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**ABSTRACT**

Growth in overall real welfare expenditures per capita has been a noted trend in the last thirty years in the U.S. The influence of demographic forces in contributing to this growth is considered in this paper. It is found that the growth of female-headed families is the strongest and dominant force in contributing to trends in real AFDC expenditures per capita over the long run. The influence of demographic growth is especially strong for the black population. For the Food Stamp and Medicaid programs, increases in participation rates, on the other hand, have been more important. Projections of future trends in the age, race, and sex composition of the U.S. population show that expenditures in none of these programs is likely to respond to such basic demographic trends, however.

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A notable feature of most developed economies in the postwar period has been a seemingly inexorable growth in expenditures on entitlements. Although most nations have made attempts to restrain that growth through legislation, administrative action, and other policy mechanisms, for the most part these attempts have not met with success. While there are good and obvious political reasons for this failure--sometimes the programs have strong constituencies, for example--the causes of this growth are still not completely understood.

The role of demographic forces in contributing to the growth of social welfare expenditures in the U.S. is the subject of this paper. This issue has been the topic of considerable interest in policy discussions surrounding welfare but little formal analysis. There is a perception among the public and in some policy and research circles that the growth of the main cash program in the U.S., formerly called Aid to Families with Dependent Children (AFDC), has been the result of an increase in the number of female-headed families, most commonly (in the public eye) because of increases in the rate of out-of-wedlock childbearing. Yet this has not been shown, and economic research on the determinants of participation in welfare programs has concentrated instead on other factors--for example, the influence of the level of the welfare benefit relative to private labor market opportunities. Indeed, most of the economic research literature on the determinants of AFDC participation examines the determinants of participation in welfare conditional on demographic status, rather than the impact of demographic influences *per se*.

The specific contribution of this paper is to decompose the growth in welfare expenditures

per capita over the last thirty or so years into three parts: growth in welfare benefits, growth in the reciprocity rate for different demographic groups, and growth in the relative sizes of those demographic groups. The first represents the influence of direct expansions in program services and benefits, while the second represents the influence of the participation rate of the population in the program. The third of these components represents the contribution of demographic forces, and is the main object of interest.

The major programs examined are AFDC, Food Stamps, and Medicaid. We find that, over the last thirty years, demographic influences--in particular, growth in female headship rates--have been by far the most important contributor to trends in real AFDC expenditures per capita, greatly outweighing changes in benefits and in participation rates. However, in the short run--over four-year periods--fluctuations in participation rates have been equally important. Over the long run these participation rates have risen and fallen, fluctuating around a fairly unchanging average level, whereas demographic influences have trended steadily in the direction of greater caseloads and expenditures. The analysis also shows that increases in Food Stamp and Medicaid expenditures have been more influenced by increases in benefit levels and participation rates, on the other hand, and less by demographic forces, compared to AFDC.

At least for AFDC, the short run and long run demographic influences have been largely unanticipated by the public sector. These influences have led to spurts of unanticipated expenditure growth, which appear to have led in each historical instance to a political reaction and subsequent retrenchment in the welfare system. A cycle of short run booms in expenditures, followed by cutbacks and retrenchment, is revealed in the history of expenditures and benefits over the last thirty years. Neither the federal nor the state public sector in the U.S. has done a

very good job in dealing with these unanticipated fluctuations.

Looking to the future, a natural question is whether demographic forces will continue to exert a major effect on public assistance caseloads and therefore expenditures. One immediate problem with any forecast of public assistance expenditures arises because a major change in the structure of the welfare system has recently (1996) occurred which makes forecasting both benefits and participation rates in the system hazardous. In addition to this problem, however, population projections of the Census Bureau and the Social Security Administration do not attempt to project demographic composition at the level of female headship, but only by age, race, and sex (and occasionally marital status). Projections of female headship would be, in any case, difficult given the unsettled state of research on the causes of its secular upward trend. Nevertheless, because age-race-sex population projections are available, projections of how public assistance expenditures would change on this basis alone can be conducted. Such projections are also provided in the paper.

The outline of the paper is as follows. The next section provides a discussion of trends in social welfare expenditures in the U.S. over the last thirty years and examines whether there is a prima facie link to trends in demographic composition. The subsequent section presents the results of a formal decomposition of the growth in per capita welfare expenditures from 1968 to 1996 in AFDC, Food Stamps, and Medicaid, and shows the importance of demographic change, particularly for AFDC. Following this, demographic feedback loops are discussed; then follows projections of real welfare expenditures arising from future changes in the age, race, and sex composition of the U.S. A summary and conclusions ends the paper.

## **Trends in Public Assistance Expenditures and Demographic Structure**

There are a large number of programs in the U.S. that can, and have been, termed "welfare" programs. One of the most authoritative accounts lists over 80 programs which have some means-tested component and which are nontrivial in size, excluding social insurance programs like Medicare and Social Security but including tax-based programs like the Earned Income Tax Credit (Burke, 1995). This makes an accounting for trends in expenditures among the programs difficult because of the diversity of groups eligible for the programs and the complex eligibility and benefit rules of most of the smaller ones.

Nevertheless, clear patterns in expenditure growth emerge when the programs are taken as a whole and when the major programs are considered. Figure 1 shows trends in the per capita real expenditure on the top eighty means-tested benefit programs in the U.S. from 1968 to 1994, both in absolute terms and as a share of GDP.<sup>1</sup> The most important single point to note in Figure 1 is that real per capita expenditure on these programs is higher today than it ever has been, and that there has never been a serious decline in expenditure since 1968. Therefore, despite periodic perceptions of retrenchment and cutbacks in means-tested programs, they have grown secularly. This is also true of such expenditures as share of GDP, which began at 1.8 percent in 1968 and reached 5.4 percent in 1994. A large fraction of that share growth has occurred in expenditures on medical programs, primarily Medicaid.<sup>2</sup>

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<sup>1</sup> The set of programs in the expenditure totals excludes unemployment and workmen's compensation, Social Security, Medicare, and includes only one tax-transfer program (the EITC). For the EITC, only the direct credit portion is counted as an expenditure, not the reduction in tax liability

<sup>2</sup> Federal expenditures on welfare programs accounted for 11.0 percent of the federal budget in 1973 and for 16.9 percent in 1994 (U.S. House of Representatives, 1996, p.1321).

The second major feature of Figure 1 to note is the uneven growth of expenditures, for over the last thirty years there have been two major spurts of growth. There was an explosion of welfare spending in the late 1960s and early 1970s and another in the late 1980s and early 1990s; over the period 1975-1988, however, there was no growth. This same pattern will appear for many of the major individual programs as well, such as AFDC, Food Stamps, and Medicaid, although the magnitudes will differ.

The influence of demographic forces, and alternative explanations for these two periods of expenditure growth, is the subject of the analysis below and will be discussed in detail. However, it is worth noting at this point that each of the booms in expenditure was followed by a significant political retrenchment in the system. Following the explosion of expenditures in the late 1960s and early 1970s, state legislatures let their real AFDC benefits decline steadily, for example. Following the explosion of expenditures in the late 1980s and early 1990s, states began reforms attempting to control caseload growth in the AFDC program and Congress eventually followed with the most significant contractionary piece of legislation in the history of the program, the 1996 Personal Responsibility and Work Opportunity Reconciliation Act. A prima facie case can be made that this pattern of boom and retrenchment can be explained with relatively simple political models.<sup>3</sup>

By 1994, six individual programs constituted 74 percent of total means-tested

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<sup>3</sup> See Moffitt (1998b) for a discussion of the 1996 Act and its political origins and Moffitt et al. (1998) for a discussion of the causes of the decline of the real benefit decline. These papers argue that something more than simple rises in expenditures is needed to explain the political retrenchment, and that the growth of inequality and reduction in the real incomes and wages at the bottom of the distribution has played an additional role. See also Burtless (1994, pp.53-63) for a discussion of the time-series pattern of real means-tested expenditures and trends in welfare generosity, and Blank (1997a, pp.85-88) for another discussion.

expenditure, as shown in Table 1. The analysis in the subsequent parts of this paper will concentrate on three of these programs--Medicaid, Food Stamps, and AFDC.<sup>4</sup> SSI receipt is concentrated among the elderly and disabled, and demographic effects on its expenditures are largely driven by increases in the size of the aged and disabled population, which is covered by papers elsewhere in this conference, and could not be considered without also considering Social Security and other programs for the aged and disabled. The EITC is relatively new, at least at its current scale, and has not yet developed much of a history with which demographic effects can be assessed, though this may well change in the future. Section 8 housing assistance, like other forms of housing assistance, is rationed and hence represents the only non-entitlement program in the table. But the consequence of this feature is that expenditures in housing assistance programs are driven largely by the cost of housing and by programmatic developments, of which there have been few major ones in the last twenty years. Thus the influence of demographic forces is less important for it than for most of the other programs.<sup>5</sup>

The three programs to be analyzed here--AFDC, Medicaid, and Food Stamps--also are responsible for almost all of the growth in expenditures in the late 1980s and early 1990s. Total real expenditures on the entire set of 80+ programs identified by the Congressional Research Service were \$213 billion in FY 1988 and \$344 billion in FY 1994, implying an increase of \$131

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<sup>4</sup> The Medicaid expenditure total in Table 1 includes a large component for the elderly. This portion will be subtracted out below.

<sup>5</sup> Many of the programs of great analytic interest to the policy evaluation and research communities are considerably smaller in terms of expenditure. These include, in descending order, General Assistance (\$9.0 billion including the medical component), Head Start (\$4.1 billion), the Special Supplemental Nutrition Program for Women, Infants and Children, also known as WIC (\$3.3 billion), job training programs including the Job Corps (\$2.6 billion), and energy assistance (\$1.7 billion).



billion, or a 62 percent growth rate. Increased spending on medical programs constituted approximately \$80 billion of this increment, while increases in cash welfare expenditures contributed \$23 billion of new spending and food benefit programs contributed \$13 billion, thereby accounting for almost all of the recent increase in expenditure (Burke, 1995, Table 6).

Expenditure trends in these three programs are illustrated in Figure 2 and the relative contributions of caseload and benefit growth are shown in Figure 3 and 4, respectively. As shown in Figure 2, real per capita AFDC expenditures grew rapidly in the late 1960s and early 1970s, declined significantly from 1975 to 1983, declined slightly more through 1989, and then rose somewhat in the late 1980s and early 1990s before turning down again. Thus there have been no major increases in expenditures in this cash assistance program since the mid-1970s. Expenditures in the Food Stamp program, on the other hand, grew all the way until 1980, at which point they declined for a few years but then rose suddenly in the late 1980s and early 1990s (but have, like AFDC, recently turned around). Per capita Medicaid expenditures rose from 1972 to 1978, as the program was still being extended and formed, maintained relative constancy from the late 1970s to the mid-1980s, and then skyrocketed upward in the late 1980s and early 1990s, and have only recently peaked. In fact, Medicaid expenditures now exceed those of AFDC or Food Stamps.<sup>6</sup>

Thus the two periods of aggregate welfare expenditure growth are reflected fairly well by these three programs. Particularly in the late 1960s and early 1970s, expenditures in all three programs grew rapidly. For the Food Stamp and Medicaid programs, this is partly a result of

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<sup>6</sup> The Medicaid expenditures in Figure, unlike those in Table 1, pertain only to dependent children and their adult caretakers. The elderly and disabled are excluded.

their newness, for both were still in a formative period.<sup>7</sup> In the late 1980s and early 1990s, growth in Medicaid expenditures was very strong as was that in Food Stamps, albeit only very slight for AFDC.

The long-term trends in expenditure in these three programs also clearly demonstrates once again the replacement of cash benefits by in-kind transfers in the U.S. social welfare mix. Working somewhat against this trend has been the growth in SSI benefits and in the EITC, which are also cash programs. The growth of the latter suggests that it is not cash per se that the voters and legislators do not prefer, but rather it is the purpose to which the funds are directed and their underlying rationale that matters (aged, blind, and disabled for SSI and low-income earners for EITC).

Figures 3 and 4 decompose these expenditure trends into trends in numbers of recipients (i.e., the caseload) per capita and real expenditures per recipient, the latter of which is a proxy for average benefit levels. The figures show clearly that caseload growth is the primary factor responsible for expenditure growth, although growth in benefit levels has played some role in the Medicaid program. Figure 3 shows that caseload growth patterns in the three programs show the same pattern of two periods of expansion (late 60s/early 70s and late 80s/early 90s) as aggregate welfare expenditure, for example. Even caseloads in the AFDC program grew in the latter boom period, and the fact that AFDC expenditures did not exhibit the same growth is a result of continued declines in real AFDC benefits. Figure 4 shows that benefit trends have not followed

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<sup>7</sup> The Food Stamp program was created by federal legislation in 1964 and the Medicaid program was created by federal legislation in 1965, but over the subsequent ten years both programs were only gradually extended to all parts of the country and benefits and services were only gradually made nationally uniform.

any of those patterns except for a growth in per-recipient Medicaid expenditures in the late 1980s and early 1990s. Real AFDC benefits have, in fact, declined over the period as state legislatures have failed to raise nominal benefit levels enough to keep up with inflation. Real Food Stamp benefits have been roughly constant, for those benefits are indexed to inflation by law.<sup>8</sup>

Demographic Influences. That the major force behind trends in expenditures has been the growth in the numbers of recipients rather than expenditures per recipient makes an examination of the possible role of demographic influences, the main subject of this paper, warranted. In considering demographic influences, it is natural to begin by noting that the most important single criterion for welfare eligibility historically has been the combination of marital status and childbearing that leads to female headship, or single-motherhood. The TANF-AFDC program has been almost exclusively composed of female-headed families or children in such families, defined as families in which there is no able-bodied father of the children present.<sup>9</sup> A program called the AFDC-UP program, which makes children eligible when both mother and father are present, has never represented more than 7 percent of the caseload. The Food Stamp program,

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<sup>8</sup> The rise of in-kind transfers and decline of cash transfers is again reflected in the caseload figures, for AFDC has been the smallest of these programs since 1972. It is also interesting to note that most of the policy developments in AFDC in the last 30 years--the 1967 Social Security Amendments which increased work incentives, the 1981 Omnibus Budget Reconciliation Act which decreased them and made eligibility more restrictive, the 1988 Family Support Act which mandated participation in training programs, and a wide variety of state-level initiatives--appear to have had no major impact on the caseload trends and, therefore, on expenditure trends.

<sup>9</sup> There are many important details in this definition which we will not take the time to dwell on here. The presence of a stepfather does not automatically disqualify the family for AFDC, nor does the presence of a cohabiting male who is not the natural father of any of the children. The AFDC-UP program, on the other hand, makes eligible for benefits children whose father is present but unmarried to the mother. See Moffitt, Reville, and Winkler (1994,1998).

while universally available to low-income families regardless of family structure, has nevertheless always been disproportionately composed of AFDC-TANF families because Food Stamps are automatically made available to those families. The Medicaid program also has always provided benefits to AFDC-TANF families automatically, but eligibility has been broadened recently to include children, albeit rarely the adults, in non-welfare families.<sup>10</sup> Welfare participation rates among female heads will be demonstrated below to still be far above those of other demographic groups, even for the Food Stamp program.

The main trends in the growth of female-headed families are shown in Figures 5 and 6. Figure 5 shows that growth from 1940 to 1994 and demonstrates the now-familiar fact that female-headship growth accelerated starting in the 1960s and has continued to grow at a fairly steady pace all the way through the present. What is somewhat less well-known, but important for an examination of welfare trends, is that the composition of this growth has changed over time. As also shown in Figure 5, divorce rates rose dramatically at about the same time that female headship rates began increasing, but peaked and leveled off in the late 1970s. The growth of female heads since that time has been instead generated by an increase in birth rates among unmarried women, who tend to be younger and to have higher welfare participation rates. Figure 6 shows trends in those rates by age and shows a strong increase in the rates for women in the age range 15-29. Not only has this latter trend therefore kept the number of female headed families growing at a steady pace, it has also induced a change in the composition of the AFDC caseload, as shown in Figure 7. In 1942, the program consisted primarily of widows and wives of men

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<sup>10</sup> See Blank (1997a) for a more detailed discussion of the rules governing eligibility for these programs.

who had been disabled, but by 1973 the dominant group in the program was divorced and separated women. By 1992, however, never married women had assumed the majority position and the fraction consisting of widowed and divorced women had declined. These observations lead naturally to a more formal consideration of the role of demographic factors in caseload trends. Together, these figures are suggestive of a prominent role of demographic forces in the growth of welfare caseloads.

### **A Demographic Decomposition of Expenditure and Caseload Trends**

The goal of this section is to use Current Population Survey (CPS) data to present a decomposition of the growth of per capita welfare expenditures in AFDC, Food Stamps and Medicaid between 1968 and 1996 into growth of the relative fractions of different demographic groups in the population, growth in the welfare participation rate within each demographic group, and growth in the average expenditure per recipient. Our main interest is in the first of these in explaining expenditure growth, but the division between the other two is also of interest.

Past Work. Although formal decompositions of caseload growth into growth of the eligible population and growth in the participation rate conditional on eligibility have been relatively rare in the research literature on welfare, there have been dozens of studies that have calculated participation rates per se in different programs, and how they change over time. Sometimes demographic and other eligibility factors are examined, and sometimes these are tied in with growth of the aggregate caseload in informal ways. For example, the explosion of the AFDC rolls in the late 1960s and early 1970s received considerable attention, starting with a

seminal study by Boland (1973) and a follow-up and extension conducted by Michel (1980) , both of whom found that that explosion was primarily the result of an increase in participation rates among eligibles, where eligibility was defined not only by having the right family structure (female-headed family) but also having income below the AFDC eligibility levels.

This conclusion has been generally accepted by subsequent analysts, and the studies just referenced also sought to explain the rise in participation rates using the conventional economic model which views participation in welfare as resulting from a tradeoff between the attraction of benefits from the program, on the one hand, and potential wages off the program, on the other (the stigma of welfare receipt is also used to explain the failure of some participating eligibles to be on the program; see Moffitt (1983)). It was initially thought that the welfare caseload explosion in the late 1960s and early 1970s could not be explained by the conventional economic model because AFDC benefits did not rise nor did wages fall over the period. The increase in the participation rate was generally ascribed to reductions in stigma and to Supreme Court decisions outlawing the man-in-the-house rule and residency requirements (Michel, 1980). However, the importance of Food Stamps and Medicaid, both of which are heavily tied to AFDC receipt, was only later recognized. When the growth of those benefits was considered, a much stronger argument could be made that it was an attraction of benefits from welfare that played a role in the increase in the participation rate (Moffitt, 1992, pp.7-8).

Participation rates subsequent to the welfare explosion peaked reached over 90 percent in the mid-1970s. Rates have been shown to have subsequently declined over the 1970s and 1980s and it has been noted that the growth of the female-head population offset that decline over that period and kept the caseload growing (Moffitt, 1992, p.8,11). These declines in participation are

more easily explainable by declines in both AFDC benefits and the benefit "sum" obtained by adding together AFDC, Food Stamp, and Medicaid benefits (Moffitt, 1986, 1992). Analyses of the growth in the AFDC caseload over the late 1980s and early 1990s indicate a major role for demographic factors. Gabe (1992) concluded that the participation rate remained unchanged from 1987 to 1991 and that all the increase in the AFDC caseload resulted from an increase in the numbers of female heads, while the U.S. Congressional Budget Office (1993,p.3) concluded that one-half the increase from 1989 to 1992 was the result of increases in female headship. Blank (1997b) conducted a decomposition of the AFDC caseload from 1984 to 1995 in twelve large states and also concluded that all of the caseload increase is a result of increases in eligibility, although changes in income were not separated from demographic changes leading to eligibility.<sup>11</sup> On the other hand, the increase in participation rates in this period have not been successfully explained. Blank (1997b) concludes that the growth in the caseload is entirely unexplained by benefits, wages, and related factors, for example. Gabe (1992) and the U.S. Congressional Budget Office (1993), on the other hand, find some role for economic factors in the growth of the caseload, and for programmatic changes such as the expansion of Medicaid (which could be thought to draw recipients onto welfare in general).

Studies of the Food Stamp program have also been conducted, where the major interest has been in calculating participation rates conditional on eligibility to determine how much of the target population is being served. In the very early years of the program, in the late 1960s and early 1970s, essentially all growth was necessarily the result of increases in participation because

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<sup>11</sup> Blank, as many other authors in this literature, also discuss the AFDC-UP program. All statements in this section refer only to the AFDC-Basic results. The AFDC-UP program is ignored because it is such a small portion of the total caseload.

the program was still being put in place and expanded to cover all parts of the country (Ohls and Beebout, 1993, pp.15-16). Participation rates among eligibles have grown from 33 percent of households in 1976 to 67 percent in 1995 (Cody and Trippe, 1997, Table 1). This growth dominates the growth of eligibles. The increase in participation rates occurred mainly in the late 1970s, and in the late 1980s and early 1990s; rates were more or less stable in between.<sup>12</sup> These studies have generally ascribed the growth in participation in the late 1970s to the elimination of the purchase requirement.<sup>13</sup> Growth in participation in the late 1980s and early 1990s has been ascribed to the economy, as well as to Medicaid expansions which were thought to bring families onto the welfare rolls in all programs, as well as increased access to Food Stamp offices (Cody and Trippe, 1997, pp.9-10).

As for Medicaid, the dominant factor in most discussions has been increases in participation. This is somewhat unusual because, prior to 1984, Medicaid receipt, at least among women and poor children, was mostly tied to AFDC receipt, and demographic growth has been thought to have been a significant contributor to the latter. But subsequent to 1984, eligibility for Medicaid has been expanded tremendously and decoupled to a significant degree from AFDC, now covering most poor children and some poor adults (Gruber, 1997). Participation rates are quite low, however, around 25-33 percent. Still, most of the growth of the program in the late 1980s and early 1990s, which has been so important to overall growth of expenditures, has clearly

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<sup>12</sup> Once again, as in most of these studies, income eligibility and demographic eligibility are not, however, separated.

<sup>13</sup> The purchase requirement was a provision that required recipients to buy Food Stamps; after its elimination, the stamps were provided free of charge. The "bonus" value was unchanged, for the value of the stamps after the change equalled the difference between the value of the stamps and the purchase amount prior to the change.



not been the result of a change in the demographics of the U.S. population. The Medicaid program is also the one program among the three examined here which has seen significant increases in expenditure per recipient, which are traceable to increases in medical care prices, the quality of care, and the use of medical technology (see the paper by Cutler and Sheiner in this volume for discussion of these issues).

New Decompositions. The analysis presented in this paper uses March CPS data from 1968 to 1996 to provide a more systematic and comprehensive examination of the relative contributions of demographic factors and participation rate influences to the caseload, and of expenditures per recipient, as well, to total expenditures. The AFDC program is examined over the entire period, but the Food Stamp program is examined only after 1980, and Medicaid only after 1989, as a result of limitations on when CPS questions on receipt of those benefit types began.<sup>14</sup> We use answers to CPS questions about receipt of benefits, along with information on the demographic and economic structure of each household, to conduct the decomposition.

We write expenditures per capita in the population as the sum over population subgroups  $k=1, \dots, K$  of the product of the fraction of the population in that subgroup ( $w_k$ ), the welfare reciprocity rate, or participation rate, in that subgroup ( $p_k$ ), and the average expenditure per recipient in that subgroup ( $b_k$ ). Adding year subscripts  $t$ , we have

$$y_t = \sum w_{kt} p_{kt} b_{kt} \tag{1}$$

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<sup>14</sup> Medicaid questions were asked prior to 1989 but the questions were changed in a major way at that time, to such an extent that many analysts feel the participation rates before and after the change in questions are noncomparable.

k

where  $y_t$  is mean expenditure per capita in the population at time t. Differencing across periods

t and t', we have:

$$y_t - y_{t'} = \sum_k a_{kt}(w_{kt} - w_{kt'}) + \sum_k b_{kt}(p_{kt} - p_{kt'}) + \sum_k c_{kt}(b_{kt} - b_{kt'}) \quad (2)$$

where  $a_{kt}$ ,  $b_{kt}$ , and  $c_{kt}$  are weights. The decomposition in (2) can be constructed using six different sets of weights, which differ according to whether the sums are evaluated at the period t or t' values of the other variables, which yields six different estimates of the relative importance of the the three factors. This is a necessary consequence of the nonlinearity of the relationship. Rather than seek a unique decomposition which relies on an assignment of joint explanatory power to each of the three factors, here we simply compute and present all six to show the sensitivity of the weighting to the conclusions.

The most important demographic criteria we use to construct groups are those which

separate households by whether they are female-headed or not, and whether children under 18 reside in the household, both of which are key eligibility criteria for all three programs we consider. However, none of the programs excludes other demographic groups entirely from possible receipt of benefits, especially the Food Stamp program, so we use a relatively comprehensive definition of eight household types. These are defined according to whether the family head is (1) married, (2) female and never married, (3) female and divorced, widowed, or separated, or (4) male and unmarried; and, secondarily, whether children less than 18 are present in the household. All four headship types are combined with the two presence-of-children types to yield the eight household categories. We also test age of the head as an additional criterion, and we stratify by race.<sup>15</sup>

Along with household structure, we also stratify the population by income. The growth in individual earnings inequality and family income inequality, and the decline of real wage rates among less skilled workers in the U.S. in the 1970s and 1980s, make it necessary to control for changes in income distribution because those changes should also contribute to changes in participation rates within demographic strata and hence to caseload and expenditure changes. We define six economic strata of real nonwelfare income (=total family income minus welfare income) of the primary family, defined as absolute numbers which are held fixed from 1968 to 1996: (1) \$0, (2) \$1-\$5,000, (3) \$5,001-\$10,000, (4) \$10,001-\$20,000, (5) \$20,001-\$50,000, and (6) \$50,001 and over. These brackets were chosen after inspecting welfare participation rates for different intervals and ascertaining how quickly those rates fall to zero when moving up the

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<sup>15</sup> Only heads less than 60 years of age are included. Thus all calculations below exclude the elderly.

income distribution. Crossing the eight demographic cells with the six income strata yields a total of forty-eight population cells.

Unlike much of the past literature, our goal here is to isolate demographic influences from those of income, so we will ascertain the contribution of income influences alone by conducting the decomposition solely with income. This assigns all joint influence entirely to economic factors, and hence will represent an upper bound on the influence of income distribution on the change in expenditures per capita.<sup>16</sup>

Table 2 shows participation rates of U.S. households in the AFDC, Food Stamp, and Medicaid programs in the mid-1990s, by household type. The table shows clearly the heavy participation in all three programs among households with children headed by women who have never been married. Almost 50 percent of such households received AFDC income and around 60 percent received Food Stamp and Medicaid benefits.<sup>17</sup> Note that no conditioning on income is made in the calculation of these participation rates, so it is the entire U.S. population of never-married female-headed households, at all income levels, that exhibit these high participation rates; their high levels are an indirect indication of the extremely low income levels of such families.

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<sup>16</sup> An alternative procedure would be to hold the income distribution fixed while conducting the decomposition for demographic influences. But one would have to pick a particular income distribution at which to evaluate the demographic effects in that case. We should also stress that the participation rates we calculate on the basis of these demographic-economic groups are not comparable to those calculated in the past literature which attempt to define eligibility more narrowly by using the actual benefit formulas and rules in each program together with household economic and other characteristics. Our participation rates represent a combination of eligibility and takeup rates conditional on eligibility.

<sup>17</sup> The definition of Medicaid "participation" is somewhat ambiguous in the CPS because the questions asks whether families are "covered" by the program. In all likelihood, families are answering the question not by interpreting the question to mean eligibility but rather having used Medicaid services. Nevertheless, some families may be answering it the other way.

While households headed by divorced, widowed, and separated women also participate in AFDC at fairly high rates, other demographic groups have much lower participation rates. But those other groups are more likely to receive Food Stamps and, sometimes, Medicaid. Almost twenty percent of households headed by unmarried males with children received Food Stamps, for example, and many households without children did so as well. Medicaid receipt is also high among several groups for whom AFDC participation is considerably lower.<sup>18</sup>

Table 3 shows changes in population shares and AFDC participation rates for selected population subgroups between the late 1960s and the mid 1990s. Among households headed by never-married women with children, for example, AFDC participation rates were either unchanged over the period or rose slightly, as did the participation rates of households headed by divorced, widowed, or separated women with children. Their shares in the population rose tremendously, however, particularly for households headed by never-married women, whose population shares rose by factors of 6, 7, or 8. The table also shows the trends in population shares of a much smaller group, unmarried men with children, whose sizes also rose but by smaller amounts. The rise in population shares of the male-headed households are a rough indicator of the decline of wage rates at the lower part of the skill distribution.

Table 4 shows decompositions of the change in real AFDC expenditure per capita between the late 1960s and mid-1990s and demonstrates the contribution of demographic influences to that growth, the main goal of the analysis. Decompositions are shown for different types of

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<sup>18</sup> Some of the entries in Table 2 with positive participation rates, e.g., those for households without children receiving AFDC, may seem unusual, but it is possible that someone else in the household other than the head is eligible for benefits. Note also that cohabiting couples are not classified as married in the CPS and may also be eligible for benefits.

weighting, which essentially represent different allocations of the influence of joint contributions of the three factors to the different components. In all cases, it is clear that the rise of \$14.50 of real expenditure per capita (see Figure 2) over the period was the result of an increase in the caseload which outweighed a decline in expenditures per recipient, a rough proxy for benefits.<sup>19</sup> Moreover, it is also clear that, regardless of the weighting method, the change in population share was far greater in importance than that of the change in the participation rate. Thus a prima facie case for the importance of demographic influences in the long run growth of expenditures is strongly established by these results.

The last two rows of the table furnish evidence on the degree to which the influence of population shares reflects changes in the inequality of nonwelfare income rather than changes in the distribution of household types. A decomposition which ignores family type altogether allocates a considerably smaller portion of the total change in expenditure to population shares, although certainly a nonzero and strongly positive portion. Decompositions based upon the change in household type alone are a much more powerful factor in explaining expenditure, up to twice as important for some forms of weighting. Thus it is clear that, while downward shifts in the income were an important contributor to the rise in expenditure, they were less important than the influence of shifts in the distribution of household types.

Although the primacy of the influence of demographic shifts--mainly the rise in the percent of unmarried women with children in the population--relative to changes in the takeup rate in

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<sup>19</sup> We use the same real expenditure per recipient in all cells, which we calibrate to national expenditures per capita; that is, the average expenditure amount is calculated by dividing the participation rate into per capita national expenditure. There is no attempt to differentiate benefits levels for different types of recipients.

AFDC is thus established for the long run, the relative importance of participation rate changes is considerably more important in the short run. This is illustrated in Figure 8, which shows the relative contributions of population shares (the lighter-shaded bars) to that of participation rate changes (the darker-shaded bars) to per capita AFDC expenditure growth over four-year periods.<sup>20</sup> That both bars are positive in both the early and late periods reflects the positive growth of the caseload in the late 1960s and early 1970s, on the one hand, and the late 1980s and early 1990s, on the other, noted earlier. That the two bars sum to a much smaller total in the years in between reflects the relative stability of caseload growth then. What the figure demonstrates more importantly is that participation rates have gone through a long-term cycle of strong growth in the early years, followed by negative growth in the middle period, followed by positive growth again in the later period. The net result is participation rates that are somewhat higher in the mid-1990s than they were in the late 1960s, but not by a large amount. The influence of population shares, on the other hand, has been more consistently strong and positive throughout the entire near-thirty-year period. It was the growth of female-headed households in the 1970s and early 1980s that kept the caseload from falling in the face of declining participation rates, for example. But it is also true that in the two major welfare growth periods, that in the late 1960s and that in the late 1980s, growth of participation rates was essentially equal in importance to that of demographic and other population share influences (including declines in income). Thus in the relatively short run, participation rate changes are much more important relative to population share influences than in the long run. No doubt this is largely a result of

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<sup>20</sup> Each year denoted in the figure represents the midpoint of a four-year interval. Thus "1971" represents the pooled years 1969-1972, "1975" represents the pooled years 1973-1976, and so on.

short-run fluctuations in welfare policy, as well as short-run fluctuations in the economy and in potential wage rates off welfare relative to benefits available on welfare, which tend to drive eligibles on and off the rolls.

Table 5 shows long-run decompositions for AFDC expenditure by race, as well as decompositions for Food Stamps and Medicaid. Interestingly, major differences appear in the change in real expenditure per capita on whites and blacks. While for the white population real AFDC expenditure per capita has grown by a moderately large amount, such expenditures have fallen drastically for the black population. The decline of expenditures on the black population is a result of the greater participation rates and population shares in welfare-eligible groups in the black population, for the drastic decline in expenditures per recipient for the black population is a result of their greater participation rates than those of whites; a greater participation rate (which implies a greater weight in the decomposition) implies that any given decline in benefit levels has a much larger impact on aggregate expenditure on the group in question, and hence on national expenditure per capita. Compounding the influence of this force has been a decline in participation rates among the black population, as compared to a increase in participation rates among whites over the period.

In any case, however, the influence of demographic factors is vastly stronger for the black population than for the white. When demographic factors alone are considered (last row of the table), black demographic shifts exerted a strong positive influence on caseloads and hence on expenditures. The influence of income inequality growth, while positive, was much less important. For the white population, on the other hand, changes in population shares were, as for the total population, more important than changes in participation rates in contributing to



expenditure growth, but not nearly so much as for the black population. These relative comparisons are consistent with the greater growth of female-headed households over the period in question in the black population as compared to the white.<sup>21</sup>

The last two columns of Table 5 show decompositions for the Food Stamp and Medicaid programs, for the periods for which CPS data provide consistently-defined measures of household receipt. In both cases, the results show a much stronger influence of growth in participation-rate influences, and smaller influence of population share and demographic influences, than for AFDC. For the Food Stamp program, for example, growth in expenditures per capita from the early 1980s to the mid 1990s was primarily a result of increases in participation rates, and secondarily of growth in expenditures per recipient; population share influences were third in importance. The secular growth of participation rates in the Food Stamp program, referred to earlier, is consistent with this finding; participation rates have not shown the major, long-run cyclical pattern as those in AFDC. This in turn may be a simple result of the fact that real Food Stamp benefits have not declined, unlike those in the AFDC program.<sup>22</sup> The broader population base and coverage of the Food Stamp program may, in turn, be responsible for the lesser importance of demographic factors in contributing to caseload and expenditure growth.

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<sup>21</sup> In addition to race, the AFDC decompositions were broken out by the age of the household head. Adding age strata to the demographic and income strata changed the relative importance of population-share and participation-rate influences very little. This result is largely a consequence of the strong age correlation of the demographic categories, particularly for never-married and divorce-widowed-separated, which already capture the major influences of changes in the age structure over the 1970s and 1980s. Once these trends are captured, additional age-related compositional shifts have little additional role to play.

<sup>22</sup> As noted earlier, the EPR also exerted upward pressure on Food Stamp participation rates but the periods shown in the table are largely after the influence of the EPR had worked itself out.

A decomposition for the Medicaid program can only be conducted for the most recent period, from the late 1980s to the early 1990s. Expenditures per capita grew strongly during this period, and the table shows that increases in participation rates among the population groups is by far the most important contributor to that growth. This growth largely reflects the expansions of program eligibility over the period which brought many new non-AFDC population groups into the program. Growth in expenditures per recipient is second in importance and changes in the population share distribution is the least important factor, as in the Food Stamp program. This is somewhat more surprising for Medicaid, which is not so universal in eligibility as is Food Stamps, and may be partly the result of examining only a relatively short time frame over which demographic factors did not have a chance to change in a major way.

### **Demographic Feedback Loops**

Given the strong long-run influence of demographic factors on expenditure growth, at least for the AFDC program, it is natural to ask whether there is likely to have been any feedback from the caseloads, benefit levels, or expenditures of the program to the growth of female-headedness in the U.S. in the first place.<sup>23</sup> The major source of research evidence on the strength of the association between AFDC and female-headedness is the rather old and sizable research literature on this issue. It is fair to say that the research findings from the literature are quite

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<sup>23</sup> Feedback loops could also exist in earnings, which are affected by benefit levels working through labor supply, and in benefit levels themselves, which respond through the political process to changes in caseloads and expenditures. Note that if benefit levels respond to changes in demographics--for example, changes in the number of female heads--through the political process, then the role of demographics is even larger than what the decompositions in the last section imply.

dispersed (see Moffitt, 1992, 1998a; and Hoynes, 1997 for reviews). There is quite noticeable evidence of welfare effects in cross-sectional data, for female headship rates, out-of-wedlock birth rates, and other outcomes of relevance are significantly correlated with welfare benefits in cross-section, and do not appear to go away when other differences (at least at the individual level) are controlled for. Models with state fixed effects, which compare changes in female headship rates across states with different growth rates of benefits, generally find smaller correlations, although there are exceptions to this generalization as well. The evidence that is available is consistent with the existence of a true but weak effect which is difficult to detect amid the myriad other factors that are affecting demographic behavior of the low-income population--such as the growth of female wages, the decline of male incomes, and the decline of the male-female sex ratio in some low-income populations--and which is not robust to changes in specification. Nevertheless, there is a rough consensus in the literature that welfare benefits do indeed have a significant effect on family structure, but that its magnitude is not large, or at least has not been shown convincingly to be so thus far.

What is less in dispute is that, regardless of the cross-sectional effect of welfare on family structure, it is difficult to explain the time series increase in female headship and out-of-wedlock birth rates with welfare benefits. Figures 5 and 6 showed female headship rates to have grown steadily, divorce rates to have risen and then flattened out, and out-of-wedlock birth rates to have jumped in the 1980s. None of these patterns even roughly coincides with the time series pattern of AFDC benefits, which have declined secularly at a steady pace. Of course, other things have been going on, one of which is a decline in real wage rates at the bottom of the skill distribution, and this has attenuated the importance of the decline in welfare benefits; nevertheless, wage rates

have not fallen as much as the benefit, and the benefit-wage ratio has consequently still declined; so it is difficult to make the argument that, because of the wage decline, welfare has become an even more attractive option over the last ten or twenty years. To say that other factors have been occurring simultaneously as the benefit decline, but which have forced female headship rates upward, is not to say that benefits have had no effect in time series, but is only to say that female headship rates might have increased even faster in the absence of that benefit decline. But it does imply that the source of the increase in headship rates has to be sought elsewhere.

Another body of relevant evidence is the demographic literature which seeks to determine whether the increase in female headship is more a result of a decline in marriage rates rather than an increase in fertility rates (outside of marriage). That the major force behind the growth of nonmarital childbearing might be a decline in marriage, and might have little or nothing to do with fertility, is suggested by the time series trends in fertility which show secularly declining childbearing rates (for the whole population) for many years, including for women with less education. It is quite possible that the rise of nonmarital childbearing is not the result, therefore, of any increase in overall fertility but rather that an increasing share of a declining volume of births is occurring outside of marriage because marriage rates themselves have declined.

A decomposition not unlike that conducted above for expenditures can also be conducted to decompose trends in nonmarital fertility into components due to declines in marriage and rises in nonmarital fertility (Smith et al., 1996). Such a decomposition demonstrates that a decline in marriage rates is indeed the most important single component overall, at least for the period since 1975, and especially for the black population. An increase in the birth rates of unmarried women, especially for the white population, has played an important secondary role, however. These

decompositions were not conducted for the low-income population per se, and hence are not as directly relevant to the issues of concern of this paper as they could be. Nevertheless, they do suggest that a decline in the return, or gains, to marriage, particularly in the low-income population, may be an alternative explanation for the rise in female headship rather than the welfare system or other policy forces.

### **Projections to 2050**

For the purposes of this volume it is useful to ask whether demographic influences in the future will continue to exert their strong, dominant influence on AFDC expenditures as they have in the past, and whether those influences will continue to be weak or will grow stronger for the Food Stamp and Medicaid programs. Unfortunately, any exercise of this kind must be heavily qualified because it requires conditioning on fixed participation rates and benefit levels, and there is considerable reason to think these may differ considerably in the future from what they are now. The recent 1996 federal legislation replacing the AFDC program with the TANF program changed the program in major ways which will, in the short run, reduce expenditures per recipient and expenditures per capita in major ways. Whether these reductions will be reversed in the future or will be permanently reduced is impossible to reliably forecast at the present time. The provisions of the legislation also have led to significant reductions in participation rates in TANF, abetted by a strong economy, introducing further uncertainty into the future course of participation rates.

A further problematic factor in projections of the influence of demographic factors is the lack of reliable forecasts of the future course of female-headedness. Such forecasts would

require a joint forecast of marital-status and fertility trends which would be extremely tentative given our rather rudimentary understanding of the structural causes of past trends in female headship. Yet because female headship is such a critical element in establishing eligibility for AFDC, as well as Food Stamps and Medicaid, projections which assume headship rates to be fixed are especially subject to uncertainty.

With these caveats, however, population projections for the age, race, and sex composition of the U.S. population furnish a basis for projecting the changes in welfare expenditures that would result from these basic demographic forces, if nothing else changed. Using the CPS to construct population shares for thirty-two age-race-sex demographic groups (five-year age categories starting at 15-19 and ending at 50-54, plus blacks and whites and men and women) and AFDC, Food Stamp, and Medicaid participation rates by group and expenditures per recipient in the mid-1990s, mean expenditures per capita in those years can be computed on an individual, rather than household, basis. Holding the participation rates and benefit levels constant, but changing the population shares to match those in Census Bureau forecasts to 2050 (U.S. Department of Commerce, 1997), yields a projection of the change in real expenditures per capita.

The results of this exercise for the three transfer programs are shown in Table 6. As the table shows, the population share changes forecast by the Census Bureau imply positive, but relatively small by historical standards, increases in real expenditure. Inspection of the changes in population shares from 1995 to 2050 reveals that this growth is almost entirely the result of the projection of considerably faster growth of the black population than the white. While the age distribution of both populations changes slightly--shares at the younger ages grow somewhat, and

shares at the later ages decline (recall that an upper cutoff of age 54 is used, so the growth in the elderly does not influence these projections), shares of the black population at all ages, young and old, increase and those of the white population decline. Given the much higher participation rates of the black population than the white, even though the gap is narrowing, results in the increases in expenditure shown in Table 6. However, as noted previously and as can be seen visually from Figure 2, the magnitudes of the changes are quite modest by the standard of the magnitudes of expenditure changes in the programs experienced over the past thirty years. Thus is it fair to characterize these projections as showing that basic age-race-sex demographic forces will have, at best, only a modest influence on future welfare expenditures (holding constant the factors previously noted).<sup>24</sup>

## **Summary and Conclusions**

The analysis in this paper has suggested that trends in real per capita AFDC expenditures over the last thirty years have been, on net, primarily a result of shifts in demographic influences rather than of shifts in participation rates conditional on population shares or of average expenditures per recipient. While prior work on the welfare growth of the late 1960s and early

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<sup>24</sup> It is important to note that these basic age-race-sex demographic forces have not had an influence in the past thirty years either. When only age, race, and sex are used to represent demographic influences in a decomposition of real AFDC expenditures per capita from the late 1960s to the mid-1990s, the influence of demographics is, in fact, negative. This is because the aging of the baby boom cohorts has shifted the age distribution toward middle ages and away from young ages, where welfare participation rates are the highest. Thus, just as in the past it has been the trend in female headship that has been the demographic influence of importance, so it will be in the future, if demographic influences are to continue to be important.

1970s suggested that it was increases in the conditional participation rate that was primarily responsible for AFDC caseload growth, the analysis here shows that the long-term rise in expenditures is instead primarily demographic in nature. These conclusions do not apply to the Food Stamp and Medicaid programs, however, where eligibility is more broad-based among different demographic groups and where programmatic changes as well as changes in participation rates have dominated demographic influences.

The two periods of growth of U.S. real per capita welfare expenditures illustrate the nature of the problem facing the fisc. Expenditure growth occurred in the late 1960s and early 1970s, and then again in the late 1980s and early 1990s. The period in between was a stable period in which per capita expenditures grew very little. Both growth periods were a surprise to policy makers. The welfare explosion of the late 1960s and early 1970s was a major event in welfare policy that had significant political repercussions, and can be plausibly argued to have led to the reaction of the 1970s in which retrenchment was the norm. The jump in both rolls and expenditures in the late 1980s and early 1990s was also unexpected, and once again led to a reaction that can also be plausibly argued to have contributed to the retrenchment reforms that have recent occurred. Whether better forecasting of demographic trends, or other allowances for uncertainty, can be used in a way to reduce the amplitude of the surprise-reaction-retrenchment cycle in welfare policy, remains to be seen.



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Table 1  
Expenditures in the Six Largest Welfare Programs in the U.S.,  
1994 (millions)

	Total	Federal	State-Local
Medicaid	\$143,593	\$82,147	\$61,446
Food Stamps	27,396	25,599	1,797
SSI	27,310	23,544	3,766
AFDC	25,920	14,141	11,779
EITC	16,549	16,549	0
Section 8 Low-Income Housing	14,576	14,576	0

Source: Burke (1995, Table 2).

Table 2

Participation Rates by Demographic Group, 1994-1996 (percent)

Household Type	AFDC	Food Stamps	Medicaid
<b>With Children</b>			
Married	3.8	7.6	5.2
Female, Never Married	49.2	60.0	58.0
Female, Divorced-Widowed-Sep	23.7	35.1	29.8
Male, Unmarried	9.8	18.7	10.4
<b>Without Children</b>			
Married	0.6	1.9	2.0
Female, Never Married	5.0	11.3	9.9
Female, Divorced-Widowed-Sep	4.2	10.2	9.1
Male, Unmarried	2.5	6.8	5.9

Notes: Fraction of all U.S. households receiving income in prior year from program in question.  
 Source: Author's tabulations from pooled 1994, 1995, and 1996 March CPS files.

Table 3

Changes in Population Shares and AFDC Participation Rates,  
1968-1970 to 1994-1996  
(Selected groups and income levels)

Household Type and Nonwelfare Income	Population Share (%)		Welfare Part. Rate (%)	
	1968-1970	1994-1996	1968-1970	1994-1996
<b>Never Married Women with Children</b>				
\$0	0.15	0.95	88.8	88.0
\$1-\$5,000	0.13	1.08	68.9	75.3
\$5,001-\$10,000	0.08	0.76	36.2	47.5
<b>Divorced, Widowed, and Separated Women with Children</b>				
\$0	0.68	0.73	80.5	83.8
\$1-\$5,000	0.99	1.30	57.4	63.4
\$5,001-\$10,000	0.90	1.35	26.2	34.7
<b>Unmarried Men with Children</b>				
\$0	0.02	0.09	50.0	60.3
\$1-\$5,000	0.04	0.20	16.7	35.8
\$5,001-\$10,000	0.05	0.26	17.1	21.6

Source: Author's tabulation of Current Population Survey files.

Table 4

## Decomposition of Change in Real AFDC Expenditures per Capita, 1968-1970 to 1994-1996

	Weighting Type					
	(1)	(2)	(3)	(4)	(5)	(6)
Change in Real AFDC Expenditures per capita	\$14.50	\$14.50	\$14.50	\$14.50	\$14.50	\$14.50
Components						
Change in Population Share	27.05	27.05	26.76	39.18	38.76	38.76
Change in Participation Rate	7.65	11.09	7.95	11.09	11.51	7.95
Change in Expenditures per recipient	-20.20	-23.63	-20.20	-35.76	-35.76	-32.19
Change in Population Share: Income Strata Only	18.75	18.74	15.81	27.14	22.90	22.90
Change in Population Share: Demographic Strata Only	29.92	29.92	35.57	43.33	51.51	51.51

Source: Author's tabulations from the Current Population Survey

Table 5  
Decompositions of Welfare by Race, and of Food Stamps  
and Medicaid

Medicaid to	AFDC, 68-70 to 94-96		Food Stamps, 81-84 to 89-92	
	White	Black	93-96	93-96
Change in Real Benefits per capita	\$16.9	-\$51.8	\$15.5	\$29.0
Components				
Change in Population Share	20.9	48.3	2.6	5.7
Change in Participation Rate	9.3	-15.8	7.3	15.8
Change in Expenditures per recipient	-13.3	-84.2	5.7	7.5
Change in Population Share: Income Strata Only	14.4	19.6	0.3	6.5
Change in Population Share: Demographic Strata Only	20.7	87.8	9.5	4.6

Notes: Weighting Method (1) used.

Source: Author's tabulation from Current Population Survey



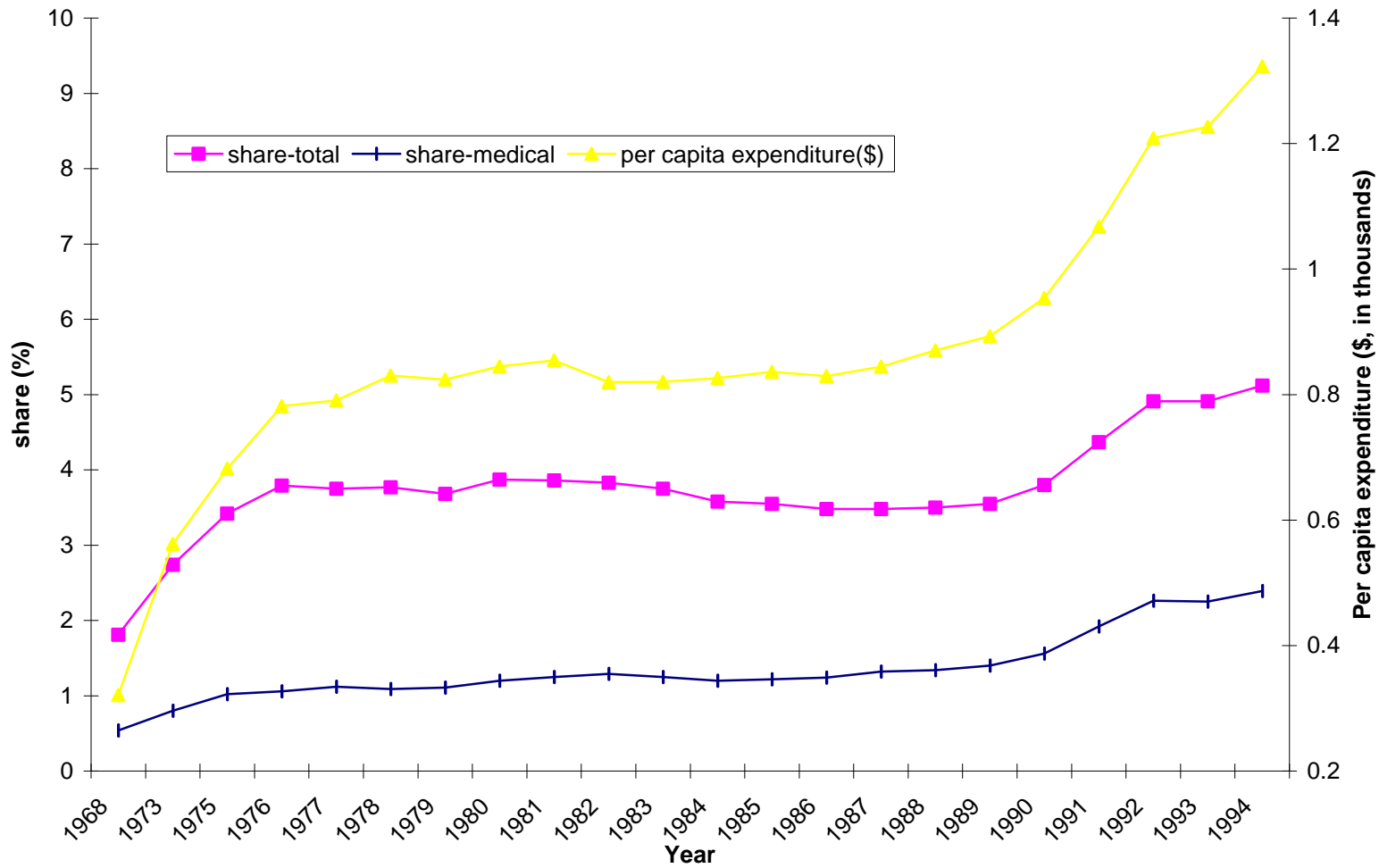
Table 6

Projections of Real Per Capita Expenditure to 2050

	AFDC	Food Stamps	Medicaid
1993-1996 Per Capita Expenditure	\$ 82.48	\$ 83.48	\$ 110.46
Projected 2050 Per Capita Expenditure	\$ 93.22	\$ 93.23	\$ 122.83

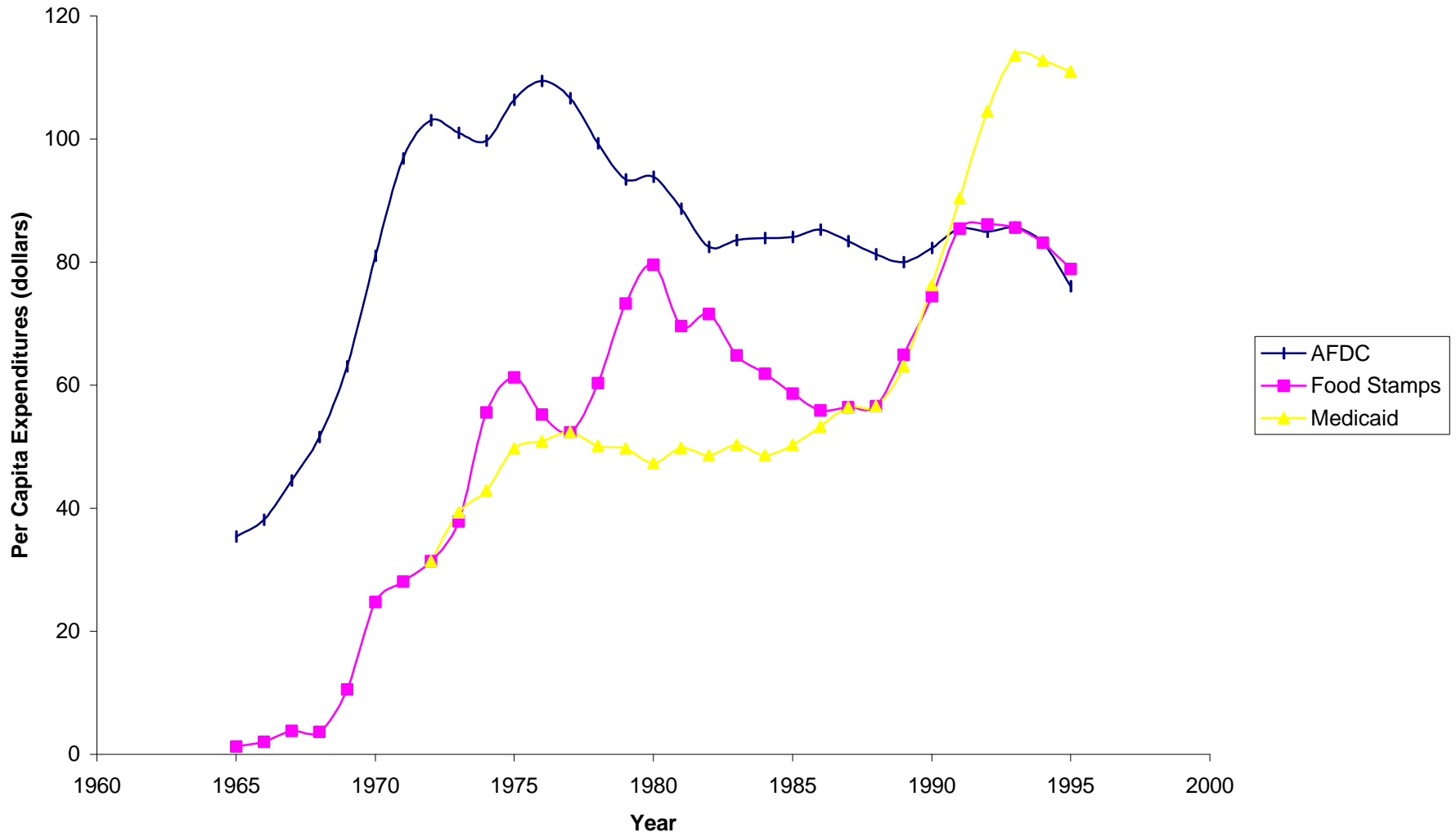
Source: Author's calculations from Current Population Survey and Bureau of the Census population projections.

**Figure 1**  
**Real Per Capita Expenditures(\$)** on Income-Tested Benefits, and Share of GDP Used for Need-Tested Benefits, Total and Medical, 1968-94



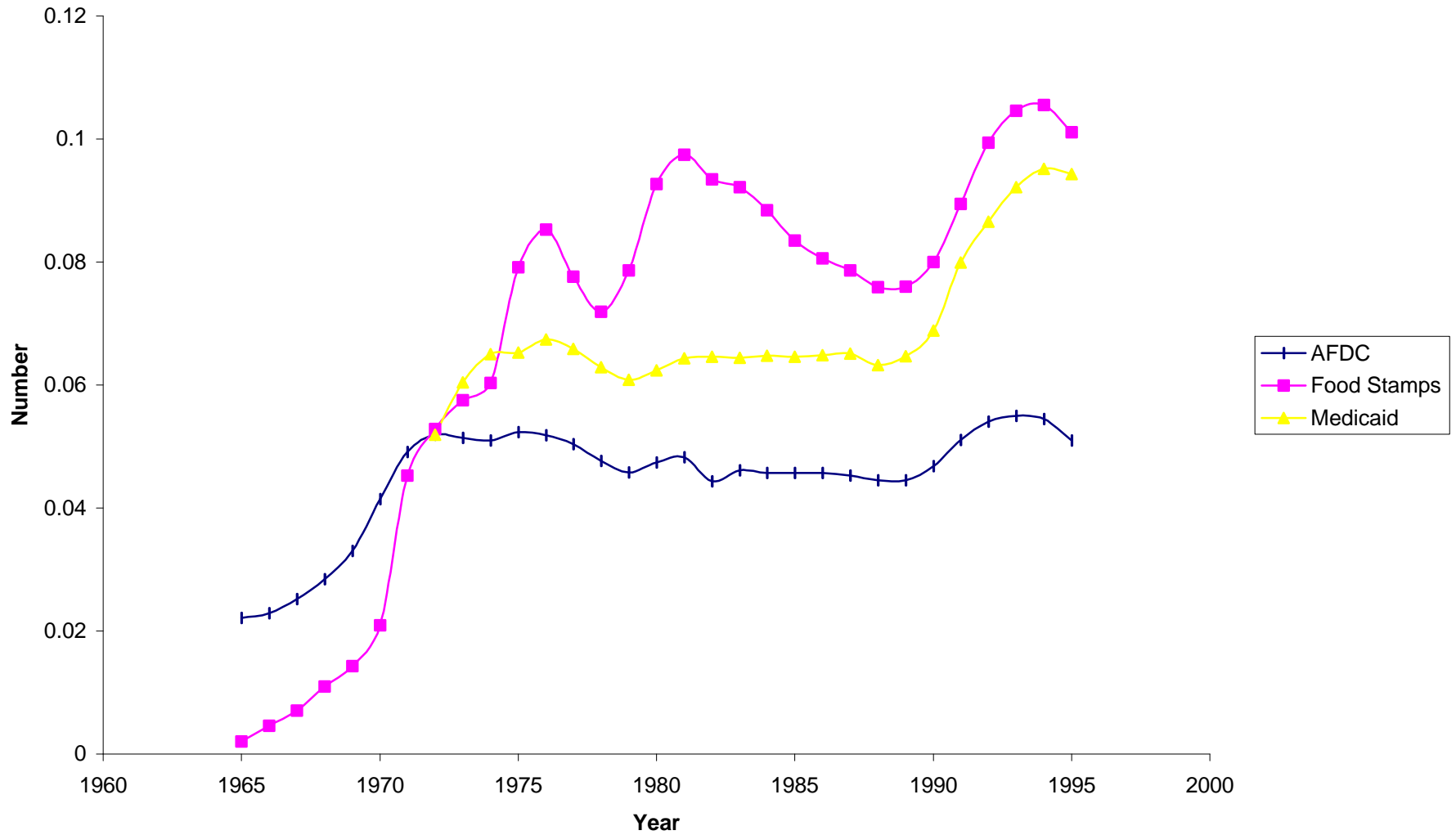
Source: Burke (1995, Tables 3 and 7), U.S. Department of Commerce (1996, p.8).

**Figure 2**  
**Real Welfare Expenditures Per Capita, 1965-1995**



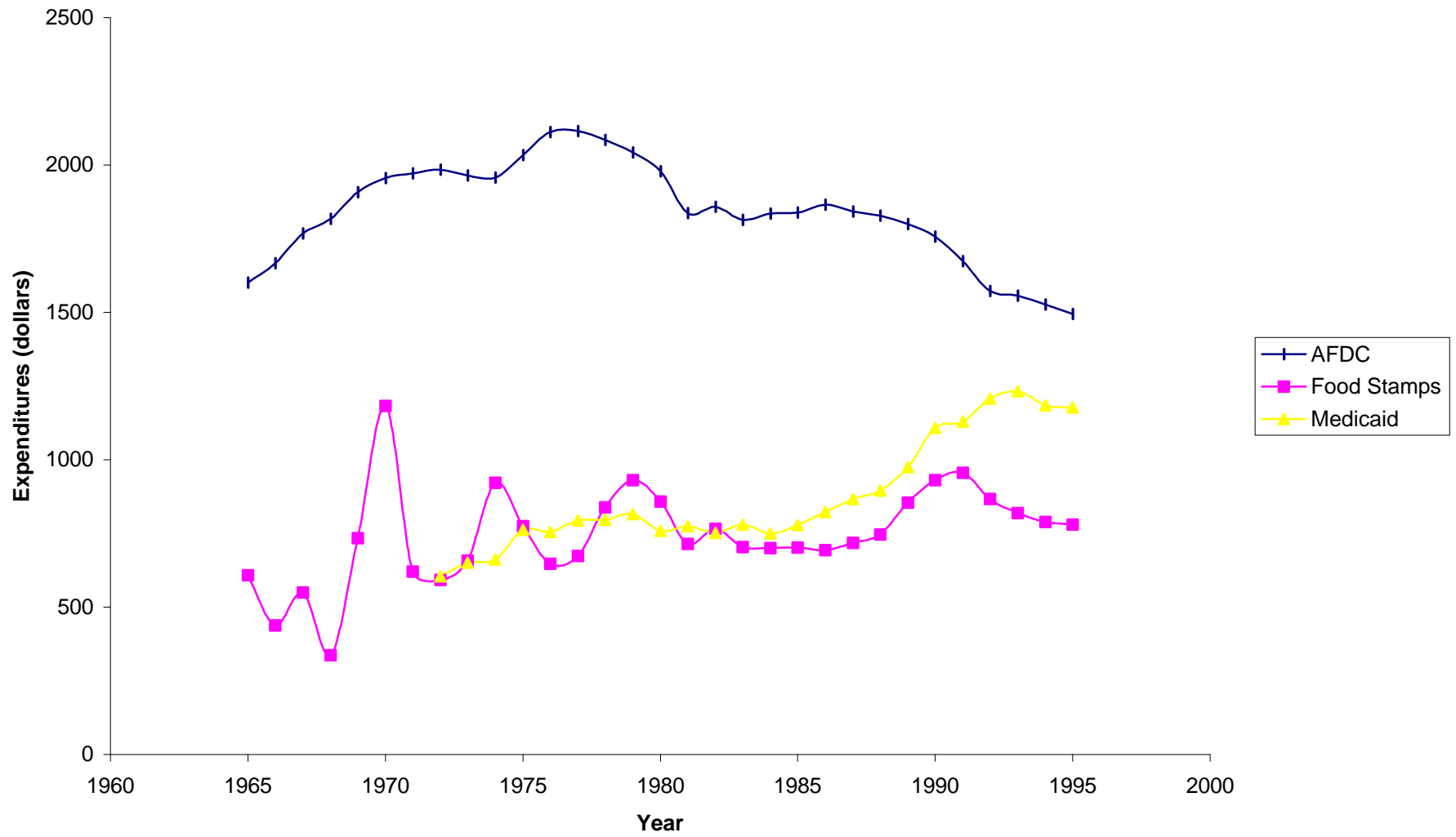
Source: U.S. Social Security Administration (1991, Table 7.E; 1997, Tables 9.G1, 9.H1, 8.E2), U.S. Department of Commerce (1996, p.8).

**Figure 3**  
**Number of Welfare Recipients Per Capita, 1965-1995**



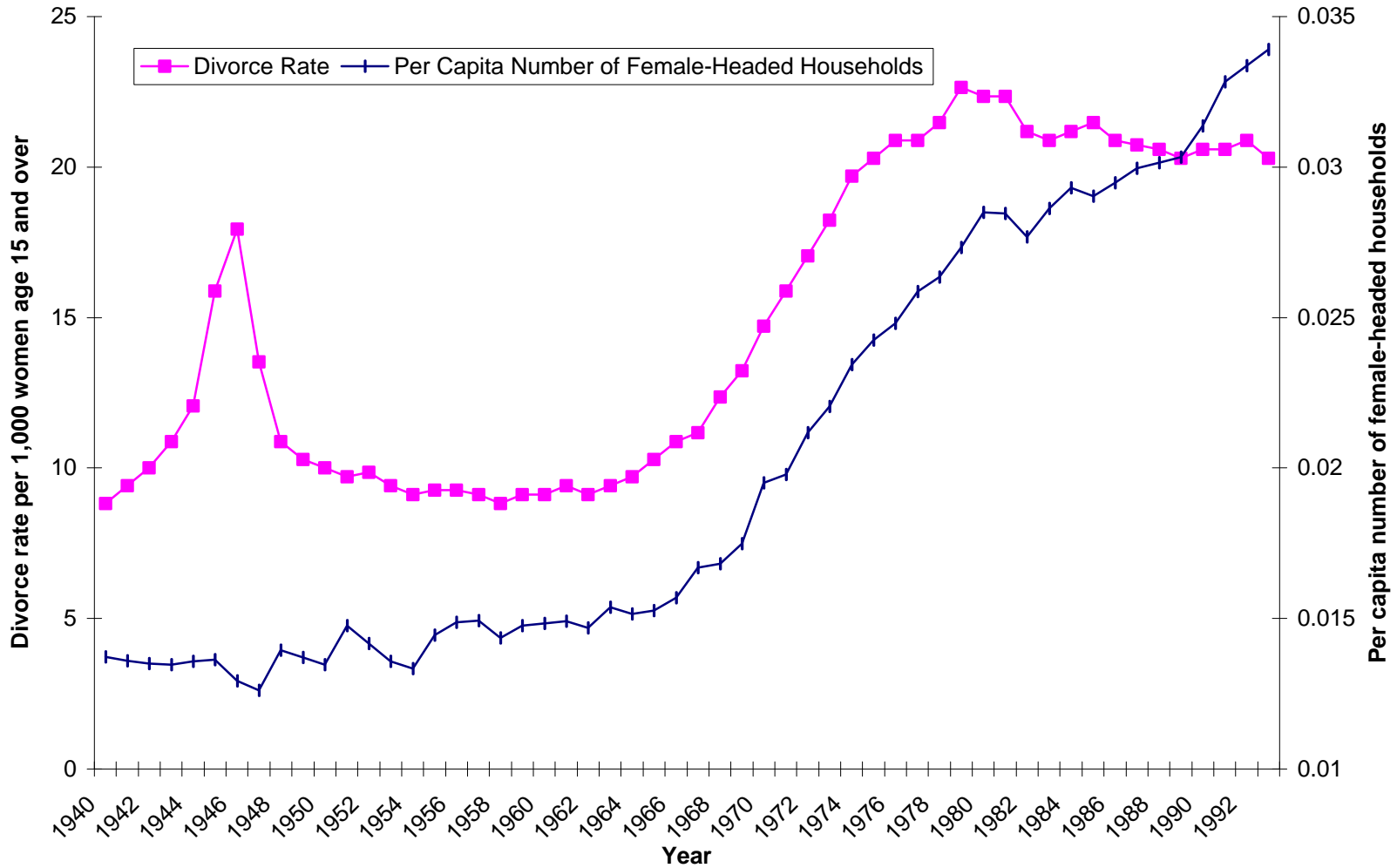
Source: U.S. Social Security Administration (1991, Table 7.E; 1997, Tables 9.G1, 9.H1, 8.E2), U.S. Department of Commerce (1996, p.8).

**Figure 4**  
**Real Welfare Expenditures Per Recipient, 1965-1995**



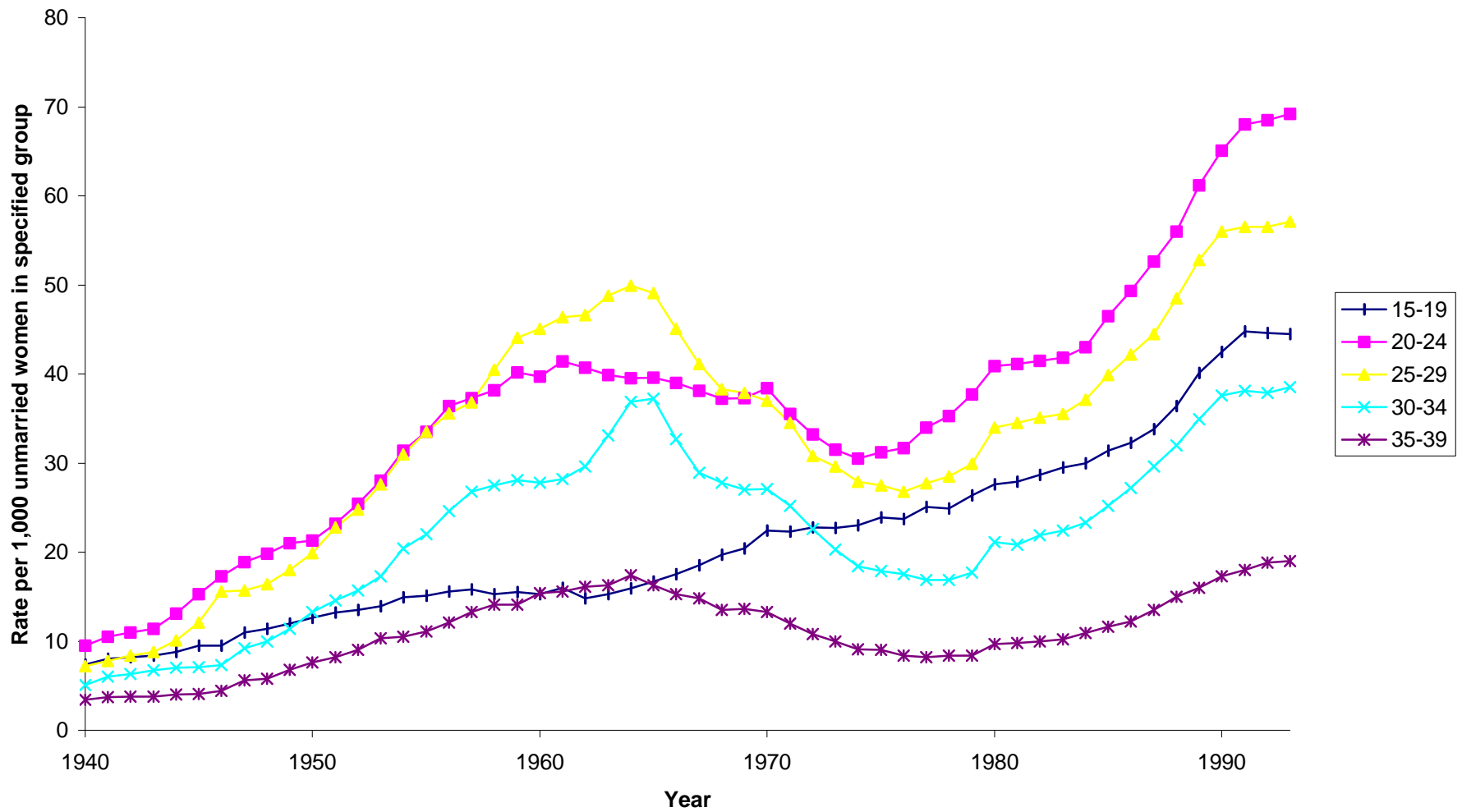
Source: Derived from Figure 2 and 3.

**Figure 5**  
**Divorce Rate and Per Capita Number of Female-Headed Households**



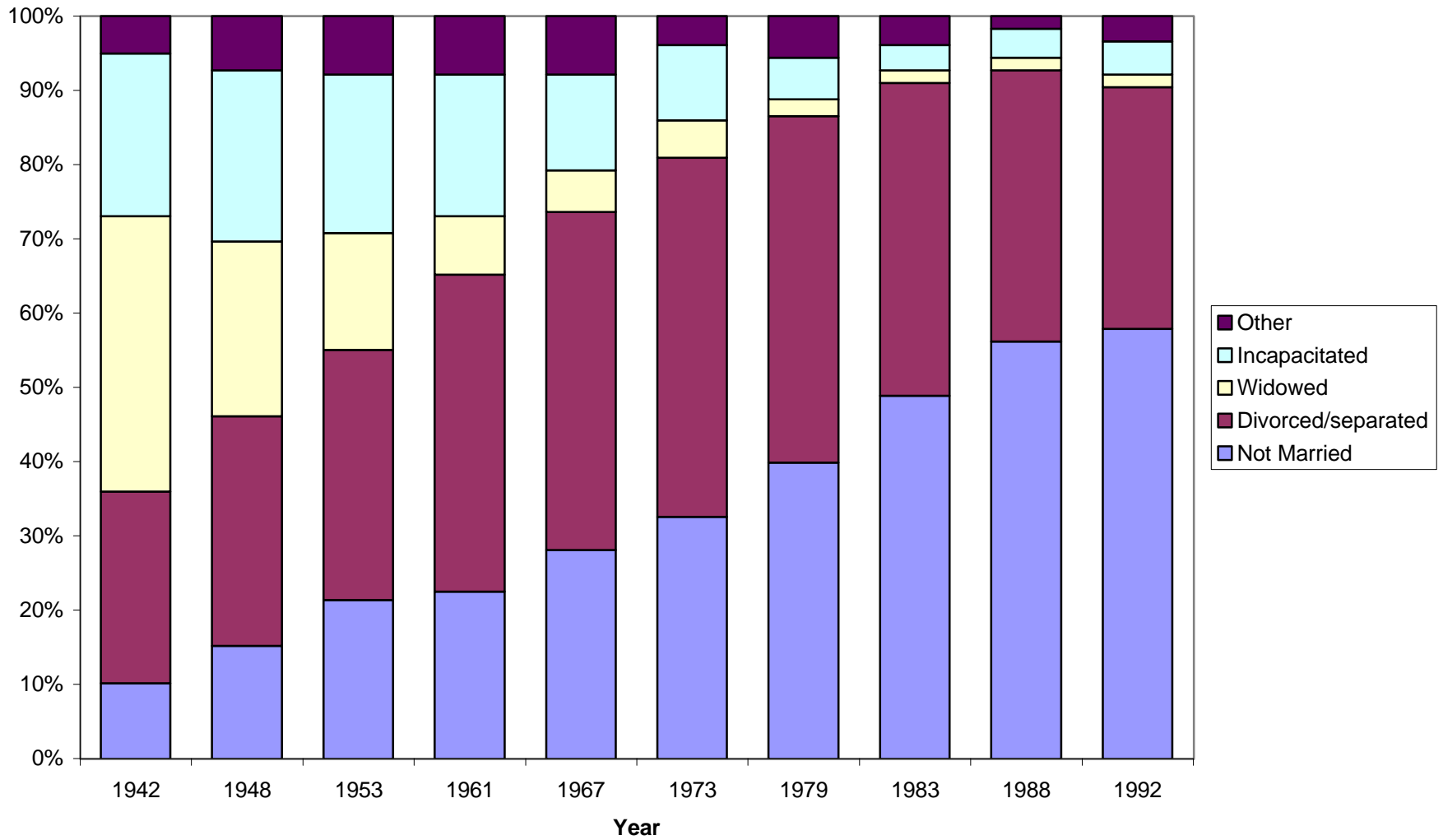
Source: U.S. DHHS (1995, p.26, 62), U.S. Department of Commerce (1996, p.8).

**Figure 6**  
**Birth Rates for Unmarried Women by Age, 1940-93**



Source: U.S. DHHS (1995, p.88).

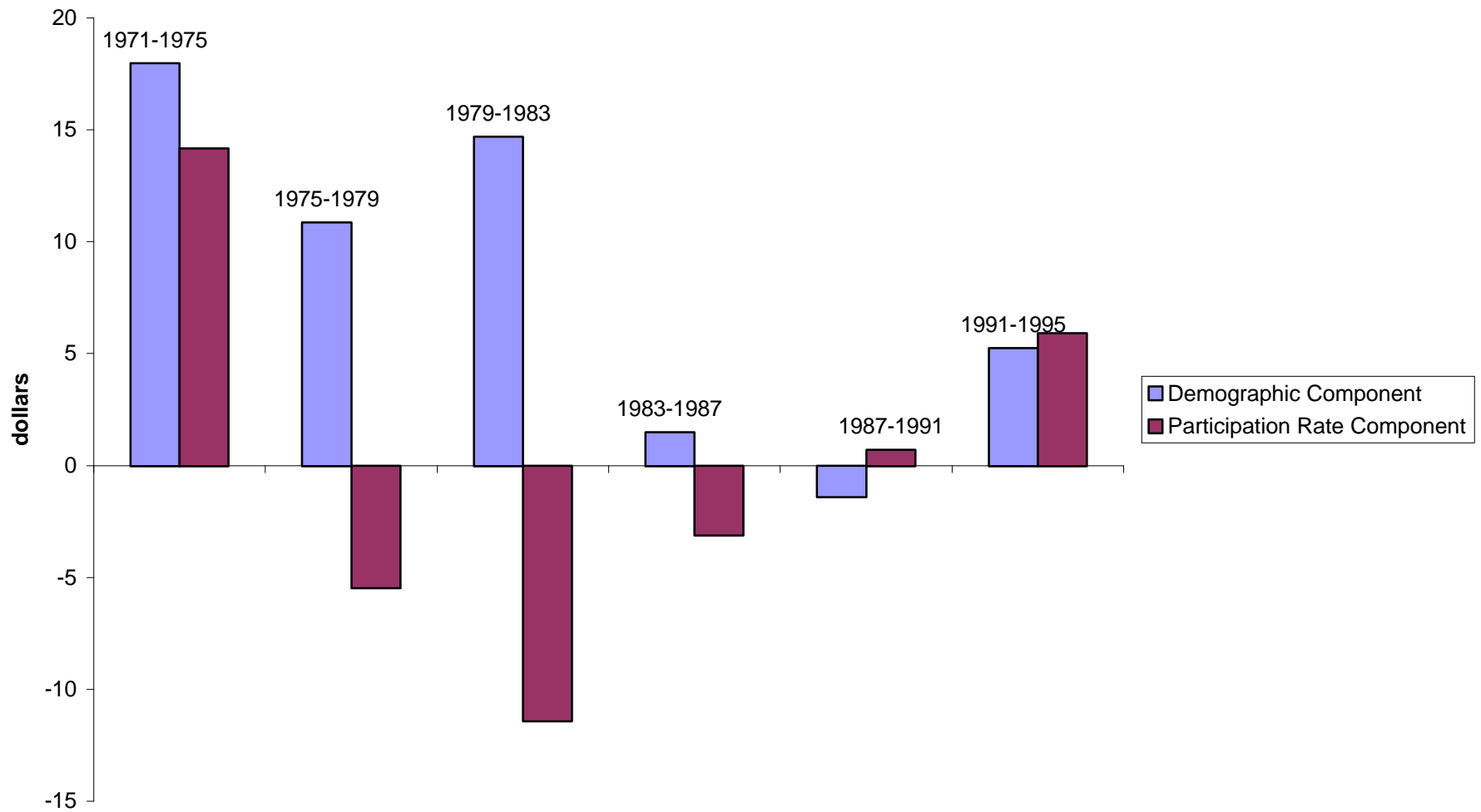
**Figure 7**  
**Basis of AFDC Eligibility, 1942-1994**



Source: U.S. DHHS (1995, p.63).



**Figure 8**  
**Two Components of Change in Real Per Capita AFDC Expenditure, 1971-1995**



Source: Author's calculations from Current Population Survey.