Research &
Planning Unit Research Bulletin, No. 14. 1982.

A succinct review of the literature relating unemployment to crime. Stresses the problems involved in disentangling the effects of other variables from unemployment in affecting crime.

[106] THIRLWALL, A.P.

"What are Estimates of the Natural Rate of Unemployment Measuring?" Oxford Bulletin of Economics & Statistics, Vol. 45 (1983) pp. 173-179.

Shows that empirical estimates of the natural rate of unemployment reflect real (structural) and monetary (demand) influence and will vary cyclically with the pressure of demand.

[107] H.M.TREASURY

Economic Progress Report, No. 130, Feb. 1981.

An interesting study which provides estimates for the financial costs of 100,000 unemployed individuals in the UK. A carefully argued document.

[108] T.TREU

"Italy", Bulletin of Comparative Labour Relations, Vol. 11, pp. 103-131.

This article surveys the current industrial relations scene in Italy. It explains how rules regarding dismissals operate and gives details of government measures to assist employment in industry, including the Cassa Integrazione system as well as special schemes to help young people and women. The role of worker participation is considered and the law on dismissal procedure is examined in some depth. Unions have resisted employers' attempts to eliminate rigidities in the labour market, claiming that such measures just make dismissals easier and do nothing to help job prospects. However, new measures regarding dismissal procedures introduced in 1979 go some way to overcoming this objection, requiring employers to negotiate with the unions and the setting up of a register of redundant workers which regional employment commissions can allocate to available vacancies in a proportion to other unemployed workers to be decided according to current policy.

[109] TRINDER Chris.

"Income in Work and When Unemployed: Some Problems in Calculating Replacement Ratios, NIER No. 103, pp. 56-61, Feb. 1983.

Provides some estimates of benefits and earnings for UK. Emphasises problems in defining replacement rates because of differences in particular circumstances of the unemployed in terms of eligibility for (especially) supplementary benefit. Critically reviews some earlier studies.

[110] UNITED NATIONS

Economic Survey of Europe, 1981

Discusses costs to the individual (replacement ratios) and costs to the Govt. (social security plus tax loss) which declined per average unemployed person. (pp 29-36)

[111] UNITED NATIONS, ECONOMIC COMMISSION FOR EUROPE

"The Cost of Unemployment, 1972-1982", Economic Bulletin for Europe, Vol. 35(3), pp. 289-306. September 1983.

Provides estimates of replacement ratios for a 'typical' worker (defined either as married with 3 dependents or single). Also provides estimates of fiscal costs of unemployment.

[112] WARR, P.

"Work, Jobs & Unemployment", Bulletin of the British Psychological Society, Vol. 36, (1983) pp. 305-11.

[113] WHITE, M
Long-term Unemployment and Labour Markets, Policy
Studies Institute, London 1983.

[114] WORLD HEALTH ORGANISATION Regional Offices for
Europe.
"Summary Report of the Workshop in Health Policy in
Relation to Unemployment in the Community" (Document
ICP/RPD 804(3)(5)1109 E of 27th Jan. 1983.

Programme of Research and Actions on the Development of the Labour Market

Costs of unemployment — Main report

By P. N. Junankar, Institute for Employment Research, University of Warwick,
and Department of Economics, University of Essex

Document

Luxembourg: Office for Official Publications of the European Communities

1986 — 126 pp. — 21.0 × 29.7 cm

EN

ISBN 92-825-6084-8

Catalogue number: CB-46-86-452-EN-C

Price (excluding VAT) in Luxembourg:

ECU 11.34 BFR 500 IRL 8.10 UKL 7.10 USD 10.50

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