Education, Migration and Local Labor Markets: Pathways out of Rural Poverty?

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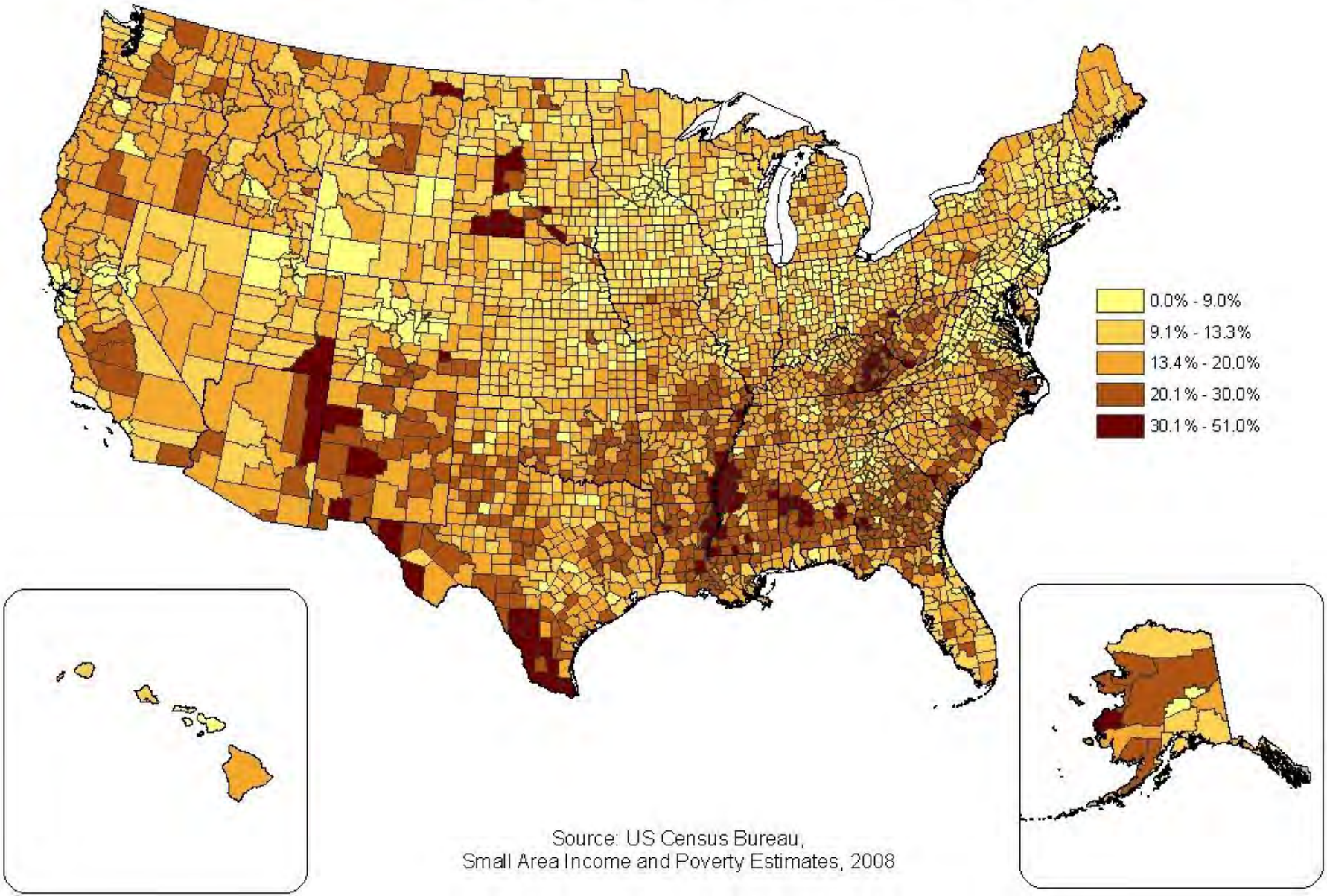
Overview

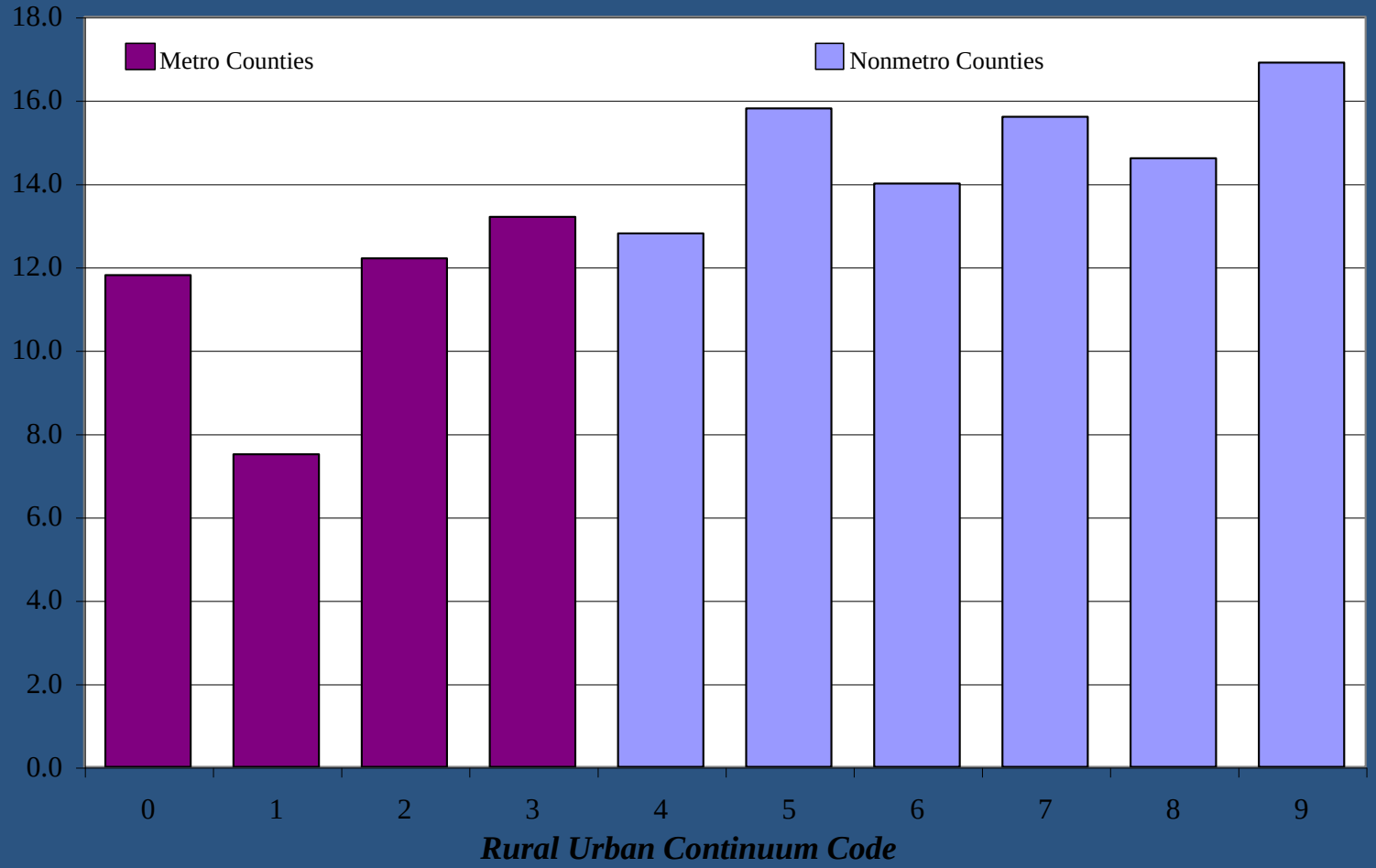
- Poverty and Place: A Geography of Poverty in US
- How Education, Migration and Local Labor Market Conditions Affected Poverty: Evidence from the PSID 1975-1997
- The New Social Safety Net
- Some Research Directions

Estimated Percent of County Population in Poverty, 2005



Source: US Census Bureau,
Small Area Income and Poverty Estimates, 2008

Poverty Rates Along the Rural Urban Continuum



Source: U.S. Census Bureau and ERS, USDA

Causes of Poverty

- Alternative Explanations
  - Personal inadequacies
    - Low levels of education
    - Poor physical or mental health
    - Family obstacles
  - Restricted opportunities
    - Shortage of jobs yielding adequate incomes
    - Barriers to employment, education, and services (inadequate transportation and child care systems)
  - Government policies that reduce incentives

Strategies for Reducing Poverty

- What are the best strategies for reducing poverty among rural families ?
  - Investing in education and training
  - Improving local economic conditions
  - Encouraging rural to urban migration
  - Strengthening to social safety net

Previous Studies

- Education increases income and reduces poverty
- Improved local economic conditions increase income and reduce poverty (Haynie and Gorman)
- Rural- to- urban migration increases income and reduces poverty (Mills and Hazarika, Rodgers and Rodgers)

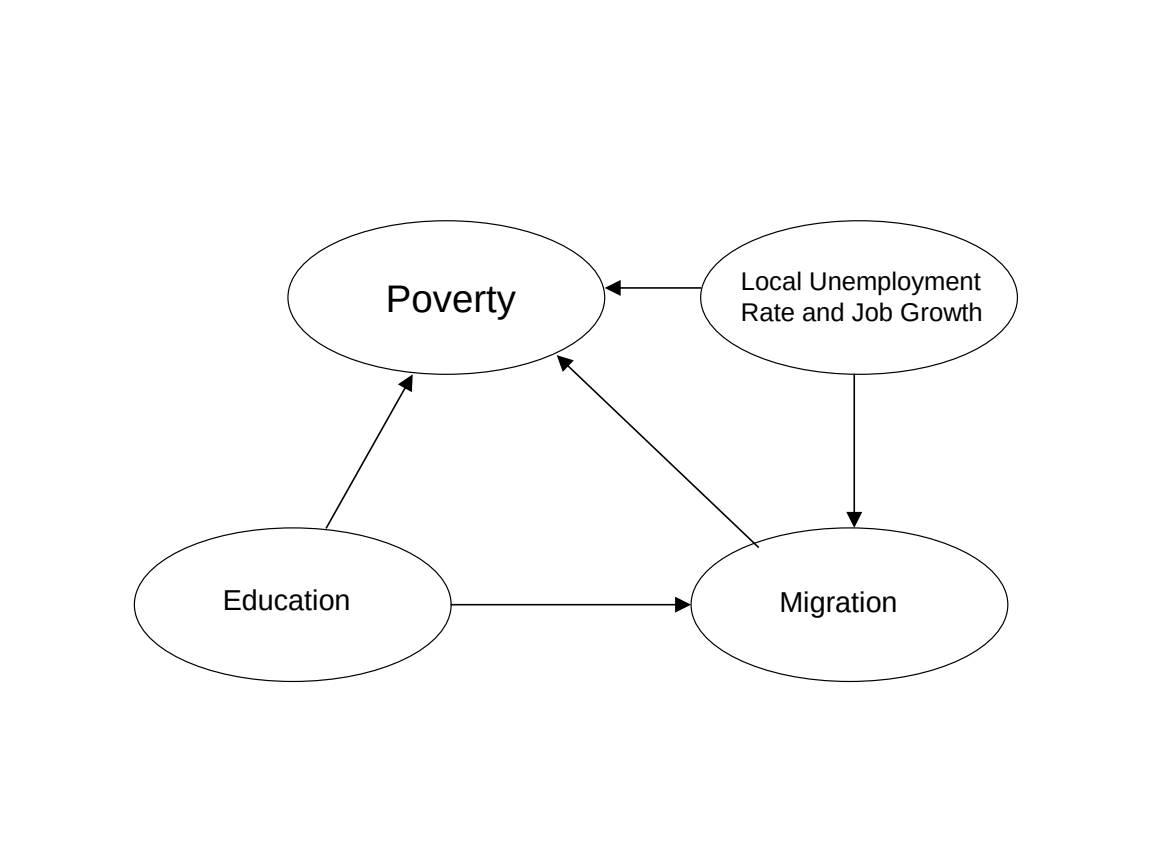
A problem with previous migration studies

- People who migrate from rural to urban areas may be different from those who stay: they may have characteristics that we don't observe (such as motivation) that may also affect their risk of being in poverty
- In such a situation, we say migration is endogenous to poverty
- If migration is endogenous, a correction is needed to produce consistent estimates

Endogeneity correction: Instrumental Variable

- A good instrumental variable is highly correlated with the migration decision and uncorrelated with the error term in the poverty risk equation
- We expected that a variable indicating where a person grew up would be correlated with migration but not with poverty
- Household head survey question : "Did you grow up on a farm, in a small town, in a large city, or what?"
- *Grew up Rural* or *Grew up in city* was statistically significant in explaining migration (10 percent level of better) but not in explaining poverty

Education, Migration, Local Labor Market Conditions and Poverty



Probit model of the migration decision

- Rural-to-urban migration is explained by:

Personal characteristics of head:

Age, age^2, white, male, family size, married, change marital status, home ownership, high school diploma, college, postgraduate

Regional characteristics

Job growth, unemployment, natural amenities

empirical strategy | migration and poverty model

Bivariate probit model of migration & poverty

- Migration between year 1 and year 2 is explained by:

Personal characteristics in year 1 :

Age, age^2, white, male, family size, married, change marital status, home ownership, high school diploma, college, postgraduate

Regional Characteristics in year 1:

Job growth, unemployment, natural amenities

Instrumental variable:

Grew up rural or grew up city

Bivariate probit model of migration & poverty

- Poverty in year 2 is explained by:
  - **Personal characteristics in year 2 :**

    Age, age^2, white, male, family size, married, change marital status, home ownership, high school diploma, college, postgraduate
  - **Regional Characteristics in year 2:**

    Job growth, unemployment, natural amenities
  - **Predicted migration between year 1 and year 2**

County data

- Unemployment rate: Bureau of Labor Statistics Local Area Unemployment Statistics
- Jobs: Bureau of Economic Analysis Regional Economic Information System
- Amenities: USDA Economic Research Service

Household data: Panel Study of Income Dynamics

- Demographic characteristics, income and poverty status, place of residence: Panel Study of Income Dynamics (PSID) – longitudinal survey that follows a representative sample of 5,000 families since 1968
- We use the 1979 to 1997 waves with confidential county identifiers
- Sample: Rural working-age household heads

Working-Age Rural Household Heads

	1979-85	1985-91	1991-97
N =	713	779	589
High School	34%	38%	46%
College	23%	25%	29%
Postgraduate	7%	8%	6%
White	73%	70%	79%
Male	87%	85%	87%
Married	76%	72%	72%
Home Ownership	70%	67%	71%
Migration	8%	7%	7%
Income	$42,337	$43,565	$46,743
Poverty	24%	24%	17%

results | probit migration models (1 of 2)

	1979-85	**1985-91**	**1991-97**
High School	0.049 (0.081)	0.037 (0.097)	---
College	0.103 (0.003)	0.141 (0.000)	---
Postgraduate	---	0.231 (0.000)	---
Home Owner	-0.065 (0.006)	-0.054 (0.001)	-0.056 (0.018)
Change Marital Status	---	0.046 (0.060)	---
Grew Up Rural	-0.033 (0.072)	-0.030 (0.035)	-0.031 (0.098)
Family Size	---	---	-0.013 (0.091)

results | probit migration models (2 of 2)

	1979-85	1985-91	1991-97
% Δ Total Employment just prior to first year	---	0.002 (0.070)	---
Average Unemployment Rate just prior to first year	---	0.004 (0.037)	---
Natural Amenities	---	---	0.013 (0.000)

results | bivariate probit poverty models

	1979-85	**1985-91**	**1991-97**
High School	-0.150 (0.000)	-0.144 (0.000)	-0.062 (0.077)
College	-0.232 (0.000)	-0.235 (0.000)	-0.162 (0.026)
Postgraduate	-0.205 (0.000)	-0.203 (0.000)	-0.139 (0.025)
White	-0.219 (0.000)	-0.235 (0.000)	-0.222 (0.007)
Male	---	-0.173 (0.003)	-0.107 (0.061)
Disabled	0.163 (0.000)	0.071 (0.069)	0.141 (0.047)
Married	-0.096 (0.053)	-0.102 (0.026)	-0.073 (0.065)
% Δ Total Employment in final two years	-0.017 (0.000)	---	---
Out-Migration	0.715 (0.002)	*0.407 (0.165)*	*-0.153 (0.193)*

Conclusions about migration

- Education of the household head influences the decision to migrate to an urban area in the 1980s: more educated heads are more likely to move
  - Education does not appear to affect rural-to-urban migration in the 1990s
- Local labor market conditions appear to have had some effect on migration in the late 1980s: high unemployment and job growth in early years induces rural-to-urban migration
  - Job growth and unemployment had no effect in early 1980s and 1990s

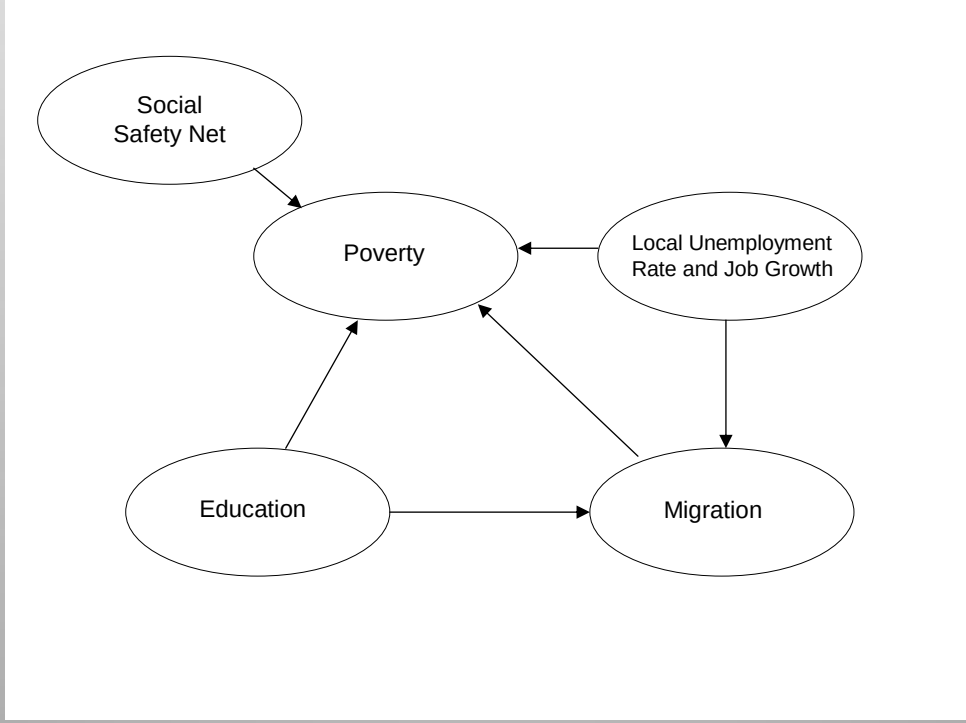
Conclusions about poverty

- Education reduces poverty risk: rural household heads with a high school diploma, college, or postgraduate education all have significantly lower poverty risk than those without a high school diploma
- Migration does not appear to be a route out of poverty for rural households. Except for the late 1980s, rural-to-urban migration does not affect poverty risk. In the late 1980s, rural households that moved to urban areas had higher poverty risk.
- Local job growth appears to have reduced poverty risk in the early 1980s but not in the late 1980s or 1990s.

Cautions

- Possible measurement error in labor market variables: County boundaries for labor markets? Appropriate time periods? Right labor market variables?
- Weak labor market effects in rural areas may be due to characteristics of rural areas: low employment densities, few work supports, low-paying and part-time jobs (Partridge and Rickman)

Strengthening the Social Safety Net



The U.S. Social Safety Net
[Blank, 1997]

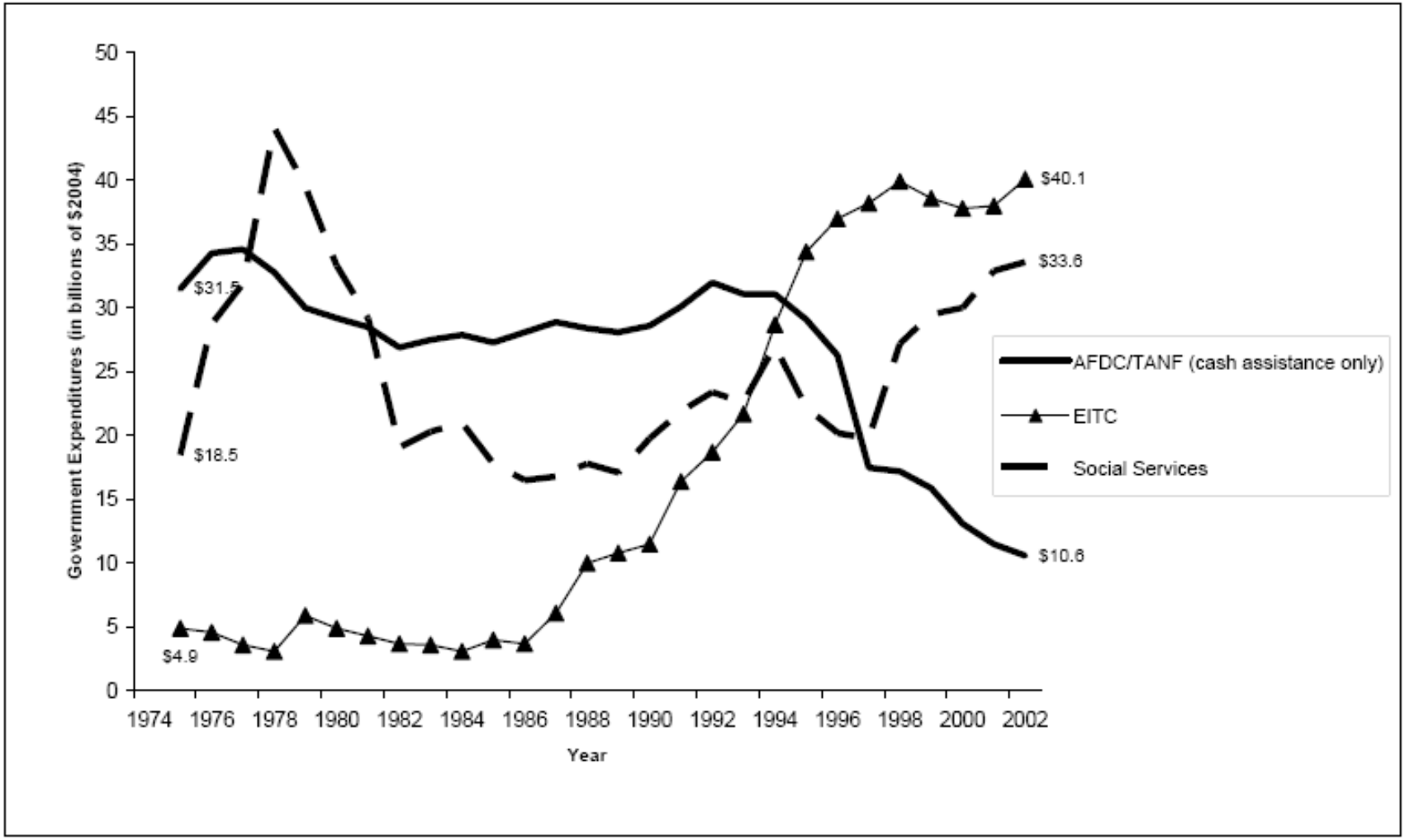
- Cash Assistance: TANF, SSI
- In-kind Assistance: Food Stamps, Medicaid, Housing Assistance
- Earnings Supplements: EITC, minimum wage
- Job Search and Job Training Programs
- Family-based Programs: Child Support
- Youth-targeted educational assistance: Head Start, Job Corps
- Place-based Economic Development: tax incentives, enterprise zones, CDBG

Policy Shift: Cash Assistance to Work Supports, Services

Program	1975	2002
Cash Assistance	$31.5	$10.6
Social Services (many are work dependent)	$18.5	$33.6
Earned Income Tax Credit (work dependent)	$4.9	$40.1

Source: Allard, 2007. All values are in 2006 dollars. Social Services amounts from Congressional Research Services estimates of federal, state and local spending on job training, child care, and the Social Services Block Grant. This value is an underestimate of social service provision.

Figure 1: Federal, State, and Local Cash Assistance, Social Service, and Earned Income Tax Credit Expenditures, 1975-2002 (in $2006 billions)



Sources: Congressional Research Services; U.S. House of Representatives, *1998 Green Book*; U.S. House of Representatives, *2004 Green Book*; Department of Health and Human Services.

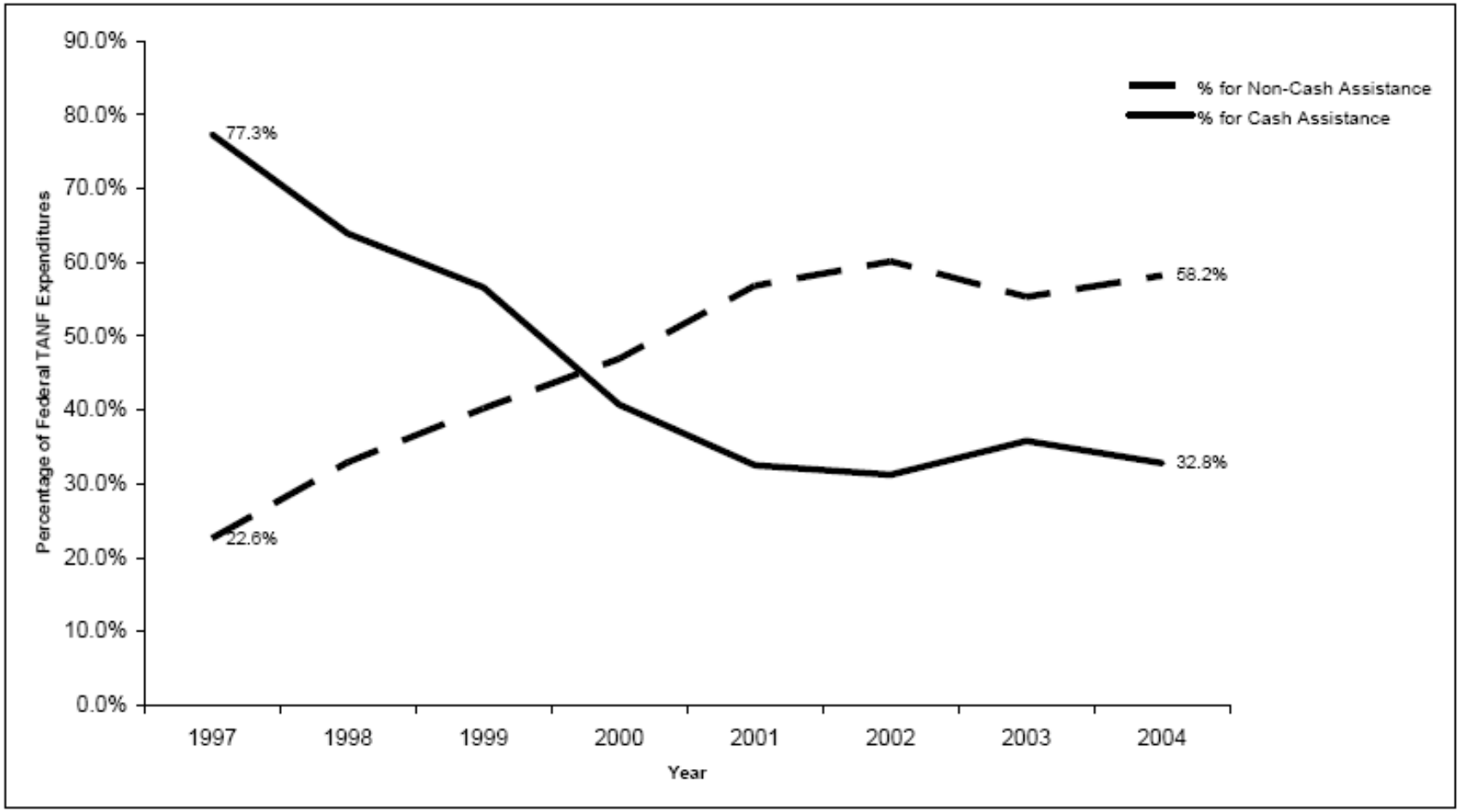
Anti-poverty Policy and the Increasing Importance of Local Context

- Most poverty is working poverty
  - most poor households have at least one worker
- Anti-poverty policy is increasingly work-related:
  - EITC goes only to those with earnings
  - TANF provides incentives for working and penalties for not working
  - Child care subsidies are often tied to work

Anti-poverty Policy and the Increasing Importance of Local Context (2)

- Anti-poverty policy increasingly consists of services:
  - A large and increasing share of means-tested social expenditures are for services: job placement and training, education, mental health and substance abuse treatment,

Figure 2: Percentage Change in Federal TANF Expenditures, 1997 – 2004



Source: Department of Health and Human Services.

Anti-poverty Policy and the Increasing Importance of Local Context (3)

- Local context is increasingly important in work-oriented, service-focused anti-poverty strategy
  - success in getting a job and escaping poverty depends on local labor market, on the availability and quality of local jobs
  - access to the services that are a dominant and growing element of anti-poverty assistance depends on where you live

The Particular Importance of Local Context in Rural Areas

- Working poverty is more prevalent in rural than in urban areas
  - Rural poor households are more likely to have a working head than urban households, and to have two or more members employed
- The local context in rural areas is particularly challenging
  - higher unemployment and underemployment, more part-time, low-wage work
  - lower availability of work support services
  - greater distances between home, work site, child care site, social service office

Barriers in Rural Areas

- Barriers in rural areas are often related to transportation issues and the lack of job training, education, and child care
- According to providers, common barriers were :

Barrier	Kentucky	Georgia	New Mexico	Oregon/ California
Child Care	31.9	28.8	27.4	39.7
Transportation	42.5	23.9	17.7	32.6
Substance/ Alcohol Abuse	25.7	19.0	25.7	35.2

(Allard, 2007)

Future Research

- Better specification of the regional labor market variables
- Inclusion of variables that capture past participation in social safety net programs
- Inclusion of regional variables that capture barriers to work and program participation

Future Research (2)

- In *Making Ends Meet,* Edin and Lein (1997) examined how low-income single mothers cobbled together income from various sources, including welfare payments, to get by under the pre-welfare reform safety net
- With the new social safety net with less cash and more services, needy families must negotiate a more complex set of programs to get by, in addition to working and meeting child care obligations
- We need a new study to understand how low-income rural and urban households negotiate balancing work, assistance services, child care, family obligations and how they make migration, education and work decisions in the new anti-poverty policy environment

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Rural Studies Program

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empirical strategy | migration model

- Probit model of the migration decision

$$\Pr\ m_i = 1 \mid X_i, R_i\ = \Phi\ \alpha_0 + \alpha_1 X_i + \alpha_2 R_i$$

X_i Age, age^2, white, male, family size, married, change marital status, home ownership, high school diploma, college, postgraduate

R_i Job growth, unemployment, natural amenities

- Example: Mills and Hazarika (2001, *Am. J Ag. Econ.*)

empirical strategy | migration and poverty model

- **Bivariate probit model of migration and poverty**

$$\begin{pmatrix} p^* \\ m^* \end{pmatrix} = \begin{pmatrix} X_{t=2}\beta_1 + R_{t=2}\beta_2 + m\beta_3 \\ X_{t=1}\alpha_1 + R_{t=1}\alpha_2 + z\alpha_3 \end{pmatrix} + \begin{pmatrix} \varepsilon \\ \upsilon \end{pmatrix}, \quad \begin{pmatrix} \varepsilon \\ \upsilon \end{pmatrix} \sim NID\left(0, \begin{bmatrix} 1 & \rho \\ \rho & 1 \end{bmatrix}\right)$$

X_i	Age, age^2, white, male, family size, married, change marital status, home ownership, high school diploma, college, postgraduate
R_i	Job growth, unemployment, natural amenities
z_i	Grew up rural or grew up city

- **Example: Evans & Schwab (1995, *Quart. J. Econ.*)**