The Impact of Redistributive Tax and Transfer Programs on Risk-Taking Behavior and Labor Mobility

By Adriana Kugler  December 2013
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Introduction and summary

The idea that higher income inequality has pernicious effects on economic growth has been considered for decades. Many studies have been written to establish the negative relation between income inequality and growth, as well as to explain the channels through which this relation can occur. Some argue that greater inequality in a society due to lack of access to education can reduce growth since increasing the skill level of the workforce is a key component of growth. Others argue that higher inequality generates conflict and political instability, which can be bad for the investment climate and for growth in general. Importantly, others indicate that higher inequality and lower earnings for middle- and lower-income households limit their purchasing power and consumption and, as such, reduce growth. A less-studied channel is the positive effect that redistributive policies and programs that reduce income inequality can have on risk taking and entrepreneurial behavior, which in turn encourages growth.

Income redistribution in the form of tax and transfer programs provide social insurance and protection against many types of risks over a person’s lifetime and over his or her career that are not always provided through private insurance. Thus, social insurance in the form of transfer programs—such as the Temporary Assistance for Needy Families, or TANF, program; Medicaid; the Supplemental Nutrition Assistance Program, or SNAP, formerly known as food stamps; and the Special Supplemental Nutrition Program for Women, Infants, and Children, more commonly referred to as WIC—allows individuals to make decisions that involve higher risk, while at the same time affording them greater mobility than they would otherwise undertake. In particular, social insurance can encourage labor mobility either to new businesses, new occupations or sectors, or new areas of the country, which is key to the efficient workings of any economy. Indeed, entrepreneurship and greater labor mobility make it easier to allocate resources to the best possible uses, which in turn increases productivity and growth by allowing more-productive businesses to expand while less-productive businesses contract.
While there is some aggregate evidence on the impact of social insurance on aggregate risk taking, there is little evidence on how tax and transfer systems impact individual risk taking in the labor market. This analysis, based on the author’s calculations (see the technical appendix), provides new evidence on the impact that the progressivity of the tax system—the tax rate increases as taxable income increases—and state and federal transfer programs—programs providing support to families in need in the form of cash, in-kind help, and services—have in three areas of the labor market, specifically:

- Occupational and industrial mobility
- Geographical mobility
- Entrepreneurship and self-employment

This report estimates the effects of the progressivity of the tax system, of the generosity of TANF, and of the generosity in coverage of Medicaid, SNAP, and WIC on labor mobility. According to the findings of this report:

- A more progressive tax system encourages occupational and industrial mobility, along with geographical mobility and mobility from self-employment to wage employment.
- Greater coverage of medical services for the poor through programs such as Medicaid are also key to encouraging occupational and industrial mobility and encouraging mobility from self-employment to wage employment.
- More generous TANF benefits increase occupational mobility.
- In-kind transfers in the form of food assistance, however, have mixed effects on mobility. While expanded coverage of food-assistance programs to families with WIC benefits increases occupational mobility and self-employment, SNAP seems to generally be associated with less mobility.

All in all, these findings suggest that a more progressive tax system and increased access to medical services and cash transfers tend to encourage labor-market mobility and afford individuals, particularly the poor, with the possibility of changing occupations, industries, and locations. Additionally, a more progressive tax system—along with transfer programs—provides individuals with opportuni-
ties to start their own businesses, which, combined with the aforementioned benefits, are key to improving efficiency in the economy by providing more services without using more resources.

The importance of redistributive taxes, cash transfers, and health insurance for the poor cannot be overstated; what is less obvious are the benefits of tax and transfer systems to society. By encouraging occupational, industrial, and geographical mobility—allowing people to pursue jobs in growing professions and go where those jobs are located—tax and transfer systems improve the workings of the overall economy. Thus, the thrust of this report is to make the case that progressive taxation and transfer to the poor is not only the right thing to do; it is the smart thing to do.
Redistributive tax and transfer systems

As mentioned above, this study considers a number of tax and transfer programs to study the impact of income redistribution on risk taking and mobility. This section describes the features of the tax system and transfer programs used for the analysis in this report.

Tax progressivity

A redistributive tax system imposes higher taxes at the upper end of the distribution and lower taxes at the lower end of the distribution. By contrast, a tax system that taxes everyone the same is regressive because it ultimately makes those at the bottom of the income ladder pay more relative to their earnings than those at the top of the income ladder. Federal and state tax liabilities of those in the top quartile are higher than the liabilities for those in the bottom quartile by about $44,000. This does not mean, however, that the tax system is not redistributive. To measure the progressivity of a tax system, one has to compare the tax liabilities to the income received. Thus, for the purposes of this report, tax progressivity is measured by looking at the difference in the average tax rate for those in the top and bottom quartiles of the income distribution. The average tax rate for those households in the top quartile of the distribution was 46 percent higher, on average, than it was for those in the bottom quartile of the distribution during the period from 1996 to 2011. This is the result of having positive and high tax rates in the upper quartile but also having negative income taxes—as a result of the Earned Income Tax Credit, or EITC—in the bottom quartile.
The tax liabilities are constructed using the TAXSIM program, a model used to jointly analyze the effects of tax policy from the National Bureau of Economic Research with information from the Current Population Survey, or CPS, to calculate the earned income, assets, pensions, disability, and more for those in the 75th percentile and 25th percentile of the total income distribution. The average tax rate is then obtained by dividing the tax liabilities by the average income at the 75th percentile and the 25th percentile. The progressivity of the tax system is measured by taking the difference in the average tax rates of the top and bottom quartiles of the income distribution.

Figure 1 shows, however, that there are big differences in the tax progressivity across states. In the most progressive states—including Minnesota; Vermont; New York; Washington, D.C.; Wisconsin; Kansas; Oregon; Hawaii; Idaho; Maine; Colorado; Massachusetts; Maryland; and New Jersey—the tax rate difference between those at the top and those at the bottom of the income distribution is 53 percent on average. By contrast, in the least redistributive states—including South Dakota, Wyoming, Washington, Alaska, Nevada, New Hampshire, Tennessee, Texas, Florida, and Indiana—this difference is 41 percent.

Transfer programs

Aside from the tax system with its deductions and credits, the government can redistribute income through various transfer programs. Many transfer programs are specifically targeted to the poor as a means to protect families already at or below the federal poverty line from facing living conditions that are unacceptable. Some of these programs provide direct income support, some provide in-kind support, and still others provide services. This analysis considers three types of programs that account for the bulk of transfer programs in the United States: TANF; Medicaid and the State Children’s Health Insurance Program, or SCHIP; and SNAP and WIC.
Temporary Assistance for Needy Families. This program provides cash assistance to low-income families with children. When TANF was introduced in 1996 to replace the Aid to Families with Dependent Children, or AFDC, program, the so-called welfare system was reformed by the legislation but also through state waivers introducing work requirements, lifetime time limits, financial sanctions, and enhanced earnings disregards. The benefits under TANF are constructed using information on maximum benefits, benefit-reduction rates, and flat-earnings disregards, which vary over time and across states, as well as using earned and unearned income for the 25th percentile by year from the U.S. Bureau of Labor Statistics’s Current Population Survey. The TANF benefit formula is:

\[ \text{TANF Benefit} = \text{Max. Benefit} - \tau \times (\text{Earnings} - D) - \text{Unearned Income} \]

where \( \tau \) is the benefit-reduction rate and \( D \) is the flat-earnings disregard. The TANF benefit was $326 on average for those in the lowest quartile over the period studied for a family of three. There are, however, big differences in the generosity of TANF across states, as shown in Figure 2. The most generous states provide $731 on average to a family of three, while the least generous states do not offer any cash transfer.

Medicaid and the State Children’s Health Insurance Program. Both programs provide health insurance to poor families and poor children. Medicaid, which provides health insurance to eligible low-income individuals, was initially created in 1965 to serve only those families receiving AFDC benefits. But starting in 1987, Medicaid eligibility was expanded to include families with incomes above the poverty line, as well as pregnant women and children under certain ages. The generosity of the Medicaid and SCHIP programs vary across states and over time because the income and age thresholds to qualify for Medicaid are higher in some states than others. Currently, the average income threshold to qualify for Medicaid is around 190 percent of the federal poverty level, though this threshold increased from the 1990s to the 2000s. Figure 3 shows large differences in the availability of Medicaid for low-income households across states. The most generous states, however, provide free health services for low-income households with incomes as high as 256 percent of the federal poverty level. On the other hand, the least generous states only provide Medicaid to households barely above the poverty line at 133 percent of the federal poverty level. The average age threshold during the period from 1996 to 2011 is 6 years of age, but this age threshold nearly doubled from the 1990s to the 2000s, indicating that SCHIP has been expanded and made more generous by including more children.

Supplemental Nutrition Assistance Program and the Special Supplemental Nutrition Program for Women, Infants, and Children. Both programs focus on in-kind food transfers. During the period from 1996 to 2011, the SNAP monthly income threshold for a family of three stood at around $1,700. In contrast to TANF and Medicaid, food-assistance programs do not vary across states because these are federally provided programs. Also, it is important to note that both SNAP and WIC have experienced a strong upward trend in the income required to qualify for these programs over the past three decades. This means that the programs have become more generous as more people qualify for them. Thus, in this analysis, it is harder to distinguish what impact food programs may be having on mobility versus other ongoing changes in the economy.

While all of these programs differ in what they provide to families—income, services, and food—they all support families that are at the very bottom of the income distribution. If people believe that making risky decisions in the labor market may cause them to fall to the bottom of the income distribution, they may choose to stay put and not undertake changes in occupations, industries, or location—or they may not choose to start new businesses. Fear of ending up in an economically worse position is a deterrent to risk taking. Transfer programs,
However, may induce individuals to undertake decisions that may have high returns but also high risk. Take, for instance, a mother of two who lost her husband and has not been in the labor force since she had her children. She finds herself without much savings and without much experience in the workplace, but she has great cooking skills and thinks she can start a catering business. But she worries that if she asks for a loan and the business does not work out, she and her kids will end up in poverty. The assurance that she is living in a state that provides reasonably generous TANF benefits gives her the push and confidence to start her business.

**FIGURE 2**
TANF Benefits from 1996-2011

![TANF Benefits Chart]

Note: TANF benefits are calculated for a family of three below the 25th percentile.


**FIGURE 3**
Medicaid Income Thresholds from 1996-2011

![Medicaid Income Thresholds Chart]

Note: Medicaid income thresholds are for a family of three.

Tax and transfer systems: Impacts on occupational and industrial mobility

A key element of a healthy labor market is the ability of workers to move across occupations and industries over the courses of their working lives. As people discover what their talents are and their experiences evolve in the labor market, they may realize that they are not a good fit for a particular occupation or industry but that their skills may be better suited to another occupation or industry. Thus, people may consider moving to a new occupation or utilizing their talents in a different industry, yet they may be reluctant to do so, as they may be worried about things not working out and being in an even worse situation than they currently face.

In addition, jobs in certain occupations and industries may disappear and new ones evolve as economies face competition from other parts of the country or abroad or as new technologies replace workers in those jobs. Under these circumstances, workers may consider moving to new occupations or industries, but the uncertainty and potential for failure may hold them back from investing in the training or education needed to get them into a new job. Under these conditions, a progressive tax system, which shares the risk if things do not work out—along with transfer programs that help people from falling below a given standard of living—may help individuals in the labor market make the investments necessary to switch occupations or industries.

But while mobility across occupations and industries is key for the health of the labor market, there is relatively little mobility of this type. Only 12 percent of workers moved occupations over the period of this study, and even less—just 9 percent—moved to different industries over the same period.8
Figure 5 demonstrates that a more progressive tax system indeed induces individuals to change occupations more often than they would otherwise. Moving the progressivity of the tax system from the least to the most progressive states by 11 percent on average increases occupational mobility by 35 percent. Thus, by providing social insurance, the increased progressivity in the tax system induces moves across occupations that are key to the healthy functioning of the labor market but that may be costly to individual workers.

Similarly, more generous transfer programs largely encourage occupational mobility. First, an increase in the income and age thresholds of Medicaid and SCHIP increases the mobility of workers to new occupations. As shown in Figure 5, an increase in the coverage of Medicaid from the least generous to the most generous states—an increase in the eligibility threshold of 122 percent—increases occupational mobility by 24 percent. Also, an increase in the coverage of SCHIP benefits from the least generous states—which cover no children—to the most generous states—which cover children up to age 18—increases occupational mobility by 34 percent. Likewise, more generous TANF benefits increase occupational mobility. Moving from the least generous to the most generous states, or increasing benefits by $731 on average, increases worker mobility across occupations by 16 percent. Finally, while the increase in WIC benefits over the past two years increased occupational changes by 13 percent, the increase in SNAP benefits seemed to have the opposite effect. This could be because, even though food stamps may be crucial in helping a household, in-kind transfers may not be as helpful in allowing individuals to keep their standard of living if their investments to improve their labor-market situations fail to work out.

![Figure 5: Impact of tax and transfer programs on occupational mobility](image-url)
Figure 6 below also shows that tax progressivity and increased Medicaid coverage are important in encouraging workers to change industries. Increasing the progressivity from the least to the most redistributive states increases industrial mobility by 24 percent. Also, increasing the coverage of health services to the poor—by either increasing the minimum income required to qualify for coverage or by increasing the number of children that qualify for health coverage—increases industrial mobility by 14.5 percent and 17 percent, respectively. On the other hand, more generous TANF benefits and food supplements do not appear to encourage changes to new industries.

FIGURE 6
Impact of tax and transfer programs on industrial mobility

Source: Author’s regression analysis.
In addition to occupational and industrial mobility, as well as mobility in terms of types of employment, geographical mobility is key to keeping labor markets working well. As we know, even during the last recession, some parts of the country were more affected than others by the downturn. Had job seekers in particularly hard-hit areas sought employment opportunities outside of their communities and regions, they could have helped reduce the unemployment rate. While this was certainly not the key reason why unemployment remained high during the Great Recession, geographical mobility can help bring unemployment down even during good times. But the prospect of moving to find a new job is daunting. Moving to a new state or city without a job is certainly risky, but moving even when one has already found a job can be just as risky, since there is a chance that the job may not pan out and since moving involves costs that cannot be recovered.

Figure 7 illustrates that the increased progressivity of the tax system induces mobility within and across states. An increase in progressivity from the least to the most redistributive states increases overall mobility by 17 percent and across-state mobility by 70 percent. Likewise, an increase in medical coverage and services for children increases geographical mobility by 17 percent. By contrast, increased health coverage for adults in a state discourages mobility, and more generous food-assistance programs also reduce geographical mobility.

<table>
<thead>
<tr>
<th></th>
<th>Probability of moving within the United States</th>
<th>Probability of moving across states</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact of tax progressivity</td>
<td>-0.003 (2.5% decrease)</td>
<td>0.016 (9% decrease)</td>
</tr>
<tr>
<td>Impact of increased Medicaid coverage (age)</td>
<td>-0.003 (2.5% decrease)</td>
<td>0.004 (17% increase)</td>
</tr>
<tr>
<td>Impact of SNAP benefits increase from 2009–2011</td>
<td>-0.0095 (43% decrease)</td>
<td>0.016 (70% increase)</td>
</tr>
</tbody>
</table>

Source: Author’s regression analysis.
Tax and transfer systems: Effects on self-employment

While previous studies have found that lower taxes from work-related income reduce entrepreneurship, these studies have not looked at the progressivity of the tax system, nor have they looked at transitions to and from self-employment. In fact, Figure 8 shows that tax progressivity has no impact on self-employment. Instead, the increase in food-supplement assistance for women and children increases self-employment by 2.5 percent.

Figure 8 does show that increased progressivity and expanded health insurance coverage of children increases movements from self-employment either to other employment or to other activities outside of employment, including educational...
pursuits and retirement. Moving the tax system from the least to the most progressive states increases movements from self-employment into nonemployment, so that if a business is not working out, rather than continuing the business, the person will move to other activities or look for other work. Also, moving from providing no health insurance coverage for children to covering all underage children increases movements from self-employment into wage employment by 39 percent, allowing individuals to take jobs even if those jobs do not extend health benefits to dependents.
Conclusion

The social insurance component of the tax and transfer system has usually received much less attention than the redistributive component. The insurance role of progressive tax and transfer programs, however, is important in encouraging households to undertake investments and make decisions that are risky but potentially worthwhile both for individuals and the economy as a whole.

This analysis underscores the important role of progressive tax and transfer programs in inducing mobility in the labor market. Redistributive taxes, cash transfers, and health insurance for the poor all induce greater occupational and industrial mobility. In addition, the progressivity of the tax system and increased medical insurance coverage of children encourage geographical mobility. Finally, increased access to health insurance for the poor increases transitions from self-employment into more stable wage employment and reduces transitions out of the labor force. Progressive taxation and transfer to the poor are thus not only good on moral grounds, but they also are beneficial to improving the workings of the overall economy, as these systems encourage greater mobility in terms of the types of jobs, industries, occupations, and places where people are willing and able to go.
References


Technical appendix: Model, data, and regression results

Model

The results in this report come from a regression model that relates the labor-mobility variables—occupational changes, industry changes, transitions to and from self-employment, and overall and across-state migration within the United States—to the tax and transfer variables.

The key to establishing a causal relationship between mobility and the tax and transfer variables is to rely on statutory tax and transfer program-qualification rules and statutory benefits as opposed to the actual payment of taxes or benefits received by an individual. Also, to avoid capturing characteristics about the population in a state or other factors that affect the distribution of income in a state, the author constructed the progressivity of the tax system and the level of benefits for those in the top and bottom quartiles of the U.S.-income distribution. See more on the construction of the variables below.

In addition, the author controlled for individual characteristics, including years of education, age, number of children, marital status, gender, race, ethnicity, and country of birth. Importantly, since many of the tax and transfer variables vary at the state level, the author controlled for state effects. Finally, because the food-assistance programs—SNAP and WIC—are federal programs and only vary over time and because other things were happening during the period of study from 1996 to 2011, the author controlled for linear time trends and region-specific time trends for the nine major regions: New England, Mid-Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, and Pacific.

The author estimates three models. Model A regresses mobility on tax and transfer variables, individual characteristics, and state fixed effects:
\[ Y_{isrt} = \delta \times \text{Tax Progressivity}_{st} + \phi \times \text{Medicaid Income Threshold}_{st} + \varphi \times \text{Medicaid Age Threshold}_{st} + \psi \times \text{TANF Benefits}_{st} + \rho \times \text{WIC Income Threshold}_{t} + \pi \times \text{SNAP Income Threshold}_{t} + \beta X_{isrt} + \kappa_s + \epsilon \]

In this model, Tax Progressivity_{st} is the difference in the average overall tax rate between the top and bottom quartile of the tax distribution; Medicaid Income Threshold_{st} is the maximum income that allows a family to qualify for health insurance through Medicaid in state s at time t; Medicaid Age Threshold_{st} is the maximum age of a child that allows him or her to qualify for SCHIP in state s at time t; TANF Benefits_{st} are calculated using information about TANF, the maximum benefit paid in each state, the benefit-reduction rate, and the earnings disregards and then using information calculating total benefits—using the average earnings and unearned income in the bottom quartile of the distribution—to use the following formula to estimate the benefits: \[ \text{Benefit} = \text{Maximum Benefit} - \tau \times (\text{Earnings} - \text{D}) - \text{Unearned Income} \], where \( \tau \) is the benefit-reduction rate and \( \text{D} \) is the earnings disregard. WIC Income Threshold_{t} and SNAP Income Threshold_{t} are the maximum income limits that a household must have to qualify for WIC and SNAP.

Model B regresses mobility on tax and transfer variables, individual characteristics, and state fixed effects, and, in addition, includes a linear time trend:

\[ Y_{isrt} = \delta \times \text{Tax Progressivity}_{st} + \phi \times \text{Medicaid Income Threshold}_{st} + \varphi \times \text{Medicaid Age Threshold}_{st} + \psi \times \text{TANF Benefits}_{st} + \rho \times \text{WIC Income Threshold}_{t} + \pi \times \text{SNAP Income Threshold}_{t} + \beta X_{isrt} + \kappa_s + \tau_t + \epsilon \]

All variables are in Model A, and \( \tau_t \) is a linear time trend.

Model C regresses mobility on tax and transfer variables, individual characteristics, state fixed effects, and region-specific time trends:

\[ Y_{isrt} = \delta \times \text{Tax Progressivity}_{st} + \phi \times \text{Medicaid Income Threshold}_{st} + \varphi \times \text{Medicaid Age Threshold}_{st} + \psi \times \text{TANF Benefits}_{st} + \rho \times \text{WIC Income Threshold}_{t} + \pi \times \text{SNAP Income Threshold}_{t} + \beta X_{isrt} + \kappa_s + \tau_{rt} + \epsilon \]

All variables are in Model A, and \( \tau_{rt} \) is a region-specific time trend that allows the time trend to vary in each of the nine large regions of the country as defined by the Census Bureau: New England, Mid-Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, and Pacific.
Data

The microdata in this report come from the Merged Outgoing Rotation Group, or MORG, files of the Bureau of Labor Statistics’s Current Population Survey. The TANF maximum benefit, benefit-reduction rate, and income disregard were all provided by Hilary Hoynes of the University of California at Berkeley for the period from 1996 to 2007, and they were updated up to 2011 with information available on the website of the Department of Health and Human Services until 2011. Likewise, the Medicare income and age thresholds were kindly provided by Hoynes for the period from 1996 to 2006 and updated up to 2011 with information available on the website of the Department of Health and Human Services until 2011. The SNAP and WIC income thresholds were obtained from the website of the Department of Agriculture.
<table>
<thead>
<tr>
<th></th>
<th>Model A</th>
<th>Model B</th>
<th>Model C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tax rate progressivity</strong></td>
<td>0.27***</td>
<td>0.29***</td>
<td>0.38***</td>
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<tr>
<td></td>
<td>(5.32)</td>
<td>(5.05)</td>
<td>(5.31)</td>
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<td><strong>TANF benefits at the 25th percentile</strong></td>
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<td>0.0018***</td>
<td>0.0027***</td>
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<td></td>
<td>(4.29)</td>
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<td>-0.77***</td>
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<td>(in thousands of dollars)</td>
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<td><strong>WIC income threshold</strong></td>
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<td>0.46***</td>
<td>0.47***</td>
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<tr>
<td>(in thousands of dollars)</td>
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<td>(13.66)</td>
<td>(13.53)</td>
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<td>0.014***</td>
<td>0.024***</td>
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<tr>
<td></td>
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<td>(4.5)</td>
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<td>0.0019***</td>
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<td><strong>N</strong></td>
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Notes: The table reports marginal effects from a probit model, with t-statistics in parentheses. All specifications include the following controls: years of education, age, number of children, sex, marital status, and dummies for race, ethnicity, and country of birth. The tax rate progressivity is the difference in average tax rates at the 75th percentile and the 25th percentile of the income distribution. TANF benefits are calculated for a family of three using the following formula: TANF Benefit = Maximum Benefit - τ× (Earnings - D) - Unearned Income, where τ is the benefit-reduction rate and D is the earnings disregard.

*p < 0.10
**p < 0.05
***p < 0.01
## TABLE 2
### Impacts of tax and transfer programs on industry changes

<table>
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<tr>
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<td>(-0.74)</td>
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<td>Yes</td>
</tr>
<tr>
<td>(in thousands of dollars)</td>
<td>-0.099**</td>
<td>-0.38***</td>
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<td></td>
<td>(-2.56)</td>
<td>(-8.39)</td>
<td>(-8.73)</td>
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<td>(in thousands of dollars)</td>
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</tr>
<tr>
<td><strong>N</strong></td>
<td>180,189</td>
<td>180,189</td>
<td>180,189</td>
</tr>
</tbody>
</table>

Notes: The table reports marginal effects from a probit model, with t-statistics in parentheses. All specifications include the following controls: years of education, age, number of children, sex, marital status, and dummies for race, ethnicity, and country of birth. The tax rate progressivity is the difference in average tax rates at the 75th percentile and the 25th percentile of the income distribution. TANF benefits are calculated for a family of three using the following formula: TANF Benefit = Maximum Benefit - τ× (Earnings - D) - Unearned Income, where τ is the benefit-reduction rate and D is the earnings disregard.

* p < 0.10  
** p < 0.05  
*** p < 0.01
### TABLE 3

**Impacts of tax and transfer programs on self-employment**

<table>
<thead>
<tr>
<th></th>
<th>Model A</th>
<th>Model B</th>
<th>Model C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax rate progressivity</td>
<td>-0.019 (-0.56)</td>
<td>-0.085** (-2.23)</td>
<td>-0.057 (-1.17)</td>
</tr>
<tr>
<td>TANF benefits at the 25th percentile</td>
<td>0.00000019 (0.01)</td>
<td>0.00017 (0.61)</td>
<td>-0.000081 (-0.21)</td>
</tr>
<tr>
<td>SNAP income threshold (in thousands of dollars)</td>
<td>-0.051* (-1.79)</td>
<td>0.013 (0.4)</td>
<td>0.0062 (0.17)</td>
</tr>
<tr>
<td>WIC income threshold (in thousands of dollars)</td>
<td>0.025 (1.24)</td>
<td>0.061*** (2.76)</td>
<td>0.068*** (2.98)</td>
</tr>
<tr>
<td>Medicaid income threshold</td>
<td>-0.003 (-1.08)</td>
<td>-0.0021 (-0.74)</td>
<td>0.0018 (0.51)</td>
</tr>
<tr>
<td>Medicaid age threshold</td>
<td>-0.00035** (-2.27)</td>
<td>-0.00028* (-1.79)</td>
<td>-0.00031* (-1.66)</td>
</tr>
<tr>
<td>State effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Time trend</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Regional trends</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>180,189</td>
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<td>180,189</td>
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</tbody>
</table>

Notes: The table reports marginal effects from a probit model, with t-statistics in parentheses. All specifications include the following controls: years of education, age, number of children, sex, marital status, and dummies for race, ethnicity, and country of birth. The tax rate progressivity is the difference in average tax rates at the 75th percentile and the 25th percentile of the income distribution. TANF benefits are calculated for a family of three using the following formula: TANF Benefit = Maximum Benefit - τ× (Earnings - D) - Unearned Income, where τ is the benefit-reduction rate and D is the earnings disregard.

*p < 0.10
**p < 0.05
***p < 0.01
### TABLE 4
Impacts of tax and transfer programs on transitions from wage employment into self-employment

<table>
<thead>
<tr>
<th></th>
<th>Model A</th>
<th>Model B</th>
<th>Model C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax rate progressivity</td>
<td>-0.0014 (-0.16)</td>
<td>0.0088 (0.85)</td>
<td>0.014 (1.11)</td>
</tr>
<tr>
<td>TANF benefits at the 25th percentile</td>
<td>-0.000039 (-0.48)</td>
<td>-0.000064 (-0.77)</td>
<td>-0.000071 (-0.06)</td>
</tr>
<tr>
<td>SNAP income threshold (in thousands of dollars)</td>
<td>-0.0071 (-0.9)</td>
<td>-0.018* (-1.85)</td>
<td>-0.022** (-2.19)</td>
</tr>
<tr>
<td>WIC income threshold (in thousands of dollars)</td>
<td>0.0046 (0.83)</td>
<td>-0.0012 (-0.19)</td>
<td>-0.00025 (-0.04)</td>
</tr>
<tr>
<td>Medicaid income threshold</td>
<td>0.0012 (1.52)</td>
<td>0.0011 (1.32)</td>
<td>0.001 (0.97)</td>
</tr>
<tr>
<td>Medicaid age threshold</td>
<td>0.000049 (1.07)</td>
<td>0.000039 (0.85)</td>
<td>0.000046 (0.84)</td>
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<tr>
<td>State effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Time trend</td>
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<td>Yes</td>
<td>No</td>
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<tr>
<td>Regional trends</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>180,189</td>
<td>180,189</td>
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</tbody>
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Notes: The table reports marginal effects from a probit model, with t-statistics in parentheses. All specifications include the following controls: years of education, age, number of children, sex, marital status, and dummies for race, ethnicity, and country of birth. The tax rate progressivity is the difference in average tax rates at the 75th percentile and the 25th percentile of the income distribution. TANF benefits are calculated for a family of three using the following formula: TANF Benefit = Maximum Benefit - τ(Earnings - D) - Unearned Income, where τ is the benefit-reduction rate and D is the earnings disregard.

* p < 0.10
** p < 0.05
*** p < 0.01
TABLE 5
Impact of tax and transfer programs on transitions from nonemployment into self-employment

<table>
<thead>
<tr>
<th></th>
<th>Model A</th>
<th>Model B</th>
<th>Model C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax rate progressivity</td>
<td>0.00028 (0.04)</td>
<td>0.011 (1.32)</td>
<td>0.0076 (1.17)</td>
</tr>
<tr>
<td>TANF benefits at the 25th percentile</td>
<td>-0.0000014 (-0.02)</td>
<td>-0.000029 (-0.48)</td>
<td>-0.000016 (-0.31)</td>
</tr>
<tr>
<td>SNAP income threshold</td>
<td>0.01 (1.64)</td>
<td>0.000037 (0.01)</td>
<td>-0.0024 (-0.50)</td>
</tr>
<tr>
<td>WIC income threshold</td>
<td>-0.0068 (-1.58)</td>
<td>-0.013*** (-2.62)</td>
<td>-0.0077** (-2.42)</td>
</tr>
<tr>
<td>Medicaid income threshold</td>
<td>0.00027 (0.44)</td>
<td>0.00013 (0.21)</td>
<td>-0.00023 (-0.42)</td>
</tr>
<tr>
<td>Medicaid age threshold</td>
<td>-0.000013 (-0.35)</td>
<td>-0.000025 (-0.68)</td>
<td>0.0000054 (0.19)</td>
</tr>
<tr>
<td>State effects</td>
<td>Yes</td>
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<td>Yes</td>
</tr>
<tr>
<td>Time trend</td>
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<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Regional trends</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>N</strong></td>
<td><strong>162,825</strong></td>
<td><strong>162,825</strong></td>
<td><strong>162,825</strong></td>
</tr>
</tbody>
</table>

Notes: The table reports marginal effects from a probit model, with t-statistics in parentheses. All specifications include the following controls: years of education, age, number of children, sex, marital status, and dummies for race, ethnicity, and country of birth. The tax rate progressivity is the difference in average tax rates at the 75th percentile and the 25th percentile of the income distribution. TANF benefits are calculated for a family of three using the following formula: TANF Benefit = Maximum Benefit - τ (Earnings - D) - Unearned Income, where t is the benefit-reduction rate and D is the earnings disregard.

*p < 0.10
**p < 0.05
***p < 0.01
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<tr>
<th></th>
<th>Model A</th>
<th>Model B</th>
<th>Model C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tax rate progressivity</strong></td>
<td>0.0028 (0.23)</td>
<td>0.019 (1.33)</td>
<td>0.029* (1.65)</td>
</tr>
<tr>
<td><strong>TANF benefits at the 25th percentile</strong></td>
<td>0.00012 (1.17)</td>
<td>0.000079 (0.75)</td>
<td>0.000021 (0.15)</td>
</tr>
<tr>
<td><strong>SNAP income threshold</strong></td>
<td>0.003 (0.29)</td>
<td>-0.012 (-1.01)</td>
<td>-0.021 (-1.64)</td>
</tr>
<tr>
<td><strong>WIC income threshold</strong></td>
<td>-0.0024 (-0.34)</td>
<td>-0.011 (-1.37)</td>
<td>-0.0099 (-1.22)</td>
</tr>
<tr>
<td><strong>Medicaid income threshold</strong></td>
<td>0.0021** (2.09)</td>
<td>0.0019* (1.86)</td>
<td>0.0014 (1.06)</td>
</tr>
<tr>
<td><strong>Medicaid age threshold</strong></td>
<td>0.00017*** (2.91)</td>
<td>0.00016*** (2.69)</td>
<td>0.00016** (2.27)</td>
</tr>
<tr>
<td><strong>State effects</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Time trend</strong></td>
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<tr>
<td><strong>Regional trends</strong></td>
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<td>No</td>
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*p < 0.10  
**p < 0.05  
***p < 0.01
### TABLE 7
Impact of tax and transfer programs on transition from self-employment into nonemployment

<table>
<thead>
<tr>
<th></th>
<th>Model A</th>
<th>Model B</th>
<th>Model C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tax rate progressivity</strong></td>
<td>0.0073 (0.95)</td>
<td>0.0085 (0.98)</td>
<td>0.03*** (2.89)</td>
</tr>
<tr>
<td><strong>TANF benefits at the 25th percentile</strong></td>
<td>-0.000091 (-1.48)</td>
<td>-0.000094 (-1.51)</td>
<td>-0.00011 (-1.47)</td>
</tr>
<tr>
<td><strong>SNAP income threshold</strong></td>
<td>-0.00036 (-0.06)</td>
<td>-0.0016 (-0.21)</td>
<td>-0.014* (-1.86)</td>
</tr>
<tr>
<td>(in thousands of dollars)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>WIC income threshold</strong></td>
<td>0.00076 (0.18)</td>
<td>0.00013 (0.03)</td>
<td>-0.00064 (-0.14)</td>
</tr>
<tr>
<td>(in thousands of dollars)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Medicaid income threshold</strong></td>
<td>-0.0014* (-1.95)</td>
<td>-0.0014** (-1.97)</td>
<td>-0.00047 (-0.56)</td>
</tr>
<tr>
<td><strong>Medicaid age threshold</strong></td>
<td>-0.00005 (-1.27)</td>
<td>-0.000051 (-1.29)</td>
<td>-0.000042 (-0.91)</td>
</tr>
<tr>
<td><strong>State effects</strong></td>
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<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Time trend</strong></td>
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<tr>
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\*p < 0.10
\**p < 0.05
\***p < 0.01
### TABLE 8
Impacts of tax and transfer programs on migration within the United States

<table>
<thead>
<tr>
<th></th>
<th>Model A</th>
<th>Model B</th>
<th>Model C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average tax rate difference</td>
<td>0.074* (1.74)</td>
<td>0.1** (2.17)</td>
<td>0.19*** (2.95)</td>
</tr>
<tr>
<td>TANF benefits at the 25th percentile</td>
<td>-0.000093 (-0.28)</td>
<td>-0.00017 (-0.52)</td>
<td>-0.00062 (-1.37)</td>
</tr>
<tr>
<td>SNAP income threshold (in thousands of dollars)</td>
<td>0.026 (0.7)</td>
<td>-0.0025 (-0.06)</td>
<td>-0.053 (-1.15)</td>
</tr>
<tr>
<td>WIC income threshold (in thousands of dollars)</td>
<td>-0.034 (-1.32)</td>
<td>-0.051* (-1.79)</td>
<td>-0.073** (-2.48)</td>
</tr>
<tr>
<td>Medicaid income threshold</td>
<td>-0.000047 (-0.01)</td>
<td>-0.00048 (-0.14)</td>
<td>-0.0042 (-0.97)</td>
</tr>
<tr>
<td>Medicaid age threshold</td>
<td>-0.00019 (-0.98)</td>
<td>-0.00022 (-1.14)</td>
<td>-0.0006** (-2.57)</td>
</tr>
<tr>
<td>State effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Time trend</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Regional trends</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>180,189</td>
<td>180,189</td>
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</tbody>
</table>

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*p < 0.10  
**p < 0.05  
***p < 0.01
### TABLE 9

**Impacts of tax and transfer programs on across-state migration**

<table>
<thead>
<tr>
<th></th>
<th>Model A</th>
<th>Model B</th>
<th>Model C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax rate progressivity</td>
<td>-0.013 (-0.7)</td>
<td>0.029 (1.41)</td>
<td>0.14*** (5.04)</td>
</tr>
<tr>
<td>TANF benefits at the 25th percentile</td>
<td>0.000079 (0.53)</td>
<td>-0.000062 (-0.4)</td>
<td>-0.00015 (-0.67)</td>
</tr>
<tr>
<td>SNAP income threshold (in thousands of dollars)</td>
<td>-0.042*** (-2.62)</td>
<td>-0.084*** (-4.53)</td>
<td>-0.14*** (-7.02)</td>
</tr>
<tr>
<td>WIC income threshold (in thousands of dollars)</td>
<td>0.021* (1.82)</td>
<td>-0.0048 (-0.38)</td>
<td>-0.017 (-1.35)</td>
</tr>
<tr>
<td>Medicaid income threshold</td>
<td>0.003** (2.25)</td>
<td>0.0025* (1.83)</td>
<td>0.003* (1.77)</td>
</tr>
<tr>
<td>Medicaid age threshold</td>
<td>0.00014* (1.77)</td>
<td>0.000088 (1.11)</td>
<td>-0.000058 (-0.62)</td>
</tr>
<tr>
<td>State effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Time trend</td>
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<td>Regional trends</td>
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* p < 0.10
** p < 0.05
*** p < 0.01
About the author

Adriana Kugler is a Senior Fellow at the Center for American Progress. She is vice provost for faculty and full professor at the McCourt School of Public Policy at Georgetown University. She was founder and co-director of the Georgetown Summer Institute on International Program Evaluation between 2011 and 2013. Kugler served as chief economist at the U.S. Department of Labor in 2011 and 2012, and she is the author of numerous publications on labor-market policy and immigration. Her work has been recognized by the Labor Employment Relations Association with the John T. Dunlop Outstanding Scholar Award and by the Global Development Network with first prize for the best contribution on “Globalization, Regulations, and Development.”

Kugler is a research associate at the National Bureau of Economic Research and a research fellow at the Centre for Research and Analysis of Migration at University College London and the Stanford Center for the Study of Poverty and Inequality at Stanford University. Her academic and policy work has been covered in print media and on radio and television, including C-SPAN, Nightly Business News, Univision, Telemundo, NPR, The Economist, NBC Latino, Fox Business, the Financial Times, The Washington Post, the Los Angeles Times, the Chicago Tribune, The Wall Street Journal, and CNN Money.

Acknowledgements

The author would like to thank Hilary Hoynes from the University of California at Berkeley for kindly providing the data on the TANF maximum benefit, benefit-reduction rate, and income disregard for the period from 1996 to 2007, as well as the Medicaid income and age thresholds from 1996 to 2006.


6 Hoynes and Luttmer, “The Insurance Value of State Tax-and-Transfer Programs.”

7 Ibid.

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