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Assessing the Factors Underlying Long-Term Unemployment during and after the Great Recession

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The staggeringly large number of people who have been looking for work for more than six months is a defining feature of the Great Recession and its aftermath. At its worst in 2009, about 4 percent of the labor force was long-term unemployed, representing well over 40 percent of all those looking for work (Congressional Budget Office [CBO] 2012; Mitchell 2013). That stands in stark contrast to both the years immediately preceding the Great Recession, when less than 1 percent of the labor force and 16 percent of the unemployed were long-term unemployed, and the depth of the recession in the early 1980s, when about 2.5 percent of the labor force and more than 25 percent of the unemployed were long-term unemployed.

That long-term unemployment would rise during a recession is not at all surprising, but the extent of the increase and its persistently high level since the start of the recovery are both troubling and unprecedented. During a recession, when demand for goods and services weakens, employers trim their workforces and slow their hiring. As a result, unemployment rises, and the time it takes to find a new job increases, as does the number of people who spend more than six months looking for a job. Based on historical experience, when the unemployment rate reaches 10 percent, as it did in October 2009, the share of the unemployed classified as long-term unemployed would be expected to be roughly between 25 and 30 percent, yet it exceeded 40 percent. Further, the long-term share of the unemployed has remained high even as the economy recovered. Although unemployment is a "lagging indicator" of the economy's health, and long-term unemployment tends to decline only after overall unemployment falls, the US economy is now well into its fourth year of recovery, the unemployment rate is below 8 percent, yet the long-term share of unemployment is still near 40 percent.

The persistently high level of long-term unemployment suggests that there is something different about this recession and recovery. Some argue that economic growth has been too modest to make much of a dent in the unemployment rate and, hence, long-term unemployment. Others argue that there have been major changes in the structure of the economy and in the nature and location of jobs, and that the long-term unemployed will not be able to find work even if the economy begins to grow at a robust pace.

Cyclical factors—the profound economic contraction coupled with the weak recovery—and structural factors have both contributed to the high level of unemployment, but cyclical factors likely account for most of the problem. That conclusion largely stems from research that examines various structural arguments for today's elevated long-term unemployment and finds that potential explanations for the problem, such as mismatches between workers' skills and employers' needs, the crash of the housing market preventing workers from moving for job prospects, the erosion of workers' skills as they remain jobless, and the work disincentive effects of the unemployment insurance program all fail to account for much of the elevated levels of long-term unemployment. This paper first examines the role that macroeconomic, cyclical factors play in keeping long-term unemployment high. Then, the paper assesses each structural argument in turn and discusses the evidence for and against it.

The Macroeconomy and Unemployment

There is a well-established relationship between economic growth and unemployment, and the level of economic growth following the Great Recession has been too low to significantly reduce unemployment. The economy, as measured by gross domestic product (GDP), naturally grows as the labor force and productivity increase. By recent standards, population and productivity growth would tend to increase GDP by approximately 2 percent per year. To bring down unemployment, GDP has to grow faster than that. Roughly speaking, GDP has to grow by 1 percent above trend to bring the unemployment rate down by 0.5 percentage points (Okun's Law; see Mankiw 2012). Because the recovery has been atypically weak, with GDP growth not much more than 2 percent per year, it is not surprising that unemployment and long-term unemployment have remained high.

The Case for Structural Changes in the U.S. Economy Driving Up Unemployment

The most compelling evidence that the Great Recession contributed to fundamental shifts in the structure of the US economy leading to elevated levels of long-term unemployment comes from a comparison of the unemployment rate with job openings, or the vacancy rate. Economist William Henry Beveridge noted that when the economy is expanding, the unemployment rate is low while the job vacancy rate is high. Conversely, when the economy is contracting, unemployment is high and vacancies are low. The "Beveridge Curve" shows that that relationship was rather stable for the

decade before the recession (exhibit 1). In the years since the Great Recession, the vacancy rate is notably higher than would be expected given the level of unemployment—graphically, the Beveridge Curve has shifted up and to the right. That means that employers are posting jobs but are having a hard time filling them, especially when compared with the large number of available, unemployed workers.

There is considerable debate over the size and significance of the changing relationship between job openings and unemployment, as well as over its causes. To the extent that the shift is large and represents a substantial mismatch between the requirements and locations of available jobs and the skills and locations of available workers, long-term unemployment will remain a problem even as the economy recovers.

Assessing the Size and Nature of Structural Changes in the Economy

That vacancies are higher than expected given the level of unemployment—the shift in the Beveridge Curve—is neither unusual nor alarming in the views of some analysts. During the early stages of a recovery, employers begin to post job openings quickly but fill them gradually. As such, the ratio of the vacancy rate to the unemployment rate will show a short-term increase and will gradually fall back to traditional levels over time (Daly et al. 2012). (An analogous phenomenon occurs in the unemployment rate itself at the early stages of a recovery: As discouraged workers return to the labor force to look for work because they perceive that job prospects are improving, the unemployment rate rises a bit.) In addition, the vacancy rate itself may be deceptively high because of a decline in recruiting intensity (Davis, Faberman, and Haltiwanger 2012). It is essentially costless for employers to post job openings but not seek to actively fill those positions.

The comparison of vacancies to unemployment provides a broad view of the labor market, but understanding how and why changes in the economy have contributed to high levels of long-term unemployment requires more detailed and focused analysis. Specifically:

- Do unemployed workers lack the skills needed for the jobs available today?
- Are unemployed workers unable to move to available jobs because they cannot afford to sell their houses?
- Have changes in public policy reduced the incentive to look for work?

- Do changes in the characteristics of the unemployed and the nature of job losses contribute to persistently high unemployment?

Research on these questions provides weak to mixed evidence of the contribution of structural changes in the economy to the rise in long-term unemployment.

Mismatch in Skills

In a rapidly changing technologically driven global economy, it would not be surprising if the workers who lost their jobs lacked the skills required by employers in growing and expanding industries. Media reports of employers unable to find skilled workers and the concentration of job losses in specific industries and occupations further fuel that argument. For example, between December 2007 and December 2009, the employment in the construction and manufacturing industries declined by 1.8 million and 2.3 million workers, respectively (Bureau of Labor Statistics web site). Together, those two industries accounted for almost half the net private-sector jobs lost over that two-year period. The conventional argument suggests that those industries are not going to recover and those workers do not currently have the skills to work in growing industries.

That job losses were disproportionately concentrated in manufacturing and construction does not in and of itself imply that a structural shift in the economy has occurred. The two industries added 560,000 net new jobs between December 2009 and January 2013. Further, if unemployed workers from declining industries did not have the skills to work in other industries, then the rate at which those workers find new jobs should be lower than the rate for unemployed workers from other industries. That has not been the case (Elsby, Hobijn, and Sahin 2010).

Another indicator of a potential skills mismatch, larger-than-expected differences in the ratio of vacancies to unemployment across industries, also provides little evidence of a growing mismatch (Lazear and Spletzer 2012). In good times and bad, there is a positive relationship between vacancies and unemployment across industries: Some industries have high turnover with many vacancies and high unemployment, whereas others are more stable with low levels of both. Thus, at any point in time, arraying industries by vacancies and unemployment defines an upward-sloping line that indicates labor market tightness (see exhibit 2). Some industries, such as manufacturing and construction, tend to have vacancy-to-unemployment ratios that are lower than expected in good

times and in bad (i.e., they fall below the labor market tightness line), whereas other industries, such as education and health services and financial activities, tend to have higher than expected vacancy-to-unemployment ratios. The overall level of mismatch across industries at any point in time can be expressed as an index of how far off the vacancy-to-unemployment ratios for the industries are from their expected levels (i.e., how far off they are from the labor market tightness line in exhibit 2). An index value of 0 implies no mismatch across industries, whereas an index value of 1 implies perfect mismatch—every unemployed worker would need to change industries to bring the vacancy-to-unemployment ratio into line.

The level of industrial mismatch did rise during the recession, from 0.144 in January 2007 to 0.320 in April 2009, but by late 2011, the index had fallen back to its pre-recession levels (Lazear and Spletzer 2012). In other words, industrial mismatch is not driving the high levels of unemployment and long-term unemployment observed today. As Lazear and Spletzer (2012, 21) write, "Turning unemployed manufacturing and construction workers into nurses and teachers would not provide those workers with immediate jobs; there is already a surplus of unemployed even in the low unemployment industries."

Similarly, there is little evidence of a growing mismatch based on the occupations of available jobs and the occupations of the unemployed (Lazear and Spletzer 2012). Just as is the case by industry, there are certain occupations, such as construction and production, for which the vacancy-to-unemployment ratio is lower than average, and others, such as professional and management, for which it is higher. The overall level of occupational mismatch did not increase very much during the recession, and by 2011, it had fallen back to its pre-recession levels.

Locational Mismatch

Although unemployment rates vary considerably across the country, locational mismatch and the challenges to moving posed by the housing crises cannot explain much of the persistently high levels of unemployment. Interstate migration did fall during the Great Recession, but the decline was consistent with a long trend of declining migration, as geographic-specific returns declined (Kaplan and Schulhofer-Wohl 2013). Further, it is unlikely that migration from high-unemployment to low-unemployment states could have had much of an impact on the overall unemployment rate. In December 2012, five states had unemployment rates below 5 percent (North Dakota, Nebraska, South Dakota, Iowa, and Wyoming [from low to high]) and five states had unemployment rates

above 9 percent (North Carolina, New Jersey, California, Nevada, and Rhode Island [from low to high]) (BLS web site). The low-unemployment states are among the smallest population-wise in the United States, whereas the high-unemployment states include several of the largest. Even if unemployed workers from high-unemployment states moved to low-unemployment states, there simply would not be enough jobs for them to substantially lower the unemployment rate.

Locational mismatch can also occur within states and even within large metropolitan areas if unemployed people need to move across state or across town to find work but cannot afford to move because they cannot sell their homes. Home values plummeted during the Great Recession, and the share of homeowners who found themselves underwater—that is, owing more on their homes than the price for which they could sell them—doubled between 2007 and 2009, exceeding 20 percent by some estimates (Carter 2012). The reluctance of homeowners to sell and realize losses can create "housing lock," keeping people from moving for jobs, and exacerbate long-term unemployment. On the other hand, homeowners who owe far more than their homes are worth and who have no reasonable expectation that their homes will recover their value may be better off cutting their losses by simply walking away from those homes (even with the negative repercussions for their credit scores) and renting elsewhere.

The idea that housing lock contributed significantly to long-term unemployment does not enjoy much empirical support. Although some research finds that underwater homeowners are less likely to move than other homeowners (Ferreira, Gyourko, and Tracy 2011), other analysts find no increase in locational mismatch during the recession (Dickens 2011; Sahin et al. 2011). Further, if housing lock were a primary driver of high long-term unemployment, one would expect that any declines in mobility during the recession would have been greater for homeowners than for renters. That was not the case, as renters account for a far greater share of the decline in mobility during the recession than homeowners (Farber 2012). The overall conclusion of many is that the housing market collapse had a large effect on migration rates, a more limited impact on regional reallocation of labor, and a small to negligible impact on aggregate unemployment (Nenov 2012).

Public Policy and Long-Term Unemployment

Government programs, such as unemployment insurance (UI), that provide aid to the unemployed when they are not working create an incentive for the unemployed to prolong their job searches and thus may contribute to long-term unemployment. In addition, other programs like the Supplemental

Nutrition Assistance Program (SNAP), which provide means-tested assistance to low-income households that phases out as income rises, create work disincentives. Although these programs intend to provide help to families in need and stimulate the macroreconomy by putting money in the hands of people who are likely to spend it quickly, the expansion of these programs during the recession, particularly the increased availability of UI, could have contributed to the persistently high levels of unemployment and long-term unemployment.

Research suggests that the expanded availability of UI benefits (from the standard 26 weeks to up to 99 weeks in some states) played a small role in elevating unemployment and long-term unemployment. One reason is that even at the height of the recession, only about two-thirds of the unemployed received UI. Thus, whereas UI benefits may have induced recipients to pass over certain job opportunities, the jobs they did not take would then be available to other job seekers, thereby muting any program effects on the overall unemployment rate. In addition, it is not clear that UI recipients would necessarily have returned to work more quickly in the absence of available benefits. Individuals are considered unemployed only if they are actively seeking work, and they also must be actively seeking work to qualify for UI. Had extended UI benefits not been available, long-term recipients may have given up and left the labor force. That would have driven down the unemployment rate as officially measured but done nothing to increase employment. Research suggests that the expansions of UI benefits likely raised the unemployment rate by less than 1 percentage point during the recession and can account for less than one-quarter of the increase in the duration of unemployment (Aaronson, Mazumder, and Schechter 2010; Daly, Hobijn, and Valletta 2011; Rothstein 2011).

Finally, it is important to note that UI benefits can lead to higher overall levels of employment, even if they also increase unemployment. UI benefits are particularly effective at stimulating the economy during a recession (CBO 2012). Every million dollars spent on UI could generate up to 19 full-time-equivalent jobs. As the unemployment rate is calculated as the ratio of the unemployed to the labor force, UI benefits could simultaneously increase the number of people working while also increasing the number of people remaining in the labor force and looking for work. Thus, any work disincentives created by UI must be weighed against the job-creating impact of the increased economic activity from recipients spending their benefits on goods and services.

Changes in the Characteristics of the Unemployed

Changes in the demographic characteristics of the workforce and the likelihood of job loss account for very little of the increase in unemployment and long-term unemployment during and after the Great Recession. For example, older workers tend to have longer spells of unemployment than younger workers. However, long-term unemployment is widely distributed across the population; therefore, increases in the duration of unemployment for all population subgroups rather than a major skewing in the characteristics of the unemployed have driven the rise in long-term unemployment. Comparing the recession of the 1980s to the Great Recession, differences in the characteristics of the unemployed can account for about 20 percent of the difference in long-term unemployment between the two periods (Aaronson, Mazumder, and Schechter 2010).

Another difference between those unemployed during and after the Great Recession and those unemployed during previous recessions that could account for some of the increasing duration of unemployment is their reasons for unemployment. For example, those who left their jobs for voluntary reasons and new entrants to the labor market tend to spend less time unemployed than those who experienced involuntary job losses. During the Great Recession, the share of the unemployed composed of involuntary job losers was far higher than prior recessions (CBO 2012). Further, among involuntary job losers, the share of permanent job losers compared with the share on temporary layoffs was much higher during the Great Recession than during prior recessions, and those who were permanently discharged tend to spend more time unemployed than those on temporary layoff (Lazear and Spletzer 2012). Nevertheless, the duration of unemployment increased among all groups of the unemployed, regardless of the reason for unemployment, and that across-the-board rise accounts for far more of the rise in the duration of unemployment and long-term unemployment than compositional shifts.

Skill Erosion and Stigma

Long-term unemployment can be a self-perpetuating problem if workers' skills erode while they are unemployed and if potential employers take long-term unemployment as a negative signal about would-be workers' productivity. The longer workers remain idle, the more likely they are to lose their job-specific proficiencies. Carpenters, machinists, computer programmers, and the like who have not used their skills for months may be simply less productive than their counterparts who

either have worked continuously or only recently lost their jobs. As such, it makes sense for employers to be reluctant to hire the long-term unemployed.

Even if skill erosion is not a significant problem, the long-term unemployed may be stigmatized in the eyes of would-be employers. Employers may think that if a particular worker was really productive, that worker would not be out of work for six months or more. Indeed, the chance of even receiving a job interview declines by 45 percent as a spell of unemployment lengthens from one month to eight months (Kroft, Lange, and Notowidigdo 2012). The potential for skill erosion and presence of stigma suggest that the long-term unemployed may be the last workers in the queue for new jobs, even as the economy recovers. That has always been the case, as the long-term unemployed consistently have lower job-finding rates than other unemployed workers. Importantly, the time it takes a long-term unemployed worker to find a job is no longer in the wake of the Great Recession than in the past (Valletta 2013). The difference today is that there are just more long-term unemployed.

Summary

A variety of factors has contributed to the persistently high rates of long-term unemployment the United States experienced during and after the Great Recession. Some research and analysis has focused specifically on long-term unemployment, whereas other work speaks to the issue indirectly by examining the average duration of unemployment and the overall level of unemployment. Hence, parsing out the contribution of various factors, from the weak economy to structural changes in the labor market, changes in the characteristics of the workforce, and the role of public policy, is a daunting, impractical task. Generally, studies that have tried to formally account for the rise in the level and persistence of unemployment during and after the recession conclude that the weak economy (the combined effects of a profound economic downturn and a sluggish recovery) is by far the most important factor (e.g., Lazear and Spletzer 2012; Sahin et al. 2011; Valletta 2013).

It is important to keep in mind that even though many structural factors cannot account for much of the recession-related *rise* in long-term unemployment, some of those factors have been present and growing in the economy for years. For example, the rapid pace of technological change means that the ways goods are produced and services are delivered are also changing rapidly, and employers and workers need to adapt to those changes. In addition, regardless of the underlying causes of high levels of long-term unemployment, the long-term unemployed may be slow to return

to work even as the economy recovers because their skills may have eroded over time and because employers may doubt their abilities.

Although an expanding economy is the single most important factor for reducing long-term unemployment, more active labor market policies are likely to be necessary to bring long-term unemployment all the way back down to its pre-recession levels. Broadly, such policies should help employers communicate their skill needs, help workers acquire or document those skills, and help match workers and employers.

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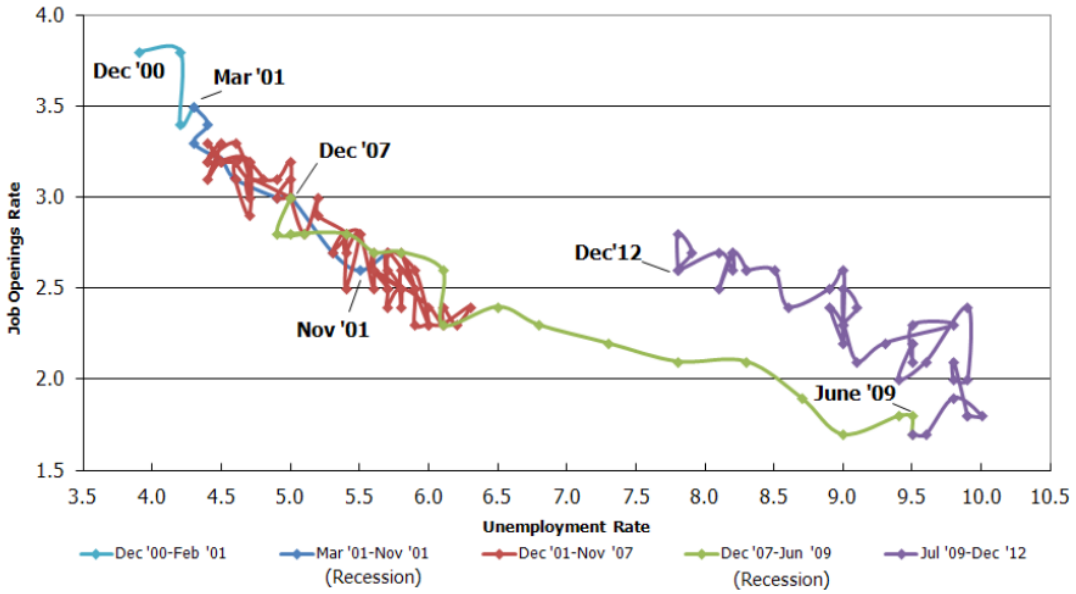
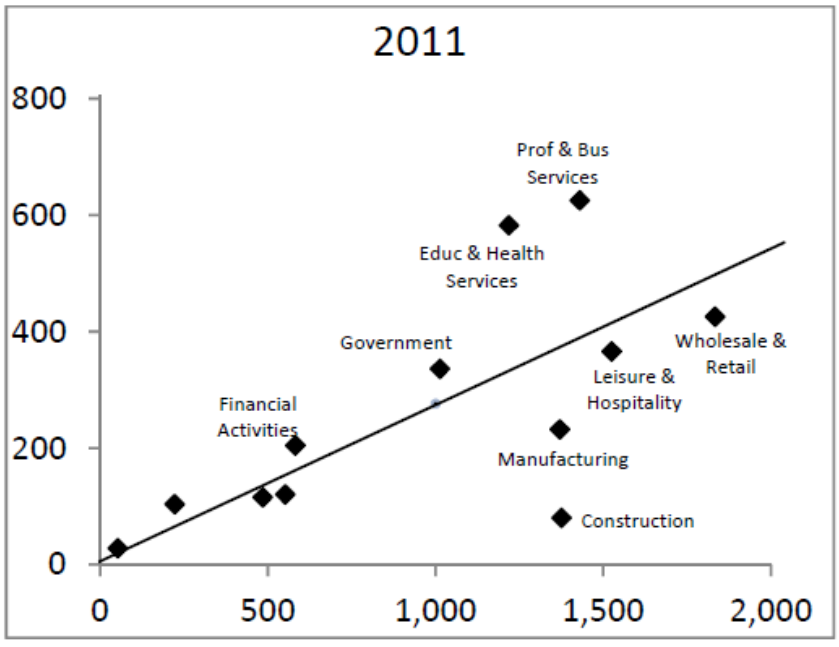
Exhibits

Exhibit 1. The Beveridge Curve (Job openings vs. unemployment rate) Seasonally Adjusted



Source: Repurposed from "Job Openings and Labor Turnover Survey" December 2012 Bureau of Labor Statistics http://www.bls.gov/web/jolts/jlt_labstatgraphs.pdf

Exhibit 2. Unemployment and Vacancies, by Industries



Source: Repurposed from Lazear, Spletzer (2012) NBER Working Paper https://www.nber.org/papers/w18386
Notes: Unemployment (in thousands) on X-axis, Vacancies (in thousands) on Y-axis