Cash welfare as a consumption smoothing mechanism for divorced mothers

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Abstract

While there has been considerable research on the disincentive effects of cash welfare under the Aid to Families with Dependent Children (AFDC) program, there is little evidence on the benefits of the program for single mothers and their children. One potential benefit of this program is that it provides short-run consumption insurance for women at the point that they become single mothers. This is only true, however, to the extent that the program is not crowding out other sources of support, such as own savings, labor supply, or transfers from others. I assess the importance of this insurance mechanism by measuring the extent to which AFDC smooths the consumption of women who transition to single motherhood through marital dissolution. I use longitudinal data on family structure and consumption expenditures on food and housing from the Panel Study of Income Dynamics (PSID), matched to information on the welfare benefits available in each state and year over the 1968–1985 period. I find that raising potential benefits by one dollar raises the food and housing consumption of women who get divorced (and their families) by 28 cents. This estimate implies that for each dollar of AFDC received by this population their consumption of these categories of goods rises by up to 51 cents. This is roughly the share of food and housing in the consumption bundle of divorced mothers and their families, suggesting little crowdout of other sources of support.   © 2000 Elsevier Science S.A. All rights reserved.

Keywords: Welfare; AFDC; Single mothers; Insurance

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1. Introduction

One of the most extensively debated government expenditure programs of the past few years has been the provision of cash welfare to single mothers and their children under the Aid to Families with Dependent Children (AFDC) program. Despite absorbing only 1% of government expenditures,[1] this program has been roundly criticized because of the perceived distortions arising from the structure of program incentives. In particular, since AFDC is both means tested and (for the most part) categorically restricted to single mothers, critics have claimed that the program leads to both reductions in work effort and dissolution of the family unit. While empirical evidence on these questions is very mixed, they remain compelling criticisms in theory and have motivated calls for reform, and perhaps even abolition (Murray, 1984), of our cash welfare system. And they were the fundamental motivation for the recent radical reform that transformed the AFDC into its successor, the Transitional Aid to Needy Families (TANF) program.[2]

At the same time, the key benefit of this program is that it transfers resources to a presumably quite needy population. Proponents of AFDC have therefore painted proposals to reduce the generosity of this program as potentially devastating to single mothers and their children. These types of arguments presume, however, that reductions in AFDC benefits are not compensated by increases in support from other sources. In fact, as critics such as Murray (1984) and Olasky (1992) have noted, in the absence of this cash transfer program other mechanisms might respond to maintain the standard of living of single female headed families. Such mechanisms could include self-insurance through savings and through own or family labor supply, transfers from family members of cash or in-kind benefits, or transfers from other charitable institutions. If there are private market or non-market mechanisms which are being "crowded out" by the current welfare system, then the implications of reductions in AFDC generosity for the standard of living of single female-headed families is unclear. But while the disincentive effects of AFDC have been subject to extensive empirical testing and criticism, there is very little evidence to support or refute the benefits that this program has in terms of raising the standard of living of recipients.

It is impossible to know what types of institutions might emerge to support single mothers and their children in the absence of any cash welfare system, so that one cannot estimate the effect of eliminating AFDC on the standard of living

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[1]In 1992, AFDC expenditures were $22.2 billion, slightly more than 1% of combined Federal and State and Local expenditures of $2100 billion (U.S. House of Representatives, 1993; Economic Report of the President, 1994).

[2]Since this article focuses on the period ending in 1985, we will continue to refer to the program as AFAC.

of this population.[3] In this paper, I pursue a more modest goal: to explore the role of the existing cash welfare system as a consumption smoothing device for women at the point that they become single mothers through divorce. Divorce is potentially associated with a large reduction in the standard of living of women and their families. One goal of the welfare system, as with other social insurance programs such as unemployment insurance, is to insure family income against this adverse event.[4] To the extent that AFDC provides such insurance, it represents a benefit of the program which must be weighed against any distortions that arise from the structure of this means-tested categorical transfer.

I assess the extent to which AFDC provides this insurance by exploiting the tremendous variation in the generosity of this program across states, and within states over time. If cash welfare is playing such a consumption smoothing role, there should be corresponding variation in the consumption change for those becoming divorced mothers in different states and times. That is, to the extent that AFDC is not simply crowding out other sources of support, then increases in benefit levels should be translated directly to smaller (per capita) consumption reductions associated with becoming a single mother through divorce.

My primary source of data for this analysis is the Panel Study of Income Dynamics (PSID). This longitudinal survey allows one to follow women as they move between marital and childbearing states. I use two different measures of consumption that are available in the PSID: food expenditures and housing expenditures. The PSID data are matched to information about the welfare system in each state over the 1968–1985 period to estimate the basic consumption smoothing relationship.

To summarize, I find that AFDC plays an important consumption smoothing role for women who get divorced and their children. Each dollar increase in the maximum benefit entitlement for a state's AFDC program mitigates the consumption fall associated with divorce by 28 cents for women in that state. I note, however, that not all single mothers receive this maximum entitlement. In fact, I find that each dollar of AFDC received by those becoming single mothers is associated with (at most) a 51 cent rise in consumption of food and housing. This

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[3]One potential empirical strategy for answering this question would be to use historical evidence on insurance arrangements before the growth of the AFDC program. For example, Olasky (1992) argues that private charity provided an effective safety net for the indigent before the emergence of the New Deal. But, even to the extent that this is true, underlying changes in the nature of the economy and private insurance mechanisms over the subsequent years make it difficult to extend this conclusion to the removal of the current social safety net.

[4]At the same time, of course, critics claim that cash welfare is causing transitions to single motherhood; I address this important point at length below. For a related argument and evidence for the unemployment insurance system, see Gruber (forthcoming).

is the average share of food and housing expenditures in the budgets of divorced women and their children, suggesting that there is not a significant crowdout of other sources of support by the AFDC system.

The paper proceeds as follows. In Section 2, I provide background on the welfare system and related research, and a simple model to illustrate the potential for AFDC to serve as a consumption smoothing mechanism. Section 3 describes the data, and Section 4 discusses the empirical strategy. Section 5 then presents the basic PSID regression results, and pursues a number of specification checks and extensions. Section 6 concludes.

2. Welfare and consumption smoothing

2.1. Background on AFDC

AFDC is the largest cash welfare program for the able-bodied non-elderly in the U.S.[5] Benefits under the AFDC program have been traditionally limited to single mothers who meet relatively restrictive income criteria; on average across the states in 1985, AFDC eligibility was limited to those below 60% of the poverty line. But there has also been tremendous variation across the states in the generosity of their AFDC programs, as well as substantial differences within states over time. In 1968, the average state had AFDC benefits of $1971 for a family of three, but this varied from a low of $546 (MS) to a high of $3875 (NJ). Over the next 16 years (the period covered by my PSID sample), nominal benefits grew by an average of 111%, but this growth ranged from a low of 29% (IL) to a high of 416% (AK).[6] In real terms, benefits fell by 31% over this period; real benefit growth varied from − 58% to 67%.

States also have the option of covering married couples as well, if the head is under-employed (working less than 100 h per month), under the AFDC-UP program. This program has traditionally been quite small, however. In 1970, only 4% of families on AFDC were enrolled through this option; this share had grown to only 7% by 1985, the last year of my sample (U.S. House of Representatives, 1993). Thus, for the purposes of this analysis I will treat AFDC eligibility as being restricted to single mothers.

There is an enormous literature which has focused on the effects of cash welfare

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[5] The SSI program, which provides benefits to the poor disabled and elderly, is of roughly the same magnitude as the AFDC program. Additional cash welfare is provided by some state General Assistance programs. I will only focus on cash welfare through AFDC in this paper, although when I measure welfare income receipt in the PSID I will include all welfare income, since the distinction in the survey between AFDC and other welfare may not be a clear one.

[6] Alaska is an outlier in terms of positive benefit growth; for the next highest state, growth was 258% (ME). Even using this figure, the disparity in benefit growth is substantial, with a 10-fold difference in growth rates across states.

on behavior; see Moffitt (1992) for a comprehensive review. There are two common features to almost all previous research in this area. First, the identification strategy generally relies on variation in the generosity of cash welfare across states and time. Second, in almost every case the focus of the research has been on the disincentive effects of AFDC. All of the articles reviewed by Moffitt focus on the potentially deleterious effects of the AFDC program for labor supply, marital status, childbearing, long term welfare dependence, or migration. But there is little work on the benefits of the program for the targeted group, single mothers.

There is a large body of older research which attempts to assess the adequacy of AFDC, in terms of raising recipients out of poverty; see Danziger et al. (1981) for a review. But, as Danziger et al. emphasize, this literature has all been static; that is, none of these studies have allowed for any offsetting income flows in response to increases in AFDC generosity. To the extent that any offsetting behavioral responses to the program exist, these calculations overstate the effects of AFDC on the standard of living of single mothers. But there has been little attempt to incorporate these responses in measuring the extent to which increases in AFDC generosity translate to an improved standard of living.

In theory, the adequacy of AFDC could be assessed by using evidence from these previous studies on how other sources of support for single mothers are reduced, or crowded out, when welfare becomes more generous. But the list of potential sources of support is a very long one, and there is only evidence on some of these margins. For example, there is some evidence that changes in the AFDC guarantee reduce labor supply (Danziger et al., 1981), although the results are mixed once state effects are included in the model (Moffitt, 1986). But the evidence on the crowdout effect on transfers from others is mixed,[7] and there is no work on the response of savings behavior.[8]

In addition, there is substantial anecdotal and personal interview evidence that AFDC recipients are maintaining their living standards by relying on legal and illegal income sources that are not reported to the AFDC caseworker and are presumably not reported to the (PSID or other) survey interviewer either (Edin, 1995). But no previous research has assessed how these unreported sources of income respond to AFDC generosity changes, and it is difficult to imagine doing so giving the inherent data problems. Finally, there is no work on how these different margins interact; the response of private transfers to AFDC generosity may be a function of how labor supply responds, for example. Thus, an alternative approach must be used to answer this question. The approach proposed in this

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[7]Rosenzweig and Wolpin (1994) find only a small crowdout effect of AFDC on parental contributions to young women. Cox and Jacubson (1995) find a crowdout of the probability of receiving support, but not the amount of support. Scheoni (1994) finds a larger crowdout for blacks.

[8]Powers (1996) does find that asset limits under the AFDC program appear to affect asset accumulation levels, but she does not explore the role of benefits.

paper is to directly examine how AFDC generosity differences are translated into changes in the standard of living for women who transition to single motherhood.

2.2. A model

In order to lay out the nature of the expected relationship between AFDC and consumption changes, it is useful to write down a simple model of the consumption implications of divorce for a single mother and children. The unit of observation, which I label the ''welfare unit'', is a woman and her (one or more) children. In the first period of the model, the welfare unit has earned income of y available with which to finance the consumption of the women and her children.[9] The woman can also set aside some of this income, s, for savings. She faces a risk of $(1 - \alpha)$ of becoming divorced between periods 1 and 2; this is assumed to be exogenous, a point to which I return in the empirical work.[10]

If she becomes a single mother, the net income of the welfare unit falls to ky, where $0 < k < 1$, under the assumption that the husband was a net contributor to the resources of his wife and children. On the other hand, in this case the woman has three additional resources with which to finance consumption: her own savings (s), AFDC payments (A), or transfers from others (t). Transfers from others are gifts, which, according to the altruism motive (Cox, 1987), are modeled as a function of her net income in the single mother state:[11]

$$t = f(ky + A) \tag{1}$$

Following the details of the current AFDC program, benefits are the maximum AFDC payment ($\underline{A}$) minus a 100% tax rate on other income. However, I assume that transfers from others are not reported to the AFDC authorities; nor do the authorities measure the ''savings'' that the woman has available.[12] Thus, AFDC benefits are:

$$A = \underline{A} - ky \tag{2}$$

If she doesn't become a single mother, the woman consumes her savings, but receives no AFDC or transfers from others. Thus, the woman maximizes the two period utility function:

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[9]The amount y can be viewed as the outcome of a within-family bargaining process which yields some division of consumption between the welfare unit and other household members.

[10]Note that the model could be extended to allow for the case where the divorce probability, α, is itself a function of income. This would not change the basic results, so long as the probability of divorce was not a function of AFDC benefits, a contention which is empirically supported below.

[11]Transfers from others could also be alimony payments or child support, which will similarly vary with income in the single mother state.

[12]This is consistent with the evidence in Edin (1995). Making transfers or savings ''taxable'' by the AFDC system would not qualitatively change the conclusions of the model.

$$U = U[y - s]$$
$$+ 1/(1 + \delta)*\{\alpha*U[y + s*(1 + r)] + (1 - \alpha)*U[ky + s*(1 + r) + A$$
$$+ t]\} \tag{3}$$

where δ is her discount rate and r is the rate of return on savings.

This model can be solved for the change in consumption upon single motherhood, as a function of the AFDC guarantee $\underline{A}$. To provide illustrative results, I solve the case where $\delta = r = 0$, where utility is of the log form, and where previous income is normalized to one. The results of this exercise are depicted in Fig. 1. The AFDC maximum payment is displayed along the x axis, and the change in consumption is measured on the y axis. I consider the case where $\alpha = 0.95$ (5% chance of becoming a single mother), and $k = 0$ (no earned income for the welfare unit after the divorce), for four different scenarios: no transfers or savings; savings, but no transfers; savings, and transfers which offset one-half of net AFDC payments; savings, and transfers which exactly offset AFDC payments.

In the first case, with no savings and no transfers, there is a one-for-one consumption smoothing role of AFDC; that is, since there is no source of private insurance, each dollar of public insurance is translated directly to consumption. In each of the other cases, however, the consumption smoothing effect of AFDC is smaller. Introducing savings, but excluding transfers, mitigates the consumption smoothing role of AFDC substantially for low AFDC benefits, but less so for more
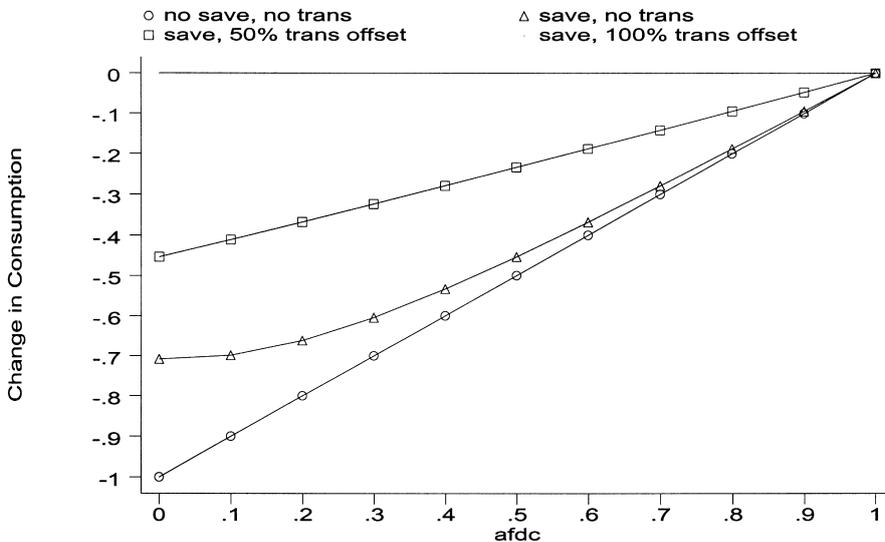

Fig. 1. Consumption smoothing effects of AFDC.

generous AFDC payment levels. This is because of the concavity of the utility function, which causes the mother to reduce her first period consumption more (through savings) when second period consumption has the possibility of being quite low.[13]

Introducing transfers further increases the crowd out of AFDC (and of savings). By providing a state contingent income stream, transfers mitigate the need for public insurance through AFDC or other private insurance through savings. In the limit, with fully offsetting transfers, there is no consumption smoothing effect of AFDC; the program fully crowds out transfers, with no effect on consumption.

Thus, only in the limiting case of no savings and no transfers from others will increases in AFDC benefits be directly translated to consumption; in other cases, some of the benefit increase will crowd out private insurance mechanisms. The ultimate extent of consumption smoothing is therefore an empirical question. This model suggests the empirical formulation of that question as a regression of the change in consumption upon single motherhood on the amount of AFDC benefits available; this is the approach that I pursue below.

To summarize, the effect of AFDC on consumption is the complement of the crowdout question that has been the subject of some previous literature. A finding that AFDC benefits translate dollar for dollar into consumption changes implies that AFDC payments are uncorrelated with changes in savings, transfers, or other earnings. Thus, the empirical work below provides a means of addressing the crowdout question in a comprehensive manner, absent data on some of the flows that might be crowded out by AFDC payments.[14]

2.3. Related work

There are two previous papers that directly assess the welfare gains from increases in AFDC generosity. Currie and Cole (1993) examine the effect of changes in AFDC generosity on the health of infants born to AFDC recipients; they find no correlation between AFDC payment levels and infant health. A

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[13]The extent to which this savings mechanism will be used will also be a function of α, the expected risk of divorce. Self-insurance through savings is a more perfect consumption smoothing device the higher is the risk of the adverse event, so that for women who anticipate divorce to be quite likely there may be more of an offset of savings by AFDC.

[14]That is, the change in consumption is simply the sum of the changes in (dis)savings, earnings, transfers, and AFDC payments. When these other components are excluded from a regression of change in consumption on AFDC benefits, the coefficient on AFDC benefits will capture its true effect, plus the true impact of the other (excluded) changes in resources, times the covariance between the excluded and included variables. Thus, a dollar for dollar effect of AFDC benefits implies that the covariances are zero. It is important to emphasize, however, that an estimate of full consumption smoothing implies that there is no net crowding out of all sources of support, not that there is no crowdout of any individual source. In fact, there may be substitution of some forms of support for others as AFDC rises, with no effect on consumption. Within this model, for example, this is illustrated by the crowdout of savings by private transfers, with total resources held constant.

previous attempt to measure the consumption effects of AFDC is Pollack (1994). He also uses the PSID data to model the consumption of AFDC recipients as a function of state/year AFDC generosity, for the 1981–1987 period. He finds that a 10% increase in program generosity raises the food consumption of AFDC recipients by roughly 7%. This paper follows essentially the same approach employed below, but it suffers from two limitations which I attempt to improve upon in my analysis. First, while empirical estimates of most behavioral effects of AFDC are in general inconclusive, the one response which has been documented most clearly is that AFDC participation does respond to AFDC generosity (see the evidence reviewed in Moffitt, 1992; also Moffitt, 1986). This leads to a potential sample selection bias in the estimates, if the women who select into this sample as AFDC becomes more generous have differential consumption patterns. Second, AFDC benefit changes are potentially correlated with state-level changes in the cost of living over time, and thus with consumption expenditures, leading to an upward bias to these estimates. I address both of these concerns below.

3. Data

The primary data set for this analysis is the PSID. This longitudinal survey has been carried out continuously since 1968, following the same sample of families and their ''split-offs'' over time. The original sample consisted of a nationally representative cross-section and a sub-sample of families in poverty; in the analysis below I use both samples in order to increase the precision of the estimates.

The PSID is the only multi-year longitudinal data set available with information on consumption behavior for the population of married and divorced women. Each year, respondents are asked how much their family ''usually'' spends on food at home and food away from home, as well as the amount of food paid for by food stamps. They are also asked about expenditures on rent and mortgage payments.[15] I deflate each component of consumption by the CPI for that component in the month of the interview, and then sum the real components (including food stamps). I also exclude observations where any element of consumption is imputed, rather than reported directly by the respondent. It is unfortunate that broader consumption aggregates are not available in the PSID, forcing me to limit myself to food and housing expenditures. These are, however, the types of necessary expenditures that are of most interest for those concerned about the well-being of single mothers and their families.

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[15]Food consumption data are missing for 1973; mortgage payment data are missing for 1973–1975. But I am able to use some data for 1974 and 1975 by noting that mortgage payments are zero for renters. The PSID also gathers information on expenditures on utilities, but these data are missing for several additional years so I did not use them in the analysis.

Lino (1994) uses data from the Consumer Expenditure Survey to study the consumption patterns of divorced women; he reports that food and housing make up 51% of the consumption bundle. This average share of consumption provides a benchmark against which the empirical estimates can be compared. That is, if the Engel curves for food and housing are locally linear, then dollar for dollar consumption smoothing would be represented by a finding that each dollar of AFDC benefits increased spending on food and housing consumption by 51 cents. In fact, Hausman et al. (1988) estimate non-linear Engel curves for food expenditures, and find that the expenditure elasticity of food only declines slightly from the 25th to the 75th percentiles of the expenditure distribution. This suggests that within the narrow range of income represented by variations in AFDC benefits, local linearity may be a reasonable assumption, so that the 51 cent benchmark is relevant.

There are four potentially important data issues with using the PSID sample. The first is timing. The rent and mortgage questions clearly refer to the point of the PSID interview. Although the frame of reference for the food consumption measures is not entirely clear, Zeldes (1989) convincingly argues that it refers to the point of the interview (rather than the previous year).[16] This timing matches the information on family structure, which is recorded at the point if the interview as well. However, it does not match the information on welfare receipt, which is from the previous calendar year. This will introduce measurement error in a regression of consumption on welfare income, a problem to which I return below.

Second, an important limitation of the PSID for this type of analysis is the difficulty in identifying relationships among sample members. It is difficult in many cases to identify the parents of children in a given household, as well as to identify the marital relationships between coresiding adults. I therefore follow Moffitt and Rendall (1993) in using the PSID Relationship and Marital History files to carefully document transitions between marital states, as well as the number of co-residing (own) children.

Third, consumption in the PSID is measured at the family level, and the event of interest for this study by necessity changes the composition of the family, thereby changing underlying consumption needs. That is, women who become single mothers may see a change in their measured family consumption even if their per capita living standards don't change.

Ideally, this problem would be surmounted by measuring the consumption of the welfare unit only, but these data are not available in the PSID. I therefore use as my sample women who divorce and become the heads of independent family

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[16]One exception is food expenditures paid for using food stamps. Before 1977, this is measured using average food stamp expenditure last year; from 1977 onwards, food stamp expenditure in the month of the survey is used.

units.[17] This population all has a similar shock: they are losing the consumption of a husband. Thus, by restricting to this sample, the constant picks up the effect of composition change, and the AFDC coefficient picks up the consumption smoothing for the mother and her children. In practice, in some cases the size of the family unit does change by more than the loss of the husband, for example because some older children leave the family. I therefore also include controls for the change in family size in the regression specification.

Fourth, I interpret increases in spending on food and housing as increases in personal welfare. For food, this is true through revealed preference, so long as society values the tastes of these women. If society has some other preference function, such as calories consumed, then spending may not be the relevant metric; I return to this issue below by examining separately food consumed at home and away from home. For housing, the translation of spending to welfare is more difficult, since in arrangements where spending on housing is shared (i.e., living with one's parents) the woman's own spending may understate her consumption value of housing. If, for example, higher AFDC benefits lead more divorced women to establish independent residences rather than live with their parents, the resulting increase in housing expenditures may overstate the rise in housing services. I return to this issue below by excluding those with zero housing expenditures from my sample.

The sample consists of all 14–64 year old women who are married with children at interview t, are unmarried with children at interview $t+1$, and are identified as a family head at interview $t+1$.[18] I do not consider in the analysis the other major route to AFDC participation, unmarried childbearing, since most of the women who move to AFDC in this fashion do not live independently. As a result, it proved to be difficult to measure accurately their welfare income receipt and consumption response to AFDC. An important consideration in selecting my sample, of course, is that becoming a single mother through divorce may be a function of the generosity of the welfare system. If the types of women who get divorced as benefits rise have disproportionately high consumption, it could bias towards a spurious consumption smoothing finding. The extent to which this bias exists is a direct function of the effect of welfare generosity on single motherhood. Evidence on this front is mixed, as reviewed by Moffitt (1992). Early studies found no effect of AFDC on the likelihood of being married, while more recent

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[17]In practice, only 1% of divorced women in the PSID do not become family heads; including them in the sample has little effect on the results. The women in my sample are not necessarily <u>household</u> heads; they may head subfamilies within other households. But they are the heads of the unit for which consumption is measured, so that consumption is measured for the welfare unit only in period t.

[18]I will refer interchangeably to marital dissolution and divorce. There may be some dissolutions in my sample which are due to the death of the husband, but I do not distinguish these from other types. In my age range there should be relatively few dissolutions due to death.

cross-sectional analyses have begun to find some effects (Moffitt, 1990). But once state fixed effects are included in these models, as they are in the regressions below, any effects of welfare on single motherhood disappear (Moffitt, 1994; Hoynes, 1995). This suggests that there is no potential for sample selection bias in this sample of single mothers. I explicitly test for sample selection below.

4. Empirical strategy

The model described above suggests that the effect of AFDC benefits on consumption be tested by estimating a model of the form:

$$DC_{ijt} = \alpha + \beta_1 BEN_{ijt} + \beta_2 X_{ijt} + \beta_3 Z_{jt} + \beta_4 \delta_j + \beta_5 \tau_t + \epsilon_{ijt} \tag{4}$$

where DC_{ijt} is the real change in consumption for family i in state j in year t; BEN_{ij} is AFDC benefits received; X_{ijt} is a set of family-specific control variables; Z_{jt} is a set of state/year-specific control variables; δ_j is a full set of fixed state effects; τ_t is a full set of fixed time effects.

In this specification, I model the effect of AFDC benefits receipt on the consumption change of women who become single mothers (between periods $t-1$ and t) and their families. Despite my use of consumption changes, I use the level of AFDC benefits as the key regressor. This is because for this population, their AFDC benefits are zero by definition in period $t-1$. So using levels is the same as using changes here, since the lagged level of benefits is zero.

The regression also controls for a set of individual demographic characteristics: race, age, and education. I also include dummies for the size of the AFDC family unit and the total PSID family size in the regression, to ensure that there is not spurious identification from the fact that larger families are eligible for a larger AFDC benefit.[19] In particular, I include a set of dummies for number of children under age 6 as well, in order to control for the labor market potential of the mother. Similarly, I include dummies for the change in family size, to control for the fact that a husband is leaving and the number of children may change, thus the total consumption needs of the PSID family may change.[20] I also include the change in the family's "food needs", which is a variable constructed by the PSID

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[19]These two concepts differ only in cases where there are older co-residing children or other adults who aren't in the welfare unit.

[20]That is, I include dummies for each of the following categories: no change in family size; an increase of one person, two persons, three persons, or four or more persons; and a decrease of one person, two persons, three persons, or four or more persons.

to reflect the caloric needs of the family, reflecting not only family size but the age of family members as well.[21]

I also include a number of controls designed to address a potential weakness with identifying the model from AFDC benefits differences: AFDC benefits may be set as a function of the cost of living in the state, which is also correlated with consumption expenditures. First, I include fixed effects for every state, in order to control for average differences in the cost of living. Second, I include the state/year unemployment rate, to absorb any correlation between AFDC benefits in a particular state and year and the nature of consumption opportunities in that state and year. Third, I include a state-specific index of house prices that is constructed from the Freddie Mac repeat-sale price index for the 1975–1985 period, and is extrapolated back to 1968 using a national housing price index. While this control captures only housing prices, and not food prices, and while it is imperfect before 1975, it should capture rough trends in prices over time that may confound the results.[22] Finally, in the specification checks section below, I directly test for the presence of an omitted correlation between AFDC benefits and price changes, by modeling the consumption of a ''control'' group that is ineligible for AFDC (women who remain married) as a function of AFDC benefits.

Of course, a major concern with an equation such as Eq. (4) is that takeup of welfare is endogenous, leading to a potential sample selection bias to the estimates. Furthermore, there is considerable measurement error in information on AFDC benefits received, both due to the usual reporting problems and the fact that in the PSID the timing of the consumption data is different than the timing of the welfare receipt data.

There is a natural instrumental variable for benefits received, however: the maximum benefit amount. The maximum benefit entitlement is clearly correlated with benefits received, and the working hypothesis of this paper is that maximum benefits is uncorrelated with consumption changes other than through the effects of the welfare system. Thus, by instrumenting welfare received by maximum benefits, I solve the problems with reduced form estimation of the second stage equation.

An important limitation of the 2SLS estimate τ_1, however, is that it might overstate the effect of AFDC on consumption. This is because there may be some

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[21]Note that I do not include controls for changes in other family resources, besides AFDC; by the crowdout argument detailed earlier, these are endogenous to the generosity of AFDC. In a specification check below, I do include lagged values of family resources as controls to capture any heterogeneity in ex-ante circumstances correlated with AFDC benefits.

[22]This index holds housing quality constant by using only repeat sales of the same housing units. I am grateful to Todd Sinai for providing me with these data. Unfortunately, there is no comparable state-specific price index for food.

"option value" of the program even for those single heads that don't take up benefits. Suppose that there is some fixed cost to taking up AFDC benefits; a clear example here would be stigma associated with receipt of cash welfare (Moffitt, 1983). This is consistent with there being less than full takeup among those eligible for the program. Consider a new single mother who would prefer not to take up stigmatizing welfare, but who is unsure of her prospects for finding other sources of income. She may delay takeup while she sorts out her financial situation. But in the meantime she will account for the presence of insurance through AFDC in her consumption choices; that is, she will consume more today than she would if this contingent option were not available, since she knows that she can go on the AFDC program if necessary. In this case, β_1 will reflect the effect of benefits variation on both recipients and non-recipients, leading to a likely upward bias to the estimated effect of AFDC receipt. The sign and magnitude of this bias are explored further in an Appendix that is available on request from the author. In practice, the bias does not appear to be very important for my case; for an option value of 10%, for example (so that a dollar of AFDC eligibility per se is worth 10 cents to non-recipients), the upward bias to my estimate is only 7.5%. But, absent independent information on the extent of option value, I cannot rule out that there is a sizeable upward bias.

In theory, this problem could be surmounted if there was a second instrument which could be used to model selection into takeup of AFDC, but I was unable to find such an instrument. It is worth noting that this is a general problem with the literature on AFDC and other social insurance programs; analysts either estimate the reduced form or 2SLS coefficients, but are unable to measure precisely the option value of these programs for those who do not take them up.

As a result, I also pursue a second estimation strategy: estimating reduced form models of the effect of benefits entitlement on consumption changes. That is, I estimate models of the form:

$$\text{WELF}_{ijt} = \sigma + \delta_1 \text{MAX}_{ijt} + \delta_2 X_{ijt} + \delta_3 Z_{jt} + \delta_4 \delta_j + \delta_5 \tau_t + \epsilon_{ijt} \tag{5}$$

where MAX is the benefits maximum available to a woman of that family size, state, and year. This reduced form model shows the effect of legislated benefits levels on consumption, irrespective of takeup. This coefficient will be smaller than the coefficient estimated by 2SLS estimation of Eq. (4), for two reasons. First, there is much less than full takeup of AFDC benefits; Blank and Ruggles (1993) estimate that takeup is only about 2/3. Second, not all single heads are eligible for the maximum benefit level; in particular, there is a tax rate on income after some deductions that has varied from 66% to 100% over the sample period.[23] As a result, the reduced form coefficient provides a lower bound on the effect of AFDC

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[23]Despite these considerations, it is actually possible for the reduced form coefficient to be larger, if the option value of receipt is very large and there is a large marginal takeup response to benefits changes; this point is discussed further in the option value appendix that is available upon request.

benefits on consumption that does not suffer from bias due to option value of benefits among non-recipients.

Both the reduced form parameter from Eq. (5) (δ_1) and the 2SLS parameter from Eq. (4) (β_1) are of interest. The former is most directly policy relevant; government policy-makers cannot directly control AFDC receipt, but they can control the level of potential benefits. So δ_1 measures the relationship of direct policy interest, which is the effect of raising welfare generosity on consumption of the potentially eligible population. The latter allows one to assess how consumption responds directly to income received. That is, if we are to understand the extent to which other sources of support are crowded out by AFDC, we need to model how much consumption rises for each dollar of AFDC received.

As a result, my empirical strategy below will be to first estimate reduced form models, to document that there is a robust relationship between AFDC benefits entitlements and consumption changes. I will then focus on the 2SLS estimates for interpretation of consumption effects, and the discussion of crowdout of benefits changes.

There are two additional potential concerns with either empirical formulation. First, if women anticipate single motherhood in period $t-1$ and depress their consumption accordingly (for example to increase savings), it might lead to a downward bias to the measured consumption smoothing effect from using one period changes. In fact, if I use the two period change in consumption as my dependent variable (from period $t-2$ to period t), the estimate is very similar, although the standard errors are 50% larger.

On the other hand, if women are drawing down their assets to qualify for the AFDC financial asset limit (varying before 1981, and $1000 after that); this might lead to an excessive increase in consumption among those signing up for the program, relative to the steady state impact on well-being. In practice, however, this is unlikely to be an important consideration, since most of the sample had very low assets before their divorce. The PSID compiled a wealth inventory for sample families in 1984, allowing me to measure the ex-ante wealth holdings of those women becoming divorced in 1985. These holdings are very small; the median family in this sample has no gross financial assets, and only about 12% of the sample has more than the $1000 asset limit. Thus, even if women retain all of the families financial assets after divorce, they are unlikely to have to spend down very much in order to meet the asset test.

4.1. Means

The means of the PSID data are presented in Table 1. The first number in each cell is the mean change, and the second number is the standard deviation; the number in curly brackets is the lagged mean value. All dollar figures are in real 1984 dollars. I show the means for the sample of interest, women who become divorced, as well as for the control group of women who remain married.

Table 1
Means of the PSID data[a]

Variable	Divorced women	Married women
Change in food and	−242	105
housing expenditures	[2469]	[2553]
	{5616}	{7235}
Change in food	−308	33
expenditures	[1810]	[1850]
	{3519}	{4543}
Change in housing	66	72
expenditures	[1536]	[1690]
	{2097}	{2692}
Move residence	0.468	0.250
AFDC maximum payment	4529	6540
	[2528]	[2539]
White	0.386	0.551
Black	0.450	0.306
Age	32.1	33.1
	[8.99]	[8.99]
HS dropout	0.385	0.324
HS grad	0.248	0.234
Some college	0.308	0.302
College grad	0.060	0.141
AFDC unit size	3.40	4.28
	[1.50]	[1.43]
Welfare received	1330	248
	[2548]	[1222]
Unemployment rate	0.073	0.069
	[0.020]	[0.020]
Change in non-welfare family	−6329	784
Income	[10750]	[11158]
	{17492}	{26711}
Number of obs	585	21725

[a] Notes: SD in square brackets; lagged values in curly brackets. Values in 1984 dollars. Sample in first column is all women in 1968–1985 PSID who get divorced; sample in second column is women who remain married. AFDC maximum payment is maximum welfare entitlement of woman; welfare received is actual amount received. Unemployment rate is state/year rate, matched onto PSID.

Combining food and housing expenditures, there is a reduction of $242 when the woman becomes a single mother. This is only 4.3% of the baseline value of consumption of these goods.[24] For food, the drop is a larger 8.8% fall. But housing expenditures actually rise somewhat, reflecting the fact that some women are moving to new residences; the rate of moving is roughly twice as high in the sample of women who become divorced than it is for women who remain married.

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[24]Of course, this figure is not corrected for family size and is therefore somewhat misleading, since family composition is changing for the single mothers. This is controlled for in the regressions below.

For women who remain married, there are small increases in consumption in each of these categories.

These consumption changes for divorced women are very variable. Of course, given the importance of this precipitating event, it is not surprising to see large consumption movements. At the same time, however, it is likely that there is considerable noise in the consumption data, so that some of these large changes may be mismeasured. I therefore censor the largest positive and negative 1% of consumption changes at the values of the 99th and 1st percentiles of the consumption change distribution, respectively.[25]

The means of the remaining PSID covariates are presented in Table 1 as well. Women who become divorced heads are disproportionately minorities, and they are in families whose heads have low educational attainment. These facts partially reflect the oversampling of disadvantaged households in the PSID; even the control group of women who remain married is over 30% black.[26]

5. Results

5.1. Basic results

Table 2 reports the basic reduced form regression results. I present results for food and housing expenditures combined, and then for the two categories separately.

For total food and housing expenditure, there is a sizeable and significant positive coefficient on maximum AFDC payments. For every dollar in potential benefits, the consumption fall associated with single motherhood is mitigated by 28 cents. This implies that at the mean potential benefits for the sample, consumption among this population is increased by $1282, relative to the absence of cash welfare benefits.

This result is reflected in the next to last row, which shows the implied fall in consumption upon divorce for women whose (real) benefits are at the 10th percentile for this sample ($1783). These women see a consumption fall of $1012, which is over four times as the average consumption fall given our current system (from Table 1). This represents 18% of baseline consumption for this population. Thus, at very low (but empirically relevant for this sample) AFDC benefit levels,

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[25]As argued by Murphy (1996), this is preferable to simply throwing out these observations, to the extent that they contain some information about the fact that there is a sizeable consumption change for the family. If these observations are included but not censored, the base case estimated effects of AFDC on consumption are roughly 10% larger than those reported below; if they are excluded altogether, the estimated effects are roughly 10% smaller.

[26]When the sample weights are used to account for this, the key variables (consumption and AFDC benefits entitlement) are not much changed, but the sample appears much less disadvantaged along observable dimensions.

Table 2
Basic regression results[a]

	Food + Housing	Food	Housing
AFDC Maximum	0.283	0.189	0.097
	(0.110)	(0.082)	(0.070)
White	54	−73	179
	(474)	(354)	(302)
Black	525	206	383
	(470)	(351)	(300)
Age	8.19	11.9	−5.88
	(13.7)	(10.2)	(8.72)
HS dropout	752	457	304
	(418)	(312)	(267)
HS grad	674	519	120
	(423)	(316)	(270)
Some college	512	304	249
	(417)	(311)	(266)
Change in family	0.471	0.403	0.021
Food needs	(0.118)	(0.088)	(0.075)
Unemployment	−14967	−11253	−4338
Rate	(9025)	(6741)	(5758)
State/year house	40.8	14.91	20.6
Price index	(18.3)	(13.66)	(11.7)
Consumption change at 10th percentile benefits	−1012	−825	−190
Two-Stage Least Squares Estimate			
Benefits Received	0.514	0.343	0.177
	(0.220)	(0.162)	(0.131)

[a] Notes: SE in parentheses. All regressions have 585 observations. Top panel estimates models of the form of Eq. (5) where the regression controls for all variables shown, as well as fixed effects for AFDC unit size, family size, change in family size, state and year. 2SLS estimate is from separate estimation of Eq. (4).

single motherhood would be associated with a quite large fall in the consumption of necessities such as food and housing.

The remaining coefficients in the regression are generally insignificant. There is a strong positive association with the change in food needs, and with the state/year house price index. In addition, the coefficient on the unemployment rate suggests that a 1% rise in unemployment in a state/year increases the consumption fall for divorced women by $150, which is sizeable relative to the average fall of $242.

Dividing the dependent variable into food and housing expenditures, we see that AFDC has a positive effect in each case; the food coefficient is marginally significant, while the housing coefficient is insignificant. The results imply that at the 10th percentile of AFDC benefits food consumption would fall by roughly 23% of its baseline value when women became single mothers, while housing expenditure would fall by only 9%. Although the estimates are not statistically

significantly different from each other, it is interesting that the effect on food is much larger than the effect on housing. This suggests that the high rate of moving among divorced mothers and the quality of residence that is chosen is largely determined without reference to the generosity of welfare.[27]

The second panel of the Table presents the 2SLS estimates of the effect of a dollar of benefits receipt on consumption; recall that this is an upper bound estimate of the extent to which a dollar of benefits received is translated to consumption spending. This upper bound estimate is 51 cents for total consumption. Comparing this to an average food and housing share of 51% for divorced women, one cannot reject the hypothesis that each dollar of AFDC received is translated to a dollar of increased food and housing expenditure. Of this 51 cents, roughly 34 cents comes from increased spending on food and 17 cents from increased spending on housing.[28]

Thus, the basic results indicate that AFDC is playing a very important consumption smoothing role for those becoming single mothers. Moreover, the results suggest that there is not an important crowdout effect of AFDC on other sources of support. Of course, to the extent that there is an option value of the program for non-recipients, this is an upper bound estimate, so that if the option value is large there may be some crowdout. Also, given the fact that we only have data on only 50% of the consumption bundle for these women, we cannot precisely infer crowdout here. Nevertheless, the results are suggestive of a small degree of crowdout.

5.2. Other transfer programs

One potential problem with the empirical work thus far is that I have used as my key regressor cash welfare benefits only. In fact, single mothers are also eligible for other government assistance as well. One example is food stamps. The exclusion of the value of food stamps leads to a downward bias to my consumption smoothing estimates, since benefits are conditioned on income, including AFDC. This means that there is an automatic crowdout of food stamps by increases in AFDC, so that when food stamps are accounted for the estimate of consumption smoothing will rise even further.

Unfortunately, it is difficult to appropriately account for the effects of in-kind programs, since to combine their influence with that of AFDC would require a cash equivalent of their value. For the case of food stamps, however, a number of studies suggest that they are roughly equivalent to cash transfers of the same value

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[27]Indeed, while the rate of moving of divorced women is quite high (as shown in Table 1), there is not a significant relationship between the odds of moving and AFDC benefits.

[28]Note that the implied elasticity of food consumption with respect to benefits at the means, 0.44, is significantly smaller than the elasticity of 0.7 estimated by Pollack (1994), suggesting some upward bias to his estimates from the sources described earlier.

(i.e., Moffitt, 1989), so that many previous papers on the behavioral effects of the welfare system simply combine food stamp and AFDC entitlements to get the overall effect of both programs.[29]

I do the same in the first panel of Table 3, taking account of the fact that food stamp benefits are reduced by a fraction of AFDC benefits, after some

Table 3
Specification checks[a]

	Food & housing	Food	Housing
Combined maximum			
Combined maximum	0.417	0.270	0.150
	(0.159)	(0.119)	(0.102)
Consumption change at 10th percentile benefits	−1286	−987	−300
2SLS coefficient	0.568	0.368	0.204
	(0.242)	(0.178)	(0.144)
Including lagged characteristics			
AFDC maximum	0.259	0.168	0.094
	(0.110)	(0.082)	(0.071)
Implied consumption change at 0 benefits	−945	−766	−179
2SLS estimate	0.537	0.348	0.194
	(0.252)	(0.185)	(0.151)
Control group regression			
AFDC maximum	0.038	0.018	0.021
	(0.016)	(0.012)	(0.010)
Implied consumption change at 0 benefits	−14.9	−22.3	4.6
Selection probit			
AFDC maximum	0.010		
	(0.021)		
Effect of $1000 AFDC benefit increase	0.00060		

[a] Notes: SE in parentheses. AFDC Maximum row reports coefficient on AFDC Maximum in regressions such as Eq. (5); regressions control for set of characteristics listed in Table 2 and the footnote to that table. Second row in each panel contains implied effects at 10th percentile of AFDC benefits distribution for this population. 2SLS estimate is from a separate estimation of Eq. (4) in the text. First panel combines AFDC and Food Stamps benefits; second panel includes lagged characteristics of household; third panel (21 725 obs) estimates model for control sample of mothers who stay married; final panel (21 847 obs) estimates probit model for becoming divorced, relative to staying married, on the set of characteristics included in Eq. (4). Effect of $1000 AFDC Benefit Increase in final panel is change in implied marginal probability from raising AFDC benefits by $1000, averaged across the relevant sample.

[29]Fraker et al. (1995) review a number of studies which suggest that food stamps may be worth somewhat less than a cash equivalent, but even in these cases the value is quite close (72–82 cents of cash for each dollar of food stamps).

deductions.[30] As expected, the estimated coefficients are somewhat larger when the combined maximum is used. The reduced form coefficient now implies a 42 cent increase in consumption for each dollar of AFDC benefits, and the 2SLS coefficient now exceeds 0.5.[31] The precision of the estimates has been reduced, however, so that one cannot reject that they are the same as those using the cash welfare maximum alone.

The other two major public assistance programs for single mothers are public housing and health insurance through the Medicaid program. Accounting for the effect of these benefits is much harder, since there is little consensus on their cash-equivalent value.[32] A further difficulty with public housing, relative to food stamps, is that there is only a limited amount of housing assistance available, so that one must account for the probability that the family actually receives help. Given these problems, I do not attempt to account for these programs in the analysis.[33]

5.3. Specification checks

The empirical results presented in Table 2 are predicated on a key identification assumption: that the underlying consumption demand of women who become divorced in places with more or less generous AFDC benefits are the same. In this section, I provide a number of tests to assess the validity of this assumption.

One means of assessing the identification assumption is to control further for potential underlying differences in the population of divorced mothers. I do so in the second panel of Table 3 by including in the baseline specification a set of lagged (from period $t-1$) individual and family characteristics: family income, the

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[30]Specifically, food stamp benefits are reduced by 30 cents for each dollar of income above and beyond a standard deduction and deductions for shelter expenses and child care expenses.

[31]Note that for the 2SLS coefficient the independent variable in the second stage is welfare income received plus consumption paid for by food stamps. This leads to a larger first stage coefficient and as a result a smaller increase in the 2SLS coefficient relative to the reduced form.

[32]See, for example, Smeeding and Moon (1980), Wolfe and Moffitt (1991), and Manser (1992) for the case of Medicaid; and Olsen and Barton (1983), Reeder (1985), and Schwab (1985) for the case of public housing. One methodology used in some studies of Medicaid is to add average state/year Medicaid expenditures per recipient to the food stamp plus AFDC benefit to get a combined benefit total. But, given the uniformity of the Medicaid benefit structure across states, average state/year expenditures largely reflect differences in population characteristics and price differences, not insurance value.

[33]The bias from omitting these other programs is not obvious. Since public housing benefits also ''tax'' income received from AFDC, the argument above implies that I am understating the consumption effects of the welfare system. On the other hand, since I am unable to account for the value of public housing in my dependent variable, I may be overstating the effects of AFDC if it shifts individuals from public to private housing. For Medicaid, given uniformity of most features of the program, it is unlikely that there is a strong correlation between the AFDC maximum and the value of Medicaid benefits. The marginal effect of a change in the AFDC maximum on Medicaid is also quite small, since it only makes eligible for Medicaid those women who have income marginally above the existing AFDC needs standard.

earnings of family head, the earnings of the woman (who may in some cases have been labeled by the PSID the family head), and her hours of work. In fact, including these extra lagged controls has little effect on the results, which are quite similar to those in Table 2.[34]

An alternative reason why AFDC may be spuriously correlated with consumption changes is that I have not fully conditioned out the underlying correlation between AFDC benefits setting and changes in consumption opportunities. I can assess the validity of this criticism by rerunning the regression for a within-state control group: those who remain married from interview $t-1$ to t. For this population, there should be little direct effect of AFDC on consumption changes.[35] But if there is a spurious correlation between AFDC benefits setting and consumption opportunities, it should be reflected in the consumption of women who don't become single mothers as well.

In fact, as the next panel of Table 3 shows, there is only a very small positive effect of AFDC benefits on the consumption change of this population. Thus, there do not appear to be important omitted correlates of both AFDC benefits setting and changes in consumption opportunities.

Finally, one reason why the identifying assumption may be violated is sample section bias arising from women becoming divorced in response to changes in AFDC generosity. Sample selection bias to the estimates would require both that AFDC induce more women to become divorced, and that those women who are induced have different underlying consumption needs or tastes that are not captured by my set of controls. However, the first of these requirements is refuted by the previous literature on AFDC which finds that, once state effects are included in the regression, there is no effect of welfare on single motherhood (Hoynes, 1995; Moffitt, 1994).

To make this point more clearly for my sample, I re-estimate models of the effect of AFDC on the transition to divorce. That is, I estimate reduced form

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[34]In addition, one might expect a heterogeneous response to AFDC benefits among the population of divorced mothers, with those from more advantaged backgrounds seeing less of an impact (since they are more likely to have adequate incomes from child support, for example). I have tested this view by including in the model interactions of AFDC benefits with both lagged family income, and with mothers education (less than college vs. at least some college). In both cases, the interactions have their expected signs: those from higher income families before dissolution see a smaller effect of AFDC on consumption changes, and those who are less educated see a larger effect of AFDC. But in neither case is the interaction significant, reflecting a lack of precision from further subdividing this relatively small sample of divorced mothers.

[35]There may be effects through long run behavior of those women who perceive some risk of relying on AFDC. For example, as noted in the model above, these women may save less on their own if AFDC is more generous, leading to faster consumption growth rates for the family. There may also be effects on their labor supply and job choice. There also may be some effects because some of these women may have been single heads during the year, but remarried by the point of the period t interview. But all of these effects should be quite small for the average married couple, given the low odds that a given married woman will end up on AFDC. An alternative control group which would be more similar to the sample of interest is divorced women without children, but the sample of these women in the PSID is too small to provide useful estimates.

regressions of the form of Eq. (5), but where the dependent variable is now a dummy for becoming divorced, and the sample is both women who remain married and women whose marriages dissolve.[36]

The results of this probit regressions are shown in the final panel of Table 3. The coefficient on AFDC benefits is insignificant, both statistically and substantively. The last row of the Table shows the implied marginal probability impact of a \$1000 increase in AFDC benefits on the likelihood of being divorced. The implied effect of this large benefits increase, 0.06 percentage points, is less than 2.5% of the mean likelihood of having a transition. This finding supports the contention from other studies that AFDC is not an important determinant of single motherhood in models that include state fixed effects, and confirms the contention that sample selection is not driving my results.

5.4. Extensions

Table 4 extends the analysis in three ways. First, I address the concern that food expenditure does not proxy for the concept of interest for many observers, nutritional value. I do so by dividing the food consumption variable into food consumed at home and food consumed away from home. To the extent that AFDC generosity increases have their expenditure effects by simply inducing a shift from restaurant to home consumption, it suggests that expenditure changes may

Table 4
Extensions[a]

	Coefficient	Implied change at 0 benefits (or marg. prob.)
Food away from home	0.025 (0.027)	−105
Food at home	0.146 (0.071)	−663
Housing–excluding zero Housing expenditures	0.067 (0.060)	−135
Non-welfare income	0.361 (0.492)	−7417

[a] Notes: SE in parentheses. Coefficient is that on AFDC Maximum in regressions such as Eq. (5); regressions control for set of characteristics listed in Table 2 and the footnote to that table. Second column contains implied effects at 10th percentile of AFDC benefits distribution for this population. In first and second rows, dependent variable is change in expenditures on food away from home and change in expenditures on food at home, respectively. In third row, dependent variable is change in expenditures on housing, excluding observations with zero expenditures in either period $t-1$ or period t. In the final row, dependent variable is change in non-welfare family income.

[36]For these regressions, I exclude the controls for family size and food needs (but retain controls for size of the welfare unit), since these are clearly endogenous to whether the transition to single motherhood is made.

overstate changes in nutritional value. In this case, we would expect that increases in AFDC generosity are reflected mostly in food consumed away from home; in fact, it is possible that the coefficient on food at home could be negative. But we observe the reverse in Table 4: there is only a very small effect of AFDC on food away from home, and a large effect on food at home. While this doesn't allow one to definitively convert these estimates to nutritional values, it does reduce the concern over the result being driven by a shift in the site at which food is consumed.

Second, I address the bias to my results from using housing expenditures to proxy for housing services, thereby ignoring the value of free housing among those living with relatives (or in free public housing). I do so by excluding from the housing consumption regressions those observations with zero expenditure on housing in either period, so that I focus only on those who are paying for their housing, among whom expenditures should be more strongly correlated with housing services. In fact, as the next row of Table 4 illustrates, this does slightly lower the coefficient on AFDC benefits in the housing expenditure change regression (from a reduced form coefficient of 0.097 to a coefficient of 0.067). But the effect is very small relative to the overall consumption smoothing impact of AFDC.

Finally, I consider further the implication of my consumption estimates that there is no crowdout of other sources of support for women becoming divorced, by examining directly the response of other (reported) household income to AFDC benefits differences. As argued above, this is likely to be an inferior means of inferring crowdout, due to the fact that transfers from a variety of sources may not be reported as income to the PSID interviewer. Nevertheless, if there were a large estimated offset of non-welfare income, it would bring into question the validity of the findings above.

The key variable for this analysis is the total money income of the family, net of welfare income received. As Table 1 shows, there is a large fall in non-welfare income when women become divorced, which is consistent with the theoretical formulation above. However, as the final row of Table 4 shows, there is a positive association between total family non-welfare income and AFDC benefits, as opposed to the negative coefficient that would be predicted by the crowdout hypothesis. Unfortunately, this estimate is very imprecise; the estimated confidence interval does not rule out reasonably large negative effects. Nevertheless, taken together with the findings for consumption, this suggests that there is little crowdout of other sources of support when AFDC benefits rise.[37]

6. Conclusions

Recent legislative action has fundamentally restructured the AFDC program.

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[37]I have also attempted to estimate specifically the effect of AFDC on the labor supply of the divorced mothers in my sample, and I also find no statistically significant effect on either hours of work or labor force participation, although the effects are in the expected direction in this case.

Despite a lack of strong evidence of disincentive effects, the intuitive case that more generous AFDC should lead to lower levels of labor supply and family dissolution has provided the major impetus for this reform. But opponents of reform have pointed to the potential costs of program cutbacks in terms of the standard of living of recipients. The results in this paper suggest that these costs are likely to be quite large. My findings imply that for each dollar of reduced AFDC receipt, the consumption of food and housing of the average woman becoming a single mother through divorce will fall by 28 cents, with recipients of AFDC seeing their consumption of these goods fall by 51 cents, the share of food and housing in the consumption bundle. Clearly, consumption expenditures is only one proxy for well being, and there are other measures that should be considered in future work on this topic. But these best available proxies from the PSID suggest that reducing this safety net will lead to a serious reduction in the standard of living of women who become single mothers and their families.

An important caveat to this exercise, however, is that I have only considered variations within the existing structure of the cash welfare system. The kinds of radical reforms that are contemplated by recent legislative action, such as time limits on receipt or binding ''work for welfare'' requirements, could cause a shift in the nature of private insurance mechanisms which mitigates the consumption smoothing costs of reduced welfare generosity. As states experiment with such radical changes to their welfare systems, it would behoove administrators to collect information not only on labor supply and family structure, but also on measures of material well being which can be used to evaluate the impact of changing the structure of the welfare system on the standard of living of potential recipients.

Acknowledgements

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