Welfare generosity: the importance of administrative efficiency, community values, and genuine benevolence

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Abstract:
Using 1988-1991 state-level data, a public expenditure model is estimated for benefits paid through the Aid to Families with Dependent Children (AFDC) programme. The paper investigates whether differences in programme efficiency, community attitudes, perceptions of the effects of AFDC on recipient behaviour, and tastes for redistribution explain the variation in public support for welfare across states.

Article:

I. INTRODUCTION

Public disenchantment in the United States with federal antipoverty programmes seems widespread and enduring. Despite the enactment of comprehensive reform legislation in 1988 and deep social service reductions by individual states in the early 1990s,[1] the popularity of President Clinton's 1992 campaign pledge to `end welfare as we know it' and the 1994 midterm electoral victory by Republicans, who ran on a platform calling for substantial cuts in welfare spending, suggests that the public's dissatisfaction has only intensified. Attempting to explain this dissatisfaction, policy analysts cite the affordability of programmes, frustration over inefficient programme administration, conflicts between the values embodied in the programmes and those held by the community, and a sense of public fatigue from contributing funds year after year to a problem that only appears to get worse.

Economic research on the determinants of public welfare expenditures (e.g. Orr, 1976, 1979; Gramlich,1982; Hulten et al., 1982; Moffitt, 1984, 1990) has focused almost exclusively on the affordability of programmes, leaving political scientists to examine other issues, including bureaucratic efficiency (Woodson, 1987) and dissonant values (Murray, 1984; Mead, 1986; Ellwood, 1988). Moreover, aside from some descriptive analyses (e.g. Heclo, 1986), hypotheses regarding the public's underlying preferences for redistribution have received little attention.[2]

This paper empirically investigates all of these issues using a 1988-1991 panel of state-level data on expenditures to the Aid to Families with Dependent Children (AFDC) programme, the largest cash public assistance programme. Key variables in the analysis, such as the public's degree of benevolence and depth of values, are not directly observable. Consequently, the paper relies on several carefully constructed indirect indicators. For example, the paper uses data on contributions to international relief and development organizations (IRDOs) as a revealed preference measure of the underlying tastes for redistribution. To measure values in conflict with those believed to be encouraged by the welfare system, the paper uses regional aggreg-

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[1] Between 1991 and 1992, five states cut nominal welfare benefits and thirty-two kept benefits fixed in nominal terms. See the Green Book (Committee on Ways and Means, 1992) and Shapiro et al. (1991) for summaries of recent changes.

[2] Exceptions are studies by Plotnick and Winters (1985), Plotnick (1986), Shroder (1992) and Ribar and Wilhelm (1994b) which incorporated some political and attitudinal controls. The present paper uses a much more detailed set of variables than these earlier studies.

ates from public opinion surveys. Finally, to measure administrative efficiency, the analysis includes the percentage of programme costs in each state devoted to administration.

Beyond these problems of measurement, the paper addresses two other important statistical issues. First, it uses instrumental variable methods to address endogeneity in the cost to the public of making AFDC benefits more generous. Endogeneity arises because the total cost of welfare is driven by the number of recipients, whose eligibility and participation decisions depend, in turn, on programme benefits. Second, as with the studies by Gramlich (1982), Gramlich and Laren (1984), Shroder (1992) and Ribar and Wilhelm (1994b), the paper uses fixed-effects techniques to control for potential biases associated with relevant but omitted time-invariant state-specific variables.

The econometric results are found to be very sensitive to the inclusion of fixed effects. Models which account for cost endogeneity but do not incorporate fixed effects provide strong support for economic and political hypotheses. Indeed, three variables — the state's income, its cost of increasing benefits and the percentage of its caseload that is black — account for nearly three-quarters of the variation in benefits across states and time. Other variables, including the paper's measures of benevolence, administrative efficiency and political attitudes, are also found to be significant with expected signs. A very different picture emerges, however, when fixed effects are added. The analysis reveals that simple cross-section variation accounts for almost all of the variation in the paper's four-year panel. After removal of this cross-section variation, benevolence, as captured by charitable contributions, is the only variable which remains statistically significant in most regressions.

The rest of the paper is organized as follows. Section II summarizes hypotheses offered to explain the public's frustration with welfare and reviews existing empirical evidence. The data and estimation strategy for the present study are introduced in Section III. Empirical results are reported and discussed in Section IV and conclusions are drawn in Section V.

II. PREVIOUS RESEARCH

Economic research on welfare generosity has typically proceeded from a public expenditure framework in which voters are assumed to have preferences over their own consumption and the well-being of people in poverty (e.g. Hochman and Rodgers, 1969). In determining individually optimal levels of consumption and public transfers, voters are constrained by their income and the effective price of transfers. Conditional on assumptions regarding how elections are decided, state welfare policy depends on the desired level of transfers of a single voter (if a median voter model is used) or weighted group of voters (if more elaborate political competition models are used). The expenditure model predicts that welfare benefits increase as the incomes of influential voters rise and the effective price of transfers falls. With few exceptions, empirical research has supported these predictions and found that welfare benefits are strongly positively related to income and weakly negatively related to price.[3]

Although evidence in favour of the expenditure model is strong, the two primary economic variables — income and price — together account for less than half of the variation in benefits. Accordingly, economists have extended the model in several directions. Orr (1979), Hulten et al. (1982), Moffitt (1990) and Ribar and Wilhelm (1994b) investigated the extent to which other forms of public support, such as Food Stamps and Medicaid, offset states' expenditures on AFDC. Gramlich and Laren (1984) and Shroder (1992) examined the effects of low-income migration on welfare generosity. Extensions by Plotnick and Winters (1985) and Plotnick (1986) incorporated controls for political competition and the strength of pro-welfare special interest groups; Shroder (1992) and Ribar and Wilhelm (1994b) also incorporated some political and attitudinal variables.[4]

Although economists have emphasized issues of affordability and political power, political scientists have offered hypotheses regarding the public's underlying attitudes and frustration with welfare. Political analysts

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[3] See Ribar and Wilhelm (1994b) for a detailed summary of the empirical economic research.

[4] Other related studies with political modelling include Craig and Inman (1986), Peterson and Rom (1989) and Tweedie (1991).

have attributed much of the pressure for reform to inadequacies in the welfare programmes and the political institutions which have constrained their evolution. For instance, Murray (1984), Mead (1986) and Ellwood (1988) emphasized the aspects of welfare that create incentives detrimental to economic self-sufficiency and traditional notions of the family.[5] Woodson (1987) argued that welfare has created an inefficient bureaucracy which inhibits beneficial reform.

Though it is central to the theories of both economists and political scientists, basic American benevolence has received little attention from researchers. This may stem from extreme assumptions that benevolence is either a uniformly strong motivation across Americans or an altogether weak and unimportant motivation.[6] Support for the first view comes from opinion polls such as the General Social Survey (GSS), which indicate that, although a large majority of the population believe that either the `right amount' or `too much' is spent on welfare, a nearly equal majority feel that `too little' is spent on assistance to the poor (Heclo, 1986). On the other hand, there is evidence that calls American generosity into question. Private contributions to social welfare organizations, totalling no more than 0.2% of GNP (Weber, 1991), do not reveal an exuberant preference for generosity. Also, compared to the United States, other industrialized countries have more extensive antipoverty programmes and achieve much lower post-transfer poverty rates (Smeeding, 1992).

Moreover, the view that Americans' benevolence and values are uniform does not withstand careful scrutiny. Responses to welfare-oriented questions in the GSS (National Opinion Research Center, 1992) show regional variation. The existence of geographical variation in private charitable contributions is also well known (see Wolpert, 1988; Ribar and Wilhelm, 1994a). Plotnick and Winters (1985) examined the relationship between charitable behavior and public welfare generosity using geographic variation in United Way contributions and itemized federal income tax deductions. Their results did not indicate that benevolence was an important determinant of welfare benefits.[7]

III. ESTIMATION METHODOLOGY AND DATA

The econometric model is a straightforward extension of the expenditure models examined in other studies. In particular, it specifies AFDC benefits in state i and year t, Bit, as an isoelastic function of income, Y_{it}, and the effective price of increasing benefits by one dollar, pit. Benefits are also assumed to depend on a vector of other observed attributes, Z_{it}, and an unobserved component, ε_{it}, such that

$$\ln B_{it} = \beta_Y \ln Y_{it} + \beta_P \ln p_{it} + Z_{it}\beta_Z + \varepsilon_{it} \qquad (1)$$

The vector Z_{it} includes measures of administrative efficiency, benevolence and values.

There are several potential difficulties in estimating Equation 1. First, it is unclear which specific variables should be used for B_{it}, Y_{it} and pit. For benefits, researchers have used a number of alternative measures, including average AFDC benefits per recipient and maximum benefits for a given size family.[8] The advantage of the former measure is that it summarizes information about relevant state policies and recipient characteristics into a single index; the disadvantage is that it is not a direct policy outcome. This paper uses average AFDC benefits per recipient as its primary measure of welfare generosity and examines maximum

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[5] Economic theory is clear about the existence of such disincentive effects. However, the empirical magnitude of these effects (and by presumption, their practical relevance for undermining political support for welfare) is an open question (see the reviews by Burtless, 1990; Moffitt, 1992).

[6] Ellwood (1988) provides an example of how analysts have treated this issue. Though he acknowledged that `stinginess surely plays a role in attitudes toward welfare', Ellwood went on to attribute public distaste for welfare primarily to its inconsistency with accepted values of work, individual responsibility and family.

[7] Plotnick and Winters acknowledged there were problems with their preference measures (e.g. the measures were negatively correlated). Their tax measure may have more closely proxied the income distribution than tastes for redistribution. Their contributions measure — gifts to United Way — may have been affected by crowd-out from local social service spending.

[8] Some researchers have also examined maximum combined AFDC, Food Stamp and Medicaid benefits.

benefits in some sensitivity analyses. The other two variables — Y_{it} and p_{it} — should correspond to the income and price for the influential voter or voters. Unfortunately, there is no simple way of identifying these individuals. Therefore, average total personal income in the state is used as an approximation for Y_{it}. Likewise for price it is assumed that the costs of the welfare programme are evenly distributed across residents. Thus, the price to a particular resident of increasing average welfare benefits by one dollar is $p_{it} = (1 - s_{it}) R_{it}/N_{it}$ where s_{it} is the subsidy rate from the federal government, R_{it} is the number of recipients and N_{it} is the state's population.[9]

Second, benevolence and values are not directly observable; hence, indirect measures must be constructed. As with Plotnick and Winters (1985), it is assumed that charitable contributions reveal a preference for giving. But their methodology is refined by using a measure of giving — aggregate data on contributions drawn directly from the computerized records of three large IRDOs — that is unlikely to be affected by crowd-out from local welfare expenditures.[10] Data on community attitudes and values come from two sources. An index of congressional voting records published by Americans for Democratic Action (1988—1991) serves as a proxy for liberal political attitudes. To measure other attitudes, responses to questions on moral values and welfare attitudes from the GSS have been aggregated by the nine census divisions.[11] Questions fielded in each of the years 1988—1991 regarding welfare spending, premarital sex and women's work roles provide region- and time-varying controls for community values.[12] Questions asked in 1983—1987 concerning perceptions of welfare incentives are used simply as regional controls.[13]

A third concern is the possibility of simultaneity bias in the price coefficient. Endogeneity arises in the recipiency component of price because of the direct effects of benefit guarantees and reduction rates on programme eligibility and the incentive effects of benefits on recipiency and recipiency-related behaviour. To address this problem, the paper uses two-stage methods to instrument for the price variable.

Fourth, coefficient estimates from Equation 1 may be biased if there are relevant explanatory variables that are correlated with Y_{it}, p_{it} or Z_{it} but inadvertently omitted from the regression. Gramlich (1982), Gramlich and Laren (1984), Shroder (1992) and Ribar and Wilhelm (1994b) have demonstrated that these biases may be substantial. Accordingly, all of the paper's regressions include annual dummy variables to capture effects of economy-wide shocks and changes in federal policy.[14] The regressions alternately rely on regional dummy variables or state fixed effects to account for unobserved geographic variation in preferences and institutions.

Table 1 lists definitions, sources and simple descriptive statistics for the variables used in the analysis. All of the dollar-denominated variables are deflated to 1988 levels using the implicit GNP deflator for personal consumption expenditures. With the exception of the measures for benevolence and values, all variables come from standard published sources.

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[9] For 1988—1991 subsidies for all states followed the Federal Medical Assistance Percentage schedule.

[10] The organizations have requested anonymity but can be characterized as follows. The organizations are widely recognized and strongly associated with international relief and development. Each operates programmes in the tens of millions of dollars and uses a large majority of its resources for foreign, rather than domestic, assistance (see Ribar and Wilhelm, 1994a, for further analysis and documentation).

[11] The GSS is a repeated cross-section survey that has been fielded in almost every year since 1972. Disaggregation by state would be preferred; however, the survey is not designed to provide random samples at that level.

[12] The spending variable indicates whether people thought `too much' is spent on welfare. The premarital sex variable indicates whether people thought premarital sex is `always' or `almost always' wrong. Female work attitudes refer to whether people approved of women working outside the home.

[13] The work, fertility and marriage measures indicate whether individuals `agreed' or `strongly agreed' with the following statements:
Welfare makes people work less than they would if there wasn't a welfare system.
Welfare encourages young women to have babies before marriage.
Welfare discourages young women who get pregnant from marrying the father of the child.

[14] Economy-wide shocks during this period include the Gulf War and the 1990-1991 recession. Federal public assistance policy also shifted with the enactment and phased implementation of the Family Support Act of 1988.

IV. RESULTS

Table 2 reports estimates from an initial series of state-level regressions. The regressions all include the `standard' variables - income, price and black caseload - used by previous researchers (e.g. Orr, 1976, 1979; Hulten et al., 1982; Moffitt, 1984) and add measures for charitable contributions, administrative overhead, and political and social attitudes. The specifications differ in their controls for unobserved geographic factors, with the first three incorporating regional dummy variables and the next three using state fixed effects. The models also differ in their treatment of the price variable. In the first OLS and fixed effects (FE) regressions, price is specified as an exogenous determinant of benefits. The subsequent regressions use two-stage least squares (2SLS) and fixed effects (2SFE) under alternative identifying assumptions to account for the possible endogeneity of the price variable.

The results from the first OLS specification indicate that income, price and charitable contributions have significant positive effects, and that the proportion of black recipients and opinions against premarital sex have significant negative effects on welfare benefits. The coefficients on administrative expenditures and political ideology are statistically insignificant. Overall, the analysis variables provide an excellent fit ($R2 = 0.831$). With the exception of the price coefficient, the estimates are consistent with expectations. The income and black caseload results are also consistent with previous findings. Simultaneity bias provides the most likely explanation for the counter-intuitive price result.[15]

The next column in Table 2 reports results from a 2SLS regression that uses exclusion restrictions on the state financing share and lagged recipiency to identify the price effect. This model produces coefficient estimates that are nearly identical to those of the preceding OLS regression. The similarity of the results reflects the high degree of longitudinal correlation in recipiency rates. The results further suggest that price endogeneity stems, at least partly, from correlations between persistent unobserved determinants of recipiency and states' AFDC policies. This implies that lagged recipiency may not be a suitable identifying variable for 2SLS.[16]

To provide an alternative basis for identification, the 2SLS regression in the third column uses restrictions on the financing share, female unemployment and poverty rate variables. This specification generates very different results than the previous two regressions. The most dramatic change involves the price coefficient, which switches sign and becomes significant. Two other variables - administrative expenditures and the ADA ranking - are also now estimated to be statistically significant with the anticipated signs. Among the remaining variables, the coefficients on income, charitable contributions and attitudes toward premarital sex maintain their signs and significance but increase in magnitude. The black caseload coefficient remains significantly negative but decreases in magnitude.

The next three columns repeat the foregoing analysis but replace the regional dummies with state fixed effects. The fixed-effects approach has benefits and drawbacks. By purging the sample of all time-invariant geographic variation, state dummies provide a more complete control than regional dummies for omitted variables bias. Unfortunately, conditional on the longitudinal variability of the data, removing the cross-section variation may leave little to test.[17] This `mixed blessing' is apparent in the four-year sample where the combination of state and time effects accounts for 99.5% of the variation in welfare benefits.

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[15] The price coefficient conforms with other OLS estimates based on 1980s data but not with estimates based on 1960s and 1970s data. Ribar and Wilhelm (1994b) presented evidence that the degree of endogeneity bias increased in the later period and attributed this increase to programmatic changes (e.g. the move to a 100% benefit reduction rate) enacted as part of the Omnibus Reconciliation Act of 1981.

[16] However, exclusion restrictions on lagged recipiency may still be appropriate in a 2SFE model.

[17] The fixed effects approach may also exacerbate bias from endogenous and mismeasured variables.

Table 1. *Variable definitions, sources and descriptive statistics*

Variable	Description	Source	Mean (std.
AFDC benefits			
Benefits per recipient	Average monthly benefits divided by monthly recipients	*Green Book*	107.35 (39.93)
Benefits for a family of three	Maximum monthly benefits assuming no other income	*Green Book*	339.90 (130.96)
Income	Average annual per capita total income	*Survey of Curr. Business*	15 365.04 (2 571.31)
Price measures			
Recipiency	Percentage of recipients in state population	*Green Book*	0.04 (0.01)
State AFDC share	One minus Federal Medicaid matching formula	*Green Book*	0.39 (0.09)
Female unemployment rate		*Geo. Prof. of Emp. & Unem.*	0.06 (0.02)
Poverty rate		*Current Pop. Reports,* P-60	0.13 (0.04)
Black caseload	Black recipients as a percentage of AFDC caseload	*Green Book*	0.34 (0.28)
Charitable contributions	Per capita private giving to International Relief and Dev.	Ribar and Wilhelm (1994a)	0.65 (0.44)
Administrative expenditures	Admin. costs as a percentage of total programme spending	*Green Book*	0.14 (0.05)
Attitudes			
ADA ranking	Ranking of state's congressional delegation of ADA	*ADA Today*	0.49 (0.22)
Premarital sex	Percentage of pop. who believe premartial sex is wrong	GSS	0.38 (0.11)
Welfare: spending	Percentage of pop. who believe too much is spent on welfare	GSS	0.39 (0.07)
Welfare: work	Percentage of pop. who believe welfare discourages work	GSS	0.85 (0.04)
Welfare: fertility	Percentage of pop. who believe welfare encourages fertility	GSS	0.61 (0.05)
Welfare: marriage	Percentage of pop. who believe welfare discourages marriage	GSS	0.59 (0.03)
Women working	Percentage of pop. who approve of women working outside home	GSS	0.78 (0.06)
Demographic variables			
Percentage of pop. over age 65		*Current Pop. Reports,* P-25	0.12 (0.02)
Percentage of pop. with high school		Decennial census	0.76 (0.06)
Percentage of pop. with college		Decennial census	0.20 (0.04)
Percentage of pop. black		*Current Pop. Reports,* P-25	0.11 (0.12)

Most of the coefficients decrease in magnitude and lose their significance in the fixed-effects regressions. The only variable that remains consistently significant is charitable contributions. The coefficient on administrative expenditures is also significant in one of the regressions. Especially striking is the disappearance of the strong income and black caseload effects from previous specifications. The difference between the OLS and FE estimates is not altogether

Table 2. *1988–1991 AFDC benefits per recipient regression results: alternative price specifications*

Variable	OLS	2SLS	2SLS	FE	2SFE	2SFE
Log (income)	1.032[b]	1.028[b]	1.263[b]	0.056	− 0.136	0.363
	(0.133)	(0.128)	(0.159)	(0.169)	(0.183)	(0.274)
Log (price)	0.124[a]	0.130[b]	− 0.264[a]	0.014	− 0.083	0.168
	(0.050)	(0.049)	(0.116)	(0.046)	(0.057)	(0.116)
Percentage black caseload	− 0.735[b]	− 0.740[b]	− 0.450[b]	0.0002	− 0.047	0.075
	(0.069)	(0.067)	(0.108)	(0.194)	(0.197)	(0.207)
Log (charitable contributions)	0.108[b]	0.106[b]	0.206[b]	0.095[b]	0.101[b]	0.087[a]
	(0.041)	(0.040)	(0.053)	(0.035)	(0.036)	(0.037)
Percentage administrative	− 0.156	− 0.132	− 1.747[b]	− 0.226	− 0.328[a]	− 0.062
expenditures	(0.338)	(0.329)	(0.562)	(0.144)	(0.150)	(0.186)
ADA ranking	0.055	0.053	0.207[a]	− 0.028	− 0.027	− 0.031
	(0.072)	(0.070)	(0.090)	(0.043)	(0.043)	(0.044)
Attitudes toward premarital sex	− 0.673[b]	− 0.671[b]	− 0.832[b]	− 0.004	− 0.010	− 0.025
	(0.156)	(0.151)	(0.178)	(0.044)	(0.044)	(0.047)
Identifying variables for price		Log (share)	Log (share)		Log (share)	Log (share)
	–	Log (recip$_{t-1}$)	Female unemp.	–	Log (recip$_{t-1}$)	Female unemp.
			Poverty rate			Poverty rate
Region dummies	yes	yes	yes	–	–	–
State fixed effects	no	no	no	yes	yes	yes
R^2	0.831	0.831	0.777	0.995	0.995	0.995
Observations		204			204	

Notes: Dependent variable is log per recipient AFDC benefits. Regressions include three time dummy variables. Least squares specifications also include an intercept and dummy variables for eastern, central and southern states. Standard errors appear in parentheses. Significant at 0.10 level.
[a] Significant at 0.05 level.
[b] Significant at 0.01 level.

surprising given the lack of longitudinal variation. The pattern of results suggests that state AFDC policies respond slowly or only to established trends in economic and attitudinal variables.

To assess the sensitivity of the economic and attitudinal results, Table 3 reports estimates from regressions that incorporate alternative sets of explanatory variables. All of the models in Table 3 are estimated using 2SLS and 2SFE with exclusion restrictions on the financing share, female unemployment and poverty rate variables. The first specification replicates the models from the earliest AFDC studies (e.g. Orr, 1976) by dropping all of the preference controls except for the black caseload variable. The economic and black caseload coefficients are clearly sensitive to this respecification. Removing the attitudinal variables leads to stronger income and black caseload estimates, and weaker price estimates.

The second specification checks the sensitivity of the estimation results to the inclusion of the black caseload variable. Dropping this variable noticeably decreases the fit of the model. Although the income coefficient is essentially unchanged from the third column of Table 2, the other coefficients all become substantially stronger. The largest changes include a doubling of the price coefficient and a 50% increase in the charitable contributions coefficient.

The third specification adds controls for the percentage of the population over age 65, the percentage with a high school education, the percentage with college and the percentage who are black. Besides capturing the preferences of various demographic groups, these variables may proxy underlying needs, permanent wealth and competing resource demands within a state. The added controls are individually and jointly significant. Although inclusion of demographic controls moves most of the other coefficients toward the previous table's 2SFE estimates, all but the price coefficient maintain their signs and significance.

The last three regressions in Table 3 repeat these analyses, controlling for state- rather than region-specific effects. As before, the use of fixed effects substantially reduces the size of most of the coefficients. The

contributions coefficient remains significant in the two regressions in which it appears. In the other regression, income and price are estimated to have significant, albeit small, positive effects on benefits. Although the point estimates for these coefficients do not vary much across specifications, differences in precision lead to their being insignificant in the other two models.

Table 4 examines alternative specifications of the social attitudes variable. In particular, measures for attitudes regarding welfare spending, welfare incentive/disincentive effects and women's work roles are substituted for the premarital sex variable. All of the models are estimated using

Table 3. *1988–1991 AFDC benefits per recipient regression results: alternative explanatory variables*

Variable	Two-stage least squares			Two-stage fixed effects		
	(1a)	(2a)	(3a)	(1b)	(2b)	(3b)
Log (income)	1.754[c]	1.259[c]	0.789[c]	0.448[a]	0.371	0.459
	(0.148)	(0.199)	(0.184)	(0.246)	(0.277)	(0.310)
Log(price)	− 0.037	− 0.553[c]	− 0.056	0.207[b]	0.171	0.203
	(0.074)	(0.094)	(0.101)	(0.095)	(0.117)	(0.130)
Percentage black caseload	− 0.751[c]	–	− 0.571[c]	0.086	–	0.052
	(0.071)		(0.116)	(0.214)		(0.218)
Log (charitable contributions)	–	0.318[c]	0.148[c]	–	0.086[b]	0.074[a]
		(0.054)	(0.043)		(0.037)	(0.042)
Percentage administrative expenditures	–	− 3.145[c]	− 1.160[b]	–	− 0.055	− 0.029
		(0.486)	(0.488)		(0.189)	(0.200)
ADA ranking	–	0.298[c]	0.238[c]	–	− 0.031	− 0.027
		(0.105)	(0.075)		(0.044)	(0.046)
Attitudes toward premarital sex	–	− 1.006[c]	− 0.683[c]	–	− 0.027	− 0.030
		(0.214)	(0.151)		(0.048)	(0.049)
Percentage of population over age 65	–	–	− 1.328[b]	–	–	0.205
			(0.651)			(0.648)
Percentage of population with high school	–	–	2.291[c]	–	–	− 0.466
			(0.474)			(0.778)
Percentage of population with college	–	–	− 1.062[a]	–	–	0.305
			(0.637)			(1.824)
Percentage of population black	–	–	0.640[b]	–	–	0.885
			(0.324)			(2.736)
Region dummies	yes	yes	yes	–	–	–
State fixed effects	no	no	no	yes	yes	yes
R^2	0.759	0.653	0.852	0.995	0.995	0.995
Observations		204			204	

Notes: Dependent variable is log per recipient AFDC benefits. Regressions include three time dummy variables. Least squares specifications also include an intercept and dummy variables for eastern, central and southern states. Log state funding share, female unemployment and the poverty rate used in first-stage regressions to identify price. Standard errors appear in parentheses.
[a] Significant at 0.10 level.
[b] Significant at 0.05 level.
[c] Significant at 0.01 level.

the 2SLS specification with demographic controls from the previous table. An additional 2SFE model is estimated using the welfare spending variable.[18] Examining the results, the coefficients for all the alternative attitude measures have the anticipated signs. For the work disincentives, fertility incentives and work attitudes variables, these effects are also statistically significant. Although there are some small changes, the coefficients on the other variables are generally robust to the different attitude measures. The results indicate that attitudes are an important determinant of welfare generosity and that the paper's conclusions can be replicated using alternative definitions of attitudes.

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[18] Recall that the three welfare incentive/disincentive questions from the GSS were asked before 1988. The paper has aggregated these data into cross-sectional measures.

Finally, to examine the sensitivity of the results to the choice of dependent variable, Table 5 reports 2SLS esti mates based on maximum rather than average benefits. The use of maximum benefits has two advantages relative to average benefits: maximum benefits are a direct policy instrument, and maximum benefits are not likely to be spuriously negatively correlated with recipiency. Despite the differences in the calculation of the dependent variables, the 2SLS estimates in Table 5 are virtually the same as the results from the earlier tables. In the 2SFE regressions, the coefficients on income and price increase in magnitude and become statistically significant whereas the coefficient on charitable contributions decreases slightly and loses its significance. Overall, the results indicate that the paper's 2SLS findings are robust to respecification of the dependent variable whereas its 2SFE findings are somewhat less so.

Table 4. *1988–1991 AFDC benefits per recipient regression results: alternative attitude variables*

Variable	Two-stage least squares					2SFE
	(4a)	(5a)	(6a)	(7a)	(8a)	(4b)
Log (income)	0.943[c]	0.902[c]	0.782[c]	0.851[c]	0.864[c]	0.416
	(0.199)	(0.195)	(0.188)	(0.186)	(0.193)	(0.323)
Log (price)	− 0.072	− 0.080	− 0.066	− 0.084	− 0.074	0.181
	(0.110)	(0.109)	(0.104)	(0.117)	(0.107)	(0.133)
Percentage black caseload	− 0.565[c]	− 0.579[c]	− 0.482[c]	− 0.544[c]	− 0.592[c]	0.049
	(0.123)	(0.122)	(0.122)	(0.124)	(0.121)	(0.218)
Log (charitable contributions)	0.172[c]	0.157[c]	0.168[c]	0.190[c]	0.166[c]	0.074[a]
	(0.048)	(0.046)	(0.045)	(0.050)	(0.045)	(0.041)
Percentage administrative expenditures	− 1.283[b]	− 1.123[b]	− 1.222[b]	− 1.440[b]	− 1.172[b]	− 0.026
	(0.540)	(0.511)	(0.501)	(0.591)	(0.509)	(0.205)
ADA ranking	0.299[c]	0.268[c]	0.294[c]	0.313[c]	0.261[c]	− 0.025
	(0.081)	(0.079)	(0.077)	(0.083)	(0.079)	(0.046)
Too much spent on welfare	− 0.175	–	–	–	–	− 0.021
	(0.209)					(0.046)
Welfare discourages work	–	− 1.301[b]	–	–	–	–
		(0.508)				
Welfare encourages fertility	–	–	− 1.391[c]	–	–	–
			(0.389)			
Welfare discourages parents from marrying	–	–	–	− 0.840	–	–
				(0.538)		
Attitudes toward women working	–	–	–	–	0.673	–
					(0.229)	
Percentage of population over age 65	− 1.762[c]	− 1.266[b]	− 1.863[c]	− 1.900[c]	− 1.449[b]	0.234
	(0.687)	(0.702)	(0.662)	(0.691)	(0.679)	(0.662)
Percentage of population with high school	2.388[c]	2.405[c]	2.438[c]	2.501[c]	2.361[c]	− 0.415
	(0.500)	(0.495)	(0.482)	(0.496)	(0.492)	(0.782)
Percentage of population with college	− 1.529[b]	− 1.228[a]	− 1.280[b]	− 1.361[b]	− 1.240[a]	0.175
	(0.672)	(0.670)	(0.648)	(0.668)	(0.663)	(1.857)
Percentage of population black	0.654[a]	0.685[b]	0.536	0.594[a]	0.663[a]	0.545
	(0.344)	(0.343)	(0.328)	(0.337)	(0.338)	(2.858)
Region dummies	yes	yes	yes	yes	yes	–
State fixed effects	no	no	no	no	no	yes
R^2	0.833	0.837	0.845	0.834	0.839	0.995

Notes: Dependent variable is log per recipient AFDC benefits. Regressions include three time dummy variables. Least squares specifications also include an intercept and dummy variables for eastern, central and southern states. Log state funding share, female unemployment and the poverty rate used in first-state regressions to identify price. Standard errors appear in parentheses.
[a] Significant at 0.10 level.
[b] Significant at 0.05 level.
[c] Significant at 0.01 level.

V. CONCLUSION
Using 1988-1991 state-level data, an examination was made of the economic and political determinants of AFDC spending. The economic variables include per capita income and the effective price of AFDC for states. The analysis also incorporates measures for programme administrative expenses, community attitudes, benevolence and ethnic composition of the AFDC caseload. Models that use regional dummy variables to account for unobserved cross-section heterogeneity replicate previous studies' findings of strong positive (roughly unit elastic) income effects and modest negative price effects. Estimates from these models also

indicate that benevolence and liberal political attitudes increase, and that largely black caseloads, high programme overhead and conservative social/welfare attitudes decrease welfare generosity.

With the exception of the coefficient on benevolence, these economic and preference effects disappear when state- specific fixed effects are introduced into the models. It is unclear whether the difference in results reflects the effects of omitted time-invariant variables or simply a lack of longitudinal variation in the data. However, the robustness of the estimates in the regressions with regional controls coupled with the excellent fit of those regressions suggests that the latter conclusion is more likely.

Although the estimated effects of the charitability, administrative overhead and attitude variables provide support

Table 5. *1988–1991 Maximum AFDC benefits for a family of three regression results*

Variable	Two-stage least squares		Two-stage fixed effects	
	Economic and preference variables	Economic, preference and demographic variables	Economic and preference variables	Economic, preference and demographic variables
Log (income)	1.326^c	0.683^c	0.542^c	0.647^b
	(0.166)	(0.190)	(0.219)	(0.252)
Log (price)	− 0.287^b	− 0.052	0.262^c	0.309^c
	(0.122)	(0.104)	(0.093)	(0.106)
Percentage black caseload	− 0.412^c	− 0.409^c	0.239	0.203
	(0.113)	(0.120)	(0.166)	(0.177)
Log (charitable contributions)	0.204^c	0.147^c	0.039	0.040
	(0.055)	(0.045)	(0.030)	(0.034)
Percentage administrative expenditures	− 1.660^b	− 0.956^a	− 0.016	0.033
	(0.588)	(0.503)	(0.149)	(0.163)
ADA ranking	0.147	0.197^b	− 0.006	− 0.0004
	(0.094)	(0.077)	(0.036)	(0.038)
Attitudes toward premarital sex	− 0.932^c	− 0.770^c	− 0.037	− 0.039
	(0.186)	(0.155)	(0.038)	(0.040)
Percentage of population over age 65	–	− 1.627^b	–	− 0.246
		(0.670)		(0.527)
Percentage of population with high school	–	2.452^c	–	− 0.200
		(0.488)		(0.632)
Percentage of population with college	–	− 0.573	–	0.362
		(0.656)		(1.483)
Percentage of population black	–	0.320	–	2.424
		(0.334)		(2.224)
Region dummies	yes	yes	–	–
State fixed effects	no	no	yes	yes
R^2	0.775	0.855	0.997	0.997

Notes: Dependent variable is log maximum AFDC benefits for a family of three with no other income. Regressions include three time dummy variables. Least squares specifications also include an intercept and dummy variables for eastern, central and southern states. Log state funding share, female unemployment and the poverty rate used in first-stage regressions to identify price. Standard errors appear in parentheses.
^{a} Significant at 0.10 level.
^{b} Significant at 0.05 level.
^{c} Significant at 0.01 level.

for hypotheses offered by political analysts, their interpretation merits some caution. First, contributions to IRDOs proxy benevolence; they do not directly measure it. Although the empirical results are consistent with an interpretation of benevolence, they do not preclude other interpretations (e.g. contributions are tax deductible and may simply be larger in high tax, high service states). Second, administrative expenditures are included in the empirical specifications without developing a formal model of programme administration. Thus, administrative expenditures are equated with programme inefficiency without considering the positive effects they may have on service delivery and programme enforcement.

These caveats aside, the results do have some intriguing implications for current efforts at welfare reform. Viewed one way, work requirements for welfare recipients and benefit reductions for women who bear children while on AFDC do not seem particularly generous. However, by increasing public support for AFDC in conservative states, reform along these lines may lead to higher benefits overall. Similarly, reforms that enhance programme efficiency, either by streamlining requirements or moving toward unrestricted block grants, may also increase benefits. Unfortunately, as the black caseload results make clear, a policy of increased state flexibility might not be universally beneficial.

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