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# THE GREAT RECESSION IN THE U.K. LABOUR MARKET: A TRANSATLANTIC PERSPECTIVE

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The increase in unemployment in the United Kingdom that accompanied the Great Recession has been conspicuous by its moderation. The rise in joblessness is dwarfed by the recent experience of the United States, by past recessionary episodes in the U.K. and by the contraction in GDP in the U.K. Increased rates of job loss have played a dominant role in shaping the rise in British unemployment. Unemployment duration has not increased to the levels seen in previous recessions, in contrast to the U.S. where duration substantially exceeds previous peaks. Looking forward, the U.K. labour market appears to have adjusted fully to the shocks that prompted the recession. Signs of reductions in match efficiency witnessed recently in the U.S. are not mirrored in the U.K. In contrast, while long-term unemployment currently remains well below historical levels, recent estimates of job finding rates suggest that it has the potential to rise much further. Thus, a timely recovery in aggregate demand will play an important role in averting persistently high unemployment in the future.

Keywords: Labour market, business cycle, unemployment, worker flows.

JEL Classification: E24, J6.

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## Introduction

The severity of the recession that accompanied the global financial crisis in 2008 has led many to refer to it as the *Great Recession*. Labour market outcomes in the United States, where the crisis originated, have deteriorated at an unprecedented rate. On the other side of the Atlantic, the United Kingdom has experienced its first recession in over fifteen years. In this paper we study the impact of the Great Recession on the U.K. labour market, and cast it in the broader context of past recessions in the U.K. and the recent experience of the U.S. economy.

We find that the increase in U.K. unemployment during the recent recession has been remarkably *modest*. This basic conclusion is confirmed by comparisons of the recent rise in joblessness to increases in unemployment witnessed in the U.K. in prior recessions, the reduction in GDP associated with the recession in the U.K., and the severity of the impact of the recession on the U.S. labour market.

What factors account for this moderate unemployment response in the U.K.? Digging deeper into the flows that underlie the recent rise in joblessness reveals that the British labour market has been afflicted by an unusually steep rise in the rate at which workers flow into the unemployment pool. Rates of job loss in the U.K. have risen more than in any downturn in the last forty years.

The muted rise in British joblessness can instead be traced to a moderate decline in the rate at which unemployed workers have found jobs, and an associated modest rise in unemployment duration. This is borne out in comparisons with the experiences witnessed recently in the U.S. economy and in the U.K. recessions of the 1970s and 1980s, where declining rates of job finding have been dominant driving forces. Moreover, this conclusion is not a symptom of the more stringent restrictions associated with the duration of unemployment benefit claims in the U.K. since the introduction of Jobseekers' Allowance in 1997: Estimates of the job-finding prospects of the unemployed based on a broader definition of the unemployed corroborate the conclusion.

Early signs for the outlook for the British labour market are more mixed. Analysis of the co-movement of unemployment and vacancies—the Beveridge curve—reveals that the U.S. labour market has shown recent signs of a decline in match efficiency: The recovery of job openings in the U.S. has not been met by commensurate declines in unemployment. In contrast, the U.K. labour market has not (yet) shown signs of a magnitude similar to that seen in the U.S.

It is also possible to construct a leading indicator of the future course of unemployment from the underlying flows, known as the “flow steady-state” unemployment rate. Recent estimates suggest that the headline U.K. unemployment rate has converged fully to its flow steady-state, implying that unemployment in the U.K. has adjusted fully to the shocks that prompted the recession.

A particular concern for the U.K. economy is that unemployment will stay persistently high in the wake of the recession, as seen during the unemployment problem of the 1980s. Prior literature emphasised the importance of the rise in long-term unemployment during the 1980s in driving persistently high rates of joblessness.

Analysis of the most recent data for the U.K. suggests there has been a modest rise in long-term unemployment to date. Nevertheless, there are reasons for caution. It was between 4 and 5 years before long-term unemployment peaked after the start of the 1980s recession, and the peak was reached about 3 years after the 1990s recession. Rates of job finding have now fallen to levels seen during the 1990s recession, raising the concern that long-term unemployment will continue to rise in the U.K. Thus, a swift recovery in aggregate demand is important to avert the prospect of persistently high unemployment in the future.

## Unemployment and GDP

Our main focus in this paper is to document the cyclical behaviour of unemployment over the course of the current recession. To set the stage, Figure 1 plots the published time series for the unemployment rate in the U.K. and the U.S. from the early 1970s through to the most recent data.

Prior to 2000, Figure 1 tells a familiar story: Rates of unemployment in the U.K. and the U.S. co-move, rising together in recessions, and subsiding in booms. In the recessions of the early 1980s and the early 1990s, unemployment in the U.K. tended to rise more, and to persist for longer after the downturns receded, reflecting the persistent unemployment problem that plagued the U.K. and other European economies during the 1980s. It is striking that the U.K. unemployment rate did not fall back to a pre-1980s level until after the recession of the 1990s.

The story since 2000 has been quite different, however. The U.K. was spared from the recession that hit the U.S. and a number of other economies in the early 2000s. In addition, the rise in unemployment witnessed in the U.K. over the course of the current recession has been conspicuous by its *moderation*: Unemployment in the U.K. rose from 5.1 percent in early 2008 to a recessionary high of 8 percent in early 2010. This 2.9 percentage point increase is modest in comparison both to past recessionary episodes in the U.K., as well as the recent experience of the U.S. labour market. It is overshadowed by the downturns of the early 1980s and early 1990s in the U.K., which saw increases in joblessness of 6.5 and 3.7 percentage points respectively. And it is dwarfed by the 5.5 percentage point rise in unemployment witnessed in the U.S. during the current downturn. In fact, the rise in U.K. unemployment since 2008 is more reminiscent of the *mild* downturns of 1990 and 2001 in the U.S. and 1975 in the U.K.

What might account for the relatively benign rise in U.K. joblessness? One possible reason might be that the current recession simply has not been that severe in the U.K. To address this

possibility, a natural point of comparison is the contraction in output that accompanied the recession.

Figure 2 performs such a comparison by depicting the relationship between unemployment and GDP in the U.K. and the U.S. since the early 1970s—Okun’s Law. Specifically, it plots the percentage point deviation from trend of the unemployment rate (measured on the left axis), and the percent deviation from trend of GDP (right axis). For all series, trends are measured using a Hodrick-Prescott filter with smoothing parameter 1600 based on quarterly data.

Figure 2 reveals that, in contrast to the modest rise in unemployment, GDP in the U.K. has fallen by 6 percent relative to trend over the course of the 2008-9 recession. The magnitude of the contraction in GDP mirrors that seen in the severe early 1980s recession in the U.K., and is almost identical to the drop in GDP seen in the U.S. during the current downturn.

The picture painted by Figure 2 therefore suggests that the rise in the unemployment in the U.K. has been moderate *despite* the severity of the recession. In what follows we will offer some clues for why this has been the case by examining the flows that underlie the rise in unemployment.

If unemployment has not borne the brunt of U.K. labour market adjustment in the recession, what has? The counterpart of the muted rise in unemployment has been the maintenance of a relatively high employment rate (see Gregg and Wadsworth, 2010). As Gregg and Wadsworth also show, although hours have fallen and the share of part-time working has risen, it is not the case that hours have taken the impact of adjustment, as hours have fallen less than in prior U.K. recessions. As Gregg and Wadsworth note, some of the burden has been borne by producer wages, as these have fallen further in this recession than in previous downturns, which has helped to maintain firm profitability. Real earnings declines have presumably contributed to firms’ ability to survive the recession without further job losses, despite the fall in productivity that has been a consequence of the moderate fall in employment relative to the large decline in output.

## **The ins and outs of cyclical unemployment**

The analysis so far has focused on a series of snapshots of the number of individuals in want of work at different points in time. In reality, the identities of these individuals are continually changing: Workers flow into the unemployment pool as they lose their jobs, and unemployed workers exit the pool as they find new jobs. These flows play a crucial role as proximate determinants of increased unemployment in times of recession. Are cyclical upswings in the unemployment rate an outcome of increased rates of inflow into the unemployment pool, reductions in the rate at which individuals exit unemployment, or some combination of the two?

We take up this question by documenting recent estimates of the rates of inflow to and outflow from unemployment, and placing them in the context of the historical behaviour of labour flows in the U.K. and U.S.

The data we explore for the U.K. are drawn from two complementary sources. First, we use direct measures of inflows to and outflows from claimant unemployment—those in receipt of unemployment benefits.<sup>1</sup> These yield very simple estimates of claimant unemployment flows. The claimant inflow rate can be computed by dividing total monthly inflows by employment.<sup>2</sup> Similarly, the claimant outflow rate may be computed by taking the ratio of total monthly outflows and the number of claimant unemployed.

A key advantage of these data is that they are available back to the late 1960s, allowing a comparative analysis of the cyclical dynamics of U.K. unemployment flows across a number of recessions. Data from 1983 onwards are publicly available from the Office for National Statistics. We combine these series with data prior to 1983 assembled by Petrongolo and Pissarides (2008) from the *Employment Gazette*.

A drawback of the claimant data, however, is that they pertain to claimant unemployment, as opposed to the more widely-accepted ILO definition.<sup>3</sup> While the correlation between these two measures of unemployment historically has been high, especially over the business cycle, there have been changes in the regulations governing the receipt of unemployment benefit—most notably the introduction of Job Seekers' Allowance in 1997—that limit the comparability of the series over time.

Reacting to this, we also explore estimates of U.K. unemployment flows based on longitudinally-linked microdata from the Labour Force Survey, in which unemployment is based on the ILO definition. The introduction of a five-quarter rolling panel element to the LFS in 1992 makes it possible to match a fraction of the responses of individuals surveyed in one quarter to the same individual's responses one quarter later. Thus, one can compute the fraction of the employed in one quarter who subsequently report that they are unemployed the following quarter—what we shall refer to as the E to U transition rate. Symmetrically, we also compute estimates of the rate at which unemployed workers find new jobs—the U to E transition rate.

While these LFS measures are analogous to the unemployment inflow and outflow rates computed from claimant data, it is important to note that there are conceptual differences. In addition to being based on a different definition of the unemployment rate, claimant inflows

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<sup>1</sup> To maximise the time span of the data, the claimant count measures we use refer to Great Britain as opposed to the U.K. as a whole.

<sup>2</sup> The employment measure used to compute the claimant inflow rate is the associated ONS workplace-based estimate. Monthly employment figures are derived by subtracting the number unemployed from the implied labour force, the latter calculated as the level of unemployment divided by the workplace-based estimate of the unemployment rate.

<sup>3</sup> According to the ILO definition, to be classified as unemployed an individual must be not working, currently available for work and actively seeking work, or waiting to take up a job.

include inflows from nonparticipation to unemployment, as well as outflows from unemployment to nonparticipation that are excluded from the estimated E to U and U to E transition rates from the LFS.

For the U.S., we infer measures of unemployment inflow and outflow rates from published monthly Current Population Survey time series on unemployment by duration, based on the method outlined by Shimer (2007) and used subsequently by a growing literature. The CPS unemployment definition underlying these series is comparable to the ILO definition used by the LFS.

The respective time series for these unemployment flows for the U.K. and the U.S. are depicted in Figures 3 and 4. Shaded regions correspond to periods of rising unemployment in the U.K. and to the official recession dates for the U.S. suggested by the National Bureau of Economic Research.<sup>4</sup>

Prior to the current recession, Figures 3 and 4 tell the following story of the nature of labour market adjustment in the U.K. and U.S. First, there have been substantial differences in the average levels of unemployment flows between the two countries: Unemployment inflow and outflow rates historically have been much lower in the U.K. than in the U.S. Moreover, the differences are substantial. Inflow rates in the U.K. have hovered around 1 percent on a monthly basis, compared to something closer to 3 percent in the U.S. Similarly, unemployed workers in the U.K. have on average flowed out of the unemployment pool at a rate of around 20 percent per month since the 1970s, compared to 55 percent in the U.S. These stark differences reflect the conventional wisdom that the U.K. labour market, like others in Europe, has historically been sclerotic, in contrast to the particularly fluid nature of the U.S. labour market.<sup>5</sup>

A second lesson of Figures 3 and 4 is that there are clear historical patterns in the dynamics of unemployment flows over the business cycle in both economies. During recessions, rises in unemployment are accompanied by sharp rises in the inflow rate that subside following the recession, together with prolonged reductions in the rate of outflow from unemployment that can persist well into a recovery. This persistence in the outflow rate has been more acute in the U.K., however, with job-finding prospects barely recovering after the recessions of the mid-1970s and the early 1980s. This dovetails with the persistent unemployment problem during the 1980s in the U.K. noted in Figure 1, and suggests that the problem can be traced in its entirety to sluggishness in the rate of exit from unemployment, a point noted by Machin and Manning (1999).

Focusing now on the current recession, a quite different picture emerges. The behaviour of unemployment flows in both the U.K. and the U.S. has been unprecedented in recent history.

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<sup>4</sup> NBER recession dates are available at <http://www.nber.org/cycles.html>.

<sup>5</sup> See Elsby, Hobijn and Sahin (2009) for a detailed analysis of the varying patterns of unemployment flows across OECD countries.

Interestingly, though, the nature of this divergence from the past has occurred in opposite directions in each economy.

The U.S. labour market has witnessed a profound reduction in the outflow rate. Figure 4 reveals that the rate of exit from unemployment in the U.S. has been halved over the course of the recession, overshadowing the declines witnessed in all recent recessions. Moreover, unemployed workers in the U.S. are leaving the jobless pool at a historically low rate of 25 percent per month.

In direct contrast, the U.K. labour market has experienced an unusually steep rise in the unemployment inflows, while outflow rates have fallen modestly. At its peak in the second quarter of 2009, the claimant inflow rate had risen by nearly 80 percent relative to its pre-recession level, much more than in any prior downturn in the U.K. since the 1970s.

The acceleration in job loss between 2008 and 2009 appears inconsistent with a ‘labour hoarding’ explanation for the muted increase in unemployment: the steep rise in the E to U inflow rate suggests that firms had relatively little hesitation in reducing their workforce size.<sup>6</sup>

The claimant outflow rate has fallen by less than might have been anticipated given previous experience. The outflow rate from JSA slowed only to the same level as in 2005, when the economy suffered a relatively minor deceleration in growth, from 3 per cent per annum in 2004 to 2.2 per cent in 2005. The comparatively modest decline in the outflow rate in the U.K. is not merely a symptom of the introduction of limited duration unemployment benefits in the form of JSA in 1997. While the reduction in the claimant outflow rate is unusually mild in current recession, a similar picture emerges from estimates of the U to E transition rate based on the LFS definition of unemployment.

The joint result of these two recent trends—unprecedented declines in unemployment outflow rates in the U.S. and more limited declines in the U.K.—is that, for the first time in nearly four decades, British and American workers face about the same probability of exiting the unemployment pool.

## **The roles of job loss and job finding**

These observations are suggestive of a conclusion that job loss has played a particularly dominant role in driving increased rates of unemployment during the current recession in the U.K. economy, especially in comparison to recent experience in the U.S. But can we be more precise about the relative roles of inflow and outflow rates in shaping cyclical movements in the unemployment rate?

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<sup>6</sup> The rapid rise in the unemployment inflow rate occurred from a very low level—lower than at any time since 1970—so the *level* of the inflow rate to unemployment remains lower than in previous recessions. This is consistent with firm profitability being relatively high going into recession and remaining relatively buoyant, and with rapid falls in producer wages (Gregg and Wadsworth, 2010).

A useful rule of thumb that has evolved out of recent literature is that the percentage increase in unemployment is approximately equal to the percentage rise in the inflow rate into unemployment plus the percentage decline in the outflow rate from unemployment.<sup>7</sup> Thus, the relative contributions of the two flow margins to cyclical unemployment can be gleaned from a simple comparison of the relative percentage change in each of the flows.

Figure 5 plots these contributions for each cyclical upswing in unemployment in the U.K. and U.S. since the mid 1970s. The picture that is revealed for the U.S. suggests that increased rates of inflow into unemployment account for around a third of increased unemployment during severe recessions, with the remaining two thirds accounted for by a slowing of the outflow rate. In contrast, the mild recessions of 1990 and 2001 in the U.S. display a more muted inflow contribution. In all recessions, increased inflows are more dominant early on in the downturn, with more persistent declines in outflow rates that dominate toward the later stages of the recession.

How does the U.K. compare? Well, the story prior to the recession of the early 1990s resembles the dynamics of U.S. unemployment flows, with elevated rates of inflow accounting for around one third of increased unemployment during the recessions of the mid 1970s and early 1980s. Thus, declines in the outflow rate were a dominant driving force behind U.K. unemployment prior to the 1990s.<sup>8</sup> Starting with the 1990 recession, however, the relative role of inflows in shaping the evolution of unemployment in the U.K. has become increasingly dominant, accounting for a little over one half of the rise in joblessness during the early 1990s.

This trend toward a growing role of job loss in U.K. unemployment fluctuations has continued into the current recession. Both the claimant-based inflow and outflow measures and the LFS estimates of the job loss and job finding rates reveal that increased rates of inflow into unemployment have dominated the recent rise in unemployment in the U.K., especially early on in the recession.

Since mid-2009 there is some difference between movements in the LFS U to E transition rate and the claimant outflow rate.<sup>9</sup> According to LFS data for the latest recession, after initial dominance of an increased rate of job loss in determining unemployment movements, the job

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<sup>7</sup> See Elsby, Michaels and Solon (2009). This approximation does require that unemployment be closely approximated by its flow steady-state value. See Elsby, Hobijn and Şahin (2009) for a related decomposition that allows for deviations from steady state, and Smith (forthcoming) for a non-steady-state decomposition that separates inactivity flows from those between unemployment and employment.

<sup>8</sup> This observation has been noted since Pissarides (1986), who was among the first to emphasise the importance of declining outflow rates in driving the unemployment problem that arose in 1980s Britain.

<sup>9</sup> There are a number of potential reasons for this discrepancy. First, flows out of the labour force are included in the claimant data, but not in the LFS U to E flows. Second, claimant data cover a subsample of the unemployed. Those not claiming JSA appear to have found it more difficult to obtain jobs compared to claimants. However, available data indicate that these two explanations cannot account fully for the discrepancy between claimant and LFS flow estimates. It remains an open question which of these sources most reliably captures the contribution of unemployment outflows to cyclical unemployment variation.

finding rate took over the largest role in the latter stages of the recession (see Figure 5). The declining rate of job finding was offset by fewer job losses, with the result that LFS unemployment stabilised (see Figure 1).

## Outlook for the future in the U.K.

The evidence we have presented so far suggests that the U.K. economy has experienced a relatively mild unemployment response over the course of the recent recession. A natural question is whether the same moderation will be observed as the British economy moves toward recovery. As noted above, there are historical reasons to be concerned: Unemployment in the U.K. remained persistently high following all prior recessions. Will the same be the case this time around?

The answer of course depends in large part on how shocks to the U.K. economy unfold in the future, which are notoriously difficult to predict. But there are also clues that lie in the data that are already available. In what follows, we highlight a few of these clues and their role in the prognosis for the U.K. labour market.

We show how the steady-state unemployment rate implied by labour market flows can indicate whether the labour market is in equilibrium, or is still adjusting to the shock of recession. We highlight how the relationship between vacancies and unemployment can suggest whether the labour market is efficiently matching workers to jobs. And, finally, we investigate unemployment persistence.

### *Actual vs. flow steady-state unemployment*

A useful by-product of an analysis of unemployment flows is that changes in these flows provide advance warning of the rate at which unemployment is likely to increase in the future. To see why, a simple equation is instructive. Denoting unemployment by  $U$  and the labour force by  $L$ , we can write:

$$\text{Change in } U = \text{Inflow rate} \times (L - U) - \text{Outflow rate} \times U.$$

If the inflow rate into unemployment and the outflow rate from unemployment were held fixed over time, the unemployment rate would converge to its *flow steady-state* value:

$$u^* = \frac{\text{Inflow rate}}{\text{Inflow rate} + \text{Outflow rate}}.$$

In reality, the unemployment rate is continually evolving toward a moving target—its flow steady-state value—which shifts over time as unemployment inflow and outflow rates change.

Thus, changes in unemployment flows provide prognostic information about the future path of the unemployment rate: If flow steady-state unemployment lies above actual unemployment, then unemployment will rise, and vice versa.

What does this exercise imply for current recession in the U.K.? Figure 6 plots the ONS time series for the unemployment rate against estimates of the flow steady-state unemployment rate based on LFS microdata back to 1975. Consistent with the reckoning above, changes in the flow steady-state unemployment rate are a leading indicator of changes in the actual unemployment rate.<sup>10</sup> The current recession is no exception in this regard: Steady-state unemployment rose sharply at the start of the downturn to reach a peak of 9 percent in early 2009; actual unemployment followed, with a lag of around three quarters. More recently, steady-state unemployment has settled down to hover around 8 percent, only a little above the unemployment rate witnessed in the most recent data.

It is important to note that this analysis does not build in any information on how future changes in British unemployment will be shaped by the strength of the recovery in aggregate demand in the economy. But what it does suggest is that the British labour market has to a large extent already adjusted to the shocks faced by the U.K. economy up to the first quarter of 2010. In the absence of further shocks, either good or bad, unemployment in the U.K. would be expected to remain around 8 percent over the short run.

### *The Beveridge curve*

A crucial determinant of the evolution of the recovery in the U.K. labour market is a rebound in job creation. One can think of a reduction in unemployment being predicated on two conditions. First, are job openings being created? And, second, how effectively will such job openings be filled?

To get a sense of the state of job creation in the U.K. economy, we examine the behaviour of vacancies over the course of the recession. For this purpose, we explore monthly data from the ONS Vacancy Survey for the U.K. from June 2001 to May 2010, and contrast it with BLS data from the Job Openings and Labour Turnover Survey (JOLTS) from December 2000 to May 2010 for the U.S.<sup>11</sup>

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<sup>10</sup> This ‘leading indicator’ characteristic of steady state unemployment was also noted by Smith (forthcoming), using British Household Panel Survey microdata. Smith (forthcoming) and Elsby, Hobijn and Sahin (2009) also show that the speed of convergence of actual unemployment to the flow steady state is faster, the higher are inflow and outflow rates—the more fluid are labour market dynamics.

<sup>11</sup> The ONS Vacancy Survey and JOLTS define vacancies in similar ways. In both cases, the data represent the stock of vacancies (rather than the flow of new vacancies). ONS Vacancy Survey respondents are asked to enter (via their telephone keypad) their current number of vacancies, defined as positions that are newly created, unoccupied or available in the near future, where the employer is actively trying to fill the position and the position is available to people outside the organisation. In JOLTS, job openings are defined as all positions that are open (not filled), where the position could be filled within 30 days (subject to successful search), and where the firm is actively recruiting from outside the establishment.

Figure 7 plots the relationship between vacancies as a fraction of the labour force and the unemployment rate—the Beveridge curve—in the U.K. and U.S. In both economies, we see a clear negative relation emerge over the course of the current recession with job openings falling as the unemployment rate rises. Interestingly, the slope of the Beveridge curve relation has been quite similar across the two economies over the course of the current recession: A one percentage point decline in the vacancy rate has been associated with something like a four percentage point rise in the unemployment rate in both the U.K. and the U.S.

Figure 7 also highlights important differences in the evolution of the Beveridge curve in the U.K. and U.S. during the Great Recession. The moderate rise in unemployment in the U.K. has been accompanied by an equally moderate decline in job openings, again suggesting that the U.K. labour market has been relatively insulated from the vagaries of the recession when compared to the U.S.

What insights does the Beveridge curve provide for the prospects of recovery in the wake of the recession? Recent U.S. experience, illustrated by the most south-easterly corner of Figure 7B, has witnessed a recovery in job openings that has not been met by a reduction in unemployment commensurate with the U.S. Beveridge curve. This observation has fuelled concerns of a reduction in the efficiency with which the U.S. economy matches unemployed workers with suitable vacancies.<sup>12</sup> Such a breakdown in match efficiency would imply that the recovery of the U.S. labour market could be retarded by persistently high unemployment rates.

The recent picture for the U.K. in Figure 7A appears at first sight to be more comforting. The evidence for a breakdown in match efficiency similar to that seen in the U.S. seems much weaker. But closer inspection reveals that a more accurate conclusion is that it is simply too soon to tell: Neither vacancies nor unemployment have yet shown any resolute signs of recovery in the most recent data for the U.K. The evolution of the Beveridge curve, and in particular the potential emergence of similar trends to those seen in the U.S., will therefore be something to monitor going forward in the U.K.

A further point to bear in mind when considering the likely paths of U.K. and U.S. unemployment is the historically lower rate of vacancy creation in the U.K. Figure 7 shows that in recent non-recession years, the number of vacancies was around one-third lower in the U.K. than in the U.S., per person active in the labour market. This tallies with the slower U.K. outflow rate from unemployment highlighted in Figure 3, and—if repeated in coming years—would imply that high unemployment will persist for longer in the U.K.

#### *Long-term unemployment and duration dependence*

We noted above that a key feature of Figure 1 is the relative persistence of the unemployment rate in the U.K. compared to the U.S. in the aftermath of recessions in the past. This observation

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<sup>12</sup> See Elsby, Hobijn and Şahin (2010).

prompted a vast literature on the causes and consequences of persistent unemployment in Europe.<sup>13</sup> That literature pointed to the rise of long-term unemployment, and the concomitant reduction in the search effectiveness of the unemployed, as an important driving force behind the European unemployment problem that developed in the 1980s.

To reiterate the predominance of long-term unemployment in the U.K. labour market of the past, Figure 8 plots the fraction of the labour force that has been unemployed for more than six months in the U.K. and the U.S. from the mid-1970s onward.<sup>14</sup> Data for the U.K. are again derived from LFS microdata; data for the U.S. are taken from published CPS time series.

At the peaks seen 3 to 5 years after the recessions of the early 1980s and 1990s, long-term unemployment exceeded respectively 7 and 6 percent of the labour force in the U.K. The analogous figures for the U.S. over the same period were much smaller: 2.5 and 1.6 percent.

In comparison, the subsequent trends for both countries are remarkable in Figure 8. Long-term unemployment in the U.K. plummeted in the late 1990s to reach levels below 2 percent of the labour force. Long-term unemployment in Britain at the height of the current recession is only a little above that seen in the boom of the late 1980s, mirroring the modest decline in unemployment outflow rates seen in Figure 3.<sup>15</sup> In contrast, long-term unemployment in the U.S. has risen so much that it is now on a par with the corresponding U.K. figures, reflecting the convergence of unemployment outflow rates seen in Figures 3 and 4.

The concern that arises in the light of the rise in long-term unemployment in Figure 8 is that such changes in the duration composition of the unemployment pool can influence the pace of recovery in unemployment. As noted above, previous literature has suggested that the long-term unemployed are less likely to search effectively for jobs.

Figure 9 plots rates of job finding—the U to E transition rates—for those who are unemployed for different durations using LFS microdata back to 1992. Consistent with the notion that the long-term unemployed are less effective at finding jobs, those unemployed for longer durations face markedly lower job finding rates—so called negative duration dependence. Job seekers with less than one month's duration find jobs at an average rate of over 15 percent per month, compared to less than 5 percent for those with greater than twelve month's duration.<sup>16</sup>

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<sup>13</sup> The classic reference for this literature remains Layard, Nickell and Jackman (1991).

<sup>14</sup> Past literature on European unemployment typically defined long-term unemployment as spells lasting for more than one year. We focus on durations in excess of six months in Figure 8 because historically a very small fraction of the unemployed in the U.S. has been unemployed for more than a year.

<sup>15</sup> Gregg and Wadsworth (2010) also note the relatively low level of U.K. long-term unemployment at this point in the cycle.

<sup>16</sup> The negative correlation between unemployment duration and the job-finding rate can arise either through unemployment scarring (true duration dependence) or worker heterogeneity ('self-selection' into long-term unemployment). It is unemployment scarring that is of particular concern in the context of recession and recovery.

The interaction of this negative duration dependence with increases in long-term unemployment can lead to a sluggish recovery in job-finding rates in the future. Intuitively, the unemployment pool increasingly becomes comprised of job seekers who are particularly unlikely to find jobs, and it takes time for this residue to filter out of the pool.

Figure 9 reveals that there is reason to believe that such changes in duration composition have played an important role in shaping the job finding rate in the U.K. prior to the current recession. In particular, the long reduction in British unemployment from the 1990s onward appears to have been aided by a continual *improvement* in the duration composition of the unemployment pool. To see this, Figure 9 superimposes the aggregate job finding rate since 1992. Comparison of the aggregate U to E transition rate with the counterparts for each duration group reveals that the aggregate job finding rate rose more steeply than the constituent rates by duration. Thus, during the 1990s, rising job finding rates faced by each duration group fuelled an improvement in the duration composition of the unemployed, which in turn improved aggregate job finding outcomes.

To what extent might these forces blight a recovery in job finding going forward? Our comparison above of actual and flow steady-state unemployment rates suggested that unemployment had mostly adjusted to the shocks faced in the U.K. until now. However, that analysis did not take account of the fact that the duration composition of the unemployment pool may continue to change for the worse in the future.

Figure 9 suggests that job finding rates for each duration group appear to have returned to levels close to those that prevailed in the early 1990s recession in the U.K. This observation has both positive and negative ramifications for the future course of the British labour market. The good news is that long-term unemployment, at 4 percent of the labour force, is currently not even close to the levels seen at this stage during the 1990s recession (see Figure 8).

The bad news is that job finding rates for each duration group regulate how fast workers of differing durations exit the unemployment pool, and thereby shape the duration composition of the unemployed in the future. It follows that, given rates of job finding are now similar to their levels in the early 1990s, the long-term unemployment share may return to levels seen in the aftermath of the 1990s recession. The concern, then, is that the U.K. labour market once again will converge to an equilibrium of high and persistent unemployment.

The rate of increase in long-term unemployment has so far been similar to previous U.K. recessions. However, the recent rise has occurred from the basis of a much lower level than in earlier downturns, so even if the share of long-term unemployment does increase to match past recessions, levels of long-term and overall unemployment should remain below previous peaks. If the path of the 1990s recession is followed, long-term unemployment is likely to peak by the end of 2010 at below 5 per cent of the labour force (compared to over 7.5 per cent and around 6 per cent in the 1980s and 1990s recessions respectively). But, if the pattern is more like the

1980s, long-term unemployment would continue to rise until the end of 2011, when it could exceed 6 per cent of the labour force.

This brings into focus the importance of a swift recovery in aggregate demand, and thereby in vacancies and job finding rates of—in particular—the newly unemployed, in driving future reductions in British unemployment. A postponement of recovery in economic activity will render more likely an accumulation of long-term unemployed job seekers who face especially low job finding prospects, slowing declines in joblessness.

## Conclusion

To date, the U.K. labour market has experienced a remarkably benign rise in joblessness during the current recession. This mild response has occurred despite an acute contraction in GDP, and is dwarfed by the rise in unemployment seen in past recessions in the U.K. and by the recent surge in unemployment in the U.S.

Further analysis of British unemployment flows reveals that unusually large upswings in rates of job loss have been offset by more modest reductions in rates of job finding among the unemployed. More than in any other recession in the last forty years, the current rise in unemployment has been dominated by increased rates of job loss.

The rapid and large rise in the rate of job loss suggests that labour hoarding is unlikely to have contributed greatly to the muted rise in U.K. unemployment. Since the last recession, various active labour market policies have been put in place to aid job finding, and their ability to respond to a labour market downturn is being tested for the first time.<sup>17</sup> Conclusions must remain speculative, but evidence presented here on the muted fall in the U.K. outflow rate from unemployment in the Great Recession, compared both to previous U.K. recessions and to U.S. experience, suggests that these reforms might have played some role on the supply side. In the U.S., as in the U.K., the rise in the unemployment inflow rate has been larger than in previous recessions, but from a historically low level, so the job loss rate has not exceeded the level reached in previous downturns. The major obvious difference between the U.K. and the U.S. is in the behaviour of the job finding rate, where the unprecedented fall in the U.S. dwarfs that in the U.K. Labour demand appears to have held up better in the U.K. than in the U.S.: there was a smaller fall in vacancies. It is possible that the relatively rapid response of the U.K. government in providing liquidity to the banking system through quantitative easing and bank bail-outs might have played a role in mitigating the impact of the financial crisis on demand.

Looking forward to the likely course of recovery in the U.K. labour market, signs are more mixed. On the plus side, there is no clear sign as yet of a decline in match efficiency of the

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<sup>17</sup> ALMPs introduced include the introduction of Jobseeker's Allowance in 1996 with associated carrots and sticks to encourage job finding, merging of Employment and Benefits Agencies into Jobcentre Plus from 2002 and the various 'New Deal' measures, again aimed at improving job finding rates.

magnitude that has accompanied the recession in the U.S., where a recovery in vacancies has not been met by a reduction in unemployment. In addition, holding constant the duration composition of the unemployment pool, the unemployment rate in the U.K. appears to have adjusted fully to the shocks that initiated the rise in unemployment.

What is more concerning is the future course of the duration composition of the unemployed. Up to the first quarter of 2010, the rise in long-term unemployment in the U.K. has not been as severe as in the past. However, analysis of job finding rates for different unemployment durations reveal that they have returned to levels seen in the early 1990s recession in the U.K., suggesting that the ingredients for future rises in long-term unemployment already are apparent. This highlights the importance of a prompt recovery in economic activity in averting persistent unemployment problems in the future of the U.K. labour market. The decline in the rate of job loss also needs to be maintained, which might be challenging in the face of likely public sector job losses resulting from budgetary cutbacks, projected by the Office of Budget Responsibility (OBR) to be in the order of 500,000 over the next 5 years.<sup>18</sup>

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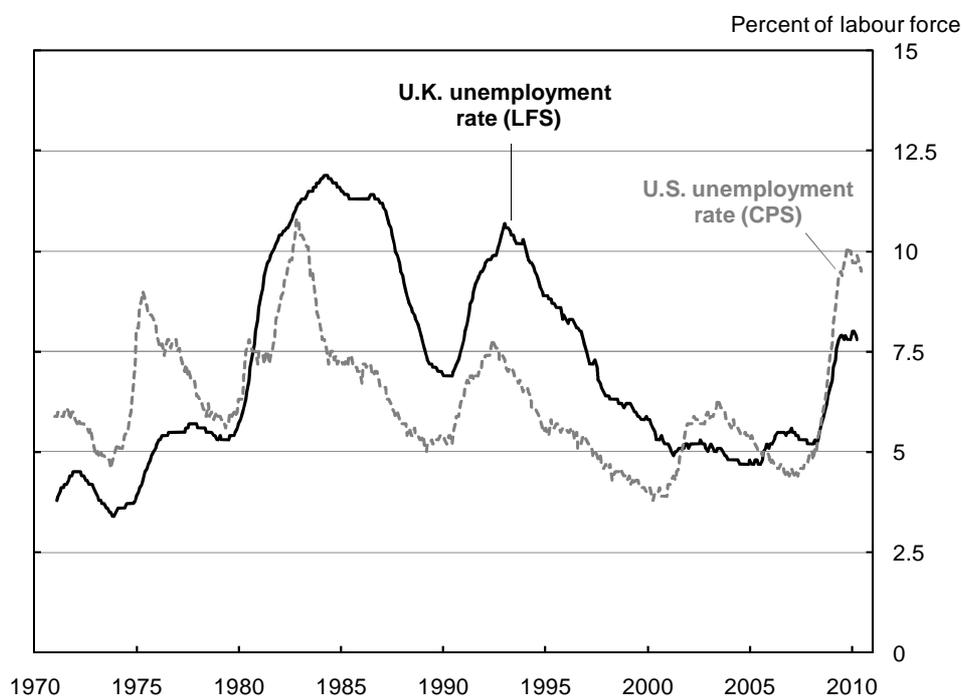
<sup>18</sup> See [http://budgetresponsibility.independent.gov.uk/d/employment\\_forecast\\_300610.pdf](http://budgetresponsibility.independent.gov.uk/d/employment_forecast_300610.pdf).

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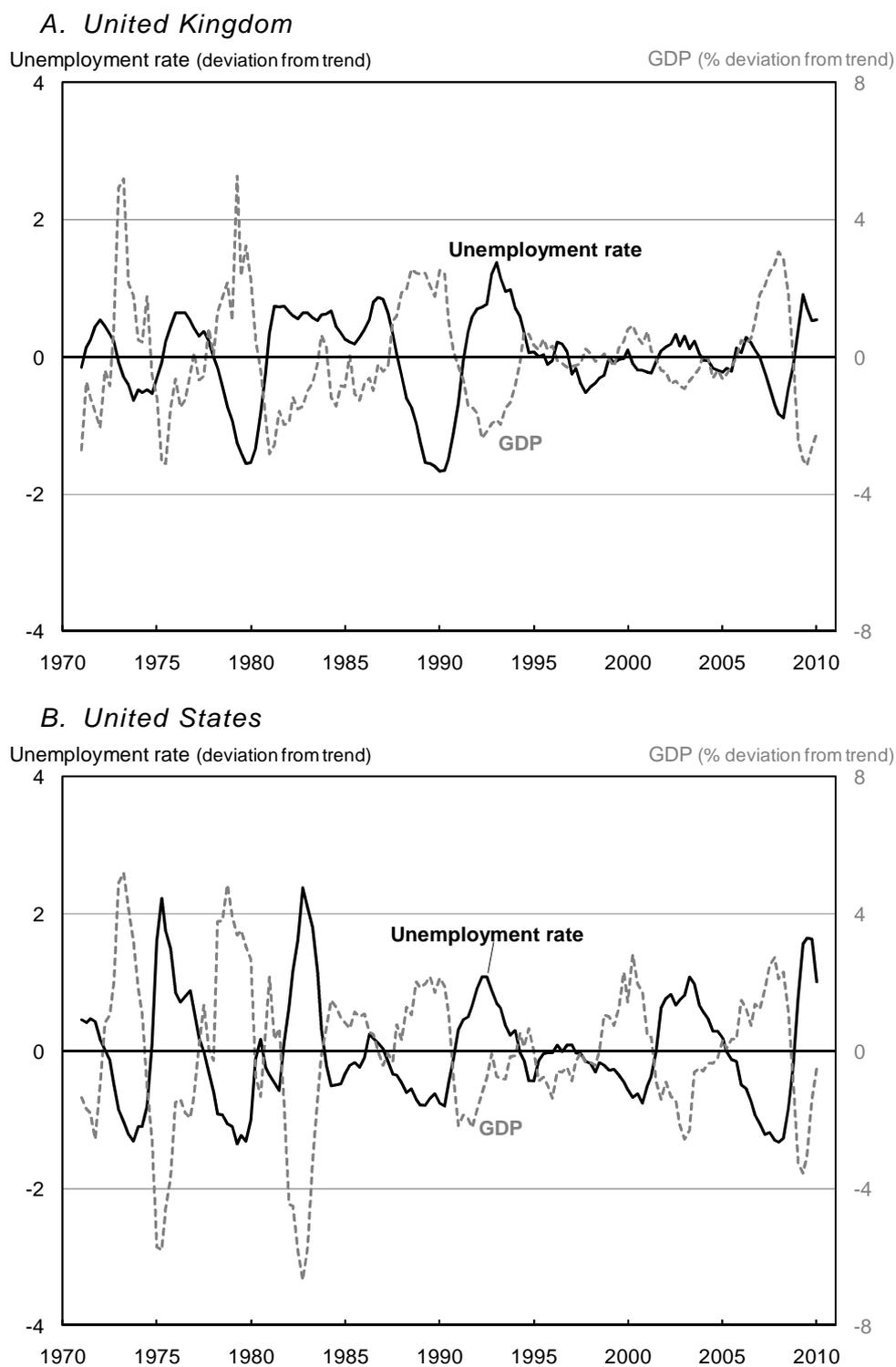
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Figure 1. Unemployment in the U.K. and U.S. 1971 to 2010



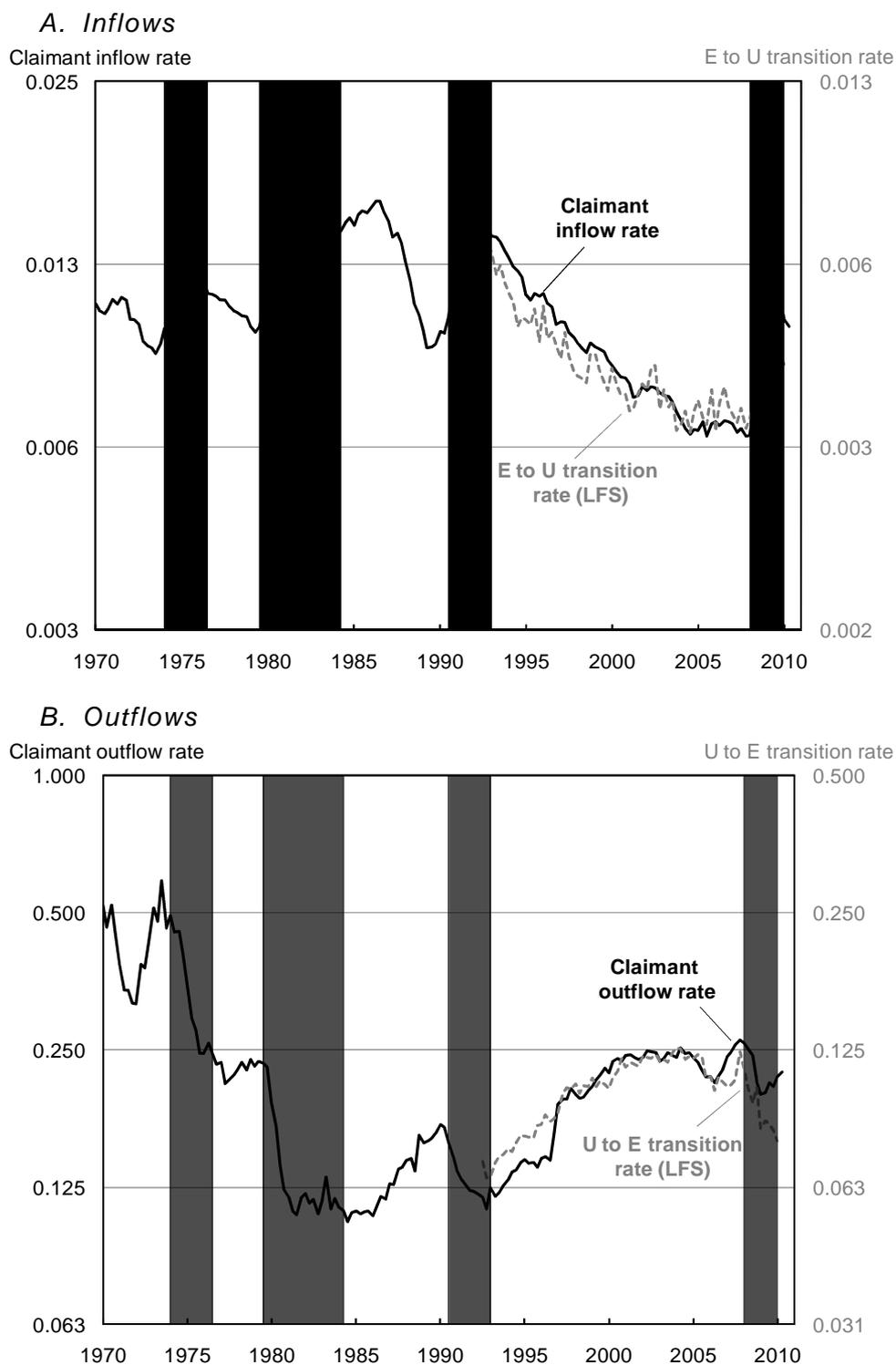
Notes: Seasonally adjusted, monthly data from ONS and BLS. Both use the ILO definition of unemployment.

Figure 2. Okun's Law in the U.K. and U.S. 1971 to 2010



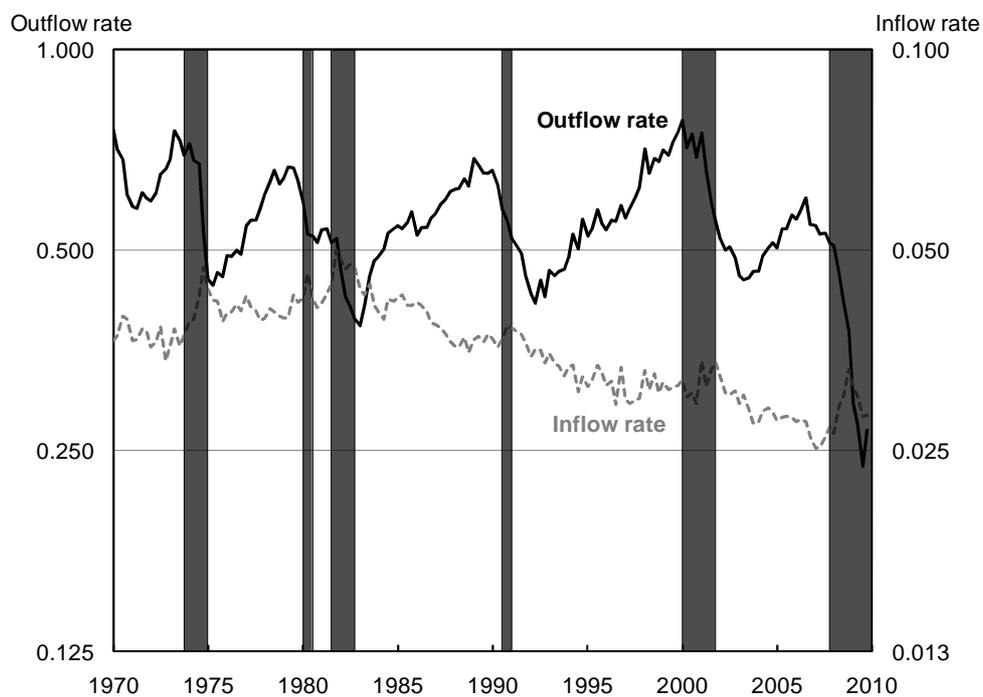
Notes: Authors' calculations using seasonally-adjusted quarterly data from the ONS and the BLS. Trends are computed using a Hodrick-Prescott filter with smoothing parameter 1600.

Figure 3. Unemployment flows in the U.K. 1970 to 2010



Notes: Logarithmic scales. Authors' calculations using Claimant Count data and LFS microdata from 1992. Claimant flows prior to 1983 are taken from Petrongolo and Pissarides (2008).

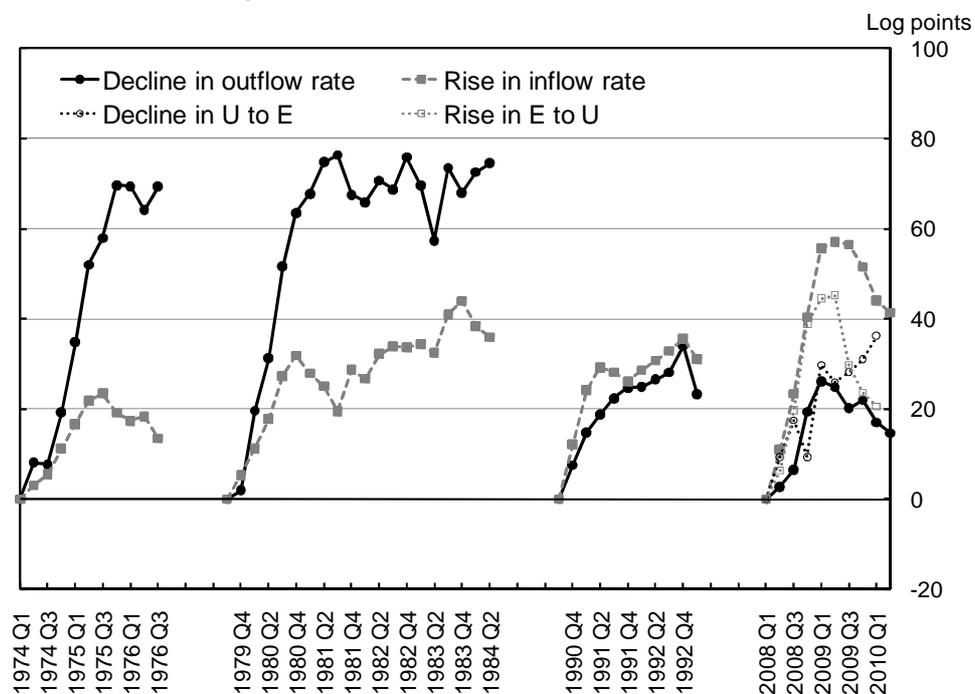
Figure 4. Unemployment flows in the U.S. 1970 to 2010



Notes: Logarithmic scale. Authors' calculations using CPS data on unemployment by duration for the U.S. based on the method of Shimer (2007).

Figure 5. Decomposition of increase in unemployment by recession, U.K. and U.S.

## A. United Kingdom



## B. United States

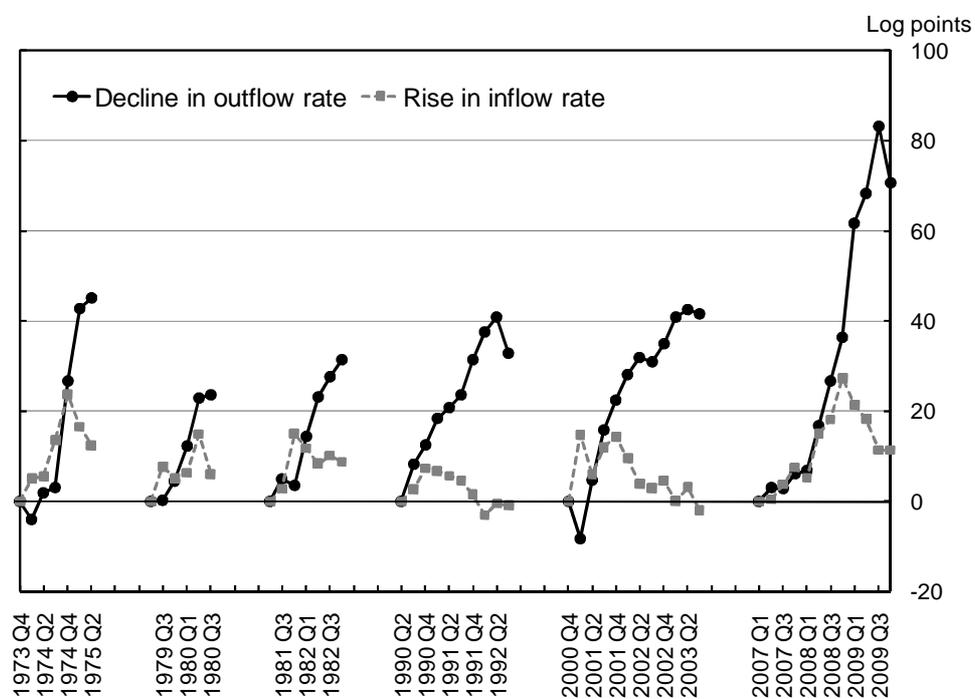
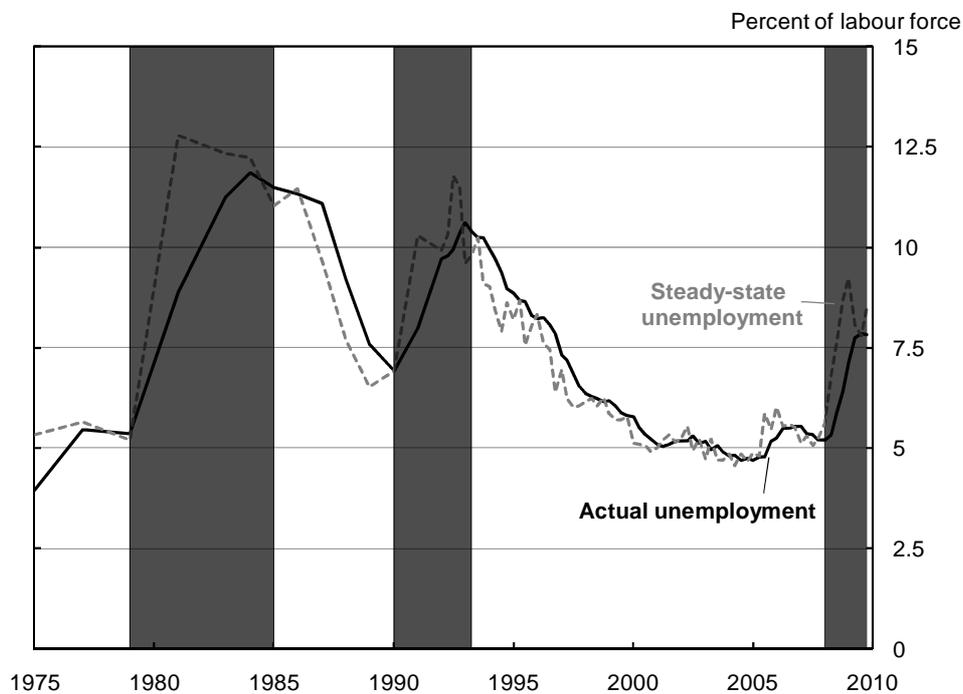
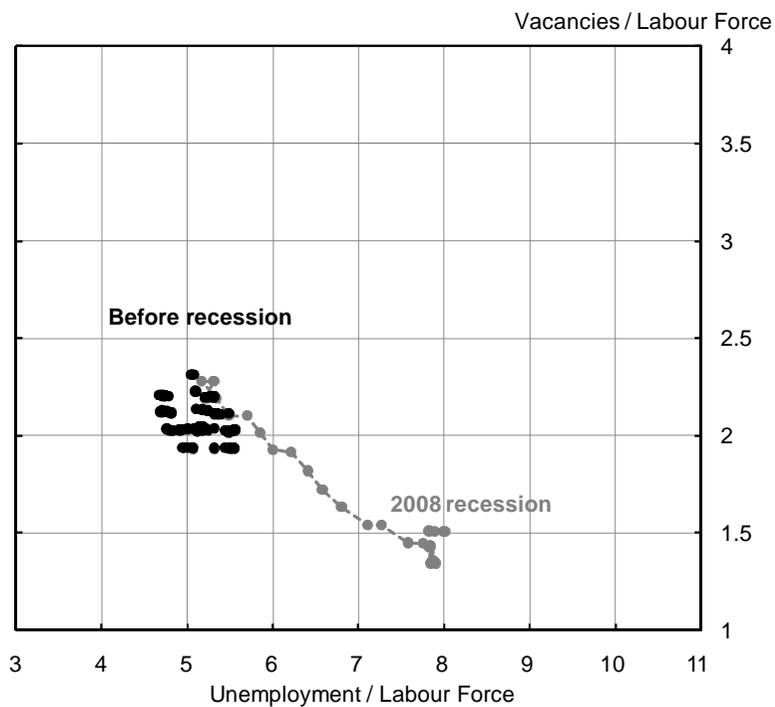
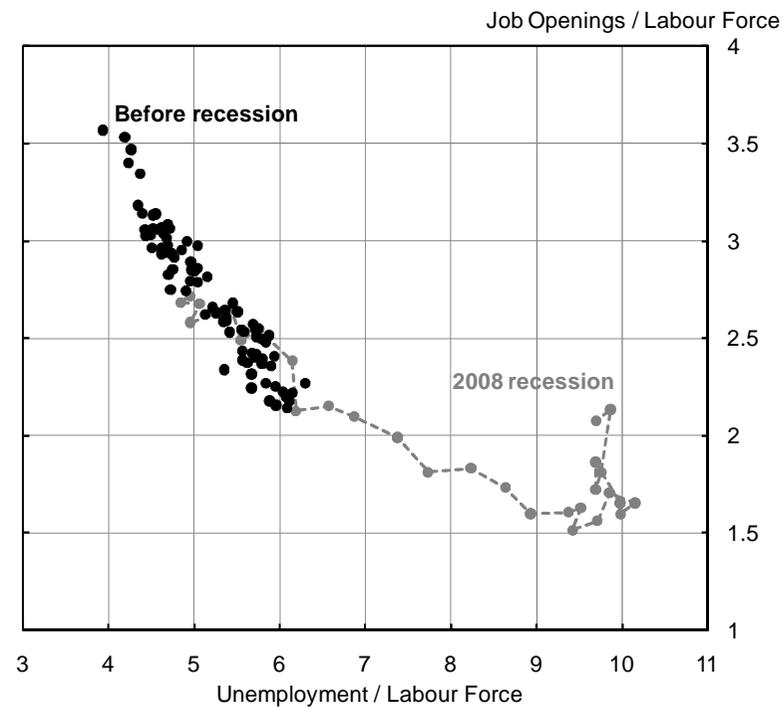


Figure 6. Actual vs. flow steady-state unemployment rates, 1975 to 2010



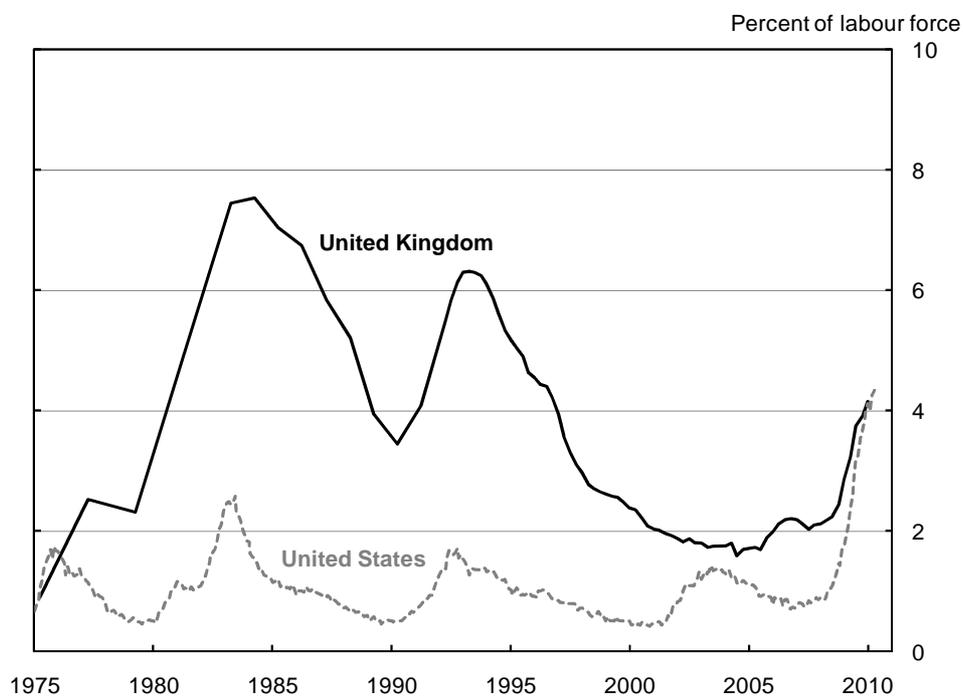
Notes: Authors' calculations using data on unemployment by duration based on LFS microdata (available every other year from 1975 to 1983, every year up to 1992, and quarterly thereafter). Flow steady-state unemployment is the unemployment rate that would be converged to if inflow and outflow rates remain constant at their contemporaneous values.

Figure 7. The Beveridge curve in the U.K. and U.S. 2000 to 2010

A. *United Kingdom*B. *United States*

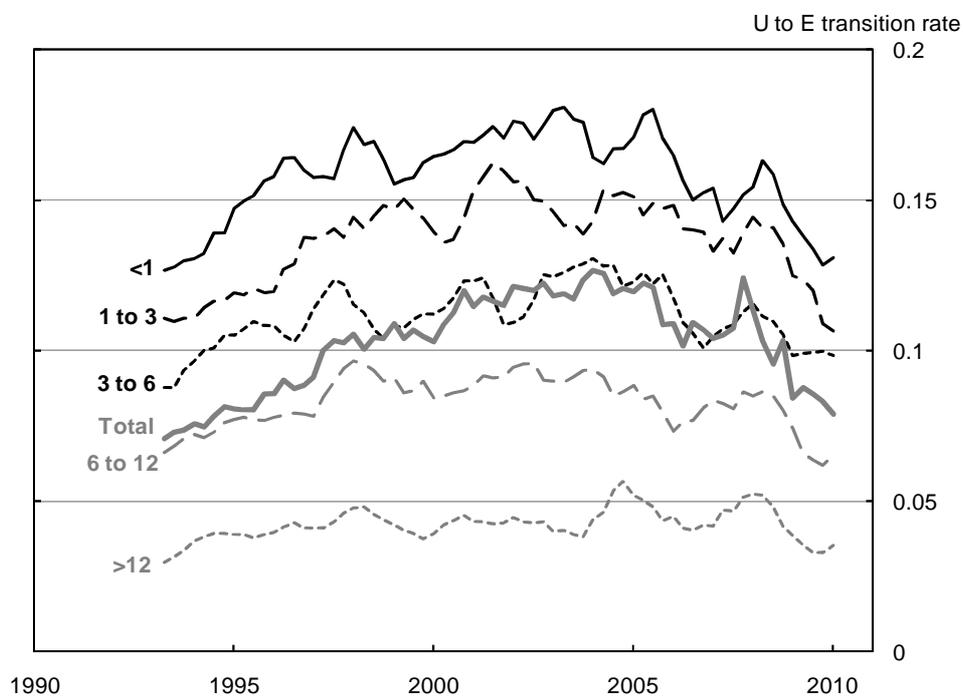
Notes: Monthly, seasonally-adjusted data from the ONS Vacancy Survey for the U.K. (June 2001 to May 2010) and the BLS Job Openings and Labor Turnover Survey for the U.S. (December 2000 to May 2010).

Figure 8. Long-term unemployment in the U.K. and U.S. 1975 to 2010



Notes: Number unemployed for more than six months as a percentage of the labour force. Data for the U.K. are taken from the LFS (available every other year from 1975 to 1983, every year from 1983 to 1992, and quarterly thereafter). Data for the U.S. are from the monthly Current Population Survey.

Figure 9. Unemployment-to-employment transition rate by duration, 1992 to 2010



Notes: Authors' calculations using quarterly longitudinal Labour Force Survey microdata from 1992Q3 to 2010 Q1. Four-quarter moving averages of quarterly data.