

**WELFARE REFORM, FAMILY STRUCTURE, AND INTER-STATE MIGRATION:
MOVING TO BENEFITS; MOVING FROM RESTRICTIONS?**

by

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Abstract

The thesis of this study is that, as a result of increased welfare benefits and eligibility inequalities, the 1996 welfare reform act not only enhanced incentives for poor families to move, but also and perhaps more importantly, created disincentives for them to stay in “race to the bottom” states. In testing this thesis, we evaluate the mediating and moderating roles of state economic development and family structure. We merge data from three main sources: The 1996-1999 panel of the Survey of Income and Program Participation, the Urban Institute’s Welfare Rules Database, and state economic characteristics from 1996-1999 Current Population Surveys. Modeling both destination (pull) and departure (push) effects of welfare policy measures and selected covariates in a multi-level, discrete-time event history migration analysis, the findings support the thesis that changes in state welfare policy precipitated the interstate migration of poor families in the U.S. However, state unemployment patterns conditioned the migration effects of welfare reform. Single mothers were not more directly affected by welfare eligibility and behavior-related rules than were married couples.

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Introduction

The enactment of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) in 1996 renewed the debate among welfare and migration scholars alike with regard to the incentive effects of the U.S. welfare system (Schram and Soss 1999; Schram, Nitz, and Krueger 1998; Frey, Liaw, Xie, Carlson 1996; Long 1974). The new welfare-migration thesis states that welfare migrants, traditionally viewed as unmotivated and lacking ambition, now engage in welfare policy-driven rational decision-making when considering an interstate move (Schram and Soss 1999). Research shows that poor single mothers in particular – a group traditionally thought to lack financial resources to migrate – are attracted to states offering greater welfare gains (see Enchautegui 1997, Schram et al. 1998 for examples). Thus, single-mother-headed families should be more likely than other families to engage in welfare-motivated migration. This paper contributes to the current debate by testing policy mechanisms that are hypothesized to drive migration of poor families.

From a policy perspective, research is needed to identify the process of migration decision-making given welfare inequalities, and how the process is linked to family structure. From the perspective of migration scholarship, the need is for new longitudinal state, family, and individual multi-level analyses that integrate both destination and origin models to provide a more valid test of the welfare migration hypothesis. This research addresses the new debate on whether state welfare eligibility and behavior rules, which now vary across states, induce interstate migration (see Borjas 1999, Cushing 1993, Danaher 1997, Enchautegui 1997, Kaestner et al. 2001, Moffitt 1992, and Schram et al. 1998) and whether certain welfare measures are more

salient than others in the migration decision making process, especially for single mothers compared with other poor families.

Utilizing merged data from the 1996-1999 panel of the Survey of Income and Program Participation, the Urban Institute's Welfare Rules Database, and state economic characteristics from the Current Population Surveys, we apply multiple measures of welfare eligibility and benefits to a longitudinal research design and multi-level event-history modeling techniques to assess what kind of welfare differentials play a role in predicting interstate migration of poor families. In addition, we evaluate whether single-parent poor families are more likely to be affected by state variation in benefits than two-parent poor families and thus more likely to move to other states, and whether employment opportunities in origin and potential destination states, as well as origin-state social network ties, mediate the relationship between welfare gains and migration.

Theoretical Background: Migration of Poor Families

The new federalism has at least two key consequences related to migration decision-making: increased inequality across states in the level of benefits and the restrictive nature of eligibility criteria, and inequality across states in the direction and degree of change in implementation of benefit levels and eligibility criteria (De Jong, Graefe and St. Pierre 2001 and De Jong and Graefe 2003), as some states maintain or enhance former AFDC policy guidelines while other states 'rush to the bottom' to reduce welfare case loads and to deter in-migration of poor families.

The microeconomic model of migration posits that rational individuals choose to migrate only after ensuring economic feasibility (Massey et al. 1998). Their decision to migrate therefore depends not only on macro- and micro-level determinants of the origin state (push

factors), but also on those of the potential destination state (pull-factors). The welfare-migration thesis posits that the costs of migration are outweighed by its benefits when higher benefit levels and less restrictive eligibility rules favor welfare participants. Such conditions are expected to "push" migrants from states where benefits and eligibility are less favorable. Based on this logic, we expect variation in state welfare policy to increase the likelihood of migration to states with more lenient eligibility rules and higher benefits, while discouraging migration to states with more stringent rules and lower benefits.

We extend prior research employing traditional micro-level migration theory by refining the generalized micro-economic cost-benefit theoretical assumption through explicitly modeling both a destination benefit model (pull effects) and a departure disincentive model (push effects). In order to evaluate the effect of welfare reform on migration, we use general welfare policy cost-benefit dimensions (i.e., summary measures rather than single specific items), controlling for alternative explanation indicators of state economic characteristics, and socio-economic characteristics of individuals.

Prior Research on Welfare Migration

Previous studies of welfare migration present conflicting and inconclusive results as to whether poor families move primarily to maximize their welfare benefits, in part, because of the diverse range of data and methods employed. Schram, Nitz, and Krueger (1998) categorize the welfare migration literature according to three waves of research. The earliest wave, typically based on ecological data, showed little evidence for the welfare migration hypothesis (e.g., Cebula 1979; Long 1974; De Jong and Donnelly 1973; Sternlieb and Indik 1973; Beale 1971; Piven and Cloward 1971; Steiner 1971). The second wave of studies, often utilizing cross-sectional individual-level data, indicated that the poor do migrate to higher benefit states (e.g.,

Dye 1990; Blank 1988; Gramlich and Lauren 1984). However, the third and more recent wave found only weak or no evidence for the welfare migration thesis (e.g. Schram, Nitz, and Krueger 1998; Levine and Zimmerman 1995; Hanson and Hartman 1994; Walker 1994). Indeed, a recent pre-reform review of the econometric literature revealed only “suggestive but inconclusive” evidence of welfare effects on interstate migration, recommending it as among “good candidates for additional research” (Moffitt 1992, p. 56).

Most of these studies used a cross-sectional methodology, an approach providing after-move-only measures of poverty, employment status, educational enrollment, marital status, fertility, etc., which are not only determinants of migration but also important criteria for welfare eligibility. Thus the causal order of variables is a major analytical problem in interpreting results using a cross-sectional research design.

Furthermore, most research neglects non-economic factors in the migration decision-making process. Schram and Soss (1999) posit three assumptions underlying the study of welfare migration: the *incentive*, *salience*, and *instrumental* assumptions. The first of these assumptions is that welfare benefits vary across states, creating a migration incentive. The second assumption is that welfare benefits are the sole and most important factor in the migration decision-making process – they are the salient factors creating that incentive. The instrumental assumption is a reformulation of the rational-choice model of migration, where individuals engage in a cost-benefit calculation before deciding to move. Schram et al. (1999) point out that the welfare-migration thesis in this form does not allow for non-economic factors to compete with economic ones. However, recent studies support the salience of non-economic factors in the welfare migration process. While weak labor force attachment, or a lack of a stable work history, appears to encourage migration (Enchautegui 1997), social networks and ties to one’s

community may mediate the relationship between migration and welfare, where individuals with strong attachments to their place of origin are less likely to move (Dublin 1998, Schram et al. 1999). The previous literature's concentration on monetary welfare benefits alone ignores, for example, both the role of social network alternatives to purchased services when families have an inability to pay for them, as well as the importance of post-reform changes in welfare eligibility requirements (Schram et al. 1999).

Most research on welfare migration is limited to pre-welfare reform data. To capture the impact of welfare reform policy on the migration process, research must incorporate pre- and post-reform policy rules that foster or inhibit interstate migration. Since previous equivocal research results were based on dollar benefits alone, access to welfare benefits rather than actual dollar amounts may be the most salient post-reform aspects influencing welfare recipient migration. States are now increasingly different in terms of their behavior and eligibility rules, issues we expect to be particularly salient for poor single mothers.

Family Structure and Migration of the Poor

Prior research confirms that migration among the poor varies with family structure although the literature is inconclusive as to why, and the evidence is not strong. Unmarried poor women are reported to be more geographically mobile than married poor individuals (Kaestner 2001), and welfare gains seem to attract single mothers the most (Cushing 1993 and Enchautegui 1997). Cushing (1993), for example, found that welfare benefits are weakly related to out-migration, and moderately related to the in-migration of single mothers. In addition, Clark (1990) found that single mothers, whether they received welfare or not, were significantly less likely to migrate if they lived in states offering generous AFDC benefits. Whether differently structured families respond differently to variations in today's welfare landscape, however,

remains an empirical question. Devolution to the states increased variation in the TANF eligibility of poor two-parent families, potentially creating new welfare incentives for poor couples with children. Also, it is not clear whether financial capital and social capital factors are weighed differently depending on family structure, or whether poor father-headed families respond differently than poor mother-headed families to welfare constraints and opportunities.

For example, the impact of increasing stringency in state welfare policy work requirements should be considered in the context of family and friend child care networks (Meyers, Heintze and Wolf 2002). Poor mothers, often unable to afford unsubsidized institutionalized child care, may rely more on mutual exchanges with other single mothers (Nelson 2000) for less expensive private child care to fulfill their benefit requirements. On the other hand, for married couples, the husband's existing employment plus established mutual social ties may increase the costs of migration for those families. For all families, then, the presence of more children may result in stronger social network ties, potentially linked with family instrumental functioning, which inhibit migration.

Less is known about how poor single fathers respond to such constraints, and we are not aware of any study addressing the reaction of poor single fathers to welfare reform. However, since social attachments play a part in the decision to move across state lines generally (Dublin 1998), states with more lenient welfare eligibility and/or behavior rules would be expected to attract single-parent families, whether single mother or single father headed, more than two-parent families, when their social network ties are not strong.

Other scholars attribute the migration of single parents primarily to the search for better employment opportunities (Crowder 2001; Dublin 1998; Kaestner et al. 2001). Although a woman's labor force experience prior to welfare helps to determine her welfare migration

(Enchautegui 1997), poor single mothers are less likely to have labor force experiences whose length and quality attaches them to a given area compared with married mothers. It appears that the structural disadvantages single women face in labor force competition may affect their decisions to move across state lines. Both the strength of social ties and the degree of labor force attachment can influence the likelihood of interstate migration, and poor single mothers may thus be more likely to migrate across state lines in response to a variety of welfare gains.

Hypotheses

Based on the preceding literature, we test the following set of hypotheses:

1. Post welfare reform changes in state welfare eligibility and behavior rules, as well as benefit levels, impact both departure (push) and destination selection (pull) migration behaviors of poor families.
2. State economic development is a viable alternative (mediating) explanation to state welfare reform policy for the migration behavior of poor families.
3. Alternatively, state economic development indicators may interact with welfare reform measures to condition the impact of welfare policy on the migration behavior of poor families.
4. The impact of changes in state welfare eligibility and behavior rules, as well as benefit levels, on migration behaviors of poor families is moderated by family structure, in that single mothers are more directly affected by welfare eligibility and behavior rules than are poor married couples and single fathers.
5. The influence of family structure on the decision to migrate among poor families is mediated by their social network ties.

We test these hypotheses using a longitudinal design to calculate individual-level life-history indicators of migration behavior, permitting the measurement of determinants preceding the decision to migrate. Data collected between 1996 and 1999 allow tests of our thesis for the final pre-reform policy year and the period immediately following welfare reform.

Research Design and Methods

This study uses merged data from three main sources – the 1996 Panel of the Survey of Income and Program Participation (SIPP), the Urban Institute’s Welfare Rules Database (WRD), and a state economic characteristics file (created from 1996-1999 Current Population Surveys) – in a longitudinal specification of welfare-benefit “push” and “pull” on individual migration behavior during the 1996 through 1999 welfare reform period. We also add state-level Medicaid data from the *U.S. Statistical Abstract* as a state policy control that may alternatively influence a state’s attractiveness to poor families. We focus on 7,878 SIPP married and single-parent families whose family income was at or below 200 percent of the federal poverty level (FPL) any time during the four-year observation period. This study sample encompasses all poor families who migrated from one state to another plus a one-tenth randomly selected subsample of non-migrating poor families. These families provide 202,471 person-months of observation. Interstate migration is a time-varying indicator defined as a move across state lines in any month during the 1996 through 1999 SIPP panel time period. Table 1 presents descriptive statistics for the variables used in the destination and departure models; variable specifications and data sources are described below. A brief discussion of the origin and destination models outlines these variables.

Table 1 About Here

Modeling Strategy

Conceptualizing both departure (push) and destination (pull) effects is consistent with the micro-level migration literature, which views migration decision making as a two-part process – 1) the decision to stay or move and 2) the decision where to move (Fischer, Martin, and Straubhaar 1997). Based on this logic, we present separate analyses of the departure decision utilizing the 48-month stay-or-move event history records for all respondents, and of the destination choice utilizing the location event history records of the subset of respondents who moved to a new state. Origin and destination outcomes are estimated using multinomial logistic regression.

Departure Model

Departure models are discrete-time event history models in which spells begin at the start of the SIPP observation period in 1996, the year PRWORA went into effect, or in the month following a migration event (in the case where the individual provided multiple observation spells). Right censoring occurs with a migration event, a death, attrition from the survey, or the last survey interview in 1999. Because these models estimate the likelihood of the event occurring in any observed month conditional on its not having occurred in other months of observation considered in the model, each person-month contributed by a case to the data is treated as an independent observation (see Allison 1995 for a discussion of nondependence among observations in survival analysis).

These models estimate the likelihood of interstate migration conditional on not migrating within the origin state or leaving the survey for unknown reasons (attrition). We code the interstate move variable as a “1” when the individual’s state fips code differs in a month from the state fips code in the previous month. Using SIPP variables indicating why an individual left or

entered the survey in a particular wave, the no-interstate-move category is further refined by coding intrastate moves as “2” and attrition cases as “3” in the month of occurrence. When no move is observed (the reference category in departure models), the outcome variable is coded as “4.” This strategy reduces bias in the estimate of interstate migration versus no migration, our outcome of interest. In this paper, we report coefficients only for the interstate move versus no move.

The basic departure model includes lenient-to-stringent measures of welfare rules levels in the state in the previous month (origin-state “push”), change in welfare rules levels between 1996 and 1999 in the state of residence in the current month (destination state “pull”), and the maximum welfare dollar benefit for a family of four, plus change in Medicaid generosity and family structure indicators in the previous month. Both welfare dollar benefit and change in Medicaid generosity are reverse-coded so that higher values indicate greater stringency. State-level economic characteristics modeled as alternative explanations of migration include fixed-time state median income and unemployment levels for the state of residence in the previous month. These are examined for direct, mediating and interactive effects. Individual-level characteristics used as controls in the full model are the family head’s racial/ethnic minority status, age, and educational attainment. Pre-migration home ownership, employment, school enrollment, and number of school-aged children – all indicators of attachment to origin locations – are tested as mediators of family structure. These indicators are lagged so that they represent conditions in the month prior to the month in which an event may occur. Models compare the likelihood of migration for married-couple, single-father-headed, and single-mother-headed families.

Destination Model

For destination-choice models, our study sample is restricted to those who moved to another state and months in which the migrations occurred. Here we are interested in choice among welfare policy-defined classes of states. Moves are classified as 1) to a lenient policy state, 2) to a stringent policy state, or 3) to a mixed lenient/stringent policy state, according to the eligibility rules and behavior-related rules score on stringency/leniency level in 1999 of the destination state, using a typology based upon the welfare rules data described in the following section. As shown in Figure 1, this typology classifies a state according to its location in the joint distribution of state Eligibility Rules and Behavior-related Rules scores: 1) as stringent when both eligibility rules and behavior-related rules were relatively stringent (i.e., Arizona, Delaware, Georgia, Kentucky, Mississippi, Nevada, Oklahoma, South Carolina, South Dakota, Tennessee, and Texas); 2) as lenient when both eligibility rules and behavior-related rules were relatively lenient (i.e., California, Connecticut, Iowa, Michigan, Minnesota, Nebraska, New York, Ohio, Vermont, and Washington); and 3) as mixed when eligibility rules were lenient while behavior-related rules were stringent, or vice versa (e.g., Illinois, New Jersey, Massachusetts, Florida, Colorado, North Carolina, and Pennsylvania).

A multinomial logistic regression predicts the conditional likelihood of choosing a particular class of states versus the reference class, given that the third alternative is not chosen. This strategy eliminates the traditional migration-modeling burden of considering the 50 by 50 matrix of flows from each state to another and yields policy-relevant model interpretations. Destination-state characteristics included in these models are change in eligibility rules and behavior-related rules between 1996 and 1999, generosity of the maximum welfare dollar benefit for a family of four, change in Medicaid generosity over this period, state median income in

1997-1999, and state unemployment in 1997-1999. Family structure, dummy coded as married-couple or single-father-headed family, focuses on single-mother-headed families as the reference group.

Figure 1 About Here

Migration Data: The Survey of Income and Program Participation (SIPP).

The United States has no national migration survey, and migration scholars usually rely on the decennial census, Current Population Survey, special purpose surveys, or other secondary administrative data sources to obtain minimal information on aggregate migration rates or individual migration behavior. Unfortunately, these data lack information on migration histories. Although not a migration survey, the 1996 Panel of the Survey of Income and Program Participation (SIPP) does provide a four-year current, as opposed to retrospective, migration history along with extensive individual socio-economic and program participation information. Thus SIPP is arguably the best nationally representative longitudinal data set currently available to study the causes and consequences of migration in the United States (Clark 1990). Importantly, the SIPP was redesigned after the 1993 Panel to improve the quality of longitudinal data for informing policy makers regarding government program participation, making the 1996 and subsequent SIPP panels ideal data for conducting these analyses.

Migration events and family and individual-level data are from the 1996-1999 Panel of the SIPP, while state characteristics are derived from the three additional data sources. The 1996-1999 Panel of the Survey of Income and Program Participation is a longitudinal survey of around 40,000 households which is nationally representative of the resident U.S. civilian, non-institutionalized population when appropriately weighted. It contains information on monthly income and assets, public assistance receipt, living arrangements, including migration behavior,

and demographic background (see www.sipp.census.gov/sipp for additional information), which we use to construct event history files based on person months for poor families. Interviews of all household members age 15 or older every four months record monthly changes in these factors as well as state of residence, thus permitting a prospective study of migration which includes information at both origin and destination points. Unfortunately, sample contributions from Maine, Vermont, North Dakota, South Dakota, and Wyoming are so small that the SIPP public-use data group these five states into two categories. Since welfare policy classifications differ for states within these two groups, our analysis of migration to and from them is precluded.

Family structure, measured as dummy indicators of single-mother-, single-father-, or married-couple family, is time-varying in our analysis. Each family in each household is considered, whether a primary family or related or unrelated subfamily. One record per family per month is included in our event history file. For married-couple and single-mother-headed families, the female head provides individual-level information for our models; for single-father-headed families, this information is provided by the male head.

Because individual and family demographic and economic characteristics are known to influence migration behavior, we address the research questions with statistical controls for age, racial/ethnic minority status, and educational attainment in our models. These dummy indicators, constructed with SIPP data, include racial/ethnic minority status (versus non-Hispanic white) and time-varying indicators of being child-bearing aged (20 to 45 versus all others) and having less than a high school education or having more than a high school education (versus having only a high school diploma).

We test the effects of social network ties and employment with time-varying indicators reflecting circumstances in the month just prior to our event of interest, an interstate move.

These variables include the number of school-aged children (6 to 18 years of age), employment status, school enrollment, and home ownership. Preliminary analysis showing that an indicator of the number of preschool-aged children was not significantly related to migration behavior, led us to focus on the number of school-aged children as an indicator of social network ties.

Numbers of children in each age group are determined through an evaluation of family rosters by age for each month. Employment, school enrollment, and home ownership involve both social and economic ties to places of origin. These three indicators are dummy variable coded “1” when true for the family head in the previous month.

Welfare Policy Data and Methods

Data on state-level welfare reform rules are from the Urban Institute's Welfare Rules Database (WRD), which provides a longitudinal, primarily textual account of the changes in AFDC/TANF rules in all 50 states and the District of Columbia for each year 1996-1999. The WRD organizes the detailed textual information on welfare rules across states and time as well as across different types of assistance units. Caseworker manuals and state regulations provide the data for 1997 to 1999, while AFDC state plans and waiver terms and conditions provide the data for 1996.

Thus, our approach to the measurement of welfare rules is based on stated “on the books” welfare policies developed by state legislatures and welfare agencies, and not on the “on the ground” policy implementation by local agencies and individual case workers. We argue that stated welfare policies provide not only the most valid indicator of state policy makers’ intentions, but also the most reliable basis for constructing time series measures of welfare eligibility and behavioral rules, which are fundamental to assessing the basic migration impact hypothesis. Because within-state local areas may differ in practice regarding policy

implementation, this strategy may result in measurement error, which is known to increase the potential that no influence will be found despite the existence of a true effect. Thus our results provide conservative estimates of the effect of welfare policy.

Using the basic policy categories provided by the WRD as a point of departure, we coded 78 salient individual welfare rule items for each state and for the years 1996, 1997, 1998, and 1999. These individual welfare rules for multiple years, coded on a lenient to stringent continuum, were then subjected to a Varimax factor analysis solution. Decisions on factor dimensions were based on the threshold principal component eigenvalue criteria of 1.00 or higher, and an individual item factor loading of .40 or higher in the rotated factor pattern. As shown in Figure 2, this methodology extracted 15 first-order and two second-order welfare policy factor dimensions composed of 40 individual items (see <http://www.pop.psu.edu/mswpvs/welfare-policy.htm> for item factor loadings from principal components analysis and scale reliability for constructs describing state policies). This strategy permits us to summarize the welfare policy climate on an annual basis for each state. Again these measures represent states' reported rules for a particular year without consideration of within-state variation in rule application.

Figure 2 About Here

In this paper, we analyze only the two second-order policy dimensions — 1) Eligibility Rules and 2) Behavior-related Rules – and the calculated value of the maximum welfare dollar benefit for a family of four with no income based on formulas provided in the WRD. These three policy measures are merged with SIPP data so that the year of the state policy corresponds with the year of the SIPP interview for the particular person-month.

Maps showing across-state variations in our second-order summary welfare policy measures in 1999 (i.e., score levels) and the directions of change for each state between 1996/97 and 1999 are shown in Figures 3 and 4. Figure 3 graphically displays the Behavior-related Rules indicator regarding recipient responsibilities for personal and work behavior, while Figure 4 displays across-state differences in Eligibility Rules. The state welfare policy typology shown in Figure 1 is based on the joint distribution patterns displayed in Figures 3 and 4.

Figures 3 and 4 About Here

Policy change is measured as follows. All change in eligibility rules was toward leniency; only a few states experienced no change. For ease in interpretation, this continuous measure is transformed to range from 0 to 4, with higher scores indicating greater change toward leniency. Change in behavior-related rules tended toward stringency; higher scores indicate change in that direction. Both previous- and current-month state scores are recorded for each person-month record. Destination models predict current state score groupings according to the classification typology in Figure 1. Origin models include previous-month state rules level scores and current state rules change scores. These indicators vary with annual policy changes.

Maximum benefit dollar values are calculated for a family of four with no income for each year for each state and are adjusted for cost of living variations by U.S. region. The distribution of 1999 state maximum benefit levels is shown by the map in Figure 5. For modeling purposes, we reverse code this variable so that high values indicate greater stringency.

Figure 5 About Here

In addition to welfare-reform indicators, we include a measure of change in state Medicaid generosity between 1995 and 1999. This measure, calculated for each year, equals the difference in the annual state Medicaid expenditure per Medicaid recipient in 1995 versus 1999,

based on data from the *U.S. Statistical Abstract*. High scores indicate a change toward stringency, or less generosity.

State Economic Characteristics Data

Labor market opportunity structures that may be interrelated with state public welfare policy are alternative explanations for the migration behavior of poor families, such that apparent welfare policy-influenced effects on migration may be mitigated by strong economies encouraging in-migration and inhibiting out-migration, and weak economies encouraging out-migration. While local labor market indicators would provide more precise measures of the opportunity structures individuals compare in migration decision making, for confidentiality reasons, the public-use SIPP data do not attach the within-state-location indicators to SIPP case records. Thus, we must test for effects of state-level economic characteristics. These are determined using the Annual Demographic (March) files of the 1996-1999 Current Population Survey (CPS). Individual-level information is summarized by state to create continuous measures of state unemployment rates and median income. This information is merged with the SIPP and state policy data. Measures for 1996 are used in the departure models, and 1997-1999 period-averaged measures are used in the destination models. Descriptive statistics for all variables used in the analysis are presented in Table 1.

Results

Departure Models

Models predicting an interstate migration, versus no migration, are presented in Table 2. “Zero-order” models, controlling only for duration in spell of observation, indicate that migration from lenient states is significantly less likely than from stringent states – a relationship that holds across all models. A positive coefficient for migration from mixed lenient/stringent states

compared with stringent states is counter-intuitive, but this relationship is shown to be negative, as expected, in models controlling for other factors.

Table 2 About Here

A test of hypothesis 2 provides no evidence that state economic development is an alternative, mediating explanation for the effect of state welfare reform policy on the migration behavior of poor families. Model 2 shows that state economic characteristic indicators have no statistically significant direct effects, nor does their addition to the model attenuate the effects of state welfare policy indicators seen in model 1. The results thus reject this hypothesis in favor of the third hypothesis, of a moderating effect. In particular, interaction terms in model 3 reveal that migration from more lenient states was more likely when unemployment was higher. That is, while state unemployment rate is negatively related to out-migration in the zero-order model, the interaction model (model 3) shows that this is true only in stringent states, and out-migration was less likely from more lenient states when unemployment rates were also low. Interactions between policy and median income are also tested and found not to be statistically significant. These are presented in the Appendix.

Model 3 also reveals that migration is negatively related to a change in behavior-related rules toward greater stringency – a result indicating that implementing more restrictive behavioral rules on welfare recipients effectively repelled in-migration of poor families. On the other hand, the positive effect of destination state change in eligibility rules toward greater leniency indicates that these states were attractive destinations for poor families, and this result holds across all models.

While in the zero-order model origin-state welfare dollar benefit stringency level encouraged out-migration, this effect disappears in models with control for other factors. Both

origin-state shift toward stringency in Medicaid generosity and state median income operate in the expected direction although these effects are not statistically significant in any model.

These results plus the simple model including controls for minority status, age, and educational attainment of the family head (model 1) support hypotheses 1 and 3 that post welfare reform changes in state welfare eligibility and behavior rules impacted the departure decisions (push) of poor families. However, we must reject this hypothesis with regard to welfare dollar benefit levels.

Model 4 shows that family structure does influence the migration behavior of poor families, such that married couples were more likely to migrate than single mothers, and single fathers were more likely to migrate than both married couples and single mothers. However, the impact of changes in state welfare eligibility and behavior rules, as well as benefit levels, on migration behaviors of poor families is not moderated by family structure. Interaction terms between family structure and each state welfare policy indicator (shown by interaction models in the Appendix) are not statistically significant. Thus, contrary to hypothesis 4, single mothers were not more directly affected by welfare eligibility and behavior rules than were poor married couples or single fathers.

The difference in the direct effects of married and single-mother families is attenuated, however, by the number of school-aged children in the family (Table 2, Model 5). This result is consistent with hypothesis 5, that the influence of family structure on migration behavior of poor families is mediated by their social network ties. Model 5 in Table 2 is the full model containing all of our social network tie indicators. Each of these indicators operates in the expected directions, and all except school enrollment are statistically significant. However, only the number of school-aged children attenuates the coefficient for married couples in model 4

Destination Choice Models

The simple model including the destination state welfare policy classifications, model 1 of Table 3, indicates that migration was more likely to lenient states and was less likely to stringent states compared with mixed lenient/stringent states, controlling for the other two policy factors. Turning to the impact of post welfare reform policy changes, a shift toward greater leniency in eligibility rules increased the probability of migration to relatively more lenient states, whereas a change in behavior-related rules toward greater stringency, as well as a less generous welfare dollar benefit level, decreased the probability of migration to relatively more lenient states. These effects remain significant net of the effect of decreasing generosity in Medicaid, which resulted in a greater likelihood that mixed lenient/stringent states were chosen as destinations compared with strictly lenient or stringent states. These effects are consistent across models controlling for state economic development (model 2) and family structure (model 4). Thus, hypothesis 1 is supported with regard to destination choice, and hypothesis 2, that state economic characteristics are alternative explanations for migration behavior, is rejected.

Table 3 About Here

Models 3a, 3b, and 3c demonstrate, however, that the effects of welfare policy changes are conditional on state economic development. Model 3a shows that the differences in migration to stringent or lenient states compared with mixed lenient/stringent states which became more lenient regarding welfare eligibility rules was reduced when state median income was higher. In addition, the pull of increasing leniency in eligibility rules for lenient states was reduced by higher unemployment rates. Model 3b likewise shows that as state median income increased, the repelling effect of behavior rules becoming more stringent declined between stringent and mixed lenient/stringent states. Thus welfare rule change was less important when

the state economy was relatively better. On the other hand, higher state unemployment exacerbated the difference between stringent and mixed states, but reduced the difference in this effect between lenient and mixed lenient/stringent states. Interestingly, model 3c shows that state economic development, as measured by median income, offset the repelling effect of less generous welfare dollar benefits. Contrary to expectation, however, higher unemployment rates also offset this negative effect.

Finally, model 4 addresses the role of family structure in destination choice. No real difference by family structure is indicated by this model, nor is any variation in effects of welfare policy by family structure found (interaction models shown in Appendix). Though family structure has a clear direct effect on the migration decision of poor families (see Table 2 for departure models), our destination choice models indicate that, once the decision to migrate is made, where poor families end up is not a function of their family structure.

Discussion

The objective of this research is to test the thesis that the devolution of welfare policy and programs to states, resulting in increased inequalities in welfare program eligibility and behavioral rules, created incentives for poor families, and particularly for poor single-mother-headed families, to migrate to other states, and disincentives to stay in origin states. We test this thesis with a set of hypotheses using models of both destination (pull effects) and departure (push effects) on interstate migration behavior using measures of eligibility and behavior-related welfare rules as key policy dimension indicators, as well as the traditionally researched measure of the generosity of state welfare dollar benefit levels. Our hypotheses require tests of these effects net of, as well as conditioned on, the effects of state economic development measures. Importantly, we evaluate these effects to determine whether married

couple and single-mother- and single-father-headed families responded differently in the context of welfare reform.

Overall the analyses provide evidence that is consistent with the general thesis that welfare reform policy created new incentives and disincentives for interstate migration for poor families. However, no evidence emerges that single mother families responded differently from other families, contrary to earlier results by Kaestner (2001), Cushing (1993), and Enchautegui (1997) based on cross-sectional data. Single-mother families were less likely than other families to migrate to other states, primarily because they were more likely to have more school-aged children tying them to social networks in their states of origin. If they did migrate, however, their choices of destination did not differ from those of married couple and single-father-headed families.

Poor families were more likely to migrate from states with more stringent welfare policies, and were drawn to states with greater change toward leniency in eligibility rules. The choice of destination was most attractive for states that were most lenient overall. Destination-choice model results indicate that, in the context of easing eligibility rules generally, poor families had a greater likelihood of migration to states with more lenient eligibility welfare rules. In addition, poor families were less likely to migrate to states with increasingly stringent behavior-related rules, controlling for the effects of state economic characteristics. Furthermore, the destination choice model results show that state policy change toward more stringent behavior rules in relatively lenient states reduced in-migration by poor families. Departure models also show that the welfare-rules-driven propensity to migrate from a state depended on the state's unemployment rate, with greater out-migration in the context of higher unemployment. In sum, these destination and departure model results support the conclusion

that poor families have engaged in interstate migration as a response to the "race to the bottom" by some states toward more stringent behavior-related rules for welfare program participation that have been instituted in the wake of welfare reform.

The validity of these finding is buttressed by the fact that the coefficients for the impact of welfare policy on migration of poor families maintain their statistical significance when salient alternative state economic development and family and individual socio-economic status explanatory indicators are included in the models. Most notable theoretically is the congruence in poor families' migration destination choice of states having friendlier welfare behavioral rules and states with generally higher median incomes, and that the role of welfare policy depends on the level of state unemployment rates. These destination model findings are consistent with, but not a full test of, the modern welfare migration assumption that welfare recipients desire to maximize both their welfare and their job and employment opportunities (Schram and Soss 1999).

While state economic development and individual socio-economic status indicators are included in the analysis, this study is not a full test of possible competing explanations for the welfare and migration hypothesis. Future research will test alternative life course transition explanations based on event-history modeling of marital status, fertility, work, and job training individual-level changes. In addition, use of the restricted-use SIPP data in future research would make possible more precise tests of local labor market economic development hypotheses by providing within-state location indicators for all SIPP respondents.

From a public policy perspective, the evidence affirms the position that the new federalism approach to public benefits has exacerbated welfare assistance inequalities as they are linked to migration of poor families. The results support Schram's and Soss' (1999) welfare

“incentive assumption” in the impact on welfare recipients’ destination choice and residential departure behavior decisions, and their “instrumental assumption” that recipients make residential decisions on the basis of means-ends rational choice of welfare benefits and state economic conditions. While further analyses noted above remain to be pursued, the evidence presented here suggests that, whether intended or not, the 1996 Personal Responsibility and Work Opportunity Reconciliation Act has created policy-driven interstate migration of poor families in the United States.

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Table 1. Weighted Descriptive Statistics for Variables Used in Analysis
(n = 202, 471 person-months).

Variable	Proportion or Mean (standard deviation)
Origin State Welfare Rules Classification	
Lenient	33.48%
Mixed Lenient/Stringent	43.01%
Stringent	23.51%
Destination State Welfare Rules Change	
Eligibility Rules Change Toward Leniency	2.72 (0.67)
Behavior Rules Change Toward Stringency	1.48 (0.77)
State Welfare Dollar Benefit Stringency	709.99 (207.89)
State Change in Medicaid Generosity Toward Stringency	-0.41 (0.58)
State Median Income	7.38 (0.82)
State Unemployment Rate	3.81 (0.70)
Individual/Family Characteristics	
Family Structure	
Married Couple	49.25
Single-mother-headed	44.01
Single-father-headed	6.66
Minority	40.19%
Childbearing-aged	75.94%
Education	
More than High School	10.50%
High School	61.97%
Less than High School	27.53%
Owns Home	43.84%
Enrolled in School	14.99%
Not Working	41.68%
Number of School-aged Children	1.28 (1.17)

Table 2. Logits from Departure Models Estimating the Probability of Interstate Migration versus No Migration, Conditional on No Intrastate Migration or Attrition from Survey (n=202,471 person months)

Variables	0-order Models				
	1	2	3	4	5
Origin State Policy Class (Reference=Stringent)					
Mixed Lenient/Stringent	0.17*	0.01	-2.64**	-2.68**	-2.84**
Lenient	-0.35**	-0.50**	-4.11**	-4.10**	-4.10**
Origin State \$ Benefit Stringency	0.001**	-0.0003	0.0002	0.0002	0.0004
Change in Origin State Medicaid Generosity	0.04	0.03	0.01	0.02	-0.002
Destination State Change in Eligibility Rules toward Leniency	0.10*	0.19**	0.27**	0.27**	0.28**
Destination State Change in Behavior-related Rules toward Stringency	0.07	0.02	-0.15*	-0.16**	-0.14*
Origin State Median Income in 1996	-0.06	-0.02	-0.06	-0.06	-0.03
Origin State Unemployment Rate in 1996	-0.17**	-0.05	-0.77**	-0.78**	-0.84**
Interaction Terms					
Mixed Lenient/Stringent X Unemployment			0.79**	0.80**	0.86**
Lenient X Unemployment			1.01**	1.01**	1.01**
Minority (Reference=Non-Hispanic White)	-0.73**	-0.59**	-0.58**	-0.55**	-0.65**
Childbearing Aged (Reference=<20 or >45)	0.02	-0.25**	-0.24**	-0.24**	-0.28**
Educational Attainment					
(Reference=High School)					
< High School	0.73**	0.68**	0.67**	0.66**	-0.75**
> High School	-0.61**	-0.58**	-0.57**	-0.58**	0.75**
Family Structure					
(Reference=Single Mother Headed)					
Married Couple	0.42**			0.17*	0.11
Single Father Headed	0.77** ^{a, b}			0.74** ^{a, b}	0.75** ^{a, b}
Owens Home	-0.25**				-0.49**
Enrolled in School	-0.33**				-0.20
Not Working	0.66**				0.88**
Number of School-aged Children	-0.31**				-0.23**
Intercept					
Likelihood Ratio Chi ² (df)	-4.16**	-3.75**	-1.49*	-1.56*	-1.68*
	72663.94	72449.26	72413.86	93339.66	167586.1
	(1E5)	(1E5)	(1E5)	(2E5)	(5E5)

*p≤.05, **p≤.01

^aAll 0-order models exhibit poor model fit.

^bSignificantly different from married couple families, p≤.01.

Table 3. Logits from Destination Choice Models Estimating the Probability of Migration to a Lenient or a Stringent State versus Migration to Mixed Stringent/Lenient State (n=717 moves)

Variables	0-order Models			1			2			3a			3b			3c			4		
	To Lenient State	To Stringent State	To Mixed State	To Lenient State	To Stringent State	To Mixed State	To Lenient State	To Stringent State	To Mixed State	To Lenient State	To Stringent State	To Mixed State	To Lenient State	To Stringent State	To Mixed State	To Lenient State	To Stringent State	To Mixed State	To Lenient State	To Stringent State	To Mixed State
Destination State Change in Eligibility Rules toward Leniency	0.88**	-0.81**		2.08**	-1.34**		2.51**	-1.32**		87.68**	-9.76**		2.55**	-1.36**		4.72**	-1.30**		2.60**	-1.33**	
Destination State Change in Behavior-related Rules toward Stringency	-0.58**	0.92**		-1.47**	1.10**		-1.87**	1.01**		-7.01**	0.93**		-2.27	-2.47		-3.80**	1.17**		-1.92**	1.00**	
Destination State \$ Benefit Generosity	-0.01**	0.004**		-0.01**	0.01**		-0.02**	0.01**		-0.04**	0.01**		-0.02**	0.01**		0.14**	-0.06**		-0.02**	0.01**	
Destination State Change in Medicaid Generosity toward Stringency	-0.58**	-0.95**		-2.35**	-1.12**		-2.53**	-1.22**		-7.53**	-1.21**		-2.71**	-1.57**		-3.78**	-1.02**		-2.56**	-1.22**	
Destination State Median Income				-0.74**	-0.30		-0.74**	-0.30		17.03**	-2.88**		-1.95**	-8.47**		-4.85**	-8.47**		-0.75**	-0.32	
Destination State Unemployment Rate				-0.16	0.68**		-0.16	0.68**		34.61**	-0.19		-1.53**	2.07**		-1.72**	-7.60**		-0.18	0.68**	
Family Structure (Reference=Single Mother Headed)	-0.26	0.02								-6.00**	0.96**								-0.39	-0.03	
Married Couple																			0.39	-0.89** ^b	
Single Father Headed																					
Eligibility-rule Change X Median Income																					
Eligibility-rule Change X Unemployment																					
Behavior-rule Change X Median Income																					
Behavior-rule Change X Unemployment																					
\$Benefit X Median Income																					
\$Benefit X Unemployment																					
Intercept				2.89**	-6.01**		8.83**	-5.74**		-225.50**	15.34*		6.40	1.24		74.45**	51.89**		9.09**	-5.23	
Likelihood Ratio Chi ² (df)			a	830.52 (954)	801.06(950)		801.06(950)	669.02 (946)		669.02 (946)	760.29 (946)		760.29 (946)	688.08 (946)		688.08 (946)	792.74 (1E3)		792.74 (1E3)		

*p≤.05, **p≤.01

^aAll 0-order models exhibit poor model fit.

^bSignificantly different from married couple families, p≤.05.

Appendix. Interaction Models.

Table A1. Logits from Departure Models Estimating the Probability of Interstate Migration versus No Migration, Conditional on No Intrastate Migration or Attrition from Survey, Including Median Income by Policy and Family Structure by Policy Interactions (n=202,471 person months)

Variables	1	2	3	4	5	6	7
Origin State Policy Class (Reference=Stringent)							
Mixed Lenient/Stringent	1.11	-0.05	0.05	0.14	0.003	0.002	0.001
Lenient	-2.38	-0.90**	-0.37	-0.34	-0.50	-0.51**	-0.51**
Origin State \$ Benefit Stringency	-0.001	-0.001**	-0.0003	-0.0003	-0.0004	-0.0003	-0.0003
Change in Origin State Medicaid Generosity	0.03	-0.10	0.07	0.03	0.03	0.03	0.03
Destination State Change in Eligibility Rules toward Leniency	0.22**	1.63**	0.21**	0.20**		0.18	0.20**
Destination State Change in Behavior-related Rules toward Stringency	0.01	-0.05	-3.00**	0.02		0.02	0.02
Origin State Median Income in 1996	0.07	-1.10**	-0.76**	-0.03	-0.03	-0.03	-0.03
Origin State Unemployment Rate in 1996	-0.05	2.96**	-0.22	-0.06	-0.06	-0.06	-0.06
Minority (Reference=Non-Hispanic White)	-0.59**	-0.65**	-0.63*	-0.57**	-0.57**	-0.57**	-0.57**
Childbearing Aged (Reference=<20 or >45)	-0.24**	-0.26**	-0.22**	-0.25**	-0.25**	-0.25**	-0.25**
Educational Attainment (Reference=High School)							
< High School	-0.58**	-0.57**	-0.57**	-0.57**	-0.57**	-0.57**	-0.57**
> High School	0.67**	0.68**	0.67**	0.66**	0.66**	0.66**	0.66**
Economic Development by Policy Interaction Terms							
Mixed Lenient/Stringent X Median Income	-0.18						
Lenient X Median Income	0.25						
Change in Eligibility Rules X Median Income		0.32**					
Change in Eligibility Rules X Unemployment		-0.98**					
Change in Behavior Rules X Median Income			0.42**				
Change in Behavior Rules X Unemployment			0.10				
Family Structure (Reference=Single Mother Headed)							
Married Couple				0.34	0.10	0.03	0.16
Single Father Headed				0.86**	0.45	0.90	0.91**
Family Structure by Policy Interaction Terms							
Mixed Lenient/Stringent X Married Couple				-0.22			
Lenient X Married Couple				-0.15			
Mixed Lenient/Stringent X Single Father				-0.26			
Lenient X Single Father Headed				-0.19			
Benefit Stringency X Married Couple					0.0001		
Benefit Stringency X Single Father					0.0004		
Destination Change in Eligibility Rules X Married Couple						0.05	
Destination Change in Eligibility Rules X Single Father						-0.06	
Destination Change in Behavior Rules X Married Couple							0.01
Destination Change in Behavior Rules X Single Father Headed							-0.11
Intercept	-4.18**	-6.93**	1.45	-3.96**	-3.78**	-3.77**	-3.84**
Likelihood Ratio Chi ² (df)	72393.07 (1E5)	72218.00 (1E5)	72372.06 (1E5)	93319.63 (2E5)	93348.20 (2E5)	93263.21 (2E5)	93363.68 (2E5)

**p≤.01

Table A2. Logits from Destination Choice Models Estimating the Probability of Migration to a Lenient or a Stringent State versus Migration to Mixed Stringent/Lenient State, Including Family Structure Interactions (n=717 moves)

Variables	1			2			3		
	To Lenient State	To Stringent State	To Mixed State	To Lenient State	To Stringent State	To Mixed State	To Lenient State	To Stringent State	To Mixed State
Destination State Change in Eligibility Rules toward Leniency	2.04**	-1.32**	2.60**	2.60**	-1.33**	2.66**	2.66**	-1.34**	-1.34**
Destination State Change in Behavior-related Rules toward Stringency	-2.00**	0.97**	-2.07**	-2.07**	1.06**	-1.96**	-1.96**	1.00**	1.00**
Destination State \$ Benefit Generosity	-0.02**	0.01**	-0.02**	-0.02**	0.01**	-0.02**	-0.02**	0.01**	0.01**
Destination State Change in Medicaid Generosity toward Stringency	-2.55**	-1.23**	-2.56**	-2.56**	-1.22**	-2.61**	-2.61**	-1.22**	-1.22**
Destination State Median Income	-0.77**	-0.33	-0.76**	-0.76**	-0.34	-0.76**	-0.76**	-0.33	-0.33
Destination State Unemployment Rate	-0.16	0.68**	-0.18	-0.18	0.68**	-0.20	-0.20	0.68**	0.68**
Family Structure (Reference=Single Mother Headed)									
Married Couple	-3.58	0.17	-0.71	-0.71	0.14	-2.90**	-2.90**	1.23	1.23
Single Father Headed	-0.20	-1.47	0.28	0.28	-0.61	4.55	4.55	-1.60	-1.60
Family Structure by Policy Interactions									
Eligibility-rule Change X Married Couple	1.06	-0.08							
Eligibility-rule Change X Single Father	0.19	0.24							
Behavior-rule Change X Married Couple			0.26	0.26	-0.10				
Behavior-rule Change X Single Father			0.09	0.09	-0.16				
\$Benefit X Married Couple						0.004	0.004	-0.001	-0.001
\$ Benefit X Single Father						-0.007	-0.007	0.001	0.001
Intercept	10.86**	-5.37	9.34**	9.34**	-5.34	10.24**	10.24**	-6.02**	-6.02**
Likelihood Ratio Chi ² (df)	789.34 (1E3)		792.34 (1E3)	792.34 (1E3)		782.43 (1E3)	782.43 (1E3)		

**p≤.01