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DISABILITY INSURANCE: DOES EXTENDING UNEMPLOYMENT BENEFITS HELP?

BY MATTHEW S. RUTLEDGE*

Introduction

The Great Recession has resulted in the highest national unemployment rate in nearly 30 years, and those who find themselves unemployed remain jobless longer than ever before. In response, the federal government has extended unemployment insurance (UI) benefits for up to 99 weeks, almost a year and a half longer than normal durations. At the same time, applications for Social Security disability insurance (SSDI) benefits, which had been increasing for decades,¹ reached an all-time high in 2009 and have continued to rise. An important question is how the availability of unemployment insurance, in general, and extended UI benefits, in particular, affect SSDI applications and the composition of the pool of applicants. This question is the topic of this *brief*.

The discussion proceeds as follows. The first section describes the UI and SSDI programs. The second and third sections assess the impact of UI benefit duration on disability applications using individual data and state data, respectively. The fourth section estimates the effects of UI benefit extensions on the costs of the UI and SSDI programs. The final section concludes that jobless individuals – particularly relatively healthier individuals – are significantly less likely to apply for SSDI benefits during the months their UI benefits are extended, and significantly more

likely to apply in the month that their UI benefits are ultimately exhausted. However, because an SSDI application is more likely to be approved during a UI extension, UI extensions do not reduce SSDI program costs.

The Programs

When the economy weakens, jobless individuals can turn to two types of public programs – unemployment insurance and, for those with a work-limiting health condition, Social Security disability insurance.

Unemployment Insurance

Most workers who lose their jobs involuntarily are eligible for unemployment benefits.² Roughly speaking, benefits equal 50 percent of an individual's weekly wage prior to the job loss, although most states cap the benefit at two-thirds of the state's average weekly wage. The weekly benefit level varies greatly among the states; Massachusetts has the highest maximum benefit (\$625 in 2011) and Mississippi the lowest (\$235). The duration of benefits is generally 26 weeks.

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UI benefits may be extended in two ways. One is through federal emergency legislation, including laws passed in 1991, 2002, and 2008 that extended benefits nationwide, with funding from the federal government's general revenue.³ The other extension route is the Extended Benefits Program. This program is triggered by high and rising state unemployment rates, based on standards imposed by federal law. All states must extend UI durations by 13 weeks during these periods, but may opt for additional triggers, which provide an extra 13 to 33 weeks of benefits. When benefits are extended automatically, the federal government pays for one-half of the added cost. The federal emergency extensions of 2002 and 2008 supplemented the automatic Extended Benefits program.

Disability Insurance

SSDI provides benefits to workers with work-limiting health conditions and a sufficient amount of total and recent working experience to qualify.⁴ The Disability Determination Service in each applicant's state decides whether the individual's medical condition is sufficiently severe and on the List of Impairments, whether the applicant can do the same work he did before, and whether he can do any other type of work. Approximately 37 percent of applications are allowed at the initial determination, but some states have consistently higher or lower allowance rates.⁵ The SSDI benefit is calculated from the same formula as Social Security old-age retirement benefits. In addition, SSDI beneficiaries are eligible for health insurance coverage through Medicare 24 months after first being entitled to benefits. Once accepted, applicants rarely leave the SSDI rolls.

SSDI *applicants* can receive unemployment benefits, so individuals may apply for both unemployment and disability benefits at the same time. In fact, UI benefits can help to bridge the gap between SSDI application and the first receipt of benefits. SSDI *recipients*, however, are excluded from UI benefits in most states.

Individual-Level Analysis

To study the impact of UI benefits and extensions on SSDI application activity, the analysis starts at the individual level.⁶ The data for this analysis come from the *Survey of Income and Program Participation* (SIPP), a nationally-representative longitudinal survey of households conducted by the U.S. Census Bureau. Every four months over a two- to four-year period, respondents are asked a battery of questions on

their labor market participation, sources of income, employment relationships, demographics and family structure, health insurance status, wealth, and public program participation during each month between interviews. New panels began annually between 1990 and 1993, plus 1996, 2001, 2004, and 2008. The SIPP *Gold Standard File* matches all but the 2008 panel to disability application data and earnings data.⁷ The sample for the individual-level regressions includes UI- and SSDI-eligible workers ages 25 to 64 who are observed losing a job during their time in the SIPP panel.⁸ The individual-level analysis uses a subsample, which consists of "work-limited" individuals – those who report either a work-limiting condition or receipt of sick pay, workers' compensation, or veterans' benefits during their time in the SIPP – as this group is most likely to consider disability application.⁹

The individual-level analysis has two parts. First, it considers the effect of UI benefit duration on the decision to apply for SSDI. Second, it considers UI's effect on the SSDI applicant pool based on the success rate of those applying.

Effect of UI Benefit Duration on SSDI Applications

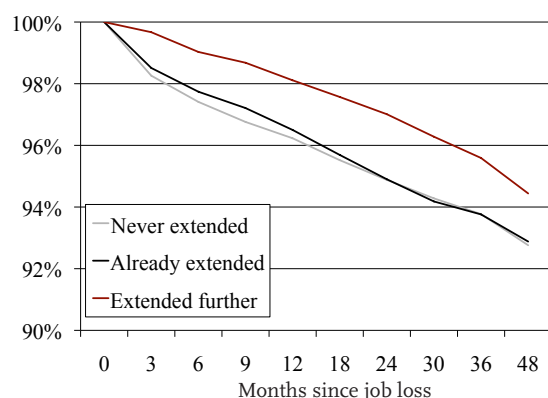
The first part of the analysis explores whether jobless workers are more likely to apply for disability benefits as they approach the exhaustion of their UI benefits. UI extensions push out the exhaustion point; the regression model investigates whether an extension induces individuals to delay their SSDI applications.

In a given month, the regression analysis allows jobless individuals to have one of three different outcomes: applying for SSDI, finding a job, or continuing the jobless spell.¹⁰ The key explanatory variables are indicators for UI eligibility status in the current month. Are individuals receiving UI benefits as part of their normal duration? Have their benefits been extended? Are their benefits about to expire? The model allows for different responses to UI eligibility and exhaustion depending on whether UI benefits have or have not been extended during the jobless spell.

Individual characteristics also may influence the decision to apply for disability or find a job. These variables include potential UI and SSDI benefits, their own and their spouse's annual earnings, and an indicator for whether the individual is lacking health insurance in the current month. Finally, the list includes age at the time of job separation along with other standard demographic characteristics and the state unemployment rate (both currently and at the time of separation).

Figure 1 plots the “survivor” function – the share of the sample that has not yet applied for SSDI. The figure provides evidence that individuals consider their remaining UI benefits in the timing of their SSDI application. The survivor function is substantially higher for those whose benefits are extended during their jobless spell (or extended further, if they are already longer than normal at the time of job loss).

FIGURE 1. PERCENT WHO HAVE NOT YET APPLIED FOR SSDI FROM TIME OF JOB LOSS, BY WHETHER BENEFITS ARE EXTENDED, 1990-2006



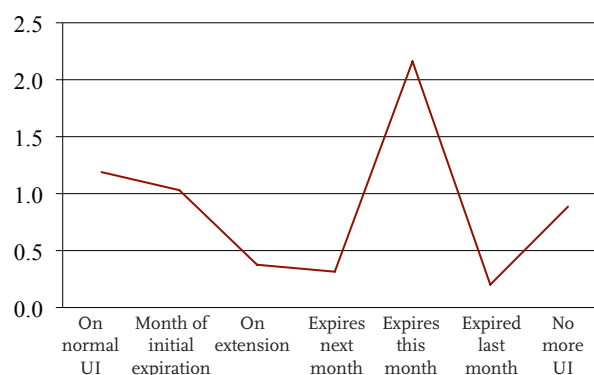
Note: Results are for “work-limited” individuals only.
Source: Author’s calculations from U.S. Census Bureau, *Survey of Income and Program Participation (SIPP) – Gold Standard File* (1990-2006).

Figure 2 uses the individual-level regression results to estimate the probability of applying to SSDI in months around the UI extension or exhaustion. Among those who reach the month of exhaustion, 2.2 percent of jobless workers apply in that month, a statistically significant increase over the application rate of 0.9 percent during UI-ineligible months. During extensions, however, the probability of applying to SSDI plunges to 0.4 percent.¹¹

Effect of UI Benefit Duration on SSDI Applicant Pool

The individual data are then used to estimate the probability of submitting a successful – rather than unsuccessful – SSDI application. Though few of these estimates are statistically significant, some evidence suggests that healthier applicants are more likely to delay application until their UI benefits are exhausted. For example, the announcement of a new

FIGURE 2. PROBABILITY OF APPLYING FOR SSDI, BY REMAINING UI ELIGIBILITY, 1990-2006



Note: Results are for “work-limited” individuals only. “On normal UI,” “on extension,” and “expires this month” are all statistically significant at least at the 10-percent level relative to the omitted condition of “no more UI.”

Source: Author’s calculations from 1990-2006 SIPP *Gold Standard File*.

UI extension is associated with a lower probability of applying for SSDI unsuccessfully and a higher probability of applying successfully.¹²

State-Level Analysis

To test the strength of the individual-level results, a separate analysis was conducted using monthly state-level data on disability activity from Social Security Administration (SSA) state agency reports between October 2000 and May 2011. While the main goal of this exercise is to try to confirm the individual-level findings, one advantage to using state-level analysis is that it more directly predicts the effect of new UI extensions on the composition of applicants statewide.¹³

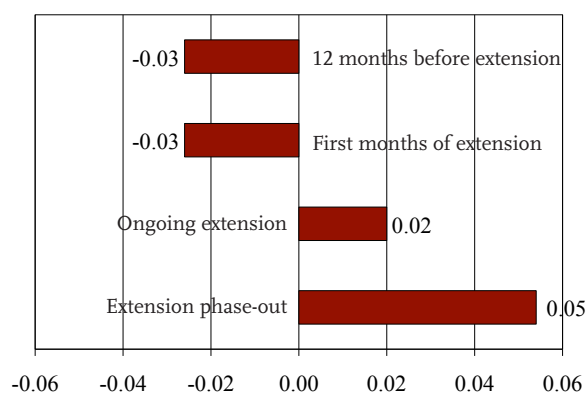
Effect of UI Benefit Duration on SSDI Applications

The first dependent variable in the state-level regression analysis is the state application rate in a given month. The coefficients of interest are on four mutually exclusive indicator variables for time since the start of the UI extension. During the first months of an extension, when all UI recipients are eligible for extended benefits, the SSDI application rate should fall.¹⁴ As some recipients begin to exhaust even their

extended UI benefits, the application rate should start to rise, continuing into the phase-out period, when only a few are eligible for extended durations.

Figure 3 shows the effect of the UI extensions on SSDI application rates. Surprisingly, applications fall even before the introduction of the UI extension, but this occurrence may be due to a delayed reaction to the end of the macroeconomic expansion. During the first months of the extension, consistent with the individual-level analysis, applications fall by 0.03 percentage points from a mean application rate of 0.93 percent. As expected, application rates begin to rise in subsequent months, and are highest in the last months of the UI extension.

FIGURE 3. ESTIMATED EFFECT OF NEW, ONGOING, AND PHASE-OUT EXTENSIONS ON SSDI APPLICATION RATE



Note: All results are statistically significant at least at the 10-percent level, relative to the omitted condition of “no recent extension.”

Source: Author’s calculations from U.S. Social Security Administration (SSA), State Agency Monthly Workload Data.

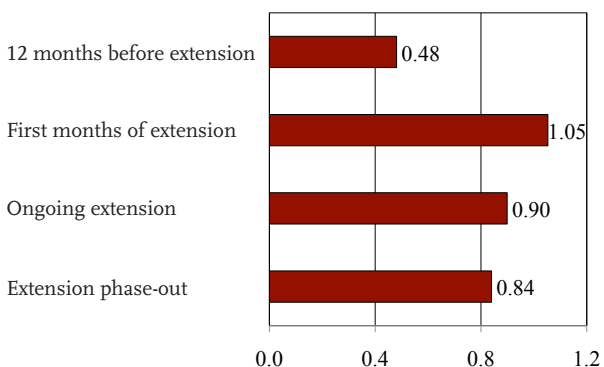
Importantly, the regression also controls for the current unemployment rate and the unemployment rate six months ago (which represents the proportion of the state’s population that is about to exhaust UI benefits at a normal duration); the literature has found a consistent positive correlation between SSDI applications and the unemployment rate.¹⁵ As expected, the application rate increases with both the current and the lagged state unemployment rate; when the local labor market tightens, SSDI application becomes more attractive, especially to those who have exhausted their UI eligibility.

Effect of UI Benefit Duration on SSDI Applicant Pool

A similar regression estimates the effect of new and recent UI extensions on a state’s “allowance rate,” which is the probability that a given SSDI application will be accepted. During the first few months of a UI extension, the results above indicate that application rates fall sharply. Those few applicants who still file when UI benefits are extended are likely to be in worse health and, therefore, have a higher probability of having their application approved. As healthier UI recipients exhaust their extended benefits, they move into the SSDI applicant pool, but because they are more likely to be denied, their applications bring down the average allowance rate. The state allowance rate, therefore, should *increase* during the first few months and *decrease* in subsequent months, the opposite of the predicted effects on application rates.

The results of the state-level analysis support this hypothesis (see Figure 4). State allowance rates rise in the first few months of a UI extension and then begin to fall as the unemployed exhaust their extended benefits.

FIGURE 4. ESTIMATED EFFECT OF NEW, ONGOING, AND PHASE-OUT EXTENSIONS ON SSDI ALLOWANCE RATE



Note: All results are statistically significant at least at the 10-percent level, relative to the omitted condition of “no recent extension,” except for the estimate for “12 months before extension.”

Source: Author’s calculations from SSA State Agency Monthly Workload Data.

Effect of UI Benefit Duration on System Costs

The above results provide strong evidence that jobless individuals – especially the relatively healthier – delay SSDI applications until they exhaust their UI benefits. This finding implies that a UI extension can reduce SSDI program costs – because potential applicants, if successful, will be on the SSDI rolls for less time or may find a job that keeps them off the rolls.

Using the above results, it is possible to estimate the budgetary impact. The baseline for each individual is his cost to the UI and SSDI programs if he can receive UI benefits only for as long as he is eligible at the start of a jobless spell, which assumes no benefit extension. The alternative is to re-estimate costs for that individual assuming that the government extends his UI duration by 13 weeks at some point during his jobless spell. The extension temporarily decreases his probability of applying while he continues to receive UI benefits, but then increases his probability of applying at the point where UI finally is exhausted.

As expected, a new UI extension increases the expected UI cost per person, as the government pays out benefits for longer. Surprisingly, however, the simulation finds that a hypothetical 13-week extension also *increases* expected SSDI and Medicare costs by 2.8 percent for the average work-limited individual in the sample.¹⁶

Why don't UI extensions decrease expected SSDI and Medicare costs? One reason could be that the government extends benefits because joblessness is rising and job prospects are poor, which could serve as a signal to recipients that they are unlikely to find a job and induce some to apply for SSDI. But the simulation model suggests that the probability of applying at some point stays relatively constant whether or not an individual receives a UI extension.

An alternative explanation is that any given application is more likely to be successful during an extension, which generally reflects poor employment conditions. The probability of applying successfully, given that one applies, is higher in all months when UI benefits are extended. This increase has two potential explanations: 1) recessions could make mental illnesses or stress-induced physical conditions worse; or 2) it may be easier to prove that an applicant cannot find suitable work when fewer jobs are available.

Conclusion

The results of this study at both the individual and state levels suggest that jobless individuals delay applying for SSDI until after they have exhausted their unemployment benefits. Jobless individuals are significantly less likely to apply for SSDI while they are benefitting from extra months of UI. This study also observes that, in states where UI has been extended, allowance rates rise in subsequent months, indicating that only the unhealthiest potential applicants continue to seek SSDI benefits.

Debates over the merits of UI benefit extensions focus on the program costs – which include both the dollar value of extra benefits distributed to those eligible and the efficiency cost of job search disincentives¹⁷ – and the direct benefits to UI recipients without alternative income sources. This *brief* suggests that these debates miss an important indirect benefit of UI extensions: increased efficiency due to delayed, and perhaps averted, disability benefits. While the analysis finds that UI extensions do not reduce SSDI costs on average, UI extensions provide recipients with more incentive to find a job than they would have had while receiving permanent disability benefits. This effect could defray some of the long-run cost to the SSDI system. Ignoring these indirect benefits has likely led to fewer, shorter, and more controversial UI extensions than a more complete accounting would suggest.

Endnotes

1 Autor and Duggan (2006).

2 The Department of Labor's annual report, *Comparison of State Unemployment Insurance Laws*, provides more information on UI eligibility and receipt. Data from the 2010 report were used to calculate individuals' UI benefits and duration, as well as the dates of federal emergency extensions and each state's automatic triggers in the Extended Benefits program.

3 For example, the Emergency Unemployment Compensation Program of 2008 initially added 20 weeks, plus an additional 13 weeks if the state unemployment rate was sufficiently high; after October 2009, all states received 34 weeks (Tiers 1 and 2), plus another 13 (Tier 3) to 19 weeks (Tier 4) if the state unemployment rate exceeded certain levels.

4 Those with lower incomes may qualify for a separate program – Supplemental Security Income (SSI). Working-age individuals are eligible for SSI only if their income and wealth fall below eligibility thresholds and they satisfy a similar disability screening to SSDI. Many SSDI applicants also apply to SSI concurrently, if their resources are sufficiently low. This analysis does not distinguish between SSDI-only and concurrent applications, though Coe et al. (2011) find that SSDI-only applications are much more responsive to UI duration than applications for both programs together.

5 If an application is denied at the initial determination, the applicant has the option to appeal the decision.

6 For a detailed discussion of the methodology and results presented here and throughout the *brief*, see Rutledge (2011).

7 The disability application data come from the SSA's 831 File; the earnings data come from both the SSA's Summary Earnings Record and the IRS' Detailed Earnings Record. The 2008 SIPP panel will be matched to the SSA and IRS datasets, including the 2008 and 2009 calendar year disability activity, in fall 2011. Approximately 88 percent of SIPP respondents over age 15 provided valid Social Security numbers and were successfully matched (Abowd, Stinson, and Benedetto 2006).

8 An individual has lost a job in month t if he worked all weeks in month $t-1$, less than the full number of weeks in month t , and no weeks in month $t+1$. Individuals may have more than one jobless spell. The individual's spell is right-censored if he finds a new job, but a subsequent job loss would put him back in the sample a second time. Most individuals have only one spell during the SIPP – the sample includes 33,385 spells for 28,728 unique persons.

9 This sub-sample includes 4,775 out of the 28,601 unique individuals in the full sample. The results for the full sample are similar, though smaller in magnitude and somewhat less likely to be statistically significant; this difference is to be expected, given that the full sample includes individuals without work limitations for whom disability application is a less viable option.

10 In this sample, approximately 58 percent of jobless spells end with the individual finding a job while they are still part of the SIPP panel, while 4.5 percent of UI recipients in the sample apply to SSDI within 48 months; the remaining individuals neither find a job nor apply to SSDI. All other outcomes, including applying to SSI, losing eligibility for SSDI, dropping out of the SIPP mid-panel, or reaching the maximum of 48 months after job loss, are considered censored. The outcome in the last month for censored observations is the baseline outcome of continued search.

11 Among those whose benefits were not extended before expiring, the probability of applying to SSDI also spikes in the month that UI expires, to 1.2 percent, but this level is not statistically different from months after UI eligibility.

12 In addition, those without health insurance who apply for SSDI are significantly more likely to have their application denied.

13 An additional advantage of the state-level analysis is that the data are more current and therefore include the current recession and recovery, unlike the individual-level data. The 2007-2011 period is especially interesting given the length of the UI extensions and the unprecedented growth in disability applications.

14 A challenge to state-level analysis, though, is that it requires more careful consideration of *when* the effect of UI extensions on the application and allowance rates should be observed. First, the state-level analysis assumes that all determinations are made on four-month-old applications, representing the median waiting time after application (U.S. Social Security Administration, Office of Inspector General 2008), but the waiting time varies from person to person. Second, initial UI benefits and, thus, extensions, are received by individuals who started receiving benefits at different times in states with different eligibility periods, so recipients receive and exhaust their benefits on a rolling basis. The state-level analysis is limited to separating periods where all UI recipients have extended benefits from periods where some recipients will have exhausted even those extended benefits. The individual-level analysis is able to account for both waiting time and the remaining duration of UI benefits directly.

15 See, for example, Rupp and Scott (1998).

16 A longer extension, up to 26 weeks, also increases SSDI and Medicare costs relative to no extension, but by almost the same amount (that is, no change from a 13-week extension).

17 Meyer (1990); and Maestas, Mullen, and Strand (2011).

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