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FORECASTING INCIDENCE OF WORK LIMITATIONS, DISABILITY INSURANCE RECEIPT, AND MORTALITY IN DYNAMIC SIMULATION MODELS USING SOCIAL SECURITY ADMINISTRATIVE RECORDS: A RESEARCH NOTE

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In examining a number of important research questions related to the reform of the Social Security program, it is helpful to understand patterns of participation in the Disability Insurance (DI) program. DI beneficiaries comprise a large fraction, approximately 15 percent, of the pool of workers who receive Social Security benefits. They are a particularly vulnerable group in later life, with poverty rates more than twice as high as those for recipients of retirement or survivor benefits from Social Security. Those who receive DI also have very different mortality experiences than those who do not, so careful modeling of the overlap between mortality and disability is essential when trying to determine the lifetime distributional consequences of Social Security reform. In addition, the larger disabled population, consisting of those who report work limitations but do not necessarily receive DI benefits, is also at higher risk of poverty and death than those who do not report work limitations.

This paper explores these important intersections by presenting estimates from multivariate analyses of self-reported disability status, reports of DI participation from administrative data, and observed mortality. The authors use data from the 1990 through 1993 panels of the Survey of Income and Program Participation (SIPP) matched to the Social Security Administration's Summary Earnings Records (SER), Master Beneficiary Records (MBR), and Death Master File (from the Social Security number identification file, or Numident). Using these data, the authors are able to provide updated parameters to replace estimates found in simulation models, particularly the Urban Institute's Dynamic Simulation of Income Model (DYNASIM).

This use of administrative data allows the author to improve upon several previous studies, as research consistently demonstrates that self-reports of earnings and disability benefit receipt are unreliable. Individuals often round up or down when reporting their earnings, particularly if they are asked about the distant past, and they frequently misreport social insurance and social assistance benefit types because they misunderstand the reasons that they receive benefits.

The author first estimates a model for entry into work limitations; that is, reporting a work limitation this year given that one did not report a work limitation last year. She finds that coefficient estimates for entries and exits from work limitations based on SIPP data are consistent with patterns from the literature. Coefficients are also fairly similar for men and women. For both sexes, the chance of acquiring a work limitation tends to increase with age and decline with education. Marital status appears to be an important predictor of work limitations entry, with never married and divorced or separated adults more likely to enter disability than those who are married.

The second set of models estimate the probability of entry into DI given that one was not receiving DI last year, conditioned on eligibility. The author finds that DI entry is significantly associated with age with older persons more likely to enter than younger ones, though this plateaus with the reference group (persons aged 61 to 67). Also, having less than a high school education is positively associated with claiming DI benefits. Race, specifically being non-Hispanic black, also has significant effects on DI claiming among men, but not among women. Marital status appears to have some important effects, with being never married significantly, positively associated with DI take-up, and being widowed is significantly, positively associated with DI take-up.

In the mortality models, the author finds, as expected, that age is a primary determinant of one's probability of dying in the coming year. The results further reveal a very strong effect of work limitations on mortality regardless of sex or the time interval over which mortality probabilities are estimated. Race and nativity were also found to be significantly associated with the mortality risk for men. Namely, blacks have higher death probabilities than persons of other races, and persons born in the U.S. have higher probabilities than those born abroad.

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