Social Security Disability Insurance: Why Are Program Costs Rising?

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Abstract

Social Security Disability Insurance is a federal program that provides benefits to workers in the event of disability. To qualify for an award, a worker must: 1) be younger than the federal retirement age, 2) have paid payroll taxes for some minimum period of time depending on his or her age, and 3) have a medical or physical impairment that will either prevent gainful employment for more than a year or result in death. Although Social Security Disability Insurance is a boon to workers suffering from disabling conditions, the program faces a challenging financial future. According to recent projections by the Social Security Administration and the Congressional Budget Office, the program will become insolvent in less than a decade. This paper explores several factors responsible for the significant rise in the cost of the Social Security Disability Insurance program. Causes include more lenient qualification requirements set by Congress, demographic shifts in the labor force, a higher replacement rate for low wage earners, and the rise of disability applications (and awards) during economic downturns.

1 Introduction: The Expansion of Disability Insurance

The Social Security Administration currently oversees two programs that account for most federal assistance to disabled workers and their dependents: Social Security Disability Insurance (DI) and Supplemental Security Income (SSI). Unlike SSI, DI is not a means-tested welfare program but rather a government-mandated insurance plan that awards benefits only to covered workers, i.e., those with sufficiently lengthy employment histories. DI benefits are calculated as a function of past earnings (although a progressive award formula provides a higher replacement rate for low wage earners). In 2009, the DI program awarded disability benefits to 7.5 million workers and their families, while the SSI program did the same for about 1 million workers (Social Security Administration, 2009). Historically, however, the federal government's strong commitment to the disabled is a relatively recent phenomenon.

President Franklin Delano Roosevelt signed the Social Security Act (SSA) into law on August 14, 1935. The law's most notable feature was the Old-Age, Survivors, and Disability Insurance (OASDI) program, which sought to combat the unusually high level of economic uncertainty and fear brought about by the Great Depression. Although the program made some provision for the disabled and families of deceased workers, its most prominent beneficiaries were the elderly, rather than workers with disabilities. In return for a small tax on their payrolls, future generations of Americans received the guarantee of financial assistance in their old age. Indeed, as FDR realized, the collection of payroll taxes placed a long-term obligation on the government to make good on its promise to provide benefits to American workers. His reasoning was both shrewd and prescient: "With those taxes in there, no damn politician can ever scrap my Social Security program" (Schlesinger, 1958). This observation is no less true today. Despite projections of long-term funding liabilities, the OASDI program remains a political and social fixture, with few politicians advocating an end to federal old-age insurance. Although repeal appears to be a remote possibility, politicians have shown themselves far more willing to adjust specific provisions of the SSA. Since its adoption, the SSA has seen numerous revisions and additions, as successive amendments have expanded the scope of the Act beyond it original mandate to provide for the elderly, the blind, as well as disabled and dependent children.

In 1956, twenty years after the passage of the SSA, federal provision for workers with disabilities began in earnest. Under the Eisenhower Administration, Congress approved a series of amendments to the SSA that significantly expanded benefits for disabled workers. Most notably, the federal government began to pay benefits to non-elderly workers between the ages of 50 and 65 suffering from approved disabilities preventing continued employment (Schottland, 1956). The Social Security Administration also began to provide benefits to children who developed long-term disabilities prior to the age of eighteen. To pay for this expansion, Congress established a separate trust fund, which it financed with a new payroll tax. The combined employer-employee payroll tax was set at half of 1 percent, while self-employed workers were required to pay three-eighths of 1 percent (Myers, 1959).

Two years later, Congress again expanded benefits. Awards rose by approximately 7 percent, workers employed by state and local governments received increased coverage, and qualification requirements were eased to make it easier for the truly disabled to obtain assistance. To pay for this largess, Congress approved a plan to accelerate future hikes in the payroll tax rate and to raise the level of taxable income. Thus, just two years after establishing the program, Congress set DI on a long-term path that would require intermittently raising payroll taxes to meet the rising expense of disability awards. In 2009,

the combined employer-employee payroll tax stood at 1.8 percent.

The early expansion of the DI program appears almost trivial compared to later growth. Since 1965, the number of Americans who apply for disability benefits each year has risen more than fivefold: from 530,000 to more than 3 million today. The 1984 congressional reforms are a significant factor behind rising expenditures during this period. The original DI screening process might have helped to stem the rising tide of applications *ceteris paribus*, but in 1984 Congress effectively tied the hands of the Social Security Administration by legally easing the evidentiary burden for those seeking to establish disability claims. In recent years, the Social Security Administration has seen an increasing need to deny benefits, as the sheer volume of applicants threatens to overwhelm the program. In 2009 only 35 percent of DI applicants were awarded benefits, whereas in the late 1960s and again in the 1990s this figure hovered around 50 percent.

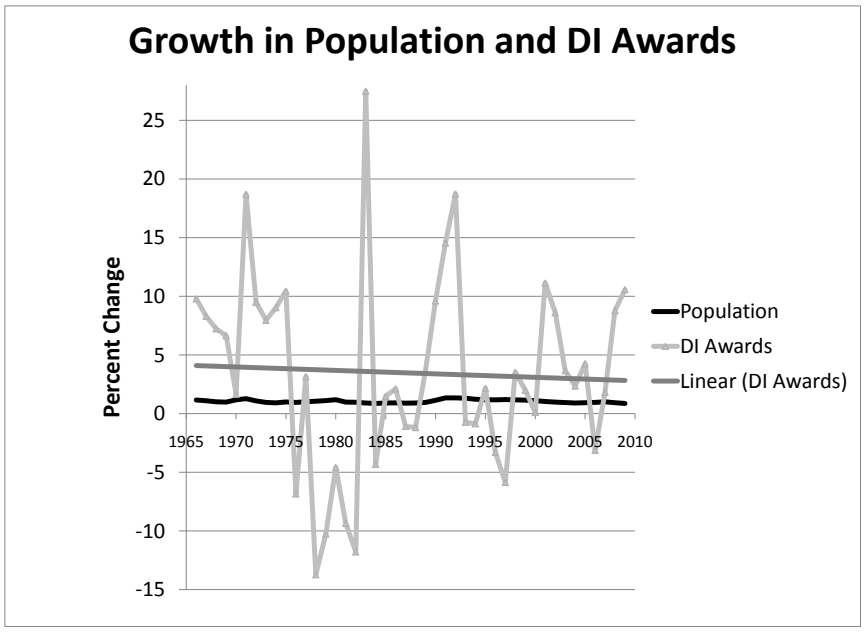

Figure 1: A comparison of growth in population and DI awards.

To put the growth of the DI program in perspective, the rise in the number of Americans receiving disability insurance has consistently outstripped relative increases in population (U.S. Census Bureau, 2010). The linear trend line in Figure 1 shows this relationship. In the forty-five year period from 1965 to 2009, annual population growth in the United States averaged slightly more than 1 percent, with some of the highest growth occurring during the 1990s. Population growth never exceeded 1.4 percent in a single year. In contrast, DI awards rose by slightly more than 3 percent each year on average and displayed far more volatility, with growth climbing more than 15 percent in some years but also falling steeply in others. By this measure, natural population growth explains only one third of the rise in disability awards.

The rising number of disabled Americans receiving financial assistance has substantially increased the obligations of the DI program. In 1965, 4.7 out of every 1000 workers eligible received DI benefits, but by 2009, this number had climbed to 6.6 out of every 1000 workers. In one sense, however, this statistic obscures the relative growth in disability roles. Due in part to increased labor force participation among women, the number of insured workers has risen dramatically. In 1965, only a quarter of Americans (about 53 million) qualified to receive benefits in the event of a disabling injury, whereas in 2009, half (about 150 million) were eligible. Viewed in this context, the DI program has absorbed not only a rise in the percentage of eligible workers who receive disability benefits, but also a tripling of the underlying work force. That a larger pool of eligible workers should result in more awards is hardly surprising, but this shift in the workforce has fundamentally affected demands on the DI program. Forty-five years ago there were only 1.3 awards for every 1000 Americans; today, this number has more than doubled to 3.2 awards (Social Security Administration, 2010). The increase in awards is shown in Figure 2.

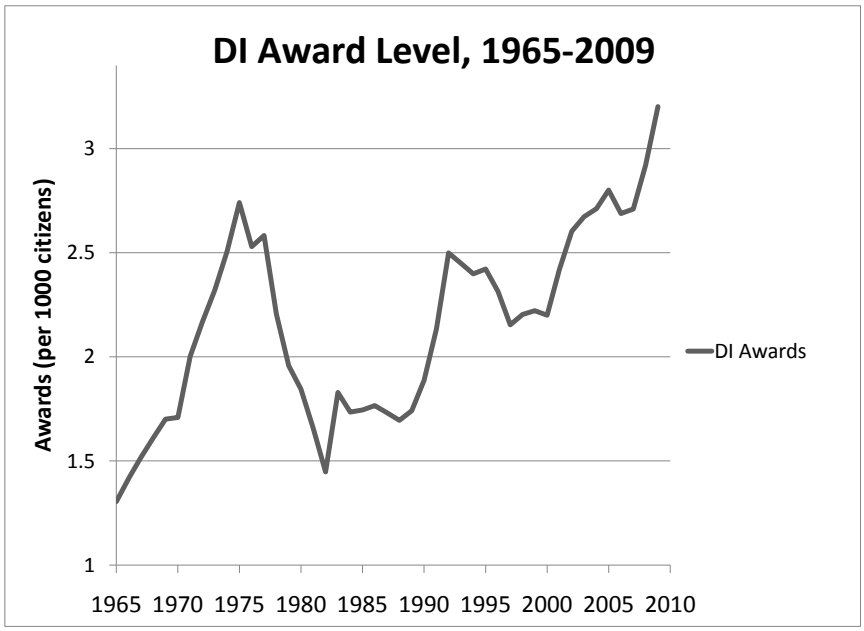

Figure 2: Increase in disability awards from 1965 to 2009.

The steady rise in DI beneficiaries has significantly impacted the Social Security Administration's bottom line. Disability benefits take up an increasing portion of its annual expenditures. This result is ironic given that the Social Security Administration is practically synonymous with the retirement program it operates. To some extent, the unique political and social status of OASDI tends to overshadow the significance of other programs operated by the Social Security Administration. Over the past decades, disability insurance has taken on an increasing importance due to the rising number of Americans seeking, and receiving, disability benefits. In 1957, Social Security Disability Insurance was in its infancy

and, consequently, little more than a budgetary afterthought in the federal government's expanding welfare net. Expenditures on the DI program were a mere $59 million, less than 1 percent of OASDI spending. By 1965 with the expansion of coverage to additional age cohorts and medical conditions, the DI program cost $1.9 billion, slightly less than 9 percent of expenditures on the OASDI program. Since then, this percentage has doubled: the program cost $124 billion in 2010 and increased to approximately 18 percent of total OASDI spending (Social Security Administration, 2010).

If past performance in any indicator, the cost of the DI program is on track to reach 1 percent of GDP. It should be noted, however, that federal disability expenditures significantly exceed this amount, since the SSI program, Medicaid, Medicare Hospital Insurance (HI), and Medicare Supplementary Medical Insurance (SMI) also provide assistance to the disabled. At the turn of the century total federal spending on disability benefits stood at 2 percent of GDP. Clearly the government has become an important player in assisting the disabled.

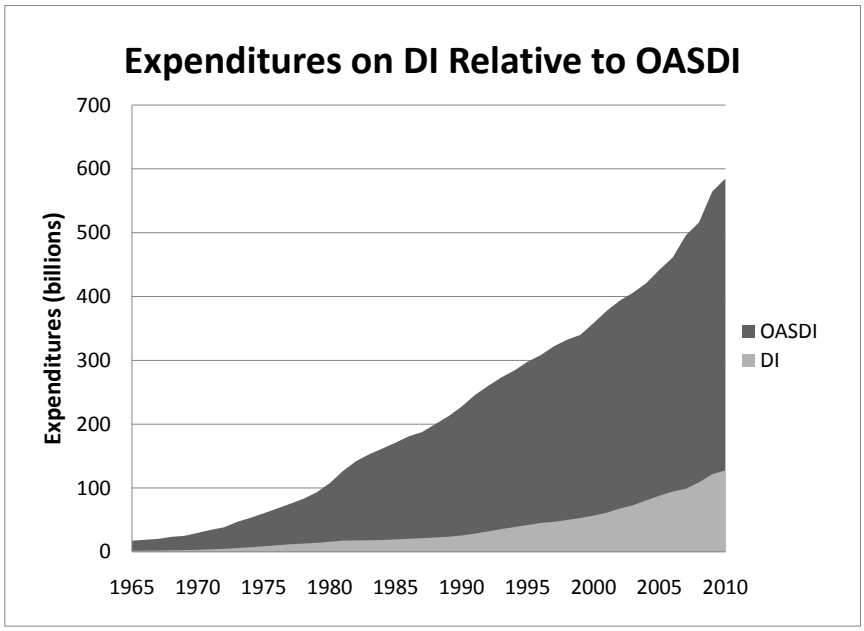

Figure 3: Increase in the cost of DI relative to OASDI.

The steady growth of DI relative to OASDI is perhaps more disturbing given the bleak financial outlook of the latter. As seen in Figure 3, the cost of each program has risen rapidly over the last forty-five years. While each is projected to accrue significant liabilities within the next seventy-five years, the DI program enjoys the dubious distinction of reaching insolvency first. In its 2009 annual report, the OASDI Board of Trustees anticipated that the separate DI Trust Fund would deplete its reserves by 2020, seventeen years before the OASDI Trust Fund.

With ever increasing disability rolls and rising costs, it is important to assess the un-

derlying factors responsible for the DI program's projected insolvency. Intrinsic factors, such as congressional changes in the regulation of awards, are partly responsible for this development. Extrinsic factors like population growth and demographic shifts have also played a role. Several reasons behind the rising cost of the DI program are outlined below.

Program Amendments Congressional adjustments to the DI program have significantly affected the categories of workers and disabilities qualifying for benefits. The DI program became law in 1956 after overcoming strong opposition with the proviso that only workers more than fifty years of age would be insured (Berkowitz, 2000). Yet in less than five years, Congress extended benefits to workers below this age, greatly expanding the number of workers insured by the program. In 1965, the DI program began awarding benefits for relatively short-term disabilities, those lasting more than a year, thus expanding on its previous commitment to assist only people suffering from permanent conditions. This coverage came at a cost. By the 1970s the program faced significant financial difficulties, which prompted Congress to tighten the screening process for applicants. As seen in Figure 2, the DI program subsequently entered a unique period in its existence during the late 1970s, with awards dropping off significantly. However, widespread criticism of the new, tougher standards led to further congressional reforms in 1984, once again sending awards spiraling in the upward direction (Autor and Duggan, 2006). This upward trajectory continues today with no indication of abating.

Labor Force Participation The overall labor force participation rate has increased by about 6 percent since the establishment of the DI program. This rise is explained by a fundamental shift in the American workforce as increasing numbers of women have chosen to find employment outside the home. In 1956 the labor participation rate for women over the age of twenty was 36 percent. Just twenty million women in this age cohort were working. By 2010 this number had risen to more than 60 million, and the participation rate for women over the age of twenty had almost doubled to 67 percent (Bureau of Labor Statistics, 2011). Although the labor participation rate for men declined in the same period from 88 percent to 73 percent, the number of men working continued to increase in absolute terms. Because of these shifts, the DI program now insures a larger percentage of the workforce relative to the total population.

Population Aging It is no secret that the OASDI program faces long-term difficulties due to the aging of the U.S. population. The rising ratio of retirees to current workers threatens to overwhelm the program in its current form, a demographic shift that must be addressed through either a reduction in benefits, an increase in payroll taxes, or some combination of the two. Less well publicized is the extent to which the aging of the population has affected the DI program. Simply put, older workers are more likely to suffer from disabilities. The graying of the population has increased the demands on the DI program, since workers nearing the retirement age seek disability benefits in greater numbers than their younger coworkers. While this effect is mitigated by the age cutoff for recipients of DI (beyond the federal retirement age, beneficiaries of the program receive retirement benefits in lieu of disability benefits), it has nevertheless increased the cost of the program.

Income Replacement Rate Another factor contributing to the rise in DI applicants is the program's income replacement rate. Workers with relatively low incomes have

stronger incentive to seek disability benefits now than in the past because benefits have risen as a fraction of income. Two factors are responsible for this shift: 1) the Social Security Administration calculates benefits as a function of median income, which has risen relative to the earnings of workers in the lowest economic strata and 2) since benefits are already progressive, the preceding effect is amplified.

Economic Factors For a program designed to insure against disability rather than unemployment, Social Security Disability Insurance has shown an alarming susceptibility to changes in the U.S. economy (Black et al., 2002). Between 1999 and 2003 the number of applicants applying for DI benefits increased by over 50 percent (Duggan and Imberman, 2005). In 2009 the DI program saw a one year surge in applications of 21 percent. While the Social Security Administration has argued that an increased number of applicants does not necessarily translate into increased awards because of its tight screening process, evidence suggests that recessions do ultimately impact the number of the awards and thus the cost of the program.

Explaining the rising cost of Social Security Disability Insurance is complicated by the interplay among these factors. Moreover, it is probable that other considerations, including the quality of health care and changing mortality, have affected demand for disability insurance. However, since program amendments, labor force participation, population aging, the income replacement rate, and changes in economic conditions can explain much of the increase in the size of the DI program, it is worthwhile to explore them in more depth.

2 Program Amendments

While it is infeasible to assess the impact of every congressional amendment on the cost of the DI program, several changes are impossible to ignore. As previous researchers have noted, one of the primary factors responsible for the rising cost of DI is the program's lack of a well defined mission (Autor and Duggan, 2006). Political disagreement about the proper level of social welfare is at least partly responsible for the changing face of the DI program. Indeed, several of the most prominent congressional modifications to the program – most notably the 1984 reforms during the Reagan Administration – were high profile compromises.

Since the program's inception, the requirements for eligibility have changed significantly. The program began on a limited basis as an insurance program for disabled workers falling in the 50-65 age range. In effect, the program was designed to tide near elderly workers over until they reached the retirement age and could begin collecting retirement benefits under the OASDI program. Recognizing the inherent unfairness of assisting some disabled workers but not others, solely on the basis of age, Congress soon expanded benefits to workers of all age groups under sixty-five. Another important change came in 1965 when Congress eased the restriction that an impairment must be permanently disabling. Workers suffering from disabling conditions expected to last for more than twelve months became eligible to receive DI benefits. Thus, the DI program shifted from an insurance plan of last resort for workers confronting permanent disabilities to a more casual plan for workers dealing with temporary impairments. In 1984 President Reagan signed additional changes to the DI program into law. The legislation tilted the screening process in favor of applicants and made it more difficult for the Social Security Administration to suspend assistance to

beneficiaries no longer satisfying disability criteria. Not surprisingly, these changes have dramatically increased the cost of the DI program today.

The payment of DI benefits to workers below the age of fifty accounts for about a third of the current cost of the program. In 2009 the Social Security Administration reported that approximately 6 million Americans between 50 and 65 years of age collected DI benefits. In the course of the year, total benefits paid to this age cohort summed up to slightly more than $75 billion (Social Security Administration, 2009). In comparison, overall spending on the DI program in the same year was $120 billion. These numbers show that although near elderly workers collected the majority of disability benefits, younger workers relied heavily on the program as well. Put in context, the substantial costs associated with young and middle-aged workers did not exist during the first several years of DI's existence.

Even with the addition of administrative expenses, which are only a small fraction of program costs, it is clear that the DI program would be much smaller today if Congress had left the 1956 mandate largely intact. This is true even though workers in the 50-65 age range tend to collect higher benefits (the replacement formula rewards longer work experience) and account for more than 65 percent of all DI beneficiaries. The breakdown of DI recipients by age is shown in Figure 4.

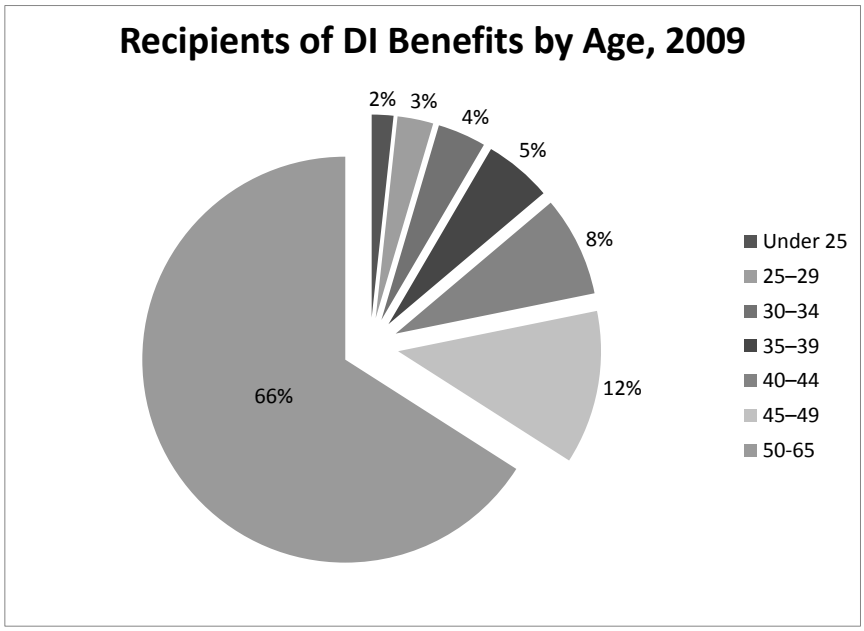

Figure 4: Over 30 percent of workers receiving DI benefits are under fifty.

One of the primary concerns with the DI program is whether it effectively accomplishes the twin goals of awarding benefits to applicants who suffer from genuinely disabling conditions while denying frivolous claims. Although the importance of the first criterion depends in part on political and ethical considerations, few would dispute the second; that is, under ideal circumstances the DI program should not award benefits to applicants feigning

disabilities. Arguably, the 1984 congressional reforms failed on this count, as it became considerably easier for applicants without debilitating impairments to receive benefits after the law's passage. Congress' leniency is explained by the political landscape at the time.

After Congress modified the DI program in the early 1970s, awards spiked. In response, Congress passed new legislation in 1977 to control costs, in part by reducing the incentive to apply for benefits. It lowered the replacement rate by indexing earnings to the Consumer Price Index (CPI). Three years later, further congressional action limited the overall replacement rate (from multiple government disability programs) and made the screening process for new applicants more rigorous (Social Security Administration, 2006). These measures were effective. They were also unpopular. While awards declined dramatically between 1977 and 1982, the growing number of workers who saw their benefits denied or terminated placed increasing political pressure on Congress to backtrack (Collins and Erfle, 1985). Congress obliged with the Social Security Disability Benefits Reform Act of 1984 (DBRA).

The DBRA relaxed standards for benefit qualification in several critical ways. Prior to 1984, the Social Security Administration evaluated disability applications by employing its own in-house physicians to conduct medical examinations. While this practice continued after the passage of the DBRA, Congress decided that evidence of disability by an applicant's personal physician would be accepted *prima facie*, since a qualified medical professional familiar with the applicant would be best positioned to make an informed judgment about his or her health. In reaching this determination, Congress overlooked, or chose to ignore, the possibility of collusion between patients and doctors. Under these new guidelines, it became easier for able-bodied or marginal candidates to collect evidence of disability. An enterprising applicant could literally shop around for a sympathetic doctor.

This change alone was a significant shift in favor of applicants, but Congress provided an additional gift to workers seeking a place on the nation's disability rolls. The DBRA permitted less objective criteria for the approval of benefits. No longer was it necessary for an applicant to pinpoint an exact cause of disability. Rather, it was enough "to consider the combined effect of all impairments without regard to whether any one impairment, if considered separately, would be severe" (Collins and Erfle, 1985). In addition, the DBRA provided for a subjective evaluation of pain. While no doubt well-intentioned, these measures hindered the Social Security Administration's ability to distinguish between a plausible but ultimately unjustified claim and a genuine disability (defined as a physical or mental condition preventing gainful employment for an extended period of time). Complicating matters was the inevitable outcome that some conditions not previously considered disabilities were newly recognized as such under the DBRA.

Since the adoption of the DBRA, the DI program has seen a telltale rise in the number of workers receiving benefits on the basis of mental and musculoskeletal disabilities. Before 1984, mental disorders (excluding retardation) and musculoskeletal disorders accounted for about 30 percent of all disabilities. By 2009 the two combined stood at more than 50 percent of all disabilities. Both of these conditions are notoriously difficult to quantify. Mental illness comes in many forms, and musculoskeletal disorders would encompass complaints of physical discomfort such as back, neck, and shoulder pain. No doubt many workers suffer from very real mental and musculoskeletal disabilities. A generous interpretation of the rise in these categories is that the DI program previously overlooked workers suffering from these conditions. However, the unprecedented growth in disabilities that are particularly difficult to assess medically suggests that at least some workers game the system. There are more than 4 million workers in these categories, each of whom collects over $10000 per

year on average. If just 15 percent of these cases are frivolous, DI wastes over $8 billion dollars each year. Figure 5 shows the acceleration in awards for mental and musculoskeletal disorders since 1984.

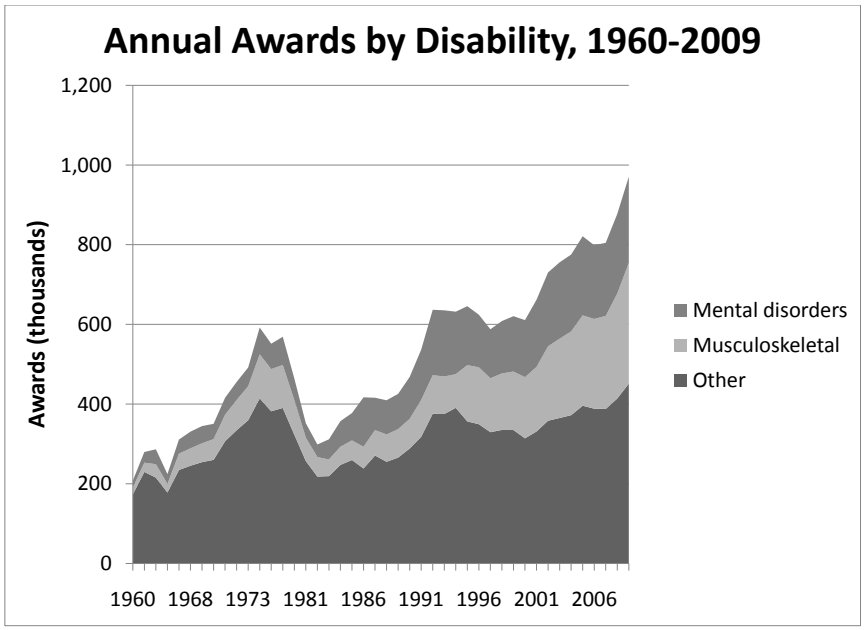

Figure 5: Mental and musculoskeletal disorders are the most common disabilities.

The growth of awards based on subjective rules established by the DBRA is exacerbated by the Social Security Administration's screening process, which allows an applicant to file multiple appeals in the event of an unfavorable decision. After an initial review, which eliminates candidates who do not meet basic requirements (such as age and employment criteria), the state office of Disability Determination Services investigates whether an applicant suffers from a qualifying disability. A favorable decision leads directly to benefits. A denial, however, is far from conclusive. The applicant can request that another panel within the Disability Determination Services office review the case. In most instances this second review yields the same result, but a little less than 15 percent of applicants see a reversal in their fortunes. Regardless, the applicant can still appeal to an administrative law judge. Approximately 63 percent of appeals are successful at this stage. Further appeals are possible, although the odds of winning become much smaller. Persistent candidates can take their cases to the Social Security Appeals Council and, finally, to federal court. Some lawyers specialize in these cases and provide advice on how to maximize the likelihood of winning an appeal. Ultimately, the appeals process makes it very difficult for the Social Security Administration to control the size of disability rolls.

3 Labor Force Participation

When Congress established the DI program in 1956, labor force participation was lower than it is today. In 1956, slightly less than 60 percent of the U.S. population was enrolled in the labor force. As of 2009, that number hovered around 66 percent (see Figure 6). Because the DI program specifically functions as an insurance program to protect workers against debilitating conditions, it only provides benefits to disabled Americans with actual work experience. (To pick up the slack, SSI is a means-tested program that assists disabled Americans without a prior work record.) The increase in the labor force participation rate implies that the pool of workers insured by the DI program has grown faster than the overall population. To be sure, the higher participation rate also ensures that more workers support the DI program through payroll taxes. But since expenditure growth has outpaced revenue growth in recent years and insolvency looms in the near future, it is clear that payments into DI are not actuarially balanced. If anything, additional workers tend to worsen the program's financial woes.

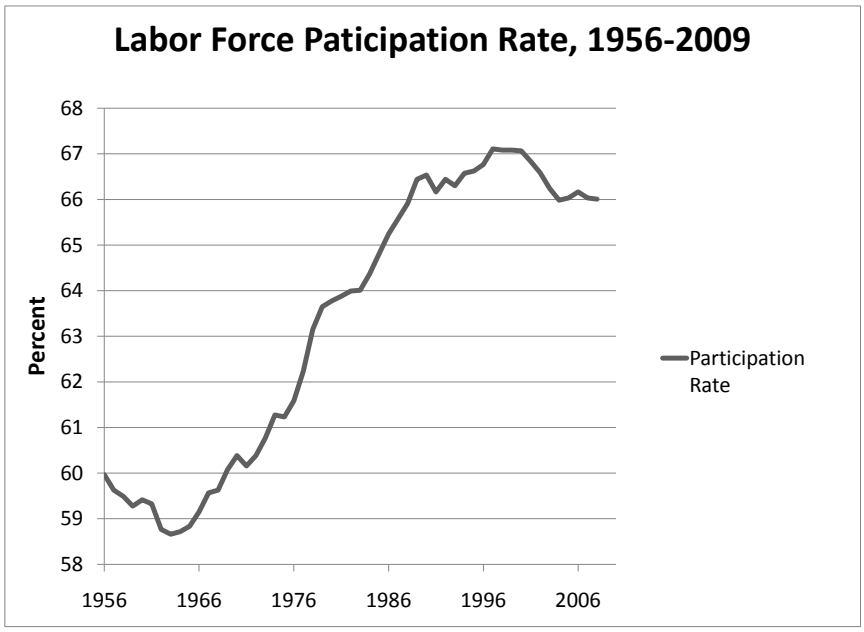

Figure 6: Rise in labor force participation rate since 1956.

The increase in the overall labor force participation rate does not fully capture the underlying shift in the U.S. workforce. The workforce grew significantly in the decades following the adoption of the DI program largely because millions of women opted to pursue professional careers. The suburbia stereotype of 1950s America with its accompanying baggage of rigid gender roles has more than a grain of truth in it. In 1955, just 40 percent of women in the 25-54 age cohort worked. In contrast, 97 percent of men in the same age category belonged to the labor force. Fifty years later, more than 75 percent of women in

this age range, and about 90 percent of men, participated in the labor force. (Hipple and Mosisa, 2006). These numbers indicate that the DI program has seen a fundamental shift in worker demographics. Just one hundred thousand women collected disability benefits in 1960; more than 3.5 million women did the same in 2009.

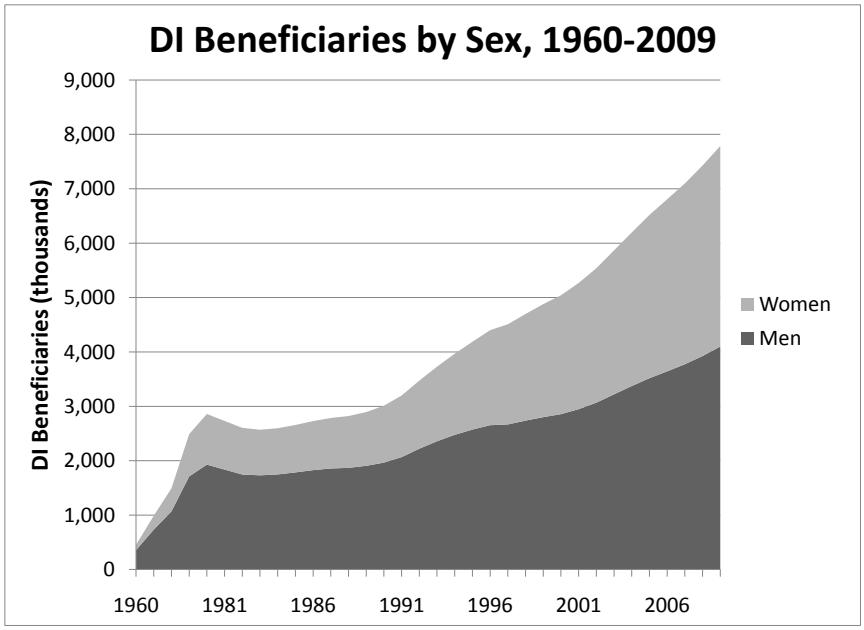

Figure 7: Increase in number of DI beneficiaries since 1960.

As Figure 7 shows, while the overall number of DI beneficiaries grew dramatically after 1960, the female portion grew more rapidly still. Put differently, over the last fifty years the growing number of female workers drawing DI benefits contributed to the program's rising expenditures in a way that could not have been forecasted in 1956. Since 1960, the number of female DI beneficiaries has grown on average by 7.7 percent each year, compared to only 5.1 percent for men. As a reference point, population growth was approximately 1 percent in the same period. This difference in growth rates is quite significant given that the program has existed for more than half a century. If the number of female workers receiving DI awards had increased at the same rate as for male beneficiaries, there would be approximately 5.2 million workers collecting benefits (as of 2009), a number substantially lower than the current 7.8 million.

It should be noted that even today female workers tend to spend fewer years working and are more likely to withdraw from the workforce for extended periods of time. In addition to lowering the average income of women relative to men, this phenomenon ensures that women on average collect less in monthly DI benefits than men, since the replacement formula for DI benefits rewards longer work experience. Average monthly benefits for women were only $925, but $1189 for men (Social Security Administration, 2010). The difference is quite modest for younger age cohorts, since these workers have less time to gain experience and

its associated benefits, but much larger for worker nearing the retirement age. In the 20-25 age cohort, for example, women received $667 in average monthly benefits, while men received $705 — only $38 more. In the 60-64 age cohort, however, the difference was over $400. Because female workers tend to receive lower disability awards, the financial strain on the program is somewhat reduced. Even so, a simple calculation based on average monthly benefits reveals that the unanticipated increase in female DI beneficiaries (about 2.6 million) costs the program in excess of $20 billion each year.

Clearly female beneficiaries are no less deserving of benefits than their male coworkers, and the increasing number of women active in the workforce reflects a welcome progression in society norms. However, the underlying budgetary point remains. Unanticipated changes in labor force participation have caused DI expenditures to rise substantially.

4 Population Aging

The U.S. population is aging. More to the point, the U.S. workforce is aging. Although the United States enjoys continued growth in all age cohorts and a birth rate above replacement, it is still susceptible to the same public policy challenges facing other industrialized nations with graying populations. In 1960 slightly less than 30 percent of the population was over 45 years of age. By 2009 that number was close to 40 percent. Viewed another way, while the population under 45 grew by 20 percent since 1980, the population over 45 grew by a far more impressive 70 percent. Even a comparatively robust birth rate cannot fully compensate for the rapid increase in the ranks of older Americans. Even now the political debate rages over what adjustments are needed to preserve the nation's public welfare programs.

The strain that retiring members of the baby-boom generation will place on the OASDI program is already well documented (Murphy and Welch, 1998). As the Social Security Administration has noted, the main reason that the "OASDI cost rate will increase rapidly between 2010 and 2030 is that, as the large baby-boom generation born in the years 1946 through 1964 retires, the number of beneficiaries will increase much more rapidly than the number of workers" (OASDI Board of Trustees, 2004). This cycle has already begun. As members of the the baby-boom generation pass the retirement age and begin to collect retirement benefits, the OASDI program will be hard pressed to meet the obligations it made decades ago when those same workers were paying into the system.

It is surprising, given the widespread acknowledgment of this problem, that few researchers have considered the impact of the baby-boom generation on the federal government's disability programs. The DI program does not pay benefits to retired workers, but it does spend a disproportionate amount of its budget on the near elderly, i.e., workers between fifty and the federal retirement age. In other words, the swell of aging workers that the Social Security Administration predicted would hit the OASDI program beginning in 2010 had already begun to affect the DI program in the late 1990s. The data should show an increase in older beneficiaries between 2000 and 2010 and indeed it does. In 2000 about 58 percent of workers enrolled in the DI program were in the 50-65 age cohort. By 2009 the number had climbed to 69 percent. Subdividing further shows that the 60-65 age cohort grew the fastest, more than 70 percent, while the next two oldest brackets, 50-54 and 55-59, increased 38 and 49 percent, respectively. Figure 8 reveals the especially rapid increase since 2000 in beneficiaries between the ages of 50 and 65.

This growth is relevant because older workers receive the most generous disability compensation. Longer work experience correlates with higher wages and higher program pay-

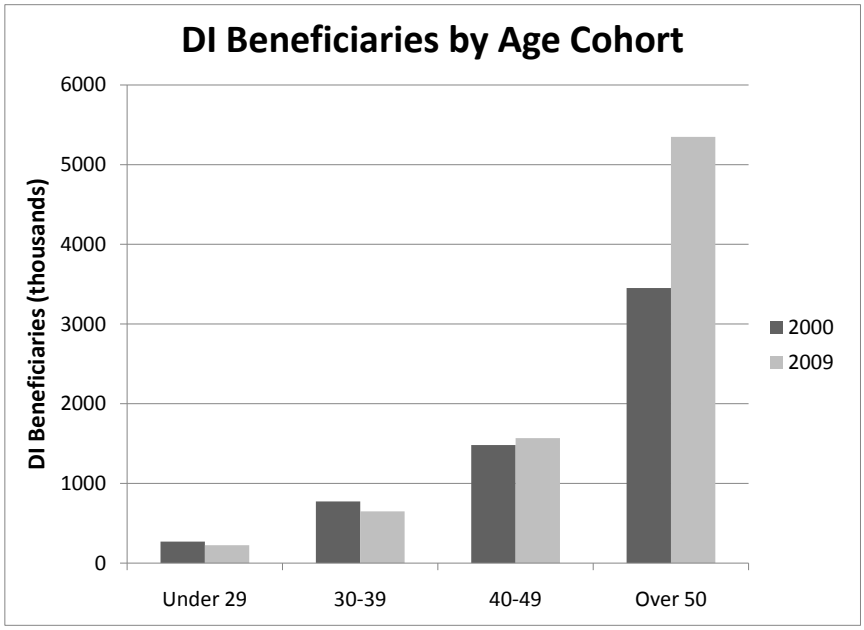

Figure 8: Change in age composition of DI beneficiaries since 2000.

outs. Despite the DI program's progressive award formula, an older worker can expect to receive higher monthly payments than a younger worker suffering from the same disability. There were 7.8 million workers receiving disability benefits in 2009. If the age composition had remained the same as in 2000, that is, with the same fraction of beneficiaries assigned to each age cohort, the DI program would have spent about $3.5 billion less than it did (assuming average monthly benefits for 2009 remained the same). Although this is not a tremendous difference for a program that spends $120 billion annually, it is still a substantial amount of money. Moreover, this calculation only captures changes in age structure that have taken place since 2000. The program costs associated with population aging will likely rise over the coming decade as the final wave of the baby-boom generation exits middle age.

5 Income Replacement Rate

The replacement rate measures the fraction of previous earnings supplanted, or replaced, by disability awards. It raises a fundamental policy dilemma. While a parsimonious replacement rate may fail to address the needs of disabled workers with limited resources, an overly generous one may draw unwanted attention from less deserving workers. Ultimately the replacement rate is a question of managing incentives. As a partial explanation of the rising costs of the DI program, some economists suggest that a relative increase in the replacement rate has prodded a growing number of workers to seek disability benefits (Clark et al., 2004).

There is little disagreement that an excessive replacement rate is undesirable. When

the DI program was signed into law, it did not contain a provision for automatic cost-of-living adjustments (COLAs). Thus it fell to Congress to approve incremental benefit changes in response to rising inflation. As these manual adjustments were cumbersome, Congress passed legislation in 1972 to tie COLAs to the CPI. It soon became apparent that the benefit formula Congress approved was overly generous. The 1970s witnessed a dramatic increase in the replacement rate, with the median rising from less than 50 percent to almost 70 percent. Workers in the highest quartile of replacement rates received more than 90 percent of their pre-disability earnings. These were the years of plenty for workers on the nation's disability rolls. In contrast, the program encountered its first bout of serious financial difficulties.

Congress responded to this development in 1977 by approving a new benefit formula that indirectly tied the award, more formally known as the Primary Insurance Amount (PIA), to the national average wage indexing series (Office of the Chief Actuary, 2009). The Social Security Administration now uses a four-step methodology to determine the size of the PIA: 1) ascertain the number of eligible working years, 2) calculate indexed monthly earnings, 3) compute average indexed monthly earnings (AIME), and 4) calculate PIA as a function of AIME. While each of these steps is necessary to compute the PIA, Autor and Duggan (2006) argue that the second step in particular artificially inflates the replacement rate for low income workers.

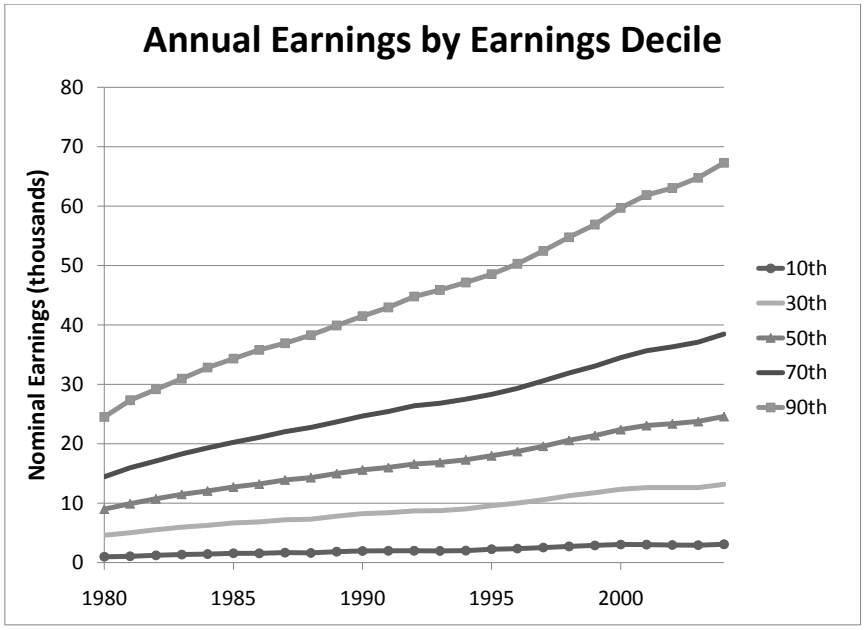

Figure 9: Change in nominal earnings across selected earnings deciles.

Since 1980, the wage difference between low income and high income Americans has increased. Real earnings for lower wage earners have stagnated over the last thirty years, while the highest wage brackets have seen substantial growth. Figure 9 tells the same story

in nominal terms: the growth in median nominal earnings outpaced the growth in the lower earnings brackets. Since the benefit formula ties monthly earnings to the national *average* wage indexing series, it seems likely that the earnings disparity causes the replacement rate for low wage earners to rise relative to their income. In effect, the benefit formula has become more progressive.

Assessing the relation between the replacement rate and disability awards is challenging, because the effect of changes in the replacement rate is difficult to isolate. Bound et al. (2004) estimate that a 1 percent increase in the replacement rate correlates with a 0.5 percent increase in DI beneficiaries. As this is one of only a few studies directly examining this relationship, the figure should be treated as a good guess rather than a hard-and-fast statistic. Nevertheless, if the replacement rate for workers in the lowest quartile of earnings has risen between 5 and 10 percent, as Autor and Duggan suggest, the long-term effect on disability rolls could be sizable.

It should be noted that the replacement rate contributes in another way, albeit indirectly, to the DI program's financial difficulties. Since 1956, Congress has increased not only DI payroll taxes, but also the contribution base, or in other words, the taxable portion of income. Although raising the cap on the contribution base has little effect on lower wage earners (because most or all of their income is already taxed), it does ensure that high wage earners pay more into the system. While good for the budget in the short term, revenue raised in this way eventually leads to higher payouts, since the replacement rate is relatively stable for high wage earners.

6 Economic Factors

In the wake of the 2008-2009 downturn, *The Washington Post* reported that applications for DI benefits increased by 21 percent in a single year. (Fletcher, 2010). The article suggested that this unexpected surge in applications occurred because newly unemployed workers were hoping to replace lost income with disability benefits. Not only is this narrative intuitively appealing, but it also explains similar increases in applications during past recessions. Between 1989 and 1991, DI applications rose by 21 percent, and between 2000 and 2003, applications rose by another 42 percent. That American workers should turn to disability payments in increasing numbers during a downturn is not surprising; it would be more surprising if they did not. In addition, it is likely that many of these cases involve real disabilities, as some workers suffering from impairments may only seek DI benefits after losing their current jobs. Even these cases likely violate requirements for DI awards, since benefits are intended to assist only workers whose disabilities prevent them from finding gainful employment. In the case of a worker who is disabled but still capable of performing work, recent unemployment would not qualify as grounds for DI benefits. In all likelihood, however, the DI program functions as a financial safety net for many marginally impaired (and even healthy) workers.

More conclusive evidence of the inverse relationship between economic growth and the DI application rate can be found by regressing a proxy for applications on the unemployment rate. In particular, choosing the logarithm of monthly DI applications as the explained variable and the overall monthly unemployment rate as the explanatory variable gives a statistically significant relationship between applications and unemployment for the years 1985 to 2010. The regression shows that every 1 percent increase in unemployment correlates with a 4 percent increase in DI applications. This result, which corroborates previous

findings, leads to a natural question: to what extent does rising unemployment translate into an increase in awards? Awards, rather than applications, are the true gage of the effect of economic conditions on the cost of the DI program. Figure 10 gives some insight into this relationship.

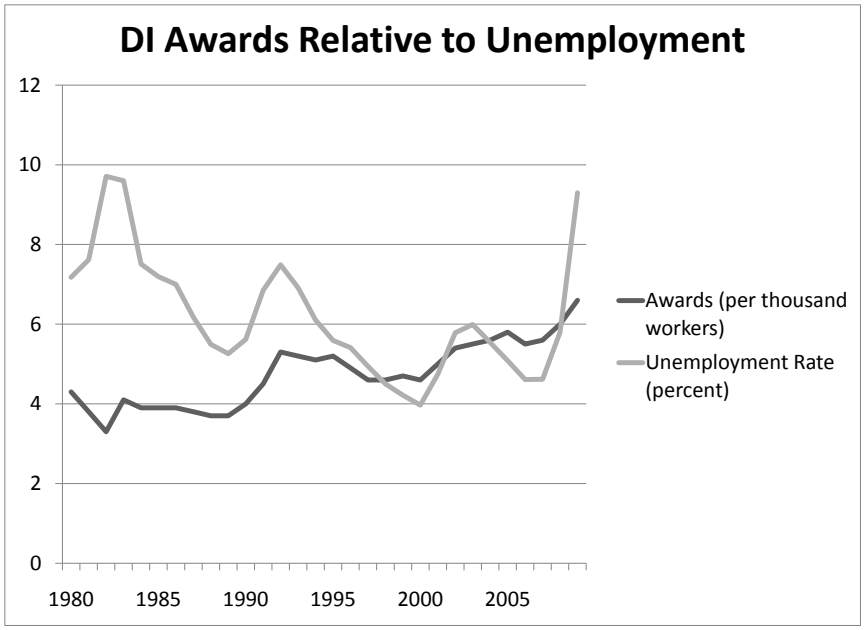

Figure 10: DI awards plotted in conjunction with the unemployment rate.

Most notably, DI awards and the unemployment rate appear to move in opposite directions during the early 1980s. During this period, which occurred before the 1984 congressional reforms that liberalized access to benefits, stricter guidelines led to reductions in awards. Excluding this anomaly, an inspection of Figure 10 shows that awards and the unemployment rate largely move together. There is, in fact, a strong correlation between the two data series (Social Security Administration, 2006; Autor and Duggan, 2006).

If workers entering disability rolls during recessions left during recoveries, their effect on the DI program would be minimal. Once workers receive access to DI benefits, however, they are highly unlikely to depart the program on their own volition. In 2009 the Social Security Administration reported that it terminated 630,000 workers from the program. This figure is somewhat deceptive. A closer examination shows that the vast majority of these terminations occurred because the beneficiary either died (35 percent of cases) or passed the federal retirement age (54 percent) and thus began to collect OASDI benefits instead. Only 5 percent of terminations took place because the beneficiary engaged in substantial gainful activity (i.e., the individual made a conscious decision to return to work). A paltry 3.2 percent of terminations occurred because the DI recipient saw an improvement in his or her medical condition. A leading reason for this outcome is that the Social Security Administration has limited resources to devote to conducting medical

reviews of current beneficiaries.

Awards grew by 10 percent between 2008 and 2009, more than triple the historic annual increase of 3 percent. Viewed in this light, the downturn put around 70000 more workers on disability rolls than expected. With average monthly benefits at $1120, these additional beneficiaries cost the program around a billion dollars in 2009 alone. Because medical and voluntary departures account for such a small percentage of program terminations, the effects of the economic contraction on DI will be felt long after the nation returns to economic prosperity.

7 Conclusion

In one sense the financial quandary facing Social Security Disability Insurance is purely actuarial. Insolvency looms because the program is self-funded: its revenue and expenditures are kept separate from the activities of the general U.S. Treasury. With payroll taxes already failing to raise enough revenue to meet outlays, the program will deplete its trust fund by 2020. Without making difficult policy adjustments, however, Congress could simply choose to loan DI the funds necessary to cover the shortfall between expenditures and revenue (much as it borrowed from the DI Trust Fund in the many years that the program racked up surpluses). In the short term this approach is made more feasible by the size of the DI program. Although growing rapidly, the program accounted for less than 5 percent of the federal budget in 2009. Perhaps the program's budgetary difficulties amount to less than a crisis.

It should be noted that political pragmatism is largely responsible for the program's current state of affairs. Together, the 1977 and 1984 reforms of the DI program established two important points: 1) Congress could, if it chose, reduce costs by restricting new awards and accelerating terminations, and 2) Congress could, if it chose, increase costs by liberalizing new awards and slowing terminations. In fact, the 1984 reforms temporarily suspended medical reviews for workers within certain disability categories. Arguably then, political caution is the primary cause of the DI program's inability to keep costs under control. While economists may inquire diligently into the underlying factors behind DI's rising costs, the practical value of their findings hinges strongly on political considerations.

At the same time the program's problems should not be understated. The expansion in program coverage since 1956 raises the question of whether Congress anticipated the future costs of its promises to the disabled. In the fifty years after 1960, for instance, disability rolls grew more than thirteenfold. Once a minor program administered by the Social Security Administration, DI is now a budgetary juggernaut. This rapid growth is nearly impossible to reverse. For many if not most Americans, reducing government assistance to the disabled is not an attractive option.

From a public policy perspective, however, the rapid expansion of the DI program is troubling. While the program assists many workers suffering from genuinely disabling conditions, is is clear that some workers collecting benefits are undeserving. The challenge for the Social Security Administration is to find an efficient way to separate the wheat from the chaff, a task which is very difficult given the subjective criteria it must use to determine the presence of a disability. In this respect, DI faces the same administrative problems as any large government welfare program. Barring a sudden upheaval in public policy making, these problems are likely to continue.

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