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State-Dependent Utility and Insurance Purchase Decisions

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A significant risk that people face during their lifetimes is that of becoming disabled, either early in life when the disability decreases one's earnings capacity, or later in life when custodial care in a nursing facility may be needed. Although many disabilities and/or long-term care episodes are of short duration, an estimated 12 percent of men and 22 percent of women will have nursing home stays of more than 3 years during their retirement. The financial consequences of disability can be enormous for those that lack adequate insurance coverage, including the loss of earnings, the need to pay for a nursing home or other care facility, or the burden imposed on family.

In the case of disabilities leading to work interruptions, the Social Security Disability Insurance (SSDI) program provides a valuable form of insurance against lost income. In contrast to the important role played by SSDI, there is very little social insurance available to cover long-term care expenditures: Medicare covers only short stays following the release from a hospital and Medicaid provides means-tested coverage only to those who qualify under stringent asset and income requirements. Because public insurance in these cases is far from comprehensive, private insurance can play an important role. It is therefore, important to understand drivers of demand for private insurance and how various governmental policies may influence insurance coverage.

Given the risks of disability, the low rates of private insurance for disability and long-term care expenses are contrary to what standard economic models predict. One reason may be that standard economic models of insurance generally assume a utility function that does not vary based on health. However, it is occasionally posited (but infrequently modeled) that preferences might depend on health, which we refer to as "state dependence." Put simply, if people value a marginal dollar less (more) when in a nursing home than when healthy and at home, then they will value long-term care insurance less (more).

It is not obvious whether people will value money more in a healthy or less healthy state. On the one hand, it may be that the marginal utility of an additional dollar of consumption is lower if one has a disability, because the individual is unable to enjoy many of the leisure activities on which they would typically spend their money. On the other hand, when an individual faces a need for professional medical care, the marginal utility from being able to afford the care (or better care), may be extremely high. So too may be the utility from being able to afford amenities to compensate for the inability to participate in activities undertaken when healthy—for example, taking taxicabs because one can no longer drive.

In this paper, we use a novel set of survey questions to assess whether there is state dependence, whether and how it varies across the population, and whether it can help explain insurance purchase decisions. These survey questions, which we field in the American Life Panel, essentially ask individuals to

allocate a lump-sum of wealth across various health states. Like most economists, we acknowledge that stated preferences in response to hypothetical questions are not a perfect proxy for true underlying preferences, and thus may lead to a biased estimate of the relation of interest: as such, we urge caution in over-interpreting our results.

We find mean estimates of state-dependence that are consistent with earlier studies showing that individuals tend to value consumption in unhealthy states less than they value consumption in healthy states. However, we show further that this average masks a substantial amount of variation both across people and across types of disability. State dependence appears to be more pronounced when considering disabilities that need long-term care, and more pronounced for mental disabilities rather than physical disabilities. Furthermore, little of the large amount of variation across individuals that we observe is related to standard socio-economic controls, suggesting that models that do not have a direct measure of state-dependence will have difficulty controlling adequately for its presence. Finally, although still in preliminary stages, we find some weak evidence that individual-specific measures of state-dependence are correlated with insurance coverage; those who prefer to allocate resources to states of disability tend to have higher rates of insurance coverage.

The full working paper is available on our website, www.nber.org/programs/ag/rrc/books&papers.html as paper NB13-06.

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