

Unemployment Benefit Design for Behavioral Workers
Proposal for the Center for Equitable Growth, April 2012
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What is the optimal design of unemployment insurance? Under some simple assumptions, the replacement rate of unemployment benefits should be constant over the duration of the unemployment spell, to allow for consumption smoothing, or slowly decreasing over time (e.g., Hopenhayn and Nicolini, 1997). Unemployment benefits in most Western countries such as the United States or Germany bear some resemblance to this structure, with a constant replacement rate over some period (followed then by a sharp drop-off at benefit exhaustion).

This set of results, however, does not take into account two widely-documented behavioral features: self-control problems and loss aversion (reviewed for example in DellaVigna, JEL 2009). If workers have self-control problems, they may delay job search up until the point of benefit exhaustion. Unemployed workers with self-control problems would benefit from a deadline, for example in the form of a stepwise decrease in the replacement rate. In a hypothetical example, compare a standard benefit system with a constant replacement rate of 70% over the unemployment spell with an alternative system in which the replacement rate of 80% decreases to 60% after two months. The expected benefit pay-out may be very similar in the two programs, but the step-wise decrease provides a commitment device for the unemployed workers to search more intensively. In addition, this decrease would also motivate workers with loss-averse preference to search harder. To the extent that the reference point is an average of past earnings, the drop from 80% to 60% proves particularly painful, inducing more search in advance of this drop.

In a project with Johannes Schmieder (at Boston University) I propose to consider how self-control problems and loss aversion lead to a different design of unemployment benefits. In particular, this design may benefit workers and at the same time shorten the duration of unemployment. In particular, we want to investigate if it might be possible to shorten unemployment durations while keeping the insurance value of UI benefits the same, thus effectively reducing the 'moral hazard' from providing UI benefits. We believe that the focus on finding new ways to hasten the exit from unemployment is timely given the high recent unemployment rate in the United States and in several Western countries.

But is a redesign of unemployment insurance along these lines possible? Several European countries indeed offer benefits with a step-wise decrease along the duration of the spell: among these, Sweden, Netherlands, Spain, and several Eastern European countries. Interestingly, however, we are unaware of any comprehensive evaluation of the impact of such systems, as compared to systems with a constant replacement rate.

We propose to evaluate such systems, and relate the estimates to the predictions of the behavioral models outlined above, as compared to the predictions of standard models. We do so with a simple design which takes advantage of the presence of a ceiling for the level of benefits. For the sake of example, consider the case of Sweden, one of the countries which we are considering. Starting from March of 2007, Sweden offers a

replacement rate of 80% of the previous salary for the first 200 days, and 70% for the next 100 days. In addition, the unemployment benefits are subject to a fixed daily cap of 680 daily SEK. This design implies that workers who, before losing their job, earned less than a threshold ($680/.8$) witness a 14 percent decrease in benefits between the first 200 days and the next 200 days. Workers earning more than a threshold ($680/.7$), however, do not face any such discontinuity in pay at 200 days of unemployment, as their benefits are capped at 680SEK. Hence, we can compare the duration of unemployment for two similar cohorts of workers, one of which experiences a step-wise decrease, and another which does not. This allows us to estimate the impact of the decrease, in particular also leveraging the comparison for the same groups to their outcomes before the reform, when the replacement rate was constant.

If workers are loss-averse and have self-control problems, the workers which face the stepwise decrease will exert substantially more effort and will be less likely to be unemployed by day 200. The effect will be muted in the standard model. The Sweden example allows for an additional evaluation of this policy using another policy change taking place in 2001 according to which the cap itself was set at a higher level in the first 100 days of unemployment than in the later days of unemployment. The advantage of this second design is that here it is the higher-earning group which faces a stepwise decrease, the converse of before.

We propose to obtain administrative data from Sweden, for which we have preliminary contacts, as well as for potentially other countries, to evaluate the impact of such stepwise decreases of unemployment benefits on the duration of unemployment. A calibrated model of loss-averse unemployed workers with a search effort and reservation wage decision suggests that the effect of stepwise decreases of benefits on the survival from unemployment can be sizeable compared to the case of workers with standard preferences, allowing for an empirical test of the behavioral model versus the standard model.

The ultimate target of this project is to examine whether a redesign of unemployment benefits with stepwise decreases could be beneficial, as a model of workers with non-standard preferences suggests. Given the political pressure to limit the expenditure on unemployment benefits, the findings from this paper may suggest a more effective way to use a given budget to achieve a shorter duration of unemployment without hurting the welfare of workers, and in fact possibly enhancing it by providing a commitment device. This would be an example of a nudge policy à la Thaler and Sunstein, and the first such example in labor market to our knowledge. We believe that this focus is in line with the objectives of the Center for Equitable Growth.