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Consequences of Long-Term Unemployment

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Consequences of Long-Term Unemployment

The unemployment rate has been over 7 percent since December 2008, and peaked at 10 percent in late 2009. Despite the gradual improvement in the labor market, long-term unemployment—the share of the unemployed who have been out of work for more than six months—remains at unprecedented levels. The fraction of unemployed workers who are long-term unemployed has hovered around 40 percent from late 2009 into 2013, although it had never previously risen above 30 percent since the Great Depression.

Being out of work for six months or more is associated with lower well-being among the long-term unemployed, their families, and their communities. Each week out of work means more lost income. The long-term unemployed also tend to earn less once they find new jobs. They tend to be in poorer health and have children with worse academic performance than similar workers who avoided unemployment. Communities with a higher share of long-term unemployed workers also tend to have higher rates of crime and violence.

Although there is considerable research documenting the association between long-term unemployment and poor socioeconomic outcomes, it is not clear what drives those associations. Those who become long-term unemployed may have issues that contribute to their unemployment status and also to their poor future outcomes. In this case, long-term unemployment can be associated with, but is not the underlying cause of, poor future outcomes, a phenomenon referred to as a “selection” effect. Another complicating factor is the extent to which the association between poor outcomes and long-term unemployment is rooted in the fact of an involuntary job loss itself and not the time spent looking for work. Last, to a certain extent, health, family, and child outcomes are influenced by the loss of income associated with long-term unemployment, and isolating the income effects from the direct effects on long-term unemployment can be difficult.

In this paper, we discuss various channels through which longer unemployment duration might influence outcomes for the unemployed. The discussion of prior research that follows shows that direct evidence for many of these channels is very underdeveloped, somewhat surprisingly. Still, there are plausible channels through which longer unemployment duration might result in worse outcomes, most notably loss of human or social capital. We also discuss evidence for how job loss itself affects various outcomes. Our review shows that most of the literature finds significant

negative effects in many areas, starting with lower reemployment wages of those directly affected by job loss, and continuing on to health, family structure, children’s well-being, and whole communities.

The measured impacts of unemployment can increase with the duration of unemployment. Cumulative loss of income increases as unemployment continues, but expected wages at reemployment also fall, leading to a permanent loss of future income. Many authors have documented long-run losses of wages following an unemployment event in addition to many other long-run impacts on measured well-being.

Challenges to Measuring Effects of Long-Term Unemployment

Long-term unemployment can plausibly affect individuals, families, and communities in direct ways. When individuals are out of work, their skills may erode through lack of use. That erosion or “depreciation of human capital” increases as time passes, meaning that the potential wages the unemployed can earn on finding a new job and even the chances of finding a new job decrease the longer they are out of work. Similarly, being out of work may reduce a worker’s “social capital”—the network of business contacts that make finding new and good jobs easier. Social capital may decrease with longer unemployment duration because social circles defined by work contact can decay when work contact ceases, or because being out of work is increasingly stigmatizing the longer a person cannot find new employment. That erosion of social capital means that the longer a worker is unemployed, the less likely he or she is to find a new job. In addition, the stress of being out of work can influence an individual’s physical and mental health, family dynamics, and the well-being of his or her children. Involuntary job loss is a stressful event, creating a variety of problems immediately, and long periods of unemployment can compound those problems.

Long-term unemployment can also influence outcomes indirectly. While a worker is unemployed, that worker’s family income falls due to the lack of earnings, and that loss of income (which becomes larger as unemployment is longer) can affect the worker and the worker’s household. The loss of income can reduce the quantity and quality of goods and services the worker’s family can purchase. Further, dealing with the loss of income can exacerbate stress. To the extent that the negative consequences of long-term unemployment have an effect through the loss of income, tax and transfer programs can help mitigate those consequences. Finally, if many workers in the same geographic area are experiencing long-term unemployment, their communities could

suffer because of an increase in demand for public services and a decrease in the tax base used to fund those services. Declines in community services, such as increased class sizes in public schools or fewer public safety workers, can also feed back on individuals and families.

Identifying the mechanisms by which long-term unemployment affects individuals, families, and communities is further complicated by the fact that even during severe recessions, job loss and long periods of unemployment are not random events. Workers with less advantageous characteristics tend to remain out of work longer and tend to experience worse outcomes regardless of when they are reemployed. To the extent that the selection effect is important, differences observed across workers with different durations of unemployment are not caused by longer duration. Selection is often discussed as a problem in the context of wages or earnings, but the pattern of selection due to workers with less advantageous characteristics left unemployed longer may also operate in other domains, such as health or other measures of well-being.

Understanding the underlying mechanisms through which time out of work relates to outcomes both during and after unemployment is essential in devising effective policies to ameliorate the consequences of job loss. Policy responses to long-term unemployment may have different effects depending on which of the possible explanations is dominant in accounting for any particular outcome.

In short, there are plausible theoretical links connecting duration of unemployment to worse outcomes. Much research on long-term consequences of job loss in previous recessions may reflect both job loss and longer unemployment in a recession. Correlations between various outcomes and job loss and long-term unemployment probably reflect at least some causal relationship. However, as we examine the literature on various consequences of job loss and long-term unemployment, we must bear in mind that many apparent consequences of job loss or longer duration may be due to differences among workers out of work for different durations, and may also be caused by the loss of income directly, not by unemployment itself.

Declining Income and Consumption

Longer unemployment has its most direct impact on family resources through lost earnings, which add up quickly with each additional week of unemployment. In the Great Recession, family incomes fell 40 percent or more for most long-term unemployed workers (Johnson and Feng 2013). In 2011,

long-term unemployed workers were almost twice as likely to be poor as those unemployed less than six months, and almost four times as likely to be poor as those never unemployed (Nichols 2012); three of every four single parents who were unemployed more than 26 weeks were poor in 2011.

Browning and Crossley (2001) find that families with an unemployed worker have consumption 16 percent lower after six months of unemployment, but 24 percent lower if the sole worker in the family became unemployed, relative to those who do not lose employment. Consumption drops less than income following unemployment in part because of borrowing or spending down savings, which is far from costless. Borie-Holtz, Van Horn, and Zukin (2010) show that the long-term unemployed borrowed money from friends, spent down savings, and missed mortgage or rent payments. About half of unemployed workers reported a poor financial situation in 2010, and about a tenth had filed for bankruptcy (Godofsky, Van Horn, and Zukin 2010).

Consumption drops can have longer-term costs in addition to lowering well-being during unemployment if family members defer needed expenditures. Among long-term unemployed or underemployed workers in late 2011, 63 percent skipped dental visits, 56 percent put off needed health care, and 40 percent reported not filling a prescription, with each proportion roughly twice that for full-time workers.¹

Declining Reemployment Wages

The negative effect of unemployment on later wages is well documented (Jacobson, LaLonde, and Sullivan 1993; Ruhm 1991). Hamermesh (1989) summarizes prior empirical work on dislocated and displaced workers² showing that reemployed workers earned about 5 to 15 percent less than similar workers who did not lose their jobs and that half of displaced workers finding jobs in some samples had been unemployed as long as nine months. Across many studies, there were not large differences

¹ Marilyn Geewax, “The Impacts of Long-Term Unemployment,” part of an NPR special series, *Still No Job: Over a Year without Enough Work*, December 12, 2011. <http://www.npr.org/2011/12/09/143438731/the-impacts-of-long-term-unemployment>.

² A dislocated worker, as defined by the Workforce Investment Act, is a person who is terminated or laid off due to plant or company closure or downsizing. Self-employed workers who become unemployed due to economic conditions and homemakers who are no longer supported by another family member are also considered dislocated workers. Displaced workers are similarly defined as persons 20 years of age and older who lost or left jobs because their plant or company closed or moved, there was insufficient work for them to do, or their position or shift was abolished. Often attention is restricted to long-tenure displaced workers, who had at least three years on the job they lost, following early Displaced Worker Supplement survey design in the Current Population Survey. Hamermesh (1989) discusses studies examining different types of job loss, but limits attention to displaced workers whose employer’s establishments (plants) closed.

in wage losses by race or ethnicity (although minority workers are displaced with greater probability) or sex. Predisplacement wage and occupation play some role, with displaced blue-collar workers tending to lose a greater fraction of lifetime earnings.

Workers displaced in the early 1980s suffered declines of 30 percent or more in wages at reemployment (Jacobson et al. 1993) and had earnings 20 percent lower than otherwise comparable workers even 15 to 20 years after displacement (von Wachter, Song, and Manchester 2009). This is partly because of steadily declining mean reemployment wages as unemployment duration increases, and the persistence of reemployment wage discounts, meaning that the effects increase with duration of unemployment. Barnette and Michaud (2012) find that laid-off workers, once reemployed, have wages about 15 percent lower than continuously employed workers, 1 to 20 years after layoff, whereas workers displaced by company closings, once reemployed, have wages about 5 to 10 percent lower than continuously employed workers. The wage disadvantage for workers displaced by company closings dissipates 4 to 10 years after separation, suggesting that closings convey less clear information to future employers about worker quality than other kinds of layoffs.

Because displacement leads to an increase of employment instability, some of the impact is also due to multiple subsequent unemployment spells repeatedly lowering wages and reducing accumulated job tenure and experience. Stevens (1997) showed that displaced workers are more likely to leave their subsequent jobs than nondisplaced workers. Brand (2004) and Rosenfeld (1992) document long-term reductions in career prospects for job losers, resulting in lower wage growth over time.

Reservation wages (the lowest wage at which a job would be accepted) also decline over time, as workers' expectations degrade and their needs increase.³ The reductions in wages over the course of unemployment spells are also related to type of job loss⁴ and to changing macroeconomic conditions.⁵

³ See, for example, Devine and Kiefer (1991).

⁴ Gibbons and Katz (1991) found that displaced workers received higher reemployment wages than workers fired for cause. Lower wages at reemployment lead to persistent earnings disadvantages because workers' entire future wage paths depend on starting wages (Rosenfeld 1992).

⁵ Higher levels of long-term unemployment, such as in the early 1980s and the Great Recession, can create a cycle of lower employment because job-finding rates are lowest among workers unemployed the longest and numbers of workers per vacancy can be artificially inflated. As the labor market improves during a recovery, laid-off workers continue to be reemployed at reduced wages, and the long-term unemployed tend to be the last to find a job, as documented in, for example, von Wachter, Song, and Manchester (2009).

Selection and screening both play a role in steadily declining mean wages as unemployment continues. Selection refers to preexisting differences among workers who lose their jobs, producing a pattern of more productive workers finding employment more quickly at less of a wage discount, leaving less productive workers still unemployed facing lower wages. Screening is a similar phenomenon on the employers' side, where employers observing a worker unemployed longer will infer that he or she must be a lower-productivity worker.⁶ An important difference is that selection does not reflect a causal impact (if we could intervene to shorten unemployment, it might not affect outcomes), whereas screening can have impacts on individual workers negatively affected by employer expectations.

Empirically, screening is an important mechanism. Kroft, Lange, and Notowidigdo (2012) show in an experiment that employer screening resulted in interview rates cut nearly in half among the long-term unemployed relative to the newly unemployed. Schmieder, von Wachter, and Bender (2012a, 2012b, 2012c) show that increases in duration of unemployment caused by benefit changes drive down the wage offers of employers but do not substantially affect reservation wages. This line of research is one of the very few to plausibly establish a direct causal impact of increases in duration of unemployment.⁷

Much of the research on wage losses at reemployment cannot distinguish between losses due to longer duration of unemployment for an individual and losses due to less favorable labor market conditions (higher unemployment, longer average durations) that are correlated with own duration. Davis and von Wachter (2011) find that men lose twice as much in lifetime earnings from being displaced via a mass layoff when the unemployment rate exceeds 8 percent as they do if displaced when the national unemployment rate is below 6 percent. However, it is not clear whether this is due to downward pressure on reemployment wages across the economy, or due to causal impacts of longer unemployment spells that accompany higher national unemployment.

⁶ One can see selection and screening as two sides of the same coin, if workers anticipate firm screening and firms correctly anticipate reductions in average worker productivity. But they need not be, if firms' expectations about worker quality declining with unemployment duration are incorrect but workers accept lower wages over time because the path of future wages looks bleak owing to unrealistic firm expectations. That is, screening can drive a vicious cycle of declining wages. Selection can operate without screening as well, if workers with higher ability are paid the same wage regardless of unemployment duration, but also exit faster, so that unemployment duration is associated with lower wages only due to the heterogeneity of workers.

⁷ Whether wage offers are driven down by information about declining average worker productivity, due to either selection or skill erosion, or information about workers' increasing desperation to find work, is not established. This line of work does cast doubt on explanations that rely on social networks among job losers, however.

Declining Human and Social Capital

Declines in wages need not be due to only selection on (or screening of) heterogeneous workers and declining expectations, but also due to real declines in productivity as human or social capital depreciates, possibly as the labor market moves farther away from the type of work lost, or as the displaced worker looks farther afield for new work. A real decline in productivity due to deteriorating human capital would be a true causal impact of longer unemployment, unlike selection due to the changing composition of the unemployed at different durations.⁸

One of the stories explaining declining reemployment wages via a causal mechanism instead of pure selection or screening is that human or social capital decays as workers are out of work longer. Yet most research purporting to measure human capital depreciation (e.g., Hollenbeck 1990) uses wages as a measure of human capital, so one cannot distinguish between the effect of human capital and other factors that might affect wages.

The few studies that attempt to measure human capital directly do not deal with selection, so that all observed correlation between unemployment duration and human capital might be because people with lower human capital are likely to remain out of work for a longer time. For example, Edin and Gustavsson (2008) find that a year out of work is associated with general skills 5 percentile points lower relative to continuously employed workers, but there is no attempt to isolate the causal impact of time out of work from selection driving a larger fraction of unemployed workers being lower-ability workers over time, as higher-ability workers return to work. Edin and Gustavsson also cannot rule out reverse causation where “negative *trends* in skills lead to non-employment” (2008, 174); that is, workers who experience skill depreciation relative to the rest of the workforce are more likely to be laid off.

The research on the deterioration of skills is far from persuasive and plagued by data problems.⁹ Losses of job tenure or experience are losses of human capital compared with otherwise identical individuals who were never unemployed, not losses of human capital relative to pre-unemployment

⁸ Declining reservation wages could reflect a decline in human capital, or endogenous changes in expectations related to human capital. For example, if laid-off workers believe their own industry or occupation, where their specific human capital is valued, will not recover fast enough, they may be induced to switch industry or occupation further afield over time, trading off losses in future wages for higher exit rates from unemployment in the near term.

⁹ Measurement error in past test scores leads the coefficient to be biased toward zero, which many authors have taken as evidence of “depreciation” of skills over time in the absence of intervention.

human capital of the individual. Losses of firm-specific and industry-specific human capital are incurred at separation, and are unlikely to increase much in magnitude over time spent unemployed.

A far more plausible loss increasing in magnitude with prolonged unemployment is of social capital, but little direct evidence is available. As Machin and Manning (1999) discuss:

Many studies have documented the importance of the use of current workers to recruit friends and relatives. Something like a third of jobs in the UK are filled in this way (Gregg and Wadsworth, 1996). The reasons given are generally that it is cost-effective and workers are unlikely to recommend others who they know are going to prove to be unsuitable workers. There is other evidence that suggests that the unemployed lose social contacts as their spells lengthen and that what social contacts they do maintain come to be increasingly made up of other unemployed.

If loss of human or social capital is the driving mechanism behind reemployment wages declining over time, then policies designed to keep unemployed workers using skills or in contact with other workers would be an effective means of heading off long-term wage losses. Evidence on job training programs has produced mixed evidence about training as an efficient means to raise reemployment wages, although Holzer (2011) and Jacobson, LaLonde, and Sullivan (2011) provide guidance on improving practice. Subsidized employment programs may hold out even better prospects, by addressing both human and social capital depreciation.¹⁰

Impacts on Future Labor Market Attachment

Unemployed workers become more likely to leave the labor force and retire, enroll in disability programs, or simply become “discouraged workers” as unemployment continues. The exit to disability is most worrisome because it tends to be permanent. Once someone identifies as being disabled, the individual is very unlikely to return to work; in fact, retired people are far more likely to reenter the labor market than the disabled. Rupp and Stapleton (1995) find that higher unemployment tends to increase the number of applicants to the Social Security Disability Insurance (DI) program, and eventually the number of successful applicants. Lindner and Nichols (2012) find that expansions of unemployment insurance staved off some applications for DI benefits.

¹⁰ Evaluations of subsidized employment and transitional jobs (Bloom 2010) indicate relatively small gains in employment and earnings, but larger gains for some subgroups, especially single mothers (Michalopoulos 2005). Programs that integrate subsidized employment into unemployment insurance systems, such as the German *Arbeitsbeschaffungsmaßnahmen*, also seem to produce small increases in future employment and income on average, but larger effects for some subgroups (Caliendo, Hujer, and Thomsen 2008; Hujer, Caliendo, and Thomsen 2004).

Impacts on Physical and Mental Health

Burgard, Brand, and House (2007) report large declines in self-reported health status following job loss, even after taking differences in characteristics of job losers into account. Losses are largest among those who lose jobs for reasons related to health, implying the causal impact of job loss is much smaller than the impact observed by comparing job losers to other workers. Furthermore, job losses for other reasons increase depressive symptoms but have little impact on other measures of health. There is little evidence of health deteriorating over the course of an unemployment spell (Salm 2009). In fact, Ruhm (2000, 2001, 2005, 2007) documents improvements in health as unemployed workers get more exercise, smoke and drink less, lose weight, and suffer less from job-related or commute-related health risks.

Sullivan and von Wachter (2009) find that the mortality consequences of displacement are severe, with a 50 to 100 percent increase in death rates the year following displacement and 10 to 15 percent increases in death rates for the next 20 years. For a 40-year-old worker, that implies a decline in life expectancy of a year to a year and a half. Long-term joblessness results in higher mortality, but voluntary and involuntary separations seem to have similar impacts on mortality (Couch et al. 2013). The mechanism for these mortality increases is unclear but could be related to income loss, increases in risky health behavior (Browning and Heinesen 2012), and losses of health insurance coverage (Olson 1992).

Although job loss increases the subsequent risk of death, the impacts of longer duration of unemployment on health or mortality are not clearly identified. Given that longer-duration unemployment is associated with higher mortality, but health does not seem to deteriorate during a spell, the observed correlations may be related to lower lifetime income (via both more forgone earnings and lower future wages earned by the long-term unemployed), and not through any direct impact on health. The link between income and health is also not clearly causal, however, and there is some evidence that it is increased labor force attachment that lowers mortality, not higher income (Snyder and Evans 2006).

There is a long history of research showing that becoming unemployed has large negative effects on mental health, but that mental health does not deteriorate substantially with longer duration of unemployment. Whooley and colleagues (2002) found that depression strongly predicts future job and income losses, suggesting reverse causation is an important threat to such comparisons. Clark

and Oswald (1994) found duration of unemployment is actually positively correlated with well-being, conditional on being unemployed. Winkelmann and Winkelmann (1998) found no evidence of satisfaction changing over the course of a spell of unemployment.¹¹ On the other hand, Classen and Dunn (2012) estimated that higher rates of long-term unemployment increase suicide rates, although this may in part reflect general economic conditions. Browning and Heinesen (2012) used micro-level data from Denmark and found that job loss increases alcohol-related disease, mental illness, and suicide and suicide attempts, but these effects could be due to job loss itself, and unrelated to unemployment duration.

Theoretically, links between declining employment prospects and declining mental health seem clear. As economic stress increases, the incidence of anxiety disorders should increase, and as individuals fall in the social hierarchy, serotonin-pathway disorders, including depression, should become more prevalent.¹² Alternatively, as expectations fall, people may adjust to a new normal and take fuller advantage of leisure time, leading to improvements in measured mental health. On balance, the empirical evidence for the link between longer durations of unemployment and worse mental health is far from clear.

Effects on Children and Families

There are a large variety of negative effects of job loss observed in the families of workers, although the causal mechanism is not always well known. Kalil and De Leire (2002) found that the negative effects of job loss for children were limited to those associated with the loss of a father's job. Similarly, Lindo (2011) documented a negative impact of paternal job loss on infant birth weight. Rege, Telle, and Votruba (2011) also showed that paternal job loss lowers children's school performance, and the negative effect of paternal job loss is not mediated by income, a shift in maternal time toward employment, marital dissolution, or residential relocation. Stevens and Schaller (2011) showed that layoffs affect children's grade retention, and Wightman (2012) documented a

¹¹ Diette and colleagues (2012) suggest that psychological distress is higher among long-term unemployed than short-term unemployed or continuously employed workers who have not experienced prior psychological distress, but they do not distinguish statistically between effects of long-term unemployment and short-term unemployment.

¹² Serotonin regulates self-esteem and may also regulate risky behavior and suicidal ideation. McGuire and Raleigh (1986) showed that position in a hierarchy affects serotonin levels, and that manipulation of serotonin can affect position in a hierarchy. Many studies show that relative income is an important predictor of health and mortality (Eibner and Evans 2005), more so than absolute income in some cases, meaning that position in a social hierarchy can have large effects on long-term outcomes. Hierarchical position can also explain a lack of increasing stress or depression with longer duration unemployment, however, if people increasingly identify with a more disadvantaged peer group in which they rank higher.

reduction in the probability that children finish high school after paternal job loss. Oreopoulos, Page, and Stevens (2008) traced the impact of job loss on children's later earnings as adults. Katz (2010) pointed out that financial aid based on prior year income does not address the immediate needs of students whose parents are laid off, perhaps leading to losses of educational opportunity in the second generation. Loss of continuous health insurance coverage could also play a role in worse child outcomes, as Johnson and Schoeni (2011) show that health insurance can play a large role in intergenerational transmission of disadvantage.

Job losses and long-term unemployment can affect children's outcomes through increased family stress and reduced incomes. McLoyd and colleagues (1994) documented how financial stress from job loss affects the emotional well-being of mothers, producing increased cognitive distress and depressive symptoms in adolescent children and more negative assessments of maternal interaction. Children whose parents suffer longer unemployment and larger lifetime income losses can be expected to suffer greater detriment to their emotional well-being, and this may result in worse education and labor market outcomes in the children's generation.

Changes in family structure may be another mechanism by which the negative consequences of job losses are transmitted to the next generation. Del Bono, Weber, and Winter-Ebmer (2008) and Lindo (2010) showed that layoff affects fertility rates, and Lindner and Peters (2013) found negative effects of job loss of mothers and fathers on family stability, especially for married parents, which is one factor through which parental job loss may affect the well-being of children. Charles and Stephens (2004) documented an increase in divorce following layoffs but not plant closings or disability, suggesting that the higher divorce rate is more strongly related to the job loser's productivity and other attributes rather than diminished financial prospects.

Impact on Communities

High rates of long-term unemployment can devastate local communities, as reduced lifetime income prospects induce a variety of behavioral changes, and alter social networks. Wilson (1987) building on Kain (1968), argued that a lack of available jobs close to where the disadvantaged unemployed workers live, or "spatial mismatch," contributes to long durations of joblessness, in part because social networks become largely populated by other jobless workers. Persistent joblessness for men is then linked to breakdowns in traditional family arrangements, increased use of public assistance, and

high crime. As long-term unemployment becomes more concentrated, the neighborhood becomes a source of persistent poverty.

Even if long-term unemployment does not have important effects on job finding via social networks, it can induce behavioral changes that have important spillover effects on the community as a whole. In addition to engaging in riskier health behavior and reducing investments in housing and other capital stocks that benefit the community as a whole, the long-term unemployed may be induced to seek out work in the illegal sector. Although crime rates fell in many areas during the Great Recession, they seem to have fallen due to a long-term trend, and to have fallen less in places hit harder by job loss.¹³

Rege, Telle, and Votruba (2012) document a 14 percentage point higher probability of arrest among workers affected by plant closings, but there are important dynamic and spillover effects as well. As Machin and Manning (1999) discuss:

a cycle develops whereby involvement in crime reduces subsequent employment prospects which then raises the likelihood of participating in crime (see Thornberry and Christensen, 1984). In this vein Freeman (1992) and Grogger (1992) show some association between the persistence of joblessness and crime. Fagan and Freeman (1997) also review evidence that show important links between unemployment and crime.... It should be emphasized again that it is difficult to distinguish between heterogeneity and true duration dependence as the explanation for these correlations.

Impacts on communities may be driven in part by increases in concentrated poverty due to long-term unemployment. The evidence of higher impacts due to greater spatial concentration of poverty is mixed, however, as discussed by Turner, Nichols, and Comey (2012) in the context of the Moving to Opportunity experiment.

Conclusions

The extensive evidence on far-reaching negative consequences of job loss is clear: Loss of a job can lead to losses of income in the short run, permanently lower wages, and result in worse mental and physical health and higher mortality rates. Further, parental job loss hampers children's educational progress and lowers their future earnings. The link between longer duration of unemployment and worse consequences is more tenuous. Lower wages and lifetime incomes are associated with longer

¹³ John Roman, "Learning About the Crime Decline from Big City Experiences with Homicide," MetroTrends (blog), December 16, 2012, <http://blog.metrotrends.org/2012/12/learning-crime-decline-big-city-experiences-homicide/>.

periods of unemployment, but the reason for the decreasing earnings prospects is not clear. In domains where we might expect to see strong evidence, such as mental health outcomes, the evidence is murky at best. When there are patterns of declining well-being as unemployment extends longer, the extent to which declining well-being is due to increasing loss of lifetime income alone or to time out of work is not clear.

The need to distinguish among competing explanations for the observed patterns is pressing, because different policy responses would be called for depending on which of the potential explanations is the dominant one. Further research should identify more clearly whether selection, declining reservation wages, human capital depreciation, or some form of employer discrimination seems to be the dominant explanation for reemployment wage declining with unemployment duration. We also need to explore whether other long-run negative impacts of job loss and unemployment duration are due to those same factors, or to loss of income or social position.

References

- Barnette, Justin, and Amanda Michaud. 2012. "Wage Scars from Job Loss." Working paper. Akron, OH: University of Akron. <http://www.uakron.edu/dotAsset/2264615.pdf>.
- Bloom, Dan. 2010. *Transitional Jobs: Background, Program Models, and Evaluation Evidence*. Washington, DC: US Department of Health and Human Services. http://www.acf.hhs.gov/sites/default/files/opre/tj_09_paper_embed.pdf.
- Borie-Holtz, Debbie, Carl Van Horn, and Cliff Zukin. 2010. *No End in Sight: The Agony of Prolonged Unemployment*. New Brunswick, NJ: John J. Heldrich Center for Workforce Development, Rutgers University.
- Brand, Jennie E. 2004. "Enduring Effects of Job Displacement on Career Outcomes." Ph.D. dissertation, University of Wisconsin–Madison, http://www.ssc.wisc.edu/wlsresearch/publications/files/_private/Brand_Enduring.Effects.of.Job.Displacement.on.Career.Outcomes.pdf.
- Browning, Martin, and Thomas F. Crossley. 2001. "Unemployment Insurance Levels and Consumption Changes." *Journal of Public Economics* 80(1): 1–23.
- Browning, Martin, and Esquil Heinesen. 2012. "Effect of Job Loss due to Plant Closure on Mortality and Hospitalization." *Journal of Health Economics* 31(4): 599–616.
- Burgard, Sarah A., Jennie E. Brand, and James S. House. 2007. "Toward a Better Estimation of the Effect of Job Loss on Health." *Journal of Health and Social Behavior* 48(4): 369–84. <http://www.jstor.org/stable/10.2307/27638722> (accessed 06/20/2013).
- Caliendo, Marco, Reinhard Hujer, and Thomsen Stephan L. 2008. "Identifying Effect Heterogeneity to Improve the Efficiency of Job-Creation Schemes in Germany." *Applied Economics* 40(9): 1101–22.
- Charles, Kerwin Kofi, and Melvin Stephens. 2004. "Disability, Job Displacement and Divorce." *Journal of Labor Economics* 22(2): 489–522.
- Clark, Andrew E., and Andrew J. Oswald. 1994. "Unhappiness and Unemployment." *The Economic Journal* 104(424): 648–59.
- Classen, Timothy J., and Richard A. Dunn. 2012. "The Effect of Job Loss and Unemployment Duration on Suicide Risk in the United States: A New Look Using Mass-Layoffs and Unemployment Duration." *Health Economics* 21:338–50.
- Couch, Kenneth, Howard Iams, Gayle Reznik, and Chris Tamborini. 2013. "Economic and Health Implications of Long-Term Unemployment: Earnings, Disability Benefits, and Mortality." Paper presented at 2013 ASSA meetings, San Diego, January 6.
- Davis, Steven J., and Till von Wachter. 2011. "Recessions and the Costs of Job Loss." Brookings Papers on Economic Activity Conference Proceedings. http://www.brookings.edu/~media/Files/Programs/ES/BPEA/2011_fall_bpea_papers/2011_fall_bpea_conference_davis.pdf.
- Del Bono, Emilia, Andrea Weber, and Rudolf Winter-Ebmer. 2012. "Clash of Career and Family: Fertility Decisions after Job Displacement." *Journal of the European Economic Association* 10(4): 659–83.
- Devine, Theresa J., and Nicholas M. Kiefer. 1991. *Empirical Labor Economics—The Search Approach*. New York: Oxford University Press.

- Diette, Timothy M., Arthur H. Goldsmith, Darrick Hamilton, and William Darity Jr. 2012. "Causality in the Relationship between Mental Health and Unemployment." In *Reconnecting to Work: Policies to Mitigate Long-Term Unemployment and Its Consequences*, edited by Lauren D. Appelbaum (63–94). Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- Edin, Per-Anders, and Magnus Gustavsson. 2008. "Time Out of Work and Skill Depreciation." *Industrial and Labor Relations Review* 61(2): 163–80.
<http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=1318&context=ilrreview>.
- Eibner, Christine, and William N. Evans. 2005. "Relative Deprivation, Poor Health Habits, and Mortality." *Journal of Human Resources* 60(3): 591–620.
- Gibbons, Robert, and Lawrence F. Katz. 1991. "Layoffs and Lemons." *Journal of Labor Economics* 9(4): 351–80.
- Godofsky, Jessica, Carl van Horn, and Cliff Zukin. 2010. "American Workers Assess an Economic Disaster." New Brunswick, NJ: John J. Heldrich Center for Workforce Development, Rutgers University.
- Hamermesh, Daniel S. 1989. "What Do We Know About Worker Displacement in the U.S.?" *Industrial Relations* 28:51–59.
- Hollenbeck, Kevin. 1990. "Dislocated Worker Human Capital Depreciation and Recovery." Working Paper 90-04. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
http://research.upjohn.org/up_workingpapers/4.
- Holzer, Harry J. 2011. "Raising Job Quality and Skills for American Workers: Creating More-Effective Education and Workforce Development Systems in the States." Hamilton Project Discussion Paper 2011-10. Washington, DC: The Brookings Institution.
http://www.hamiltonproject.org/files/downloads_and_links/11_workforce_holzer_paper.pdf.
- Hujer, Reinhard, Marco Caliendo, and Stephan L. Thomsen. 2004. "New Evidence on the Effects of Job-Creation Schemes in Germany: A Matching Approach with Threefold Heterogeneity." *Research in Economics* 58(4): 257–302.
- Jacobson, Louis, Robert LaLonde, and Daniel Sullivan. 1993. "Earnings Losses of Displaced Workers." *American Economic Review* 83(4): 685–709.
- . 2011. "Policies to Reduce High-Tenured Displaced Workers' Earnings Losses through Retraining." Hamilton Project Discussion Paper 2011-11. Washington, DC: The Brookings Institution.
http://www.hamiltonproject.org/files/downloads_and_links/11_displaced_JLS_paper.pdf.
- Johnson, Rucker C., and Robert F. Schoeni. 2011. "The Influence of Early-Life Events on Human Capital, Health Status, and Labor Market Outcomes over the Life Course." *B.E. Journal of Economic Analysis & Policy: Advances* 11(3).
- Johnson, Richard W., and Alice Feng. 2013. "Financial Consequences of Long-Term Unemployment during the Great Recession and Recovery." Washington, DC: The Urban Institute.
<http://www.urban.org/publications/412800.html>.
- Kain, John F. 1968. "Housing Segregation, Negro Employment, and Metropolitan Decentralization." *Quarterly Journal of Economics* 82:175–97.
- Kalil, Ariel, and Thomas DeLeire. 2002. "Parental Job Loss and Early Adolescent Development in Black and White Families." Working Paper 282. Chicago and Evanston, IL: Joint Center for Poverty Research.
- Katz, Larry. 2010. "Long-Term Unemployment in the Great Recession." Testimony before the Joint Economic Committee, April 29.
http://scholar.harvard.edu/files/lkatz/files/long_term_unemployment_in_the_great_recession.pdf.

- Kroft, Kory, Fabian Lange, and Matthew J. Notowidigdo. 2012. "Duration Dependence and Labor Market Conditions: Theory and Evidence from a Field Experiment." Working Paper 18387. Cambridge, MA: National Bureau of Economic Research. <http://papers.nber.org/papers/w18387>.
- Lindner, Stephan, and Austin Nichols. 2012. "The Impact of Temporary Assistance Programs on Disability Rolls and Reemployment." Working Paper 2012-2. Boston, MA: Center for Retirement Research at Boston College. http://crr.bc.edu/wp-content/uploads/2012/01/wp_2012-2-508.pdf.
- Lindner, Stephan, and Elizabeth Peters. 2013. "How Does Unemployment Affect Family Arrangements for Children?" Unpublished manuscript. Microsoft Word file.
- Lindo, Jason M. 2010. "Are Children Really Inferior Goods? Evidence from Displacement-Driven Income Shocks." *Journal of Human Resources* 45(2): 301–27.
- . 2011. "Parental Job Loss and Infant Health." *Journal of Health Economics* 30(5): 869–79.
- Machin, Stephen, and Alan Manning. 1999. "The Causes and Consequences of Long-term Unemployment in Europe." In *Handbook of Labor Economics*, Vol. III, edited by O. Ashenfelter and D. Card (3085–3139). Amsterdam: North-Holland.
- McGuire, Michael T., and Michael J. Raleigh. 1986. "Behavioral and Physiological Correlates of Ostracism." *Ethology and Sociobiology* 7:187–200.
- McLoyd, Vonnie C., Toby Epstein Jayaratne, Rosario Ceballo, and Julio Borquez. 1994. "Unemployment and Work Interruption among African American Single Mothers: Effects on Parenting and Adolescent Socio-Emotional Functioning." *Child Development* 65:562–89. <http://www.jstor.org/stable/1131402>.
- Michalopoulos, Charles. 2005. *Does Making Work Still Pay? An Update on the Effects of Four Earnings Supplement Programs on Employment, Earnings, and Income*. New York: MDRC.
- Nichols, Austin. 2012. "Poverty and Unemployment." Washington, DC: The Urban Institute. <http://www.urban.org/publications/412652.html>.
- Olson, Craig A. 1992. "The Impact of Permanent Job Loss on Health Insurance Benefits." Industrial Relations Section Working Paper 305. Princeton, NJ: Princeton University. <http://dataspace.princeton.edu/jspui/bitstream/88435/dsp01q811kj632/1/305.pdf>.
- Oreopoulos, P., M. Page, and A. Stevens. 2008. "The Intergenerational Effect of Worker Displacement." *Journal of Labor Economics* 26(3): 455–50.
- Rege, Mari, Kjetil Telle, and Mark Votruba. 2011. "Parental Job Loss and Children's School Performance." *Review of Economic Studies* 78(4): 1462–89.
- . 2012. "Social Interaction Effects in Disability Pension Participation: Evidence from Plant Downsizing." *Scandinavian Journal of Economics* 114(4): 1208–39.
- Rosenfeld, Rachel A. 1992. "Job Mobility and Career Processes." *Annual Review of Sociology* 18:39–61.
- Ruhm, Christopher J. 1991. "Are Workers Permanently Scarred by Job Displacement?" *American Economic Review* 81(1): 319–24.
- . 2000. "Are Recessions Good for Your Health?" *Quarterly Journal of Economics* 115(2): 617–50.
- . 2001. "Economic Expansions Are Unhealthy: Evidence from Microdata." Working Paper 8447. Cambridge, MA: National Bureau of Economic Research. <http://www.nber.org/papers/w8447>.
- . 2005. "Healthy Living in Hard Times." *Journal of Health Economics* 24(2): 341–63.

- . 2007. “A Healthy Economy Can Break Your Heart.” *Demography* 44(4): 829–48.
- Rupp, Kalman, and David Stapleton. 1995. “Determinants of the Growth in the Social Security Administration’s Disability Programs—An Overview.” *Social Security Bulletin* 58(4): 43–70.
- Salm, Martin. 2009. “Does Job Loss Cause Ill Health?” *Health Economics* 18:1075–89.
- Schmieder, Johannes F., Till von Wachter, and Stefan Bender. 2012a. “The Effect of Unemployment Insurance Extensions on Reemployment Wages.” Working paper. Boston, MA: Boston University. http://www.irs.princeton.edu/sites/irs/files/event/uploads/matchqual_wp_March2012.pdf.
- . 2012b. “The Effects of Extended Unemployment Insurance Over the Business Cycle: Evidence from Regression Discontinuity Estimates Over 20 Years.” *Quarterly Journal of Economics* 127(2): 701–52.
- . 2012c. “The Long-Term Effects of UI Extensions on Employment.” *American Economic Review* 102(3): 514–19.
- Snyder, Stephen E., and William N. Evans. 2006. “The Effect of Income on Mortality: Evidence from the Social Security Notch.” *Review of Economics and Statistics* 88(3): 482–95.
- Stevens, Ann Huff. 1997. “Persistent Effects of Job Displacement: The Importance of Multiple Job Losses.” *Journal of Labor Economics* 15(1): 165–88.
- Stevens, Ann, and Jesamyn Schaller. 2011. “Short-Run Effects of Parental Job Loss on Children’s Academic Achievement.” *Economics of Education Review* 30(2): 289–99.
- Sullivan, Daniel, and Till von Wachter. 2009. “Job Displacement and Mortality: An Analysis Using Administrative Data.” *Quarterly Journal of Economics* 124(3): 1265–1306.
- Turner, Margery Austin, Austin Nichols, and Jennifer Comey. 2012. “Benefits of Living in High-Opportunity Neighborhoods: Insights from the Moving to Opportunity Demonstration.” Washington DC: The Urban Institute. <http://www.urban.org/publications/412648.html>.
- Von Wachter, Till, Jae Song, and Joyce Manchester. 2009. “Long-Term Earnings Losses due to Mass Layoffs during the 1982 Recession: An Analysis Using US Administrative Data from 1974 to 2004.” Unpublished paper, Columbia University. Word document. http://www.columbia.edu/~vw2112/papers/mass_layoffs_1982.pdf.
- Whooley, Mary A., Catarina I. Kiefe, Margaret A. Chesney, Jerome H. Markovitz, Karen Matthews, and Stephen B. Hulley. 2002. “Depressive Symptoms, Unemployment, and Loss of Income: The CARDIA Study.” *Archives of Internal Medicine* 162(22): 2614–20.
- Wightman, Patrick. 2012. “Parental Job Loss, Parental Ability and Children’s Educational Attainment.” Research Report 12-761. Ann Arbor: Population Studies Center, University of Michigan. <http://www.psc.isr.umich.edu/pubs/pdf/rr12-761.pdf>.
- Wilson, William Julius. 1987. *The Truly Disadvantaged: The Inner City, the Underclass and Public Policy*. Chicago, IL: University of Chicago Press.
- Winkelmann, Liliana, and Rainer Winkelmann. 1998. “Why Are the Unemployed So Unhappy? Evidence from Panel Data.” *Economica* 65(257): 1–15.