

Snower, Dennis J.

Working Paper — Digitized Version

Why people don't find work

CEPR Discussion Paper Series, Centre for Economic Policy Research (CEPR), London, No. 883

Provided in Cooperation with:

Kiel Institute for the World Economy – Leibniz Center for Research on Global Economic Challenges

Suggested Citation: Snower, Dennis J. (1994) : Why people don't find work, CEPR Discussion Paper Series, Centre for Economic Policy Research (CEPR), London, No. 883, Centre for Economic Policy Research (CEPR), London

This Version is available at:

<https://hdl.handle.net/10419/1207>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

DISCUSSION PAPER SERIES

No. 883

WHY PEOPLE DON'T FIND WORK

Dennis J Snower

519966



0. FEB. 1994 Weltwirtschaft
Kiel

W 32 (883) ~~TX~~

Centre for Economic Policy Research

25-28 Old Burlington Street, London W1X 1LB

WHY PEOPLE DON'T FIND WORK

Dennis J Snower

Discussion Paper No. 883
December 1993

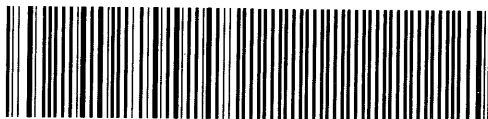
Centre for Economic Policy Research
25-28 Old Burlington Street
London W1X 1LB
Tel: (44 71) 734 9110

This Discussion Paper is issued under the auspices of the Centre's research programme in **Human Resources**. Any opinions expressed here are those of the author(s) and not those of the Centre for Economic Policy Research. Research disseminated by CEPR may include views on policy, but the Centre itself takes no institutional policy positions.

The Centre for Economic Policy Research was established in 1983 as a private educational charity, to promote independent analysis and public discussion of open economies and the relations among them. It is pluralist and non-partisan, bringing economic research to bear on the analysis of medium- and long-run policy questions. Institutional (core) finance for the Centre has been provided through major grants from the Economic and Social Research Council, the Esmée Fairbairn Trust, the Baring Foundation, the Bank of England and Citibank; these organizations do not give prior review to the Centre's publications, nor do they necessarily endorse the views expressed therein.

These Discussion Papers often represent preliminary or incomplete work, circulated to encourage discussion and comment. Citation and use of such a paper should take account of its provisional character.

W 32 (883)



CEPR Discussion Paper No. 883

December 1993

ABSTRACT

Why People Don't Find Work*

This paper provides a brief, non-technical survey of the major theories about why people remain unemployed. The aim is to provide a macroeconomic perspective on the microeconomic problem of why people don't find work. The first section deals with market-clearing theories: the natural rate hypothesis, the intertemporal substitution hypothesis, and real business cycle theory. The second section deals with imperfect information as an impediment to finding work: search theory, implicit contract theory, and efficiency wage theory. The third section concerns labour market institutions as sources of unemployment: labour unions, supply shocks combined with real wage rigidity, and automation and trade combined with real wage rigidity. The fourth and fifth sections deal with deficient demand and labour turnover costs as sources of unemployment. The final section deals with unemployment dynamics.

JEL classification: E3, J2, J3, J6

Keywords: unemployment, work, wage formation, macroeconomic fluctuations, imperfect information, unions, aggregate demand, labour turnover

Dennis J Snower
Department of Economics
Birkbeck College
7 Gresse Street
London
W1P 1PA
Tel: (44 71) 631 6408

*This paper is produced as part of a CEPR research programme on *The UK Labour Market: Microeconomic Imperfections and Institutional Features*, supported by a grant from the UK Department of Employment (no. 4RP-154-90). The views expressed in this paper are those of the author and do not necessarily reflect those of the Department or of CEPR.

Submitted 12 October 1993

NON-TECHNICAL SUMMARY

This article provides a very brief, idiosyncratic survey of the main theories purporting to explain why people don't find work. It is idiosyncratic, because it gives a macroeconomic perspective on a problem – why people don't find work – that is intrinsically microeconomic. This perspective is clearly important, since this microeconomic problem is closely related to the macroeconomic problem. If many people seek work but can't find it for long periods of time, the unemployment rate will be high. The size of the unemployment rate is thus a rough indicator of how serious the microeconomic problem is. Nowadays macroeconomists studying unemployment are reasonably careful about specifying the microeconomic foundations on which their theories are based. Microeconomists studying why people can't find work often do not show similar care about the macro implications. This paper is a small step towards redressing the balance.

The phenomenon of people looking for work in free markets, but not finding it for a long time, is inherently puzzling. In free markets, after all, wages are free to respond to labour market conditions. Workers who are tired of seeking work need only reduce their acceptance wages. So why are so many people so persistently unsuccessful at finding jobs?

For most people the state of unemployment is far from agreeable; it commonly brings with it illness, family problems, and loss of self-esteem. Yet over the past two decades, more and more Europeans have chosen this course of action. The resulting unemployment swings have come in long waves rather than in the short-term fluctuations that characterize business cycles. Meanwhile Japanese and US workers have largely avoided this unemployment trap. Here fluctuations in unemployment track the fluctuations in national output much more closely. Why?

This paper gives a whirlwind tour of the major macroeconomic theories of unemployment, which might shed light on this problem, together with an assessment of how successful they have been in this regard.

The first section deals with market-clearing theories: the natural rate hypothesis, the intertemporal substitution hypothesis, and real business cycle theory. The second section deals with imperfect information as an impediment to finding work: search theory, implicit contract theory, and efficiency wage theory. The third section concerns labour market institutions as sources of unemployment: labour unions, supply shocks combined with real wage rigidity, and automation and trade combined with real wage rigidity. The fourth and fifth sections deal with

deficient demand and labour turnover costs as sources of unemployment. The final section deals with unemployment dynamics.

These theories provide partial explanations for why people don't find work. It is argued that the main achievement of these theories is perhaps that we now have a much better idea of what we *do not* understand. For example:

(a) Keynesian models appear to have done well in predicting unemployment over the 1950s and 1960s, but not so well since, particularly in explaining why labour and product market activities do not always move in tandem. Keynesian theory suggests that wage-price sluggishness must play a dominant role in such an explanation, but so far the theory bears little relation to the facts.

(b) Efficiency wage theory implies that employers' imperfect information about their employees' productivities may play an important role in generating unemployment, but we have not yet learnt how this insight helps explain the movement of unemployment through time.

(c) Insider-outsider theory indicates that labour turnover costs, together with the resulting insider power, has an important role to play in explaining unemployment, but we *do not* properly understand how this role depends on the characteristics of the business cycle.

(d) Search theory shows how imperfect information about the availability of workers and jobs can lead to unemployment and vacancies, but it is not clear which of the theory's useful predictions is observationally distinct from the predictions of other, simpler theories.

(e) We know that shocks – such as oil price shocks, technological shocks, and trade shocks – set in motion chain reactions that have longer-term implications for unemployment behaviour, but we still have a long way to go in gaining a clear picture of the underlying dynamics.

These are promising areas of future research.

WHY PEOPLE DON'T FIND WORK

by Dennis J. Snower

1. Introduction

The sight of people looking for work but not finding it has become increasingly common in market economies over the past two decades. Most people have their pet hunches for why this is so. Economists have produced theories rationalizing most of these hunches, plus a few models that lie beyond the imagination of the layman. It is terribly important to get this matter right, for each diagnosis has different policy implications.

This article provides a very brief, idiosyncratic survey of the main theories. It is idiosyncratic, because it gives a macroeconomic perspective on a problem - why people don't find work - that is intrinsically microeconomic. This perspective is clearly important, since this microeconomic problem is closely related to the macroeconomic problem of unemployment. If many people seek work but can't find it for long periods of time, the unemployment rate is going to be high. The size of the unemployment rate is thus a rough indicator of how serious the microeconomic problem is. Nowadays macroeconomists studying unemployment are reasonably careful about specifying the microeconomic foundations on which their theories are based. Microeconomists studying why people can't find work often do not show similar care about the macro implications. This paper is a small step toward redressing the balance.

The phenomenon of people looking for work in free markets, but not finding it for a long time, is inherently puzzling. In free markets, after all, wages are free to respond to labour market conditions. A worker who is tired of seeking a job need only

reduce his acceptance wage. So why are so many people so persistently unsuccessful at finding jobs?

There are several easy answers, but none of them is entirely convincing as an encompassing explanation. The first is that the long-term unemployed do not really get tired of job seeking; in fact, they are not really trying to find jobs at all. This answer is particularly suspect in the light of macroeconomic developments over the past three decades. EC unemployment remained roughly between 2% and 3% from 1960 to 1973, swelled from about 4% in 1975 to 6% in 1980, and has stayed stuck between about 8% and 11% since then. Why should people have become so increasingly complacent about finding jobs? Rising unemployment benefits and longer benefit durations clearly tell part of the story, but only a part: the steep ascent of EC unemployment in the first part of the 1980s was not mirrored by a steep rise in unemployment benefits. It is also true that people who, for whatever reason, remain unemployed for a long time become discouraged and ineffective in seeking work. Nevertheless, when European unemployment fell in the late 1980s, the long-term unemployed joined the short-term unemployed in filling the available vacancies.

Another easy answer is that wages are not always free to adjust to unemployment: minimum wage laws may keep the unemployed from offering their services as cheaply as they would like. But only a small proportion of the workforces of the major market economies is paid the minimum wage, and unemployment variations bear no close relation to changes in minimum wage laws.

Yet another easy answer is that, for whatever reason, it takes time for wages to adjust to changing economic fortunes and that fortunes are always changing. Thus people leaving declining sectors are not immediately taken up in the expanding sectors. But economists have not been successful in finding any measure of labour market "turbulence" that matches the steep rises in European unemployment over the last three decades. The massive increase in European *long-term* unemployment and the associated rise of the unemployment rate *relative to* the vacancy rate does not fit this explanation.

So the problem remains. For some reason a gradually increasing number of Europeans have found it worthwhile to remain in a state of unsuccessful job search. There are really two puzzles here: (i) why are a given number of job seekers becoming less successful in finding employment? and (ii) why are there so many job seekers? why don't more give up and drop out of the labour force?

For most people the state of unemployment is far from agreeable; it commonly brings with it illness, family problems, and loss of self-esteem. Yet, over the past two decades, more and more Europeans have chosen this course of action. The resulting unemployment swings have come in long waves rather than in the short-term fluctuations that characterize business cycles. Meanwhile the US and Japanese workers have largely avoided this unemployment trap. Here fluctuations in unemployment track the fluctuations in national output much more closely. Why?

What follows is whirlwind tour of the major macroeconomic theories of unemployment that could shed light on this problem, along with my dispassionate assessment of how successful they have been in this regard. I conclude with the locus of explanations I find most convincing.

2. Why People Don't Look for Work

I begin with three very influential theories of why people don't bother to look for work. These theories attempt to explain the observed swings in unemployment as the outcome of voluntary decisions by job-seekers and job-providers under market-clearing conditions.

2a. The Natural Rate Hypothesis

The first is the *natural rate hypothesis*.¹ The underlying idea is simple. In a free market economy, wages and prices are assumed to adjust promptly to bring demand into equality with supply not only in the labour market, but in all other markets as well. Then, if wage-price expectations are correct, unemployment will be at its "natural rate", which depends only on the structural characteristics of the economy, namely, on people's tastes, technologies, and resource endowments, as well as on the degree of competition and the institutional framework in which labour, product, and financial market activity takes place. If wage-price expectations should deviate from actual wages and prices, then unemployment will deviate from its natural rate. Given that tastes, technologies, resource endowments, competition, and economic institutions do not fluctuate cyclically, much of the fluctuations in unemployment - according to this theory - can be explained by fluctuations in expected wages and prices around their actual values. Since the labour market is assumed to clear, all this unemployment is a voluntary abstention from work. The important distinction between the state of "unemployment" and that of being "out of the labour force" has no significant role to play in this context.

In order for this theory to have predictive power, it needs to be combined with a theory of how expectations are formed. The dominant one is the "rational expectations hypothesis", which asserts - quite plausibly - that people are not fooled in ways that they themselves could have predicted. In order for this hypothesis to be empirically implementable, we need yet another theory, this time one that tells us what people's "information set" about the economy is, from which we could then infer what they could have predicted. This of course is an empirically impossible task; so economists in this area generally assume that everyone has the same information sets as the economists themselves, except that the economists are able to get the data somewhat faster.

The implication of all this is powerful: if people make no systematic expectational errors (viz, errors they could have predicted), then unemployment cannot

¹See, for example, Friedman (1968), Lucas (1975), and Phelps (1970).

diverge systematically from its natural rate. Just as expected wage and price expectations fluctuate randomly around their actual values, so unemployment will fluctuated randomly around the natural rate.

Whatever its intellectual appeal, this theory simply fails to address the facts of unemployment over the past decade. With the decline in union density and the moves towards deregulation, privatization, and liberalization of labour markets in many OECD countries over the 1980s, no one could argue that the natural rate of unemployment could have risen significantly. Furthermore, given the stable rates of inflation over much of the decade, it could also not be argued that people's wage-price expectations were getting further and further out of line with actual wages and prices. Nevertheless European unemployment, as noted, rose massively. There is nothing in the natural rate hypothesis that provides even a clue about why this happened.

2b. The Intertemporal Substitution Hypothesis

The intertemporal substitution hypothesis² provides another rationale for why people don't look for work. As the name implies, this hypothesis is concerned with workers' desire to engage in intertemporal substitution of work for leisure, and vice versa, in response to various economic incentives. For example, if workers believe that real wages are temporarily depressed and will rise in the future, they may wish to partake of more leisure now and work harder later. The same may be true if they perceive real interest rates to be temporarily low, since that means that their current wage income cannot be transferred into the future at an advantages rate.

How this hypothesis could seriously explain European unemployment defies the imagination. Many millions of people in Europe joined the unemployment register in the mid-1970s, early 1980s, and early 1990s. Can we honestly believe that these were simply colossal leisure binges, taken because workers were expecting real wages or real

²See, for example, Barro (1981) and Lucas and Rapping (1969).

interest rates to rise later on? Regarding the upward trend in European unemployment rates since the mid-1970s, can we honestly assert that we are observing a very long-term intertemporal substitution, whereby workers have decided to enjoy a lot of free time for two decades, perhaps with the intention of working very long hours for the next two decades? And even if the monstrous implausibility of these suppositions is put aside, we are still left with the fact that the available empirical evidence indicates that people's hours of work are unresponsive to real wage and real interest rate variations, and that much of these variations tend to be permanent rather than temporary.

2c. The Real Business Cycle Theory

The real business cycle theory³ takes issue with the presumption, made above, that the structural characteristics of the economy - tastes, technologies, endowments, institutions, competitive structure - do not change abruptly and thus cannot explain the abrupt swings in unemployment. Specifically, the theory identifies technological shocks as the main source of macroeconomic fluctuations. Perfectly informed individuals, all maximizing their utility subject to technological and resource constraints, respond to these technological shocks by intertemporally substituting labour, leisure, and consumption.

The intertemporal substitution hypothesis, on which this theory relies heavily, has already been discussed. Beyond that, it is difficult to get a clear picture of what the technological shocks are. Whereas technological advances (that are the source of the booms in the real business cycle theory) are relatively easy to identify, the technological setbacks (that give rise to the recessions) are not. It is hard to see how knowledge and expertise gets lost, particularly on the large scale that is necessary to account for the deep recessions we have witnessed over the past two decades.⁴

³See, for example, King and Plosser (1984), King, Plosser and Rebelo (1988a,b), Kydland and Prescott (1982), and Long and Plosser (1983).

⁴In the real business cycle models, the technological shocks are measured by "Solow

Finally, it would be difficult, if not impossible, to defend the real business cycle models by de-emphasizing the role of technological shocks and concentrating on swings in, say, tastes instead. For then these models would be unable to explain why consumption rises and leisure falls in an economic upturn, and the opposite happens in a downturn. The reason is that a change in tastes does not affect the labour demand curve, and thus in an upturn employment would rise only if the real wage fell; but a fall in the real wage would reduce consumption and increase leisure - the opposite of what actually happens.

3. Why People Don't Find Work: Imperfect Information

We now turn to the theories that attempt to explain why people look for work but don't find it. We begin with the theories that focus on imperfect information as the obstacle to finding work.

3a. Search Theory

In the search theories⁵ unemployment arises because workers have imperfect information about the availability of jobs. It makes sense for them to look for work since they know that there are vacant jobs within their reach with wages that are sufficiently high so that the marginal benefit from seeking a job exceeds the marginal cost. But since they don't know precisely where these jobs are, they may not find them right away. The result is "frictional unemployment". This unemployment does not go away

residuals", which are the differences through time between the growth rate of output and a weighted average of the growth rates of factor inputs. But given the difficulty of interpreting negative Solow residuals as technological regress, it is perhaps more plausible to see them as reflecting labour and capital hoarding.

⁵See, for example, Blanchard and Diamond (1989), Diamond (1982), Mortensen (1986), and Pissarides (1986).

since there are always some workers getting fired, some entering the labour force, and some retiring from it.

At centre-stage in all search models lies a "matching function", which specifies how the expected number of matches is related to the number of unemployed workers and the number of vacant jobs. It is not plausible, however, to attribute the rise in European unemployment to a deterioration of this matching technology, because the dissemination of labour market information has improved with the passage of time. Nor are the recent periods of high unemployment related to comparatively high degrees of labour market "turbulence", i.e. sectoral imbalances responsible for job creation and job destruction.⁶ There are, of course, many other reasons why unemployment may fluctuate in the search models; fluctuations in real interest rates, unemployment benefits, and productivity are prominent examples. But these reasons are not specific to search theory; there are many other theories that explain why unemployment rises when the real interest rate increases, the unemployment benefit increases, or productivity falls. Thus the final verdict is not yet in on where the unique contribution of search theory to our understanding of unemployment lies.

3b. Implicit Contract Theory

The point of departure for the implicit contract theories⁷ is that because workers are more risk-averse than firms or have less access to financial markets than firms, firms have an incentive to remunerate their employees not merely by paying wages, but also by providing insurance against fluctuations in income. Moreover, since workers are assumed to be immobile among firms, wage-employment contracts must be negotiated before all contingencies determining the demands for and supplies of labour are known.

⁶The turbulence hypothesis has been formalized by Lilien (1982), but has found no significant empirical support, e.g. Abraham and Katz (1986).

⁷See, for example, Azariadis (1975), Gordon (1974), Grossman and Hart (1981, 1983), and Hart (1983).

The insurance that firms given their workers in the efficient wage-employment contracts may, under specified conditions, involve stabilizing the real wage and allowing employment to fluctuate more than it would have done in spot markets.

To explain how unemployment can arise in this context, it is necessary to assume that there is asymmetric information, e.g. firms know more about productivity shocks than their employees. But the unemployment results are not robust: under some postulated utility functions for the workers unemployment can occur in response to adverse productivity shocks, but under other utility functions there is over-employment. It seems genuinely impossible to rationalize the long swings in postwar OECD unemployment and the inter-country differences in unemployment time paths on this basis.

3c. Efficiency Wage Theory

In the efficiency wage theory, firms are assumed to have imperfect information about individual employees' productivities and are thus unable to make their wage offer contingent on their employees' performance. The firms are also assumed to be wage setters and they observe that by raising their wage offers they are able to stimulate the average productivity of their workforce. The reason is that higher wage offers enable a firm to recruit more highly qualified employees or motivate employees to work harder.⁸ In other variants of the theory, higher wages discourage workers from quitting the firm, thereby reducing the firm's labour turnover costs.⁹ Consequently firms may have an incentive to keep the wage above the level that would be necessary to ensure full employment. The unemployed are unable to get jobs by offering to work for less than

⁸In Weiss (1980) a higher wage offer encourages workers of high skill, who were previously self-employed, to join the firm. In Shapiro and Stiglitz (1984) the firm randomly samples workers' effort and fires those who shirk; thus a higher wage offer raises effort by raising the expected penalty for shirking. In Snower (1983) a higher wage offer discourages workers from searching on the job and thereby promotes productivity. In Akerlof (1982) workers agree to work more than what is specified in their contract and firms, in return, pay more than the minimum amount that would be necessary to attract them.

⁹See, for example, Salop (1979) and Stiglitz (1985).

the prevailing wage, because it is not in the firms' interests to allow the wage to fall.

The great strength of this theory is that it provides one conceivable explanation for why, even under perfectly flexible wages, people may be involuntarily unemployed, that is, unemployed even though they would prefer to do the jobs of the current job holders at less than the prevailing wage. Beyond that, however, it is not clear that the efficiency wage theory can shed much light on why EC unemployment has risen over the past two decades, why US and Japanese unemployment has fared better, or why unemployment in many countries varies less within a business cycle than from one cycle to the next. These phenomena clearly cannot be ascribed to differences in monitoring technologies through time and across countries: it is quite implausible that EC unemployment should have risen because firms have become worse at monitoring their employees' performance; nor is it plausible that US unemployment recovered more quickly from the recent recessions than EC unemployment because US firms have more information about their employees than EC firms. Of course many efficiency wage models also explain how unemployment may rise in response to a drop in labour productivity, a rise in the real interest rate, or a rise in the unemployment benefit. But as with the search models, the efficiency wage models cannot lay unique claim to these predictions. The efficiency wage models do not add much to what other theories have have to say in this respect.

4. Why People Don't Find Work: Labour Market Institutions

In another group of theories, various labour market institutions are identified as the crucial impediments that keep people from finding work.

4a. Labour Unions

In the traditional union theories,¹⁰ all unions members are assumed to have identical preferences and have an equal share in the available work. Then the union represents the interest of its members by exerting its monopoly power in wage setting, much like sellers of goods or services exert their monopoly power in price setting. The resulting wages will be higher and employment will be lower than it would have been in the absence of the union's influence on the wage. If all workers in the economy belong to unions, then aggregate employment will be less than it would have been under full employment. The difference may be called unemployment (or under-employment) and is wholly voluntary.

More recent union theories recognise that unions take greater account of the the interests of their employed members than of the unemployed and that the employed workers have greater access to work than the unemployed do. The unemployment arising in this setting may be voluntary from the vantage point of the employed union members, but is generally involuntary from the vantage point of the unemployed, since the latter could be made better off by a wage reduction associated with a rise in employment.

The main weakness of these theories lies not in what they do tell us, but in what they don't. They don't tell us why the unemployed workers don't leave the unions that don't represent their interests, and start new unions making lower wage claims. Nor do the theories tell us what gives unions their clout. Since union coverage in most market economies is far under 100%, why don't employers simply throw out high-wage union members and hire low-wage non-members instead?¹¹

On the empirical front, it is worth noting that although there is some association between inter-country differences in unemployment rates over several decades and inter-country differences in unemployment rates, the union theories have not

¹⁰See, for example, McDonald and Solow (1981) and Oswald (1982, 1985).

¹¹This question is answered by the insider-outsider theory, discussed below. But if the answer of the insider-outsider theory is accepted - namely, that it is labour turnover costs that prevent firms from replacing union members by non-members - the traditional union theories must undergo substantial revision. (See, for example, Lindbeck and Snower (1987).

performed well over the past decade in predicting movements of unemployment through time. In the first part of the 1980s, for example, union membership in the UK and several other European countries fell while unemployment rose.

4b. Supply Shocks and Real Wage Rigidity

Another influential view attributes European unemployment to the influence of supply-side shocks under rigid real wages. This is the line of Bruno and Sachs (1985), who have claimed that the adverse supply shocks of the late 1970s reduced labour demand and, since real wages refused to fall, unemployment rose. The source of the real wage rigidity is not identified in detail; it could be union activity, a downward rigidity in real unemployment benefits, or some other institutional pressure.

This line sounds eminently plausible but, on reflection, it can only tell a small part of the story. The second oil price shock of 1979 started the recession of the early 1980s, but real oil prices came down steadily in the first half of the 1980s while EC unemployment rose steadily. Furthermore, if people can't find work because labour demand is limited and real wages are rigid, one would expect employment to rise as productivity rises. But whereas European productivity rose briskly between 1980 and 1987, European unemployment fell by about 1% in this period.

4c. Technological Change, International Trade, and Real Wage Rigidity

Another very popular line - particularly among politicians and journalists - is that people can't find work because they are being replaced by (1) machines and (2) cheap labour from the Third World and the ex-communist countries. Technological change is assumed to be markedly labour-saving, so that the rise in automation, for instance,

reduces the demand for labour.¹² Interestingly enough, trade with the labour-abundant countries of the Third World and the transforming economies of Eastern and Central Europe and the republics that constituted the Soviet Union can have a similar impact, since such trade may be expected to raise the capital-intensive commodities and reduce the demand for labour-intensive ones in the West. To make sense of these arguments as a rationale for unemployment, we must presuppose some real wage rigidity, for then the fall in labour demand translates into a fall in employment rather than a fall in wages.

This story also has a good ring to it, but it does not fit all the relevant facts. If it were true, we would expect labour's share of total production costs to fall through time, whereas the opposite has happened for much of the past two decades. Furthermore, the arguments centering on both automation and trade imply that productivity of those who remain employed must have risen briskly. This prediction does not sit comfortably with the widely noted European productivity slow-down since the 1970s.

5. Why People Don't Find Work: Deficient Demand

In the Keynesian theory, people can't find work because firms are not producing enough goods and services; firms are not doing so because there is too little demand; and demand is deficient because people can't find work. What lies at the source of this vicious cycle is the insight that deficient demand in the labour market originates in the product market and deficient demand in the product market originates in the labour market. Activity in these two markets goes up and down together. The mechanism that puts this vicious cycle into operation is wage-price rigidity. A fall in product demand will reduce labour demand if wages don't fall sufficiently; a fall in labour demand will reduce product demand if prices are downwards-rigid.

¹²See, for example, Rostow (1983).

This view has been vastly influential throughout the postwar period. Originally proposed by Keynes (1936), it was given a microeconomic rationale, based on exogenously given wages and prices, by Barro and Grossman (1976), Malinvaud (1977), Muellbauer and Portes (1978) and others. More recently, wage-price rigidities have been rationalized through staggering models¹³ (which assume that wages and prices are fixed over substantial contract periods and are staggered, rather than set simultaneously) and menu-cost models¹⁴ (which show how small costs of wage-price change can generate significant wage-price inertia).

Yet it is far from clear that this model sheds much light on the unemployment experience of the 1980s. In the first part of the 1980s, European labour and product market activity did not move together at all. Product demand started to pick up towards the end of 1982, but employment did not start to improve until 1986 in the UK and even later in most other West European countries. This gap is simply too large to be explained away by inventory dynamics or lags between inputs and outputs in production processes. The Keynesian vision of tightly linked labour and product demand is called into question here. It turns out that the link was much stronger in the US and the EFTA countries than in the EC over the 1980s, but it would certainly be absurd to rationalize this in the Keynesian way, by suggesting that the US and EFTA face much more wage-price sluggishness than the EC.

6. Why People Don't Find Work: Labour Turnover Costs

In the insider-outsider theory,¹⁵ labour turnover costs are the impediments that, through their influence on wage and employment decisions, keep people from finding work. These costs, falling at least in part on the firms, give market power to the "insiders" (experienced, incumbent employees), who know that their employers would find it costly

¹³For example, Blanchard (1983), Calvo (1983), and Taylor (1979).

¹⁴For example, Akerlof and Yellen (1985) and Mankiw (1985).

¹⁵See, for example, Lindbeck and Snower (1986, 1988).

to replace them. The insiders are assumed to use this power to pursue their own interests in the wage setting process. Thus the wages of experienced employees turn out higher than they would otherwise have been. The labour turnover costs discourage the firm from firing their current insiders, but the high insider wages also discourage hiring of new entrants.

Some of the labour turnover costs (such as training costs) are an intrinsic part of the production process; others (like severance payments) are the result of rent-seeking activities. The rent-related turnover costs give the insiders preferential conditions of employment over the "outsiders" (who are either unemployed or working in the unprotected "secondary" sector of the economy). Unemployment in this setting can turn out to be involuntary in the sense that the outsider can't find work on account of their inferior employment opportunities.

The insider-outsider theory sheds some light on the differences in the unemployment experiences of Europe and the US. When business cycles are short-lived and mild, countries with comparatively high labour turnover costs may be expected to do relatively little hiring or firing, hoarding labour in the slumps and bringing it back into use in the booms. But in the face of deep, prolonged recessions, these countries will stop hoard and start firing labour. In the latter case, firms will be comparatively slow to rehire this labour as the recovery get under way, fearing that they may incur further firing costs should the recovery not materialize, and thus investment in labour-saving capital equipment may then take the place of employment. This may help explain (a) why unemployment rates in Europe were significantly lower than in the US in the 1950s and 60s, but significantly higher since the mid-70s, (b) why US unemployment has been more variable than European unemployment, and (c) why there has been a "decoupling" of employment and production activities in Europe but not in the US.

One problem with the insider-outsider theory is that it is difficult to test empirically. The reason is that many labour turnover costs that may well be very important in practice - such as the costs arising when insiders cooperate with one

another in the process of production but not with underbidding entrants, or when insiders harass the underbidding entrants in order to raise their marginal disutility of work¹⁶ - are inherently difficult to measure. The main measurable turnover costs are those associated with hiring, training, and firing, and even here data is severely limited.

7. Why It Takes So Long for People to Find Work

In view of all that has been said so far, it seems unwise to believe that there is one single, major cause that keeps people from finding work. A more sensible approach, to my mind, is to see unemployment as the outcome of four interrelated phenomena:

- (i) "shocks" which reduce labour demand or raise labour supply at given wages, or ones which raise wages at given employment,
- (ii) "amplifiers" which magnify the effect of the shocks on unemployment,
- (iii) "propagators" which carry the shocks from one market to another, and
- (iv) "lags" which carry the effects of the shock from the present into the future.

The discussion above has already covered a variety of shocks - oil price shocks, trade shocks, technological shocks, and others. The Keynesian mechanism that carries the effects of a product demand shock into the labour market is a good example of a propagator.

Amplifiers are quite straightforward; they simply depend on the slopes of demand and supply curves. Specifically, picture a labour market equilibrium in terms of the intersection between a labour demand curve (that tells us how much labour is demanded at any given real wage) and a wage setting curve (that indicates the real wage that will be set at any given level of employment). The difference between the equilibrium level of employment and the labour force at the equilibrium real wage is the equilibrium level of unemployment. In this setting, an adverse labour demand shock (that reduces the amount

¹⁶See Lindbeck and Snower (1988).

of labour demand at any given real wage) will generally reduce the equilibrium level of employment. The flatter the wage setting curve (i.e. the more responsive is wage setting to changes in the level of employment) the greater will be the effect of the labour demand shock on equilibrium employment and unemployment. In this way the slope of the wage setting curve can act as an amplifier of a labour demand shock. Naturally, the slope of the labour demand curve and the labour force participation curve (depicting the amount of the labour force participation at any given real wage) can be amplifiers along similar lines.

Labour economists have devoted a lot of effort to estimating the labour demand, wage setting, and labour force curves of market economies. One thing that emerges from these studies is that the slopes of these curves can differ dramatically from country to country. So it is clear that the unemployment effect of a particular shock - like an oil price shock - may be greatly amplified in one country but not in another.

That leaves the lags, which have the most central and interesting role to play in explaining the movement of unemployment through time. The underlying principle is simple, but its implications for unemployment dynamics can be very complex indeed. The principle is that the position of each of the curves described above - the labour demand curve, the wage setting curve, and the labour force participation curve - depends, in part, on what has happened in the past. Thus previous periods' real wages, employment, and labour force participation help determine the values of these variables at present. For this reason a labour market shock occurring in one period may have effects on unemployment in many subsequent periods.

The first step towards understanding how this works is to identify the principal lagged effects operating on the labour demand, wage setting, and labour force participation curves. To aid our intuition, let us give each of these lagged effects a name that suggest an important underlying rationale (although other rationales are conceivable as well):

(a) The "employment adjustment effect" arises when the position of the labour demand curve depends on past employment. This may happen when firms face employment adjustment costs.¹⁷

(b) The "insider membership effect" makes the position of the wage setting curve depend on past employment. It may arise when insiders' objectives in wage negotiations depend on the size of firms' insider workforces.¹⁸

(c) The "wage staggering effect" may be depicted by letting the position of the wage setting curve depend on past wages. Staggered wage setting may be the reason why current wage decisions depend on past ones.¹⁹

(d) The "long-term unemployment effect" makes the position of the wage setting equation depend on past unemployment. This may happen when the long-term unemployed lose motivation to search for jobs and thus have less influence on the wage setting process than the short-term unemployed.²⁰

(e) The "labour force adjustment effect" occurs when the position of the labour force participation curve depends on the past labour force magnitudes.

These effects can interact with one another in complex ways, so there are no simple conclusions to be derived for the way unemployment responds through time to a particular shock. It is clear, however, that the form of the response will depend crucially on the form of the shock. And shocks come in all shapes and sizes. At one extreme there are "temporary" shocks that occur for just one period, as when labour demand (at a given real wage) declines from period t to $t+1$ and then, in period $t+2$, returns to its original value and remains there for ever after. At the other extreme are "permanent" shocks, as when labour demand (at a given real wage) declines from period t to $t+1$ and remains at its new value thereafter.

¹⁷For example, Nickell (1978).

¹⁸This effect is developed in the insider-outsider theory. See, for example, Blanchard and Summers (1986) and Lindbeck and Snower (1987).

¹⁹This effect is described in the staggering theory, e.g. Taylor (1979).

²⁰See, for example, Bean and Layard (1988).

Due to the lagged effects above, a temporary shock can have prolonged effects on unemployment. This means, for example, that a temporary rise in oil prices (as in the mid- and late- 1970s) may affect unemployment rates for many years thereafter. This phenomenon, which has received a lot of attention in the macroeconomic literature, is called "unemployment persistence".²¹

Furthermore, a permanent shock can have delayed effects on unemployment. For instance, the long-lasting contractionary monetary and fiscal policies in many European countries during the 1980s may have had unemployment effects that took some time to manifest themselves. This phenomenon, which has been given less attention, may be termed "imperfect unemployment responsiveness". If unemployment displays inertia, so that the actual unemployment rate gradually rises to its long-run value after an adverse shock, it may be said to be "under-responsive"; if it overshoots its long-run value and then gradually returns to that value, it may be called "over-responsive".

Karanassou and Snower (1993a,b) measure unemployment persistence and responsiveness for several market economies and evaluate how the various lagged effects each contribute to these aggregate phenomena. The upshot of these studies is that there are no easy answers to the question of how unemployment responds dynamically to shocks. A particular lagged effect can augment unemployment persistence in one country but dampen it in another; similarly with unemployment responsiveness. Within a particular country, lagged effects that augment persistence by dampen responsiveness, and vice versa.

These are matters of vital policy concern. Through changes in job security legislation, wage subsidies to the long-term unemployed, and other measures, policy makers can influence many of the lagged effects above. How they do so must presumably depend, in part, on the extent to which these lags amplify or dampen the degree of unemployment persistence and imperfect unemployment responsiveness. The results above

²¹"Hysteresis" is an extreme case of unemployment persistence, where a temporary shock has permanent (not merely long-lasting) effects on unemployment. (See, for example, Blanchard and Summers (1986).)

imply that different countries may require quite different policies to deal with the same unemployment problem, and within a particular country, quite different policies may be required to deal with temporary and permanent shocks.

8. Concluding Remarks .

The theories above shed some light on why people don't find work. But the rays of light are thin and the areas left in darkness are large. Perhaps the main achievement of our many partial explanations is that we now have a much better idea of what we *do not* understand. For example:

(a) Keynesian models appear to have done well in predicting unemployment over the 1950s and 60s, but not so well since then, particularly in explaining why labour and product market activities do not always move in tandem. Keynesian theory suggests that wage-price sluggishness must play a dominant role in such an explanation, but so far the theory bears little relation to the facts.

(b) The efficiency wage theory implies that employers' imperfect information about their employees' productivities may play an important role in generating unemployment, but we have not yet learnt how this insight helps explain the movement of unemployment through time.

(c) The insider-outsider theory indicates that labour turnover costs, together with the resulting insider power, has an important rôle to play in explaining unemployment, but we do not properly understand how this role depends on the characteristics of the business cycle.

(d) The search theory shows how imperfect information about the availability of workers and jobs can lead to unemployment and vacancies, but it is not clear which of the theory's useful predictions is observationally distinct from the predictions of other, simpler theories.

(e) We know that shocks - such as oil price shocks, technological shocks, and trade shocks - set in motion chain reactions that have longer-term implications for unemployment behavior, but we still have a long way to go in gaining a clear picture of the underlying dynamics.

These loci of ignorance presumably help set the research agenda for the coming years. If progress will be made here, there are exciting times ahead.

References

- Abraham, Katharine G., and Lawrence F. Katz (1986), "Cyclical Unemployment: Sectoral Shifts or Aggregate Disturbances?" *Journal of Political Economy*, 94, June, 507-22.
- Akerlof, George A. (1982), "Labor Contracts as Partial Gift Exchange," *Quarterly Journal of Economics*, 97, 543-569.
- Akerlof, George A. and Janet L. Yellen (1985), "A Near-Rational Model of the Business Cycle, with Wage and Price Inertia," *Quarterly Journal of Economics*, 100 (suppl), 823-838.
- Azariadis, Costas (1975), "Implicit Contracts and Underemployment Equilibria," *Journal of Political Economy*, 83, 1183-1202.
- Barro, Robert J. (1981), "Intertemporal Substitution and the Business Cycle," *Carnegie-Rochester Conference Series on Public Policy*, 14, 237-68.
- Barro, Robert J., and Herschel Grossman (1976), *Money, Employment and Inflation*, Cambridge: Cambridge University Press
- Blanchard, Olivier (1983), "Price Asynchronization and Price Level Inertia," in Rudiger Dornbusch and Mario H. Simonsen (eds), *Inflation, Debt, and Indexation*, Cambridge, Mass: MIT Press, 3-24.
- Blanchard, Olivier, and Peter Diamond (1989), "The Beveridge Curve," *Brookings Papers on Economic Activity*, no. 1, 1-60.
- Blanchard, Olivier, and Lawrence Summers (1986), "Hysteresis and the European Unemployment Problem," *NBER Macroeconomics Annual*, vol. 1, Cambridge, Mass: MIT Press, 15-77.
- Calvo, Guillermo A. (1983), "Staggered Prices in a Utility-Maximizing Framework," *Journal of Monetary Economics*, 12, Nov., 383-398.
- Diamond, Peter (1982), "Aggregate Demand Management in Search Equilibrium," *Journal of Political Economy*, 90, Oct., 881-94.
- Friedman, Milton (1968), "The Role of Monetary Policy," *American Economic Review*, 58, 1-17.
- Gordon, D. F. (1974), "A Neoclassical Theory of Keynesian Unemployment," *Economic Inquiry*, 12, 431-59.
- Grossman, Sanford. and Oliver Hart (1981), "Implicit Contracts, Moral Hazard and Unemployment," *American Economic Review*, 61, 301-07.
- Grossman, Sanford, and Oliver Hart (1983), "Implicit Contracts under Asymmetric Information," *Quarterly Journal of Economics*, 98, 1223-56.
- Hart, Oliver (1983), "Optimal Labor Contracts Under Asymmetric Information: An Introduction," *Review of Economic Studies*, 50, 3-36.

- Karanassou, Marika, and Dennis J. Snower (1993a), "Explaining Disparities in Unemployment Dynamics," Discussion Paper, CEPR, London.
- Karanassou, Marika, and Dennis J. Snower (1993a), "Sources of Unemployment Responsiveness," Discussion Paper, CEPR, London.
- Keynes, John Maynard (1936), *The General Theory of Employment, Interest, and Money*, London: Macmillan.
- King, Robert G., and Charles Plosser (1984), "Money, Credit and Prices in a Real Business Cycle," *American Economic Review*, June, 74, 363-80.
- King, Robert G., Charles Plosser, and Sergio Rebelo (1988a), "Production, Growth and Business Cycles I: The Basic Neoclassical Model," *Journal of Monetary Economics*, 21, 195-232.
- King, Robert G., Charles Plosser, and Sergio Rebelo (1988b), "Production, Growth and Business Cycles II: New Directions," *Journal of Monetary Economics*, 21, 309-341.
- Kydland, Finn E., and Edward C. Prescott (1982), "Time to Build and Aggregate Fluctuations," *Econometrica*, Nov., 50, 1345-70.
- Lilien, David M. (1982), "Sectoral Shifts and Cyclical Unemployment," *Journal of Political Economy*, 90, Aug., 777-93.
- Lindbeck, Assar, and Dennis J. Snower (1986), "Wage Setting, Unemployment, and Insider-Outsider Relations," *American Economic Review*, Papers and Proceedings, 76(2), May, 235-239.
- Lindbeck, Assar, and Dennis J. Snower (1987), "Union Activity, Unemployment Persistence, and Wage-Employment Ratchets," *European Economic Review*, Feb, 31, 157-167.
- Lindbeck, Assar, and Dennis J. Snower (1987), "Strike and Lock-Out Threats and Fiscal Policy," *Oxford Economic Papers*, 39, Dec., 760-784.
- Lindbeck, Assar, and Dennis J. Snower (1988), "Cooperation, Harassment, and Involuntary Unemployment," *American Economic Review*, 78(1), March, 167-88.
- Long, John B., and Charles Plosser (1983), "Real Business Cycles," *Journal of Political Economy*, Feb., 91, 1345-70.
- Lucas, R. E. (1975), "An Equilibrium Model of the Business Cycle," *Journal of Political Economy*, 83, 1113-44.
- Lucas, R. E., and L. A. Rapping (1969), "Real Wages, Employment, and Inflation," *Journal of Political Economy*, 77, 721-54.
- Malinvaud, Edmond (1977), *The Theory of Unemployment Reconsidered*, Oxford: Oxford University Press.
- Mankiw, N. Gregory (1985), "Small Menu Costs and Large Business Cycles: A Macroeconomic Model of Monopoly," *Quarterly Journal of Economics*, 100, 529-539.
- Mortensen, D. T. (1986), "Job Search and Labor Market Analysis," in O.C. Ashenfelter and R. Layard (eds.), *Handbook of Labor Economics*, vol. 2, Amsterdam: North-Holland, 849-919.

- Muellbauer, John, and Richard Portes (1978). "Macroeconomic Models with Quantity Rationing," *Economic Journal*, 88, 788-821.
- Nickell, Stephen (1978), "Fixed Costs, Employment and Labor Demand over the Cycle," *Economica*.
- Phelps, Edmund S. (1970), "Money Wage Dynamics and Labor Market Equilibrium," in E. Phelps (ed.), *Microeconomic Foundation of Employment and Inflation Theory*, New York: Norton.
- Pissarides, Christopher (1986), "Unemployment and Vacancies in Britain," *Economic Policy*, 3, Oct., 499-559.
- Rostow, W. W. (1983), "Technology and Unemployment in the Western World," *Challenge*, vol. 26, March-April, p. 6.
- Salop, S. C. (1979), "A Model of the Natural Rate of Unemployment," *American Economic Review*, 69(1), 117-125.
- Shapiro, Carl, and Joseph E. Stiglitz (1984), "Equilibrium Unemployment as a Worker Discipline Device," *American Economic Review*, 74(3), 433-444.
- Snower, Dennis J. (1983), "Search, Flexible Wages and Involuntary Unemployment," Discussion Paper No. 132, Birkbeck College, University of London.
- Stiglitz, Joseph E. (1985), "Equilibrium Wage Distributions," *Economic Journal*, 95(379), 595-618.
- Taylor, John B. (1979), "Staggered Wage Setting in a Macro Model," *American Economic Review*, 69, May, 108-113.
- Weiss, Andrew (1980), "Job Queues and Layoffs in Labor Markets with Flexible Wages," *Journal of Political Economy*, 88, 526-538.