Participation as a measure of program success

by Jennifer L. Warlick

The formal evaluation of social welfare programs has imposed stringent demands upon research methodologies in economics and other social sciences. Often the validity of the performance criteria must be reassessed. We now know, for instance, that simply counting numbers served or dollars spent provides insufficient information. The Institute was closely associated with the development of target effectiveness as a rule-of-thumb measure. More recently, Institute researchers, among others, have promoted another criterion: the level of program participation. In the article that follows, Jennifer Warlick, Research Associate at the Institute, assesses the advantages and pitfalls of this measure.

The decade of the seventies witnessed an intensive evaluation of the nation's public assistance programs, which resulted in two proposals for comprehensive welfare reform and a series of proposals for lesser reforms. The performance criteria used to evaluate the various programs included concepts that had become familiar during the previous decade: horizontal and vertical equity (equal treatment of equals, equivalent treatment for nonequals); target efficiency; adequacy; clarity; simplicity; and the presence of incentives for work, family stability, savings, and sharing of income and wealth within families. The seventies marked the development of a new criterion: the level of program participation.

Government officials, program administrators, and welfare rights advocates know well that the number of people who receive benefits from government programs is less, sometimes dramatically so, than the number of those eligible to participate. The failure to reach all those for whom programs are intended is frequently seen as a flaw in program design or administration. Thus the participation rate has become an indicator of the success of a program.

Historical review

The issue of participation first arose when the Aid to Families with Dependent Children (AFDC) caseload grew explosively, more than doubling across the nation between 1967 and 1971. In a 1973 study, Barbara Boland determined that 55 percent of the increase in the basic family (BF) portion—by far the major portion of AFDC—was due to increasing participation among eligibles, and only 45 percent could be attributed to growth in the number of poor eligible families. The estimation of aggregate participation, measured as the ratio of participating to eligible households among all types of AFDC families, increased from 58 to 84 percent in the years 1967 to 1970, while participation by the female-headed families in the caseload climbed from 63 to 91 percent.[1] Identifying increasing participation as a major cause of growth of caseloads and costs helped to defuse escalating concern that the number of poor was increasing during a period of national prosperity. The discussion of growth also underscored a proposition set forth earlier by Frances Piven and Richard Cloward: program caseloads may be controlled not only by manipulating the size of the eligible population but also by discouraging or encouraging participation.[2]

As the seventies progressed, participation rates of other programs were studied. Maurice MacDonald, an Institute researcher, discovered that nationwide participation in the Food Stamp Program averaged 38 percent in 1975.[3] Accusing program administrators of negligence in some cases and blatant resistance to awarding eligible persons the benefits to which they were entitled in others, welfare rights advocates brought suit against states with low participation rates. The courts ruled in favor of potential participants, ordering that outreach programs be created to inform eligible households about the availability of food stamps and to ensure that the stamps were applied for and received with dispatch.[4]

In 1972 Congress created the Supplemental Security Income (SSI) program, the first federal guaranteed annual cash income program in our nation's welfare history. Because eligibility for the program is limited to the aged, blind, and disabled, the Social Security Administration was given administrative responsibility for the program. Alerted to the problem of low participation rates in other programs, SSA initiated a program to inform the eligible population that benefits would be available beginning January 1, 1974. Despite these outreach efforts, which were nationwide in scope and cost $26 million by 1976, participation during the first two years of operation was disappointingly low—estimated for the aged at 50 percent, for the blind and disabled at 67 percent.[5]

Attention has recently turned again to AFDC. Because Boland's work exerted a major and enduring effect on thinking regarding participation, the Urban Institute was awarded a government contract to review her study. Analysis revealed that the way in which Boland derived the numerator in her measure of participation caused her to overestimate the true participation rate by as much as 15 percentage points. According to the Urban Institute study, there have been two distinct periods of growth in AFDC-BF during the decade 1967-1977: In the first five years, participation rose by 104 percent (from 45 to 92 percent); in the second five years the rate rose marginally, by only 3 percent.[6] Although these estimates differ substantially from Boland's, which were 13 and 15 percentage points higher than the Urban Institute's for 1967 and 1970, they do not contradict her basic conclusion that participation increases were responsible for much of the caseload growth between 1967 and 1970. In contrast to Boland's results, they indicate that participation in AFDC-BF reached saturation in 1973 rather than 1970. The Urban Institute study suggests, but does not prove conclusively, that the rapid growth between 1967 and 1973 can be explained by the combination of active outreach efforts, a favorable social and legal climate for welfare expansion, and increased total benefits due to the rapidly growing availability of food stamps and medical care to AFDC participants.

The Urban Institute study also analyzes growth in the unemployed parent (UP) portion of the AFDC program, where participation rates rose by 167 percent between 1967 and 1977 (from 27 to 72 percent). In contrast to the basic family program, UP has not shown a pattern of smooth growth, although the general movement has been upward. Variations appear to be best explained by fluctuations in the level of unemployment.

Measuring participation

The measure that was first developed, and is the one most commonly used, to gauge level of program participation is the ratio of the number of actual "filing units" to the estimated total units eligible to receive program benefits. A filing unit is defined as the relevant residence group (i.e., household) filing a single application. The definition varies by program: for food stamps it is all persons living under a single roof and sharing cooking facilities, regardless of blood relationship; for SSI it is a single individual or married couple, which means that there may be multiple filing units within a single household. To calculate the ratio—called the "caseload" or "population participation rate"—it is necessary to count the number of participating filing units and to identify all eligible filing units.

An accurate count of participants can usually be obtained from microdata surveys—surveys of individual households—which question respondents about receipt of welfare. These counts can be verified by checking against administrative records. Because eligible nonparticipants do not identify themselves, counting the eligible population is much more difficult. Most programs have multiple eligibility criteria, all of which must be satisfied. Researchers approach this problem by matching the characteristics of single filing units with the eligibility criteria within a microsimulation model of eligibility (see "The Modern Miracle of Microsimulation Modeling," *Focus*, 4:2, 1980). Even so, there is no available benchmark equivalent to administrative records against which to verify estimates so obtained.

The population participation rate indicates what proportion of the targeted population actually receives benefits, but does not differentiate this population by level of need. It therefore ignores differences in economic circumstances among members of the eligible population. In programs such as AFDC and SSI, benefits vary inversely with the amount of nonwelfare income of the filing unit. If the level of participation is low, it is difficult to determine a program's target efficiency on the basis of the population participation rate alone. Is the program reaching those with the greatest or least need? It follows that this rate may shed very little light on the question of the degree to which program costs will rise as participation increases.

To help answer these questions, some researchers have recently begun to calculate a second measure of participation: the ratio of program benefits disbursed to the hypothetical total which would have been distributed had all eligibles participated. As in the case of the population participation rate, the numerator—benefits actually disbursed—of this "expenditure participation rate" is more easily obtained than is the denominator—the hypothetical total. The numerator may be obtained directly from program administrative records, but the denominator requires estimation of the sum of benefits available to nonparticipating eligible filing units. Once again, employment of a microsimulation model is required.

Unlike the population participation rate, the expenditure participation rate, by indicating the percentage of benefits actually disbursed, provides a measure of the degree to which the economic needs of the targeted population are met. Yet it too is an inadequate predictor of how costs will change with increasing participation. Moreover, the cost implications of rising participation in one program may extend beyond that program if increased participation in the initial program leads to higher enrollment in other programs. For example, SSI beneficiaries are automatically enrolled in Medicaid in 28 states, regardless of the amount of their SSI benefits. It is therefore possible for an individual receiving minimal SSI benefits (e.g., one dollar a month) to receive medical services financed by Medicaid valued in the thousands of dollars. It follows that the increase in Medicaid expenditures resulting from increased participation in SSI could dwarf the corresponding change in SSI outlays. While persons interested in SSI's ability to meet the income needs of the eligible population might focus on the expenditure participation rate, Medicaid officials concerned with caseloads and expenditures would find the potential changes in the SSI population participation rate more relevant. In general, it is safest to consider both rates in conjunction.

Estimates of the population and expenditure participation rates for AFDC and SSI are presented in Figure 1. Comparing these rates within a single program, one is struck by their similarity. In no case is their difference greater than 5 percentage points. Differences across programs are more marked. The population participation rate in SSI is only half that in AFDC-BF and two-thirds that in AFDC-UP. In SSI, the expenditure rate is greater than the population rate, suggesting that the neediest of the eligible participate with greater frequency than those with less need (a point illustrated in Figure 2). This hypothesis is not borne out by the AFDC programs, in which the population rate exceeds the expenditure rate.

Users of participation rates should also be aware that aggregate or programwide participation rates such as those cited above may mask substantial variation across states and/or across different categories of recipients. The national population participation rate for filing units in the AFDC-BF program during 1976 is estimated at 83 percent, but state participation rates range from a high of 95 percent in the District of Columbia to a low of 56 percent in Arizona. The national SSI participation rate during 1975 was 47 percent, but the state rates range from 20 percent (Nebraska) to 77 percent (Louisiana).[7]

There is also substantial variation in SSI participation rates when eligible filing units are categorized by demographic characteristics. One of every two aged eligible individuals with an eighth-grade education or less participates, whereas only 1 of 5 of those with a college education does so. Rural residents are 40 percent more likely to participate than nonrural residents, and
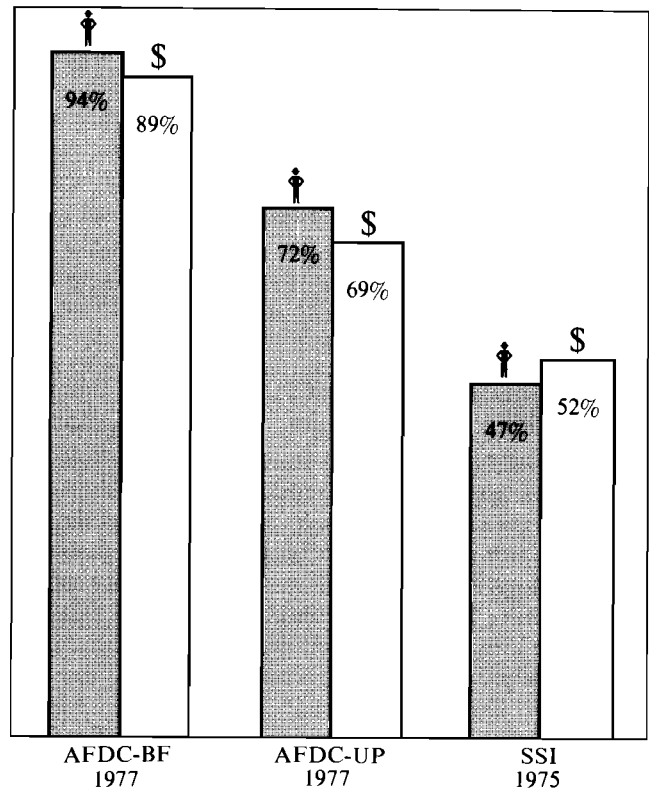

Figure 1. Population and Expenditure Participation Rates for Three Programs

Population rate = number of people participating as percentage of estimated total eligible

Expenditure rate = amount spent on benefits as percentage of hypothetical total expenditure if all eligibles participated

Source: AFDC rates from Michel (1980); SSI rates estimated by the author from Survey of Income and Education. Figure by University of Wisconsin Cartographic Laboratory.

southerners are 60 percent more likely than nonsoutherners. Figure 2 illustrates another kind of variation: participation in relation to levels of benefit entitlement (the amount of benefit for which a recipient is eligible).

Can the rates be accurately measured?

Precise measurement of participation rates is a goal that has not been reached. The need to identify nonparticipating eligibles leads to reliance upon large microdata bases. Several features of these data can lead to imprecise estimates:

- Underreporting of nonpublic assistance income

- Reporting of income and other data for a time period different from program accounting periods

- Absence of detailed information regarding respondents' assets and other economic characteristics relevant to eligibility determination

- Insufficient sample size to support estimates for individual states

The first and third features are more likely to lead to overestimates of the size of the eligible population and hence to artificially low participation rates. The second often produces the opposite result: For example, persons earning their annual income in the first six months of a calendar year and experiencing unemployment for the remaining months may be classified as ineligible on the basis of their annual income when they were actually eligible for benefits from a program with a shorter accounting period. It follows that the size of the eligible population will be underestimated and the measured participation rate will be higher than its true value.

A paradoxical situation results when persons who report receipt of welfare benefits are classified as ineligible by the microsimulation model of eligibility. Such persons are referred to as ineligible participants. Should they be included in the calculation of participation rates? The answer may depend on a researcher's belief about the true eligibility status of such persons. It is known that a significant number of people apply for and receive welfare benefits fraudulently. The researcher may believe that a majority of ineligible participants are fraudulent recipients, and may exclude them from the calculation. If, however, the classification of ineligible participants results from an imprecise microsimulation model, and such participants are in fact eligible, then they should be included in the calculation. Researchers hope to find that ineligible participants are indeed ineligible, because the opposite conclusion raises the possibility that a significant proportion of the nonparticipating eligible population is also being misclassified as ineligible.
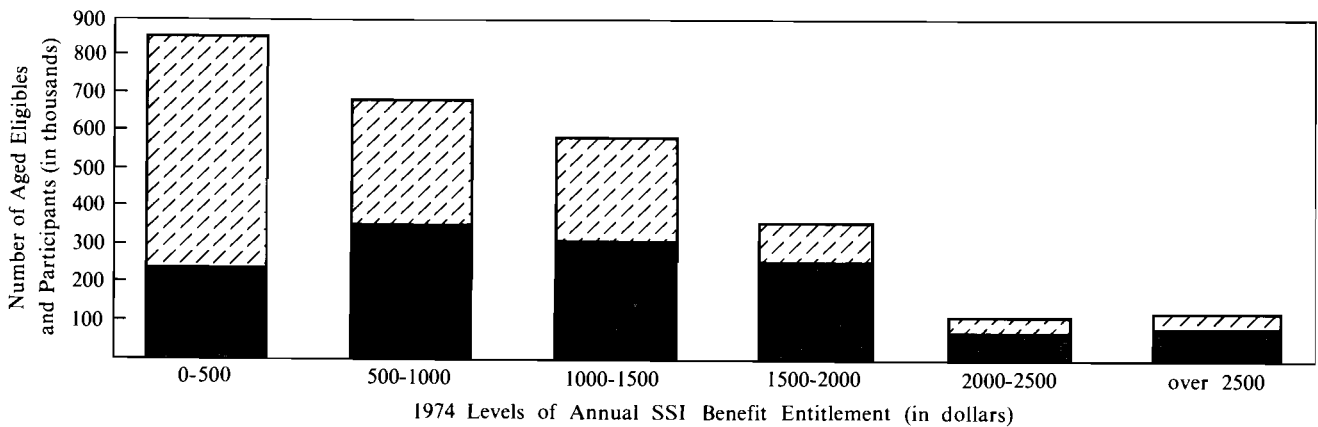

Figure 2. The Higher the Potential Benefit, the Higher the Level of Participation

Dashed areas = number of all the aged potentially eligible for SSI benefits who would receive the particular benefit level
Solid areas = number of those potentially eligible for that level who are actually participating

Source: March 1975 Current Population Survey. Figure by University of Wisconsin Cartographic Laboratory.

The absence of detailed data regarding the nature and amount of a filing unit's asset holdings may also significantly affect estimated participation rates. Because the value of assets is included in determining eligibility for most public assistance programs, the problem cannot be ignored. It is common practice to impute assets to filing units according to demographic characteristics, using the known asset value of persons with similar characteristics, or else on the basis of reported nonemployment income. Unfortunately, estimated participation rates are quite sensitive to the chosen imputation method.

To illustrate this sensitivity, the author calculated the population participation rate for SSI in 1974 using three different imputation methods. The first assumed that interest, rents, and dividends actually reported represented a 6 percent return on the total stock of assets. The second and third methods employed two-step and one-step re-gression procedures respectively to assign asset values to filing units. The estimated participation rates produced under these three methods varied dramatically, from a low of 42 percent when no asset screen was employed to 71 percent when assets were predicted with the simplest of the regression procedures. Calculations also show that variation in SSI participation rates attributable to including and excluding ineligible participants is substantial, ranging from 6 to 20 percentage points depending upon the method of asset imputation.

The Urban Institute study cited above approached the problem of ineligible participants in a different way: Rather than simply including or excluding them, it adjusted estimated participation rates on the basis of data regarding AFDC case and payment error rates regularly collected by the U.S. Department of Health and Human Services as part of its Quality Control Program. The adjustment lowered the estimated population and expenditure participation rates by averages of 7 and 11 percentage points respectively over the period 1973 to 1977. The upward trend in both rates in that period was not changed, however.

What policy role for participation rates?

The previous discussion has established that reliance on a single participation standard, such as the population participation rate, may be misleading in many policy contexts, that national participation rates mask significant variation in participation by geographic residence and recipient characteristics; and that measured participation rates are highly sensitive to the methodologies used in their estimation. What then is the appropriate policy role of participation rates? How much confidence should be placed in them as measures of program performance? Do they enlighten policy discussions or perhaps misguide them?

In the absence of improved data sources, regular use of participation rates as a measure of administrative performance appears unwarranted. Despite their statistical inadequacies, however, participation rates have to good purpose focused attention on program accessibility and on obstacles to participation, leading to efforts to increase public knowledge of program availability, to simplify complex application forms, to reduce waiting time between application and benefit receipt, and to eliminate demeaning treatment of actual and potential recipients. Moreover, comparative studies of variations in participation rates by demographic groups are useful in identifying the different effects of outreach efforts according to the circumstances of filing units, thus helping to target these efforts more efficiently. To the extent that estimation biases are randomly distributed by state, comparative studies of state participation rates can be quite useful. Exact cardinal rankings are not necessary to determine that some states perform relatively better in this respect than others. And the practices of states with high participation rates may be successfully applied to those with low participation rates. Similar lessons may be learned from examination of variations in participation rates for a particular program through time. Thus, despite the fact that absolute participation rates measured at a single time are suspect as a measure of single program performance, relative studies of participation have enhanced and can continue to enlighten the policymaking process. ■

[1]Barbara Boland, "Participation in the Aid to Families with Dependent Children Program (AFDC)," in U.S. Congress, Joint Economic Committee, Subcommittee on Fiscal Policy, *Studies in Public Welfare—The Family, Poverty, and Welfare Programs: Factors Influencing Family Instability,* Paper no. 12, Part I (Washington, D.C.: GPO, 1973).
[2]F. F. Piven and R. A. Cloward, *Regulating the Poor: The Functions of Public Welfare* (New York: Pantheon, 1970).
[3]Maurice MacDonald, *Food, Stamps, and Income Maintenance* (New York: Academic Press, 1977).
[4]*Bennett v. Butz,* 1974, 386 F. Supp. 1059 (D. Minn.), and *Tyson v. Norton,* 1975, 350 F. Supp. 545 (D. Conn.).
[5]Jennifer L. Warlick, "Participation of the Aged in SSI," *Journal of Human Resources,* forthcoming; U.S. Department of Health, Education, and Welfare, "Overview of the Supplemental Security Income Program," Staff Paper prepared for the Social Security Advisory Council, Office of Research and Statistics, Social Security Administration, May 1978.
[6]Richard C. Michel, "Participation Rates in the Aid to Families with Dependent Children Program, Part I: National Trends from 1967 to 1977," Working Paper no. 1387-02, Urban Institute, Washington, D.C., December 1980.
[7]Lynn Ware, "AFDC Basic Eligibles and Program Participation Rates" (memo to David Arnando, Family Assistance Studies, SSA), Public Assistance Data Analysis Laboratory, Social Welfare Research Institute, Boston College, 1980. Estimates of SSI benefits are the author's.