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**The Effectiveness of Financial Work Incentives in DI and SSI:  
Lessons from Other Transfer Programs**

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## **Abstract**

The Disability Insurance Program (DI) and the Social Security Insurance Program (SSI) are the primary cash transfer programs for the disabled. We compare the potential outcomes of using financial inducements as a means to increase the work incentives to those who are on DI, and earnings replacement program, or SSI, a means-tested transfer program not tied to previous work experience. Our assessment of the existing research on work incentives in programs for the nondisabled leads us to urge caution in relying on simple financial inducements as means of work-incentive reform without further, concrete evidence of their effectiveness.

## **The Effectiveness of Financial Work Incentives in DI and SSI: Lessons from Other Transfer Programs**

### 1. INTRODUCTION

The major programs for the disabled in the United States, the Social Security Disability Insurance (DI) program and the Supplemental Security Income (SSI) program, are each intended to provide income support to individuals who have a disability that prevents them from engaging fully in productive labor force activity. As originally enacted, both programs based eligibility not only on evidence of a disabling condition but also on low earnings. Recent experience has shown that the disabled are capable of at least some productive labor force activity and, as such, that basing eligibility on low earnings may provide work disincentives to existing recipients or even discourage some of the genuinely disabled from applying for benefits in the first place. This development has led to changes in the rules governing earnings receipt in both programs designed to encourage work. Additional programmatic changes have been proposed that are designed to increase work incentives even more.

In this paper we assess the implications of existing research on work incentives in programs for the nondisabled for the likely effectiveness of the current and proposed work-incentive provisions in disability programs. Although there has been relatively little research on work effects in DI and SSI, there has been a tremendous amount of research on the work incentives of transfer programs for the low-income population, such as Aid to Families with Dependent Children (AFDC) and the Food Stamp program (FSP), and even a small amount of research on the work-incentive effects of Medicaid. The relevance of this literature comes not so much from its rather large body of empirical evidence on the responsiveness of the low-income population to work-incentive provisions—since the responsiveness of the disabled may be quite different—as from the lessons that have been learned about the way in which work-incentive provisions operate and what their effects, both intended and unintended, might be. We

shall argue that there are a number of important insights from this research literature that have implications for existing work incentives and proposed work incentive reforms in DI and SSI.

In the next section of the paper, we discuss the major transfer programs for the low-income population in the United States, what the work-incentive effects of these programs are generally presumed to be, and what the empirical evidence suggests on the effects of current work-incentive rules and of past and proposed changes in those rules. In the third section, we provide a parallel discussion of DI and SSI, and draw lessons for those programs from the literature on nondisability programs. We discuss the probable effects of both existing and proposed work-incentive provisions. In the final section of the paper, we draw policy conclusions.

## 2. TRANSFER PROGRAMS FOR THE NONDISABLED

In our discussion of nondisability transfer programs, we will focus on income-conditioned programs for the nonaged, and therefore exclude both Social Security and unemployment insurance from our survey. Instead we concentrate on the AFDC program, the FSP, and Medicaid.

### 2.1 Description of Program Rules

The AFDC program currently provides cash benefits to families with dependent children, where a “dependent” child is defined as a child living in a family with only one parent or with an unemployed parent.<sup>1</sup> Most AFDC families are headed by women with no adult male present, although the unemployment provision permits some families to receive benefits where both parents are present. In families where income and asset conditions for eligibility are met, an adult's earnings, if any, are taken into account in calculating the amount of the benefit, which also varies by family size. First,

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<sup>1</sup>The rules described in this section can be found in the 1994 *Green Book* (U.S. House of Representatives 1994).

earnings that cover work-related expenses are allowed, up to a certain maximum, without any reduction in benefits, as are earnings that cover child care expenses, up to a maximum. In addition, for the first 4 months of earnings after joining the program, a deduction from income of one-third of earnings above work-related expenses plus \$30 is allowed. The marginal tax rate (MTR) on earnings is thus 67 percent for earnings beyond deductions. The one-third disregard is eliminated after 4 months of earnings, leading to a 100 percent MTR on earnings above deductions.<sup>2</sup> In addition to these provisions, the AFDC program imposes a maximum on the gross income a family can receive from all sources, earned and unearned; if income exceeds these amounts, eligibility ends. An increase in earnings which pushes family income above these maximums thus results in an MTR exceeding 100 percent.

The AFDC program provides extended, or “transitional,” child care benefits to families who have been made ineligible for benefits because of increased earnings. Child care subsidies are provided for up to 12 months following the date of exit from the rolls. These provisions can be thought of as lowering the effective MTR on earnings.

The Food Stamp program provides food coupons to all families, with or without children and regardless of marital status, who have income and assets below defined amounts. In computing benefits for families with earnings, a standard deduction is allowed as well as a deduction of 20 percent of earnings and deductions for child care and shelter expenses up to certain maximums. Earnings above these deductible amounts reduce benefits by 30 cents per dollar, leading to a 30 percent MTR.

However, as in the AFDC program, families are made ineligible if income rises above certain limits.<sup>3</sup>

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<sup>2</sup>The \$30 flat deduction is eliminated after 12 months of earnings. Both the 12 months of a \$30 deduction and the 4 months of the one-third deduction can be reestablished after a period of a year, provided that the recipient has gone off AFDC and come back on in the interim. Also, some states use a payment method called “fill-the-gap,” which permits a disregard of earnings entirely up to a certain maximum, after which the tax rates noted in the text are applied.

<sup>3</sup>Unlike the AFDC program, the FSP has two maximums, one on gross income and one on net income (i.e., income after deductions). A family loses eligibility if either maximum is exceeded.

This leads to a 100 percent MTR at the point at which earnings push a family above one of the maximums.<sup>4</sup>

Historically, the Medicaid program has provided subsidized or free medical care mainly to families receiving AFDC benefits (or SSI benefits). The types and amount of medical care for which an AFDC family is eligible are independent of its income or benefit amount, and thus the tax rate on Medicaid benefits is implicitly zero as long as the family is on the AFDC rolls. Until recently, eligibility for Medicaid was lost in its entirety when a family left AFDC, generating an MTR of over 100 percent on increased earnings at that point. However, Medicaid eligibility is currently not as closely tied to AFDC receipt as it once was. Many states have a Medically Needy program, for example, which provides Medicaid benefits to families who are below somewhat higher income and assets limits than those for AFDC or who experience heavy medical expenses that push them below those limits. In addition, recent federal legislation has extended Medicaid eligibility to some children and pregnant women in families who are not on AFDC but whose income is below 133 percent of the federal poverty line. Finally, transitional Medicaid benefits are available to families who leave the AFDC rolls because of increased earnings for up to 12 months following exit from the rolls. These provisions, taken together, can once again be thought of as effectively lowering the MTR faced by women leaving AFDC.

Cumulative marginal tax rates for families receiving multiple programs can be quite high (Keane and Moffitt 1991; Giannarelli and Steuerle 1994). In many states, recipients who work part-time at the minimum wage rate have lower disposable income than they would have if they were not to

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<sup>4</sup>Also note that the AFDC benefit is included in countable income for those FSP recipients who are also on AFDC. This inclusion tends to lower the cumulative MTR below what it would otherwise be for those who are on both programs, since an increase in earnings generally reduces the AFDC benefit, which therefore increases the FSP benefit. In simple cases, the cancellation is complete: a \$1 increase in earnings lowers the AFDC benefit by \$1, so countable income in the FSP is unchanged and hence the FSP benefit is unchanged.

work at all, implying an average tax rate of over 100 percent. Average tax rates between no work and full-time work at the minimum wage are between 70 and 80 percent nationwide and exceed 100 percent in some states.<sup>5</sup> Aside from the Medicaid notch, which can cause high tax rates alone, separate notches are created for AFDC and the FSP. In addition, payroll and income taxes generally raise the cumulative tax rate, since they are only partially (that is, not fully) deductible in the programs.

In the 1980s and 1990s, most of the policy interest in these programs has centered on employment and training programs for welfare recipients instead of on financial inducements to work (the major current program of this type is the JOBS program in AFDC). Such programs can be mandatory or voluntary. Mandatory work programs necessarily increase work effort among those recipients whose participation is required, obviously, but voluntary work and training programs provide work incentives through the prospect of increased future earnings or employability. If future earnings and employability are increased by participation in such a program, the effective MTR (taking into account future earnings) is lowered even if the current, nominal MTR is 100 percent.

Our paper is mainly concerned with the effectiveness of financial incentives rather than with the efficacy of work, employment, and training programs. However, we will discuss the policy merits of both in our final section.

## 2.2 Expected Effects of Work-Incentive Provisions

The framework within which work incentives of welfare program tax rates are generally analyzed is the conventional labor-leisure model. That model uses the assumption of utility maximization to justify the common-sense presumption that individuals trade off the amount of take-home income they would have for different levels of hours of work with the desire for and difficulty

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<sup>5</sup>We have not discussed the MTR arising from participation in public and subsidized housing programs because there has been too little research on their effects. Keane and Moffitt (1991) provide estimates of these MTRs.

involved in that work. As an empirical matter, the model implies that the choice of how much to work is partially based upon how much take-home income is gained by working various amounts—or by how much is gained by working less, in the case of some transfer programs.

The model is illustrated in Figure 1, which shows the budget constraints for welfare programs with different tax rates. In Figure 1, segment ACDE, with slope equal to the hourly wage rate, applies to individuals off welfare. Segment BC applies to women on welfare if the tax rate is 100 percent. Segment BD applies to women on welfare if the tax rate takes on a value  $t$ , which is less than 1. The theory implies that an individual will work less on welfare than off welfare, whether segment BC or BD applies.

A major focus of attention in the research literature has been the effects of a reduction in the tax rate on work effort. Perhaps surprisingly, the research literature does not yield a clear verdict on whether work effort would go up or down as a result. The arrows in the figure illustrate the types of responses that might occur from a shift from segment BC to BD. For individuals initially on welfare and not working (that is, initially at point B), the reduction in the tax rate may encourage the type of movement shown by arrow 1, reflecting an increase in work effort. Unfortunately, some individuals who were initially ineligible for welfare and were hence initially off the welfare rolls are made eligible by the reduction in  $t$ ; some of these women will go onto welfare and reduce their work effort, as illustrated by arrow 2 in the figure. In addition, some individuals who are ineligible for benefits even at the new, lower tax rate may take advantage of the financial inducement to combine welfare and work by reducing their work effort enough to become eligible for benefits, as illustrated by arrow 3.<sup>6</sup>

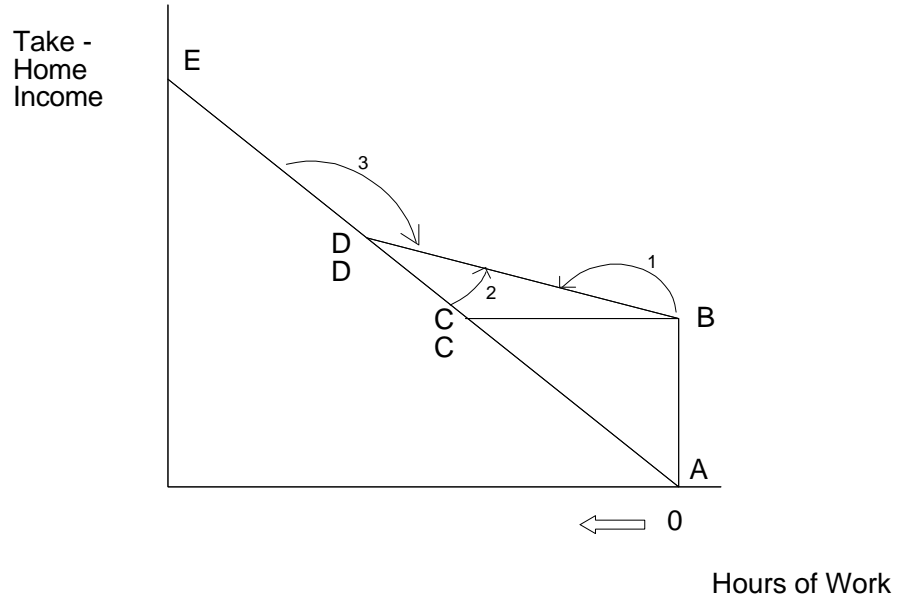
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<sup>6</sup>Another possible response can occur if initially there are individuals along segment AC who are eligible for benefits but do not receive them either because of a stigma associated with AFDC receipt or because the “hassle” and other costs of applying for and receiving benefits outweigh the benefits of the potential payment. A reduction in  $t$ , which increases potential payments, may induce some of these women to go onto welfare after all, with an associated reduction in work effort.

It should be noted that the welfare program caseload unambiguously rises. Providing work incentives by lowering the tax rate increases the caseload.



**Figure 1**  
**AFDC Budget Constraints with Different MTRs**  
**(BC: MTR = 0, BD: MTR =  $t > 0$ )**



The net effect of the reduction in the tax rate is thus ambiguous in direction, and could be positive or negative on the overall level of work effort. It is even theoretically possible that 100 percent tax rates result in the *greatest* amount of overall work effort in the low-income, eligible population. This would occur if any reduction in  $t$  below this level induced large numbers of individuals to come onto the rolls and work less than they had been working off the rolls.

The possibility that large numbers of eligibles would rush onto the welfare rolls if the tax rate were lowered seems implausible in many circumstances. However, the same end result would occur even if entry rates onto welfare were completely unaffected by the level of the tax rate, but if exit rates were affected. Even if individuals joined the rolls only because of unforeseen job losses, adverse health events, or other unplanned changes in household structure (for example, divorce), the likelihood that they would leave the rolls after going on would be reduced by a low tax rate. There may be many welfare recipients who would, for example, ordinarily leave the rolls to take a full-time low-wage job if the tax rate were 100 percent, but who would choose to stay on the rolls and work part-time if the tax rate were lower. After some period of time, some number of recipients would end up working on the rolls who would otherwise have been off the rolls working longer hours.<sup>7</sup>

Whether this possibility has any relevance to actual situations will be discussed momentarily in the context of a discussion of the available empirical evidence. However, even if it is relevant to actual situations, it does not imply that reductions in tax rates below 100 percent are undesirable, only that they must be justified on some grounds other than as a means to increase average work effort. For example, it may be desirable per se to have welfare recipients work, even if this can be achieved only

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<sup>7</sup>In this discussion we have—to a degree—shifted to a model of exit and entry, unlike the static model of our diagrams. In truth, there are continual flows onto and off of the rolls, even in the presence of “fixed” budget constraints, in response both to unforeseen and controllable events (layoffs, health events, etc.) and to conscious decision and purposeful behavior (e.g., leaving the rolls to take a job offer). Purposeful behavior that takes relative income and work incentives into account will result in a long-run equilibrium similar to that portrayed in the static model, as higher fractions of individuals end up in portions of the constraint with higher income.

by broadening the recipient population to include individuals who would otherwise have been off the rolls (they are likely to be low-wage individuals as well, of course). Alternatively, it may be desirable to avoid a division of the low-income eligible population into those who are on welfare and not working and those who are off welfare and working long hours. A reduction in the tax rate which increases the work effort of the former group but reduces it for the latter group may serve to equalize the distribution of earnings and income in the eligible population and lessen polarization. In addition, it may be desirable to have a program that offers income supplements to individuals who work part-time but are still poor (assuming that such work is covered by a low  $t$ ) simply because they are considered to be deserving of assistance, even if by doing so some recipients may reduce work effort from full-time to part-time. Finally, low tax rates may be desirable to avoid underreporting of income and fraudulent work while receiving benefits.<sup>8</sup>

Another possibility is that work while on the welfare rolls provides a welfare recipient with work experience and increased skills, thereby raising earnings ability (that is, the wage rate) and encouraging exit from the rolls in the future. Whether the types of jobs that welfare recipients are likely to have while on the rolls would provide a stepping-stone to permanent self-sufficiency in the job market, or whether such jobs are likely to be high-turnover, dead-end jobs that lead nowhere but back onto the rolls, is an empirical question. However, if this is the goal of the reduction in the marginal tax rate, it could be fairly asked whether job training programs are not a superior method of increasing skills.

Finally, the literature in this area has shown that the same work incentive difficulties that arise with tax-rate reductions also arise when transitional child care and Medicaid benefits are provided

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<sup>8</sup>Although very little is known of underreporting among AFDC recipients, based on anecdotal evidence, many suspect it to be common. One study of 50 AFDC families in Chicago found that all 50 were receiving some form of unreported income (Edin 1991). The general presumption in the literature is that the frequency and magnitude of underreporting of income is positively associated with the level of the tax rate.

(Moffitt and Wolfe 1990). In this case, the provision of such benefits provides an incentive for individuals who leave the rolls to work less than they would have otherwise during the transition period, while also providing an incentive to those who are on the borderline between applying or not applying for benefits in the first place to apply in circumstances where they would not have otherwise because they know that transitional benefits will be available should they go off the rolls. Consequently, transitional child care and Medicaid benefits may have the undesirable effect of actually increasing the caseload and reducing average levels of work effort.

### 2.3 Empirical Evidence

Empirical evidence on the effects of welfare program tax rates on work effort comes from three sources: (1) econometric estimates of tax-rate effects from cross-sectional survey data; (2) estimates from controlled experiments testing a negative income tax; and (3) historical evidence from actual changes in the tax rate in recent decades in particular programs such as AFDC. We will not discuss any evidence on the effect of transitional child care and Medicaid benefits on work effort and the caseload, since those provisions have not been studied. Nor will we review the evidence on the earnings and caseload impacts of welfare employment and training programs, since our review is focused on financial inducements to work.

Cross-sectional econometric estimates of the effect of welfare programs on work effort generally relate differences in hours of work to differences in benefit levels and MTRs among welfare-eligible individuals living in different states with different benefit schedules (Danziger, Plotnick, and Haveman 1981; Moffitt 1992). Most of these studies have examined the effect of welfare on the level of work effort per se, and have found that welfare programs provide some disincentive to work and therefore that work effort would be higher in the absence of the programs. However, only a minority of the studies examined the issue of whether the net effects of a change in the MTR on work effort would be positive or negative; most studies estimated instead the “marginal” effects of changing the MTR

conditional on program participation—that is, the effect of a change in the MTR on hours of work for those on AFDC before and after the change.<sup>9</sup> On this issue, the research studies indicated that there were non-zero, but moderately sized, responses to benefit levels and MTRs—both higher benefits and higher MTRs are correlated with less work effort, assuming the individual is on AFDC before and after the change.<sup>10</sup> Thus, arrow 1 in Figure 1 was found to be significantly positive: when faced with a lower MTR, many AFDC recipients enter the workforce and work.

Three studies reviewed by Danziger, Plotnick, and Haveman did estimate net effects of changes in MTRs, however. Those three (Masters and Garfinkel 1977; Levy 1979; Barr and Hall 1981) found either no net effect of tax rates on work or a “perverse” effect—higher tax rates increase work levels. The explanation given for these findings was that the positive effects on the work effort of initial recipients are canceled out by the negative effects from new entrants and from a decline in the exit rate. Thus these studies suggest that the theoretical possibility discussed above of significant offsetting effects to the work incentives of lower tax rates is, unfortunately, supported by the evidence.

There have been only a few additional studies of the AFDC program since the Danziger, Plotnick, and Haveman review, but those that have provided further evidence in support of weak effects of the changes in the MTR. Moffitt (1983) applied more advanced econometric methods to the problem but found, again, essentially no net work effort effect of changes in the tax rate. Keane and Moffitt (1991) incorporated the housing program into a model of AFDC and Food Stamps, and found that changes in cumulative MTRs had very little net effect on work effort. Hoynes (1993), in the first work-

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<sup>9</sup>Technically, these studies estimated the substitution and income elasticities assuming that the budget constraint segment upon which individuals were located did not change.

<sup>10</sup>That is, income elasticities are estimated to be negative and substitution elasticities are positive.

incentive study of the AFDC-UP program, found essentially zero net effects on the work effort of husbands and wives of reductions in the MTR on earnings.<sup>11</sup>

Only a few studies have been conducted on other programs. Fraker and Moffitt (1988) estimated the effects of the Food Stamp program on the work effort of female heads and found, again, that the net effect of MTR reductions was zero. Estimates of the effect of the Medicaid program on work effort have been conducted by Blank (1989), Moffitt and Wolfe (1992), and Winkler (1991). Two of the studies showed rather weak effects of the Medicaid program on work effort while the third showed quite strong effects. However, none of these studies specifically examined the effect of the notch imposed by Medicaid.<sup>12</sup>

The negative income tax (NIT) experiments conducted in the 1970s provided additional evidence on the responsiveness of welfare recipients to welfare programs (Burtless 1987; Kehrer and Moffitt 1981; SRI International 1983). In these experiments, a sample of the low-income population in several cities was selected and its members were randomly assigned either to an experimental group, which received a welfare program with varying benefit levels and MTRs, or to a control group, which was eligible only for the existing welfare system. Estimates were obtained by comparing work effort levels of the control group to those of the different experimental groups with varying benefit levels and MTRs. The results of the experiments showed that an NIT with higher benefit levels than those in the existing AFDC system would reduce work effort of female heads, and that an NIT of any type would reduce the work effort of men and women for whom no existing program was available. The

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<sup>11</sup>Another approach taken to estimating net effects of tax rates has been to simulate those effects from a microsimulation model, applying estimated elasticities from the econometric literature to representative household data bases (Moffitt 1992; Fortin, Truchon, and Beausejour 1993). These studies confirm that lowering tax rates in welfare programs may reduce work effort, depending upon the size of the estimated responses but also the relative numbers of eligible individuals in different portions of the income distribution.

<sup>12</sup>A recent study by Yelowitz (1994) did examine the effects of the Medicaid notch, however, and found that it had negative effects on the probability of working.

experiments also provided estimates of the responsiveness of welfare recipients to changes in benefit levels and MTRs, assuming the individual to be on AFDC before and after the change. The estimates were found to be non-zero, but slightly lower in magnitude than those estimates based on cross-sectional survey data.<sup>13</sup> Unfortunately, the experiments provided little evidence on the net effect of changes in welfare program tax rates. In part, this is because the experiments were not designed to estimate net effects of tax-rate changes because they excluded families with income very much above the break-even level, and hence could not capture effects of tax-rate changes that might arise from that group.<sup>14</sup>

Finally, some studies have been conducted on the effects of two historical changes in the AFDC tax rate—its reduction from 100 percent to 67 percent in 1969, as a result of the 1967 Social Security Act (SSA) amendments, and its increase from 67 percent to 100 percent in 1981 as a result of the 1981 Omnibus Budget Reconciliation Act (OBRA). Early studies of the 1967 SSA amendments examined the changes in employment and earnings among recipients remaining on the AFDC rolls, and hence once again excluded responses from entry and exit and did not estimate net effects (Appel 1972; Bell and Bushe 1975; Smith 1974). Those studies suggested that work effort initially went up among women on the AFDC rolls. However, aggregate data on the AFDC participation rates and work-effort levels of female heads in the United States in the early 1970s, just following the reduction in the tax rate, showed increases in participation rates and decreases in the work effort (Moffitt 1992). Thus, net effects appeared to be zero, and therefore there was no evidence of increased work following the legislation.

The 1981 OBRA legislation was evaluated more formally. The best study was conducted by the Research Triangle Institute (1983), which examined the exit rates and work-effort levels of women

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<sup>13</sup>See Kehrer and Moffitt (1981) for details.

<sup>14</sup>The experiments also excluded eligible nonrecipients, whose responses would also affect the net effect in real-world welfare programs.

initially on the AFDC rolls at the time of the legislation, some of whom were made ineligible by the increase in the MTR. The results of the evaluation indicated that the increase in the tax rate to 100 percent had no discernible work-d discouraging effects on those who were initially on the rolls and working, in the sense that there was no evidence of their having reduced work effort to zero to retain eligibility for benefits. However, the study did find that the exit rate from AFDC increased, consistent with the expected effects discussed previously. Unfortunately, the study failed to gather information on the work effort levels of those who left the rolls following the change, or on the work effort levels of those who failed to apply for benefits following the tax-rate increase, and hence the total effect (that is, the net effect) of the change could not be ascertained. However, once again, subsequent time-series evidence on work effort levels of female heads showed very little effect of the legislation subsequent to the change (Moffitt 1986).

In summary, the empirical evidence in the welfare program literature reveals a consistent pattern of inelastic (that is, weak) responsiveness of work effort to changes in marginal tax rates. Despite MTRs of or in excess of 100 percent, there is very little evidence that reductions in those MTRs would induce any statistically detectable increase in overall hours of work or employment among the low-income population. It is partly a result of this realization by policy analysts and policymakers that efforts in the 1980s to change work patterns among AFDC recipients shifted so strongly toward employment and training programs and away from the use of financial incentives.



### 3. TRANSFER PROGRAMS FOR THE DISABLED

#### 3.1 Description of Program Rules

The primary cash transfer programs for the disabled consist of the Social Security Disability Income (DI) and Supplemental Security Income (SSI) programs.<sup>15</sup> The DI program is a major part of the Social Security program of Old-Age, Survivors, and Disability Insurance (OASDI). It was added in 1957 and is designed to provide partial earnings replacement to all workers under 65 who sustain severe, long-term (typically career-ending) disabilities. All workers covered under Social Security (about 95 percent of the United States workforce) are also covered for DI benefits; financing for the program comes out of employer- and employee-paid FICA taxes. In 1993, the DI program provided benefits for about 5 million disabled, nonaged individuals for a total cost of \$34.5 billion (U.S. House of Representatives 1994).

The SSI program provides benefits to the aged, blind, and disabled. The goal of SSI is to provide an income floor and receipt is not tied to previous work experience. The program, enacted in 1972 and implemented in 1974, is funded from general revenues and benefits are standardized across the states. However, most states supplement the federal SSI benefits through state SSI programs. On average, 4 million disabled workers and their dependents received federal SSI benefits per month in 1993, for a total annual cost of about \$35 billion. The disabled represent about 75 percent of the total SSI caseload. DI recipients with low benefits can use SSI to supplement their income. About 16 percent of DI recipients also receive SSI (Social Security Administration 1994).

Both programs define disability as “the inability to engage in any substantial gainful activity by reason of medically determinable physical or mental impairment which can be expected to result in

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<sup>15</sup>Other public programs that provide cash benefits for the disabled include several veterans’ compensation programs, workers’ compensation, and (optional) state-provided temporary disability benefits. The discussion in this paper will be limited to the DI and SSI programs.

death or which has lasted or can be expected to last for a continuous period of not less than twelve months” (Social Security Administration 1992). Therefore, the medical definition of disability is not sufficient for benefit receipt. Instead, initial and continuing eligibility for both programs is tied to the ability to work. Substantial gainful activity (SGA) is defined as a threshold level of earnings, which is currently set at \$500 per month.<sup>16</sup>

Social Security Disability Income Program (DI). Eligibility for DI requires meeting the definition of disability (given above), having sufficient work history in social security–covered jobs, and not working or working and earning less than the SGA threshold.<sup>17</sup> When determining if earnings exceed SGA (both for initial as well as continuing eligibility), deductions are allowed for impairment-related work expenses (IRWE). The DI benefit is equal to 100 percent of the worker's primary insurance amount (PIA), which is a function of the individual's earnings history in social security–covered employment.<sup>18</sup> This benefit can be significant, and is typically equal to the full value of the worker's potential social security retirement benefit. In 1993, DI benefits for disabled workers averaged \$642 per month. The PIA calculation is based on a progressive structure under which high-wage workers obtain lower earnings replacement rates than lower-wage workers. The replacement rate in 1994 ranges from 78 percent for workers with low average monthly earnings (\$500) to 29 percent among workers with high monthly earnings (\$4500) (U.S. House of Representatives 1994).<sup>19</sup>

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<sup>16</sup>The SGA is not indexed for price changes and has been increased nine times in the program's 35 years. The SGA started in 1957 at \$100, and was set at \$300 from 1980–1990 before the latest increase up to \$500.

<sup>17</sup>To qualify for DI, applicants must have worked 20 of the last 40 quarters preceding the quarter of application, or half the quarters since age 21. The work history required for DI is virtually the same as that required for social security retirement benefits.

<sup>18</sup>The benefit can be as large as 150 percent of PIA for disabled workers with families.

<sup>19</sup>The earnings figures refer to the worker's average indexed monthly earnings (AIME) in social security employment. The DI benefit, equal to the worker's PIA, is a function of the AIME. Benefits are adjusted for changes in the cost of living. The PIA and AIME are calculated in roughly the same

To examine the work-incentive provisions in the DI program, we must examine the five possible phases of DI receipt that working recipients can experience. First, there is a 5-month waiting period after disability begins before receiving benefits (although there is no waiting period if the individual returns to the rolls within 5 years of leaving). Second, a trial work period (TWP) allows for 9 months of work over a 60-month period. A month is counted as a trial month if the individual earns over \$200 in the month. Third, individuals who accumulate 9 months of work have their case reviewed; if the work in which they have been engaged is “SGA” (generally meaning that it reflects an ability to earn more than the SGA monthly threshold), benefits are extended for a 3-month grace period and then stop. During the TWP, benefits are provided in full regardless of the level of earned or unearned income and are intended to let recipients test their ability to work without danger of losing benefits. Fourth, recipients who have reached this point enter the extended period of eligibility (EPE), which lasts 36 months. After the 3-month grace period, benefits are provided in full if earnings (net of allowed deductions) are less than SGA, but are reduced to zero if earnings are over SGA. After the EPE is exhausted, the individual is dropped from the rolls if he has achieved SGA (or must file a new application if he is still disabled).<sup>20</sup>

The marginal tax rates (MTRs) on earnings in the DI program are generally much lower than those found in the programs for the nondisabled. During the TWP, for example, the MTR is zero. Further, the MTR is also zero during the EPE if earnings are below SGA. However, by eliminating benefits for workers over SGA, an MTR of over 100 percent is created on earnings that push the

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way as they are for social security retirement benefits.

<sup>20</sup>If a person has *never* achieved SGA, the EPE is extended indefinitely. However, benefits will be discontinued the first time that SGA is achieved.

Medicare benefits are available after 24 months of DI benefit receipt. Once the individual enters the EPE, Medicare benefits are available for the next 39 months. Thus Medicare is provided for 3 months past the end of EPE. Once a worker reaches age 65, the DI case is automatically transferred to the social security retirement system.

individual just over SGA. This creates a “notch” that resembles the MTR of over 100 percent created by the loss of Medicaid benefits in the nondisabled programs previously discussed. Hoynes and Moffitt (1994) find that DI recipients who enter the labor force on a part-time basis experience average tax rates that range from 60 to 91, depending on their earnings capacity. Those entering at full-time levels experience average tax rates of about 40 percent.

Supplemental Security Income Program (SSI). While the DI program is an earnings-replacement program, the SSI program is a means-tested transfer program that is not tied to previous work experience. Consequently, the eligibility and benefit formulas are similar to those in the means-tested programs for the nondisabled. In order to be eligible for SSI, the individual must meet the definition of disability, have income and assets below the eligibility requirements, and not work or work and earn less than the SGA threshold. The income test, asset test, and benefit level vary by living arrangement. The asset limit is \$2000 for single persons and \$3000 for couples, while the income test requires that countable income—which includes both earned and unearned income—not exceed \$446 for single persons and \$669 for couples for 1994. The main deductions used in calculating countable income include the full deduction of impairment-related work expenses (IRWE), \$20 of monthly income, \$65 of earned income, and one-half the remaining earnings. This creates an MTR of 50 percent for earnings above deductions. Benefits are equal to the program guarantee (\$446 for singles persons and \$669 for couples) less countable income. These benefit levels are adjusted annually for changes in the cost of living. All SSI recipients are also eligible for health benefits through the Medicaid program.<sup>21</sup>

Work effort is observed to be quite low in both the DI and SSI programs. In a study of a sample of new entrants to DI in the early 1980s, only 10 percent of all participants had any work experience over a 10-year period following initial benefit receipt (Muller 1992). Three percent left the rolls

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<sup>21</sup>All figures refer to 1994 levels.

because of increased earnings and 5 percent attempted trial work but did not result in SGA termination. Those who worked were more likely to be younger, white, female, single, with higher education levels, lower DI benefits, and less severe disabilities. SSI workers have represented about 6 percent of the total SSI caseload since the mid-1980s (Social Security Administration 1993).

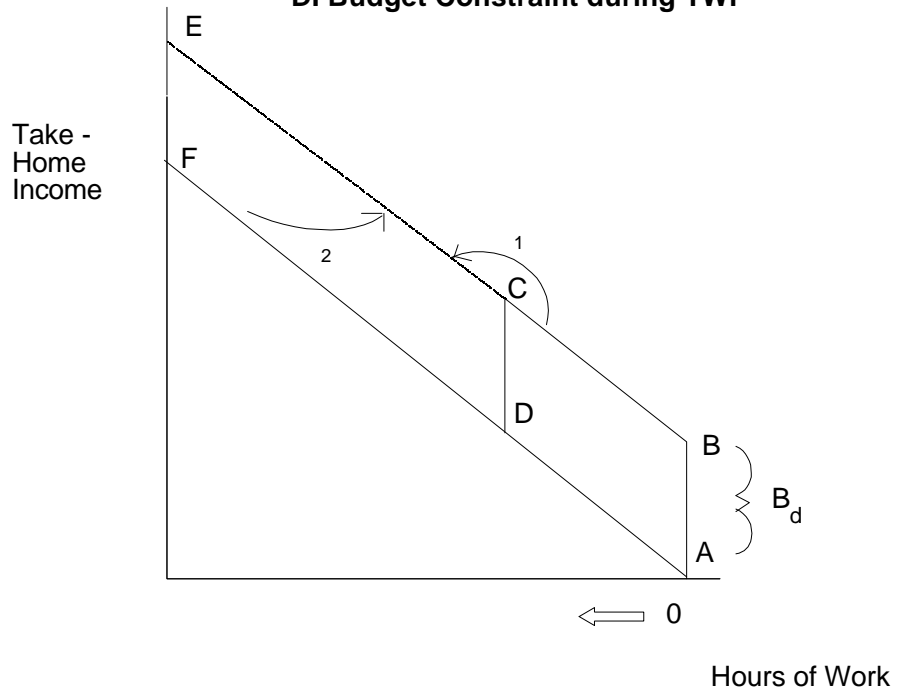
### 3.2 Expected Effects of Work-Incentive Provisions

The DI and SSI programs are designed to replace (or supplement) earnings for workers who are unable to engage in “substantial gainful activity.” There is, of course, a potential moral hazard problem associated with these programs inasmuch as disability is not a purely medical condition but may respond to economic and other factors. High benefits or lenient application procedures may lure those who are in poor health, but with employment possibilities, out of the labor market. Furthermore, a high MTR may lead to low work effort among the recipient population.

To begin, consider how the existence of the DI program affects work effort among the disabled. First, eligibility requires that during the application and waiting periods, recipients must earn less than SGA. This will act to lower work effort. The time spent out of the labor force while establishing eligibility may be quite costly, especially since many recipients are initially denied and since acceptance may follow only after a lengthy appeals process. Bound (1991) estimates that DI recipients are out of work for an average of 8.5 months before receiving benefits.

Second, the level of work effort is affected by the TWP. Figure 2 shows the one-period budget constraint that operates for the TWP as well as the grace period. Without DI, the relevant budget segment is ADF. During the TWP, benefits are received in full regardless of earnings (MTR equals zero) thus shifting out the budget constraint by the amount of the benefit, resulting in the DI budget segment of ABCE. In this case, the effect of the DI program operates through a pure income effect,

**Figure 2**  
**DI Budget Constraint during TWP**



causing work effort to fall. High benefits may induce some workers to accept DI and reduce labor supply, and they might possibly even leave the labor force altogether.

Third, a different effect of the DI program on work effort is created during the EPE. The income opportunities during the EPE are shown by budget segment ABCD in Figure 3. If earnings are less than SGA, benefits are provided in full. Above  $H_{BE}$ , the break-even level of hours, the benefit is cut off completely and the MTR is over 100 percent. In this case, the worker would have to increase hours of work to  $H_1$  to make up for lost DI income. The EPE, like the TWP, provides a negative income effect that reduces work, as illustrated by arrow 1. In addition, the notch provides a strong incentive to work at levels below SGA. In this situation, shown in arrow 2, some individuals who might otherwise have had high work effort could be induced by the DI benefits to work at lower work levels to remain below SGA. Overall, providing benefits to the disabled through the DI program will reduce labor supply among the disabled.

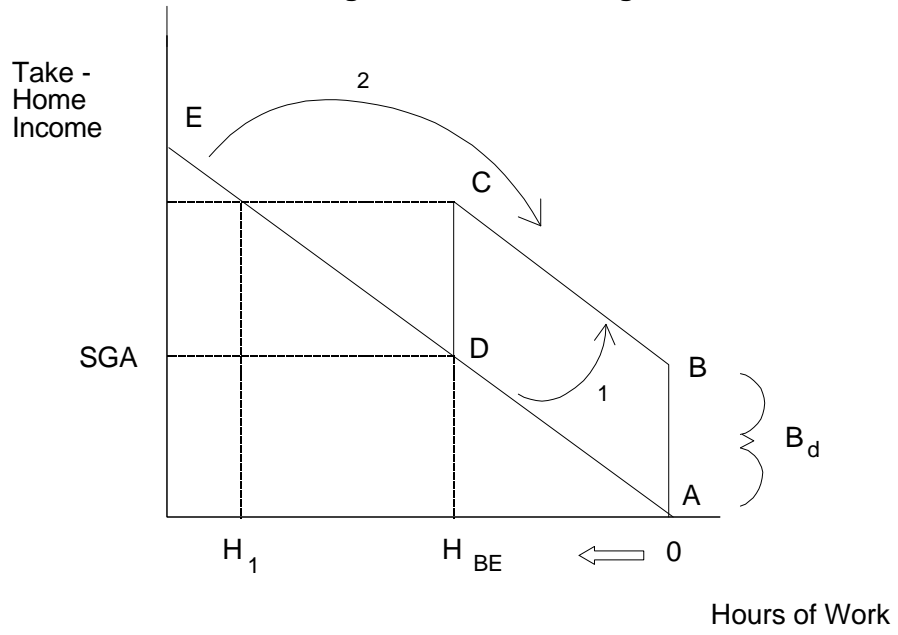
These effects are not necessarily of greatest policy interest, because they concern the effects of the DI program relative to having no program at all. Of more interest are the expected effects on work effort of the provisions of the DI program that are intended to provide work incentives—mainly the TWP and the EPE—relative to a DI program that did not have such provisions. To examine the effects of these work incentives—or any proposed changes in existing incentives—we need to consider changes in work effort among current recipients, as well as any changes in entry and exit rates which also contribute to changes in the overall level of work effort among the disabled.

First, consider the effects of adding a TWP to a “strict SGA” program in which benefits are unaffected if work is below SGA but are eliminated entirely for work above SGA.<sup>22</sup> The effect of the TWP on the budget constraint is illustrated in Figure 2. Without any DI program at all, the budget

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<sup>22</sup>The original DI program did not have the TWP or EPE features. The TWP was introduced in 1960 and the EPE in 1980.

**Figure 3**  
**DI Budget Constraint during EPE**





constraint is ADF, while the budget constraint is ABCD under the “strict SGA” DI program. The addition of the TWP extends benefits regardless of earnings, extending the DI budget constraint to ABCE. As intended, this change provides a work incentive for those recipients who were initially at or a bit below SGA to work more than SGA, as shown by arrow 1. However, by making the program more generous for those who can and wish to work above SGA, exit rates from the program will fall in the longer run due to the fact that some recipients who would have moved off the program in order to work above SGA will stay on.<sup>23</sup> Thus, although work effort among current participants may increase in the short run, it may fall in the long run because those who would have exited the program will work less in the long run than they would have otherwise, as illustrated by arrow 2 (income effects induce a reduction in hours of work). In addition, because benefits can now be received above SGA, entry rates may increase due to the creation of incentives for eligible nonparticipants to apply for benefits, should they think that work above SGA is likely for them if they go onto DI. This would also increase the caseload and result in reduced work effort. Overall, the introduction of the TWP has ambiguous net effects on the level of work effort of DI recipients and the eligible population, for the increased work among initial recipients may be outweighed by the likely future reductions in work among those who delay exit and those who enter.

The effects of the EPE, which was introduced in 1980, are, at least at first inspection, more clear-cut since the benefit schedule reverts to its strict SGA form of loss of benefits for work above SGA (aside from the retention of Medicare and other benefits, whose effects are similar to the TWP—these benefits are provided above SGA). Once a worker is in the EPE, the incentives to work

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<sup>23</sup>Once again, such exit rates can only be understood if it is realized that a dynamic model involving normal flows onto and off of the rolls underlies the static diagrams we have drawn. Normal exits from the rolls occur, for example, from job opportunities which arise, even though the budget constraint does not change in the ordinary sense of the word. Whether an individual takes advantage of such opportunities will no doubt be based in part on the relative income gain or loss associated with leaving the rolls vs. staying on. These are the same considerations that underlie the arrows in our static diagrams, although in a dynamic context.

above and below SGA are the same in each month as they were in the strict SGA program. However, the main effect of the EPE is in its provision of insurance for 36 months against a fall in earnings. In the strict SGA program, a recipient might have hesitated to work above SGA because of the danger of not being able to sustain such high earnings and having to reapply for benefits. This is part of the intention of the EPE program, and presumably increases work effort during the EPE period.

However, even with the EPE there is the possibility of increased entry after its provision. The increased generosity created by the EPE may make the DI program more attractive to eligibles who are on the margin of applying or not applying for benefits, and may tip them in the direction of applying. Whether this will happen will depend on the extent of information about the DI program, whether eligibles have reasonably good expectations of whether or not they will attempt to work when on the program, as well as the costs associated with application. An entry will raise the DI caseload and reduce work effort, since those who enter will work less, on average, while on the DI program than they would have if they had stayed off DI. Thus, in principle, the net effect of EPE is ambiguous in direction, and can only be resolved by empirical research.<sup>24</sup>

This discussion shows that there is a basic similarity between the TWP and EPE work provisions of the DI program, on the one hand, and the MTR reductions in nondisability programs, which are also aimed at increasing work effort, on the other. Both have ambiguous net effects on the level of work effort of the recipient and eligible populations because, while they have positive work incentives for some, they also reduce exit rates and possibly increase entry rates, both of which reduce long-run work effort (and increase the caseload). The similarity in the effects arises because both types

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<sup>24</sup>The EPE may also reduce exit rates from DI when averaged over the 36-month period. For example, recipients may take jobs with possibly short durations to try them out, knowing that they will probably return within a few months to collect benefits. While this encourages work effort among those who would have not worked at all, it discourages work effort among those who would have otherwise chosen to go off the rolls altogether at a job with greater prospects of stability and longevity.

of financial incentives operate by making the program more generous, and therefore more attractive, to working individuals compared to their prospective situations off the program.<sup>25</sup>

The work incentives of SSI differ considerably from DI, although they are similar to those in the AFDC or Food Stamp programs, described above. The work incentives of SSI can be discussed by referring to the welfare budget constraint for the nondisabled in Figure 1, substituting the SSI implicit tax rate on earnings of 50 percent ( $t = 0.5$  in Figure 1). The 50 percent MTR implies that if earnings are increased by \$1, total income increases by only 50 cents. Benefits are phased out as earnings increase and reach zero at the break-even level (point D). As above, the static labor supply model implies unambiguously that the existence of SSI will reduce work effort among the disabled relative to having no program at all. There is an income effect associated with the guarantee (as with the DI program) but the 50 percent MTR induces a substitution effect that is not present in the DI program. The income and substitution effects work in the same direction and hours of work must fall. If the MTR is reduced, the net effect on work effort is ambiguous in direction, however. As discussed in Section 2.2 for the nondisability programs, such a reduction lowers work effort because of a delay in exit and an increase in entry.<sup>26</sup>

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<sup>25</sup>Some important dynamic considerations of the DI program have been left out of this discussion. For example, even though benefits are not reduced during the TWP, potential benefit cutoffs begin after 9 months of work if the recipient enters EPE. Consequently, taking advantage of the TWP will increase income at the time but reduce future income prospects, effectively increasing the MTR and reducing work effort. Similarly, individuals who consistently work above SGA during the EPE will be eventually be dropped from the system altogether after 36 months, thus losing Medicare benefits as well as the insurance of DI benefits if wages drop below SGA. This also operates to increase the effective MTR. Lastly, Medicare benefits will be lost 3 months after the end of the EPE when leaving the DI rolls. There is anecdotal evidence that losing health benefits may be a larger work disincentive for the disabled than the prospect of losing cash benefits (National Academy of Social Insurance 1994).

<sup>26</sup>This discussion highlights that the main difference between SSI and DI is in the treatment of earnings. In SSI, SGA is only used when determining initial eligibility and benefits are reduced with increases in earned income. The notch in the DI budget constraint during the EPE does not exist in SSI. However, this difference is only a result of recent legislative changes in the SSI program. Provisions referred to as 1619(a) and 1619(b) started in 1980 and were made permanent in 1986. These provisions dramatically change the earnings opportunities for disabled workers. Previously, SSI recipients had a

### 3.3 Empirical Results

The scope of the empirical literature on work incentives of disability income programs is somewhat limited compared to the literature for the nondisabled. The main body of empirical studies examines the effect of DI benefits level on program participation or caseload size.<sup>27</sup> Participation in DI is typically estimated as a function of the potential DI benefit—imputed for those not on the program—and individual characteristics such as age and education, and locational characteristics.<sup>28</sup> The main parameter of interest, the elasticity of DI participation (or nonparticipation in the labor market) to the DI benefit, varies widely in the literature. The results based on samples of older men (45–62) provide elasticities ranging from 0.06–1.80. The largest elasticities in the literature are found by Parsons and range from 0.63 (Parsons 1980a) to 1.80 (Parsons 1980b). Slade (1984) estimates an elasticity of 0.81. The magnitude of these elasticities is sufficient to explain all of the observed decline in labor force participation rates by older men in the 1970s. Haveman and Wolfe (1984b) claim that Parsons' estimates are flawed and instead estimate an elasticity between 0.06 and 0.21 (Haveman and

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trial work period, and Medicaid and cash benefits were lost when a worker had countable earnings that exceeded SGA. In that case there is a MTR of 50 percent below SGA, at which point the remaining benefits (and Medicaid coverage) are lost in entirety. Provision 1619(a) allows SSI (and Medicaid) benefits to be continued even at earnings exceeding SGA (until sufficiently high earnings moves a person off the rolls completely). To ease the transition back to work, provision 1619(b) extends Medicaid coverage when a worker's earnings renders them ineligible for SSI benefits.

<sup>27</sup>This literature is critically reviewed in Leonard 1986, and the exchanges between Parsons 1984 and Haveman and Wolfe 1984b and Parsons 1991 and Bound 1991.

The empirical studies of the work disincentive effects of the SSI and workers' compensation programs are much less developed. McGarry (1993) considers the effect of potential benefits on take-up of SSI benefits among the low-income elderly.

<sup>28</sup>The majority of the literature defines the dependent variable to be labor force participation or not (Haveman, de Jong, and Wolfe 1988; Gruber and Kubik 1994; Haveman and Wolfe 1984a; Parsons 1980a, 1980b; Slade 1984). Leonard (1979) specifies the dependent variable as DI participant or not. Operationally, there is little difference between these approaches. Halpern and Hausman (1986) consider three states: DI recipient, DI rejected applicant, and non-applicant. Haveman, Wolfe, and Warlick (1988) consider the DI recipient, social security early retirement, and labor force participant choices.

Wolfe 1984a; Haveman, de Jong, and Wolfe 1991). The other main estimates fall in the range of 0.10 to 0.20 (Halpern and Hausman 1986; Leonard 1979). Older workers, those in poor health and with greater disabilities, and those with lower earnings have been found to be more responsive to changes in benefits (Haveman and Wolfe 1984a; Slade 1984). Haveman, de Jong, and Wolfe (1988) find evidence that women are more sensitive to benefits as they estimate elasticities of 0.97 for female heads of household and 0.23 for married women.<sup>29</sup>

Variation in the leniency of determining eligibility has been used to examine the sensitivity of DI participation to the uncertainty of benefits. Parsons (1991) and Gruber and Kubik (1994) use over time and across state variation in DI denial rates to estimate how DI applications and nonparticipation in the labor market are affected by the uncertainty of benefits. Parsons finds the elasticity of applications to the denial rate to be -0.18. Gruber and Kubik find the elasticity of nonparticipation with respect to the denial rate to be -0.27.

Although much of the empirical work in this literature is of great interest, the results fall significantly short of what would be needed to estimate the effect of the TWP, the EPE, or other work-incentive provisions. In the absence of direct evaluations of the TWP, for example, inferences about its effects could be made only by estimating the number of individuals who would prefer to work above SGA but still receive benefits, and wage elasticities as well as income elasticities are needed for this prediction. The marked absence of attempts at estimated wage elasticities is, in fact, the major defect of this literature for assessing the effectiveness of work-incentive provisions.<sup>30</sup> Furthermore, in these

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<sup>29</sup>The elasticities cited are from the econometric studies that utilized cross-sectional data. The time-series studies are summarized by Leonard (1986).

<sup>30</sup>Some of the studies (e.g., Parsons 1980a and 1980b) do include wages but only their pre-disability level, and only in the form of a replacement rate, which results in neither an income nor a wage elasticity. There are many difficulties in estimating the work-incentive effects of the DI program which are not encountered in the literature for the nondisabled. These include the endogeneity of DI benefits—due to its relationship to previous work experiences, the uncertainty of DI receipt, and the difficulty in imputing DI benefits for non-recipients. These issues and their relevance for the empirical

studies, participation in DI is considered equivalent to nonparticipation in the labor market. This rules out examining the sort of responses shown by the arrows in Figures 2 and 3.

As noted in our review of the empirical results for nondisability programs, the available evidence should generate skepticism that there are any significant positive net effects on work incentives from provisions designed to generate financial inducements for recipients to work while on the rolls. While the TWP and EPE are quite different in form than is a simple MTR, the same types of effects are involved and, therefore, the results from the nondisability programs should generate concern about the effectiveness of the TWP and EPE. One issue that presumably would be very important in an assessment of whether the nondisability results are applicable to DI programs is also whether the responsiveness of the disabled to changes in benefits and tax rates (that is, their income and substitution elasticities) are or are not similar to those of female heads and other low-income groups that commonly receive nondisability benefits. Whether the responsiveness is higher or lower seems unclear from the literature. Nonetheless, it is important to point out that there are many ways in which the populations and programs differ which may contribute to different responsiveness levels. It is clear that DI recipients face different obstacles to labor market success than those faced by female heads of household. Disabled individuals may face difficulties in labor supply (due to physical or emotional conditions impacting their ability to work) and labor demand (due to the availability of jobs for persons with disabilities). Furthermore, contrasted with AFDC, receipt of DI benefits is uncertain and subject to long waiting periods, due to difficulties in evaluating the medical definition of disability. Lastly, the availability of public health insurance may be quite important for disabled workers, especially due to pre-existing-condition clauses in private insurance.

### 3.4 Expected Effects of Reforms to DI Work Incentives

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literature are discussed in Leonard 1986; Haveman and Wolfe 1994b; Bound 1991; and Hoynes and Moffitt 1994.

The passage of the Americans with Disabilities Act (ADA) reflects a desire to encourage labor force participation among the disabled. As is often noted, the existence of the DI program does run counter to this goal by encouraging reductions in work effort among the disabled. Compared to a program with a strict SGA limitation, however, the TWP and EPE features of DI do produce work incentives for current recipients, even though their overall impact is ambiguous in direction. Several changes to the work incentives of the DI program are under consideration and include increasing the SGA, extending the length of the TWP, and imposing an MTR of 50 percent on earnings after the end of the TWP.<sup>31</sup>

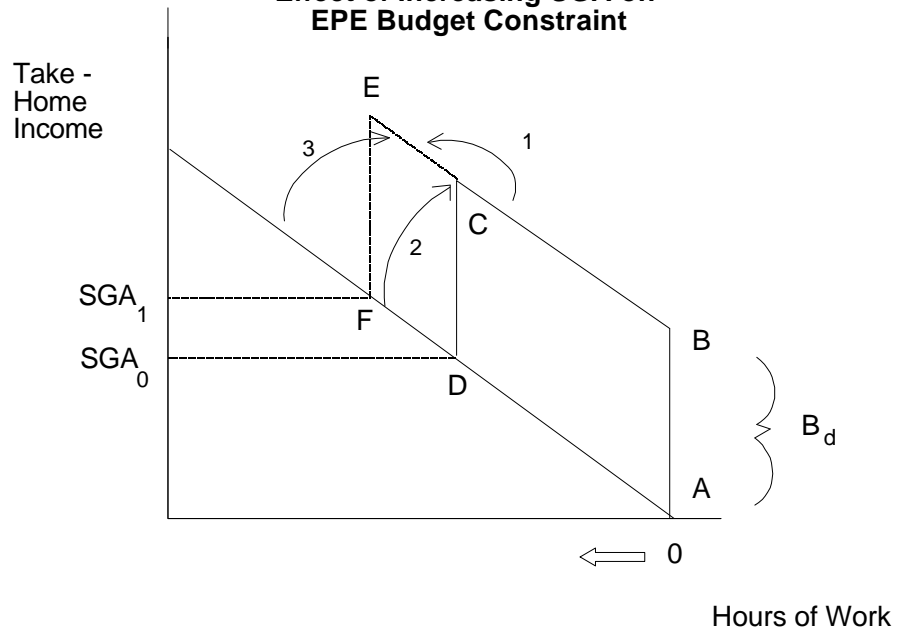
Increasing the SGA increases the DI caseload but has ambiguous impacts on work effort among the disabled.<sup>32</sup> This change affects work effort, program exit, and program entry in two ways. First, this change lowers the costs of application because higher work effort can be sustained without exceeding SGA (required for initial application). Second, as shown in Figure 4, increasing the SGA shifts up the notch in the budget constraint during the EPE. Increasing the SGA level from  $SGA_0$  to

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<sup>31</sup>Specifically, the National Academy of Social Insurance (1994) outlines five possible reforms: indexing the SGA amount to keep pace with wage growth; raising the SGA level to the level for the blind (\$930 in 1993) and indexing to keep pace with wage growth; providing a partial offset (MTR) of 50 percent to be imposed after the TWP on earnings above the monthly SGA; providing a partial offset (MTR) of 50 percent to be imposed after the TWP on earnings above \$85 a month; and extending the TWP by 12 months. By introducing the partial offset, the work-incentive effects of the DI program are made more similar to those in place in the SSI program.

<sup>32</sup>Increasing the SGA would also expand eligibility for SSI. The impacts are likely to be larger for the DI program since the SGA only affects initial (but not continuing) eligibility for the SSI program.

**Figure 4**  
**Effect of Increasing SGA on**  
**EPE Budget Constraint**

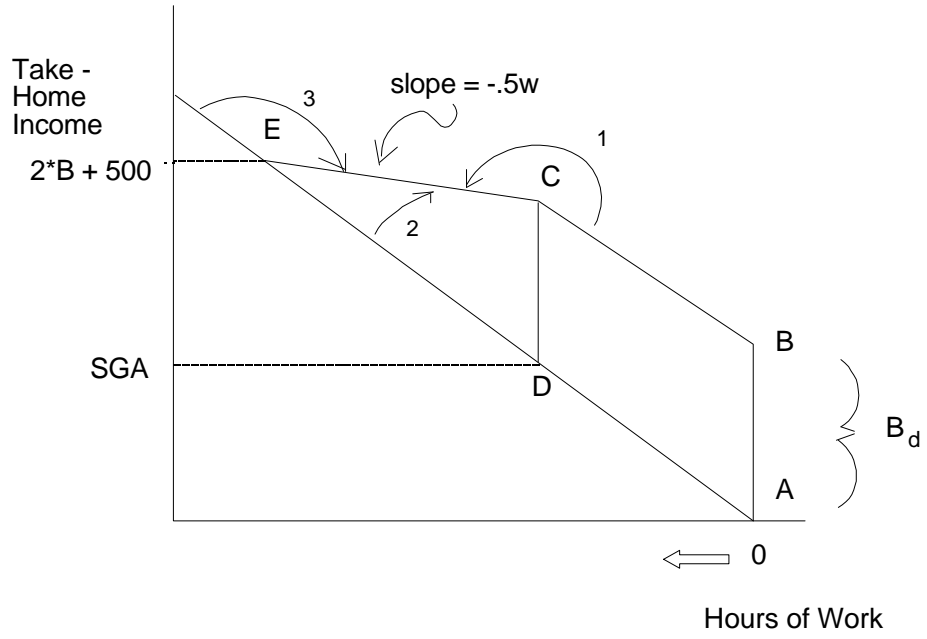




$SGA_t$  shifts out the DI budget constraint from ABCD to ABEF. This will lead to increases in hours of work among some current recipients, as shown by arrow 1 in the figure. However, by allowing for higher levels of work with full benefits, the more generous program lowers the exit rate from the rolls for some recipients, who stay on the rolls and ultimately work less than they would have otherwise. In addition, the change attracts new entrants who, if they apply and are successful in getting onto the rolls, will take advantage of the  $SGA$  to work while on the rolls but at a lower level than they would have had they been off the rolls, as illustrated by arrows 2 and 3. Some of these new entrants are eligible under the expanded program, as illustrated by arrow 2, and others may take advantage of the increased benefits and reduce their work effort to become eligible, as shown by arrow 3. This leads to increases in the caseload both through increases in the entry rate as well as decreases in the exit rate.

Similarly, adding a partial benefit or MTR on earnings during the EPE will tend to increase work levels among current DI recipients, but the impact on overall work effort among all disabled persons is indeterminate in direction (the caseload will unambiguously rise). Figure 5 shows the budget constraint for the EPE before and after the introduction of the partial offset where the MTR is imposed only on earnings over the  $SGA$ . Under current law and with this expansion, the slope of the budget constraint below the  $SGA$  (ABC) is  $w$ , reflecting an MTR of zero. With the expansion, above the  $SGA$  there is an MTR of 50 percent which operates until benefits are reduced to zero. As before, arrow 1 shows the likely movement in work levels among current recipients. This increase in work effort is the intended effect of the expansion. However, a positive income effect and negative substitution effect suggest that work levels will fall for others, as shown by arrows 2 and 3, both from reduced exit and increased entry. Under this expansion, the potential increase in the caseload is quite large. Using the

**Figure 5**  
**Partial Benefit Offset (50%) over \$500**



average 1993 benefit of \$642, the break-even earnings level increases from SGA to about \$1800 per month or \$22,000 per year.<sup>33</sup>

Increasing the length of the TWP also has ambiguous effects on work incentives. By allowing recipients to work for more months before being taxed (for example, before entering the EPE), the effective MTR in the program decreases. This can be expected to increase work levels—and the length of time on the program for current participants. However, it can also be expected to reduce exit rates and to attract new participants, both of whom will work at reduced levels during the additional 12 months than they would have otherwise. This will increase the size of the caseload as well.

The empirical literature, described above, provides little insight into the likely results of these proposed reforms to DI work incentives. In general, the effect on overall work effort depends critically on the relative sizes of the income and substitution effects for current recipients and potential entrants. As we noted previously, existing research provides very little reliable information on these parameters. The overall effect also depends on the size of the increase in break-even income and the density of the eligible population in these areas of the earnings distribution—that is, the relative numbers of disabled who can and prefer to work just above the SGA.

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<sup>33</sup>This is calculated by setting benefits ( $B - 0.5 * (wh - 500)$ ) equal to zero and solving for the earnings level where benefits are just exhausted.

Imposing a 50 percent MTR on earnings over an \$85 exclusion during the EPE would result in closer parity between the SSI and DI work incentives. This change, however, differs from those considered in the text because benefits would be lower than they are under current law for some ranges of earnings because the \$85 exclusion is below the SGA level of \$500. By increasing the tax rate (from 0 to 50 percent) we may see a reduction in work effort for current recipients. However, by eliminating the notch (and its high MTR) and extending benefits past the SGA, we may see an increase in work levels among some recipients. For this program change, the caseload as well as the net work effects are ambiguous. The direction of the change in entry and exit rates is not predictable since for some hours ranges the program has been expanded, while for others the program is less generous.

#### 4. CONCLUSIONS AND POLICY IMPLICATIONS

As the issue of increasing work incentives into the DI and SSI programs becomes of greater policy interest, the lessons that have been learned from the experience with, and research on, similar work-incentive provisions in programs for the nondisabled should be studied. Our review of the nondisability program literature demonstrates that increasing work incentives through simple financial inducements or changes in benefit formulas are unlikely to be as effective as they first appear. The empirical research on such reforms in nondisability programs does not bode especially well for their effectiveness, for the evidence is quite uniform in its failure to find strong responses to financial inducements and decreased marginal tax rates. Lying behind this apparent ineffectiveness of financial inducements is a set of possible explanations that involve new entry onto the programs as well as decreased exit. While our review of the empirical research on DI and SSI does not allow us to reach any conclusions about whether the *magnitude* of the responses that might be found in DI programs is likely to be greater than that found in nondisability programs, the different types of responses that are induced by financial inducements—both the intended increases in work effort and the unintended reductions—should be present in DI and SSI, at least to some degree. This leads us to urge caution in using financial inducements as a means of work-incentive reform in those programs without further, concrete evidence of their effectiveness.

Policy toward work among AFDC recipients has evolved away from financial inducements in recent years and has shifted toward the use of work, employment, and training programs to directly encourage, and sometimes require, work. This policy shift began in the 1970s and occurred in part because of the perceived failure of financial inducements, such as that provided by the amendments to the 1967 Social Security Act, to increase AFDC recipient work levels and to reduce caseloads. In addition, the shift reflected a society-wide change in attitudes toward work among women with children, as it increasingly became the norm for such women to work rather than stay at home. A

similar change in attitudes toward the disabled appears to have occurred, with many arguing that all recipients should work to the degree they can. However, the use of financial inducements is still more favorably viewed in policy discussions of SSI and DI than in the AFDC and other welfare programs, which, as we have stressed, is not necessarily justified by the evidence.

A recent policy direction taken for AFDC and related programs is to provide financial incentives to *leave* the welfare rolls by providing earnings and wage supplements for private sector work. The most prominent of these programs is the earned income tax credit (EITC), which supplements earnings of low-income families and which has been greatly increased in generosity. The attractiveness of the EITC is that it has the potential to increase work and earnings and to reduce the welfare caseload at the same time. The philosophy behind the EITC and similar private sector wage subsidy programs is diametrically opposite to that behind the use of financial inducements to work more while on welfare, for the latter has the potentially deleterious consequence of increasing the caseload and possibly reducing work effort, which we have discussed at length in our paper. These deleterious effects would not be present if financial inducements were offered only for off-welfare (or both on- and off-welfare) work. It might be fruitful if policy discussions of disability programs turned to such programs as well, perhaps by investigating special private sector earnings subsidy programs for the disabled or modifications in the EITC to make more disabled individuals eligible for its benefits.

To determine the effectiveness of any of these policies in increasing work effort and reducing caseloads in the DI and SSI programs, major research gaps need to be filled. Secondary analysis of existing data sets using econometric techniques must be pursued with more of an eye toward estimating wage and substitution elasticities, for example, although we recognize the difficulties in doing so. Alternatively, either large- or small-scale microsimulation models could be constructed and the effects of different work-incentive provisions could be predicted based upon a range of assumed responsiveness levels and elasticities; this would provide at least some indication of how large or small

responsiveness needs to be for work-incentive provisions to have a genuinely positive effect. Finally, direct experiments or demonstrations on the caseload would be helpful in obtaining estimates of the response to specific program initiatives, although it needs to be emphasized that program evaluations need to be designed to capture both the exit and entry effects of financial inducements as well.

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