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Notes on unemployment insurance and behavioral economics

The rapidly expanding literature on behavioral economics may have important implications for unemployment insurance (UI) policies as well as other public policy issues. So far, however, there seems to have been relatively few applications concerning UI policies. In this note I mainly discuss two strands of research that have appeared in the literature, namely time-inconsistent preferences and over-optimism.[1]

Time-inconsistent preferences

The standard model of job search is a model where the worker is forward looking and discount future utilities at a constant rate (also known as exponential discounting). In this model, there is no conflict between short-run and long-run preferences. Preference for option A at some future time 't' over option B at time 't+x' implies a preference for A over B at all future dates. Preferences are time consistent.

Experimental evidence suggests that discounting is steeper in the short run than in the long run. People may prefer 'one apple today to two apples tomorrow' but few would prefer 'one apple in one year' to 'two apples in one year plus one day'. Preferences are time-inconsistent if people initially opt for 'the two apples in one year plus one day' option but prefer 'one apple today' when a year has passed. Current preferences are inconsistent with future preferences.

Time-inconsistent preferences are frequently modeled by means of so-called hyperbolic discounting which allows current discounting to differ from future discounting. In these models, individuals attach extra weight to current utility compared to future utility; individuals have present-biased preferences or are myopic. One may also think of such preferences as reflecting impatience.

Theoretical and empirical works on job search with hyperbolic discounting are provided by DellaVigna and Paserman (2005) and Paserman (2008). The models are standard partial equilibrium search models where agents have two decision variables, namely search effort

[1] Relevant references include Babcock et al. (2012), Congdon et al. (2011) and Huizen and Plantenga (2010).

and the reservation wage. It is found that an increase in impatience reduces the present value of investing in search and therefore leads to lower search effort which tends to increase the length of unemployment. On the other hand, higher impatience implies lower reservation wages which tends to reduce the duration of unemployment; once a wage offer is received, more impatient individuals prefer to accept what they already have. The net effect of impatience on the duration of unemployment is therefore ambiguous. DellaVigna and Paserman (2005) find in their empirical analysis that measures of higher impatience are negatively correlated with search effort and exit rates from unemployment. The effect on reservation wages is close to zero.

Paserman (2008) offers estimates of the degree of hyperbolic discounting and finds evidence of a substantial degree of hyperbolic discounting (i.e. impatience) among low and medium wage workers but only a moderate degree of impatience among high wage workers. The estimates are used in various UI policy experiments, including welfare calculations. Welfare is evaluated from the perspective of the long-run self. Results are presented for the model with hyperbolic preferences as well as a model with exponential discounting. The results are largely similar across the two models, with one striking exception. A policy involving monitoring of job search is much more welfare-improving with hyperbolic discounting than with exponential discounting. Hyperbolic workers search less actively than what is optimal from the long-run self's perspective and policies that encourage more intensive search is welfare improving.

Over-optimism

The standard assumption in the literature on optimal UI design is that individuals have unbiased beliefs about their employment prospects so that perceived expected utility coincides with true expected utility. There is some evidence, however, that the unemployed substantially overestimate how quickly they will return to work (see Spinnewijn 2015 and references therein). As a consequence of this optimism-bias, the unemployed search and save too little and deplete their assets too rapidly. The worker maximizes perceived expected utility.

A paternalistic social planner maximizes the worker's true expected utility. Spinnewijn (2015) studies how the optimal policy will be affected if workers have biased risk perceptions. With too optimistic beliefs about job finding, workers underestimate the risk of becoming long-term unemployed and will be less responsive to future incentives. The planner can therefore

offer more insurance to the long-term unemployed without much adverse incentive effects. Under some conditions, the optimal policy may involve *increasing* benefits over the unemployment spell.

Hard and soft duration constraints

Recent empirical work on Norwegian data by Roed and Westlie (2012) offers interesting results concerning the impact of time limits and sanctions in UI benefit receipt. Benefit sanctions cause an increase in exit rates but the *harshness* of the sanction seems to matter very little. That is, the impact is largely the same if the sanction is hard (involving complete benefit termination) or soft (involving small benefit cuts or cuts for short periods). The authors also find evidence of myopic search behavior; exit rates from unemployment increase markedly just before UI exhaustion.

It is not clear how one should interpret the harshness irrelevance result through the lense of standard theory. It remains to be seen if insights from behavioral economics can explain the findings.

Concluding remarks

Behavioral economics have offered lots of insights that may well have a lasting impact on public policy evaluation in many areas. Time-inconsistent preferences are probably a salient feature of individual behavior and provide yet another case for monitoring of job search.[2] Regarding over-optimism concerning job finding, I am not sure how robust the empirical evidence is. More research on this issue would be valuable.

All in all, behavioral economics is likely to stimulate new research on UI policies based on more realistic assumptions than the conventional ones. At this stage, however, there are relatively few results that can be used in policy design.

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[2] The case for monitoring and sanctions can also be made in models with standard exponential discounting; see Boone et al. (2007).

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