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The Welfare Implications of Increasing DI Benefit Generosity

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Issues in Brief

Executive Summary

Researchers studying the impact of disability insurance (DI) in the U.S. have focused on the impact of program parameters on the costs of the program. What is striking, however, is that there have been no studies that attempt to place a value on the benefits associated with providing DI. The effectiveness of the program depends on how the costs relate to the social benefits. Given its importance and continuing growth, an evaluation of whether the DI program provides adequate insurance against the income losses associated with the onset of severe limitations is overdue. We address this question by evaluating whether workers are currently over or under-insured against career-ending disability. To test which is the case, we simulate the welfare implications of a small increase in the level of payments.

In this *Issue in Brief,* we summarize a study that evaluates the potential impact of a marginal increase in DI benefits. Our simulation allows us to assess the potential costs and benefits. The cost of increasing DI benefits by 1% has two components: the *direct* or *static* cost, and the *indirect* or *dynamic* cost. In short, the direct cost is the cost to the government of the benefit increase itself, while the indirect cost is the cost to the government of changes in people's economic behavior caused by the benefit increase. The extent of these costs and individuals' valuations of the net benefits are estimated using data from the March 1991 Current Population Survey (CPS) and the 1990-1993 waves of the Survey of Income and Program Participation (SIPP). In general, our results suggest that the level of DI benefits is close to its optimal level.

Summary of Major Findings

Direct and Indirect Costs of the Reform

The most obvious direct cost of a 1% increase in DI payments is the cost of the higher payments themselves to current DI beneficiaries. We expect the government to pay an extra $320.7 million in DI benefits to current DI beneficiaries as a result of the benefit increase. However, the total direct cost of the benefit increase is less than this because the increase in DI benefits reduces the cost of other government programs. Since DI benefits are income that counts against DI beneficiaries' eligibility for Supplemental Security Income (SSI) and Food Stamps, a 1% increase in DI can be expected to reduce SSI and Food Stamps payments to current DI beneficiaries by $28.9 million and $0.9 million, respectively.

Furthermore, DI income is taxable, so an increase in DI benefits will increase the revenue the government receives from current DI beneficiaries in taxes. We expect a 1% increase in the generosity of DI benefits to increase federal tax revenues by $4.1 million and state tax revenues by $0.5 million. After subtracting the tax, SSI and Food Stamps savings to the government, we estimate the total direct cost to the government of a 1% increase in the generosity of DI benefits to be $286.3 million.

If the benefit increase had no effect on people's economic behavior, the total cost of a 1% increase in DI benefits would equal its direct cost. But since the higher DI benefits change the economic incentives people face, the benefit increase has indirect costs to the government, too. First, higher DI benefit payments should reduce the work hours, earnings, and tax liabilities of the family members of DI beneficiaries. This is because higher DI benefits will increase the income of the families of current DI beneficiaries, reducing the incentives of family members to work long hours. Assuming that a 1% increase in the generosity of DI payments will result in a 1% decrease in the earnings of wives of male DI beneficiaries but no change in the earnings of husbands of female DI beneficiaries, we estimate the cost to the government of the tax revenues lost as a result of this drop in spousal earnings to be $2.2 million.

Second, an increase in the generosity of DI benefits should cause more people to apply for DI benefits. Results from other studies suggest that a 1% increase in the generosity of DI payments will result in a 0.5% increase in applications for DI benefits. Analysis of data from the 1990-93 SIPP and from Social Security disability determination records suggests that the proportion of these extra applicants who are awarded DI benefits will be approximately equal to the proportion of all applicants who are awarded DI benefits. Consequently, we expect a 0.5% increase in DI applications to result in a 0.5% increase in DI beneficiaries. We estimate the cost to the government of paying DI benefits to these extra beneficiaries to be $89.7 million.

These extra DI beneficiaries will face work restrictions as a condition of receiving DI benefits. Indeed, the vast majority of DI beneficiaries do not work at all. Therefore, these extra DI beneficiaries will work fewer hours, earn less income, and pay fewer taxes than before. We estimate that these lost tax revenues will cost the government an additional $50.9 million. With a general net loss of income as a result of reducing work hours or

leaving work altogether to receive DI, these extra DI beneficiaries will become more eligible for Aid to Families with Dependent Children (AFDC), SSI, and Food Stamps. We expect the cost of these extra DI beneficiaries through these programs to be an additional $0.2 million. As a result, the total cost to the government of extra beneficiaries attracted to DI by the benefit increase is $140.8 million.

Between the attraction of extra beneficiaries to the DI program and the reduction in work hours, earnings, and tax liability of the spouses of DI recipients, the total indirect cost of a 1% increase in the generosity of DI payments is $143.0 million. This, along with the $286.3 million in direct cost, adds up to a total cost of the benefit increase of $429.3 million. Note that the total cost is 1.5 times the direct cost. This implies that increasing the incomes of current DI beneficiaries by $1 has a cost to the government of $1.50--$1 to increase the beneficiaries' incomes, $0.50 as a result of the side effects.

Representative Workers' Willingness to Pay

On its face, this analysis suggests that the DI program, or at least expanding the DI program, is inefficient and undesirable. However, this is not necessarily the case because people are *risk averse*. In the absence of DI, people face dramatically lower incomes in the event of being disabled than in the event of not being disabled. As a result, the risk of disability to most people is a risk of having to survive on a considerably lower income than that which they otherwise would have earned. DI reduces this financial aspect of the risk of disability by acting as an insurance program that redistributes income from the event of not being

less inclined to support higher DI benefits, considering only their own financial outcomes.

Analysis using data from the March 1991 CPS and the 1990-93 SIPP suggest that the latter effect is dominant and that self-interested support for DI expansion should be lower among more educated people. The average person with a high school diploma and no college faces a 3.6% probability of becoming disabled. If the generosity of DI payments is increased by 1%, he can expect to pay an extra $3.40 in net taxes in the event of not being disabled and receive an extra $62.96 in net benefits in the event of being disabled. Given this information and assuming a reasonable degree of risk aversion, the average person with a high school diploma and no college would gain from the 1% benefit increase. On the other hand, the average college graduate faces only a 1.2% probability of becoming disabled. A 1% DI benefits increase raises his net taxes in the event of not being disabled by $5.88 and his net benefits in the event of becoming disabled by $68.53. Given a reasonable level of risk aversion, the average college graduate would not gain from an expansion of DI benefits at this cost. More generally, our results show that DI is not a particularly "good deal" for the typical person with more than a high school education.

Life Cycle Incidence for Average Workers

So far, we have only considered how typical workers might be affected by an expansion of DI benefits with regard to the risk of becoming disabled. However, people face many risks other than the risk of becoming disabled, including the risk of becoming poor for reasons other than disability. An increase in the gener-

osity of DI benefits will make the non-disabled poor worse off because the benefit increase will increase the tax burden, however small, on them. If the non-disabled poor are worse off than most of the disabled, individuals may oppose expanding DI and redistributing income from the former to the latter. Consequently, risk aversion might cause people to *oppose* increasing DI benefits. Indeed, our analysis suggests that this is likely to be the case. Using the March 1991 CPS data, we find that, given a consideration of *all* economic risks, including those of becoming disabled or simply poor, people are made worse off by a 1% increase in the generosity of DI benefits. The reason is that DI redistributes income to people in bad economic states (the disabled) from people in even worse economic states (the non-disabled poor).

Incorporating Health Insurance

We have also not considered health insurance and medical expenses in our analysis so far. DI beneficiaries automatically receive Medicare health insurance coverage. As a result, when the benefit increase attracts extra beneficiaries to the DI program, it increases the number of Medicare beneficiaries, too. The cost to the government of these extra Medicare beneficiaries adds $45.3 million to the indirect cost of a 1% increase in the generosity of DI benefits. With this extra indirect cost, the total cost to the government of increasing the income of DI beneficiaries by $1 increases from $1.50 to $1.66. This change does not substantially affect our conclusions about whether typical workers would be willing to trade lower take-home pay for higher DI benefits.

However, considering medical expenses does notably affect our conclusions about how exposure to other risks affects the

attractiveness of a benefit increase. Despite Medicare coverage, the disabled have much higher out-of-pocket medical expenses than the non-disabled. As a result, the disabled are not as much better off in terms of disposable income than the non-disabled poor as our initial analysis implied. In this light, people are not as likely to take the risk of becoming one of the non-disabled poor much more gravely than the risk of becoming one of the disabled, and so it becomes less important to them that DI redistributes income from the former to the latter. Repeating our analysis with health insurance and medical expenses included in consideration, we find that people are, on average, made only slightly worse off by a 1% increase in the generosity of DI benefits. The sensitivity of our results to relatively small changes in the analysis suggests that the level of DI benefits is not too far from the optimal level.

Conclusion

In this brief, we consider the welfare implications of increasing the generosity of increasing Disability Insurance (DI) benefits. We use data from the March 1991 Current Population Survey (CPS) and the 1990-93 waves of the Survey of Income and Program Participation (SIPP). We find that the cost to the government of increasing the after-tax incomes of DI recipients by $1 is $1.50 due to the effects that the benefit increase will have on the behavior of DI beneficiaries and their families and of potential DI applicants. This figure increases to $1.66 when we include health insurance and medical expenses in our analysis. Due to risk aversion, we find that typical workers are made better off by an increase in DI benefits despite this inefficiency because DI reduces the risk of having to survive on a low income in the event of becoming disabled. However, when other risks, such as the risk of becoming poor but not disabled, are included in our analysis, we find that people are not made better off by an increase in DI benefits. Our results do suggest that the level of DI benefits is close to its optimal level.

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