

The Fiscal Impact of Immigrants and State Redistributive Policy

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Abstract

Contrary to the traditional assumption that state policy is immune to changes in population caused by an influx of immigrants, we demonstrate, utilizing Temporary Assistance to Needy Families (TANF) policy outcomes, that state governments respond to the presence of immigrants in their economy. State government demand is estimated over the life of the TANF program, from 1997-2003 using pooled estimation procedures, allowing for the endogeneity of the key program elements and immigrant population characteristics. State government design of TANF is found to be sensitive not only to the number of non-citizens in the state, but also to their composition. Specifically, we find that a 1% increase in a state's percentage of non-citizens decreases the number of recipients per capita by 1.46% and benefits per recipient by 10.43% even in states where immigrants are not eligible for benefits. However, the percentage of the female and uneducated populations that are non-citizens have the opposite impact as the immigrant population as a whole.

I. Introduction

This paper investigates an assumption central to work on whether migration responds to welfare generosity, specifically whether the structure of low income assistance programs is sensitive to the level of immigration. To determine whether state governments alter their design of welfare programs based on levels of immigration, we model state program design of Temporary Assistance for Needy Families (TANF). Immigration, and the characteristics of immigrants, is a central part of our examination, although we also examine how the changes in the fiscal federalism environment compare to the previous structure of Aid to Families with Dependent Children (AFDC). Immigration is found to alter program design for some of our output measures, but not others. More central to the debate as to whether migrants follow welfare generosity is that the problem on an aggregate level is difficult to identify statistically, thus indicating that simultaneity needs to be seriously addressed.

Several strands of economic analysis have assumed that state policies are unchanged in the face of immigration. In addition to some of the literature looking at whether immigrants respond to welfare generosity, the literature attempting to model the governmental fiscal impact of immigration has assumed tax and expenditure policies are unchanged.¹ Assuming that government policy is unchanged in the face of large changes in the demographic composition of the population, and of the labor force, strikes us as unlikely to be correct even in the absence of political action by immigrants. Firms, consumers, and workers are all affected in the general

¹ The fiscal impact of immigrants on states budgets has been recently estimated in Auerbach and Oreopoulos (1999) and in Lee and Miller (2000). Auerbach and Oreopoulos use a generational accounting method to determine the fiscal impact of immigrants and future immigrants, assuming the level of public good provision changes proportionally with the change in immigration. Lee and Miller use a longitudinal accounting method to determine the impact of immigrants and their children, assuming public policy is fixed over the lifetime of the immigrants.

equilibrium response to immigration, and the impacts on these three native groups by immigrants may cause the public sector to reform its policies. For example, some states do not permit immigrants to participate in their TANF program. Even those states, however, are not unlikely to alter their TANF policies in response to immigration, because of the impact of immigration on their labor markets. This paper models such a response.

To understand how TANF responds to immigration requires that we identify the program outcomes that state governments can alter. We define TANF program outcomes in two ways. In the first, we differentiate between benefits per recipient and total recipients. Our idea is that for a fixed budget, states can either grant more generous amounts of money to a more carefully selected group of people, or grant less money per recipient to a larger group. The other path is to define output as its impact on taxpayers, where the total cost per capita of the program is the variable of interest, which of course encompasses the number of recipients and benefits per recipient. TANF has another complication, however, as a result of the welfare reform which created it out of the former welfare policy, AFDC.. Specifically, TANF not only makes cash grants to recipients, it offers specific aid designed to assist recipients to participate in the work force, including for example transportation and child care. Thus, a third dimension of TANF output we will examine is the distinction between other aid and cash grants.

There are approximately one million immigrants who enter this country each year.² An important question is whether these immigrants have an impact on state budgets. Temporary Assistance for Needy Families (TANF), the primary cash assistance program for low income

¹ Source: 2002 Yearbook of Immigration Statistics, Table B, page 8. <http://uscis.gov/graphics/shared/aboutus/statistics/Yearbook2002.pdf>

households, is used to estimate the effects of immigrants on states' redistributive policy. The TANF program is an excellent program to analyze this question since there is significant variation across states as to whether immigrants are eligible to receive benefits, and because public welfare expenditure account for almost 1/5 of average state budgets.³

These papers compare the individual taxes paid to the cost of the benefits received by immigrants. Even Borjas (1999) concedes that "a state's welfare policy is probably very sensitive to the in-migration of potential welfare recipients either from other states or from abroad," even though he assumes that welfare policy is fixed in his research.⁴

The innovation in this paper is to test whether immigrants have an impact on state government public sector low income assistance policies. We study for two potential impacts. One, which we term the policy impact, tests whether states explicitly vary their policy choices depending on the size and characteristics of the immigrant population, due to changes in the fundamental preferences of the state regarding welfare. This might be the lesser of potential changes, as it would require that either natives alter policies due to immigrants or that immigrants themselves are important to policy choices. However, a more fundamental policy path is what we term the price effect. That is, simply because of the impacts of immigrants on local labor markets, the size and characteristics of the potential pool of welfare recipients may change. Each dollar in extra benefits raises the price of more lenient welfare eligibility policy options, while a higher number of recipients raises the price of policies that lead to higher benefits per recipient. This paper attempts to stratify observed policy changes into the price effects and the policy effects, by isolating the policy effect. However, irrespective of the exact

³ In a recent year (2002), welfare expenditures were 19% of average state government expenditure (State Government Finances, 2002).

⁴ Borjas (1999), page 610, footnote #6

cause of policy change, the results are unambiguous that immigrants have important consequences for the design of state government redistributive policy.

We examine the impact of immigrants on three important welfare outcomes; the number of recipients per capita, benefits per recipient and the total welfare expenditures per capita. The percentage of the population that is comprised of non-citizens is found to have a negative impact on the number of recipients per capita. We find that a 1% increase in the percentage of the state population that are immigrants leads to a 1.63% decline in the number of recipients per capita. Immigrants are also found to have a negative impact on the benefits per recipient. We estimate that the result of a 1% increase in the percentage of the state immigrant population is a reduction of 10.43% in benefits per recipient. To isolate the policy effects, we also examine only states where immigrants are not eligible to receive welfare benefits. In these states, immigrants will not cause any price effects since they will be ineligible to receive welfare benefits, except indirectly through changes in the native population. Any effect of the non-citizens on the welfare outcomes in these states can be interpreted as policy effects of immigrants and natives residing in those states. We find that the percentage of the state population that is comprised of immigrants has a negative and significant effect on the number of recipients per capita. This identifies a policy effect that is occurring due to the presence of immigrants in the state population.

To arrive at all of the above results, we use a two stage least squares (2SLS) model and assume the characteristics of the non-citizen population are endogenous to welfare outcomes. Once non-citizens make the decision to move to the United States, it is a small additional cost to locate in a specific state, for any reason. The reason to reside in a specific state may be a job, family, ethnic networks, or welfare generosity. No matter the specific reason for each immigrant, it is likely that the composition of the non-citizen population is not exogenously determined. we

use state level industrial employment and region of origin of the non-citizen population to instrument for the pertinent non-citizen characteristics.

In addition to tests that determine if immigrants affect the welfare outcomes, we also employ a linear probability model to test if immigrants and their composition impact the probability that a state will offer benefits to immigrants. we assume that the characteristics of the immigrant population are endogenous to this policy outcome for the same reasons that we assume that immigrant characteristics are endogenous to the welfare outcomes. The impact that the immigrant population has on the probability that a state will provide welfare benefits to immigrants is not significant at conventional levels, but it is positive and quantitatively large. This is a measure of the policy impact of immigrants through the political clout of the immigrants themselves along with the preferences of the native population regarding providing benefits to immigrants.

The paper is developed as follows; Section II presents the relevant details regarding the new TANF program. Section III explains the model and methodologies that are used to estimate all of the results. Section IV discusses the data that are used, where it was collected and the methods used to estimate missing values. Section V explains the simultaneous estimation results while Section VI summarizes the results and adds concluding remarks. Additionally, there is an appendix attached to explain some data issues in more detail than covered in Section IV.

II. TANF Program Details

Temporary Assistance for Needy Families (TANF) replaced the preceding cash assistance program for low income families, Aid to Families with Dependent Children (AFDC) through the Personal Responsibility and Work Opportunity Act of 1996 (PWORA), the welfare

reform act.⁵ According to the rules that govern TANF, federal funds are prohibited from being used to finance welfare payments to immigrants who are non-citizens.⁶ On the surface this provision would seem to prevent any impact of immigrants on welfare policy, due to the fact that they are unable to benefit. However, state governments have the option to provide benefits to immigrants if they choose to finance the transfer payments with their own funds. The price of doing so is not necessarily higher taxes, since own fund payments to immigrants are allowed to count toward federally required state minimum welfare payments.

Each state has three options with regard to funding systems for their own welfare dollars. The first option is for the state to commingle its funds with the federal TANF funds. Under this option the state is restricted to spend their own funds with all of the same restrictions that are placed on the federal funds. If a state has no desire to fund immigrants who are otherwise eligible, then there is no need for the state to separate its funds from the federal funds with regard to immigrants.⁷ However, if a state's environment is one in which providing welfare benefits is preferred then that state has the option to provide benefits under either a state TANF program or a separate state program. A state TANF program requires that the state follow most guidelines set by the federal TANF program, but allows for an exemption with regard to immigrants who are otherwise eligible. With a separate state program, there are few restrictions on how the funds are spent within the state. Both options allow for the state to count any funds spent on the immigrants who are otherwise eligible towards their minimum spending

⁵PWORA also replaced Emergency Assistance (EA) and Job Opportunities and Basic Skills (JOBS) programs.

⁶ With the exception of refugees, asylees, active armed forces personnel and their dependants and those who have 40 qualifying quarters of work in this country, immigrants are no longer eligible for benefits until they have been legal permanent residents for a minimum of five years.

⁷ Unless a state would like to be more generous to other groups as well, such as those past the 5 year time limit. These groups are not directly relevant to this study.

requirement. Program options structured in this manner have a direct impact on the incentives that states face concerning whether they offer benefits to immigrants or not.

The presence of immigrants and their characteristics may alter the welfare policy in states. Immigrants have great incentives to participate in the political process that leads to state decisions with regard to welfare policy formation because it could lead to the eligibility to receive benefits. Participation could also lead to higher levels of benefits for recipients. The composition and size of the immigrant population may also impact the native preferences for providing benefits to immigrants. Even in states where immigrants are not eligible to receive benefits, they may indirectly impact the welfare outcomes through native worker displacement, leading to a larger native population receiving welfare benefits. Each native worker that is replaced with an immigrant worker on the job that results in another native welfare recipient is an additional cost to the state.

III. Model and Methodology

Immigrants have the ability to change the welfare outcomes in a state through three separate channels. The first two channels through which immigrants have the ability to affect welfare outcomes are “policy effects”. Immigrants may be able to organize with others to obtain political influence that will impact the welfare rules or outcomes within a state, having a direct policy influence over state welfare outcomes, which may lead to their eligibility to receive benefits. It is also possible that immigrants will have a more indirect policy impact through the native population and their preferences that may lend themselves toward favoring or disfavoring immigrants in a way that will have an impact on the welfare outcomes of the state. The last channel is what we term a “price effect”. If an immigrant migrates to a state that offers welfare benefits to low income immigrants then additions of low income immigrants to the population

will change the number of recipients of welfare within the state and in response a change in benefits per recipient or a change in total expenditure on welfare. In a state where immigrants are ineligible for welfare benefits, the addition of low income, and presumably low skilled immigrants, may lead to low skilled native worker displacement, resulting in a larger number of native recipients. This will also give rise to either a change in the benefits per recipient or the total welfare expenditure.

The total expenditure for welfare in state s at time t is represented by Equation (1).

$$\text{Totexp}_{st} = B_{st} \times R_{st} \quad (1)$$

Where B_{st} is the benefits received per recipient of welfare in state s at time t and R_{st} is the number of recipients of welfare in state s at time t . This equation shows clearly the price effect of immigrants. Benefits per recipient and number of recipients will act as prices for each other. Any change in the number of recipients will cause a change in total expenditure if there is not an offsetting change in the benefits per recipient. Likewise, any change in benefits per recipient will change total expenditure if there is not an offsetting change in the number of recipients. If there is any increase in the eligible recipient population, there will be an increase in the number of recipients. If the legislature prefers to keep total expenditure constant, then they may prefer to lower the benefits per recipient. The amount total expenditure changes due to an increase in the number of recipients will be determined by the elasticity of demand for welfare in that state. If there is a low elasticity of demand, then total expenditure may experience an increase because the increase in the number of recipients will not lower benefits per recipient enough to offset the increase in total expenditure due to the augmented number of recipients. Therefore, it is important to separately study these three equations.

We estimate a model of state demand for welfare utilizing the following reduced form general equations for the welfare outcomes of interest; recipients per capita, R_{st} , benefits per recipient, B_{st} , and total expenditure per capita, T_{st} .

Equations (2.1), (2.2), (2.3), respectively are:

$$R_{st} = f(\%Immig_{st}, Ncit_char_{st}, state_char_{st}, polstr_{st}, pop_{st}, unobligbal_{st}, tanf_bg_{st}, Income_{st}, unempl_{st}, \varepsilon)$$

$$B_{st} = f(\%Immig_{st}, Ncit_char_{st}, state_char_{st}, polstr_{st}, pop_{st}, unobligbal_{st}, tanf_bg_{st}, Income_{st}, unempl_{st}, \varepsilon)$$

$$T_{st} = f(\%Immig_{st}, Ncit_char_{st}, state_char_{st}, polstr_{st}, pop_{st}, unobligbal_{st}, tanf_bg_{st}, Income_{st}, unempl_{st}, \varepsilon)$$

We use a two-stage least squares method to estimate these equations, using instruments for the characteristics of the non-citizen population in each state. The number of recipients and the benefits per recipient act as prices for each other and are determined simultaneously, as shown in equation (1). The reduced form allows the model to identify the impacts of immigrants on the welfare outcomes, but includes the impact on other welfare outcomes simultaneously with the specific outcome in each equation.

The variable $\%Immig_{st}$ is the percent of the state population that is comprised of immigrants. We define immigrants as the population that are non-citizens. Once immigrants are citizens, they are no different than native born citizens with regard to welfare eligibility. Also, naturalized citizens possess the right to vote. An interesting aspect of this paper is that we identify the political impact of a group without traditional and direct political power, through the right to vote. $Ncit_char_{st}$ is a vector of demographic characteristics of the non-citizen population. Specifically, the percent of the young (under the age of 15) that are non-citizens, the

percent of the old (over the age of 65) that are non-citizens, the percent of females that are non-citizens, percent of the population that does not have a high school diploma that are non-citizens, percent of those who are under the poverty line that are non-citizens, the percent of the married population that are non-citizens and the percent of the non-white population that are non-citizens⁸. $State_char_{st}$ is a vector of the same demographic characteristics for the entire state population, including citizens and non-citizens. $Polstr_{st}$ is a vector of political structure variables representing the structure of the political officials in the governor's office and the state senate and house in state s at time t . Specifically, included are the percentage of seats in each state house and senate that are occupied by democrats, both interacted with a political ideology index. This adjusts for ideology differences that exist across states. $Unobligal_{st}$ is the un-obligated balance of the state. In other words, this is the amount of the federal block grant dollars that a state has saved for future years use. We lag this data by one year, since the current year's savings are determined by today's expenditures instead of being an explaining factor in today's expenditures. $Tanf_bg_{st}$ is the amount of the TANF block grant received by the state in per capita terms each year. This variable includes the basic block grant amount and any additional grant money that is awarded due to economic downturns, population increases or bonus grant money for superior performance. $Income_{st}$ is the per capita earnings of the state population in state s at time t . $Unempl_{st}$ is the unemployment rate of state s at time t . The unemployment rate

⁸ We use the percentage of each demographic group that is made up of non-citizens as opposed to the percentage of non-citizens that fall into each demographic category because this specification allows me to identify within a specific demographic group that has a significant impact on one of the welfare outcomes if it is significant due to citizens, non-citizens, or both. Also, for demographic categories that are insignificant, it may be due to an offsetting effect of citizens and non-citizens, this specification allows us to identify this occurrence as well.

may directly influence the number of recipients, and possibly total expenditure. It may also indirectly impact the benefits per recipient due to the tradeoff between the number of recipients and benefits per recipient. Finally, ε is the unobservable error term. We estimate all three of these equations with the inclusion of state and time fixed effects. The state fixed effects control for differences among the states not specifically controlled by the demographic and per capita earning variables that lead to overall differences in generosity among the states.⁹ Overall generosity of the states may be correlated with the generosity of the states towards immigrants. The time fixed effects control for economic fluctuations in the states that will influence the welfare outcomes that are not explicitly controlled for in the specification.

In addition to the equations discussed above, we also estimate the same model using the maximum benefits for a family of three instead of using the benefits per recipient as a welfare outcome. This is another measure of the generosity level of the state, an important aspect of the state demand for welfare. Benefits per recipient measures the average benefit received among all recipients in the state and includes all effects of the complicated rules that are implicit in the system, including the implicit tax rates. Maximum benefits for a family of three gives information only regarding benefits of a select portion of the welfare recipient population, families with one parent and two children and no income. There are different levels of recipients, from those whose sole source of income is from the TANF program, to those who rely on the program to only assist in supplementation of their child care costs. To examine the maximum benefits for a family of three excludes all recipients that are not completely dependent on the program. Therefore, the more complete result is the result on the benefits per recipient equation. The results for all of the maximum benefits equations are presented in the appendix for

⁹ In later version of this paper we would like to also control for state differences in generosity using the charitable contributions by state. At this time, we do not have the IRS data sufficient for including this into the estimation.

reference. We continue to focus on the average benefit per recipient in the main portion of the paper.

Borjas (1999) presents a theory in which states may act as welfare magnets to immigrants. States with generous welfare programs, such as California, may attract more low income immigrants holding everything else constant. Once an immigrant has made the decision to relocate from their home country, which has a large fixed cost, the additional cost of locating in a welfare generous state as opposed to a non-welfare generous state is very small. Natives on the other hand, if they are poor enough to qualify for benefits, are much less likely to incur the large cost of relocating from a less generous to a more generous state. Borjas also shows that immigrants that fail to be able to provide for themselves would be more likely to stay in a welfare generous state than to return home. This will create a larger welfare dependant immigrant population within the welfare generous states. We assume that the native population characteristics are exogenous to the welfare outcomes and that the non-citizen population characteristics are endogenous. The endogeneity of the non-citizen population characteristics may influence the impact of the immigrant population on the welfare outcomes.

To address the issue of the endogeneity of the composition of non-citizens within each state, we need to determine what will influence their location decisions separate from welfare eligibility and generosity of each state. There are several factors that will determine the location decision of newly arrived immigrants. Immigrants may locate in the state that has jobs for them. For this reason, a portion of the set of instruments that we use to estimate the demographic characteristics of the non-citizen population is the sectoral composition of employment in each state. There is reason to believe that immigrants will be attracted to or qualified for a specific set of jobs within the set of industries that may differ than the native population. We use the two

digit NAICS industry codes to represent the state employment in each broadly defined industry in each state¹⁰. Another reason for location choice may be the geographic location of their home country in relation to the state in which they locate. For example, there is a large population of Cubans in south Florida, Asians in California, Mexicans in Texas, Arizona and California. Also, they may be more likely to locate where there is an already established population of immigrants from their home country, so the stock of immigrants from a certain country within a state may be important in their location decision. This may be due to the ethnic networks that will be available. Strong networks within immigrant communities can lead to sharing of information about benefits that are available and how to go about applying for them (Borjas and Hilton 1996). They can also lead to organization that leads into political power, especially with regard to local politicians. In addition to previously mentioned instruments, we use the country of origin to assign the immigrants to a region of origin.¹¹ Each region is segmented into OECD and non-OECD countries.

Political structure of the states may be important to include because it is representative of the political preferences of the population of the state. Democrats, based on core principles, may be more aligned with higher welfare benefits for low income residents. To the extent that the political party of the elected officials does not accurately represent their core ideology, we also include an ideology index developed by Erikson, Wright and McIver (1989) to control for differences in ideology across states. This index is interacted with the percent of seats in each

¹⁰ We use the NAICS industrial codes instead of the SIC industry codes. The following are the industrial categories used: (1) Forestry, fishing, hunting, and agriculture support (2) Mining (3) Utilities (4) Construction (5) Manufacturing (6) Wholesale trade (7) Retail trade (8) Transportation and warehousing (9) Information (10) Finance and Insurance (11) Real Estate, renting and leasing (12) Professional, scientific and technical services (13) Management of companies and enterprises (14) Admin, support, waste management and remediation services (15) Educational services (16) Health care and social assistance (17) Entertainment, recreation and arts (18) Accommodation and food services (19) Other services (except public administration) (20) Auxiliaries.

¹¹ Regions are Europe, which includes all of Europe and the former Soviet Union countries, Asia, which includes Asian countries, the Middle East and Australia and New Zealand, Africa, which includes all of the countries on the African continent, and America, which includes all countries in North and South America. Each of the 5 regions are divided into OECD and or non-OECD, except for Africa, leading to 9 total regions.

state house and senate that is occupied by a Democrat or Republican. The ideology index places the political environment of the state on scale of conservative to liberal and controls for any ideological differences between states that is not picked up using just the political party of the elected officials.

I estimate the pooled 2SLS regressions described above, but this specification includes all of the effects discussed, the policy effects and price effects of immigrants on the welfare outcomes. To separate out the policy effects, we estimate the same model separately for the states that allow economically qualified immigrants to receive welfare benefits and for the states that do not provide benefits to immigrants. The impact of non-citizens in the states where immigrants are not eligible to receive benefits will be interpreted as a policy effect of immigrants. The immigrants, as modeled, are assumed to not impact the number of recipients directly, so there is no direct price effect of the immigrants in these states¹². However, the impact of immigrants in the states where they are eligible to receive benefits, if they otherwise qualify, is interpreted as a combination of both the policy and price effects of immigrants on the welfare outcomes.

In addition to the model that we have discussed, we also estimate a linear probability model using the same instruments that have been discussed for the characteristics of the non-citizen population. We estimate the probability that changes in the number of non-citizens and their composition will increase or decrease the probability that a state will allow immigrants to receive benefits within their state. This estimation will explain what factors are important in determining welfare policy specifically as opposed to the welfare outcomes. If immigrants have no impact on welfare policy, whether immigrants are eligible to receive welfare benefits, it does

¹² There is the possibility of an indirect price effect of immigrants through potential native worker displacement caused by an influx of immigrants.

not necessarily imply that immigrants have no policy impact, because they may impact the welfare outcomes. For example, if a state does not want to provide benefits to immigrants due to a “dislike” for them, the immigrants may have a zero effect on policy, so that their presence does not impact the likelihood that the state will provide benefits to them. At the same time, for the state to maintain its required level of funding (or to use available funds) it may choose to increase the benefits per recipient, who are all natives, or relax income requirements of natives when possible as opposed to increasing the eligibility to immigrants. The immigrants are influencing the policy outcomes of the state, but they are not influencing the policy.

IV. Data

We implement the estimation strategy with a pooled panel of all states and the District of Columbia spanning the years 1997-2003, the entire length of the TANF program. The data includes demographic data, state and TANF income data, population data, political structure data, instruments as discussed and welfare outcomes, such as recipients per capita, benefits per recipient, total expenditure per capita and maximum benefits for a family of three. See Table 1 for the summary statistics of all key variables used throughout this paper.

The TANF expenditure data is reported annually to the Department of Health and Human Services (HHS). With the allowance of states to carry over money from each year’s block grant to future years, there is detailed information on how much is spent for specific categories from the specific year of grant money. The number of recipients is also collected by HHS since they track caseload information and is a monthly figure from January of each year.¹³ Since we use the total expenditure per capita and the number of recipients per capita as welfare outcome variables, we collect the state intercensal population estimates from the US Census Bureau division of

¹³ The January figure is collected for 1997, 1998, 1999, 2001 and 2002. In 2000 and 2003, we use the June figures adjusted for average difference between January and June in other years. See appendix for full explanation.

population estimates.¹⁴ The third welfare outcome variable is the benefits per recipient, and this is calculated as the total expenditure each year less the administrative costs over the number of recipients. This definition attempts to measure the true level of benefits that recipients are receiving on average. An alternative welfare outcome that we use is the maximum level of benefits for a family of three (Greenbook, annual). It contains a time series of this information by state over the relevant time period of 1997-2003.¹⁵ All expenditure, revenue and benefit data was adjusted for inflation into 2003 dollars using the Bureau of Labor Statistics CPI-U published data.

The demographic data is from the Current Population Survey March Supplement (US Census Bureau) for the years of 1997-2003. We separate out all demographic groups in citizens and non-citizens to measure the demographic differences between the citizens and non-citizens of the state. We also separate all non-citizen and citizen groups into the demographic groups that comprise them.

Political variables are the party of the governor and the percentage of the house and senate that are occupied by each political party (Book of the States, annual). To the extent that the political party in control does not represent the true ideological atmosphere of the state, we also adjust the raw percentage of the house and senate that are democrats using a political ideology index created by Erikson, Wright and McIver (1989) to correct for potential ideological differences across states.

V. Results

¹⁴ we adjusted these population estimates for true population change over the decade, see appendix for a full explanation.

¹⁵ This data is only available for 1996, 1998, 2000, 2002 and 2003. To estimate missing data, we use the average of the preceding and following year to create the estimate.

We find that non-citizens are an important force in the determination of the three welfare outcomes; benefits per recipient, number of recipients per capita and total welfare expenditure per capita. From a basic reduced form model of welfare demand (equation 2) we find that the number and characteristics of non-citizens are statistically important determinants of the welfare outcomes. We show that the results are comprised of both policy and price effects, as non-citizens and their characteristics are important both in states that do not allow immigrants to receive TANF as well as those that do. Finally, the discrete choice model reinforces the results by showing that the number and characteristics of the non-citizens affect the choice of whether the states use their own tax money to support welfare payments to non-citizens.

The first specification includes all of the demographic characteristics of the state and the non-citizen population, the savings of the state from the previous year, the amount of the federal block grant per capita, and the per capita earnings of the state. The non-citizen population is not found to be significant from zero at conventional levels in the determination of any of the welfare outcomes. See Table 3 for the 2SLS results. However, this specification does not include any political structure variables. The political structure of the state may be influencing the outcomes and the model is unable to pick up the importance of the non-citizen population on the welfare outcomes due to this omitted set of variables.

We test for the possibility that the political structure may be important for the determination of welfare outcomes independent of the non-citizens present in the state. We include a dummy indicating the party of governor of the state (equals one when the governor is a democrat), the percent of the seats occupied by democrats in the state senate and the percent of the seats occupied by a democrat in the state house. We interact the percent of the seats in the state senate and house occupied by democrats with the Erikson et al. ideology index. These

variables represent the political structure of the state. Table 4 includes all of the significant results of this specification, which shows that immigrants are important in the determination of the welfare outcomes.

The important results here are that the percent of non-citizens is negative and significant in determining the number of recipients per capita and the benefits per recipient. A 1% increase in the percent of the population that is comprised of immigrants leads to a reduction of 0.00764 recipients per capita. The mean recipients per capita is 0.049, so any 1% increase in the portion of the population that are non-citizens reduces the recipients per capita by 1.63%. There is also a negative impact on the benefits per recipient of 10.43%¹⁶ for a 1% increase in the percent of non-citizens in the state population.

In addition to the percentage of the population that is non-citizen being an important determining factor for the welfare outcomes, their specific characteristics are important as well. Even though the overall effect of non-citizens is negative in the determination of the welfare outcomes, certain characteristics of the non-citizen population will reduce the negative impact. The percentage of the female population that are non-citizens and the percentage of the population without a high school diploma that are non-citizens both have a positive and significant impact on the number of recipients per capita. The percent of the uneducated that are non-citizens also has a positive and significant effect on the benefits per recipient. These are demographic groups that will tend to have higher welfare usage. This can possibly be interpreted as the impact of the female and uneducated non-citizens that use welfare in states where it is available to immigrants and that leads to an increase the number of recipients per capita. The other possibility is that the uneducated non-citizens are replacing the native uneducated workers,

¹⁶ The benefits per recipient data is plagued by errors leading to a few significant outliers driving the large size of the coefficients. we expect the overall results to remain the same after this data is corrected. we have deleted the outliers and receive the same overall results.

which is leading to an increase in the number of native recipients per capita and the benefits per native recipient. It is possible that both of these are scenarios are occurring simultaneously in different states, depending on their rules regarding immigrant eligibility.

As expected, the percent of non-citizens in the population has a significant effect on the recipients per capita and the benefits per recipient. However the effect is not significantly different from zero for total expenditure per capita. Since the effect is negative for both the level of benefits and the number of recipients, we can speculate that there are a some states who are lowering their benefits per recipient and some states are lowering the recipients per capita, but few states are lowering both, leading to the zero effect on the total welfare expenditure.

In addition to the results regarding non-citizens and their characteristics, total expenditure per capita appears to be influenced positively by the presence of a democratic governor and democrats in the state house. So, as predicted the political structure of the state is important to the total welfare expenditure per capita of the state.

The previous specifications use pooled data including all states regardless of the eligibility of immigrants to receive welfare benefits. We also estimate the same model, but separately for the states that allow immigrants to be eligible for welfare benefits and those that do not allow immigrants to receive welfare benefits¹⁷. In states where the immigrants are not eligible to receive benefits, there is no price effect of the immigrants. In these states, any impact of immigrants will be interpreted as policy effects of immigrants. Table 5 reports the status of states with regard to immigrant eligibility for welfare benefits. Table 6 presents the results of the 2SLS model that estimates the states separately based on immigrants eligibility status.

¹⁷ This is equivalent to estimating a model fully interacted with a dummy indicating the states that provide benefits to immigrants. we have included state fixed effects that will control for any unobservable differences between the states.

The effect of non-citizens on benefits per recipient has fallen to zero when we only include the states where the immigrants are ineligible for benefits and the effect remains zero for the total welfare expenditure per capita. However, the impact of non-citizens on the number of recipients per capita remains negative and significant for the states that do not allow immigrants to receive benefits. Remarkably enough, a 1% increase in the state population percentage of non-citizens leads to a reduction in the number of recipients per capita by 1.46%, which is actually smaller than the impact calculated with the pooled data. The effect in states where immigrants are eligible to receive benefits is positive, but not significantly different from zero. The presence of the significance of non-citizen population on the number of recipients per capita in states that do not allow immigrants to participate in their welfare program implies that there is policy reaction of states to the immigrant population.

The final specification we test is a linear probability model that estimates the probability of a state allowing immigrants to receive welfare benefits given the same exogenous and endogenous variables included in all other specifications. We use the same set of instruments for the non-citizen characteristics of the state. See Table 7 for results. We find that the effect of non-citizens on the probability that a state allows immigrants to be eligible for benefits is not significantly different from zero at conventional levels, but it is positive and a quantitatively important result, the p-value is 0.154. The main result is that an increase in the non-citizen population by 1% will lead to a 30% higher probability that a state will allow immigrants to be eligible for welfare benefits. The presence of a large non-citizen population may be driving whether a state allows immigrants to be eligible for welfare benefits.

Also, important in this specification is the amount of the TANF block grant per capita. The larger the block grant per capita, the more likely the state is to allow immigrants to be

eligible for benefits. Since the block grant is based on previous levels of spending this is an indication that more generous states, ones that have spent more in the past, are more likely to grant benefits to immigrants. Or an increase in the block grant amount, or the transfer from the federal government, will lead to a higher probability that they will provide benefits to immigrants. Policy decisions regarding immigrants are influenced by the amount of income that the state has to spend on welfare. Another explanation is regarding the bonus grants. Bonus grants are awarded to states that are excelling in meeting some of the select goals outlined in the TANF rules, such as reduced out of wedlock births. States that are putting forth more effort in these certain areas that can lead to bonus money are also more generous to immigrants. States that are investing the resources to make it more than just a cash assistance program, might “care” more for the recipients and also “care” more low income immigrants.

B. Estimation With An Alternative Instrument

As an alternative to the estimation presenting above, we re-estimate the model by deleting the stock of immigration variables as instruments. While they pass conventional statistical tests, if the main thesis that immigration is affected by welfare holds, it is unlikely that welfare did not affect prior immigration. To the extent welfare program parameters are correlated over time, using the stock of immigrants as instruments becomes problematic.

We therefore investigate a model where the economic motivation for migration comes not only from the industrial structure of a state, but also from educational opportunities. Thus we add the number of college seats per capita to the list of instruments (available from the Center for Education Statistics, annual). Table 8 presents the new estimates for the affects of the number and characteristics of immigrants on the TANF welfare program outcomes, treating both

the number of immigrants and their characteristics as endogenous to the welfare policy outcomes by state governments.

Comparing the results in Table 8 to those in Table 4 show comparable effects, in that both the number and characteristics of immigrants are found to alter state government policy choices for TANF. Specifically, we see that as the number of immigrants rises, the eligibility criteria for TANF participation falls, although only at marginal significance levels. The share of females that are immigrants are no longer found to be a significant influence on TANF policy, but the share of people without a high school education who are immigrants are found to increase both recipients per capita and benefits per recipient.

VI. Conclusion

We have shown that Borjas' concern that immigrants may be impacting the policy of the state is indeed a valid concern. Irrespective of the precise nature of the methodology, we believe we have found that both the number and characteristics of immigrants influence TANF policy. Clearly, to assume that the policy framework of a state government is fixed even in the presence of a change in the composition of the population is incomplete. We have shown in this study that immigrants impact the welfare outcomes of states in a manner which suggests that there is more than just a price effect of immigrants, suggesting that a policy effect is occurring simultaneously. Immigrants have a price effect on state welfare outcomes because when they move to the United States they change the number of residents and the composition of the residents within the population. However, the price effect is not the only effect occurring.

The existence of the expected policy effect was demonstrated through the use of several different specifications, including a pooled 2SLS model, a 2SLS model separating the states based on eligibility of immigrants and a linear probability model that employs instrumental

variables. Immigrants are shown to have an impact on the welfare outcomes that are examined in this paper; number of recipients per capita and benefits per recipient. Immigrants in states that do not grant benefits to immigrants maintain a significant impact on the number of recipients per capita. Immigrants also have a strong positive impact on the probability that a state will offer benefits to the immigrant population in the state. With the inclusion of the preferences of the natives and the political power (or lack of power, with the negative and significant results) that the immigrants are able to achieve, there is a policy impact of immigrants on the welfare outcomes.

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Table 1: Summary Statistics of Key Variables

Variable	Mean	Standard Deviation
Recipients per capita	0.023	0.016
Benefits per recipient	4277.27	4646.75
Total Expenditure per capita	81.34	56.40
Maximum monthly benefit for a family of three	437.63	166.11
Percent of the population that are Non-citizens	0.049	0.042
Percent of the population that are under the age of 15	0.23	0.027
Percent of the population 65 and older	0.051	0.013
Percent of the population that is female	0.52	0.012
Percent of the population that has no high school diploma	0.17	0.029
Percent of the population that is under the poverty line	0.12	0.036
Per capita earnings	16400.96	2959.86
Percent of the population that is married	0.43	0.034
Percent of the population that is non-white	0.17	0.14
Percent of those under 15 that are non-citizens	0.022	0.018
Percent of those 65 and older that are non-citizens	0.017	0.023
Percent of the females that are non-citizens	0.047	0.040
Percent of those without a high school diploma that are non-citizens	0.11	0.11
Percent of those under the poverty line that are non-citizens	0.085	0.076
Percent of the married population that are non-citizens	0.063	0.056
Percent of the non-white population that are non-citizens	0.074	0.063
Dummy for party of governor (Equal to 1 if governor is a democrat)	0.37	0.48
Percent of state house that is comprised of democrat congressmen	0.49	0.18
Percent of the state senate that is comprised of democrat senators	0.51	0.18
Percent of house comprised of democrats, adjusted for ideology	1.52	1.17
Percent of senate comprised of democrats, adjusted for ideology	1.49	1.14
Un-obligated balance lagged by one year	11.64	16.99
TANF block grant amount per capita	55.75	32.24
Unemployment rate	4.70	1.21
Number of Observations = 357		

Table 2: Joint Significance of Instruments

Endogenous Variables	F-statistic	p-value
Percent of the population that are non-citizens	2.63	0.00
Percent of the children population who are non-citizens	0.90	0.61
Percent of the old population that are non-citizens	1.43	0.08
Percent of the female population that are non-citizens	2.36	0.00
Percent of the population without a high school diploma that are non-citizens	2.76	0.00
Percent of the population below the poverty line that are non-citizens	1.31	0.14
Percent of the married population that are non-citizens	2.53	0.00
Percent of the non-white population that are non-citizens	4.64	0.00

Presented are the F statistics for the joint significance of the instruments in explaining the endogenous variables.

Included Instruments: Percent of Non-citizens from an OECD European Country¹⁹, Percent of Non-citizens from a non-OECD European Country, Percent of Non-citizens from an OECD Asian Country²⁰, Percent of Non-citizens from a non-OECD Asian Country, Percent of Non-citizens from a non-OECD African Country²¹, Percent of Non-citizens from a non-OECD American Country²², Percent of Non-citizens from Mexico, Percent of Non-citizens from Canada, Percent employed in each of the 2 digit NAICS industries.

¹⁸ Education variables are defined over the adult population.

¹⁹ Europe includes the European countries and the former Soviet Union countries.

²⁰ Asia includes Asia, Australia and the Middle East. The OECD countries in this group are Japan, Korea, Turkey, Australia, and New Zealand.

²¹ There are no African countries that are an OECD member country.

²² America includes all countries in North and South America.

Table 3: IV Estimation Results for Welfare Outcomes

Exogenous Variables	Recipients per Capita	Benefits per Recipient	Total Expenditure per Capita
Percent of the population that are non-citizens	-0.56 (0.38)	-667,556.50 (407,380.80)	1,024.64 (1,353.02)
Percent of the children population who are non-citizens	0.27 (0.19)	412,602.60 (269,723.20)	-146.39 (649.95)
Percent of the old population that are non-citizens	0.15** (0.08)	-73,654.33 (65,267.15)	-366.28 (284.87)
Percent of the female population that are non-citizens	0.21 (0.26)	222,245.20 (209,253.20)	990.17 (741.31)
Percent of the population without a high school diploma that are non-citizens	0.05 (0.04)	60,064.33 (39,039.32)	-147.41 (157.02)
Percent of the population below the poverty line that are non-citizens	-0.01 (0.04)	-10,791.20 (36,755.27)	-27.18 (131.36)
Percent of the married population that are non-citizens	0.16 (0.16)	101,936.90 (128,032.70)	-1,117.01** (560.29)
Percent of the non-white population that are non-citizens	-0.02 (0.02)	-13,270.25 (15,114.91)	-11.09 (54.08)
Un-obligated balance lagged by one year	0.00 (0.00)	62.75* (34.07)	0.27** (0.12)***
TANF block grant per capita	0.00 (0.00)	79.16 (64.71)	1.33 (0.17)
R-squared	0.92	0.47	0.93
N	357	357	357

2SLS coefficients with robust standard errors in parentheses.

State and Time fixed effects included in each regression, also included are the state population, the characteristics of the state population, per capita income, and the unemployment rate – Full set of results available upon request.

*** Significant from zero at the 1% level, ** Significant from zero at the 5% level, * Significant from zero at the 10% level

Table 4: IV Estimation including Political Structure Variables

Exogenous Variables	Recipients per Capita	Benefits per Recipient	Total Expenditure per Capita
Percent of the population that are non-citizens	-0.76** (0.38)	-907,054.10** (426,435.60)	-479.67 (1,358.65)
Percent of the children population who are non-citizens	0.19 (0.20)	370,687.00 (229,035.20)	433.79 (703.73)
Percent of the old population that are non-citizens	-0.02 (0.10)	-133,821.80 (101,625.10)	-497.35 (331.50)
Percent of the female population that are non-citizens	0.46* (0.28)	476,445.70 (293,444.90)	898.93 (769.91)
Percent of the population without a high school diploma that are non-citizens	0.08* (0.04)	83,412.95** (40,630.08)	-88.10 (152.72)
Percent of the population below the poverty line that are non-citizens	-0.02 (0.03)	-32,196.98 (35,155.21)	-51.44 (119.37)
Percent of the married population that are non-citizens	0.18 (0.17)	83,306.10 (147,036.20)	-356.38 (533.02)
Percent of the non-white population that are non-citizens	-0.02 (0.02)	-14,689.09 (17,134.65)	-38.95 (53.34)
Dummy for party of governor (Equal to 1 if governor is a democrat)	0.0011 (0.0011)	1,307.50 (1,104.24)	10.16*** (3.68)
Percent of state house that is occupied by democrats	-0.0008 (0.0024)	695.55 (1,886.28)	12.85 (9.14)
Percent of state senate that is occupied by democrats	-0.0013 (0.0023)	50.36 (1,939.41)	-9.44 (9.97)
Un-obligated balance lagged by one year	-0.00002 (0.00003)	63.60* (38.21)	0.26** (0.12)
TANF block grant per capita	0.0001 (0.0001)	118.46 (109.64)	1.18*** (0.24)
R-squared	0.89	0.47	0.92
N	336	336	336

2SLS coefficients with robust standard errors in parentheses

State and Time fixed effects included in each regression, also included are the state population, the characteristics of the state population, per capita income, and the unemployment rate – Full set of results available upon request.

*** Significant from zero at the 1% level, **Significant from zero at the 5% level, * Significant from zero at the 10% level

Table 5: Immigrant Eligibility for TANF benefits²³

State	1997	1998	1999	2000	2001	2002
Alabama	No	No	No	No	No	No
Alaska	Yes	Yes	Yes	Yes	Yes	Yes
Arizona	Yes	Yes	Yes	Yes	Yes	Yes
Arkansas	No	No	No	No	No	No
California	No	Yes	Yes	Yes	Yes	Yes
Colorado	No	Yes	Yes	Yes	Yes	Yes
Connecticut	Yes	Yes	Yes	Yes	Yes	Yes
Delaware	No	No	No	Yes	Yes	Yes
District of Columbia	No	No	No	No	No	No
Florida	No	No	No	No	Yes	Yes
Georgia	No	Yes	Yes	Yes	Yes	Yes
Hawaii	No	Yes	Yes	Yes	Yes	Yes
Idaho	No	No	No	No	No	No
Illinois	No	No	Yes	Yes	Yes	Yes
Indiana	No	No	No	No	No	No
Iowa	No	No	No	No	No	No
Kansas	No	No	No	No	No	No
Kentucky	No	No	No	No	No	No
Louisiana	No	Yes	Yes	Yes	Yes	Yes
Maine	Yes	Yes	Yes	Yes	Yes	Yes
Maryland	Yes	Yes	Yes	Yes	Yes	Yes
Massachusetts	Yes	Yes	Yes	Yes	Yes	Yes
Michigan	No	No	No	No	No	No
Minnesota	No	Yes	Yes	Yes	Yes	Yes
Mississippi	No	No	No	No	No	No
Missouri	No	Yes	Yes	Yes	Yes	Yes
Montana	No	No	No	No	No	No
Nebraska	No	No	Yes	Yes	Yes	Yes
Nevada	No	No	No	No	No	No
New Hampshire	No	Yes	Yes	Yes	Yes	No
New Jersey	No	No	No	No	No	Yes
New Mexico	No	Yes	Yes	Yes	Yes	Yes
New York	No	Yes	Yes	Yes	Yes	Yes
North Carolina	No	No	No	No	No	No
North Dakota	No	No	No	No	Yes	Yes
Ohio	No	Yes	Yes	Yes	Yes	Yes
Oklahoma	No	No	No	No	No	No
Oregon	Yes	Yes	Yes	Yes	Yes	Yes
Pennsylvania	Yes	Yes	Yes	Yes	Yes	Yes
Rhode Island	Yes	Yes	Yes	Yes	Yes	Yes
South Carolina	Yes	Yes	No	No	No	No
South Dakota	No	No	No	No	No	No
Tennessee	Yes	Yes	Yes	Yes	Yes	Yes
Texas	No	No	No	No	No	No
Utah	Yes	Yes	Yes	Yes	Yes	Yes
Vermont	Yes	Yes	Yes	Yes	Yes	Yes
Virginia	No	No	No	No	No	No
Washington	No	Yes	Yes	Yes	Yes	Yes
West Virginia	No	Yes	Yes	Yes	Yes	Yes
Wisconsin	No	Yes	Yes	Yes	Yes	Yes
Wyoming	No	Yes	Yes	Yes	Yes	Yes

Source: The Welfare Rules Database, <http://anfdata.urban.org/WRD>

²³ There may be additional restrictions imposed on immigrants compared to the native population. This is a rough measure of the state that allow immigrants to be eligible for TANF benefits when they are not eligible for Federal TANF benefits.

Table 6A: IV Estimation Only States where Immigrants are not eligible for TANF Benefits

Exogenous Variables	Recipients per Capita	Benefits per Recipient	Total Expenditure per Capita
Percent of the population that are non-citizens	-0.72** (0.29)	-361,201.90 (300,474.30)	-1,612.44 (1,088.53)
Percent of the children population who are non-citizens	0.08 (0.13)	132,269.40 (87,304.44)	678.14* (366.45)
Percent of the old population that are non-citizens	0.09 (0.19)	35,413.86 (91,801.21)	-834.40* (494.04)
Percent of the female population that are non-citizens	0.46 (0.33)	456,963.50 (294,778.20)	586.29 (838.58)
Percent of the population without a high school diploma that are non-citizens	0.08** (0.04)	-17,347.66 (27,653.58)	160.84 (152.96)
Percent of the population below the poverty line that are non-citizens	-0.05 (0.03)	12,986.26 (19,129.46)	38.12 (91.05)
Percent of the married population that are non-citizens	0.03 (0.16)	-41,115.58 (94,719.54)	290.29 (440.27)
Percent of the non-white population that are non-citizens	0.01 (0.03)	-50,868.45** (23,531.70)	-86.64 (95.87)
Dummy for party of governor (Equal to 1 if governor is a democrat)	0.0009 (0.0019)	1,379.62 (967.64)	9.56* (5.01)
Percent of state house that is occupied by democrats	0.0069 (0.0043)	-13.05 (2,053.59)	16.53 (10.75)
Percent of state senate that is occupied by democrats	-0.0003 (0.0031)	2,426.85 (2,603.91)	12.92* (7.46)
Un-obligated balance lagged by one year	-0.00001 (0.00005)	5.16 (35.44)	0.01 (0.19)
TANF block grant per capita	0.0001 (0.0001)	9.28 (52.53)	1.19*** (0.23)
R-squared	0.95	0.72	0.93
N	157	157	157

2SLS coefficients with robust standard errors in parentheses.

State and Time fixed effects included in each regression, also included are the state population, the characteristics of the state population, per capita income, and the unemployment rate – Full set of results available upon request.

*** Significant from zero at the 1% level, ** Significant from zero at the 5% level,* Significant from zero at the 10% level

Table 6B: IV Estimation Only States where Immigrants are eligible for TANF Benefits

Exogenous Variables	Recipients per Capita	Benefits per Recipient	Total Expenditure per Capita
Percent of the population that are non-citizens	0.53 (0.44)	-682,439.20 (458,250.50)	1,239.80 (1,786.81)
Percent of the children population who are non-citizens	0.03 (0.14)	156,751.60 (150,930.50)	220.58 (734.09)
Percent of the old population that are non-citizens	0.03 (0.08)	-105,289.60 (85,032.34)	-557.69 (374.02)
Percent of the female population that are non-citizens	-0.29 (0.25)	460,620.60 (303,548.50)	365.28 (1,077.43)
Percent of the population without a high school diploma that are non-citizens	0.01 (0.05)	19,286.31 (43,036.18)	-210.68 (186.30)
Percent of the population below the poverty line that are non-citizens	-0.02 (0.02)	-18,859.79 (26,871.60)	10.28 (100.27)
Percent of the married population that are non-citizens	-0.21 (0.14)	57,734.83 (158,803.20)	-866.80 (594.13)
Percent of the non-white population that are non-citizens	-0.02* (0.01)	-16,490.38 (14,643.76)	-35.75 (55.98)
Dummy for party of governor (Equal to 1 if governor is a democrat)	-0.0019 (0.0015)	1,006.98 (1,880.41)	17.15** (8.21)
Percent of state house that is occupied by democrats	-0.0042 (0.0039)	1,527.03 (3,639.38)	8.22 (17.80)
Percent of state senate that is occupied by democrats	0.0093*** (0.0031)	-439.81 (2,497.11)	-17.30 (17.29)
Un-obligated balance lagged by one year	0.000053 (0.000038)	53.00 (45.37)	0.25 (0.17)
TANF block grant per capita	0.00014* (0.00007)	284.19 (228.96)	1.59*** (0.27)
R-squared	0.93	0.64	0.92
N	179	179	179

2SLS coefficients with robust standard errors in parentheses

State and Time fixed effects included in each regression, also included are the state population, the characteristics of the state population, per capita income, and the unemployment rate – Full set of results available upon request.

*** Significant from zero at the 1% level, ** Significant from zero at the 5% level, * Significant from zero at the 10% level

Table 7: Linear Probability Model

Exogenous Variables	Immigrants eligible for TANF Benefits
Percent of the population that are non-citizens	30.30 (21.21)
Percent of the children population who are non-citizens	-9.80 (9.59)
Percent of the old population that are non-citizens	3.47 (3.88)
Percent of the female population that are non-citizens	-2.41 (14.91)
Percent of the population without a high school diploma that are non-citizens	-1.82 (2.54)
Percent of the population below the poverty line that are non-citizens	-2.37 (2.19)
Percent of the married population that are non-citizens	-18.90** (9.28)
Percent of the non-white population that are non-citizens	-0.86 (0.99)
Dummy for party of governor (Equal to 1 if governor is a democrat)	-0.09 (0.07)
Percent of state house that is occupied by democrats	0.83 (0.58)
Percent of state senate that is occupied by democrats	0.29 (0.56)
Un-obligated balance lagged by one year	0.0022 (0.0016)
TANF block grant per capita	0.0057** (0.0025)
R-squared	0.77
N	357

2SLS coefficients with robust standard errors in parentheses.

State and Time fixed effects included in each regression, also included are the state population, the characteristics of the state population, per capita income, and the unemployment rate – Full set of results available upon request.

*** Significant from zero at the 1% level, ** Significant from zero at the 5% level, * Significant from zero at the 10% level

Table 8: IV Estimation including Political Structure Variables- Using college enrollment and industrial structure as IVs, and excluding the stock of immigrants

Exogenous Variables	Recipients per Capita	Benefits per Recipient	Total Expend per Capita
Percent of the population that are non-citizens	-1.02 (0.65)	-314,853 (294,268)	561.6 (1,855.3)
Percent of the children population who are non-citizens	0.42 (0.34)	133,050 (141,623)	435.8 (932.0)
Percent of the old population that are non-citizens	0.07 (0.16)	31,219 (62,776)	-702.8 (428.2)
Percent of the female population that are non-citizens	-0.12 (0.13)	20,789 (199,375)	593.0 (1,169.3)
Percent of the population without a high school diploma that are non-citizens	0.17* (0.09)	50,982 (39,145)	-211.9 (285.4)
Percent of the poverty population that are non-citizens	0.02 (0.05)	-7,380 (19,315)	-134.0 (142.6)
Percent of the married population that are non-citizens	0.50 (0.30)	69,570 (93,279)	-368.5 (849.6)
Percent of the non-white population that are non-citizens	-0.04 (0.03)	-11,607 (11,326)	-110.7 (96.8)
Dummy for party of governor (1 = Democrat)	0.0014 (0.0017)	699 (734)	12.16** (4.78)
Percent of state house that is occupied by Democrats Interacted with ideology index	0.004 (0.004)	1,586 (1,270)	9.69 (12.42)
Percent of state senate that is occupied by Democrats Interacted with ideology index	-0.003 (0.004)	-535 (1,157)	-17.97 (14.19)
Percent of state house that is occupied by Republicans Interacted with ideology index	-0.004 (0.004)	-1,627 (1,256)	9.58 (10.27)
Percent of state senate that is occupied by Republicans Interacted with ideology index	0.004 (0.005)	2,493 (1,734)	9.70 (11.35)
Un-obligated balance lagged by one year	-0.000012 (0.00004)	28.08 (17.82)	0.29*** (0.13)
TANF block grant per capita	0.00011* (0.00007)	53.88 (36.82)	1.19*** (0.23)
R-squared	0.84	0.30	0.91
N	336	336	336

2SLS coefficients with robust standard errors in parentheses

State and Time fixed effects included in each regression, also included are the state population, the characteristics of the state population, per capita income, and the unemployment rate – Full set of results available upon request.

*** Significant from zero at the 1% level, **Significant from zero at the 5% level, * Significant from zero at the 10% level

Appendix I: Data Estimation

State Population Estimate Correction

The Census Bureau releases population estimates annually for each state. These estimates are based on formulas that utilize information, such as births and deaths and migration to estimate the population each year. They use the birth certificates, death certificates, IRS data, group quarters data and other administrative data to estimate population changes at the county level and then sum the counties to achieve a state population estimate. These estimates are not corrected for the end of the decade true census count of all persons in each state. This results in an overestimation of population for the states in the years preceding the decennial census. There is important information that signals how population is changing in the data used to estimate each year's population. We want to include that information in the adjusted estimates, but we also want to correct for the overestimate of population at the end of the decade.

I create a "population estimate trend line" which is the constant average growth rate applied to the census population estimates between 2 decades (ex. 1980 and 1990) to estimate each year on this trend line. Then we calculate the percent difference between the annual estimate and the population estimate trend line at each point in time. We apply this difference to the corresponding years on the "decennial population trend line" which created from the constant average growth rate between the decennial population counts. These new estimates are corrected for the "true" population counts of the decennial census and they incorporate all of the information used to formulate the original population estimates.

Recipient Data

Monthly recipient data is available for January 1993-1999. In 2000 and 2003 June data is available. In 2001 and 2002 January and June are both available. In order to adjust for any seasonality that might occur in the data. We adjust the data to reflect the same month over the time period, specifically by adjusting the June observations to reflect January data. We use the 2001 and 2002 data where we have both January and June to determine the percent difference for each state between January and June and average this difference for both years. We apply this average percent difference to the 2000 and 2003 June observations to estimate the January data for those years.

Industrial Employment Data

There was a shift to using the North American Industry Classification System (NAICS) codes in 1998. Data in the County Business Patterns (CBP) uses the NAICS codes after and including 1998. The CBP currently only has data available through 2001. The Bureau of Labor Statistics (BLS) also releases employment data for each state. This data switches to reporting the data in NAICS codes in 2003, but there is data available for the entire set of relevant years used in this paper. We use the BLS data, which is less detailed than the CBP data, to calculate the percent change in five broad categories of industries for each state. The broad industries are manufacturing, construction, trade transportation & utilities, finance real estate & insurance, services and government. These broad categories are matched up with the specific categories of the NAICS codes. Then for the missing years, we apply the growth rates of the relevant category to the specific category with missing data.

In addition to missing data, there is also the issue that there are “bands” within the data for certain industries in certain states. If there are a significantly small number of establishments

within a certain industry in a certain state, the employment figures are presented in a band (ex: 100-249) instead of a specific number. To correct for this problem in the data, we just use the midpoint value of the band to estimate the missing value.

Appendix II: Maximum Benefits for a Family of 3 Results

Exogenous Variables	2SLS (1)	2SLS (2)	Immigrants Ineligible (3)	Immigrants Eligible (3)
Percent of the population that are non-citizens	5,717.10*** 1,929.36	3,436.39 2,147.56	491.93 971.49	942.17 2,120.41
Percent of the children population who are non-citizens	-1,572.34* 838.27	-825.72 893.10	-342.78 408.79	423.26 825.79
Percent of the old population that are non-citizens	204.78 322.46	-59.67 434.10	-536.31 489.62	912.03 497.90
Percent of the female population that are non-citizens	-1,270.15 1,061.76	-240.10 1,188.75	818.06 900.47	-672.46 1,413.84
Percent of the population without a high school diploma that are non-citizens	-237.39 189.77	-22.97 205.06	-41.00 135.14	262.30 237.18
Percent of the population below the poverty line that are non-citizens	-337.78* 202.16	-415.35** 173.31	-113.07 79.04	-317.84** 155.50
Percent of the married population that are non-citizens	-2,129.42** 835.60	-1,904.04** 776.53	-734.95 467.15	-1,730.80** 793.86
Percent of the non-white population that are non-citizens	-107.08 88.28	-152.51* 87.00	-99.36 98.34	-147.41** 61.73
Dummy for party of governor (Equal to 1 if governor is a democrat)	-- --	17.50*** 6.47	22.22*** 7.33	15.11 10.41
Percent of state house that is occupied by democrats	-- --	0.24 11.56	4.13 13.99	57.15*** 20.03
Percent of state senate that is occupied by democrats	-- --	16.94 10.94	26.81** 11.39	43.59** 19.43
Population	0.000014** 0.000007	0.000006 0.000007	0.000003 0.000009	-0.000003 0.000012
Un-obligated balance lagged by one year	0.19 0.18	0.15 0.20	0.05 0.19	-0.13 0.20
TANF block grant per capita	-0.69*** 0.25	-0.17 0.22	0.24 0.29	0.31 0.37
Percent of the population under the age of 15	349.80* 203.70	340.71* 174.88	25.16 160.45	614.24** 262.39
Percent of the population over the age of 65	-108.84 293.17	56.69 288.33	31.80 270.39	-290.80 475.20
Percent of the population that are female	109.60 202.37	8.62 198.11	-255.58 220.32	186.47 291.17
Percent of the population without a high school diploma	-511.22***	-165.31	153.12	-74.40

Exogenous Variables	2SLS (1)	2SLS (2)	Immigrants Ineligible (3)	Immigrants Eligible (3)
	187.98	201.86	179.03	259.18
Percent of the population below the poverty line	312.72** 151.88	315.63** 141.60	-75.46 109.45	416.84* 227.04
Per capita earnings	-0.0028 0.0020	-0.0008 0.0018	-0.0006 0.0015	0.0014 0.0026
Percent of the population that are married	166.43 152.00	243.84 148.21	53.65 173.64	92.74 181.11
Percent of the population that is non-white	-50.05 103.33	129.30 82.58	114.14 92.97	-56.44 155.32
Unemployment rate	-9.49** 4.09	-14.87*** 4.00	-4.72* 2.74	-22.07*** 5.07
R-squared	0.98	0.99	1.00	0.99
N	357	336	157	179

2SLS coefficients with robust standard errors in parentheses.

State and Time fixed effects included in the regression

*** Significant from zero at the 1% level, ** Significant from zero at the 5% level, * Significant from zero at the 10% level