Unemployment insurance benefit levels and consumption changes

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Abstract

We use a Canadian survey of the unemployed to examine how household expenditures after a job loss respond to the level of income replacement provided by UI. We isolate a liquidity constraint or 'transitory income' effect from the 'permanent income' shock of job loss, and from the costs of working. We find significant effects of varying the replacement ratio among the third of the sample who did not have assets at the job loss. We conclude that the consumption smoothing benefit of UI is concentrated wholly on a sub-group of the unemployed. © 2001 Elsevier Science S.A. All rights reserved.

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1. Introduction

Should governments provide unemployment insurance and, if so, what should the provisions be? There have been numerous studies of the costs of unemployment insurance (UI) in recent years but fewer attempts to measure the benefits.

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Households may benefit from UI in several ways. The '*consumption smoothing*' benefit of UI is realized by liquidity constrained households that have temporarily low income and are not able to set their current consumption at a level consistent with their expectations of the future. The '*insurance*' benefit of UI arises because UI, like a progressive tax,[1] reduces the variance of stochastic outcomes. That UI has an '*insurance*' benefit requires only that households be risk adverse and not otherwise fully insured against idiosyncratic shocks; in particular, borrowing constraints are not a necessary condition. The '*consumption smoothing*' benefit of UI is often thought to be the most important potential benefit of UI,[2] and it is this benefit which is the focus of this paper.

We use a new Canadian panel data set to examine household expenditure changes across a job loss and how those changes vary with the level of replacement income provided by UI. Household expenditure changes with unemployment confound three things: the costs of working (changes in expenditure due to the non-separability of consumption from labor supply), a response to the 'permanent income' shock of job loss, and, a response to 'transitory income'. Responses to transitory income are informative about the 'consumption smoothing' benefit of UI. Specifically, if households respond to marginal changes in 'transitory income' then they are not on their optimal consumption path, and marginal actuarially fair increases in UI replacement income (that increase current income and lower future income) raise household welfare, moving the household towards that optimal path.

The form of our test will be to see if differences in the UI replacement ratio across a sample of households experiencing unemployment correlate with differences in the reported expenditure change from before the beginning of the unemployment spell. There is no variation in labor force status *across* our sample, so our test is not confounded by non-separability between consumption and labor supply. Consequently, to isolate a 'transitory response' the main econometric problem we have is that across our sample the UI replacement ratio is plausibly correlated with the permanent shock from a job loss. To overcome this we use rich controls for the permanent shock. We can also test that we have 'purged' the UI benefit of its 'permanent' component by performing an exogeneity test using instruments that are based on the 'quasi-experiment' afforded by two sets of legislative changes (and one administrative change) to the Canadian UI system over our sample period. These instruments are correlated with the temporary loss of income but not with the permanent shock of job loss.

Of the small literature on the benefits of UI, this paper is most similar to Gruber (1997). Our work differs from Gruber's in several important ways: we use a different measure of expenditure (total, rather than food), a different source of

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[1]See for example, Varian (1980).

[2]For example, Gruber (1997) writes that 'The primary benefit of UI is the ability of government to smooth consumption during unemployment spells'.