The Great Recession and the Changing Geography of Food Stamp Receipt

Tim Slack · Candice A. Myers

Abstract   The Great Recession has been distinctive in driving up unprecedented levels of participation in the Supplemental Nutrition Assistance Program (SNAP). This study extends the literature on the geography of SNAP receipt by (1) examining change in SNAP receipt across US counties during the Great Recession and (2) identifying how changes in other local characteristics were associated with this outcome. Our analysis draws on data from the US Department of Agriculture and other secondary sources. We use descriptive statistics, mapping, and weighted least squares spatial regression models to examine county-level variation ($N = 2{,}485$) in the percentage-point change in SNAP receipt between 2007 and 2009. Our findings reveal substantial local-level variation in the change in SNAP stamp use during the downturn. We find that counties with the greatest levels of change in SNAP participation tend to be regionally clustered. Our regression analysis shows that areas where the signature characteristics of the Great Recession were most pronounced (i.e., home foreclosures and unemployment) were precisely the places where SNAP use jumped most, not places with historically high levels of SNAP participation. Overall, this study demonstrates that change in SNAP receipt was geographically uneven during the Great Recession, and that local and regional configurations matter in shaping this variation. These results hold a range of implications for public policy, including opportunities for regionally targeted outreach and investment in SNAP and the use of the program as a responsive form of local stimulus during periods of economic crisis.

Keywords   Food stamps · Great Recession · SNAP · Spatial inequality

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Introduction

The 18-month recession spanning December 2007 to June 2009 ranks as the worst downturn in the US economy since the Great Depression of the 1930s (National Bureau of Economic Research 2012). The Great Recession, as it has come to be known, stands out from all other recessions in the post-Depression era in the severity of its impacts: major labor market dislocations, including high and long-term unemployment and underemployment (e.g., discouraged and involuntary part-time workers); a staggering destruction of wealth (housing wealth in particular); and great declines in consumption (Grusky et al. 2011). By the end of the downturn, the national poverty rate had reached 15 %, its highest level in nearly two decades, translating to over 46 million Americans living in poverty, the largest number of poor recorded in the 52 years the federal government has tracked poverty statistics (DeNavas-Walt et al. 2011). The extent to which the Great Recession has transformed the social and economic landscape of the country, and the degree to which it has exacerbated existing forms of social disadvantage and/or created new contours of inequality, stand as critical questions for social scientists (Grusky et al. 2011).

One respect in which the Great Recession has been distinctive is in driving up unprecedented levels of participation in the Supplemental Nutrition Assistance Program (SNAP). Formerly the Food Stamp Program, SNAP is the nation's largest food assistance program and one of the longest-standing and well-known components of the US social safety net (Food and Nutrition Service 2009).[1] Studies based on data prior to the recession show that even before the downturn, SNAP receipt was a common part of the American experience, with between 40 and 50 percent of the population utilizing the program at some point during adulthood (Grieger and Danziger 2011; Rank and Hirschl 2005). But over the course of the Great Recession, SNAP receipt soared to record highs. Between 2007 and 2011, monthly SNAP rolls increased from roughly 26 million people (or 1 in 11 Americans) to 45 million people (or 1 in 7 Americans) (Congressional Budget Office 2012).

To date, the majority of research on SNAP participation has either focused on individual/household (e.g., Bhattarai et al. 2005; Frongillo et al. 2006; Grieger and Danziger 2011; Gundersen and Oliveira 2001; Nord 2001; Rank and Hirschl 2005; Van Hook and Stamper Balistreri 2006) or state-level factors (e.g., Figlio et al. 2000; Tapogna et al. 2004; Wallace and Blank 1999). However, a couple of recent studies have drawn attention to the analysis of SNAP receipt at middle-range spatial scales, showing that the characteristics of localities play a significant role in shaping SNAP use (Goetz et al. 2004; Slack and Myers 2012). More specifically, these studies demonstrate that counties with high SNAP receipt are typically persistent poverty regions such as Central Appalachia, the Lower Mississippi Delta, and the Texas Borderland are especially notable in this regard (Slack and Myers 2012).

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[1] A product of the 1960s War on Poverty, the program was signed into law as the Food Stamp Act of 1964. The name of the program officially changed from the Food Stamp Program to the Supplemental Nutrition Assistance Program (SNAP) in 2008.

The impacts of the Great Recession, however, have not been most pronounced in places characterized by persistent economic distress, but instead in more affluent and growing areas of the country. For example, the collapse of the residential housing market, one of the signature features of the Great Recession, had distinct geographic patterns. Five states saw median home prices fall by more than 30 %—Nevada (−49 %), Florida (−38 %), Arizona (−38 %), California (37 %), and Michigan (−34 %)—while in nearly half the states in the country ($N = 22$) housing prices actually held steady or even increased (Taylor et al. 2011). The same five states ranked in the top six in terms of increased unemployment due to the downturn, with Nevada again topping the list (+9.8 %) (Walden 2012). Importantly, these state-level comparisons undoubtedly mask local-level variation in the impacts of the recession (e.g., not every locale in Nevada is hurting economically). These considerations help to motivate the current study, which extends the existing literature on the geography of SNAP participation by (1) examining change in SNAP receipt across US counties during the Great Recession and (2) identifying how changes in other local characteristics were associated with this outcome.

Background

There are a host of reasons to believe that the Great Recession was not a typical contraction, but rather a transformative event (Grusky et al. 2011). As outlined by Fligstein and Goldstein (2011), the Great Recession had its origins in the collapse of the US housing market, which in turn created and sustained crises in both the financial sector and the labor market. For most of the post-Depression era, housing prices tended to rise slowly around an inflation-adjusted constant. But from 1997 to 2007, housing prices increased rapidly, and the housing sector emerged as a core engine of the American economy. As the housing market boomed, mortgage-backed securities—a process where home loans are bundled and sold on the market as bonds—became a profit center for Wall Street. Driven by the incentive to increase home loan originations, the banks devised products to lend money to homebuyers who had traditionally been viewed as too risky (i.e., those who could not provide a 20 % down payment), and thus, subprime mortgages grew to be a major market segment for the big private banks. The problem with this bet was that it was premised on ever-increasing housing prices, and in 2007, the housing bubble burst. As housing prices fell, subprime mortgage defaults, and home foreclosures climbed, and staggering losses were incurred by Wall Street on mortgage-backed securities.

These events spiraled into a systemic crisis now known as the Great Recession. The downturn created the greatest labor market dislocations in the post-Depression era, driving up high- and long-term unemployment, as well as the ranks of those working part-time involuntarily and those who quit looking for work due to discouragement with their job prospects (Grusky et al. 2011). The Great Recession is also unique in terms of the multifaceted and large-scale response taken by the federal government to try to stem the crisis: in 2008, the Troubled Asset Relief Program (TARP) was enacted to bailout the financial sector; in 2009, the American

Recovery and Reinvestment Act (ARRA), a massive stimulus package, was passed; and in 2010, the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act, another large stimulus plan, was signed into law (Grusky et al. 2011).

The scale of the federal intervention in the market aimed at staving off economic collapse became a major point of political contention. Conservative policymakers objected to federal intervention in the market generally, and the borrowing required for funding the relief programs specifically. On the left, many argued the federal government was not doing enough to protect middle and low-income Americans from economic hardship. It is in the context of this debate, as well as the larger debate about the trajectory of major federal entitlement programs (i.e., Social Security, Medicare, and Medicaid), that SNAP has come into the political spotlight. In fact, in 2013, opposition to SNAP spending among House Republicans led them to strip funding for the program from the farm bill, in turn losing Democratic support for the legislation and making the ability to reach a bipartisan agreement on national agricultural policy uncertain. This was the first time that SNAP had not been part of the farm bill since 1973 (Weisman 2013).

Since the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (i.e., welfare reform), which placed time-limits and work requirements as conditions for the receipt of cash assistance (i.e., Temporary Assistance for Needy Families or TANF), cash welfare caseloads have declined precipitously (Kaminski 2008). Indeed, despite the harsh economic consequences of the Great Recession, trends in TANF caseloads have shown little response (Kaminski 2008; Rosenbaum 2013). SNAP, on the other hand, was very responsive to the downturn, with an increase in caseloads that closely tracks the rising numbers of eligible Americans (Rosenbaum 2013). According to the Congressional Budget Office (2012: 4), "the primary reason for the increase in the number of participants was the deep recession from December 2007 to June 2009 and the subsequent slow recovery; there were no significant legislative expansions of eligibility for the program during that time."

Conceptual Approach

The overarching approach guiding the subsequent analysis is informed by the notion that the intertwined concepts of space and place operate as key axes of social inequality (Gans 2002; Lobao 2004; Lobao and Saenz 2002; Lobao et al. 2007; Logan 2012; Tickamyer 2000; Voss 2007). The examination of relational social-spatial configurations allows for the comparison of differential structures of power and opportunity that characterize places (e.g., neighborhoods, communities, regions, labor markets). Counties, in particular, have been advocated as useful units of analysis in this regard, because as governmental units they play an active role in shaping local frameworks for economic action and redistribution, and thus inequality (Lobao and Hooks 2007). Moreover, in an era of devolution and welfare reform, the manner in which local-level inequality influences the provision of social services has become especially salient (Allard 2009; Helfin and Miller 2012). While SNAP is not currently a block grant program (there are many on the right who argue it should be), there is still a great deal of variation in how states and local providers

administer the program (Food and Nutrition Service 2012; Zedlewski and Brauner 1999) and local county offices often represent a key point of contact for applicants and recipients (Food and Nutrition Service 2013).

Objectives

With these ideas as a foundation, we seek to understand the changing geography of SNAP receipt over the course of the Great Recession. Our conceptual framework, which follows closely to recent work examining the geography of SNAP participation for a single cross-section of time prior to the recession (Slack and Myers 2012), is organized along 5 key dimensions at the county level: poverty experience, labor market conditions, population structure, human capital, and residential context. Specifically, we ask two basic research questions:

Q1: How has SNAP receipt changed across counties between 2007 and 2009?
Q2: What types of local-level change are associated with change in SNAP participation the county level?

Methods

Data and Measures

In order to address our research questions we analyze data drawn from the US Department of Agriculture (USDA), US Census Bureau, US Department of Labor, and US Department of Housing and Urban Development (HUD). Counties are our unit of analysis. We elaborate on the definition of our measures below. Table 1 provides descriptive statistics for all of the variables we use in our analysis.

Dependent Variable

Our dependent variable is the percentage-point change in SNAP receipt between 2007 and 2009 in the contiguous US (Alaska and Hawaii are excluded). More specifically, we use data obtained from the USDA Food and Nutrition Service (FNS), the federal agency tasked with administering SNAP. Based on the FNS data, we determine the percentage of a county's population that utilized SNAP in 2007 and 2009, and then calculate the percentage-point difference between the two time periods.[2]

The FNS collects and organizes its data according to the political subdivision designated as the administrative unit responsible for carrying out local SNAP operations. FNS refers to these units as "project areas." In most states project, areas

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[2] It should be noted that we are measuring changes in take-up rather than eligibility. In Fiscal Year 2010 about three-quarters of those eligible for SNAP participated in the program (Rosenbaum 2013).

Table 1 Descriptive statistics for the dependent and independent variables

	Mean	SD	Min.	Max.
Dependent variable				
PP Δ SNAP receipt, 2007–2009	2.3	1.52	−5.27	11.13
Independent variables				
Poverty experience				
PP Δ poverty, 2000–2009	1.5	3.33	−20.7	37.1
Persistent poverty (1 = yes), 2000	0.1	n/a	0.0	1.0
Labor market conditions				
PP Δ unemployment, 2007–2009	4.3	2.17	−1.6	15.3
PP Δ secondary/peripheral jobs, 2000–2009	0.5	3.56	−24.0	31.9
Population structure				
PP Δ female-headed families, 2000–2009	1.1	2.23	−15.4	13.4
PP Δ total pop., 2000–2009	2.8	10.81	−43.1	72.5
PP Δ 65 and older, 2000–2009	0.658	1.76	−5.9	32.3
PP Δ under 18, 2000–2009	−1.3	3.0	−13.5	31.6
PP Δ black, 2000–2009	0.1	1.6	−12.0	18.4
PP Δ Latino, 2000–2009	1.5	2.0	−17.9	22.7
PP Δ foreign-born, 2000–2009	0.8	1.6	−6.8	32.1
Human capital				
PP Δ less than high school, 2000–2009	−5.7	2.9	−19.0	9.4
PP Δ limited or no English, 2000–2009	0.2	1.1	−8.5	19.2
Residential context				
Foreclosures as % of mortgages, 2007–2008	5.2	2.1	0.0	33.3
MSA > 1 million pop. (1 = yes), 2000	0.1	n/a	0.0	1.0
MSA < 1 million pop. (1 = yes), 2000	0.2	n/a	0.0	1.0
Micropolitan (1 = yes), 2000	0.2	n/a	0.0	1.0
Non-core (1 = yes), 2000	0.4	n/a	0.0	1.0
PP Δ segregation of poor and non-poor, 2000–2009	2.9	6.3	−24.1	50.0
PP Δ segregation of black and whites, 2000–2009	3.1	15.4	−56.1	80.3
PP Δ segregation of Latinos and whites, 2000–2009	4.9	14.3	−63.7	69.2

$N = 2,485$

Sources US Department of Agriculture, US Department of Labor, US Department of Housing and Urban Development, and US Census Bureau

PP Δ percentage-point change, *Pop.* population, *MSA* metropolitan statistical area. For changes in poverty, secondary/peripheral jobs, population structure measures, human capital measures, and segregation measures "2009" as the latter time point listed above is from the 2005 to 2009 5-year estimates of the American Community Survey

are counties, but in some states, SNAP is administered by entities at other geographic levels or even by the state as a whole. States ($N = 16$) that do not organize their SNAP operations at the county level are excluded from our analysis (the FNS does not provide county-level data for these places). These states are

primarily located in the northeast and northwest.[3] In total, our sample is comprised 2,485 counties in 32 states and the District of Columbia.

Independent Variables

We assess a range of variables tapping the five dimensions of county-level characteristics stated previously: poverty experience, labor market characteristics, population structure, human capital, and residential context.

Poverty Experience   We measure the local poverty experience with two variables: the percentage-point change in the total population living at or below the official poverty thresholds and a dummy variable for whether or not a county is classified as being persistently poor (yes = 1). Change in poverty is calculated as the difference between the values from the US Census Bureau's 2005–2009 American Community Survey and the 2000 Census. Persistent poverty is reported by the USDA Economic Research Service (ERS), which defines a county as persistently poor if 20 percent or more of its residents were poor in each decennial census period for 1970, 1980, 1990, and 2000. Our expectation is that rising poverty will be associated with increases in SNAP receipt, but that the uneven geographic impacts of the Great Recession and the housing bubble in particular (and perhaps a "ceiling effect" in traditional high poverty areas) will make persistently poor places less likely to have witnessed increases in SNAP use.

Labor Market Conditions   We examine two variables that measure changes in local labor market conditions: the percentage-point change in the working age population that is unemployed and the percentage-point change in the labor force employed in the secondary/peripheral sector. Change in unemployment is calculated as the difference between the annual averages for 2009 and 2007 based on data from the US Department of Labor's Bureau of Labor Statistics (BLS). Following McLaughlin et al. (1999), the secondary/peripheral sector measure includes the percentage of the civilian labor force employed in retail trade and particular segments of the service sector [i.e., arts, entertainment, and recreation services; accommodation and food services; and other services (primarily personal services and business and repair services)], as well as agriculture, forestry, fishing, and hunting. Notably, this definition excludes higher skilled service work, including employment in educational and health care services. Change in this variable is measured as the difference between the values from the 2005–2009 ACS and the

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[3] Specifically, the states excluded from our analysis due to a lack of available data include Connecticut, Idaho, Maine, Massachusetts, Missouri, Montana, Nebraska, New Hampshire, New York, Oregon, Rhode Island, Utah, Vermont, Washington, West Virginia, and Wyoming. In an effort to assess the potential selection bias associated with the exclusion of these states, we conducted a t test to compare the mean change in SNAP receipt at the state level between states that were included in our analysis and states that were excluded. The results showed no significant difference in the mean change in SNAP use between these two groups of states ($p = .80$). In the absence of a clear cut method for imputing such a large amount of data, we elected to rely on "available case analysis," which is advocated as the best approach for dealing with missing data in regression analysis, especially when statistical power is not an issue (Howell 2008).

2000 Census. Our expectation is that places where unemployment and secondary sector work are on the rise will also be places where SNAP receipt is increasing.

Population Structure   We assess seven variables related to changes in the local population structure: percentage-point change in families headed by single women with children, percentage-point change in the total size of the population, percentage-point change in the population age 65 years and older, percentage-point change in the population age 15 years and younger, percentage-point change in the population that is black, percentage-point change in the population that is Latino/Hispanic, and percentage-point change in the population that is foreign-born. All of these variables are based on the difference between the 2005–2009 ACS and the 2000 Census. Our expectation is that areas with growing shares of economically vulnerable populations will be associated with increases in SNAP receipt. Because the collapse of the housing sector was so central to the downturn, we also expect that population growth will be associated with an increase in SNAP participation.

Human Capital   We examine two variables tapping changes in local human capital: percentage-point change in the population 25 years and older with less than a high school degree or equivalent and percentage-point change in the population that does not speak English well or at all. Both of these variables are based on the difference between the 2005–2009 ACS and the 2000 Census. Our expectation is that rising shares of less educated residents will be associated with increasing SNAP use. How rising numbers of non-English speakers will impact SNAP trends is less clear, though it might be surmised that language barriers may impede access to the program.

Residential Context   Last, we assess six variables related to changes in the local residential context: foreclosure starts expressed as a percentage of all mortgages, three dummy variables assessing the influence of being a metropolitan (metro) area with under 1 million residents, a micropolitan area, or a non-core area (metro areas with more than 1 million residents serve as the reference), and percentage-point change in segregation as measured by indexes of dissimilarity for the poor versus non-poor, black versus white, and Latino versus white populations. The foreclosure measure is based on data from HUD's Neighborhood Stabilization Program and is calculated as the number of foreclosure starts divided by the total number of mortgages over 18 months spanning 2007 to mid-2008. Metro/non-metro status is obtained from the USDA ERS and is based on data from the 2000 Census. Changes in the three segregation measures are based on the difference between the 2005–2009 ACS and the 2000 Census.[4] Our expectation is that foreclosures, metro contexts, and increasing segregation will be linked to rising SNAP use.

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[4] Defined by the Office of Management and Budget, a metropolitan (metro) area contains a core urban area of 50,000 or more population, and a micropolitan (micro) area contains an urban core of at least 10,000 (but less than 50,000) population. Each metro or micro area consists of one or more counties and includes the counties containing the core urban area as well as any adjacent counties that have a high degree of social and economic integration with the urban core (as measured by commuting to work). Non-core areas are counties that fit neither the metro nor micro definition. The index of dissimilarity measures

Analytic Strategy

In the analysis that follows, we use descriptive statistics, mapping, and weighted least squares (WLS) spatial regression modeling to examine county-level variation in the percentage-point change in SNAP receipt during the Great Recession. The aim of our regression model is to identify local-level changes with significant linkages to changes in county-level SNAP receipt over the course of the downturn. We weight our model by county total population size (2005–2009 ACS). We do so because ordinary least squares regression weights all counties equally, such that a percentage-point change in a county with a 1,000 residents exerts the same influence in the model as a percentage-point change in a county with 1,000,000 residents. In supplementary analyses, we estimated models without weights and obtained similar results. We present only the fully specified model including all of our measures in the results section of this paper, though we do provide the adjusted r-squares for intervening models in footnote 6.

Diagnostics for statistical issues such as skewness and collinearity revealed no need for adjustments to our measures. However, we do take steps to address two related issues commonly faced in county-level regression models: state-level effects and spatial autocorrelation. Because counties are nested in states and states are comprised different numbers of counties, unmeasured variables that are county-invariant within a state can bias county-level regression estimates. In this case, it is important to account for state-level effects, because we know that states vary in their approach to the administration of social welfare programs (Nathan and Gais 2001). As mentioned previously, while SNAP is not a state block grant program, welfare reform led to great innovation and variation in state approaches to the provision of human services generally, which translated into differences in the administration of SNAP across states (Food and Nutrition Service 2012; Zedlewski and Brauner 1999). To account for state-specific county-invariant factors, we follow previous studies (e.g., Lobao and Hooks 2003; Slack and Myers 2012) by controlling for state-fixed effects. Beyond state-specific effects, local conditions in a county can also be a function of proximity to neighboring counties. Known as spatial autocorrelation, this too violates regression assumptions and can potentially bias estimates. Therefore, to account for spatial autocorrelation beyond that controlled by the state-fixed effects, we follow previous studies (e.g., Goetz et al. 2004; Slack and Myers 2012) by including a spatial lag term in our models. The spatial lag is calculated as the average value of the dependent variable (i.e., percentage-point change in local SNAP receipt) among a county's neighbors.[5]

Footnote 4 continued

the evenness with which two groups are distributed across component geographic areas (here census tracts) that make up a larger area (here counties). In cases where two groups are perfectly segregated, the index of dissimilarity takes the maximum value of 100. In cases where two groups are perfectly integrated, the index of dissimilarity takes the minimum value of zero (Racial Residential Segregation Measurement Project 2008).

[5] The spatial lag was produced by a "rook" weights matrix, which defines a location's neighbors as those areas with shared borders. We use this method because it provides better model fit than the "queen" weights matrix, which is the other commonly used contiguity-based spatial weights measure.

Results

Local Change in SNAP Receipt

As shown in Table 1, county-level SNAP receipt climbed an average of 2.3 percentage-points between 2007 and 2009. However, there is a notable amount of variance in this regard, with counties ranging from a decrease of 5.3 points to an increase of 11.1. The geographic distribution of changes in SNAP participation is illustrated in Fig. 1. Of special note are counties that are more than one standard deviation above the mean—places with "above average" changes in SNAP receipt—and counties that are more than one standard deviation below the mean— places with "below average" changes in SNAP receipt. According to this definition, 382 counties had above average increases in SNAP receipt during the downturn. The map shows that counties where SNAP use climbed highest are not randomly distributed across the nation. Instead, they tend to be part of multi-county regional clusters, with counties in Arizona and Florida standing out in particular. There also appears to be some spatial clustering among the 349 counties where SNAP use increased little or fell, though this pattern is somewhat less pronounced.

In Fig. 2, we present a Local Indicators of Spatial Association (LISA) map of county-level change in SNAP receipt. The LISA map brings the geographic clustering apparent in Fig. 1 into much clearer relief. Diagnostics reveal significant positive spatial autocorrelation (i.e., geographic clustering of counties with like values, Moran's $I = 0.47$) in county-level SNAP change. The terminology used in LISA maps for significant spatial clustering of high values is "high–high" (i.e., counties with high levels of SNAP change surrounded by neighboring counties with similarly high levels of SNAP change). Significant spatial clustering of low values is referred to as "low–low" (i.e., counties with low levels of SNAP change surrounded by neighboring counties with similarly low levels of SNAP change). Accordingly, what stands out in the LISA map is the significant regional clustering of places with high ($N = 349$) and low ($N = 427$) levels of change in SNAP participation. Especially, striking is the significant clustering of high SNAP change in Arizona and Florida, places hit hard by the housing crisis, in addition to parts of the southeastern US and areas in Texas, Wisconsin, and Michigan. Equally striking is the significant clustering among counties with little change (or even reductions) in SNAP receipt. Areas that stand out in this regard include parts of Kansas, Colorado, and the Dakotas, as well as regions with historically high levels of SNAP participation like the Lower Mississippi Delta and Central Appalachia.

Regression Model of Local Change in SNAP Receipt

Table 2 shows results from a WLS spatial regression model that estimates the influence of a range of county-level factors on changes in SNAP receipt controlling for state-fixed effects. The table reports unstandardized coefficients and standard errors from the full model in which all variables were entered at once.[6] The model

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[6] The adjusted R^2 for each separate construct controlling for state-fixed effects is poverty experience .37; labor market conditions .43; population structure .36; human capital .36; and residential context .39.
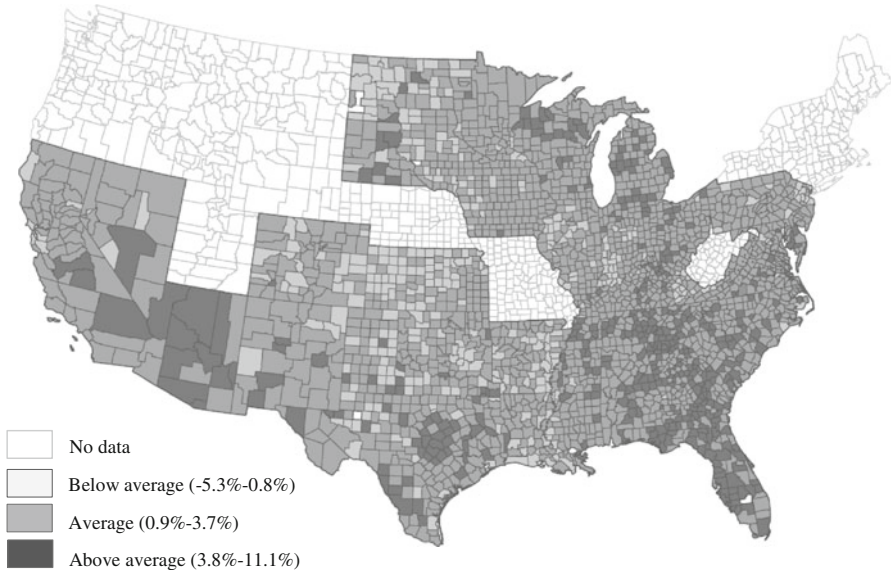
Fig. 1 Change in county-level SNAP receipt, 2007–2009. *Source* US Department of Agriculture. *Notes* "Below average" is more than one standard deviation below the mean, "average" is within one standard deviation of the mean, and "above average" is more than one standard deviation above the mean
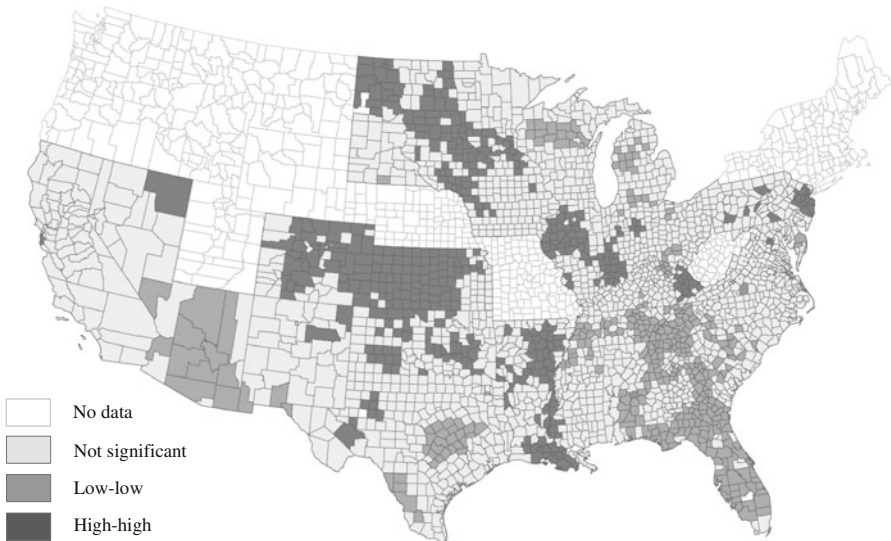

Fig. 2 LISA map of county-level change in SNAP receipt, 2007–2009. *Source* US Department of Agriculture. *Notes* Moran's $I = 0.47$. "Low–low" refers to counties at the center of geographic clusters with significantly lower change in SNAP receipt than would be expected at random. "High–high" refers to counties at the center of geographic clusters with significantly higher change in SNAP receipt than would be expected at random

Table 2 Results from WLS regression model of county-level change in SNAP receipt, 2007–2009

Independent variables	Unstandardized coefficient	Standard error
Poverty experience		
PP Δ poverty, 2000–2009	0.084***	0.012
Persistent poverty (1 = yes), 2000	−0.299**	0.097
Labor market conditions		
PP Δ unemployment, 2007–2009	0.155***	0.019
PP Δ secondary/peripheral jobs, 2000–2009	−0.003	0.011
Population structure		
PP Δ female-headed families, 2000–2009	−0.036*	0.017
PP Δ total pop., 2000–2009	−0.004	0.002
PP Δ 65 and older, 2000–2009	−0.054*	0.022
PP Δ under 18, 2000–2009	0.020	0.022
PP Δ black, 2000–2009	−0.064***	0.014
PP Δ Latino, 2000–2009	0.069***	0.017
PP Δ foreign-born, 2000–2009	−0.024	0.021
Human capital		
PP Δ less than high school, 2000–2009	−0.056***	0.013
PP Δ limited or no English, 2000–2009	0.037	0.036
Residential context		
Foreclosures as % of mortgages, 2007–2008	0.149***	0.015
MSA < 1 million pop. (1 = yes), 2000	0.083	0.044
Micropolitan (1 = yes), 2000	0.176*	0.069
Non-core (1 = yes), 2000	0.023	0.084
PP Δ segregation of poor and non-poor, 2000–2009	−0.011*	0.005
PP Δ segregation of black and whites, 2000–2009	0.004	0.002
PP Δ segregation of Latinos and whites, 2000–2009	0.001	0.003
Spatial lag	0.591***	0.028
Intercept	−1.845***	0.131
Adjusted R^2	0.600	
$N = 2{,}485$		

Sources US Department of Agriculture, US Department of Labor, US Department of Housing and Urban Development, and US Census Bureau

PP Δ percentage-point change, *Pop*. stands for population, *MSA* metropolitan statistical area. For changes in poverty, secondary/peripheral jobs, population structure measures, human capital measures, and segregation measures "2009" as the latter time point listed above is from the 2005–2009 5-year estimates of the American Community Survey. Models control for state-fixed effects and are weighted by county total population size

* $p < .05$, ** $p < .01$, *** $p < .001$

confirms some of our expectations, but runs counter to others. In keeping with our expectations, there is solid evidence that places where the impacts of the Great Recession were most pronounced witnessed significant increases in SNAP receipt. This is evidenced by positive associations between changes in SNAP participation

and increases in poverty, unemployment, and home foreclosures. Also, consistent with our expectations, the model shows that changes in SNAP receipt were significantly lower in persistently poor regions of the country—places where SNAP participation has historically been highest—and significantly greater where the Latino population is increasing. Counter to our expectations, increases in the share of female-headed families, older populations, black populations, the less educated, and poor/non-poor segregation are shown to be associated with significantly less change in SNAP receipt, while small town America (micropolitan areas) witnessed greater SNAP increases compared to other residential settings. The model also shows a significant positive effect associated with the spatial lag, indicating the significance of regional clustering among counties with like levels of change in SNAP use, net of state effects.

Discussion

This study aimed to contribute to the literature on the geography of SNAP participation by (1) examining change in SNAP receipt across US counties during the Great Recession and (2) identifying other types of local-level change associated with this outcome. Our findings demonstrate substantial county-level variation and significant regional patterns in changes in SNAP participation over the course of the downturn. On balance, our results suggest that the impacts of the Great Recession (e.g., poverty, unemployment, and home foreclosures) played a pivotal role in driving up county-level SNAP receipt, while factors that have traditionally been linked to high SNAP participation (e.g., persistent poverty) were not associated with rising SNAP use during the crisis. Moreover, we show that counties where SNAP use jumped most were not geographically isolated, but instead tended to be members of multi-county regional clusters.

Our findings contribute to the extant literature in a number of ways. While the bulk of research on SNAP has focused on individual/household (e.g., Bhattarai et al. 2005; Frongillo et al. 2006; Grieger and Danziger 2011; Gundersen and Oliveira 2001; Nord 2001; Rank and Hirschl 2005; Van Hook and Stamper Balistreri 2006) or state-level factors (e.g., Figlio et al. 2000; Tapogna et al. 2004; Wallace and Blank 1999), this analysis contributes to a smaller subset of studies that bring attention to localized SNAP dynamics (Goetz et al. 2004; Slack and Myers 2012). Doing so is consistent with calls for greater attention to the intertwined concepts of space and place in stratification research, and the need for examination of middle-range spatial scales and subnational inequality in particular (Gans 2002; Lobao 2004; Lobao and Saenz 2002; Lobao et al. 2007; Logan 2012; Tickamyer 2000; Voss 2007). This study also responds to those advocating for special attention to the ways in which the Great Recession has transformed the social and economic landscape of the country, creating new contours of inequality (Grusky et al. 2011). In this vein, we show clearly that change in SNAP receipt has been geographically uneven during the Great Recession, and that local and regional configurations matter in shaping this variation.

Limitations

Our study is subject to a number of limitations. One is that many of our measures of
local-level change do not conform strictly to the period covered by the Great
Recession, instead being based on differences between the 2005–2009 ACS and the
2000 Census. This is an unfortunate matter of data availability—the 1-year and
3-year ACS estimates only include data for areas with populations of 65,000+ and
20,000+, respectively—though it does allow for the comparison of economic good-
times (the end of the historic expansion of the latter 1990s) and bad-times (the bulk
of the years in the 2005–2009 ACS capture the recession). Further, while our
measures of change in SNAP receipt and the signature characteristics of the Great
Recession (i.e., increased foreclosures and unemployment) were captured more
specific to the period in question, all of these variables are lagging indicators of the
downturn (i.e., they all continued to increase after the economy started growing
again), and in the case of foreclosures differences in state laws influence the
timeline on which the process takes place (Currie and Tekin 2011). Other data
limitations include potential selection effects due to the lack of county-level SNAP
data for 16 states, an issue faced in previously published research (Slack and Myers
2012), as well as the lack of direct measures of changes in local office policies
guiding the administration of SNAP. Another issue is what has been termed the
"uncertain geographic context problem" (Kwan 2012). The crux of this issue is that
there is uncertainty about the actual geographic scale that exerts contextual
influences on SNAP use or other outcomes of interest (i.e., are counties or some
other spatial unit most appropriate?). We do believe that in the case of the current
study this concern is somewhat allayed by the administrative role played by county
SNAP offices and the governmental capacity of counties in shaping local economic
action and redistribution more generally.

Policy Implications

Our findings hold a range of implications for public policy. Because places where
the use of SNAP climbed highest during the Great Recession were geographically
clustered, there may be opportunities for targeted regional approaches to program-
matic outreach. Building regional networks among local service providers could
allow agencies to better align resources, increase administrative capacity, more
effectively share best practices, and ultimately improve services to food insecure
Americans. Our models also demonstrate that key local-level factors were
associated with changes in SNAP receipt. Policymakers could draw on this
information to develop community profiles to help identify areas where current
needs are likely to be high as well as to anticipate how social and economic change
may influence future demand for food assistance. Many states are engaged in
innovative approaches to modernize the administration of SNAP and are working
with local community partners on outreach and education efforts (Food and
Nutrition Service 2012). Our findings provide support for these efforts and also
suggest potential opportunities in the form of inter-state regional collaborations.

In terms of the Great Recession and future downturns, our findings concur with those who have argued that SNAP (along with Unemployment Insurance) was uniquely responsive to the increased economic hardship brought on by the crisis (Rosenbaum 2013). The responsiveness of SNAP to increased need is especially notable given that TANF has been effectively sidelined as a prominent and responsive component of the US social safety net. Moreover, SNAP not only helps to alleviate food insecurity in a time of economic crisis, but it also acts as form of local economic stimulus. According to the USDA, spending on SNAP yields a substantial local multiplier effect, with every $1 invested in SNAP benefits in a community generating an additional $1.80 in local spending (Food and Nutrition Service 2011). Therefore, targeted place-based investments in outreach and education aimed at increasing SNAP take-up stand to yield important returns in terms of local stimulus in the context of an economic crisis.

Conclusion

The Great Recession was distinctive in driving up unprecedented levels of SNAP participation. This study showed that local-level change in SNAP receipt was geographically uneven during the Great Recession, and that local and regional configurations mattered in shaping this variation. These results hold a range of implications for public policy, including opportunities for regionally targeted outreach and investment in SNAP and the use of the program as a responsive form of local stimulus during economic downturns. Future research should continue to untangle the ways in which spatial inequality and the political economy of place impact population well-being and social program participation.

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