Voting on Welfare Reform:

Stemming Migration, Assisting the Needy, or Promoting Economic Growth?

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Abstract: This paper examines the influences on voting by members of the House of Representatives on the Carter Administration's welfare reform legislation. The analysis finds some support for the hypothesis that voting by national legislators responded to the potential mobility of welfare recipients from low to high benefit states. Defining the public interest as promoting economic growth and the special interest as increasing redistribution, the results also provide evidence in support of the Stigler hypothesis that politically secure legislators are better able to vote the public, as opposed to the special, interest.

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After many years of trying, in 1996 opponents of the welfare system succeeded in passing legislation aimed at revamping the entire system. Many previous reform efforts, proposed by Republicans and Democrats alike, never made it to the floor of either chamber for a vote or foundered in the Senate after passing the House. Interestingly, two of these failed reforms were sweeping efforts intended as comprehensive reforms of the entire safety net of social assistance programs. President Nixon's Family Assistance Plan proposed in 1969, a negative income tax experiment, and President Carter's 1977 Program for Better Jobs and Income are two such efforts. Stung by the inability to get his plan brought to a vote in 1978, President Carter proposed a second welfare reform plan in 1979. This plan was far-less comprehensive than his earlier package, and it came to the House floor for a vote. It did not make it out of committee in the Senate.

Two key provisions of The Social Welfare Reform Amendments of 1979 were the setting of a minimum national standard for benefit payments under Aid to Families with Dependent Children and the requirement that each state provide benefits under AFDC-UP, a program paying benefits to families with an unemployed parent. The purpose of these proposals, and all the provisions of the Carter plan, was twofold. First, the Carter Administration intended to raise the level of benefits available to America's neediest families. Second, the amendments would make welfare plans across the states more similar in the benefits paid and in their administration and operation. One argument frequently heard as justification for standardizing benefits across the nation was that the poor from low benefit states had the incentive, which many followed, to migrate from low-benefit states to high-benefit states.[2] On the other hand, benefits may differ across states because the political pressures internal to the states differ or because states differ in ability and willingness to redistribute income.

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[2]Robert Moffitt (1992) summarizes and critiques the literature on mobility induced by welfare benefits. He concludes that recent studies using disaggregated data and sophisticated econometric techniques "show positive and significant effects of welfare on residential location and geographic mobility". Brown and Oates (1987) come to this same conclusion.

Several political economy models explaining the size of welfare benefits across states or nations have examined just these issues. Orr (1976), Gramlich and Laren (1984), Plotnick (1986), Kristov, Lindert and McClelland (1992) and Cordes and Shipp (1996) develop different theoretical or empirical models or use distinct data sets to study the determinants of welfare benefit levels within states or countries. Nonetheless, they find support for the idea that benefits differ across political jurisdictions because of differences in incomes, in the characteristics of the recipient population, in the "altruism" of the taxpaying population, in the "affinity" between the taxpaying and the recipient populations, and in the cost or revenue sharing provisions.

These analyses do not, however, directly examine the decision making of elected representatives concerning the design of the welfare programs. They are, implicitly or explicitly, based upon representative citizen, median voter type models wherein the individual legislators and the legislature are nothing more than a conduit through which citizen preferences are transformed into policy. This study differs from those mentioned above by focusing on the role of the legislator in setting welfare policy. The analysis gives him or her some discretion in the process.

One study which examines voting and attitudes of members of the House of Representatives is Barrett and Cook (1991). The authors surveyed a random sample of members and a select sample of leaders of committees with jurisdiction over social welfare matters. Measures of support for social welfare programs were constructed based on the responses to questions concerning the member's view on the size of benefits under a given program. Correlations were computed for these attitude scores and variables such as party affiliation, district level unemployment, median income and conservatism. The authors also performed a regression analysis wherein the dependent variable was the respondent's vote score tabulated from 20 votes, 10 selected by each of the Children's Defense Fund and the National Council of Senior Citizens. The analysis supports the idea that party affiliation and individual attitudes influence legislator voting on social welfare issues. The level of district conservatism did not influence voting, though it is

correlated with legislator attitudes.

Few of these models address the role of mobility of recipient populations. Edward Gramlich and Deborah Laren (1984) are an exception. Using panel data on the United States over the decade of the 1970s, Gramlich and Laren (1984) find that state legislators perceive that migration of welfare recipients is an important issue and that they "appear to be very much conditioned by what other states are doing when they set AFDC benefits."

David Wildasin (1991, 1994) addresses labor mobility, among states in a union, from a theoretical perspective.[3] His purpose is to examine the effects of this mobility on the welfare of the immobile residents of the relatively wealthy jurisdiction. Wildasin (1991) demonstrates that coordination amongst lower level governments or intervention by higher level government can achieve welfare improvements relative to the uncoordinated situation. He shows (Wildasin, 1994) that individuals in a high wage, high public service area may find it advantageous to make payments to labor from the low wage, low public service state to soften the incentive to migrate. In other words, Wildasin's theoretical model suggests the possibility that utility maximizing voters might elect to tax themselves to redistribute income to people from outside their jurisdiction to reduce the mobility of the recipients. Wages plus the benefits paid under the redistribution plan are high enough to stem the flow of labor into the relatively high wage region. Consequently, wages remain high in the relatively affluent state, and after tax wages in the new equilibrium exceed those that would prevail had migration of labor continued unchecked.

Charles Brown and Wallace Oates (1987) adapt Orr's (1976) model to assess the effects of mobility on the size of welfare payments. Their model implies that greater mobility has the effect of reducing benefit payments in high-benefit states but that low-benefit states may raise or lower payment levels. Simulation results indicate that the greater is mobility the more suboptimal are the benefit levels

[3]Harry Huizinga (1999) develops the implications for location of high and low quality workers and patterns of international trade of different levels of redistribution across regions within a given country.

under decentralized provision of income redistribution. Key to the Brown and Oates analysis is the assumption that the nonpoor derive utility from the income of the poor.[4]

Brown and Oates (1987) summarize the relationship of welfare to mobility with two questions. First, do benefit differentials induce migration from low to high benefit jurisdictions? They conclude, as does Moffitt (1992), that the best evidence suggests that differentials do significantly influence mobility. Second, Brown and Oates ask if there is evidence that benefit levels respond to such migration? Moreover, it is not just a matter of levels responding to actual migration but "the hypothesis of interest to us is that *potential* migration depresses benefit levels" [emphasis in original]. Their proposition is that as a response to potential migration of low-income families, public officials "select benefit levels below those they would choose in the absence of such mobility". The Gramlich and Laren (1984) evidence is that local public officials do respond to migration by lowering benefit levels.

The purpose of this paper is to assess the extent to which voting by national elected officials reflects concern with inter-state migration of welfare recipients. A further distinction of this work from the existing literature on welfare benefits is, therefore, that this analysis addresses the connection between the interests of the lower level of government, here the states, to the behavior of representatives to the higher level government. Specifically, this paper examines the voting of Members of the House of Representatives on President Carter's Social Welfare Reform Amendments. The validity of this assessment rests on the theoretical and empirical modeling of the decision calculus of the representatives. Therefore, the second question of this paper concerns the most appropriate modeling of the legislator's voting decision. One issue is whether the electoral security of the legislator influences her voting behavior.

Section 2 provides detail on the history of welfare reform proposals leading up to the Carter proposal, the key points of the Carter proposal, and the arguments pro and con. Section 3 describes the

[4]Wildasin does not make this assumption.

economic model of the legislator's decision whether to vote in favor or against the Carter proposal. Section 4 discusses the results of estimating the model and the evidence regarding legislators' behavior. Section 5 concludes.

2. The Carter Proposal

The debate about welfare reform was long standing before Jimmy Carter entered the presidency in 1977. President Nixon offered the Family Assistance Plan in 1969 as a replacement for AFDC. Under this plan, each of two members of a household would receive a benefit of $500 per year with each additional family member getting $300. The family could earn up to $60 a month with no reduction in benefits, but would lose one dollar in benefits for every two dollars of earnings beyond $60. Four person families would receive some assistance until income exceeded $3,920. Families with the same number of children and the same income would receive the same benefits.

The Family Assistance Plan also committed the Federal government to paying 30 percent of any additional outlays states chose to make beyond their obligations under the program. In eight states welfare payments would have been increased under the FAP without supplemental payments by those states. In the remaining states and the District of Columbia benefits under FAP would have been below benefits before FAP without state supplements. Simultaneously, many states that did not extend benefits to families in which both parents were present and able-bodied would have been required to make these families eligible under FAP. For a net cost of $3.8 billion, the plan would have raised the number of families receiving assistance by 1.2 million. A modified version of the FAP made it through the House of Representatives in 1970. The bill never made it out of the Senate Finance Committee.

The committee, headed by Russell Long of Louisiana, objected to the omission of in-kind benefits in determining the extent of poverty and thus in determining the level of benefits to be paid. Additionally, the senators noted that the plan did not eliminate or reduce the incentive for able-bodied individuals to quit

working to obtain larger welfare payments. The Nixon Administration revised the plan but the Senate Finance Committee voted 14-1 against reporting the bill to the Senate floor. In 1971 the Administration made yet another proposal, again passed in the House. This bill is known as H.R. 1.

H.R. 1 raised the benefits for a family of four from $1600 to $2400 while making recipients of cash assistance ineligible for food stamps. In 42 states, these attributes of the plan would have reduced benefits to recipients compared with the existing system had the states not paid supplemental benefits. The system proposed in H.R. 1 would have removed the large implicit tax inherent in the existing system as earned income reduced both welfare and food-stamp benefits. At the same time a new work disincentive was added. Families would have been required to pay a medicaid deductible equal to one-third of the earnings over $720 plus whatever cash supplement the state paid.

The explicit treatment of earnings was also changed under H.R. 1. Earnings above $60 a month were to be taxed at the rate of 66⅔ percent, up from the 50 percent rate under the existing law. However, deduction of day care expenses was allowed. This plan would have paid benefits to four-person families with incomes less than $4320, $400 higher than the breakeven point under FAP.

H.R. 1 was taken up by the Senate in late July of 1971. Two weeks later President Nixon's new economic policy was announced and the Senate never got back to H.R. 1. Senator Long had expressed serious reservations about the plan, and it is doubtful it would have made it out of the Finance Committee even had other matters not intruded.

The Senate Finance Committee produced its own proposal for aiding needy families in 1972. Under this proposal, poor families would be divided into two groups. In the first group would be families headed by mothers with children under the age of six. Families in this group would have been eligible for a modified AFDC plan with block grants replacing matching grants and federal rules limiting state discretion. States were given the flexibility to raise or lower benefits but would lose federal support if annual benefits were cut below $2400 for a family of four. The innovation in this plan came from the treatment of those

poor families not eligible for AFDC, general families headed by men capable of working or by women whose children were no younger than six years old. Such families would have received wage subsidies and guaranteed employment.

The Senate Finance Committee plan would have paid a subsidy of three fourths of the difference between the individual's wage and $2.00 per hour, then the minimum wage. Jobs paying less than $1.50 an hour would receive no subsidy, nor would work beyond forty hours a week. In addition, 10 percent of gross private earnings would be paid directly to the worker. This bonus would have been phased out at the rate of one dollar for every four of earnings over $4,000. Those unable to find work would receive, under the plan, a guaranteed job for 32 hours each week at $1.50 an hour, a total benefit of $2,400.

The Senate plan also placed strict requirements on the ability of states to supplement the federal benefits. The upshot of the provisions was that state supplements would be reduced. Additionally, the plan did not take account of family size. A provision for greater benefits to larger families was considered in committee but did not get reported out with the bill. Consequently, the plan contained implicit incentives for the dissolution of the family whenever benefits exceeded $2,400. Moreover, families wishing to remain eligible would have been discouraged from accepting part-time employment, from which they could only keep the first $20 per month, or would have been required to switch to the guaranteed job program from which the wage subsidy would have been smaller. The full Senate rejected this plan.

Senator McGovern proposed a plan known as "demogrants." This proposal was to give to every individual a grant that would average $1000 per capita. One difficulty with such a plan is that it would have required tax rate increases for the income tax system to have produced the same revenue. The idea behind such a broad-based grant system is that everyone would benefit from the program making everyone feel a part of the system and removing any stigma the poor might feel from receiving aid. Such a program could not meet emergency needs but would, if the grants were large enough, provide adequate income support.

None of these programs was enacted. Henry Aaron summed up the lack of action from 1969 to 1972: "The reason for inaction is not the absence of concern about the present system, but rather the intense divisiveness of these programs. While differences in philosophy and values go far in explaining these controversies, technical issues, centering on the preservation of work incentives, are prominent." After 1972, until the Carter Administration proposal in 1977, no major welfare reform proposals were given serious consideration. Two proposals that did generate some attention during this period were one by Martha Griffiths, a Democratic Member of Congress from Michigan, and a second by Casper Weinberger, then Secretary of the Department of Health, Education, and Welfare in the Ford Administration. Griffiths' plan was another attempt at replacing AFDC, food stamps and other assistance programs with a negative income tax. It never came to a vote. Secretary Weinberger's Income Supplement Plan, produced under the prodding of President Ford, was rejected by Ford in favor of tinkering at the margins.

In a period of eight years welfare reform proposals had gone from frequent, complex and controversial to of little interest. Jimmy Carter was about to bring renewed emphasis to the reform of welfare. Campaigning for the presidency, Carter repeatedly proposed

"a simpler national welfare program, with one fairly uniform standard of payment, adjusted to the extent feasible for cost of living differences by areas with a strong work incentive built in. In no case should the level of benefits make not working more attractive than working. And we should have welfare rules that strengthen families rather than divide families."

President Carter came into office having argued that the existing welfare system was a disgrace. He proposed to have a welfare reform plan by May 1, 1977, less than five months after his inaugural. This proposal was in trouble immediately and never came up for a vote. It was an attempt to produce a comprehensive welfare reform package.

Having learned the lesson that broad wide-ranging proposals would not stand a chance in Congress, the Carter Administration scaled back its proposals in 1978. This package, known as HR 4904, was voted on in November of 1979 by the House of Representatives, where it passed 222-184.

The Congressional Quarterly describes the bill as containing two types of reform. First, benefits were increased and standards made more uniform across states. Had the bill been enacted into law, states would have been required to raise AFDC and food stamp benefits up to 65% of the poverty level for a family of four. States would also have been required to set up AFDC-UP programs under which AFDC benefits are paid to families with an unemployed principal income earner.[5] The definition of income would be made uniform across the states. The legislation would also have made the work-expense allowance and allowable assets more standard across jurisdictions. Finally, the federal government would spend $900 million in increased assistance to the states to cover their welfare costs.

At the same time, the bill contained provisions to reduce the costs of welfare and to get recipients into jobs and off the welfare rolls. Some recipients would lose benefits. Further savings would occur through streamlining and revising the administration of the program. For example, basing benefits on retrospective rather than projected incomes would assure that benefits are not paid to people who have not accurately reported their income for the future. Moreover, under the current system, recipients have strong incentives not to report changes in their status, resulting in overpayment of benefits.

The Carter proposal also included plans to expand jobs programs. This part of the plan would entail high costs as the federal government would offer tax credits to private employers and federally created jobs or training and job search assistance to welfare recipients. The administration estimated that about 600,000 new jobs would be needed, but critics doubted the ability to create such jobs in the private sector. If the private sector did not create these jobs, then federal jobs would be made available for these

[5]At this time, the existing programs paid benefits only to unemployed fathers. Consequently, they were called AFDC-UF.

individuals.

The Congressional Quarterly reported that the bill did not generate a great deal of lobbying support either pro or con. The Carter administration, of course, lobbied for the bill as did the National Governors' Association, welfare program administrators and some organized labor. Welfare recipients "were not an organized factor" in lobbying efforts regarding the legislation. What effort there was against the bill focused on the idea that the public's perception of "welfare reform" was that any reform must require work and reduce costs. Democrat James Jones of Oklahoma summarized this sentiment, "In my part of the country, welfare reform means helping those who need it and requiring work from those who can work. This bill fails that test."

Opponents of the Carter plan also criticized its standardization of the program across the country. Jones said, "This is an irreversible federalization of the welfare system." Barber Conable, Jr. a New York Republican opined, "The bill leads the welfare program in the wrong direction. It moves us several steps closer to [a] uniform, national income redistribution program."

Prior to voting on the Carter proposal, voting occurred on two amendments to the bill. The first of these would have allowed states to make cash payments in lieu of food stamps to households containing only individuals over 65 years of age. This amendment passed 406 to 2. The second proposed amendment, by Representative Bill Archer, Republican from Texas, had it passed, would have sent the bill back to committee with instructions for revisions which were described by the Congressional Quarterly as a "scaled down version of a major alternative bill (HR 4460)." The principal instruction was to include in the bill a permanent cap on federal welfare costs and greater autonomy for the states over their welfare systems. This greater autonomy would take three forms. First, a demonstration block grant project would allow states to spend as they pleased, as long as the money helped children and families with children. Second, eight states and three counties would have been allowed to design their own welfare system and operate it for five years. Finally, states would have been allowed to design their own work requirements for welfare

recipients subject only to the restriction that parents caring for children under six years old would not be required to work if there was not adequate day care. The Archer motion failed on a 200-205 vote. In what follows, voting on both the Carter proposal and the Archer amendment are analyzed.

3. The Empirical Model of the Legislator's Decision Calculus

Models of legislator behavior range between the "public interest" approach, on the one end, and the "economic" approach, on the other. The public interest extreme assumes that legislators and bureaucrats have only the good of society in mind when enacting laws and rules. The economic approach, following Stigler (1971), models legislators as interested only in reelection, completely "captured" by the special interests at whose whim they serve. In propounding the economic theory, Stigler (1971) contended that "regulation is acquired by the industry and is designed and operated primarily for its benefit." Stigler averred that any claim that regulations are promulgated to protect the public at large would "elicit uproarious laughter" from the regulated. Nonetheless, Stigler (1971) was careful to add that the characteristics of the political process compel voters to "employ representatives with wide discretion and eschew direct expressions of marginal changes in preferences." Moreover, he went on to say,

> If the representative could confidently await reelection whenever he voted against an economic policy that injured society, he would surely do so. Unfortunately virtue does not always command so high a price. If the representative denies ten large industries their special subsidies of money or power, they will dedicate themselves to the election of a more complaisant successor: the stakes are that important.

In Stigler's view, then, legislators' voting behavior should vary with their electoral security; those who are electorally secure will vote in the public interest. Implementing this idea is, of course, problematic; any definition of the public interest is ad hoc. Moreover, implicit in Stigler's description is that either the

legislator is or is not electorally secure. Political safety is not a continuous variable, higher values of which make one more able to vote the public interest; there exists no margin at which the relative political benefits of voting in the general and the special interest are compared.

Peltzman (1976) generalized Stigler's original insight to allow this trade-off of the interests of one group against another. Legislators in Peltzman's model maximize their electoral security (share of the vote) through trade-offs between the interests of potential beneficiaries from some policy and the interests of potential losers from that policy. Hence, in the Stigler-Peltzman model the nature of the trades a legislator will accept depends on her level of security. Peltzman (1976) models the probability that a beneficiary will vote for the legislator as a concave function of the transfer to that individual. "In keeping with Stigler's model, I assume that, in the relevant range, [political] benefits are subject to decreasing returns." The greater the transfers to the beneficiaries, the greater the likely electoral support from them; and the smaller the political benefit to the legislator from further transfers to that group. Hence, the more electorally secure is a legislator the less influential, at the margin, are constituent and/or special interests on her voting decisions.

The empirical model of legislator voting on welfare reform in this paper attempts to reasonably reflect the theoretical implications of the Stigler-Peltzman model.[6] One difficulty is that neither electoral security nor “public interest” is a well-defined, precisely measured variable. Because of this, the best one can do is attempt to account for these influences as fully and generally as possible by inclusion of a wide variety of variables that proxy for these effects.

A second difficulty is that the poor, who are the beneficiaries of the increased redistribution that would result under the Carter proposal, are not a potent political force. Stigler’s model is expressly about the influence of industry on public policy. Moreover, he remarks that if representatives deny industries a

[6]See also Becker (1983, 1985) on the competition among pressure groups.

subsidy of money or power, "they will dedicate themselves to the election of a more complaisant successor." The poor simply don't vote in sufficient numbers in the United States, nor do they have sufficient financial resources, to sway outcomes in the fashion described by Stigler. The lack of lobbying effort by the poor in favor of the Carter proposal is evidence that they do not satisfy well Stigler's notion of the special interest group. Therefore, Peltzman's approach, in which groups compete with one another for favors from elected officials, is more appropriate for this context. The poor wish for increased redistribution, the non-poor for less. Politicians weigh the costs and benefits of providing benefits to the one group at the expense of the other group.

The approach taken here is to model the balancing done by the legislator using an indirect utility function. The legislator is assumed to choose to vote favorably on the bill if the utility from doing so equals or exceeds the utility from voting against the legislation. Legislator utility depends upon the interests of the district, his or her own preferences, and the constraints he or she faces. Among these constraints is the legislator's own perceived electoral security. The empirical specification of the indirect utility function reflects these determinants of the legislator's vote.[7]

The indirect utility function of legislator j is $I_j = I(X, L, E, C)$, where X is a vector of variables characterizing the legislator's district, L is a vector of legislator specific attributes, E is a vector controlling for the welfare system as it existed in the legislator's district at the time of the vote, and C is a vector characterizing the effects of the Carter Administration's proposals in the legislator's district. If $I_j \geq 0$ the legislator votes in favor of the Carter proposal, $v_i = 1$; if $I_j < 0$, the legislator casts a no vote, $v_i = 0$.

The indirect utility function of the legislator's decision of how to vote on the Carter welfare reform

[7]Note that the "ideology" of the legislator has not been expressly mentioned. Poole and Rosenthal (1985) and Poole and Romer (1993), as well as others, have argued forcefully that the predominant influence on legislator voting behavior is ideology. Coates and Munger (1995) and Coates (1995) have argued that one interpretation of ideology is as individual preferences. Consequently, this paper does not use any of the typical measures of legislator ideology but includes individual legislator characteristics to proxy for preferences, as would be done in any study of consumer demand or labor supply.

bill, given the foregoing discussion, is:

$$v_i = \alpha_0 + \sum_{k=1}^{K} \alpha_k X_{ik} + \sum_{j=1}^{M} \beta_j L_{ij} + \sum_{h=1}^{H} \delta_h E_{ih} + \sum_{g=1}^{G} \theta_g C_{ig} + \tilde{\alpha}_0 VS_i + \sum_{k=1}^{K} \tilde{\alpha}_k VS_i X_{ik} + \sum_{h=1}^{H} \varphi_h VS_i E_{ih} + \sum_{g=1}^{G} \mu_g VS_i C_{ig} + \varepsilon_i \quad \textbf{(1)}$$

where the α, β, θ, $\tilde{\alpha}$, φ, μ, and δ are parameters to be estimated and ε is a random disturbance with mean zero and constant variance. A similar equation can be estimated for the vote on the Archer Amendment. Because the error terms from these two equations are likely to be highly correlated, estimation of the two equations using a bivariate probit technique will improve the efficiency of the estimates. Results from the estimation of equation (1) are reported using both the simple probit approach and using the bivariate probit method.

Hypotheses of two types can be tested using this general specification of equation (1). One can begin by addressing the types of issues raised in the general literature on legislator voting. For example, one can ask whether the existing situation influences the voting behavior of the legislators. That is, are δ and φ significantly different from zero. If they are, then the current system influences the way the legislator votes. This is essentially the question of whether or not the legislator is influenced by the costs and benefits of the current welfare system for the district. Second, one could test whether the particular ways the Carter proposal will affect the state will determine the voting of the legislator. Statistical significance of θ and μ would provide support for this hypothesis. This questions the role of the forecasted costs and benefits incurred by the district from the new program in influencing the legislator's vote.

A third hypothesis is that legislators take different account of the existing situation and the particular impacts of the Carter proposal depending upon their own electoral security. If this is true then the μ, φ, and $\tilde{\alpha}$ will be statistically significant. Coates (1995) and Coates and Munger (1995) contended that significance of the vote share interaction variables is evidence of shirking on the part of legislators, where by shirking they meant simply that legislators are influenced differently by given constituent interests

depending upon their electoral security. Recall that George Stigler (1971) hypothesized that secure legislators would be better able to vote the general interest than would less secure legislators. This third hypothesis is, therefore, a weak test of the Stigler proposition. If electoral security, measured here by the vote share of the representative in the previous election, alters the role of constituent interests, that is support for the Stigler position.

But a somewhat stronger test of the Stigler hypothesis is also possible. Several of the variables described below reflect the gains of special segments of the population from either the existing welfare program or from the Carter welfare reform proposals. For example, one variable reflects the requirement that the state raise its benefit payments under the Carter proposal. Consequently, this variable represents the benefit of the poor at the expense of the non poor whose taxes must rise, all other things held constant. Under the Stigler-Peltzman model, the effects of such a variable on the voting behavior of a legislator will depend upon his or her electoral security, weighing the gain from helping the poor against the loss from harming the non-poor. Taking the poor to be the "special interest" group, less secure legislators would tend to be more favorable toward the program, be more influenced at the margin by the interests of the poor, than more secure legislators.[8] In other words, as electoral security rises, the marginal ability of this variable to influence the legislator to vote the interests of the poor should approach zero. If this marginal influence passes beyond zero, then the legislator has sufficient electoral security to experience a gain, at the margin, from voting the public interest over the special interest.

A final hypothesis related to the general literature on legislator voting is that only "ideology" matters. The literature on legislator voting has a long running controversy over the role of legislator ideology in determining how the legislator votes. Early work in this area by Kau and Rubin (1979) and

[8]The endogenous growth literature has identified redistribution programs as a cause of slower than average economic growth (Alesina and Rodrik, 1994; Persson and Tabellini, 1994). Following this literature, growth is in the public interest, redistribution is a private or special interest.

Kalt and Zupan (1984) used groups of other votes by the legislator to account for ideology. These vote indices, or the residuals from regressions explaining them, have been criticized on endogeneity and other grounds (Jackson and Kingdon, 1992; Van Doren, 1990). Coates (1995) and Coates and Munger (1995) equate "ideology" with preferences and contend that a better approach is to include legislator specific characteristics as proxies for the tastes of the legislator.

Poole and Romer (1993) have taken a different tack. They have argued that ideology of the legislator is always the most important determinant of how that legislator votes. Moreover, they contend that models that use these ideology variables alone do at least as well as, and frequently far better than, models which include economic variables in predicting the votes of legislators. Use of these ideology scores also makes for models that are far more parsimonious than economic models. Both these arguments are true. They are also beside the point. Econometric models may be intended for forecasting or for testing a theory. Poole and Romer's argument is fine if all one wishes is to predict how a legislator will vote. It is lacking if one wishes to understand why that legislator voted the way she did. Additionally, the ideology variable used, whether it is an interest group score such as that of Americans for Democratic Action or the League of Conservation Voters or the principal components of the matrix of all votes by the legislator, is highly correlated with the characteristics of the district and of the legislator. Consequently, far from not including ideology, the model here includes ideology in its fundamentals.

In this model, ideology is represented in two ways. First, one might argue that the party affiliation of the legislator represents that individual's ideology. It is, in that case, an imperfect measure of ideology as not all Republicans nor all Democrats express the same opinions on every issue. Alternatively, if ideology is simply another term for preferences, then the legislator characteristics as a group represent ideology. If only ideology matters, all the parameters but â will be indistinguishable from zero.

The second type of hypotheses that this model addresses are specifically related to the issue of welfare benefits and mobility. Recall that Wildasin (1994) demonstrates that it can be Pareto optimal for

individuals from one region to tax themselves to finance subsidies to individuals in other areas to forestall those people from moving. A very real concern in the United States was and has been the induced mobility resulting from differentials in welfare benefits (Moffitt, 1992). Coefficient estimates from the model of equation (1) can provide some insight into the extent to which Members of the U.S. House of Representatives acted on those concerns when voting on welfare reform legislation. To make these hypotheses concrete requires full knowledge of the variables, a discussion of which I turn to now.

Table 1 provides descriptive statistics and variable definitions. The sample contains 399 observations. This sample results from deleting any legislator that did not vote on both the Carter plan and on the Archer Amendment to that plan. An additional observation was dropped because I could not find the age of the legislator.[9]

The vector X from the indirect utility function comprises variables commonly found in legislative voting models to control for district interests. Variables in X include median income, median education, percent white, percent of the population from the central city, the median age of those over 18, whether Jimmy Carter carried the state in 1976, whether the district is from a state of the Confederacy, the tax capacity of the state as measured by the Advisory Council on Intergovernmental Relations, and the income capacity of the state. The vector of legislator attributes, L_i, includes age, race, party affiliation, religious background and gender. The vectors X_i and L_i make up the basic model.

Three additional types of variables are added to the model. The first of these additional types of variables captures characteristics of the welfare system in the legislator's state at the time of the vote. The vector of these variables is denoted by E_i. These variables measure the dollar value of maximum annual

[9]The legislator in question is William Royer from California's 11th district. Representative Royer served less than one full term as he won the special election held to fill the seat of Leo Ryan who had been murdered at Jonestown, Guyana. Royer won the special election largely due to bitter fighting among the Democratic hopefuls but lost the subsequent regular election to a Democrat that had not been a combatant during the campaign for the special election.

AFDC and food stamp benefits in the state, the percent of the poverty rate met by the benefits paid in the legislator's state, the proportion of the recipients that are children, the total number of recipients per Congressional district in the state, and the dollar value of federal aid to the state in 1977, net of highway funds. The second group of variables, represented by C_i, reflects the characteristics of the Carter welfare program. These variables include a dummy variable that indicates whether this state will be required to begin paying benefits under the AFDC-UP program, the gain to the state from boosts in federal spending to hold states' budgets unaffected, and a dummy variable that reflects which states must raise their benefit payments. It must be noted that the classification of variables as measuring the existing situation or the Carter plan is ambiguous. Finally, the regression includes the vote share of the legislator in his or her previous election VS_i and, following Coates (1995) and Coates and Munger (1995), this vote share variable interacted with variables from the X_i, E_i, and C_i vectors to determine the extent to which the electoral security of the Representatives alters the influence of the specifics of the programs on the decision to vote for or against it.

The model to be estimated is a reduced form, and hypotheses about the signs of reduced form variables are typically difficult to make. The key issue is that all the relevant influences on the legislator are accounted for in the regression. Nonetheless, hypotheses about some specific variables in the model are intuitive, especially considering the theory that suggests legislators vote in part to stem the flow of migration into their own districts, that the welfare program will reflect the altruism of the citizenry, its affinity for the recipients of welfare, and the political clout of the various interested parties.

Consider the variables that characterize the existing program and the Carter plan. The first of these is the maximum AFDC and food stamp benefit paid in the state, WELBEN79. If legislators are voting to impose higher benefit levels on low benefit states to reduce the incentive for labor migration, then those from states paying high benefits would be more likely to vote in favor of the Carter proposal than legislators from low benefit states. The coefficient on this variable is expected to be positive. The percent

of the poverty level of income covered by the benefits, PCTPOVRT, is an indication of the need of the poor in each state. If the legislator is motivated to enhance the well-being of the recipients of her state, then those legislators from states meeting smaller fractions of the poverty level of income will be more inclined to vote for the Carter plan. However, if legislators are motivated by the desire to stem migration into their state or to encourage migration out of their state, then those from states paying a high fraction of the poverty rate will be more inclined to vote for the bill and those from states paying a small fraction of the poverty rate will be more likely to vote against the bill. That is, the sign of the coefficient on this variable may be positive or negative.

The higher the proportion of the state's welfare population that is children, CHILDPCT, the more likely a legislator may be to vote for the bill if concern for the needy is the motivation. One might conjecture that the "social affinity" of the upper and middle classes for children is higher than their affinity for non child recipients of welfare. Therefore, the greater the proportion of recipients that are children, the greater the support for welfare programs and higher benefit levels. If this is the case, then political pressure in favor of the Carter plan would be stronger where CHILDPCT is high than where it is low. Consequently, a positive coefficient on CHILDPCT would be support for the Kristov, et al, (1992) hypothesis that greater affinity between taxpayers and benefit recipients raises welfare benefits. However, since children cannot vote, politicians may be less likely to vote for the bill the larger the proportion of recipients that are under the age of majority. The coefficient of CHILDPCT may, therefore, be either positive or negative.

The Orr (1976) and Plotnick (1986) models imply that the greater the ratio of recipients to taxpayers, all other things held constant, the lower are transfers. Translating this into pressures on the representatives, the implication is that more recipients per taxpayer induces the representative to oppose increases in benefits, and therefore to oppose the Carter plan. On the other hand, Plotnick also shows that if the marginal political influence of recipients rises then benefits will rise. One might suppose that the

greater the number of recipients per legislative district in a state, RECIPDIS, the more likely the Representative is to favor passage of the bill. That is, the stronger the political clout of beneficiaries, the greater the likelihood of a favorable vote. Consequently, RECIPDIS may have a positive or a negative sign.

The FEDAID77 variable is intended to capture the stake the state has in the current system. States receiving large amounts of non-highway aid are expected to favor the existing system. Those states receiving little aid, or subsidizing other states, are expected to oppose the existing system. So, as this FEDAID77 rises, the likelihood of a favorable vote is expected to rise.

States that pay benefits to families with an unemployed father would be attractive destinations for migrants. For such states, AFDCUP equals one. Legislators from these states would be more inclined to vote in favor of the Carter plan if they hoped to reduce the flow of migration from states not paying welfare benefits to families with unemployed fathers. A positive sign on AFDCUP is evidence that legislators from high benefit states were motivated in part to vote to stem migration. This positive sign could also be evidence of greater altruism on the part of voters, both constituents and legislators, from states paying these benefits than voters from other states.

Many states would be forced to pay greater benefits under the Carter plan than under the existing plan. Without federal assistance, many of these states would suffer reductions in their state budgets for other purposes. The bigger this loss, the greater the probability legislators from the state will oppose the Carter plan. However, the federal government would be obligated to pay additional monies to those states under the Carter plan to offset these budgetary effects. The greater the transfer to the state under these "held harmless" provisions, the more likely the legislators are to favor the Carter plan. The RELGRANT variable is the dollar benefit to the state treasury under the held harmless provisions of the Carter plan. Therefore, the sign on RELGRANT is expected to be positive. Finally, a simple dummy variable indicating whether the state must raise its benefits or not is used as a regressor. Legislators from states

forced to raise their benefit payments, LT65PCPV equal to one, are likely to oppose the plan as unwarranted due to different circumstances across states, say variation in the cost of living or preferences toward government programs, or as infringements on state authority. Moreover, if the implications for migration are important, then being forced to raise one's benefit levels would reduce the incentive for the poor to leave the state. State obligations under the plan would rise for a second reason, therefore; more poor would remain on the state's rolls. The coefficient on this variable is, therefore, expected to carry a negative sign.

The expected signs on the district characteristic and legislator attributes variables are as follows. CENTCTY captures the effect of urbanization of the district. Urban areas tend both to be more liberal and to have higher concentration of poverty than rural areas. Consequently, the variable is hypothesized to have a positive sign. MEDED, MEDINCD and CARTER76 are also believed to have a positive impact on the likelihood of voting for the Carter bill. These hypotheses reflect the more liberal attitudes of better educated individuals, normality of the demand for income redistribution, and the more favorable perception of Carter's policy proposals by his supporters. PCTWHITE is expected to carry a negative sign because whites historically have been less favorable toward welfare programs than nonwhites.

The sign of MEDVOTAG may be either positive or negative. Older individuals may be more sympathetic to government assistance programs due to their experiences with the Great Depression and other periods of economic hardship. On the other hand, they may be less accepting of the government role, more imbued with a belief in self-reliance. Kristov, et al, (1992) find that the greater the proportion of the population over 65 the higher are transfers as a share of GDP. Finding a positive coefficient on MEDVOTAG is consistent with their results.

Taxpayers from high benefit states may pay higher tax bills to finance the greater benefits for low benefit states. Under the Wildasin (1994) model, such taxpayers would still favor passage of the plan because the equilibrium impact on wages would be smaller than if migration continued unfettered. Two

variables that capture these impacts are the tax capacity and the income capacity of the state. The Advisory Commission on Intergovernmental Relations computed the tax capacity variable as an alternative measure of the ability of a state to finance government services. This variable will generally be large in those states whose tax rates are low, or states that have large quantities of taxable resources such as land, oil or minerals. Income capacity measures the ability of states to finance public services using standard measures of income. It is hypothesized that legislators from states with high values of the tax capacity variable will be more likely to oppose the Carter plan. This is expected because these states offer comparatively few public services and have comparatively greater aversion to taxation than other states. High values of the income capacity variable suggest a high income state, one likely to have high wages and, therefore, to be attractive as a destination for migrants. High values of this variable will, therefore, show greater likeliness to favor minimum national benefits and standardization of programs to reduce the incentive for migration or because redistribution is a normal good.

As for the personal characteristics of the legislator, several have unambiguous hypothesized signs. Legislators from the South, who are white, or who are male are expected to be less likely to vote for the Carter reform. Democrats are expected to be more likely to vote for the bill than non-Democrats. The variable PROTEST has no clear sign expectation. In accord with the Protestant ethic, Protestants may be more likely to oppose the Carter program as paying too great a reward to non work. On the other hand, several Protestant denominations are very liberal in their attitudes toward social issues. Finally, the effects of greater age of the legislator on his or her likelihood of voting for the bill are uncertain. The reasons are those that are expressed above with respect to the age of the district population.

4. Empirical Results

The results are presented in three stages. First, simple Chi square tests of independence of two dichotomous variables are conducted. Second, voting on the Carter proposal is analyzed separately from

voting on the Archer Amendment. Finally, the two votes are analyzed together using a bivariate probit technique. The advantage of the bivariate probit is that it estimates the parameters of the indirect utility function for each vote simultaneously while accounting for correlation in the unobservable regression errors in the two equations. This approach improves the efficiency of the estimates.[10]

Table 2 reports the Chi square value for each of tests of the independence of the legislator's vote and personal characteristics or policy variables. The Chi square tests support the hypothesized relationship between voting on the Carter proposal and the dichotomous explanatory variables. For example, the test statistic for the null hypothesis of independence between AFDCUP and the vote on the Carter proposal is 62.1. The p-value for this test is less than .0005, clearly indicating rejection of independence. Testing for independence of LT65PCPV and the vote on the Carter proposal results in a Chi-square value of 25.7, also with a p-value less than .0005. Among the variables that are naturally dichotomous, only MALE and CARTER76 cannot be rejected as independent from the vote at the 5% level. However, rejection of the independence of MALE and the vote is possible at the 10% level of significance.

The WELBEN79 variable was made dichotomous by comparing the benefits paid in a given legislative district (state) to the average level of benefits in the sample. When the level was above average, a new variable called HIGHBEN was set equal to one. When WELBEN79 was below average, HIGHBEN was set to zero. The Chi squared test statistic for the null hypothesis that HIGHBEN and the vote on the Carter proposal are independent variables is 67.8, resulting in rejection of the null.

The results of the estimations of the vote equation for the Carter proposal provide further support for the hypothesized relationships. First, it is clear that the characteristics of the existing situation and of the Carter proposal are important determinants of the vote of the legislator. The tests clearly indicate that the characteristics of the pre-existing welfare program in the legislator's state and the effects of the Carter

[10]This also may be helpful because of the high degree of collinearity among district characteristics and among the welfare system variables.

proposal are important influences on the legislator's decision calculus. Moreover, one can reject exclusion of interactions between the legislator's vote share from the previous election and the characteristics of both the existing and proposed plan. In other words, there is weak support for the Stigler hypothesis that electoral security influences the manner in which elected representatives respond to special interest pressures. The most restrictive, or BASE, model is rejected in favor of the full model which includes vote share interacted with all the district and welfare variables. The less restrictive models, however, cannot be rejected in favor of the full model. Finally, the results soundly reject the hypothesis that the only significant determinant of legislator voting is ideology, here measured by legislator personal characteristics. Limiting the model to include only party affiliation DEM, the SOUTH variable and the legislator's personal characteristics is rejected against each of the alternative more general specifications. Specific results for all the models are reported in Tables 3 and 4.

Second, it is quite clear that for this study the "pocketbook" types of variables contain much of the explanatory power. These variables are individually significant in one or more of the four regressions reported in Tables 3 and 4: TAXCAP, INCCAP, AFDCUP, LT65PCPV, RELGRANT. Moreover, it is possible to reject at the 95% level the hypothesis that the vectors E and C have no impact on the legislators' voting decisions. In other words, with respect to the Carter welfare reform proposal the voting of individual legislators is clearly influenced by the economic implications for the district. That is, the BASE model of Table 3 is rejected in favor of the model in the second column of that table.

One might contend that the influence of the E and C variables is predominantly from one or the other of these vectors. To check this possibility, I tested the restriction that first one then the other was insignificant when added to a model including the other. In either case, the data rejects the omission of one vector once the other is included. What this means is that both the existing situation and the Carter proposals are influential, neither is carried in on the strong significance of the other.

In the analysis here, legislators are found to be influenced differently at the margin by the variables

in the C and E vectors as their electoral security changes. The third model reported in Table 3 is not rejected in favor of either of the more restrictive models from that table. This provides support for the Stigler hypothesis. Note also that the level variables have signs opposite from their interaction terms. This result indicates that the marginal impact of the level variable goes toward zero as electoral security rises, perhaps even to the point of switching the direction of impact of the variable.

Turning to the idea of legislators voting to stem mobility, consider the coefficient of WELBEN79. In the model without interactions this coefficient is positive, as the theory predicts, though not statistically significant at conventional levels. Once the interaction with the vote share variable is present, the coefficient on the level of benefits becomes negative, but the interaction term is positive. This indicates that more secure legislators are more likely to vote to impede mobility. The level of the vote share at which the impact of WELBEN79 becomes positive, at the margin, is 51.1 percent of the vote. The average vote share in the sample is 70.9 percent.

It was also argued that legislators voting to impede mobility would tend to come from states paying AFDCUP under the existing welfare system; that is AFDCUP would have a positive influence on voting for the Carter proposal. The evidence is that such is the case. Even in the models with the vote share interaction, when the coefficient on AFDC-UP is negative, the marginal impact of AFDC-UP is positive for all incumbents. Consequently, there is evidence that the support of minimum benefit standards is in part motivated by a desire to stem migration of the poor from low benefit to high benefit states.

Table 5 reports the value of the vote share at which the marginal impact of each of the variables interacted with the vote share becomes zero. For CHILDPCT, LT65PCPV, FEDAID77 and RELGRANT, the marginal impact does not reach zero within the relevant (possible) range of values for the vote share. In the case of LT65PCPV and FEDAID77, the marginal impact is positive for all elected officials; the marginal impacts of CHILDPCT and RELGRANT are negative for all. The sign of the marginal impact may be positive or negative in the relevant range of electoral security for WELBEN79, PCTPOVRT, and

AFDCUP. However, nearly all members of the House of Representatives in the sample are electorally secure enough (have vote shares sufficiently large) that they can vote the general interest (against those favoring more redistribution and, implicitly, slower economic growth) on the welfare reform proposals.

Several of the variables in the model were related to the existing literature on the size of benefits across states. For these variables, the evidence is mixed with respect to the hypotheses in that literature. Under the social affinity hypothesis it seems likely that the higher is the proportion of recipients that are children the higher will be support for increased benefits. That does not appear to be the case in any model. The greater the proportion of recipients that are children, the lower is the support for the Carter plan. Of course, this may be a rejection of the assumption that the taxpaying population has greater affinity for children than for non-children, so the evidence is not conclusive. The signs of MEDVOTAG and the legislator's own age are consistent with the Kristov, et al (1991) results.

Orr (1976) and Plotnick (1986) each derived the implication that the greater the number of recipients relative to the number of taxpayers the lower will be the benefits. Here RECIPDIS, which measures the number of poor per legislative district, is positively associated with support for increasing benefits. Of course, this may be due to the political clout of the poor rising, as Plotnick's model implied. Consequently, because the reduced form cannot separate the influences of political clout and the marginal cost of providing benefits to more people, it is not possible to conclude that the model refutes the marginal cost explanation.

Calculation of the probability derivatives provides additional evidence on the influence of the variables on the voting decision of the legislators. Table 6 provides the probability derivatives. These values are calculated as the average difference in the predicted probability of a favorable vote as one variable is changed by one unit. For example, given the value for CENTCTY, and all the other variables for each legislator, the probability of a favorable vote by that legislator is forecasted. Then the forecasted probability of a favorable vote is recalculated assuming that CENTCTY has increased by one unit. The

reported value is the difference in these two forecasted probabilities averaged over all the legislators in the sample. For those variables that are interacted with vote share, the reported values account for the effect of changing that variable both in its linear and its interacted roles. Finally, for those variables that are categorical in nature, MALE and DEM for instance, the forecasted probability is computed for each individual with that variable set to zero, then recalculated for that variable set to one. It is the average difference in these two probabilities that is reported.[11]

As Table 6 makes clear, the change in the probability of a vote for the Carter proposal is often quite small, frequently less than 1 percentage point. But other differences are quite large. For example, consider two legislators, one from a state paying AFDC-UP the other from a state which does not. The probability of supporting the Carter proposal is almost 19 percentage points higher for the former. If the difference is between legislators from states whose benefits are less than 65% of the poverty line and legislators from states whose benefits exceed that level, the former are 19 percentage points more likely to favor the Carter proposal. Similarly, a one percentage point increase in the ratio of welfare and food stamp benefits to the poverty level raises the probability of that state's legislators voting in favor of the Carter proposal by almost 5 percentage points. Males, whites and legislators from the south are less likely to vote for the Carter proposal than are women, non-whites and non-southerners. The differences are 18, 22 and 24 percentage points, respectively. Democrats are almost 45 percentage points more likely to favor the Carter reform than are non-Democrats. Legislators from states carried by Carter in the 1976 presidential election and those from states where children are a higher proportion of the welfare recipients are each about 2 percentage points more likely to vote for the Carter proposal than other legislators.

Finally, committee leaders do not appear to vote any differently than other members of Congress.

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[11]This approach makes sense for two reasons. First, raising the value by 1 for those for whom it is already 1 makes the value of the variable fall outside the possible range for that variable. Second, this approach can be thought of as integrating out over the distributions of all the other variables putting the focus on the unconditional effect of the variable of interest.

Unreported estimates included dummy variables for leadership of House committees with jurisdiction over social welfare issues.[12] The variable took value one if the member was chair or ranking minority member of a relevant committee or chair of a relevant subcommittee. Additionally, the regressions included an interaction of the leadership variable with party affiliation. These two variables are jointly insignificant and none of the results reported above are affected by the inclusion or exclusion of these variables. Consequently, unlike Barrett and Cook (1991), this analysis provides little support for the idea that committee leaders vote differently on welfare reform legislation than the other members of Congress.

In many of the estimations reported above large numbers of variables are statistically insignificant. This may be because these variables do not belong in the model, because of high degrees of correlation among the explanatory variables, or because the equation error is imprecisely estimated. Bivariate probit estimates of the voting on the Carter proposal and the Archer Amendment to that proposal will help improve the efficiency of the estimates. Table 7 shows the results for the base model for both votes. A Chi squared test of the estimated correlation between the equation errors easily rejects the null hypothesis of no correlation; the test statistic with 1 degree of freedom is 46.8. Note also that, relative to the single equation base model of Table 3, an additional variable CENTCTY, is statistically significant at the 10% level. Little else about the results for the Carter proposal have changed as a consequence of using the bivariate probit model.

It is interesting to note that the results for the Archer Amendment are largely consistent with the hypotheses for the Carter proposal. To ease comparability, a vote against the Archer Amendment was coded as a 1, a vote for coded as a zero. This way the hypothesized signs of the variables in a vote against the Archer Amendment, which is implicitly a vote for the Carter Proposal, will be the same as the hypothesized signs in the Carter proposal equation. Except for those variables that are not remotely

[12]Results are available upon request.

significant at conventional levels, the variables have the same signs and frequently are significant in both equations.

Table 8 presents the results for the third model of Table 3 when estimated as a bivariate probit. The Chi squared test statistic of this model against the base model is 59.6.[13] The critical value of the Chi square is about 47 with 34 degrees of freedom, so one can reject the restrictions the base model places on the this model. Table 9 shows the full set of Chi square test statistics for each of the sets of restrictions. Note that the results are not meaningfully different from those of Table 2.

Conclusion

The analysis examined the political economy of welfare reform by considering the role of various interests on the decision calculus of members of the House of Representatives. The evidence suggests that the elected officials compared the Carter welfare reform proposals to the existing system to determine which system most favored the interests of their district. But the legislators are politicians and people, not simply conduits for transmitting the wishes of their constituents to the national level. Consequently, the legislators' decisions were influenced by both their own preferences, measured by personal characteristics, and by the interaction of the welfare proposals with their political security.

The results with respect to the hypotheses about the effects of mobility are mixed. Unfortunately, because of the nature of the models and the need to use proxy variables, the evidence here is only suggestive, not conclusive. It may have been influenced by the social affinity of taxpayers for recipients and by the political clout of the recipients. Additionally, favorable votes may have been the result of greater altruism on the part of legislators from high benefit states or on the part of their constituents.

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[13]The full model of Table 4 is not tested against the restricted models because the likelihood function is not concave. This occurs at least in part because the estimate of the correlation coefficient reaches 1.

Nonetheless, there is evidence that voting on the Carter welfare reform proposals was influenced by the desire to stem migration from poor to rich states.

Table 1: Variable names, definitions, descriptive statistics, expected direction of influence, and vector		
Variable (expected sign, vector)	Definition	Mean and Standard Deviation
CENTCTY (+,X)	Percent of the district population living in the central city	31.3 (31.5)
MEDED (+,X)	Median years of education	11.9 (3.9)
MEDVOTAG (?,X)	Median age of the voting age population	42.7 (2.9)
PCTWHITE (-,X)	Percent of the district population that is white	85.1 (16.4)
MEDINCD (-,X)	Median income in the district	9626 (2023)
CARTER76 (+,X)	1 if Carter carried the state, 0 otherwise	.58 (.49)
SOUTH (-,X)	1 if a state of the Confederacy, 0 otherwise	.25 (.43)
WELBEN79 (+,E)	Maximum benefits from AFDC and Food Stamps in the state	3917 (1351)
DEM (+,L)	1 if the Representative is a Democrat, 0 otherwise	.64 (.48)
AGE (?,L)	The age of the Representative	49.4 (10.4)
MALE (?,L)	1 if a male, 0 otherwise	.97 (.18)
WHITE (-,L)	1 if white, 0 otherwise	.95 (.21)
PROTEST (?,L)	1 if a Protestant, 0 otherwise	.56 (.50)
PCTPVRT (+,E)	AFDC and Food Stamp benefits as a percent of the poverty rate	73.7 (13.2)
CHILDPCT (+,E)	Percent of the recipients of AFDC that were children in March, 1979	69.9 (2.6)
RECIPDIS (+,E)	Welfare recipients per Congressional district in the state	23.3 (7.0)
AFDCUP (+,C)	1 if the state provided AFDC-UP benefits, 0 otherwise	.65 (.48)
TAXCAP (?,X)	Tax capacity, the ability of a state's economy to sustain taxation	99.2 (12.7)
INCCAP (-,X)	Income capacity, the ability of the state's economy to fund government services	100.0 (10.0)
FEDAID77 (?,E)	Dollars of transfers to the state from the Federal government, net of highway funds.	2635 (2218)
RELGRANT (+,C)	Millions of dollars to the state treasury in 1982 under passage of the Carter reform.	62.7 (72.6)
LT65PCPV (-,C)	1 if a state pays less than 65% of the poverty level of a family of 4 in benefits, 0 otherwise	.23 (.42)
VOTESHR (?)	Percent of the vote received by the Representative in the last election	70.9 (15.7)
HIGHBEN (+)	1 if the legislator's state pays benefits higher than the average in the sample, 0 otherwise	.55 (.50)

Table 2: Chi Square Tests of Joint Significance of Coefficients				
Unrestricted Models	Restricted Models			
	Ideology	Base	Existing program and Carter proposals	Existing program and Carter proposals, and voteshare interacted with each
Base	44.2*			
Existing program and Carter proposals	74*	29.8*		
Existing program and Carter proposals and voteshare interacted with each	84.6*	45.4*	15.6**	
Full	98.6*	54.4*	24.6	9

*Indicates that the restricted model is rejected at the 5% level.

**Indicates that the restricted model is rejected at the 10% level.

Table 3: Estimation Results for the Base Model and Two Less Restrictive Alternatives				
	BASE Model 1	Existing situation and Carter proposals Model 2	Existing situation and Carter proposals and Voteshare interaction with each Model 3	
Constant	-2.65 (2.3)	18.59 (13.4)	-24.08 (65.6)	
CENTCTY	.598e-2 (.377e-2)	.714e-2 (.425e-2)**	.570e-2 (.460e-2)	
MEDED	.314e-1 (.302e-1)	.255e-1 (.255e-1)	.252e-1 (.243e-1)	
MEDVOTAG	.609e-1 (.327e-1)**	.490e-1 (.355e-1)	.524e-1 (.373e-1)	
PCTWHITE	-.235e-1 (.101e-1)*	-.273e-1 (.117e-1)*	-.371e-1 (.133e-1)*	
MEDINCD	.428e-4 (.609e-4)	.624e-4 (.627e-4)	.218e-4 (.669e-4)	
CARTER76	.312 (.214)	-.485e-1 (.343)	.109 (.377)	
SOUTH	-1.400 (.321)*	-1.156 (.425)*	-1.376 (.481)*	
WELBEN79		.424e-2 (.309e-2)	-.009 (.015)	.176e-3 (.208e-3)
DEM	1.872 (.200)*	2.069 (.229)*	2.225 (.249)*	
AGE	.113e-1 (.085e-1)	.123e-1 (.090e-1)	.144e-1 (.099e-1)	
MALE	-.541 (.485)	-.668 (.527)	-1.085 (.600)**	
WHITE	-1.214 (.897)	-1.227 (.952)	-1.312 (.999)	
PROTEST	-.537 (.191)*	-.359 (.206)**	-.323 (.218)	
PCTPOVRT		-.407 (.317)	1.072 (1.567)	-.195e-1 (.216e-1)
CHILDPCT		-.975e-1 (.602e-1)	-.206 (.291)	.136e-2 (.418e-2)
RECIPDIS		.185e-1 (.241e-1)	-.031 (.096)	.715e-3 (1.32e-3)
AFDCUP		.743 (.409)**	-3.877 (2.012)**	.717e-1 (.302e-1)*
TAXCAP	-.425e-1 (.115e-1)*	-.259e-1 (.145e-1)**	-.348e-1 (.163e-1)*	
INCCAP	.600e-1 (.181e-1)*	.306e-1 (.253e-1)	.556e-1 (.289e-1)**	
FEDAID77		.149e-3 (.142e-3)	-.516e-4 (.527e-3)	.257e-5 (.732e-5)
RELGRANT		-.878e-2 (.474e-2)**	-.219e-1 (.200e-1)	.199e-3 (.291e-3)
LT65PCPV		.872 (.419)*	-.941 (2.336)	.331e-1 (.328e-1)
VOTESHR			.559 (.929)	
Log Likeli.	-141.4	-126.5	-118.7	

Table 4: The Ideology Only Model and the Most General Model			
	Ideology Only	Full Model	
Constant	1.25 (1.02)	-19.43 (73)	
CENTCTY		-.26e-1 (.22e-1)	.46e-3 (.32e-3)
MEDED		-.61 (.73)	.70e-2 (.73e-2)
MEDVOTAG		.195 (.19)	-.21e-2 (.27e-2)
PCTWHITE		-.104 (.68e-1)	.85e-3 (.88e-3)
MEDINCD		.79e-3 (.40e-3)**	-.11e-4 (.57e-5)**
CARTER76		-2.54 (2.0)	.38e-1 (.30e-1)
SOUTH	-1.427 (.21)*	-1.47 (2.1)	-.15e-2 (.29e-1)
WELBEN79		-.14e-1 (.16e-1)	.23e-3 (.22e-3)
DEM	1.774 (.18)*	2.22 (.26)*	
AGE	.015 (.008)*	.13e-1 (.11e-1)	
MALE	-.44 (.46)	-1.17 (.63)**	
WHITE	-1.90 (.85)*	-1.34 (1.1)	
PROTEST	-.62 (.17)*	-.33 (.23)	
PCTPOVRT		1.51 (1.7)	-.24e-1 (.23e-1)
CHILDPCT		-.32 (.35)	.30e-2 (.52e-2)
RECIPDIS		-.08 (.12)	.11e-2 (.17e-2)
AFDCUP		-2.67 (2.3)	.59e-1 (.35e-1)**
TAXCAP		-.74e-1 (.73e-1)	.44e-3 (.98e-3)
INCCAP		.030 (.13)	.42e-3 (.20e-2)
FEDAID77		.48e-3 (.82e-3)	-.54e-5 (.12e-4)
RELGRANT		-.36e-1 (.28e-1)	.49e-3 (.41e-3)
LT65PCPV		-.50 (2.7)	.32e-1 (.34e-1)
VOTESHR		.47 (1.0)	
Log Likelihood	-163.5	-114.2	

Table 5: Vote Share (in percent) at which Marginal Impact Changes Sign	
Variable	Zero point
WELBEN79	55.92
PCTPOVRT	57.12
CHILDPCT	132
RECIPDIS	53.09
AFDCUP	53.85
FEDAID77	26770
RELGRANT	142.4
LT65PCPV	13.83

Table 6: Probability Derivatives Model 3 of Table 3				
	Mean	Stand. Dev.	Maximum	Minimum
PCTPOVRT	0.049	0.081	0.340	-0.037
CHILDPCT	0.018	0.016	0.054	0.000
AFDCUP	0.186	0.236	0.898	-0.113
LT65PCPV	0.191	0.192	0.764	0.000
RECIPDIS	-0.003	0.004	0.000	-0.016
WELBEN79	-0.001	0.001	0.000	-0.003
FEDAID77	-0.000	0.000	0.000	-0.000
RELGRANT	0.001	0.001	0.005	-0.000
VOTESHR	0.001	0.007	0.032	-0.018
MALE	-0.182	0.161	-0.000	-0.413
DEM	0.445	0.237	0.734	0.000
WHITE	-0.217	0.191	-0.000	-0.488
PROTEST	-0.056	0.047	-0.000	-0.128
SOUTH	-0.241	0.178	-0.000	-0.508
CARTER76	0.018	0.016	0.044	0.000
CENTCTY	-0.001	0.001	0.000	-0.002
MEDED	-0.004	0.004	0.000	-0.010
MEDINCD	-0.000	0.000	0.000	-0.000
MEDVOTAG	-0.009	0.008	0.000	-0.021
PCTWHITE	0.006	0.005	0.015	-0.000
AGE	-0.002	0.002	0.000	-0.006
TAXCAP	0.006	0.005	0.014	-0.000
INCCAP	-0.009	0.008	0.000	-0.022

Table 7: Estimation Results for the Base Model of the Carter Proposal and the Archer Amendment using Bivariate Probit		
	Carter	Archer
Constant	-1.92 (2.34)	-7.64 (2.53)*
CENTCTY	.006 (.004)**	.011 (.004)*
MEDED	.033 (.033)	.034 (.056)
MEDVOTAG	.055 (.032)**	.004 (.038)
PCTWHITE	-.030 (.010)*	-.006 (.010)
MEDINCD/1000	.028 (.061)	-.022 (.081)
CARTER76	.339 (.212)	.823 (.300)*
SOUTH	-1.502 (.320)*	-.806 (.342)*
DEM	1.885 (.202)*	4.528 (.564)*
AGE	.012 (.009)	.014 (.010)
MALE	-.643 (.497)	.295 (.614)
WHITE	-1.408 (.898)	-.086 (.637)
PROTEST	-.513 (.191)*	-.830 (.265)*
TAXCAP	-.042 (.011)*	-.056 (.013)*
INCCAP	.064 (.018)*	.091 (.024)*
Rho	.866 (.065)*	
Log Likeli.	-206.1	

Table 8: The Existing Program and Carter Proposals with Vote Share Interactions as a Bivariate Probit				
	Carter		Archer	
Constant	-24.8 (65.6)		-16.33 (81.1)	
CENTCTY	.008 (.005)**		.012 (.005)*	
MEDED	.026 (.025)		.080 (.187)	
MEDVOTAG	.040 (.036)		.005 (.046)	
PCTWHITE	-.046 (.013)*		-.010 (.013)	
MEDINCD/1000	.021 (.067)		-.106 (.102)	
CARTER76	.160 (.376)		.928 (.560)**	
SOUTH	-1.400 (.466)*		.132 (.544)	
WELBEN79[a]	-.008 (.015)	.180e-3 (.205e-3)	-.253e-4 (.019)	.515e-4 (.252e-3)
DEM	2.206 (.250)*		5.426 (.901)*	
AGE	.016 (.010)		.017 (.013)	
MALE	-1.062 (.597)**		.072 (.792)	
WHITE	-1.469 (1.05)		-.024 (.737)	
PROTEST	-.340 (.218)		-.742 (.304)*	
PCTPOVRT	.990 (1.56)	-.020 (.021)	.125 (1.98)	-.007 (.026)
CHILDPCT	-.152 (.291)	.448e-3 (.004)	.036 (.350)	-.178e-3 (.005)
RECIPDIS	-.012 (.095)	-.485e-3 (.001)	.010 (.125)	.284e-3 (.002)
AFDCUP	-3.567 (1.91)**	.065 (.028)*	-2.710 (2.086)	.049 (.030)
TAXCAP	-.032 (.016)*		-.051 (.020)*	
INCCAP	.049 (.029)**		.083 (.039)*	
FEDAID77/100	-.022 (.052)	.47e-3 (.72e-3)	.545e-3 (.812e-3)	-.778e-5 (.106e-4)
RELGRANT	-.018 (.020)	.148e-3 (.287e-3)	-.399 (.032)	.589e-3 (.462e-3)
LT65PCPV	-.595 (2.20)	.023 (.030)	-1.573 (2.306)	.026 (.030)
VOTESHR	.672 (.922)		.228 (1.114)	
Rho	.866 (.065)*			
Log Likelihood	-176.3			

Table 9: Chi Square Tests of Joint Significance of Coefficients - bivariate probit estimates				
Unrestricted Models	Restricted Models			
	Ideology	Base	Existing program and Carter proposals	Existing program and Carter proposals and voteshare interacted with each
Base	65.8*			
Existing program and Carter proposals	104*	38.2*		
Existing program and Carter proposals and voteshare interacted with each	125.4*	59.6*	21.4	
Full[b]	145.8*	80*	41.8	20.4

*Indicates that the restricted model is rejected at the 5% level.

[b]The full model did not converge due to non-concavity of the likelihood function so these tests are only to illustrate the similarity of the bivariate probit results with those from the simple probit model.

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