Unemployment Scarring

By

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The best predictor of an individual's future risk of unemployment is his past history of unemployment; unemployment tends to bring future unemployment.[1] In addition, there is considerable evidence, mainly from the U.S., that job displacement is followed by a lower trajectory for future earnings after re-engagement. These two indications combine in extreme form in the evidence on the low-pay/no-pay cycle: that repeat spells of unemployment go hand in hand with jobs that are low paid and unstable.[2] There is thus evidence that interruptions to employment not only bring the obvious loss of current income during the period of unemployment, but inflict a longer term 'scar' through the increased future incidence of unemployment and lower subsequent earnings in employment. These two effects may well be related, with lower earnings potential leading to an extended period of job search before a suitable job match is found or the person drifts into economic inactivity. Their effects will be particularly damaging in exacerbating lifetime inequality, bringing the threat of poverty and social exclusion.

Why does scarring occur? Human capital theory indicates that job termination incurs the permanent loss of firm-specific human capital, while an unemployment spell not only precludes the accumulation of work experience but may also bring the deterioration of general skills. Future earnings in employment will therefore be lower than if unemployment not occurred. Or, since productivity is imperfectly observable, only a lower wage offer may be forthcoming if the employer takes a past history of unemployment as signalling low productivity. On the other hand, where a job is terminated by either side because of a poor

match, higher earnings may result if the subsequent unemployment spell allows the sorting of workers into better-matched jobs. How far scarring occurs is therefore to be established empirically.

Early studies of scarring, focusing on the effect of job displacement on subsequent earnings, were largely confined to the U.S., where appropriate data were available.[3] They originated in the aftermath of the massive job losses, particularly in manufacturing, which followed the overvaluation of the dollar in the mid-1980s. Special surveys on displaced workers collected information on pre- and post-displacement earnings and job characteristics, and on the intervening period of non-employment.[4] These gave clear *prima facie* evidence of reductions in post-displacement earnings. However, although the sample sizes in the surveys could be very large, lack of parallel information on non-displaced workers meant that no control group could be constructed from which to make inferences on the wage and job experiences which would have occurred in the absence of displacement, and therefore of the true impact of displacement. To overcome this problem a number of researchers have subsequently used standard longitudinal survey or administrative data sets that record individuals' labour market experiences.[5] The available longitudinal data sets, however, typically yield only quite small samples of displaced workers, while administrative data sets do not identify the reason for the job interruption or allow unemployment to be distinguished from other types of joblessness.

The papers in this symposium address the issue of the scarring effect of unemployment in the case of British men over the 1980s and 1990s. The papers by Arulampalam ([A]), and Gregory and Jukes ([GJ]) examine wage scarring, the effect of unemployment on subsequent wages, while the paper by Gregg ([G]) examines the effect of unemployment on subsequent unemployment. Given the high levels of unemployment which prevailed in Britain over the 1980s and 1990s the economic and social relevance of these issues is clear. Moreover,

differences in labour market institutions between Britain and the U.S. suggest that U.S. experience may not be closely replicated in Britain. The restricted availability of unemployment benefit and social welfare support for unemployed men in the U.S. gives a strong incentive to rapid re-engagement, bringing shorter unemployment durations, while the more extensive social welfare support in Britain provides at least some scope for more extended search and greater selectivity in job acceptance. Although the role of collective bargaining has diminished sharply in Britain over the past 20 years it remains significantly greater than in the U.S., with the implication of reduced wage flexibility for the individual.

Data sets available for Britain provide exceptionally suitable test-beds for examining the issue of scarring, allowing the methodological points raised above also to be addressed. Each of the three papers exploits a different type of data set, covering overlapping periods. [A] uses a household survey for the years 1991-97, [GJ] administrative data for the period 1984-94, and [G] the labour market experience of a birth cohort (born in 1958) between 1974 and 1991. All include workers with unemployment histories as well as those with no interruptions to their employment experience, providing sizeable control groups. All the data sets are panel surveys, tracing the experience of the same groups of individuals over time. Crucially, this allows us to control for heterogeneity, and therefore identification of the effects of unemployment after allowance for the influence of both observed and unobserved characteristics of those individuals who do, and those who do not, experience unemployment.

1. The British Labour Market over the 1980s and 1990s

The scarring effect of unemployment has become an issue of importance in the British economy following the changes that swept through the labour market in the 1980s, many of which are still present twenty years later. The main changes relevant here those affecting unemployment and employment patterns.

The most immediately striking change involves the level of unemployment. Unemployment had already re-emerged as a major concern during the 1970s, when the cycles were for the first time in the post-war period around a rising trend. 1979 was to prove a watershed, with registered male unemployment doubling between 1979 and 1980, and doubling again between 1980 and 1981. This reflected both a sharp rise in redundancies and a steep fall in recruitment (outflows from unemployment). This was the period in which the birth cohort used in [G]'s study, aged 23 in 1981, should have been moving from the youth labour market into more established jobs. After this upsurge unemployment continued on an apparently inexorable upward trend, although at a diminishing rate, until 1985-6. A major consequence of this seven-year rise was the lengthening duration of unemployment spells and particularly the increase in long-term unemployment. By 1986 over half the men aged over 25 on the unemployment register had been unemployed for more than a year. This rise in unemployment, and in long-term unemployment in particular is captured in the period studied by [GJ].

The sharp rise in redundancies in the early 1980s first spread the experience of unemployment to substantial groups previously not exposed to it – managers, professionals, supervisory staff and skilled craftsmen. The brunt of that recession was borne by employees in manufacturing, particularly in the traditional industrial heartlands in the North and Midlands. The recession of the first half of the 1990s, on the other hand, impacted particularly on the services sector and in London and the South. As a consequence of these dual developments, redundancy became widely perceived as a risk of employment. Moreover, the period as a whole has been characterised by the massive loss of jobs particularly for male manual workers, skilled and less skilled, in manufacturing and mining, and the growth of particularly female, often part-time, jobs in services. For unemployed men this structural shift in the pattern of employment has brought deteriorating probabilities of re-employment in the type of

job previously held. This has been reflected in the rise in male inactivity. Gregg and Wadsworth (1999) show that by 1998 the numbers of men of working age who were economically inactive was more than double the number unemployed on the ILO definition (2.3 million inactive as compared to 1 million unemployed). In 1975 the ratio had been 2 to 1 in the opposite direction (80,000 unemployed to 400,000 inactive).[6] This major shift between unemployment and inactivity is relevant to both the [A] and [GJ] papers.

2. Wage Scarring: Methodologies and Findings

Both [A] and [GJ] use the generalisation of the methodology most commonly referred to as difference-in-difference estimation. The availability of longitudinal information on those who have not suffered an interruption enables the authors to construct a suitable control group and estimate the effect of interruption for these individuals who experience it, against the control group with no employment interruption. To implement this procedure requires at least two wage observations per individual and therefore creates a non-random sample. Both papers address the possibility of sample selection bias using Heckman corrections. In the [A] paper, the richness of the BHPS data in terms of personal and household characteristics allows particularly detailed analysis of this.

[A] uses a sample constructed from the British Household Panel Survey (BHPS). This is a nationally representative survey of around 5,500 households randomly selected from those located south of the Caledonian Canal. The BHPS has been conducted annually since the autumn of 1991 (for details, see Taylor (1996)). The first seven waves, 1991-97, are used here. The BHPS dataset provides extensive information on earnings and labour market transitions along with a rich set of information on personal and job characteristics. The data set also enables her to separate unemployment interruptions from periods of economic inactivity. While great care is taken in the annual interview, some of the information on labour market

transitions is collected retrospectively and therefore may be subject to recall error; this may apply particularly to short spells of unemployment (Paull, 1997). The sample used in the analysis presented by [A] covers 2092 men, with and without the experience of job interruptions.

In contrast, the paper by [GJ] uses a very large sample constructed from an administrative dataset. This is the linked New Earnings Survey Panel Dataset (NESPD), and the Joint Unemployment and Vacancies Operating System (JUVOS) data set. NESPD questionnaires report earnings for the specified Survey pay week in April of each year, and are completed by employers from their payroll records. Sample selection is on the basis of a specified pair of terminating digits for the individual's National Insurance number, identified from employers' tax returns on payroll, generating a 1% random sample of all employees in employment. The JUVOS data is a 5% sample of all claimants of unemployment-related benefits, again selected on the individual's National Insurance number, and including the sample terminating digits selected for the NESPD. The linked dataset contains information on over 150,000 men over the period 1984-94. The sample used in the analysis presented in [GJ] uses information on around 70,000 men per year, each present for between two and eleven years. Given the source of the JUVOS data in claims for unemployment-related benefits, [GJ]'s definition of employment interruption is confined to registered unemployment spells qualifying for the payment of benefits.

Both papers find significant wage penalties to employment interruptions, in line with the American evidence. In [A], the wage penalty attached to a spell of unemployment on re-entry job takes an inverted U-shape. It is estimated to be about 6% during the first year of re-entry, increasing over the next three years within the same employment spell to about 14%, before declining to about 11%. [GJ], who have the advantage of a much larger sample, split the effect of unemployment into two components, attributable to the job interruption

(unemployment incidence) and the duration of the unemployment spell respectively. The profile on the first component gives a largely temporary, and declining, effect; the wage penalty associated with an job interruption is estimated to be around 10% over the first year, decreasing to about 7% in the second year, with a long run or permanent penalty estimated at 1.9%. In addition [GJ] find a further wage penalty varying directly with the length of the unemployment spell, and with no tendency to diminish as the unemployment experience recedes into the past. For those with a typical six-month spell of unemployment this duration penalty reduces wages by a further 5.1%, rising to 11.1% for those who had been out of work for a year. Combining these two elements makes the [GJ] and [A]'s results closely similar. [A], however, does not find any additional significant effects coming via the length of the interruption itself. There are at least three possible reasons for this. First, the experience of unemployment durations differs between the two papers. [A]'s sample covers only the period of the 1990s, when there was a big shift of long-term unemployed on to sickness benefits. [GJ]'s period, on the other hand, also covers the years of the mid-1980s when unemployment durations were long and early retirement not yet an option for the unemployed.[7] Second, [GJ]'s definition of unemployment referred to registered unemployment only while [A]'s definition includes both registered and unregistered unemployment. Thirdly, the [GJ] sample is many times larger than [A]'s, which may allow sharper definition.

Their large sample allows [GJ] to examine the impact of unemployment for different age-groups and occupations. The age-profile is striking. Employment interruption for young workers does not bring a wage penalty, unless it is of significant duration. But the penalty rises steeply through the prime-age years. It is also more pronounced for the higher paid and those in higher occupational groups. [A] explores the effects of multiple interruptions, and finds the largest wage scar to be caused by the first spell of joblessness. In addition, [A] also finds the wage penalty to be carried through to the second spell of employment, but to a lesser extent.

Her data also distinguish redundancy from other sources of separation, showing a smaller penalty to be attached to joblessness caused by redundancy.

3.   Unemployment Scarring

The paper by [G] addresses the issue of how early unemployment experiences as young adults contribute to unemployment in adulthood. All existing analyses of structural dependence for unemployment have been based on short panels. Whilst there is a common UK finding of structural dependence in the short run of three years or so (see Arulampalam et al, 2000, for example), there is nothing looking over longer windows. This paper, drawing on the National Child Development Survey, looks at the issue of whether the cumulated experience of unemployment from ages 16 to 23 is correlated with that from ages 28 up to age 33. Such long period analysis has an advantage that it requires less stringent assumptions to separate dependence from heterogeneity. The paper highlights how unemployment experience is concentrated on the same minority of the workforce over these extended time periods. This raises the question whether background characteristics make some people especially prone to unemployment. It goes on to use the wealth of detail in the NCDS to parameterise the individual heterogeneity prior to entry into the labour market. This suggests that low educational attainment, ability not captured by education, financial deprivation and behavioural problems in childhood do raise a person's susceptibility to unemployment. An instrumental variables approach is then used to identify structural dependence from any residual unobserved heterogeneity. It shows strong evidence of structural dependence induced by early unemployment experience for men. By contrast there is evidence of only minor persistence in unemployment for women and then only when the women experienced at least a year of unemployment before age 23.

4.   Policy Implications

The papers taken together make very clear that unemployment has a scarring effect for both future employment and future earnings. The costs of unemployment, particularly repeated unemployment, are much higher than the immediate loss of earnings. This gives support to any policies which will secure its reduction, and also points up the need to include these future effects into any assessment of the costs of unemployment and equally into the evaluation of programmes to reduce it.

[GJ]'s analysis of the unemployment history of men in work reveals the cyclical sensitivity of re-employment; a macroeconomic upswing, as occurred in the late 1980s, is very effective in getting particularly the long-term unemployed back into work. A successful macroeconomic framework, with sustained high levels of employment, is the first-best attack on scarring at the aggregate level.

A major dimension of scarring appears to be the depreciation of skills during interruptions to employment. This gives support to policies of 'in-work' benefits to promote employment and obviate the depreciation of skills. This policy, however, has its dangers. If in-work benefits are not time-limited they may act as a disincentive for skill acquisition, which is the sustainable solution to scarring. Moreover, if scars associated with job interruptions are long lasting (see [A]), then time-limiting of welfare measures themselves may be important, in order to prevent the development of welfare dependency among the jobless.

On unemployment experience more directly, a number of prompts emerge from the three papers. [G]'s analysis gives a highly effective micro focus, characterising the types of young men at risk of repeated unemployment spells and poor labour market outcomes in general. He shows family context, educational attainment, behavioural traits and early labour market experiences all as major influences. This argues for a policy thrust towards improving educational attainment and school-to-work transitions for these 'at risk' groups of young men. The estimates by [GJ] show that scarring is particularly pronounced in the case of older men and the long-term

unemployed. Projects such as RESTART, targeted at the prevention of long-term unemployment, and the New Deal, targeted at older workers and the long-term unemployed, are to be welcomed. They also show that the dislocation costs of unemployment are particularly high for prime age and older men who are higher earners. While the numbers involved are not large, the size of the penalties indicates that active policies towards job finding for displaced men in these categories would be efficient. With suitable incentives this could be provided within the private sector.

Given the extent and magnitude of scarring, the main conclusion must be that prevention is better than cure. Well-managed transitions into work and between jobs will be the most effective approach. Estimates of the extent of scarring reveal just how high the costs of unemployment really are.

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Endnotes

[1] On the evidence for Britain see Narendranathan and Elias, 1993; Arulampalam et. al, 2000; Gregg, 2000.

[2] Stewart, 2000; Boheim and Taylor, 2000.

[3] Fallick (1996) and Kletzer (1998) provide excellent surveys. See Kuhn (2000) for an international perspective on the effects of displacement.

[4] Some data do not distinguish spells of unemployment from spells of economic inactivity (Abbring et al., 1998).

[5] See, for example, Ruhm (1991) and Stevens (1997) for studies that have used longitudinal data in the U.S. context. Jacobsen et al. (1993) use an administrative data set for Pennsylvania State in the U.S.. Also see Kuhn (2000).

[6] See also Disney (1999).

[7] We are grateful to a referee for this point.