How do benefit adjustments for government transfer programs compare with their participants' inflation experiences?

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Introduction and summary

Millions of Americans rely on government transfer programs as a way to make ends meet during a temporary setback or as their main source of income during retirement. Whether individuals qualify for unemployment assistance, Temporary Assistance for Needy Families (TANF), Social Security,[1] or Supplemental Security Income (SSI), the level of benefits they will receive is affected by how the benefits are adjusted to deal with inflation—the general increase in prices for goods and services over time. Changes in benefit levels to address inflation—that is, cost-of-living adjustments (COLAs)—are determined by formulas that vary depending on the program in question. Adjustments to some programs' benefits are made automatically based on a government inflation index, while adjustments to others require legislative action.

COLAs can have a substantial impact on the welfare of transfer program participants. Those who receive benefits from a program for a long time are particularly affected by the formulas determining COLAs. In addition, COLAs can have a large impact on transfer program costs. For example, the bipartisan National Commission on Fiscal Responsibility and Reform (chaired by Democrat Erskine Bowles and Republican Alan Simpson) recently proposed changing the way COLAs are made for Social Security benefits. By making Social Security COLAs using a chain-weighted Consumer Price Index (C-CPI),[2] as opposed to the current method that relies on the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W), benefits are expected to increase by about 0.3 percentage points less each year. This small change in the formula for determining the Social Security COLAs would significantly affect both the benefits received from the program and the program's costs. According to our calculations, if inflation measured by the CPI-W

averaged 2.5 percent per year for the next 15 years, an individual receiving $25,000 in Social Security payments this year would receive 15 years from now an annual payment of $36,207. Under the chain-weighted formula, assuming inflation averaged 2.2 percent per year (0.3 percentage points less than under the current formula), the same individual would receive 15 years from now an annual payment of $34,650. According to the National Commission on Fiscal Responsibility and Reform (2010, pp. 54, 65), if the proposed change in the method for calculating COLAs for Social Security were enacted, this change would lead to savings of $89 billion over the period 2012–20 and would reduce the Social Security shortfall by 26 percent over 75 years.

Major U.S. transfer programs target individuals with particular characteristics—for example, single mothers and the elderly. These individuals are likely to have different spending patterns than the average individual. However, programmatic COLAs are typically based on aggregate inflation measures. Since different groups of individuals purchase different goods and services, they may face a rise in their cost of living that differs from that of the average household. For example, the elderly spend more on health care than the general population, and commuters spend more on transportation. If health care costs increase more rapidly than aggregate prices, then the inflation experienced by the elderly will be greater than general inflation. Similarly, if gas costs and therefore the costs of transportation increase rapidly, then commuters will face inflation that is higher than that of the general

population. COLAs for major transfer programs do not typically account for these differences in spending patterns.

In this article, we measure the inflation experienced by different groups of people. We focus on groups that are likely recipients of federal benefits: the elderly, single mothers, individuals with less than a high school diploma, the disabled, and the poor. We compute group-specific inflation measures for the period 1980–2010, using data on group spending patterns from the U.S. Bureau of Labor Statistics' (BLS) *Consumer Expenditure Survey* in combination with item-specific inflation measures, also from the BLS. We then compare our group-specific inflation measures with the COLAs used for major transfer programs to evaluate whether program benefits that are adjusted using aggregate measures of inflation or using other means "keep up" with the inflation experienced by a specific group.

COLAs can affect the welfare of transfer program recipients in (at least) two ways: by determining the initial level of benefits that they receive and by determining how benefit payments grow during program participation. The latter is particularly important for programs like Social Security that individuals often participate in for a long time, and the former is a key factor of programs like TANF that individuals usually participate in for shorter periods.

We find that the elderly and, to a lesser extent, the disabled, the poor, and those with less than a high school diploma experienced higher inflation than the aggregate population from 1980 through 2010. Because the Social Security/SSI COLA is based on aggregate inflation, Social Security/SSI COLAs have been less than the price increases experienced by the elderly in most periods since 1980. More specifically, in 2010, Social Security benefits for an individual who had been on the program since 1980 would be 265 percent of their nominal 1980 value, while the cost of the items purchased by the average elderly household was 270 percent of their nominal 1980 value. Inflation faced by the disabled, while above aggregate inflation, has been slightly below the Social Security/SSI COLA because of nuances in COLA determination. Single mothers experienced lower inflation than the overall population during this period, but the inflation they faced was larger than the increases in benefits from the Aid to Families with Dependent Children (AFDC) program and TANF. Increases in welfare benefits from the AFDC and its successor program, TANF, in most states have been substantially below both aggregate inflation and the price increases faced by single mothers over the period 1980–2010. In addition, we find that the growth in benefits from the Supplemental Nutrition Assistance Program, or SNAP (formerly

called the Food Stamp Program), has exceeded the inflation faced by single mothers, the disabled, the poor, and those with less than a high school diploma over the period 1980–2010, largely because of increases in benefit levels enacted as part of the American Recovery and Reinvestment Act (ARRA) of 2009.

During the recent recession and subsequent recovery, U.S. inflation has been atypically low. Also, during this period, there have been somewhat unusual COLAs for both Social Security/SSI benefits and SNAP benefits. Because this period is unique from both an inflation perspective and policy perspective, we break our analysis into two periods: 1980–2008 and 2008–10.

The rest of our article is organized as follows. In the next section, we discuss major U.S. transfer programs and report how benefits from these programs are adjusted for inflation. Then, we describe the characteristics of program recipients and compare them with the overall U.S. population. These comparisons are used to identify the groups whose inflation experiences we would like to investigate. Next, we compare the inflation experiences of these groups with the inflation experience of the aggregate U.S. population, and discuss how these comparisons were generated. We also compare group inflation experiences with programmatic COLAs. We highlight four programs in our analysis of COLAs: Social Security, SSI, TANF, and SNAP.[3] Finally, we review our conclusions and briefly discuss them in the context of the policy debate concerning COLAs, which has chiefly revolved around the Social Security program.

COLAs for major transfer programs

The federal government transfers money to many different recipient populations through a large variety of targeted programs. Table 1 lists all of the federal government's transfer programs with total direct payments and indirect payments (which are largely payments made via states) to individuals that exceeded $10 billion in fiscal year 2010, according to the 2012 federal budget. This table also lists the outlays on the program, the number of beneficiaries served, the way in which benefits or expenditures are adjusted for changes in the price level, and a brief description of the eligibility criteria. There are 18 such programs, which served a total of 379 million recipients in 2010, indicating that the average American is served by more than one of these programs.

Combined, these programs cost the federal government $2.2 trillion in fiscal year 2010 and made up over 95 percent of all federal payments to individuals. These programmatic expenses represented approximately 60 percent of all federal government outlays in fiscal

TABLE 1

Government transfer programs with payments exceeding $10 billion, fiscal year 2010

Program	Outlays for payments to individuals (in millions of dollars)	Beneficiaries (annual average in thousands)	Inflation adjustment/ benefit determination	Eligibility
Child nutrition programs (not including Women, Infants, and Children program and Commodity Supplemental Food Program) and Special Milk Program	16,430	34,889	Beneficiaries receive low-cost or free nutritionally balanced breakfasts and lunches. Payments to a state depend on changes in the Food Away from Home series in the CPI-U.	Children in school or child care from families with incomes at or below 130 percent of the FPL are eligible for free meals; those from families with incomes between 130 percent and 185 percent of the FPL are eligible for reduced price meals.
Civil Service Retirement System	69,407	2,523	CPI-W (July–Sept.) determines cost-of-living adjustment.	Retired federal government workers.
Earned income tax credit (refundable portion)[a]	54,712	21,743	Thresholds and maximum credit are adjusted by CPI-U (for the 12-month period ending August 31).	Low-income working individuals and families. For single-parent families with two children, annual income must be below $40,363; for single individuals, annual income must be below $13,460 (2010 tax year).
Hospital and medical care for veterans[b]	38,216	5,639	In kind. No maximum benefit level.	Individuals who actively served in the military (priority to those with service-connected disabilities and low income).
Housing assistance[c]	49,959	3,200	In kind. For public housing rental payment equal to 30 percent of monthly adjusted income.	Income below limits that are area specific (30 percent, 50 percent, and 80 percent of median).
Tenant-based rental assistance/ housing choice vouchers (Section 8)[c]	17,987	2,100	Benefit amount equal to the difference between 30 percent of adjusted household income and the public-housing-authority-determined payment standard (90 percent to 110 percent of the fair market rent, or FMR). FMR is set by the federal government as average gross rents (including utilities) for medium-quality apartments.	Income below some percentage (between 50 percent and 80 percent) of local area median. Housing authorities can have additional criteria. At least 75 percent of new households must have income at or below 30 percent of the area median.
Medicaid	272,771	59,339	In kind. No maximum benefit level.	States are required to serve pregnant women and children under six years old with income below 133 percent of the FPL, children aged six to 19 up to 100 percent of the FPL, and Supplemental Security Income recipients. States can include other groups.
Medicare: Hospital Insurance (Part A)	250,223	46,906	In kind. No premium for most beneficiaries.	Free if aged 65 years or older and individual or spouse is receiving Social Security or if under 65 and receiving Social Security disability benefits. Nonqualifying individuals aged 65 or older can pay for Part A coverage.

TABLE 1 (CONTINUED)

Government transfer programs with payments exceeding $10 billion, fiscal year 2010

Program	Outlays for payments to individuals (in millions of dollars)	Beneficiaries (annual average in thousands)	Inflation adjustment/ benefit determination	Eligibility
Medicare: Supplemental Medical Insurance (Part B)	268,945	43,569	Monthly premiums, deductibles, and co-insurance amounts are adjusted by the federal government, as determined by formula. Premium is required to be the amount needed to cover 25 percent of estimated program costs for enrollees aged 65 years and older.	Anyone eligible for Medicare Part A can pay a premium and enroll in Part B.
Military retirement	50,585	2,212	CPI-W (July–Sept.) determines cost-of-living adjustment.	Retired members of the military (no specific age requirement).
Refundable (additional) child credit[d]	22,659	18,160	Child credit = $1,000 nominal; no automatic adjustment. Set legislatively. Has been increased on occasion—Economic Growth and Tax Relief Reconciliation Act of 2001 doubled the credit. It will return to $500 in 2013.	Tax filers with children under 17 years old whose tax liability is not large enough to fully discharge the $1,000 per child credit (or the amount remaining after phaseouts) can get the additional child credit. Child credit is reduced by 5 percent of adjusted gross income (AGI) for married filers with AGI over $110,000 and single parents with AGI over $75,000. The maximum additional child tax credit is limited to 15 percent of earnings above a threshold ($3,000 in 2010; historically this threshold was indexed for inflation using CPI-U).
Social Security: Disability Insurance	123,507	9,822	CPI-W (July–Sept.) determines automatic cost-of-living adjustment.	Individuals who worked in Social Security-covered employment for a sufficient amount of time, are under retirement age, and are unable to perform any substantial work for at least one year.
Social Security: Old-Age and Survivors Insurance	576,578	43,110	CPI-W (July–Sept.) determines automatic cost-of-living adjustment.	Individuals who contributed to the program for 40 quarters or more and who have reached the minimum retirement age (62 years old). Surviving spouses and children of contributors are also eligible.
Student assistance—U.S. Department of Education and other (primarily Pell Grants and subsidized Stafford Loans)	46,768	20,638	Maximum loan amounts are nominally fixed, but periodically adjusted.	Pell Grants for students with family annual income below $45,000 (most with family annual income below $20,000). Subsidized Stafford Loans based on "financial need."
Supplemental Nutrition Assistance Program (officially known as the Food Stamp Program until October 1, 2008, and still commonly referred to by this name)	70,492	40,302	Changes in the cost of items (using the Consumer Price Index) in a "market basket" based on the Thrifty Food Plan (TFP) from June determine benefit levels starting in October. Revised TFP originally relied on prices paid by low-income households. The American Recovery and Reinvestment Act of 2009 led to unusual adjustments.	Household gross monthly income at or below 130 percent of the FPL; net income (net of allowances) below 100 percent of the FPL; and assets below $2,000 (or below $3,000 if one person is aged 60 years or older or is disabled).

TABLE 1 (CONTINUED)

Government transfer programs with payments exceeding $10 billion, fiscal year 2010

Program	Outlays for payments to individuals (in millions of dollars)	Beneficiaries (annual average in thousands)	Inflation adjustment/ benefit determination	Eligibility
Supplemental Security Income (SSI)	43,886	7,522	CPI-W (July–Sept.) determines automatic cost-of-living adjustment.	Aged (65 years old or older), blind, or disabled with assets below $2,000 per individual or $3,000 per couple. Benefit phases out with income. Benefit fully phased out for those with monthly income (net of allowances) greater than $694 per individual and $1,031 per couple.
Temporary Assistance for Needy Families[e]	21,936	4,594	Maximum benefits have been fixed at nominal levels since 1996 in many jurisdictions. Legislated changes in others. No inflation adjustment in grants to states.	Families with dependent children and pregnant women with income and assets below a state-determined threshold. Phases out at about 75 percent of FPL in average state. Households subject to work requirements and time limits.
Unemployment assistance	158,263	11,429	Benefits set at a fraction of weekly wage up to a maximum. In 36 jurisdictions, maximum benefit levels automatically adjust according to weekly wages of covered employees. In remainder, maximum benefits are set at a fixed dollar amount that can be changed by legislation.	Recently unemployed workers who are unemployed through no fault of their own, earned qualifying wages, and are actively seeking work.
Veterans service-connected compensation	43,377	3,498	CPI-W (July–Sept.) determines cost-of-living adjustment. Not automatic. Needs legislative approval. Typically granted unanimously.	Veterans who are at least 10 percent disabled as a result of military service, and their survivors.

[a]The number of earned income tax credit (EITC) beneficiaries is based on the number of tax returns with refundable EITC for tax year 2008 (see Internal Revenue Service, Statistics of Income, 2010, table 2.5).
[b]The number of beneficiaries of hospital and medical care for veterans is based on the total number of patients from www.va.gov/vetdata/Utilization.asp.
[c]Housing assistance and tenant-based rental assistance beneficiary estimates are from the U.S. Department of Housing and Urban Development (2011). Tenant-based rental assistance/housing choice vouchers (Section 8) is a subcategory of housing assistance.
[d]The number of refundable (additional) child credit beneficiaries is based on number of tax returns with additional child tax credit for tax year 2008 (see Internal Revenue Service, Statistics of Income, 2010, table A).
[e]The Temporary Assistance for Needy Families caseload data for 2010 are from www.acf.hhs.gov/programs/ofa/data-reports/caseload/caseload2010.htm. This program became the successor to the Aid to Families with Dependent Children program in 1997.
Notes: CPI-U means Consumer Price Index for All Urban Consumers. CPI-W means Consumer Price Index for Urban Wage Earners and Clerical Workers. FPL means federal poverty line. See note 6 for the definition of market basket. In some cases, there are minor differences between the coverage of the cost and beneficiary numbers.
Sources: Outlays data from White House, Office of Management and Budget (2011b), table 11.3; beneficiaries data for most programs from White House, Office of Management and Budget (2011a), table 27-5; and some beneficiaries data, inflation adjustment/benefit determination data, and eligibility data from various government sources.

year 2010.[4] For some of these programs, in particular Medicaid and unemployment assistance, state governments also expend significant sums of money. The only state dollars that are included in table 1 are those that were funded by transfers from the federal government.

Inflation adjustment/benefit determination information is presented in table 1 (pp. 115–117). The inflation adjustment/benefit determination column explains in detail how program benefits are adjusted for inflation for an individual once he is already enrolled in the program. For many programs such as TANF and SNAP, the level of benefits upon initial enrollment is set using the same formula. For other programs, initial benefits are set using a different formula. For example, the initial Social Security benefit level depends on earnings over the recipient's working life.

The inflation adjustment/benefit determination column in table 1 shows that there are four main types of adjustments used by these programs. First, some programs adjust benefit levels based on an aggregate inflation index—either the Consumer Price Index for All Urban Consumers (CPI-U) or CPI-W. The programs in this category are Civil Service Retirement System, earned income tax credit (EITC), military retirement, Social Security (both Old-Age and Survivors Insurance and Disability Insurance), SSI, and veterans service-connected compensation.[5] These tend to be the large income-transfer programs. The CPI-U and CPI-W are the two aggregate indexes released by the BLS. They are both consumer price indexes and as such represent changes in the cost of "market baskets"[6] consumed by different demographic groups. The CPI-W is calculated based on price increases for goods consumed by households for which at least half of household income comes from the earnings of workers in hourly wage or clerical jobs. This index represents about 32 percent of the U.S. population. The CPI-U is based on the market basket of all urban consumers; it represents 87 percent of the population. Second, some programs have benefits that are linked to price growth in a particular category. The programs in this category are child nutrition programs (in particular, the National School Lunch and Breakfast Programs) and the Special Milk Program; SNAP; and tenant-based rental assistance (Section 8 housing assistance). These programs are supporting consumption in a specific category, and therefore, their benefits are linked to price growth in that category. Third, some programs have no inflation adjustment because benefits are in kind. These programs are hospital and medical care for veterans, Medicare (Parts A and B), Medicaid, and non-Section 8 housing assistance. While there is no explicit benefit adjustment, the value of the benefits increases as the cost of the underlying good increases. A final set of programs has benefits that are nominally fixed in value. Benefit amounts can be changed through legislation. These programs are student assistance, the refundable (additional) child tax credit, and TANF. Unemployment assistance, for which the increases in benefits are based on wage growth, does not fall into any of these categories. No programs are linked to the broad-based expenditure needs of the program's recipient population.

If we combine the program costs for the programs that link to the CPI-U and CPI-W, we find that about $960 billion in annual expenditures was linked to these indexes, representing about 28 percent of total federal expenditures for 2010.

In addition to indexing benefit levels to inflation, the federal government indexes eligibility criteria for many transfer programs to inflation. In many cases eligibility is based on federal poverty guidelines, which are indexed to the CPI-U. Also, many features of the tax code, such as personal exemptions and tax brackets, are indexed (Hanson and Andrews, 2008).[7]

Characteristics of program participants

Next, we are interested in finding out what percentage of the population benefits from these programs and which demographic groups are especially dependent on benefit payments. Benefit levels, and hence COLAs, are especially important to households that receive a large fraction of their income from federal government transfer programs. We divide the population in six different ways—by education, age, disability status, family structure, veteran status, and poverty status. We choose these six methods of segmenting the population because they are in keeping with program eligibility standards and because the groups based on these different division criteria are some of the groups that are highlighted in other research on transfer program participation (see, for instance, Meyer and Rosenbaum, 2001, and Haveman et al., 2003). In addition, we are interested in groups whose recipient status tends to be fairly persistent. Gaps between programmatic inflation adjustments and household expenditure growth will be more relevant if households benefit from programs over long periods so that the gaps are compounded over time. Because of this issue, we do not look at population groups based on work status because employment status has historically been fluid.

In box 1, we describe the criteria we use for the inclusion of households in the groups listed there. As delineated in box 1, our definition of the disabled only includes those individuals who do not have a job rather than all individuals with a disability. In table 2, we present results showing what fraction of households

BOX 1

Demographic group variable descriptions

Variable	Description
Less than high school diploma	Neither the reference person nor spouse completed high school.
High school graduate, no college	Reference person or spouse obtained a high school diploma; neither the reference person nor spouse pursued education beyond the high school level.
Some college or more	Reference person or spouse pursued education beyond the high school level.
Elderly	Reference person or spouse is at least 65 years old.
Disabled	Reference person or spouse is out of work because of a chronic health condition or disability.
Single mother	Reference person is an unmarried female aged 18–64 years old; the reference person's child who is younger than 18 years old lives in the household.
Other parent	Reference person aged 18–64 years old is either an unmarried male or a married male or female; the reference person's child who is younger than 18 years old lives in the household.
Nonparent	Reference person is aged 18–64 years old; the reference person has no children who are younger than 18 years old living with him or her in the household.
Veteran	Reference person or spouse served on active duty in the U.S. Armed Forces at some point in his or her lifetime (currently active members of the Armed Forces are included).
Poor	Household's income was below the poverty line (adjusted for household size and composition) during the last month of reference period.

in these groups were recipients of benefits from the different programs listed in table 1 (pp. 115–117). This information is calculated from wave 4 of the 2004 panel of the U.S. Census Bureau's *Survey of Income and Program Participation* (SIPP), corresponding to the January–April period of 2005. The results displayed in table 2 are consistent with the eligibility criteria outlined in table 1. For example, 49 percent of families headed by a single mother receive a benefit from the National School Lunch and Breakfast Programs, while only 2 percent of households without children report receiving a benefit from these programs. Similarly, the vast majority of the elderly households receive both Medicare and Social Security.

In table 3 (p. 122), we show the median and average numbers of transfer programs that members of these different groups participated in. The median household of the overall sample receives a benefit from one of these programs (table 3, final row). For many groups, the median household participates in no benefit programs—these groups are the households with some college or more, nonelderly households, nondisabled households, non-single-mother households, nonveteran households, and the nonpoor. By contrast, among a number of groups, the median household benefits from two programs—these groups are those with less than a high school diploma or only a high school diploma, the elderly, single-mother households, veteran households, and the poor. The median disabled household receives benefits from three programs. This suggests that program receipt is fairly concentrated. Given the overlapping eligibility criteria for many programs, this degree of concentration is not surprising. The pattern for average benefit receipt among the various demographic groups is quite similar to that for median benefit receipt. Our measure of the average number of cash transfer programs excludes those programs providing in-kind benefits. There is a notable gap between the average number of transfer programs and the average number of cash transfer programs used by single mothers and the elderly.

Next, we investigate what percentage of household income is received from the transfer programs listed in table 2. We do this in two steps. First, in table 4, we show the average benefit received from the different programs by demographic group. These are average monthly benefit amounts among all households in the group. In the final column of table 4, we sum cash transfer income across all the different programs. The elderly receive the largest transfers on average per month ($1,420), followed by the disabled ($1,059) and veterans ($999). Second, in table 5 (p. 124), we tabulate the percentage of total household income that is received from the different transfer programs. In this case, household income is defined as the sum of cash transfers, the value of Food Stamp Program (Supplemental Nutrition Assistance Program) benefits, and other income. While the average U.S. household receives 11 percent of its income from transfer programs (table 5, final row), some groups of households receive (on average) nearly half of their income from these programs. In both tables 4 and 5, we are not imputing values to in-kind assistance, such as Medicare and housing assistance, so these numbers underestimate true total transfer benefits.

We have looked at program participation, benefit levels, and income ratios. By examining transfer programs and their participants in this way, we find that there are certain demographic groups that are particularly dependent on transfer income. We choose to further investigate those groups whose average household (based on the data in table 3) receives benefits from two or more transfer programs (namely, those with less than a high school diploma, the elderly, the disabled, single mothers, and the poor) and also those groups whose ratio of average monthly transfer income to average total monthly income (based on the data in table 5) exceeds 25 percent (namely, those with less than a high school diploma, the elderly, the disabled, and the poor). By using

TABLE 2

Percentage of households receiving government transfer program benefits, by demographic group

	Percent of sample	National School Lunch and Breakfast Programs[a]	Civil Service Retirement System	Earned income tax credit[b]	Food Stamp Program	Hospital and medical care for veterans	Housing assistance	Tenant-based rental assistance/housing choice vouchers (Section 8)
		(- percent -)						
Less than high school diploma	7.65	24.90	0.74	9.15	22.72	0.63	3.45	2.12
High school graduate, no college	22.66	14.18	1.73	8.40	11.42	1.13	2.16	1.39
Some college or more	69.69	6.74	1.96	5.99	4.07	1.10	0.90	0.61
Elderly	20.64	1.47	6.45	0.62	5.18	1.67	1.35	0.87
Nonelderly	79.36	11.99	0.61	8.52	7.68	0.91	1.39	0.91
Disabled	6.20	16.59	0.55	5.64	32.00	1.86	6.68	5.00
Nondisabled	93.80	9.37	1.90	6.91	5.52	1.02	1.03	0.63
Single mother	7.23	49.28	0.10	30.49	31.10	0.28	6.47	5.22
Other parent	25.70	19.51	0.15	12.81	5.37	0.88	0.46	0.29
Nonparent	46.44	2.02	0.94	2.69	5.31	1.03	1.12	0.58
Veteran	18.32	3.05	5.06	3.49	2.39	4.77	0.55	0.38
Nonveteran	81.68	11.33	1.08	7.51	8.24	0.24	1.57	1.02
Poor	11.93	28.58	0.11	12.06	34.08	0.91	5.85	4.23
Nonpoor	88.07	7.27	2.04	6.03	3.52	1.09	0.78	0.45
All groups	100.00	9.82	1.81	6.82	7.16	1.07	1.38	0.90

TABLE 2 (CONTINUED)

Percentage of households receiving government transfer program benefits, by demographic group

	Medicaid	Medicare	Military retirement	Social Security: Disability Insurance	Social Security: Old-Age and Survivors Insurance	Supplemental Security Income	Temporary Assistance for Needy Families	Unemployment assistance	Veterans service-connected compensation
					-------- percent --------				
Less than high school diploma	47.34	41.71	0.18	10.35	36.21	16.08	4.01	2.37	1.20
High school graduate, no college	27.35	34.86	1.09	7.42	31.48	7.66	2.38	2.27	1.43
Some college or more	13.06	19.40	1.72	4.14	17.97	2.78	0.90	1.77	2.16
Elderly	14.86	95.63	3.24	5.85	91.14	6.49	0.30	0.46	3.16
Nonelderly	19.97	6.14	1.00	5.23	4.56	4.49	1.78	2.31	1.59
Disabled	56.10	49.84	1.24	48.69	15.62	33.22	6.31	1.33	3.77
Nondisabled	16.46	22.94	1.48	2.49	22.88	3.03	1.16	1.97	1.79
Single mother	54.47	3.49	0.04	3.20	2.04	8.56	9.11	1.86	0.36
Other parent	23.78	2.66	0.75	2.16	1.65	2.35	1.43	2.68	1.27
Nonparent	12.50	8.48	1.29	7.24	6.56	5.04	0.84	2.18	1.97
Veteran	9.53	43.34	6.85	6.34	42.00	2.28	0.31	1.37	9.47
Nonveteran	21.03	20.41	0.25	5.14	18.04	5.49	1.74	2.06	0.22
Poor	50.86	18.72	0.06	7.37	12.71	15.18	7.09	2.66	0.68
Nonpoor	14.59	25.41	1.65	5.08	23.74	3.51	0.72	1.83	2.08
All groups	18.92	24.61	1.46	5.36	22.43	4.90	1.48	1.93	1.92

aThe *Survey of Income and Program Participation* asks households specifically about their participation in the National School Lunch and Breakfast Programs, but federal budget sources used for table 1 cover the broader category of child nutrition programs and the Special Milk Program.
bEarned income tax credit (EITC) data are missing for about 12 percent of the sample.
Notes: For descriptions of the demographic group variables, see box 1 on p. 119. The sample is limited to metropolitan-based households in which the head is at least 18 years old. There is insufficient detail in the *Survey of Income and Program Participation* to measure the participation in or the benefit value from the refundable (additional) child credit and student assistance, which appear in table 1, as well as distinguish between Medicare Parts A and B. The single mother, other parent, and nonparent households sum to less than 100 percent in the first column of data because the elderly are excluded from these demographic groups (see box 1).
Source: Authors' calculations based on data from wave 4 of the 2004 panel of the U.S. Census Bureau, *Survey of Income and Program Participation*, corresponding to the January–April period of 2005.

these two different criteria, we end up focusing on the same groups, with the exception of single mothers, who receive 13 percent of their monthly income from transfer programs but are covered by 2.3 programs on average. This discrepancy arises because many single-mother households receive benefits from the child nutrition programs and Medicaid, which are in-kind programs and thus not included in our transfer income calculations.[8]

Group expenditure patterns and inflation rates

We next look at the expenditure patterns of households (or "consumer units") in these five groups: those with less than a high school diploma, the elderly, the disabled, single mothers, and the poor. More specifically, we use data from the *Consumer Expenditure Survey* to investigate whether their expenditure patterns conform to those of the general population. We measure these expenditure patterns by using merged data from the Diary and Interview portions of the survey over the period 1980–2009.[9] The unit of analysis in the *Consumer Expenditure Survey* is the consumer unit—a grouping defined as either a single individual who makes independent consumption decisions, a group of related individuals, or a group of individuals who live together and make joint consumption decisions.[10]

We use the term "consumer unit" interchangeably with "household" throughout this article. We define a household as having less than a high school diploma if both the head and spouse have not graduated from high school. We define a household as elderly if either the head or spouse is aged 65 or over. We define a household as headed by a single mother if the household contains children younger than 18 and is headed by an unmarried female aged 18–64. We define a household as disabled if the head or spouse was not working during the past 12 months because he or she was "ill, disabled or unable to work," as stated in the *Consumer Expenditure Survey*'s Codebook. Our definitions here are consistent with the definitions presented in box 1 (p. 119) that we used in our analysis of transfer program participation and the sources of transfer income in tables 2–5.

In table 6, panel A, we report 2009 expenditure shares for our groups of interest, their complements, and the overall population. The number 14.2 in the top row of the column labeled "food" means that among the entire population, 14.2 percent of all expenditures is on food items. We refer to these expenditure shares as the market baskets of households. For all expenditure categories except for housing, these market baskets are based on the out-of-pocket expenditures of households. For example, if a hospital visit was paid for by Medicaid, it would not be included in household

TABLE 4

Average monthly income from government transfer programs, by demographic group

	Social Security (Old-Age, Survivors, and Disability Insurance)	Supplemental Security Income (federal and state amounts)	Food Stamp Program	Military retirement	Civil Service Retirement System	Temporary Assistance for Needy Families (and other welfare amounts)	Unemployment assistance (state and supplemental unemployment benefits)	Veterans service-connected compensation	Earned income tax credit[a]	Total cash transfer income[a]
					------- dollars -------					
Less than high school diploma	455.35 (611.98)	90.35 (258.84)	45.89 (111.76)	1.02 (28.04)	6.56 (83.20)	15.90 (92.88)	22.23 (216.13)	9.02 (160.42)	15.24 (54.00)	672.86 (708.69)
High school graduate, no college	455.27 (732.86)	47.66 (202.83)	25.48 (92.61)	12.22 (132.26)	25.18 (230.00)	16.68 (325.50)	22.60 (187.05)	8.14 (100.04)	13.09 (47.53)	632.78 (899.31)
Some college or more	289.34 (643.91)	19.58 (160.29)	8.80 (53.08)	28.51 (250.17)	40.93 (347.98)	4.80 (122.36)	17.91 (178.24)	12.89 (140.12)	9.09 (40.30)	432.53 (863.42)
Elderly	1,233.30 (780.44)	32.37 (159.48)	5.56 (34.01)	47.97 (314.48)	116.48 (544.01)	1.51 (29.75)	4.58 (75.29)	20.36 (193.29)	0.74 (10.59)	1,419.88 (954.03)
Nonelderly	107.23 (375.16)	31.09 (186.23)	17.98 (77.14)	16.15 (184.95)	13.47 (207.59)	10.11 (209.80)	23.13 (202.11)	9.22 (113.32)	13.24 (48.37)	248.08 (641.03)
Disabled	637.41 (831.69)	228.13 (479.31)	54.62 (121.48)	17.44 (174.55)	11.51 (244.42)	39.73 (487.77)	11.34 (118.46)	42.51 (306.90)	7.89 (38.15)	1,058.50 (1,100.43)
Nondisabled	319.95 (650.05)	18.35 (130.50)	12.83 (65.05)	23.07 (221.05)	36.27 (315.34)	6.26 (147.16)	19.83 (186.91)	9.47 (113.21)	10.74 (43.78)	460.97 (833.35)
Single mother	88.75 (329.08)	63.44 (267.67)	88.22 (155.40)	0.61 (32.04)	0.94 (29.57)	46.77 (457.54)	19.76 (166.08)	3.93 (86.11)	49.36 (84.32)	361.78 (732.37)
Other parent	51.62 (278.61)	18.98 (173.82)	16.29 (80.69)	11.89 (153.39)	3.22 (106.85)	7.54 (70.06)	27.08 (229.13)	6.60 (99.37)	20.48 (59.33)	175.15 (535.64)
Nonparent	140.88 (421.72)	32.76 (176.53)	7.99 (44.04)	20.93 (212.64)	21.10 (258.95)	5.83 (199.26)	21.47 (190.94)	11.49 (123.76)	3.55 (24.70)	263.42 (666.16)
Veteran	675.05 (910.42)	16.74 (184.27)	4.30 (36.93)	113.56 (484.52)	111.65 (571.63)	1.94 (34.82)	14.49 (160.84)	55.32 (284.90)	5.16 (31.09)	998.80 (1,237.90)
Nonveteran	264.40 (572.84)	34.63 (180.14)	17.91 (75.92)	2.34 (59.28)	17.48 (209.44)	9.77 (206.69)	20.38 (188.10)	1.69 (56.67)	11.66 (45.49)	397.04 (725.66)
Poor	120.97 (269.19)	74.81 (209.13)	82.97 (152.48)	0.35 (18.04)	0.23 (8.11)	25.27 (110.17)	18.22 (128.83)	2.39 (38.54)	19.76 (59.93)	350.06 (418.38)
Nonpoor	369.25 (698.72)	25.47 (176.06)	6.27 (42.56)	25.75 (232.52)	39.41 (331.60)	6.05 (195.44)	19.45 (189.61)	12.75 (141.90)	9.16 (40.19)	522.60 (912.58)
All groups	339.63 (667.15)	31.35 (181.03)	15.42 (70.61)	22.72 (218.45)	34.73 (311.46)	8.34 (187.42)	19.30 (183.42)	11.52 (133.87)	10.55 (43.44)	499.98 (866.00)

[a]Earned income tax credit (EITC) data are missing for about 12 percent of the sample.
Notes: Standard deviations are in parentheses. For descriptions of the demographic group variables, see box 1 on p. 119. The sample is limited to metropolitan-based households in which the head is at least 18 years old. Total cash transfer income is based on about 88 percent of the households for which EITC data are available. Total cash transfer income includes the value of food stamp benefits. Values to in-kind assistance, such as Medicare and housing assistance, are not imputed. There is insufficient detail in the *Survey of Income and Program Participation* to measure the participation in or the benefit value from the refundable (additional) child credit and student assistance, which appear in table 1.
Source: Authors' calculations based on data from wave 4 of the 2004 panel of the U.S. Census Bureau, *Survey of Income and Program Participation*, corresponding to the January–April period of 2005.

TABLE 5

Transfer income as a share of total income, by demographic group

	Average total monthly transfer income (cash transfers and food stamp benefits)	Average total monthly income (including cash transfers and food stamp benefits)	Transfer income as a share of total income
	(- - - - - - - - - - - - - - - - - dollars - - - - - - - - - - - - - - - - -)		(*percent*)
Less than high school diploma	672.86 (708.69)	2,150.75 (1,846.15)	31
High school graduate, no college	632.78 (899.31)	3,070.68 (2,806.11)	21
Some college or more	432.53 (863.42)	5,435.51 (5,641.29)	8
Elderly	1,419.88 (954.03)	3,061.06 (3,340.13)	46
Nonelderly	248.08 (641.03)	5,023.68 (5,325.44)	5
Disabled	1,058.50 (1,100.43)	2,384.28 (2,587.10)	44
Nondisabled	460.97 (833.35)	4,756.69 (5,122.98)	10
Single mother	361.78 (732.37)	2,785.72 (2,496.91)	13
Other parent	175.15 (535.64)	6,363.32 (6,258.03)	3
Nonparent	263.42 (666.16)	4,767.55 (5,021.33)	6
Veteran	998.80 (1,237.90)	5,118.47 (5,054.67)	20
Nonveteran	397.04 (725.66)	4,495.14 (5,019.67)	9
Poor	350.06 (418.38)	737.42 (581.62)	47
Nonpoor	522.60 (912.58)	5,184.78 (5,146.49)	10
All groups	499.98 (866.00)	4,601.77 (5,031.05)	11

Notes: Standard deviations are in parentheses. For descriptions of the demographic group variables, see box 1 on p. 119. The calculations in this table are based on the results in table 4.

Source: Authors' calculations based on data from wave 4 of the 2004 panel of the U.S. Census Bureau, *Survey of Income and Program Participation*, corresponding to the January–April period of 2005.

expenditures, but if it was paid for directly by the household, it would be. Expenditure for owner-occupied housing is set equal to the estimated rental value of the property—in keeping with the methodology used by the BLS in the creation of the Consumer Price Index. Entries in panel A of table 6 are in bold if expenditure shares in a given category for a group differ from expenditure shares of the overall population by more than 1 percentage point.

We want to highlight differences in spending in three areas—food, transportation, and health. For food expenditure (table 6, panel A, first column), those with less than a high school diploma, the disabled, single mothers, and the poor all concentrate a higher percentage of expenditures on food than the average consumer. This is in keeping with other research that finds that

lower-income households spend a higher portion of their expenditures on food and other necessities. For transportation (fifth column), we see lower expenditure than on average by those with less than a high school diploma, the elderly, the disabled, and the poor. These groups are less likely to have commuting expenses. We find that both the elderly and the disabled spent more on health than the average consumer (sixth column). This pattern is consistent with the weakened health status of these two demographic groups. The nonelderly, single mothers, and the poor spend less on health than the average consumer.

In table 6, panel B, we display annual 2009 expenditure levels by demographic group. We note that total expenditures, as shown in the final column, are higher for those groups that we would expect to have higher income

TABLE 6

Expenditure shares and annual expenditure levels, by demographic group, 2009

	Food	Alcohol	Housing	Apparel	Transportation	Health	Entertainment	Personal care products	Personal care services	Reading materials	Education	Tobacco	Miscellaneous	Total
A. Expenditure shares										— percent —				
All groups	14.2	1.0	47.0	3.6	16.3	6.9	5.6	0.7	0.7	0.2	2.4	0.8	0.7	100.0
Less than high school diploma	**16.9**	0.7	**49.0**	**5.1**	**14.5**	6.0	**3.7**	0.8	0.5	0.1	**0.6**	1.6	0.6	100.0
High school graduate or more	14.0	1.0	46.9	3.5	16.4	6.9	5.7	0.7	0.7	0.3	2.5	0.7	0.7	100.0
Elderly	**12.8**	0.8	**50.7**	**2.6**	**12.8**	**12.1**	4.9	0.7	0.7	0.4	**0.4**	0.5	0.7	100.0
Nonelderly	14.6	1.1	46.1	3.8	17.1	**5.6**	5.8	0.7	0.7	0.2	2.8	0.9	0.6	100.0
Disabled	**15.5**	0.9	47.6	3.0	**13.3**	**9.2**	5.3	0.7	0.5	0.2	**0.6**	**2.1**	1.2	100.0
Nondisabled	14.2	1.0	47.0	3.6	16.4	6.7	5.6	0.7	0.7	0.2	2.5	0.7	0.6	100.0
Single mother	**16.2**	0.6	46.4	**5.7**	16.1	**3.9**	5.3	1.1	0.8	0.2	1.7	1.4	0.8	100.0
Non-single-mother	14.2	1.0	47.0	3.5	16.3	7.0	5.6	0.7	0.7	0.3	2.4	0.8	0.6	100.0
Poor	**17.7**	0.6	**48.8**	**4.6**	**12.1**	**5.3**	**4.5**	0.9	0.5	0.2	3.1	1.3	0.6	100.0
Nonpoor	13.8	1.0	46.3	3.6	16.9	7.1	5.8	0.7	0.7	0.3	2.3	0.8	0.6	100.0
B. Annual expenditure levels										— dollars —				
All groups	5,953.04	418.46	15,945.73	1,497.62	6,799.08	2,864.70	2,344.95	296.82	280.20	103.36	997.30	331.52	272.49	38,105.27
Less than high school diploma	4,219.20	181.01	10,109.88	1,265.06	3,616.19	1,488.12	920.51	200.47	134.30	29.50	139.03	392.84	138.17	22,834.29
High school graduate or more	6,129.29	442.73	16,627.81	1,527.19	7,175.54	3,026.18	2,508.43	306.57	297.42	112.10	1,099.01	324.30	288.32	39,864.87
Elderly	4,918.05	291.25	12,892.66	987.28	4,915.88	4,634.74	1,874.34	263.19	283.33	142.05	148.26	199.95	276.57	31,827.53
Nonelderly	6,210.37	450.25	16,734.21	1,623.92	7,284.50	2,409.67	2,466.00	304.78	279.41	93.40	1,215.81	365.37	271.50	39,709.19
Disabled	4,490.78	251.34	10,982.11	881.97	3,873.81	2,685.55	1,528.30	199.74	143.13	60.40	175.63	597.32	334.45	26,204.51
Nondisabled	6,038.42	427.79	16,273.70	1,535.58	6,994.20	2,876.99	2,399.50	302.36	289.29	106.22	1,052.22	313.81	268.87	38,878.95
Single mother	5,151.09	176.77	13,589.02	1,801.10	5,132.33	1,248.73	1,691.69	338.73	242.95	54.94	533.27	447.16	248.45	30,656.22
Non-single-mother	6,002.77	433.59	16,079.56	1,480.77	6,892.67	2,955.63	2,381.88	294.02	282.29	106.09	1,023.76	325.07	273.76	38,531.86
Poor	4,030.79	139.37	9,365.43	1,052.20	2,754.12	1,203.07	1,024.09	197.34	112.59	37.03	701.43	295.78	134.76	21,048.01
Nonpoor	6,279.70	475.71	17,140.13	1,616.72	7,683.72	3,214.68	2,630.88	324.46	316.15	120.65	1,057.52	354.17	287.33	41,501.81

Notes: For descriptions of the demographic group variables, see box 1 on p. 119. Expenditure for owner-occupied housing is set equal to the estimated rental value of the property—in keeping with the methodology used by the U.S. Bureau of Labor Statistics in the creation of the Consumer Price Index. Each row's values may not sum to the value in the final column (labeled "total") because of rounding. In panel A, the expenditure shares of specific groups are in bold if they differ from the expenditure shares of the overall population by more than one percentage point.

Source: Authors' calculations based on data from the U.S. Bureau of Labor Statistics, *Consumer Expenditure Survey*.

on average. In particular, total expenditures are higher for those with a high school diploma than those without one, for the nonelderly than the elderly, for the nondisabled than the disabled, for non-single-mothers than single mothers, and for the nonpoor than the poor. In short, individuals in our groups of interest spend less on average than individuals in the remainder of the population.

We measure the inflation of a group as the weighted average of the price changes of the items purchased by households in that group, with the weights depending on the market basket of the group in question. For example, because the elderly spend more on health care than the nonelderly, the price changes in health items get a larger weight in the calculation of the inflation of the elderly than the nonelderly. Given the differences in consumption patterns shown in table 6, panel A (p. 125), we would expect to find differences in inflation experiences if price changes across categories differ dramatically. For example, in a period of rapidly increasing oil prices, we would expect that the inflation experienced by households that commute less, such as the elderly and the disabled, would be lower than that experienced by commuting households, all else being equal.

Before calculating inflation experiences of different groups, we would like to develop some intuition for the results by displaying price changes of goods in different categories. In table 7, panels A and B, we show how prices have changed in the broad expenditure categories displayed in table 6, panels A and B. We show price changes for six different periods: 1980–2010, 1980–90, 1990–2000, 2000–10, 1980–2008, and 2008–10. As noted in the introduction and summary, we divide the period 1980–2010 into 1980–2008 and 2008–10 because of the unusual patterns of price changes and COLAs during the recent recession and subsequent recovery. All price changes are based on August-to-August inflation rates. Panel A of table 7 shows the total price change over the periods, while panel B shows average annual rates during the periods. For example, the 249 percent for food inflation over the period 1980–2010 in panel A of table 7 means that nominal food prices in August 2010 were 249 percent of their August 1980 level. In addition, the average annual rate of food inflation over the period 1980–2010 was 3 percent, as shown in panel B of table 7.

We see in both panels of table 7 that inflation rates have differed across the expenditure categories. For some categories, in particular health, education, and tobacco, price growth has been above the total

TABLE 7
Inflation, by expenditure category, 1980–2010

	Food	Alcohol	Housing	Apparel	Transportation	Health	Entertainment	Personal care products	Personal care services	Reading materials	Education	Tobacco	Miscellaneous	Total
	(------- percent -------)													
A. Cumulative price changes														
1980–2010	249	255	265	128	230	514	216	200	273	282	786	1,133	505	262
1980–90	151	149	159	134	143	218	157	159	158	175	249	256	227	158
1990–2000	127	135	131	103	127	159	126	120	135	138	177	212	159	131
2000–10	130	127	127	93	126	148	109	105	128	117	178	209	140	126
1980–2008	245	246	268	128	246	482	217	197	266	273	715	823	484	263
2008–10	101	104	99	100	94	107	100	101	103	103	110	138	104	100
B. Annual average inflation														
1980–2010	3	3	3	1	3	6	3	2	3	4	7	8	6	3
1980–90	4	4	5	3	4	8	5	5	5	6	10	10	9	5
1990–2000	2	3	3	0	2	5	2	2	3	3	6	8	5	3
2000–10	3	2	2	–1	2	4	1	0	3	2	6	8	3	2
1980–2008	3	3	4	1	3	6	3	2	4	4	7	8	6	4
2008–10	1	2	0	0	–3	3	0	1	1	2	5	17	2	0

Note: All price changes are based on August-to-August inflation rates.
Source: Authors' calculations based on data from the U.S. Bureau of Labor Statistics, Consumer Price Index Database.

price growth (as shown in the final column) during all three decades of the 1980–2010 period. In contrast, apparel inflation has been lower than the overall price growth during all three decades. Transportation price growth has been lower than or equal to total price growth in all of the periods we consider. Because of these patterns, we would expect groups that concentrate high portions of consumption on health, education, and tobacco to have experienced higher inflation than the average consumer, while groups that concentrate high portions of spending on apparel and transportation would have experienced lower inflation.

Now, we combine the expenditure share data and the price change data to calculate group inflation. We calculate group inflation in two ways. Our first inflation calculation is based on the annual market basket consumed by a particular group. The inflation rate for a group in a particular month is calculated as the year-over-year price change of the market basket consumed by that group in the prior year. For example, inflation for the elderly in August 2010 is equal to the price change between August 2009 and August 2010 of the market basket purchased by the elderly in 2009.[11] Put differently, inflation is the weighted average price change of the goods and services purchased by the elderly, with the weights being the elderly's expenditure shares (as displayed in table 6, panel A, p. 125). We label such calculations "annual-weighted inflation." This differs from the way in which the official CPI is calculated because the official CPI uses weights that are fixed over a period longer than a year and are derived from expenditures across multiple years. For example, the CPI from January 2006 through December 2007 is based on the 2003 and 2004 market basket. Our second inflation calculation follows the BLS's methodology as closely as we are able (U.S. Bureau of Labor Statistics, 2007).[12] For this second measure, we only tabulate inflation from 1987 onward because earlier inflation data would require the use of older *Consumer Expenditure Survey* data (in particular that for 1972–73) than we have used. We label such calculations "fixed-weighted inflation."[13]

In table 8, panel A, we show annual-weighted inflation calculations, and in panel B, we show fixed-weighted inflation calculations. We show cumulative inflation experiences based on inflation during the month of August. We choose August because many of the COLAs are based on year-over-year third-quarter inflation. In table 8, panel A (first row and first column of data), we show that for the overall population, prices were 255 percent of their August 1980 level in August 2010. This does *not* mean that a fixed set of goods that cost $100 in 1980 costs $255 in 2010 because our calculations of inflation are based on a market basket that is redetermined every year.

Over the 1980–2010 period, the highest levels of inflation have been experienced by the elderly, followed by the disabled, the poor, and those with less than a high school diploma, as shown in table 8, panel A (as well as in panel B over the 1987–2010 period). This pattern is due in part to the findings presented in panel A of table 6 (p. 125) that the elderly and the disabled spend more than on average in the health category, which had quickly growing prices, while those with less than a high diploma and the poor spend less than on average in the transportation category, which had slowly growing prices. This general pattern persists, more or less, across the different periods displayed in table 8, panel A. This finding is consistent with other research that has focused on the elderly as a group that has faced high inflation (Hobijn and Lagakos, 2005; and Amble and Stewart, 1994).

Based on the calculations using annual weights in panel A of table 8, we note that over the 30-year period from 1980 through 2010, inflation faced by the elderly has been 15 percentage points higher than that experienced by the overall population. Inflation faced by the elderly has been higher in each of the three decades displayed in panel A of table 8 as well. We generally find smaller gaps between the inflation of the poor, those with less than a high diploma, and the disabled and that of the overall population. We also find that single mothers have experienced slightly lower inflation than the overall population. The results using fixed weights, in panel B of table 8, are similar. Note that the numbers in the first row of panel B of table 8 are smaller than the numbers in the first row of panel A of table 8 because we are measuring cumulative inflation over a shorter period in panel B.

In the final column of both panels A and B of table 8, we show cumulative August-to-August inflation according to the official CPI-U. Our measure of inflation for "all" over the period 1987–2010 in panel B of table 8 (190 percent in the first row and first column of data) should be close to the official CPI-U over the same period (191 percent in the first row and final column) because for this data point we are using the same BLS data and methodology. We would expect our inflation measure for "all" over the period 1980–2010 in panel A of table 8 (255 percent in the first row and first column) to be lower than the official CPI-U over the same period (262 percent in the first row and final column) because we are updating market baskets more quickly than the CPI-U and taking into account the fact that households may change their behavior in response to rising prices by purchasing more of those goods and services whose prices are increasing less quickly.

Our next goal is to compare the inflation experiences of different groups to increases in benefit payments. Benefit payment increases arise either because a program has an explicit cost-of-living adjustment or because legislators enact increased benefit amounts. We focus on four programs—Social Security, SSI, TANF, and SNAP.

Social Security and SSI

We begin by looking at the Social Security and SSI COLA and the inflation experiences of the elderly and the disabled. Social Security and SSI benefits (for both the elderly and the disabled) have been in-dexed to the (seasonally unadjusted) CPI-W since 1975. Benefits for the Civil Service Retirement System, military retirement, and veterans service-connected compensation are all indexed in the same way.

In table 9, panel A, we show the increase in the CPI-W in the first column of data. The number 256 in the first row and first column of data means that, according to the CPI-W, prices in August 2010 were 256 percent of their nominal August 1980 value. In the next two columns, the numbers displayed for the various periods are the same as those measuring the inflation faced by the elderly and the disabled with annual weights and fixed weights in table 8, panels A and B, respectively.

From table 9, panel A, we see that for both annual-weighted and fixed-weighted in-flation measures, the inflation experienced by the elderly has been almost always higher than the CPI-W, both over the entire period and for each of the three decades covered by the data. Over the entire 30-year period, based on annual weights, elderly inflation has been 14 percentage points above the CPI-W. For each of the three decades presented in the part of panel A of table 9 using annual weights, the gap has been between 2 percentage points and 5 percentage points. Because individuals tend to benefit from the program for a number of years (the life expectancy of an American 65 years old in 1980 was 16.4 additional years),[14] these decade-long gaps lead to de-clines in the purchasing power for the same individual. For the disabled, the inflation ex-perienced by the group has also tended to be higher than aggregate inflation for both the

TABLE 8

Cumulative inflation experiences, by demographic group

	All	Less than high school diploma	High school graduate or more	Elderly	Nonelderly	Disabled	Nondisabled	Single mother	Non-single-mother	Poor	Nonpoor	Official CPI-U
	(--- percent ---)
A. Annual weights												
1980–2010	255	261	255	270	253	262	255	247	256	262	254	262
1980–90	156	157	156	160	156	158	156	155	156	158	156	158
1990–2000	129	130	129	132	129	129	129	127	130	129	129	131
2000–10	126	128	126	128	126	128	126	125	126	129	126	126
1980–2008	255	262	255	269	253	260	255	247	256	261	254	263
2008–10	100	100	100	100	100	100	100	100	100	100	100	100
B. Fixed weights												
1987–2010	190	194	190	198	188	197	190	187	190	195	189	191
1987–90	114	115	114	115	114	115	114	114	114	115	114	115
1990–2000	131	131	131	133	131	133	131	130	131	132	131	131
2000–10	127	129	127	129	126	129	127	126	127	129	126	126
1987–2008	190	195	190	198	189	197	190	187	190	195	189	191
2008–10	100	100	100	100	100	100	100	100	100	100	100	100

Notes: For descriptions of the demographic group variables, see box 1 on p. 119. CPI-U means Consumer Price Index for All Urban Consumers. The cumulative inflation experiences are based on inflation during the month of August. Please see the text for further details on inflation based on annual and fixed weights. The different weighting methodologies do not apply to the calculations for the official CPI-U, which is created by the U.S. Bureau of Labor Statistics using one weighting methodology.
Sources: Authors' calculations based on data from the U.S. Bureau of Labor Statistics, Consumer Price Index Database and *Consumer Expenditure Survey.*

TABLE 9

Consumer Price Index, benefit adjustments, and inflation experiences of select demographic groups

A. Social Security and SSI and the elderly and the disabled

	Official CPI-W	Elderly	Disabled	Social Security/ SSI COLA
	(- percent -)			
Annual weights				
1980–2010	256	270	262	265
1980–90	155	160	158	152
1990–2000	130	132	129	133
2000–10	126	128	128	131
1980–2008	257	269	260	250
2008–10	100	100	100	106
Fixed weights				
1987–2010	189	198	197	198
1987–90	115	115	115	113
1990–2000	130	133	133	133
2000–10	126	129	129	131
1987–2008	190	198	197	187
2008–10	100	100	100	106

B. AFDC/TANF and single mothers

	AFDC/TANF maximum in Alabama	AFDC/TANF maximum in Connecticut	AFDC/TANF maximum in Illinois	Official CPI-W	Single mother
	(- percent -)				
Annual weights					
1980–2010	182	143	150	256	247
1980–90	100	137	127	155	155
1990–2000	139	99	103	130	127
2000–10	131	106	114	126	125
1980–2008	182	143	150	257	247
2008–10	100	100	100	100	100
Fixed weights					
1987–2010	182	124	126	189	187
1987–90	100	119	107	115	114
1990–2000	139	99	103	130	130
2000–10	131	106	114	126	126
1987–2008	182	124	126	190	187
2008–10	100	100	100	100	100

C. SNAP and the disabled, single mothers, poor, and those with less than a high school diploma

	Thrifty Food Plan	CPI-food	Official CPI-W	Disabled	Single mother	Poor	Less than high school diploma	SNAP (food stamp) monthly maximum
	(- percent -)							
Annual weights								
1980–2010	250	249	256	262	247	262	261	320
1980–90	149	151	155	158	155	158	157	158
1990–2000	128	127	130	129	127	129	130	129
2000–10	131	130	126	128	125	129	128	157
1980–2008	260	245	257	260	247	261	262	259
2008–10	96	101	100	100	100	100	100	123
Fixed weights								
1987–2010	202	193	189	197	187	195	194	246
1987–90	120	117	115	115	114	115	115	122
1990–2000	128	127	130	133	130	132	131	129
2000–10	131	130	126	129	126	129	129	157
1987–2008	210	190	190	197	187	195	195	200
2008–10	96	101	100	100	100	100	100	123

Notes: For descriptions of the demographic group variables, see box 1 on p. 119. CPI-W means Consumer Price Index for Urban Wage Earners and Clerical Workers; CPI-food means the Consumer Price Index for all food. COLA means cost-of-living adjustment. SSI means Supplemental Security Income. AFDC means Aid to Families with Dependent Children, and TANF means Temporary Assistance for Needy Families. SNAP means Supplemental Nutrition Assistance Program (Food Stamp Program). The Thrifty Food Plan is the basis for food stamp allotments. Please see the text for further details on inflation based on annual and fixed weights. The different weighting methodologies only apply to the inflation calculations for the demographic groups.

Sources: Authors' calculations based on data from the U.S. Bureau of Labor Statistics, Consumer Price Index Database and *Consumer Expenditure Survey*; and data on benefit determination from the U.S. Social Security Administration (panel A), U.S. Department of Health and Human Services (panel B), and U.S. Department of Agriculture (panel C).

annual-weighted and fixed-weighted measures, although to a lesser degree (for example, by 6 percentage points over the entire period for the annual-weighted measure). Like the elderly on Social Security Old-Age and Survivors Insurance, disabled individuals tend to benefit from the Social Security Disability Insurance and SSI programs for long durations—with the average stay on disability lasting over ten years (Rupp and Scott, 1995).

The comparison of inflation experiences of the elderly and the disabled with the actual COLAs implemented by the Social Security and SSI programs is more complicated. Over the period 1976–83, the Social Security/SSI COLAs were based on increases in the CPI-W from the first quarter of the prior year to the first quarter of the current year and became effective with June benefits paid to recipients in July. After 1983, the COLAs were based on increases in the CPI-W from the third quarter of the prior year to the third quarter of the current year and became effective with December benefits paid in January. Figure 1 shows August-over-August growth in the CPI-W, Social Security/SSI COLA, and inflation faced by the elderly. There are three notable features of the Social Security/SSI COLA relative to the CPI-W. First, CPI-W increases are reflected in the COLA with a lag because the COLA has been implemented one quarter after the price change is measured. Second, there was no COLA in 1983; in other words, benefits in August 1983 were the same as benefits in August 1982. This is due to the shift, beginning in 1983, from implementing COLAs in July to implementing COLAs in the following January (that is, the 1983 COLA was implemented in January 1984). Third, recent Social Security/SSI COLAs have been somewhat unusual. The COLA for 2008—first paid in January 2009—was 5.8 percent. Prices in 2008:Q3 were 5.8 percent above their 2007:Q3 level. The magnitude of this increase was in part due to the timing of the COLA determination. Energy prices spiked over the summer of 2008. For all of 2008, CPI-W inflation was 4.1 percent, but the COLA was based on the 2008:Q3 measurements. The COLA for 2009—first paid in January 2010—was zero because prices fell between 2008:Q3 and 2009:Q3 and the COLA cannot be negative. This fall was due in part to the temporary nature of the energy price spike. The COLA for 2010, payable in January 2011 (not shown in figure 1), was also zero because, although prices increased modestly (1.5 percent) between 2009:Q3 and 2010:Q3, they were still about half a percentage point below their 2008:Q3 level. In effect, recipients were compensated beginning in January 2009 for the inflation experienced between 2009:Q3 and 2010:Q3. Because of all these

factors, the CPI-W and the Social Security/SSI COLA have differed modestly over this period.

We divide our comparison of the Social Security/ SSI COLA with elderly inflation into the periods 1980–2008 and 2008–10 because the forces at work in these two eras differ. In the 1980–2008 period, elderly inflation was above the Social Security/SSI COLA by 19 percentage points (see table 9, panel A, fifth row, p. 129). This is in part due to the following factors: the gap between elderly inflation and overall inflation, the lack of a COLA in 1983, and the fact that the price increases in 2008 had not yet been incorporated into the COLA. In 2008–10, the Social Security/ SSI COLA was higher than the inflation faced by the elderly. This is due to the large COLA in January 2009 and the fact that the January 2010 COLA could not be negative. The pattern for the disabled is similar, although the gap in the 1980–2008 period is smaller.

Overall, the inflation experienced by the elderly and the disabled has generally been higher than the price index used to adjust their most substantial income support benefits. However, the path for the actual Social Security/SSI COLA has differed from that for the index it tracks because of idiosyncrasies in the determination of the Social Security/SSI COLA.

Temporary Assistance for Needy Families

Benefit payments for the Temporary Assistance for Needy Families program (which replaced the Aid to Families with Dependent Children in 1997) are set by the states. States set maximum benefit payments for families of different compositions, and subtract some portion of family income to set the actual benefit payment for a given family. In table 9, panel B (p. 129), we compare nominal increases in maximum monthly AFDC/TANF benefits for a family of three in three states—Alabama, Connecticut, and Illinois—with the inflation experiences of single mothers, based on both annual and fixed weights. We choose these three states because one was a relatively high-benefit state in 1980 (Connecticut's maximum benefit was $475), one was a moderate-benefit state (Illinois's maximum was $288), and one was a low-benefit state (Alabama's maximum was $118). While states determine benefit levels, TANF payments are partially funded by federal block grants that have been fixed in nominal terms since they were established in 1996.

If we compare the increases in AFDC/TANF benefits with the inflation experiences of single mothers based on annual weights, we find that while single mothers were facing prices in 2010 that were 247 percent of their 1980 level, benefits in these three states were between 143 percent and 182 percent of

FIGURE 1

Social Security/SSI COLA, elderly inflation, and CPI-W

percent
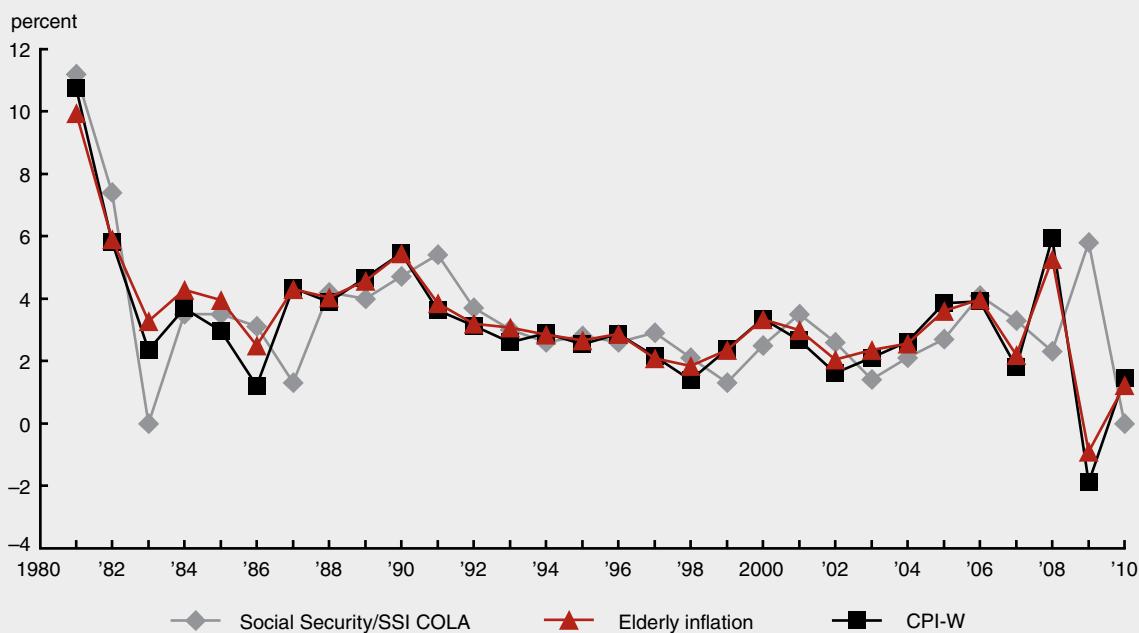
Notes: SSI means Supplemental Security Income. COLA means cost-of-living adjustment. CPI-W means Consumer Price Index for Urban Wage Earners and Clerical Workers. August-over-August growth is displayed for all data.

Sources: Authors' calculations based on data from the U.S. Bureau of Labor Statistics, Consumer Price Index Database and *Consumer Expenditure Survey*; and data on benefit determination from the U.S. Social Security Administration.

their 1980 level (see table 9, panel B, first row, p. 129). Growth in the price of the market basket of single mothers was 65 percentage points above the growth in benefits in the state with the largest percentage growth in benefits among the three selected—Alabama. We also see large gaps, particularly for Connecticut and Illinois, when we investigate the 1987–2010 period and use fixed weights. These gaps between benefit growth and price growth are far larger than that between the Social Security/SSI COLA and elderly inflation, and represent substantial erosion in the purchasing power of program beneficiaries. These three states are fairly representative of the 50 states. In no state did the value of benefits keep up with the annual-weighted price increases faced by single mothers over the 1980–2010 period. This erosion in the real value of welfare benefits has been noted elsewhere (for example, Schott and Levinson, 2008). For 1990–2000 and 2000–10, growth in benefit payments in Alabama (the low-benefit state) slightly exceeded the price growth faced by single mothers (see table 9, panel B, third and fourth rows). However, the maximum benefit in Alabama had been unchanged between 1980 and 1990 (see table 9, panel B, second row).

In figure 2, we show August-over-August increases in AFDC/TANF benefits in the three states, overall

inflation (as measured by the CPI-W), and single-mother inflation. In most years, benefits have been unchanged, but there have been occasional changes. For the AFDC/TANF population, the duration of benefit receipt differs before and after the implementation of the TANF program in 1997, since federal funding for TANF recipients is limited to 60 months. Prior to welfare reform in 1996, over 50 percent of the caseload was expected to stay on the program for over a decade (Rupp and Scott, 1995). The real erosion in welfare benefits translates into both lower real benefits for individuals who enter AFDC/TANF at later dates and a decline in the purchasing power of benefits for an individual during her stay on AFDC/TANF.

Supplemental Nutrition Assistance Program

In panel C of table 9 (p. 129), we compare increases in monthly maximum benefits from the Supplemental Nutrition Assistance Program (formerly called the Food Stamp Program) with price increases faced by those with less than a high school diploma, the disabled, single mothers, and the poor—all based on both annual and fixed weights. Individuals in all of these groups are heavily represented among SNAP recipients (see the Food Stamp Program column in

FIGURE 2

AFDC/TANF benefit growth in select states, single-mother inflation, and CPI-W
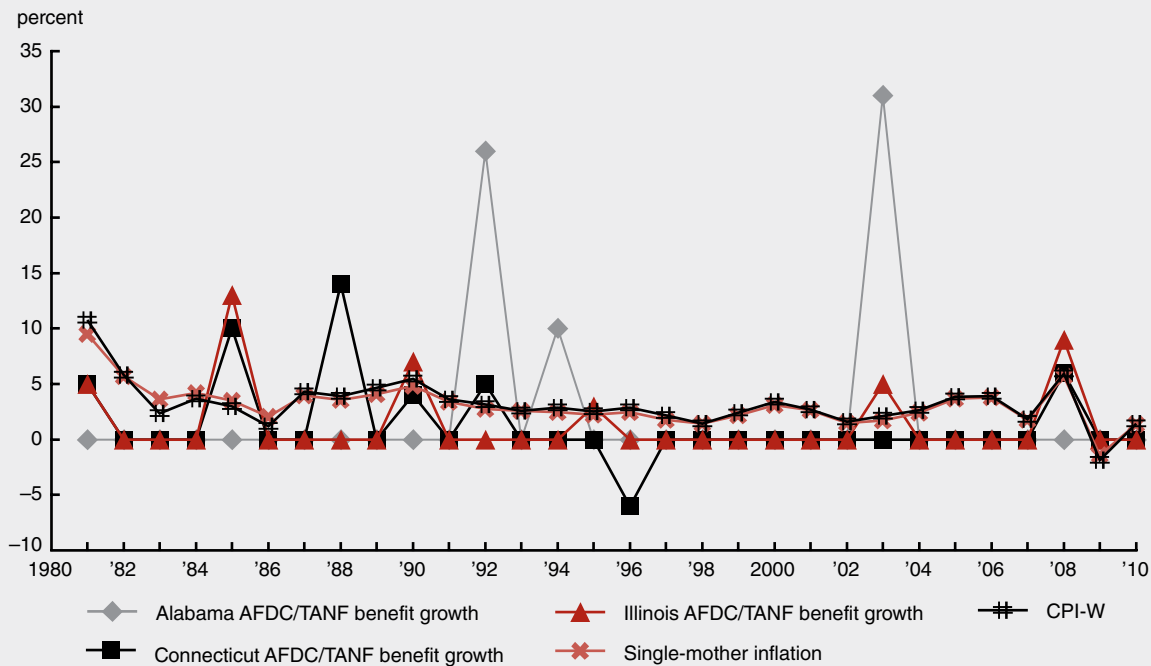
Notes: AFDC means Aid to Families with Dependent Children; TANF means Temporary Assistance for Needy Families, and it replaced the AFDC in 1997. CPI-W means Consumer Price Index for Urban Wage Earners and Clerical Workers. August-over-August growth is displayed for all data.

Sources: Authors' calculations based on data from the U.S. Bureau of Labor Statistics, Consumer Price Index Database and *Consumer Expenditure Survey*; and data on benefit determination from the U.S. Department of Health and Human Services.

table 2, pp. 120–121). As noted in table 1 (pp. 115–117), SNAP maximum benefits are currently indexed to increases in the cost the U.S. Department of Agriculture's Thrifty Food Plan (TFP). In particular, benefits are based on the cost of a low-cost nutritious diet for a family of four with one child aged 6–8 and one child aged 9–11. June-to-June increases in prices are reflected in October SNAP benefits.

In table 9, panel C (p. 129), we display increases in the cost of the TFP in the first column of data. The fourth through seventh columns of data display price increases for our groups of interest. The increases in the cost of the TFP are slightly above the annual-weighted price increases faced by single mothers over the 1980–2010 period, while the increases in the cost of the TFP are slightly below the inflation experienced by the other groups in panel C. For the 1980–90 period, when food price growth overall (as measured by the Consumer Price Index for food, or CPI-food, and displayed in the second column) was below total inflation (displayed in the third column), all groups experienced inflation that was higher than the growth in the cost of the TFP. This is by design, in that growth in benefits is meant

to match increases in the price of food rather than increases in the cost of all items.

We graph annual August-over-August increases in SNAP benefits, the cost of the TFP, the cost of food (as measured by the CPI-food), and the price of the market basket consumed by the poor in figure 3. Two notable patterns emerge from the figure. First, TFP inflation is more volatile than overall food inflation (as measured by the CPI-food). This is due to greater weighting in the TFP toward vegetables, milk products, and fruit, whose prices tend to be less stable than those of other foods and food away from home (McGranahan, 2008; and Carlson et al., 2007). Second, SNAP benefit growth and TFP cost growth have differed quite substantially at times. In fact, over the period 1980–2010, these measures have been *negatively* correlated. This differential is due to the four-month lag in implementing benefit changes and to frequent policy changes in the methods of determining maximum benefits. The current method of indexing benefits was first put in place in October 1996, based on June 1996 prices.[15] Prior to that, inflation adjustments had been a done in a variety of different ways. Since the Food Stamp Act of 1964,

FIGURE 3

SNAP benefit growth, Thrifty Food Plan cost growth, inflation of the poor, and food inflation

percent
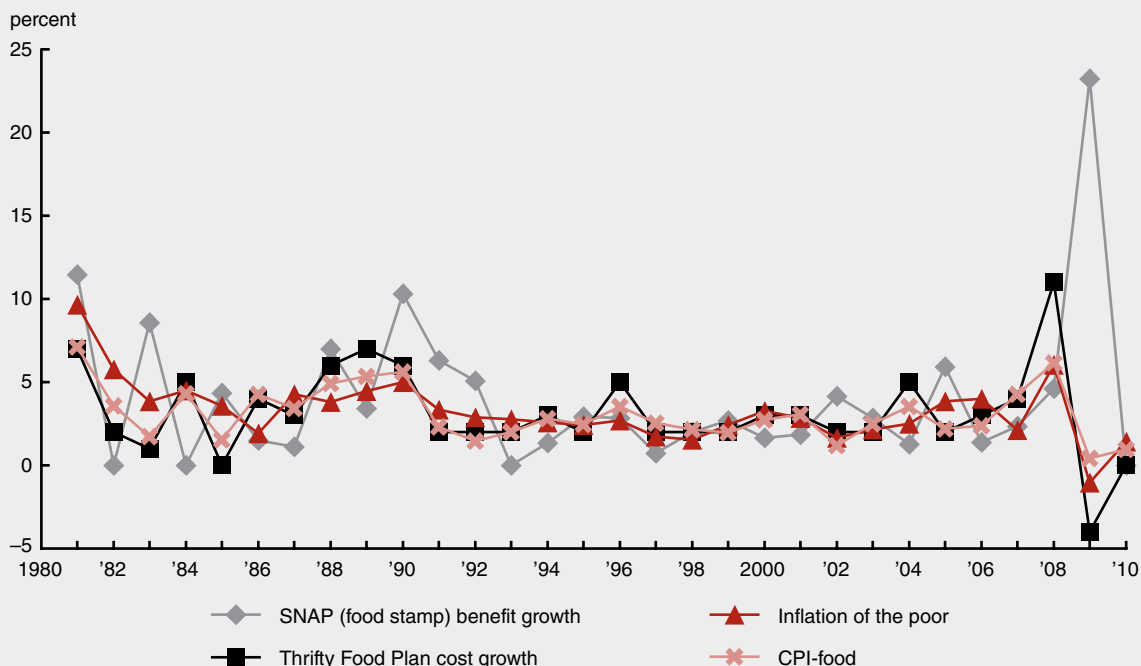
Notes: Supplemental Nutrition Assistance Program (SNAP) was previously known as the federal Food Stamp Program (and it is still commonly referred to by this name). The Thrifty Food Plan is the basis for food stamp allotments. CPI-food means Consumer Price Index for all food. August-over-August growth is displayed for all data.
Sources: Authors' calculations based on data from the U.S. Bureau of Labor Statistics, Consumer Price Index Database and *Consumer Expenditure Survey*; and data on benefit determination from the U.S. Department of Agriculture.

food stamps have been indexed annually, indexed semiannually, and frozen. Benefits have been set from 99 percent to 103 percent of the cost of the Thrifty Food Plan. For example, from October 1992 until October 1996, food stamp benefits were set at 103 percent of the cost of the TFP. As another example, food stamp benefits were fixed between January 1981 and September 1982, and the benefit adjustment for October 1, 1982, was based on 21 months of price changes.

By contrast, in 2010, the food stamp maximum was 123 percent of its 2008 level, although the cost of the TFP was 96 percent of its 2008 level in 2010 (table 9, panel C, sixth row, p. 129). This disparity is due to a provision of the American Recovery and Reinvestment Act of 2009 that set benefits beginning in April 2009 at 113.6 percent of the cost of the TFP as of June 2008. Because of the ARRA increase, SNAP benefit growth exceeded the inflation faced by all population groups over the entire 1980–2010 period—in particular, the 2008–10 period.

SNAP COLAs will also be unusual going forward. Under current legislation, SNAP benefits are set to remain at 113.6 percent of the June 2008 TFP cost until

October 2013 unless food inflation is so high that 100 percent of the contemporaneous TFP cost exceeds 113.6 percent of the June 2008 TFP cost prior to that date. In other words, from now until October 2013, unless inflation is very high, there will be no benefit increases. In October 2013, benefits will revert to being set at 100 percent of the June 2012 TFP cost. Assuming total TFP inflation between June 2008 and October 2013 is less than 13.6 percent (about 2.6 percent per year), benefits will fall in October 2013. This schedule for future benefit adjustments has been changed twice since the passage of the ARRA. Originally, the provision was going to end whenever the TFP cost exceeded 113.6 percent of the June 2008 level. It was then set to end in March 2014 and is now set to end in October 2013. These changes in the timing of the added benefits' phaseout are akin to what has been seen in other periods where food stamp benefit adjustments were subject to frequent policy shifts. In general, the relationship of the cost of the TFP and maximum SNAP allotments has been influenced by policy decisions. This relationship was altered through the ARRA and through two additional pieces of legislation since

the ARRA's passage, as well as numerous times prior to 2009.

Reviewing the four transfer programs

The relationship between the experience of program recipients and the computation of benefit levels has been quite different for Social Security and SSI, TANF, and SNAP. With the exception of a change in the timing of COLA determination between 1982 and 1983, the Social Security/SSI COLA has been calculated in a consistent manner. As a result, for the most part, the Social Security/SSI COLA has been close to the inflation measure, the CPI-W, it is intended to track. However, the inflation experiences of both the elderly and the disabled have been generally higher than the inflation of the population covered by the CPI-W.

The gap between the Social Security/SSI COLA and the inflation of the elderly and the disabled pales in comparison with the gap between the growth of TANF benefits and the inflation faced by single mothers. TANF beneficiaries have seen substantial declines in the purchasing power of their benefits. Although the inflation faced by single mothers has been moderately below inflation for the CPI-W population, the growth in TANF benefits has been far below the inflation faced by single mothers. This gap is so large because neither the block grants from the federal government to the states nor the state benefits themselves are indexed. As a result, the growth in nominal TANF benefits at the state level has been modest and uneven.

 For SNAP benefit recipients, inflation over the entire period has been close to growth in the cost of the TFP in part because food inflation has been close to overall inflation. However, SNAP benefit growth and TFP cost growth have diverged because of policy decisions. SNAP benefit levels and the relationship between these benefit levels and the cost of the TFP have been policy levers that are frequently used. Because of a major increase in benefits enacted as part of the ARRA, benefit increases far exceed the inflation of the groups that depend on SNAP. However, the history of the ARRA benefits is also indicative of the frequency with which SNAP benefits are altered—the timing of the phaseout of the added ARRA benefits has been changed twice since the ARRA passed.

Conclusion

We compare the inflation indexation used in government transfer programs with the inflation experiences of households that are dependent on those programs for income support.

We find that the inflation experienced by different demographic groups differs from aggregate inflation because of differences in consumption patterns across the demographic groups and differences in price changes across expenditure categories. Demographic groups that concentrate a higher portion of their spending in categories whose prices have grown rapidly over the past three decades, such as health care, have experienced higher inflation than demographic groups that concentrate a higher portion of their spending in categories whose prices have grown more slowly, such as transportation. Because of their high demand for health care and low commuting costs, elderly households have experienced the highest inflation of all the groups we investigate.

We also find that the evolution of transfer program benefits has differed substantially across the four programs we investigate. Social Security and SSI benefit growth has been moderately lower than the inflation experiences of the elderly and the disabled because of the consumption patterns of the elderly and the disabled. However, TANF benefit growth has been far below the inflation experienced by single mothers because of the absence a routine COLA for most state-level benefits; and SNAP benefit growth has diverged from the inflation experienced by its beneficiaries because of frequent changes in the way the SNAP COLA has been calculated.

Much of the policy debate concerning COLAs has revolved around the Social Security program. This is in part due to the high inflation experienced by the elderly and in part due to the fact that Social Security is the single largest income support program, representing 31 percent of all federal expenditures on payments to individuals in 2010.[16] Because the elderly have experienced higher inflation than the overall population, their inflation experiences have exceeded inflation as measured by the CPI-W, the index upon which increases in Social Security benefits are based. Given the gap between inflation experienced by the elderly and the Social Security COLA, the elderly have experienced a decline in their ability to purchase their preferred market basket, even in the presence of a fully indexed benefit. Using an alternative COLA that indexed Social Security benefits to the inflation faced by the elderly could eliminate this gap. However, such a policy change would be extremely costly. Researchers at the Federal Reserve Bank of New York (Hobijn and Lagakos, 2003) estimated the potential costs of using a CPI based on the consumption patterns of the elderly to adjust Social Security benefits. According to this research, had an elderly-specific index been adopted in 1984, benefits would have been 3.84 percent higher than they actually were in 2001. The New York Fed researchers anticipated that changing to an elderly-specific index in 2003 would likely have increased future benefit levels and have

rendered the Social Security trust fund insolvent five years sooner than projected at the time.

Alternatively, changing the Social Security COLA to one that led to more modest increases in benefits, as proposed by the National Commission on Fiscal Responsibility and Reform, would magnify the gap between the inflation of the elderly and the Social Security COLA.[17] At the same time, such a change would relieve some budget pressures.

Past attempts to change the Social Security COLA to one that reflected the purchasing habits of the elderly have not gotten much traction. Legislation to change the Social Security COLA has been introduced in every Congress since the 105th in 1997–98, but this legislation has never made it to the floor of either chamber. Legislation has also been introduced in the current Congress. The National Commission on Fiscal Responsibility and Reform's proposal to use a chain-weighted Consumer Price Index (in particular, the chain-weighted Consumer Price Index for All Urban Consumers, or C-CPI-U) has not yet been incorporated into any legislative proposal, and such a change was not included in President Obama's 2012 budget proposals. However, this change has been incorporated into some of the broad-based proposals to address the federal deficit.

NOTES

[1]Social Security is officially referred to as the federal Old-Age, Survivors, and Disability Insurance Program, or OASDI.

[2]Chain-weighting is a method of measuring inflation that takes into account the fact that people tend to buy less of things whose prices have increased a lot and instead buy more of substitutes whose prices have risen less. Different inflation measures are discussed in more detail later in this article.

[3]Social Security and SSI are administered by the U.S. Social Security Administration; TANF is administered by the U.S. Department of Health and Human Services; and SNAP is administered by the U.S. Department of Agriculture, Food and Nutrition Service.

[4]These are our calculations based on data from White House, Office of Management and Budget (2011a, b).

[5]These adjustments are automatic except for the case of veterans' benefits. Congress enacts legislation every year that sets the COLA for veterans' benefits equal to that for Social Security benefits. This legislation tends to pass unanimously.

[6]Market baskets refer to evolving selections of goods and services purchased by individuals that are used to track inflation in an economy or specific market.

[7]For alternative discussions on the use of indexation in the federal government, see Congressional Budget Office (1981, 2010).

[8]Our criteria do not lead us to look at the expenditure patterns of veterans. However, even if we had wanted to do so, we would not have been able to. The only question related to veteran status in the *Consumer Expenditure Survey* is one that asks the amount of income from workers' compensation and veterans' benefits combined. Workers' compensation is a larger program paying out $55 billion in annual benefits in 2007 (U.S. Census Bureau, 2010) versus $32 billion in veterans service-connected compensation (see table 1 on pp. 115–117 of this article for more on the latter). We do not include workers' compensation in the list of programs discussed in this article because it is largely funded by private insurance carriers and employers' self-insurance and not by the federal government.

[9]In McGranahan and Paulson (2006), we detail how the data are merged to create these expenditure patterns.

[10]For the official BLS definition of "consumer unit," see www.bls.gov/cex/csxfaqs.htm#q3.

[11]Doing the calculation in this way ensures that the inflation measure is not influenced by seasonal patterns in expenditures or prices.

[12]We cannot perfectly mirror the BLS's calculation because we lack some of the information needed to do so. Area information is missing in the public use data. In addition, some prices are not publicly released.

[13]These weights are not fixed over the entire sample, but they are fixed for longer than a year.

[14]See www.cdc.gov/nchs/data/hus/hus2009tables/Table024.pdf.

[15]The current method of indexing SNAP (food stamp) benefits was enacted in the Personal Responsibility and Work Opportunity Reconciliation Act of 1996. See www.fns.usda.gov/snap/rules/Legislation/timeline.pdf for details on the Food Stamp Program's evolution.

[16]This is our calculation based on data from White House, Office of Management and Budget (2011b).

[17]It would be worthwhile to compare the Social Security COLA with increases in elderly inflation by using the type of chain-weighted measures that the National Commission on Fiscal Responsibility and Reform has proposed. While chain-weighted inflation experienced by the elderly will most likely be lower than the measures of elderly inflation we present, the rapid increases in health care costs will still lead to chain-weighted inflation experienced by the elderly being greater than chain-weighted aggregate inflation.

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