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Rosen, Gina L

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Determinants of SNAP Participation:

Employing a Structural Vulnerability of Poverty Framework to Examine SNAP Participation

Among Low-Income Heads of Households

A dissertation submitted in partial satisfaction of the

Requirements for the degree Doctor of Philosophy

in Social Welfare

by

Gina L. Rosen

2015

ABSTRACT OF THE DISSERTATION

Determinants of SNAP Participation:

Employing a Structural Vulnerability of Poverty Framework to Examine SNAP Participation
Among Low-Income Heads of Households

By

Gina L. Rosen

Doctor of Philosophy in Social Welfare

University of California Los Angeles

Doctor of Philosophy

in Social Welfare

Professor Todd M. Franke, Chair

This research examines how aspects of a weakened social structure potentially impact SNAP participation over the course of the Great Recession among elderly low-income heads of households. The objective is to understand how individual characteristics, as well as structural factors of a weakened economy, a growing low-wage labor market, and a shrinking safety net, impact participation in SNAP.

This research will specifically ask the following questions:

- How does participation in SNAP change throughout the course of the Great Recession when the structural vulnerability of poverty framework is examined?

- Do differences in SNAP participation change by structural factors associated with poverty across states?

This research brings a new approach to investigating the relationship between determinants of SNAP participation as a function of poverty in relation to structural factors throughout the Great Recession. Instead of asking how SNAP participation affects labor force participation, this research adds to the literature by exploring what factors act as a determinant to SNAP participation in times of economic uncertainty.

A binary logistic multilevel regression was conducted using secondary data from the Survey of Income and Program Participation 2008 Panel. The sample included low-income (150% of the Federal Poverty Line) heads of households, aged 18-64.

The dissertation of Gina L. Rosen is approved.

Rosina Becerra

Yeheskel Hasenfeld

Michael Seltzer

Todd M. Franke, Committee Chair

University of California, Los Angeles

2015

Dedicated to my family, Michael, Helen, Corinne, Jesse,

Glorie, Miguel, Kelley, Olivia and Nadia –

whose love, support and encouragement made this possible. To the never-ending support and friendship of Maggie, Lauren, Lesley, Casey and Susan who have been at most a phone call away and always provided a shoulder to lean on.

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CV GINA ROSEN

EDUCATION

Ph.D. Candidate University of California, Los Angeles Expected June 2015
Department of Social Welfare
Dissertation Title: Determinants of SNAP Participation: A Structural Vulnerability Approach
Dissertation Committee Members: Todd Franke (chair), Yeheskel (Zeke) Hasenfel, Rosina Beccera, Mike Seltzer

M.P.P American University, Washington, DC 2006
School of Public Affairs
Concentration: Social Policy

B.A. University of Rhode Island 2003
Major: Sociology

GRANT AWARDS AND FELLOWSHIPS

2014-2015 Bette and Hanz Lorenz Endowed Fellowship
2014-2015 Advisory Board Student Fellowship
2014-2015 Community Partnerships Fellowship
2013-2014 Luskin Fellowship, UCLA
2012-2013 Community Partners Fellowship, UCLA
2010 -2011 Graduate Research Mentorship Award, UCLA
2010 Graduate Summer Research Mentorship Grant, UCLA
2009 Graduate Summer Research Mentorship Grant, UCLA
2004-2006 American University Graduate Student Study Grant, AU
URI Black Faculty Association 2003 Althea Gibson Award Recipient, URI

PEER REVIEWED JOURNAL PUBLICATIONS

Rosen, Gina. (2014). Determinants of Employment: Impact of Medicaid and CHIP Among Unmarried Female Heads of Household with Young Children. *Social Work in Public Health*, 29:5, 491-502.

PEER REVIEWED CONFERENCE PRESENTATIONS

Rosen, G. (2014) SNAP Participation through the Great Recession: Employing a Structural Vulnerability of Poverty Framework to Examine SNAP Participation Among Low-Income Heads of Households. Association for Public Policy Analysis and Management. Albuquerque, NM. November 8-10, 2014.

Rosen G. (2014) Employing a Structural Vulnerability of Poverty Framework to Examine Determinants of SNAP Participation. Society for the Study of Social Problems. San Francisco, CA. August 15-17, 2014.

Rosen, G. (2014). Determinants of Employment: Impact of Medicaid and Chip Among Unmarried Female Heads of Household With Young Children. Society for Social Work and Research. San Antonio, TX. January 15-19th, 2014.

RESEARCH EXPERIENCE

Principal Investigator 2011 - Present
Dissertation Research: Food Insecurity as a Determinant of Poverty: The Result of a Structural Failing

Research Analyst Oct 2013 – Present
Leap and Associates
Supervisor: Jorja Leap, PhD

Graduate Research Assistant Aug 2011 – Dec 2011
University of California, Los Angeles
Supervisor: Todd Franke, PhD

Graduate Research Assistant Apr 2011 – Jul 2011
University of California, Los Angeles
Supervisor: Zeke Hasenfeld, PhD

Graduate Research Assistant Mar 2010 – June 2010
University of California, Los Angeles
Supervisor: Rosina Becerra, PhD

Graduate Research Assistant Jan 2009 – Dec 2009
University of California, Los Angeles
Supervisor: Joel Handler, J.D.

Research Assistant Jan 2005 – May 2005
American University
Supervisor: Sam Garrett,

INTRODUCTION

Inherent in the social welfare system is the assumption that a social safety net is provided to those in greatest need. To address concerns related to poverty and the needs of low-income populations, the US government has been using safety net welfare programs with incentives to help alleviate poverty. In 1964, President Lyndon B. Johnson declared a war on poverty stating, “This administration today, here and now, declares unconditional war on poverty in America. I urge this Congress and all Americans to join with me in that effort. It will not be a short or easy struggle, no single weapon or strategy will suffice, but we shall not rest until that war is won. The richest Nation on earth can afford to win it. We cannot afford to lose it.” Today, this “war” is still being waged.

The current economic downturn, which officially began in December 2007, has resulted in more people falling into poverty (15.1% in 2010, see Appendix 1 for more information) and has increased the reliance on various social welfare programs. The US social welfare system delivers programs to provide financial assistance, food benefits, health care, and/or subsidized housing, with the goal of addressing systemic market failures by providing aid to those most in need. Policies are designed to assist those in need even as they become employed and move out of poverty into jobs that lead to financial independence. Nearly half of the increases in social welfare spending from the past 38 years occurred as a result of the Great Recession after 2007. Safety net spending, also referred to as entitlement spending, equated to nearly 11 percent of the GDP in 2007 prior to the Great Recession. By 2010, as the unemployment rate more than doubled and the housing market burst, safety net spending rose to almost 14 percent of GDP (Hungerford, 2013). These increases in spending equate to increased participation in social welfare programs, and in particular the Supplemental Assistance Nutritional Program (SNAP),

colloquially known as Food Stamps. (For a more detailed history of Poverty and Inequality in America see Appendix I).

Food Insecurity as a Measure of Poverty

Living in poverty often means foregoing a sufficiently balanced diet and an adequate intake of calories (McGovern, 2001; Poppendieck, 1999; Rose, 1999). Income is one of the most significant determinants of food security. Declining incomes and increased poverty are related to increased food insecurity (Rose, 1999). A study by the U.S. Department of Agriculture determined that 14.5 percent of all Americans (17.2 million households) were deemed food insecure in 2010. Food insecurity was more prevalent in households with children (20.2 percent) versus households without children (11.7 percent), and in low-income households (under 185 percent of the poverty threshold) at a rate of 33.8 percent. This amounted to 48.8 million people living in food insecure households in 2010,—32.6 million adults and 16.2 million children (Coleman-Jensen et al., 2011).

Supplemental Nutrition Assistance Program (SNAP)

One of the entitlement programs that works to combat poverty, specifically food insecurity, is the Supplemental Nutrition Assistance Program (formerly known as the Food Stamp Program). The program today is administered federally by the US Department of Agriculture, however benefits are distributed by individual states. SNAP currently offers nutrition assistance to eligible, low-income individuals and families by providing an Electronic Benefit Transfer (EBT) card to purchase any prepackaged edible foods. EBT cards can be used to purchase any prepackaged edible foods, regardless of nutritional value. Hot foods (such as those found in a supermarket deli) are ineligible, as well as items in fast food restaurants and similar retail settings, although some exemptions do exist. As of September 2012, 47.7 million

Americans received approximately \$134.20 in SNAP benefits per month on average. Program participant's income, expenses and household size determine the amount of a SNAP benefit. Benefit amounts are based on the expectation that a participant spends about 30% of their household income on food. In 2012, \$74.6 billion was distributed in SNAP benefits nationwide to nearly 48 million people (US Department of Agriculture, 2013). (For a more detailed history of SNAP in the United States see Appendix II).

Addressing Poverty and Food Insecurity

In recent years, competition for scarce governmental resources coupled with diverging political ideologies have intensified the debate over how to combat poverty and food insecurity through the use of social welfare programs. The antipoverty programs that have been instituted in the US since the war on poverty have undergone major transformations over the decades in both how they are run and whom they aim to help. Over time, this has led to the development of programs designed to help the poor and fight against poverty by prioritizing a moral subtext that considers personal responsibility and increasing work requirements the goal (Handler & Hasenfeld, 1991). Today, social welfare programs function on the assumption that they are incentivizing labor force participation by providing assistance to unemployed and low-wage earners to help them in the move from low-income to financially stable. The effectiveness of alleviating poverty by using economic and other incentives has been the subject of much debate and continues to be re-evaluated in our changing world. Some believe that imposing work requirements constructs a screening process that may serve as a means of targeting transfers, as well as a deterrent that may serve as a device to encourage poverty-reducing investments (Besley & Coate, 1992). However, it has been argued that these work-first policies that prioritize

employment-based supports lead to cycles of poverty and jobs with no growth in economic self-sufficiency (Acs, Loprest, & Ratcliffe, 2010; Robert Moffitt & Roff, 2000).

Social welfare programs function on the assumption that they are incentivizing labor force participation by providing assistance to unemployed and low-wage earners to help them move from low-income to financially stable or self-sufficiency. The assumption is that individuals make a rational choice to participate in either the labor force or welfare. By focusing on individual behavior framework, many social welfare programs are designed with the premise to encourage work. This perspective assumes that work is readily available to those who want it, and it is a lack of effort and motivation that leads to welfare dependency. This framework fails to account for the possibility of structural factors that contribute to welfare participation. Such factors include human capital and individual characteristics, as well as a weakened social structure made up of a low-wage labor market, a depressed economy, and a shrinking safety net.

The majority of research that has examined SNAP participation has focused on investigating individual incentive and motivation for work rather than the potential for structural failure. An individual approach to examine SNAP participation fails to recognize many of the factors that play a role in poverty and participating in welfare programs.

To address these concerns, this research examines how aspects of a weakened social structure potentially impact SNAP participation. This research brings a new approach to investigating the relationship between determinants of SNAP participation as a function of poverty in relation to structural factors over time. Instead of asking how SNAP participation affects labor force participation, this research adds to the literature by exploring what factors act as a determinant to SNAP participation. To meet this goal, this research specifically asks the following questions:

- How does participation in SNAP change when individual characteristics and human capital variables associated with the structural vulnerability of poverty within states is examined?
- Do differences in SNAP participation change by structural factors associated with poverty across states?

By using twelve waves of data from the public use files of the Survey of Income and Program Participation (SIPP) 2008 panel collected by the U.S. Census Bureau and data from the Bureau of Labor Statistics (BLS), this study employs a bivariate logistic hierarchical linear model. The SIPP data set provides a significantly accurate estimation of income and program participation among the public. Additionally, this is a national data set rather than limiting data to a small geographic region, making the study highly generalizeable.

The within state model (level 1) allows the exploration of differences across individuals within each state to examine determinants of SNAP participation and the differences between individual characteristics and human capital versus differences in each state's social structure. The across state model (level 2) allows us to examine how SNAP participation varies by each state depending on the differences between each state's social structure.

Study Strengths

This study has several strengths. First, the study adds to the literature by exploring SNAP participation as a function of poverty in relation to structural factors over time. Mainstream research uses an individual approach to examine SNAP participation, however this fails to recognize many of the factors that play a role in poverty and participating in welfare programs.

Second, the study uses survey data from the SIPP data set, which provides an significantly accurate estimation of income and program participation among the public.

Additionally, this is a national data set rather than limiting data to a small geographic region, making the study highly generalizeable.

Third, using a multilevel model provides a convenient framework for studying multilevel data like the SIPP data set. The multilevel framework provides a systematic analysis of how covariates measured at different levels (individual and state) affects the outcome variable (logit probability of SNAP participation) and how the interactions among covariates measured at different levels affect the outcome. The multilevel model also corrects for the biases in parameter estimates resulting from clustering and corrects standard errors. With the observations are clustered into higher level unites, the observations are no longer independent; if the lack of independence is ignored, standard errors tend to be underestimated. With the model employed in this study, the clustering at the state level helps correct for this possible underestimation (Guo & Zhao, 2000).

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

In the United States, poverty, food insecurity, as well as social scientist study of these subjects, has evolved to identify poverty and food insecurity as a social epidemic. Mainstream research in this area typically employs labor supply theory. This approach has resulted in the evaluation of participation in social welfare programs, such as SNAP, and their effect on labor market participation and poverty reduction. Hence, the research examines the causes of poverty and how to combat the problem through an individualized approach. Unfortunately, this approach fails to examine structural factors that could influence financial well-being and labor force participation.

To begin exploring the relationships between poverty, in particular food insecurity, and labor force participation, this section describes what the literature has and has not established regarding factors associated with poverty and labor force participation, as well as establishes a theoretical framework for this. The section is divided into four sections: (1) a review of empirical studies, (2) an examination of the individual approach to analyzing poverty, (3) the introduction to a new theory examining poverty as a structural failing, and (4) the establishment of a theoretical framework.

The empirical literature is presented in an order that progresses from an examination of studies focusing on SNAP participation and the effects on labor supply to an examination of an individuals participation in various welfare programs and how it effects the individual's labor force participation. The theoretical examination of an individual approach to analyzing poverty outlines what is traditionally done in labor supply poverty research and its shortcomings. Next the theoretical approach to be utilized in the study, the structural vulnerability of poverty framework, which accounts for human capital as well as a weakened social structure, is outlined.

Finally the theoretical framework melds together the most salient components that emerge from theory and empirical studies. In addition, the theoretical framework attempts to compensate for gaps in the existing literature.

Empirical Review

The majority of research looks at the effect individual participation in social welfare programs has on labor participation, since increased labor participation decreases the probability of impoverishment (Currie & Madrian, 1999; Danziger et al., 1981; Fraker & Moffitt, 1988; Gruber & Madrian, 2001; Hoynes & Schanzenbach, 2012; Moffitt, 1992, 2002; Moffitt & Wolfe, 1992; Moran, 2011; Winkler, 1991; Yelowitz, 1995). This approach assumes that poverty and wealth reflect personal merit and effort (Bullock, 2008). To date, there has been little research done examining SNAP participation and its impact on labor supply. Prior studies include Fraker and Moffitt (1988), Hagstrom (1996), Keane and Moffitt (1998), and Hoynes and Schanzenbach (2012).

SNAP participation and labor supply.

In 1988, the first study examining participation in the food stamp program and its impact on labor supply was conducted by Fraker and Moffitt. By using maximum likelihood procedures and a bivariate selection model, the authors examined female heads of household labor supply response to food stamp participation. Using data from the Income Survey Development Program (ISDP). The findings indicate that food stamp participation reduces the labor supply by about 9 percent, but marginal changes in the program's guarantee and benefit reduction rate have minimal effects on labor supply (Fraker & Moffitt, 1988)

Hagstrom (1996) took a slightly different approach, examining the labor supply and program participation decisions by married couples. Because the FSP is the largest assistance

program available to married couple families, and married couples constitute 26 percent of all poor US families with children, Hagstrom examined data from SIPP to estimate a multinomial logit model. Findings indicated a smaller labor supply effect to changes in the food stamp benefit than research that focused on single parents, program participation estimations, however, were consistent with other research showing a responsiveness to changes in the maximum benefit and benefit reduction rate (Hagstrom, 1996).

A 1998 article by Keane and Moffitt approached labor supply and program participation to analyze the effects of transfer programs, including food stamp participation, on labor supply using SIPP data. Because families who participate in one program often simultaneously participate in other programs, and no other studies had been done that estimated a structural model of labor supply and multiple transfer program participation, the authors examined a model of labor supply and multiple program participation by applying methods of simulation estimation. By examining AFDC, food stamps and housing subsidies, the authors found fairly large wage elasticity's of labor supply where many types of wage subsidies and wage rate increases have both significant positive labor supply effects and decreased program participation effects. Additionally, the estimation found very inelastic responses to moderate changes in cumulative marginal tax rates. This finding helped the authors conclude that unlike increases in wages, high welfare tax rates do not necessarily lead to major reductions in work effort. Wage increases and wage subsidies had a decreased effect on program participation and an increased effect on labor supply; in contrast, welfare tax rates do not often lead to increases in labor supply (Keane & Moffitt, 1998).

Hoynes and Schanzenbach (2012) examined the cross-county introduction of the Food Stamp Program in the 1960's and 1970's by examining data from the Panel Study of Income

Dynamics (PSID) using a difference-in-difference approach, a triple-difference approach, an event study analysis and a specification check. The analysis was consistent with their theoretical predictions that the introduction of the Food Stamp program led to lower rates of employment and hours worked. In particular, single female heads of households, who were more likely to participate, resulted in a 24 to 27 percent decrease in the employment rate and a reduction of 183 hours worked annually (Hoynes & Schanzenbach, 2012).

Welfare participation and labor supply.

More research has examined other welfare program participation and the labor supply response, particularly participation in Medicaid and/or AFDC/TANF. Again, instead of focusing on what inhibits those in poverty from self-sufficiency, the research has concentrated on the personal attributes of those in poverty and how people make decisions on their participation in the labor force. By examining the complexities of individual consumer tastes, salary and benefit incentives, and the welfare state, many authors have concluded that social welfare programs create incentives that can impact employment decisions.

A 1991 article (Winkler, 1991) investigated Medicaid's impact on women's labor supply behavior. Winkler found that Medicaid generosity had a consistently significant negative impact on an individual's probability of working. Alternatively, it was also found that Medicaid is not an important factor in an individual's continuous hours worked decision. In addition, AFDC participation was found to not be influenced by the generosity of a states' Medicaid program.

A 1992 study examined how the Medicaid program affected female heads of households and their decision to participate in the labor market or AFDC. By examining SIPP data, the authors found that an increase in expected Medicaid benefits strongly increases the likelihood of AFDC participation and strongly decreases the likelihood that the head of household will work.

They also found that private health insurance, especially for workers, has a negative effect on AFDC probabilities and a positive effect on employment probabilities, increasing the likelihood of labor market participation (Moffitt & Wolfe, 1992).

Yelowitz (1995) examined Current Population Survey data to examine Medicaid expansions for children and how it impacted labor force and AFDC participation. Using a variant of the static labor supply model, the authors estimation showed that the expansions of Medicaid, which included decoupling Medicaid eligibility from AFDC eligibility, had a significant effect on labor supply and welfare participation; a substantial decrease in AFDC caseload is the result of decoupling the programs (Yelowitz, 1995). This shows that the availability of health insurance coverage seems to be an important factor for lower-income populations who work. With the current implementation of the ACA, it is expected that the increased availability of health insurance coverage will lead to increased labor force participation, especially in states that have implemented further expansions to Medicaid.

A meta-analysis on the connection between health, health insurance and labor market outcomes was conducted by Currie & Madrian (1999). By examining an extensive body of literature, this paper analyzes health status and its effects on wages, labor force participation and job choice. The meta-analysis suggested that estimates of the effects of health on labor market activity might be sensitive to measure of health used and the way that information is collected. Health is also found to have a greater effect on hours worked versus wages. However labor force outcomes vary widely and are sensitive to identification assumptions employed. Additionally, the authors analyzed access to health insurance and its effect on labor force participation and job choice.

Many of the articles reviewed found that health insurance affects employment outcomes by giving those with employer provided health insurance incentive to remain employed, and by giving those with other sources of health insurance provision less reason to participate in the labor market. Again, the authors found that identification issues are critical to these assessments (Currie & Madrian, 1999).

Several major reviews of literature on the effects of welfare programs on labor supply have been undertaken, but will not be exhaustively covered here. These studies did, however, estimate the effects of AFDC program participation and labor supply using structural or quasi-structural models. They consistently found that AFDC program participation reduced labor supply by 10 to 50 percent of non-AFDC levels (Danziger et al., 1981; Hoynes, 1996; Moffitt, 1992)

A more recent review of econometric studies examining the effects of existing welfare programs on labor supply was conducted in 2002. It reviewed the importance of labor supply and the work incentive effects of welfare programs in the United States. The author examined the theoretical models associated with these effects, including the basic static model, dynamic models including: welfare program effects in a life cycle context, on human capital investment, welfare based human capital investment programs, and time limits. Further analysis of issues are with the variance in program design, such as work requirements and tagging models, wage and earnings subsidies, and in-kind transfers. The paper ended with an examination of various empirical studies beginning with pre-1995 evidence and ending with post-1995 structural and reduced form policy impact estimates. Findings of the empirical review concluded that more research was both needed, and many programs other than TANF are quite understudied including Food Stamps (Moffitt, 2002).

These studies contribute greatly to understanding labor force participation, yet little has been concluded on whether it is the program participation that affects their labor force participation or whether it is the lack of opportunity in the labor force that pushes individuals towards welfare participation. As evidenced above, the abundance of research on poverty and food insecurity has focused on this individual approach of poverty, examining individual attributes and demographic characteristics of the poor (Blank, 1997; Schiller, 1989).

Individual Approach to Poverty

All of the studies referenced above employ labor supply theory to examine an individual approach to poverty and food insecurity. This approach is based on the common assumption that poverty is caused by individual behavior or a lack of human capital rather than economic and social factors. By using correlations as evidence to attribute poverty to individual behaviors the authors make assumptions about labor force participation and welfare.

This line of reasoning can be traced back to the Colonial period with Benjamin Franklin and Poor Richards Almanac, (1759). In the 19th Century, as millions of poor Eastern and southern Europeans immigrated to America, it took the form of social Darwinism. And after a brief respite during the Great Depression and New Deal, the individual approach to poverty re-emerged with a vengeance during the post World War II era. These beliefs have resulted in programs that reward those who work and punish those who make “bad choices”, including not participating as active members of the labor force.

As a result of this individual approach, there has been an abundance of research that looks at the development of a culture of poverty. Brought to the forefront by anthropologist Oscar Lewis (1959), the culture of poverty argues that a subculture has emerged awakening a permanent underclass that encourages welfare dependency. Children are socialized into

behaviors that perpetuate an inability to escape the poverty stricken underclass they are born into. Building off this concept, The Other America, a book that would become a seminal work in how we see those in poverty, was published a few years later (Harrington, 1962). In an effort to give voice to those in poverty, Harrington identified the poor as “different” from the rest of us, not just in the sense they were disadvantaged, but that they had a different understanding of the world characterized by shortsightedness and intemperance. As Harrington wrote, "There is... a language of the poor, a psychology of the poor, a worldview of the poor. To be impoverished is to be an internal alien, to grow up in a culture that is radically different from the one that dominates the society" (Harrington, 1962). Although not Harrington’s intention, his observation of the “twisted” proclivities of the poor became the foundation for social scientists to argue that poverty was the result of individual ineptitude (Ehrenreich, 2012)

One prominent political scientist, Charles Murray, has written extensively about welfare and poverty, and is a strong advocate on the individual approach. In his book, Loosing Ground (1985) Murray argues that the welfare system has destroyed the poor’s incentive to work hard, and instead has reinforced a society where the poor are freed from any individual responsibility to alter their own circumstances (Murray, 1985). While Murray’s views were often seen as beyond the pale, other scholars, such as Lawrence Mead, were instrumental in the debate to “change welfare as we know it” resulting in the 1996 Personal Responsibility and Work Opportunity Act (PRWORA), which fundamentally changed welfare and the safety net for the poor is approached. Mead held that there was a need for a strong welfare state, however the permissiveness of Great Society programs failed to enforce social obligations on the poor; what was needed was a more paternalistic, authoritarian welfare state that had an active role in emphasizing free market individualism and enforcing work ethic (O'Connor, 2009).

Structural Nature of Poverty

While worthwhile in their attempt to begin to understand the relationship between welfare use and labor force participation, previous research has assumed that the poor have a viable alternative to participating in welfare programs, and that upward mobility is possible. This view is disputed by empirical data that demonstrates that those who are likely to rely on the social safety net of welfare often do not have the opportunity for labor force participation, employment with above poverty wages, other earned income, or investment in human capital, such as higher education (Bartik, 2002; Nichols, 2011).

Because of the obvious failings and faulty assumptions of the labor supply theory and the individual approach of poverty, this research employs a less common approach, which is premised on the structural nature of poverty. A paradigm, brought to the forefront by Rank (2004), the structural vulnerability of poverty theory is premised on the idea that the individual is not the source of their poverty; rather it is the economic, political and social system that limit opportunities and access to resources, especially for those lacking human capital and who are more at risk for poverty (Bradshaw, 2007; Rank, 2004). “Poverty researchers have in effect focused on who loses out in the economic game, rather than addressing the fact that the game produces losers in the first place” (Rank et al., 2003). Instead of focusing on wage stagnation, income inequality, unemployment, and a growing low-wage labor market, poverty research has fixated on studying, evaluation, and experimenting with welfare programs and those who participate (O'Connor, 2009). To reverse this trend, the structural nature of poverty approach can be broken down into two components worth further discussion: the nature of poverty (in relation to human capital and individual characteristics), and the weakened social structure (as evidenced by a depressed economy, a growing low-wage labor market where the chances of

impoverishment are high, and a shrinking safety net) that creates a system that ensures that failure will occur for many. Each of these components has been individually researched, but little has been done to combine them into one theoretical model.

Human capital and individual characteristics.

Research on the first component, the nature of poverty in relation to individual characteristics and human capital examines who is likely to be impoverished. This research shows that poverty is concentrated among Blacks and Hispanics, female-headed households, children under 18, and those in central cities (DeNavas-Walt et al., 2011; Rank & Hirschl, 2001; Seccombe, 2000) as well as teenage mothers, giving birth outside of marriage and families with large numbers of children (Hoffman & Maynard, 2008). Women are more likely to be poor the more children they have, because larger families require more income and greater parenting responsibility restricts a women's ability to work in the labor market and earn an income. (Cancian, Maria & Reed, Deborah, 2001). Likewise, women and children from single-parent families are disproportionately represented among the long-term poor (Cancian, Maria & Reed, Deborah, 2001)

Additionally, research has shown that a majority of Americans will experience poverty at some point throughout their lifecycle (Rank & Hirschl, 1999a, 1999b). Using data from the Panel Study of Income Dynamics (PSID), the longest running household longitudinal survey in the world, Rank and Hirschl (2001) concluded that poverty is a clear economic risk across the lifecycle. Instead of poverty occurring as an isolated event, the authors calculated that a "significant percentage of individuals will experience poverty at some point during their adult lifetime" (Rank & Hirschl, 2001).

Examining human capital research has shown that those with poor health, less education, and a lack of work experience are highly correlated to increased poverty (Rank & Hirschl, 2001; Seccombe, 2000). Furthermore, those who are born into poverty are more likely to wind up in poverty as adults since there is little social mobility (Hertz, 2006, 2009; Jencks & Tach, 2005). These are all important factors when considering individual responsibility for social class outcomes. Because research shows that opportunity for education, employment and other factors related to social mobility are limited by social constraints rather than individual deficiency (Hertz, 2009; Jencks & Tach, 2005), it is important to acknowledge these issues in research examining their role in poverty outcomes.

In this same vane, just as it is important to who is likely to be impoverished, it is also necessary to understand how these individual characteristics lead to economic insecurity. The extent that systematic discrimination inhibits members of minority groups and marginalized groups (including female headed households, single parent homes, etc) from participating in social and economic opportunities that are the basis of economic self sufficiency and increase the likelihood of economic hardship is a common theme when understanding individual characteristics of poverty (Hertz, 2009; Pager, 2008). These concentrations of economic hardship among minorities and marginalized groups often lead to characterizing poverty as a minority problem or a reflection of weak morals associated with the decline of the nuclear family (Bullock, 2008), which only reinforces stereotypes and discrimination. While the argument for the causes and existence of discrimination can be saved for a different time, it is important to note that the presence of discrimination, whether blatantly obvious or inconspicuous in nature, does exist and has been well documented (Blank et al., 2004).

As evidenced above, the nature of poverty in relation to individual characteristics and human capital examines who is likely to be impoverished. However, it does little to analyze the structural components society and their role in causing wide spread impoverishment. The mainstream poverty research industry reduces “the most volatile of social problems into quantifiable, individualized, variables” by examining individual characteristics related to demography, education level and personal behavior (O'Connor, 2009). In response, it is important to turn to the second component of a weakening social structure. By expanding the scope of poverty research to institutions, social and economic practices, work conditions, and policies that shape the economy and economic opportunities would open up a level of inquiry that has recently been absent (O'Connor, 2009). This translates to examining the weakened social structure as a component of structural nature of poverty framework, including a growing low-wage labor market, the depressed economy, a shrinking safety net and the high probability that poverty will be experienced by a majority of the population in their adulthood.

Weakened social structure.

Research on the second component has examined the weakening social structure as a separate, often unrelated phenomenon. Although some research has investigated the growing low-wage labor market, the economy, and a shrinking safety net in relationship to one another (Secombe, 2000), researchers often analyze these as individual phenomena. Below is an examination of the research that has been conducted in each of these areas and a discussion of how they relate to the current weakened social structure.

Low wage labor market.

Since the 1980's there has been a significant change in the labor market that has influenced the poverty rate in the United States. Employment has increased dramatically for mothers with children under 6 over time (Cancian, Maria & Reed, Deborah, 2001). However, many jobs associated with the middle class have eroded because of the decline of manufacturing, as sector that has generally paid higher wages than average hourly wages. Instead, there has been a massive shift in employment of less educated workers from industries that produce goods to those that produce services (Kalleberg, 2011). Since the mid 1980s, manufacturing jobs have declined dramatically among male and female workers, and among those with less education the decline has been even faster (Blank, 2008). Men with a high school diploma or less saw their share of employment in manufacturing fall from 33.5 percent in 1985 to 19.5 percent in 2007. Among women with the same education level, their share of employment in manufacturing fell from 22.4 percent in 1985 to 12.3 percent in 2007 (Blank, 2008). This decline in manufacturing has resulted in less skilled workers vying for positions within the service sector, particularly entry-level positions such as retail, health care, clerical, hotels, restaurants, and entertainment referenced above.

Depressed economy.

Labor supply theory research often assumes that employment is both available and attainable by those who want to work. Unfortunately this is not always the case, as illustrated by higher rates of unemployment and underemployment during recessionary periods, like the recent Great Recession. Following the most recent recession where the nation hemorrhaged jobs, a modest recovery has developed with some employment gains. Job growth, however, has been primarily concentrated in minimum wage employment, and often doesn't provide benefits such

as health insurance, paid sick leave or vacation (Danziger & Gottschalk, 1995; Seccombe, 2000). The concentrated growth of low wage occupations has increased 2.7 times as fast as mid-wage and high-wage occupations. Since the recession, lower-wage occupations were 21 percent of recession losses, but 58 percent of recovery growth. Mid-wage occupations were 60 percent of recession losses, but only 22 percent of recovery growth. Higher-wage occupations were 19 percent of recession job losses, and 20 percent of recovery growth (National Employment Law Project, 2012). When analyzed by gender, about 60 percent of the increase in women's employment from 2009 to 2012 was in jobs that pay less than \$10.10 an hour, while about 20 percent of the increase in men's employment can be categorized the same way over the same period (Entmacher et al., 2012).

Underemployment includes those who are working part-time because they cannot find full-time work ("involuntary part-time employment"), as well as "marginally attached" workers who are able and want to work but are so discouraged they have given up looking and the unemployed. According to the Bureau of Labor Statistics in December 2011 the official underemployment rate was over 15% (Bureau of Labor Statistics, 2012). Since 1969, the expansion of part-time employment has been an effect of employer attempts to decrease labor costs, and not because of employee preferences. Moreover, involuntary part-time workers account for most of the growth in part-time employment (Tilly, 1991). Additionally, research has found that in recessionary periods involuntary part-time work increases affecting millions (Terry, 1981).

The stagnation of wages and decreased benefits is often examined in relation to growing trade and the internationalization of the economy. Outsourcing production to less-developed countries with lower wages allows US companies to reduce their costs and maximize profits. The

minimum wage has also experienced only slight increases since the 1980's and its declining real value has impacted low skilled workers in pushing wages downward (Lee, 1999). While many economists assume that job rewards are reflective of a person's skill and effort, a stagnation of wages has turned formerly "good jobs" into what may be conceived as "bad jobs" since little variation in earnings indicate little difference in job quality (Kalleberg, 2011).

The decline in union membership has also played a significant role in the decline in wages among lower skilled workers (Card, 2000; Gordon, 20012; Madland & Miller, 2013). Union membership enable workers to realize their economic interests by exerting collective power through bargaining with employers (Kalleberg, 2011). Unionization among low-skilled men declined from 28 percent in 1985 to 15 percent in 2007. Among low skilled women, unionization fell from 14.1 percent in 1985 to 8.5 percent in 2007 (Blank, 2008). As union membership has declined there has been a high correlation to the diminishing share of the nation's income going to the middle class (Madland & Miller, 2013) and has been an important reason why job quality has declined in large segments of the labor force (Kalleberg, 2011).

Shrinking safety net.

Since the early 1970's, social programs in the United States have faced mounting political challenges (Pierson, 1996). Expansion has given way to retraction and reforming programs targeted at helping the poor (Schott & Cho, 2011). After the Great Society expanded social welfare programs through the 1960's, a political mobilization by corporate American began revitalizing support for an effort to restrain social spending and cut taxes in the 1970's (Noble, 1997; O'Connor, 2004). Business investment in "ultra conservative" think tanks, such as the American Enterprise Institute, the Hoover Institution and the Heritage Foundation, as well as political action committees paved the way for conservative policy reforms by promoting

supply-side economics and neoliberalism (Reese, 2005). Once a staunch and effective defender of welfare programs, the labor movement experienced a precipitous decline in membership; this coupled with a failure to build productive alliances with a transforming liberalism and the Democratic party contributed to labor's inability to defend safety net programs as they came under assault from the right (Noble, 1997).

Racial divisions also contributed to the backlash against welfare programs (O'Connor, 2004). Public dissatisfaction with the welfare state was driven by a white perception of bias in the welfare system towards blacks (Noble, 1997) and growing resentment as Blacks gained more access to the welfare system during the 1960's (Schram et al., 2010). Throughout the 1970's and 80's it was widely believed that welfare users consisted of poor black single moms who abused the system and engaged in fraud, also known as the welfare queens (Gilliam, 1999). This misconception and a more conservative appeal to white racism was effective in gaining working-class support and put pressure on Democratic interests to acquiesce in cutting social programs like AFDC, which would disproportionately affect blacks and Latinos (O'Connor, 2004; Reese, 2005).

In 1995, Congress voted to "end welfare as we know it" by eliminating the AFDC and replacing it with TANF through the passage of PRWORA. This change resulted in lifetime time limits, increased discretion among states as funds were distributed through block grants, employment requirements and sanctions for noncompliance. Additionally, marriage promotion and the reduction of out-of-wedlock births were encouraged as policy alternatives by conservative politicians including President Reagan, in an effort to increase more traditional family structures (Schoeni & Blank, 2000), with lower rates of poverty and welfare usage and reduced public expenditures (Eggebeen & Lichter, 1991; Manning & Brown, 2006; Novak,

1987). These policies appealed to and were provided by an organized Christian Right lobby (Reese, 2005). Echoing mainstream Liberal economists, the belief that “poverty is dependent on the harmonious progress of economic growth, free market capitalism, worker productivity and the supply and demand of labor” reinforced the individual framework and pushed for an emphasis on individual responsibility (Brady, 2003). These policy changes and the implementation of TANF marked the shift towards individual and market solutions to poverty with government intervention and social policies cast as the residual player in the welfare state (EspingAndersen, 2002).

Since the implementation of TANF, welfare participation has decreased. From 1994 to 1999, AFDC/TANF caseloads were cut in half, falling from 5 million to 2.5 million caseloads, Food Stamp caseloads followed a similar trend (Blank, 2000). Additionally, labor market participation among traditional welfare users increased and poverty rates decreased. The caseload reductions and poverty decreases cannot solely or primarily be attributed to the change in AFDC/TANF. The changes took place in the midst of a strong economy with significant job growth and wage increases, (Blank, 2000) including an increase in the minimum wage. Wallace and Blank (1999) cite a number of studies that estimate the impact of declining unemployment rates. The findings indicate that a 1 percentage point in unemployment produces about a 4 percent decrease in AFDC caseloads (Wallace & Blank, 1999). Regardless of what led to the reduction in caseload, welfare reform was viewed by the public as a success and helped strengthen the argument to cut welfare spending even more.

However, as many critics expected, an economic downturn has once again led many economically distressed citizens to return to assistance from the social safety net, in particular SNAP and Unemployment Insurance (UI), in response to financial hardship and a stagnant labor

market (Bitler & Hoynes, 2013; Ganong & Liebman, 2013). Yet, with the changes to AFDC/TANF, many in need of assistance faced a new social safety net to navigate through, and the protection of TANF has all but disappeared (Bernstein & Chapman, 2003; Bitler & Hoynes, 2013; Floyd & Schott, 2013). This was somewhat compounded by a short-term increase in SNAP benefits and an extension to UI, both part of the Obama Administration's American Recover Act, designed to stimulate the economy. Many took advantage of these programs with record levels of participation in SNAP growing from 26 million in 2007 to nearly 48 million in 2013. Yet, even as the economy has only recently started to rebound, many are proposing major cuts to SNAP. Congressional leaders from both houses support major cuts to the program which would result in reduced benefits to participants (Dean & Rosenbaum, 2013). Despite reports on the importance of welfare programs reducing the rate of poverty have been aplenty, especially in the midst of the most recent recession (Bitler & Hoynes, 2013; Parrott, 2013; Rosenbaum, 2012; Tiehen et al., 2012). Some estimate that every \$1 spent on food stamps generated about \$1.74 in overall economic activity (Rampell, 2013). Unfortunately the political system is almost certain to cut benefits, which will ensure continued hardship for the most vulnerable.

The next section of the chapter will provide this study's theoretical framework. The theoretical framework will meld together theory and empirical literature and provide the rationale behind the study's research questions.

Theoretical Framework

The previous sections detailed a review of the empirical research, examining an individual approach to explaining poverty and labor force participation, in particular the use of labor supply theory, as well as a structural approach, incorporating not only individual characteristics and human capital, but also a weakened social structure evidenced by a low wage

labor market, a depressed economy and a shrinking safety net. The empirical literature predominantly tests labor supply theory linking individual participation in welfare programs to labor force participation (Currie & Madrian, 1999; Danziger et al., 1981; Fraker & Moffitt, 1988; Gruber & Madrian, 2001; Hoynes & Schanzenbach, 2012; Moffitt, 1992, 2002; Moffitt & Wolfe, 1992; Moran, 2011; Winkler, 1991; Yelowitz, 1995). This approach makes the assumption that individuals who utilize social welfare programs have the choice to engage in other employment and instead choose to participate in welfare programs. As detailed above, this is not often the case and overlooks many relevant factors that impact individual participation in the labor force and/or welfare programs.

In order to compensate for the shortcomings of both the individual approach and the empirical literature testing this approach, this study's conceptual framework employs poverty as a structural failing. Because the majority of research that examines SNAP participation investigates individual incentive and motivation for work, the goal of this research is to examine aspects of a weakened social structure that could impact SNAP participation.

Applying poverty as a structural failure framework, this study explores the relationship between poverty, food insecurity, SNAP and labor force participation, and fills the existing gap in literature. By examining the factors that contribute to SNAP participation, this research brings a new approach to investigating the correlation between the determinants of SNAP participation as it relates to labor force participation and poverty. Instead of asking how SNAP participation acts as a determinant to labor force participation, this research examines what factors act as a determinant to SNAP participation. To meet this goal, this research will specifically address:

- How does participation in SNAP change when individual characteristics and human capital variables associated with the structural vulnerability of poverty within states is examined?
- Do differences in SNAP participation change by structural factors associated with poverty across states?

The study uses data from the Survey of Income and Program Participation (SIPP) 2008 panel collected by the U.S. Census Bureau and data from the Bureau of Labor Statistics (BLS). By employing the structural vulnerability of poverty theoretical framework, participation in SNAP is examined as a determinant of the human capital and individual characteristics domain, the weakened social structure domain, as well as state politics. SNAP participation is the dependent variable, since it is participation in SNAP that we plan to evaluate. See Figure 1 for a depiction of the structural vulnerability framework.

The human capital and individual characteristics domain contains the independent variables that measure the nature of poverty in relation to human capital and individual characteristics. This includes variables on education, race, ethnicity, age, gender, household structure, and metropolitan resident status. According to previous research, these variables have been consistent factors when examining the relationship between poverty and SNAP participation (DeNavas-Walt et al., 2011; Hertz, 2009; Hoffman & Maynard, 2008; Pager, 2008; Rank & Hirschl, 2001; Seccombe, 2000), as well as examining who is likely to be on SNAP and where the program is geographically concentrated.

The weakened social structure domain includes the 3 components addressed above, a depressed economy, a low-wage labor market and a shrinking safety net. The first component, a depressed economy has been measured in previous research by variables including the

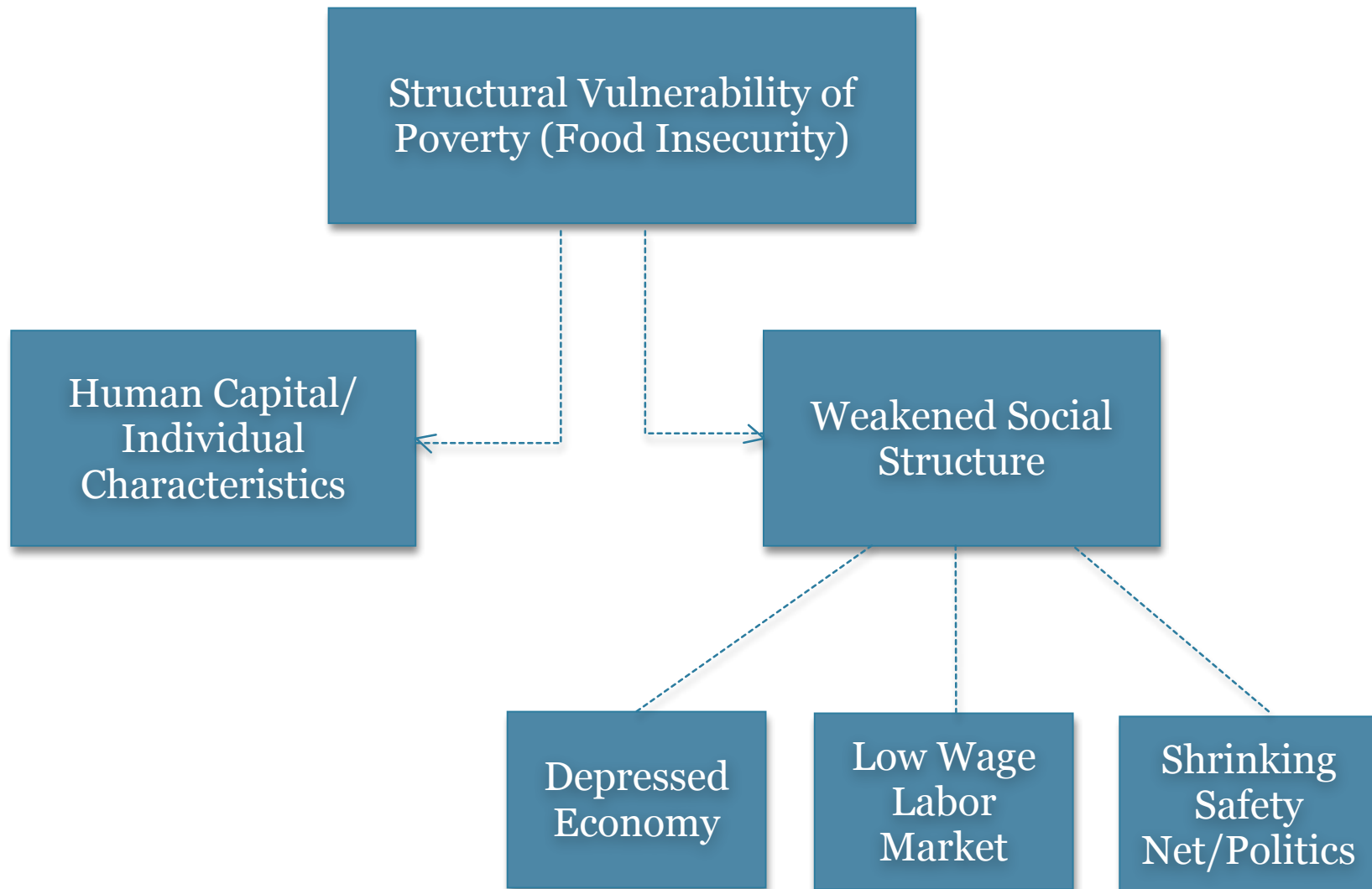
unemployment rate, the underemployment rate (Terry, 1981; Tilly, 1991), and union membership (Card, 2000; Gordon, 2012; Madland & Miller, 2013), where high unemployment and underemployment rates, as well as declining union membership resembles a weakened economy. Underemployment includes those who are working part-time because they cannot find full-time work (“involuntary part-time employment”), as well as “marginally attached” workers who are able and want to work but are so discouraged they have given up looking and the unemployed. Since 1969, the expansion of part-time employment has been an effect of employer attempts to decrease labor costs, and not because of employee preferences. Moreover, involuntary part-time workers account for most of the growth in part-time employment (Tilly, 1991) and a growing population of those in poverty. Additionally, research has found that in recessionary periods involuntary part-time work increases affecting millions (Terry, 1981). For this study, the unemployment rate, union membership rates, engagement in involuntary part-time employment and number of times an individual is below 150% of the Federal poverty line are included.

The second component, a low-wage labor market is often measured by examining the state median wages (Blank, 2008). By identifying state median wages, the research has been able to be drawn conclusions linking the low-wage labor market and a decrease in “good jobs” that provide higher wages and benefits. This research also incorporates whether a state has Right-to-Work laws, which many argue have led to decreased unionization and lower wages (Eisenbrey, 2015; Lafer & Allegretto, 2011; Shierholz & Gould, 2011).

The third component, a shrinking safety net includes a variable measuring state generosity of TANF. Other research has shown the significant impact of welfare generosity on poverty (Bernstein & Chapman, 2003; Bitler & Hoynes, 2013; Brady et al., 2013; Floyd &

Schott, 2013). By examining the generosity of another welfare programs this variables allow the impact of a changing safety net to be measured. The amount of resources allocated to social welfare programs is often found to be a function of state politics (Rank, 2004). In an effort to measure the impact of state politics, this research incorporates several variables often associated with state political ideology. The assumption is that a states political ideology impacts how a program, such as SNAP, is delivered to constituents throughout the state. Previous research has examined determinants of policy expenditures and program participation using political determinants, this typically includes political party affiliation of the Governorship as well as partisan control in the state House/Senate (Park et al., 2013).

Figure 1. Theoretical Framework



It is hypothesized that the variables associated with a weakened social structure leads to a significant likelihood of participation in SNAP. In particular, states with increased unemployment and underemployment, a decrease in union membership, as well as right-to-work legislation will result in an increased likelihood of SNAP participation. Additionally those states with employment concentrated in lower wage industries will result in an increased likelihood of SNAP participation. Lastly, states that have decreased access to other social welfare programs will result in an increased likelihood of SNAP participation. These hypotheses infer that SNAP participation is affected because the vulnerability of poverty ensures a system that failure will occur for many resulting in an increased need of assistance.

The next chapter, Methodology, will delineate the methods used for analyzing this study's data. The Methodology section will explain the study design, data collection methods, the sampling weights, study sample, measures and the methods used to statistically analyze the data.

STUDY DESIGN

This study uses twelve waves of data (3 years) from the public use files of the Survey of Income and Program Participation (SIPP) 2008 panel collected by the U.S. Census Bureau and data from the Bureau of Labor Statistics (BLS) collected from multiple sources. As previously stated, this research addresses:

- How does participation in SNAP change when individual characteristics and human capital variables associated with the structural vulnerability of poverty within states is examined?
- Do differences in SNAP participation change by structural factors associated with poverty across states?

SIPP Data

The SIPP is a nationally representative, longitudinal, multi-stage, stratified sample. The goal of “SIPP is to provide accurate and comprehensive information about the income and program participation of individuals and households in the United States, and about the principal determinants of income and program participation. SIPP offers detailed information on cash and noncash income on a sub-annual basis. The survey also collects data on taxes, assets, liabilities, and participation in government transfer programs. SIPP data allow the government to evaluate the effectiveness of federal, state, and local programs,” (Census Bureau, 2013). By providing this nationally representative sample, SIPP allows users the ability to evaluate annual and sub-annual dynamics of income, movements into and out of government transfer programs, as well as the family and social context of individuals and households (Shaefer, 2013)

As a true longitudinal survey, SIPP tracks people over time. With few exceptions, original sample members are interviewed every 4 months over the duration (4 years) of the panel.

When original sample members move to new addresses, interviewers attempt to locate them and continue to interview them every four months. Between September and December of 2008, SIPP began the 2008 panel, conducting interviews about each individual in the participating household for each intervening month (a 4 month reference period), gathering data on demographics, income sources, public assistance, program participation, household and family structure, and jobs and work history. In each wave of the data (14 waves total in the 2008 panel), each individual may have up to 4 observations since there are 4 reference months for the wave, totaling 421,911 observations for Wave 1 (the first wave used for this study) and 309,419 observations for Wave 12 (the final wave used for this study). (See table 1 for the number of observations by wave).

SIPP employed a complex sampling design, utilizing two-stage sample design. The first stage includes the selection of primary sampling units (PSUs), and the second stage includes the selection of addresses with sample PSUs. The sampling frame for PSUs includes a list of US counties and independent cities, along with population counts and other data for those units from the most recent census of population. From the sample PSUs, SIPP selects addresses from separate sampling frames maintained by the Census bureau, after which the frames are then clustered and sampled (Census Bureau, 2013).

SIPP is found to do an exceptional job of measuring income and program participation among the public in comparison to other large nationally representative surveys (Czajka & Denmead, 2008; Meyer et al., 2009). While under-reporting is still a limitation, SIPP does relatively well in reporting rates of SNAP usage (Gundersen & Kreider, 2008).

Through a stratified multistage probability sample, 42,030 heads of households were selected in wave 1. From those selected households in wave 1, the sample size obtained included

105,663 individuals. By wave 12 the sample included 30,671 heads of households, and 77,287 individuals. (See table 1 for the number of household and individuals by each wave)

State Level Data

This study also uses data from the Bureau of Labor Statistics (BLS) on state measures of unemployment, occupational composition, wages, and union membership. Additionally, state level data on the political climate of states was captured through the National Governors Association and the National Conference of State Legislatures.

Through the Local Area Unemployment Statistics (LAUS) program, a Federal-State partnership collects monthly employment and unemployment statistics by states. That data is accessible through the BLS website. (Bureau of Labor Statistics, 2014b). Occupational composition by state was collected through the BLS website under the Currently Employment Statistics program. Every month, this data “surveys approximately 143,000 businesses and government agencies, representing approximately 588,000 individual worksites, in order to provide detailed industry data on employment, hours, and earnings of workers on nonfarm payrolls” (Bureau of Labor Statistics, 2015a). The Occupational Employment Statistics (OES) program “produces wage estimates annually for over 800 occupations. These estimates are available for the nation as a whole, for individual States, and for metropolitan and nonmetropolitan areas; national occupational estimates for specific industries are also available” (Bureau of Labor Statistics, 2015b). This program provided the state wage data used in this analysis.

Union membership data by state is also accessible through the BLS website. This data is retrieved by BLS from the Current Population Survey, which records data on union membership and representation by state on an annual basis (Bureau of Labor Statistics, 2014a).

Political data on governor political party was retrieved from the National Governors Association (2015). This data included information on each state Governor's political affiliation in the years 2008, 2010 and 2012. If at least two of those data points had consistent results, the state was coded as having a Governor with that same political affiliation. Additionally, because Washington, DC does not have a governor, data on their mayors political affiliation was included (National Governors Association, 2015). State Legislature and Right-to-Work data was retrieved from the National Conference of State Legislatures (2015). By examining both legislative chambers if the years 2008-2012, conclusions on state legislator political control was determined. If both legislative chambers had Republican majorities for at least two of the data points, they were determined to have Republican control. The same logic applied for both legislative chambers having Democratic majorities, or neither parting having a political party. Because Nebraska is a non-partisan unicameral legislature, it was included as not applicable (National Conference of State Legislatures, 2014). Right-to-work data was retrieved from the National Conference of State Legislators database on right-to-work states (2015). This included information on whether states were listed as right-to-work during the time frame of the study (National Conference of State Legislatures, 2015).

Study Sample

For the purposes of this study, the data set was narrowed to heads of household's aged 18-64 (those considered working age). In addition, this sample was chosen to avoid analyzing the employment decisions of currently enrolled students (youth) and the elderly. Additionally, the sample is restricted to households based on low-income. Similar to what others has been done in previous research (Mykerezzi & Mills, 2010; Ratcliffe & McKernan, 2010; Shaefer & Gutierrez, 2012). Instead of trying to simulate SNAP eligibility, households with an income at or below 150

percent of poverty at any time during the 12 waves of data collection in the reporting month are included in the study sample. Lastly, state of residency was identified by interview participant's response to residency in the first wave of data. While it is possible that state of residence may have changed, tracking this change when examining the data in the aggregate was not possible. This amounted to a sample size of 17,169 heads of household's (See table 1).

Similar to Mykerezzi & Mills (2010) and Shaeffer & Gutierrez (2012), the sample was not restricted by household assets. Doing so would reduce a significant portion of households reporting SNAP participation by coding them ineligible. State eligibility calculations and/or fluctuations in household incomes and assets could be the cause of the inconsistencies in household assets and participation (Shaefer & Gutierrez, 2012). Additionally, by using a gross income threshold for sample selection instead of SNAP eligibility we eliminate concerns that income may be endogenous to participation. For example, previous research has concluded that households near the eligibility threshold may modify their earnings or assets in ways that make them eligible for SNAP participation (Ashenfelter, 1983). As previously stated, this research looks to dispute that assumption and by using a threshold of 150 percent of the poverty line, rather than SNAP's gross income limit of 130 percent, we can account for this belief that households modify their earnings to stay eligible.

The average age of the sample over the 12 waves was just under 42 years, and on average they had about 1 child under the age of 18 in each household (See Table 2). The majority of individuals in our sample came from unmarried households (54.7 percent) and female-headed households, with nearly 59 percent of observations coming from female respondents (see table 3). This is consistent with previous research that shows "1/3 of children were born to unmarried mothers" and that half of all children will spend at least a portion of their childhood living with

only one parent (Bumpass & Raley, 1995; Cancian, Maria & Reed, Deborah, 2001). Furthermore, research shows that women are more likely to be poor the more children they have, because larger families require more income and greater parenting responsibility restricts a women's ability to work in the labor market and earn an income. Women and children from single-parent families are disproportionately represented among the long-term poor (Cancian, Maria & Reed, Deborah, 2001).

The average household income of the sample was \$2957 over the 12 waves (see table 2). The sample included 6,201 heads of households receiving SNAP benefits at least once over the 12 waves of data collection. (see table 2).

Measures

The dependent measure used in this study is SNAP participation. The independent measures, presented by domain, are taken from the structural vulnerability of poverty theory at the individual level. These domains include human capital and individual characteristics, the depressed economy and growing low-wage labor market, and a shrinking safety net with increased risks of impoverishment. Table 3 provides the descriptive statistics for the measures related to human capital and individual characteristics.

SNAP participation.

SIPP contains data on SNAP participation, benefit amount and receipt of SNAP income in reporting month. This domain contains the variables of most interest to the study as finding what factors are determinants of SNAP participation. An individual is recorded as a SNAP participant if they reported participating in the program at least once throughout the 12 waves of data collection.

Human capital and individual characteristics.

This domain contains the independent variables that measure the nature of poverty in relation to human capital and individual characteristics. The SIPP data set contains information that was self-reported by interview respondent on education, race/ethnicity, age, gender, household structure and metropolitan resident status that will be utilized in this study. These variables are important to examining the degree to which human capital and individual characteristics are a determinant of SNAP participation.

Education is coded into a categorical variable of highest education level obtained, where 1 equals 8th grade or below; 2 equals no high school degree; 3 equals high school diploma or its equivalent; 4 equals some college, but no degree; 5 equals an associate or bachelors degree; and 6 equals a masters, professional or PhD degree. This data was obtained from the question, “What is the highest level of school ... has completed or the highest degree ... has received?”

Race and ethnicity have been coded into dummy variables. If the participant identifies as White alone, the White variable equals 1. If not, it is coded as 0. This is done in the same fashion for the other race/ethnicity variables including Black, Asian, Hispanic, and other. If the participant identifies as of Spanish, Hispanic or Latino ethnicity, the Hispanic variable is set equal to 1. If not, it is coded as 0. These variables were constructed from two questions in each wave asking, “What race(s) does ... consider herself/himself to be?” and “Is ... Spanish, Hispanic or Latino?”

Gender is dummy-coded so that females equal 0 and males equal 1 and based on the response by the survey respondent. Ages were calculated by the respondents answer to the question, “Age as of last birthday.” Age is measured as a continuous variable.

Household structure is a categorical variable identifying marriage status. This variable was dummy-coded so that married equals 1 and not married equals 0. The respondents were

coded as not married if they were not married at all throughout the 12 waves of data collection; if the respondent was married at all during the 12 waves of data they were coded as married. Additionally, the survey asked about the number of children under 18. This is coded as a continuous variable based on the survey participants response. To examine area of residence, metro status was dummy-coded so living in a metropolitan area equals 1 and living in a nonmetropolitan area equals 0.

Weakened social structure.

The domain for a weakened social structure includes 3 components: a depressed economy, a low-wage labor market, and a shrinking safety net. The previously mentioned, a depressed economy has been measured in previous research by variables including the unemployment rate, the underemployment rate (Terry, 1981; Tilly, 1991) and union membership (Card, 2000; Gordon, 2012; Madland & Miller, 2013). Additionally, engaging in involuntary part-time employment and being in poverty are also measures of a depressed economy. To account for these factors, data from the Bureau of Labor Statistics on state levels of unemployment, underemployment and union membership will be imported into the data set. SIPP variables on the number of times reporting income below 150% of the poverty line and engaging in involuntary part time work were also utilized.

The BLS provides unemployment data for every month by state. This data was extracted from the dates of observation, starting August 2008 and every month until July 2012 and averaged to an overall rate. Union membership is collected on an annual basis by state. This data will be extracted to include data from 2008 until 2012 and averaged to create an overall union membership rate by state. The unemployment rate and union membership for each state are linked to each participant based on their reported state of residence. This data is averaged

because, as discussed below, the state level variables are time invariant where state level differences are not a function of change in SNAP participation over time.

The second component, a low-wage labor market was measured by examining the state median wages as was done in previous research (Blank, 2008), as well as states status as a right to work state from the National Governors Association . The Occupational Employment Statistics (OES) program produced the state wage estimates. In this analysis, median hourly wage was used. Because outliers often skew mean wages, the median hourly wage gives a more accurate description of wages and income distribution within the state (Blakely & Kawachi, 2001). Whether a state was categorized as a Right-to-Work state was also included for the reasons cited previously. These variables will allow the analysis to measure the impact of a low-wage labor market as a determinant of SNAP participation.

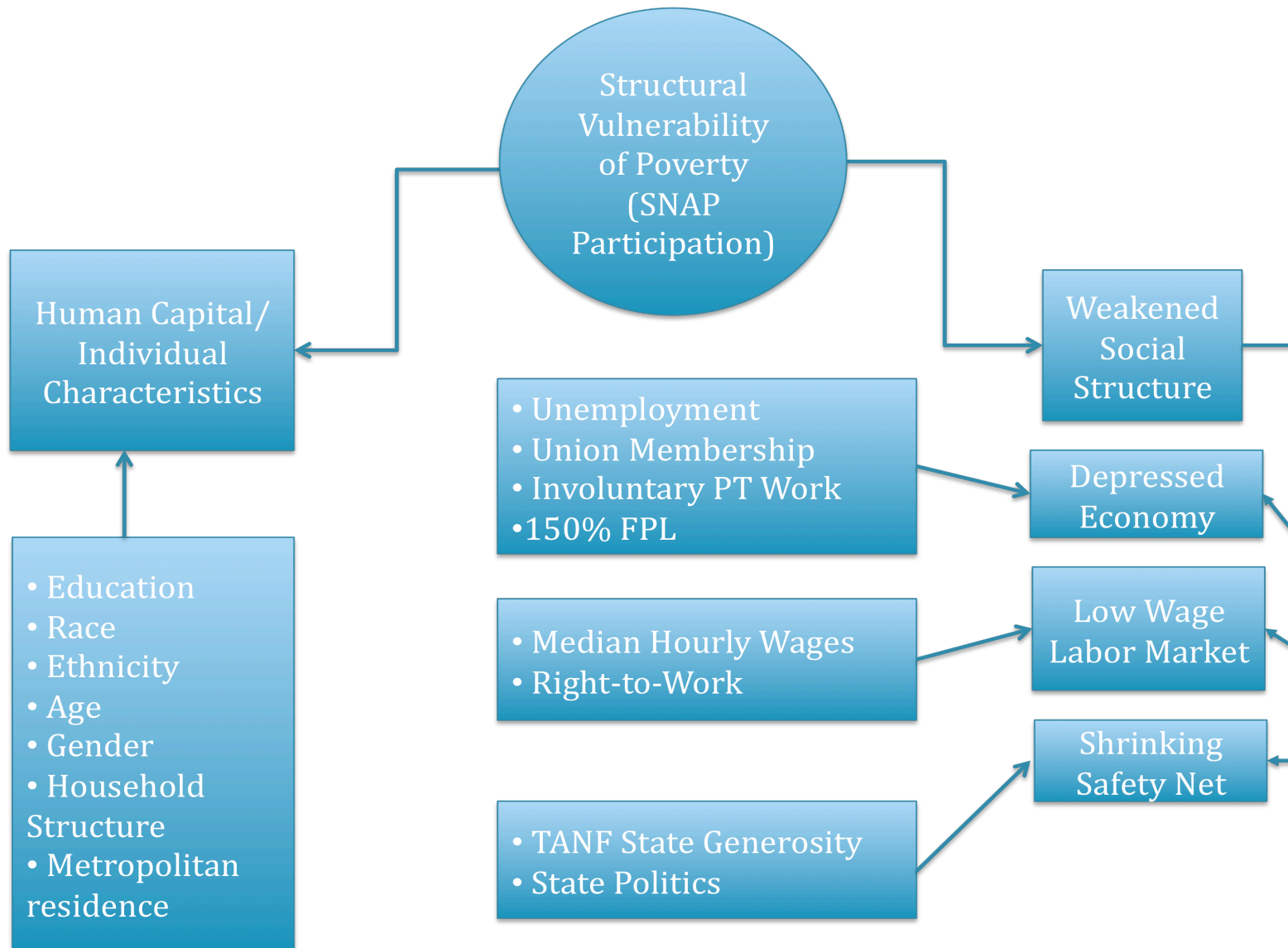
The third and final component of the weakened social structure domain includes the shrinking safety net and politics. Similar to previous research (Brady et al., 2013), data from the Urban Institute's Welfare Rules Database was included in the analysis. This database included states maximum TANF benefits for a 3-person household. This measures examines whether states generosity of the safety net act as determinants to SNAP participation.

Political variables were included, since politics is often associated with policy expenditures and program participation (Park et al., 2013). To capture this, the variables included political party affiliation of the Governorship as well as partisan control in the state House and Senate.

By combining the variables to represent three components of the weakened social structure domain with the variables to represent the human capital and individual characteristics

domain, this study will employ the structural vulnerability of poverty theory to examine the determinants of SNAP participation.

Figure 2. Theoretical Framework with Measures



Statistical Analysis

In order to examine individual covariates as determinants of change to household SNAP participation over time, as well as simultaneously examine structural differences across states, the statistical analysis applied to this study will employ a hierarchical linear model (HLM).

Using HLM imparts a convenient framework for studying multilevel data like the SIPP data set. The multilevel framework provides a systematic analysis of how covariates measured at different levels (individual and state) affects the outcome variable (average SNAP participation). It is a technique that accounts for the dependence of nested observations by partitioning the variance into two parts: (1) The sampling variance (σ^2) exists at the individual level (the individual level is also referred to as within or level 1 in HLM); and (2) The true residual parameter variance (u_j) is present at the cluster level (also termed between or level 2 in HLM) (Bickel, 2007; Hox, 1995).

The multilevel model corrects for the biases in parameter estimates resulting from clustering and corrects standard errors. When the observations are clustered into higher-level units, the observations are no longer independent; if the lack of independence is ignored, standard errors tend to be underestimated. With the model employed in this study, the clustering at the state level helps correct for this possible underestimation (Guo & Zhao, 2000).

Missing data

The SIPP data set contains missing data on many of the variables of interest. To deal with missing data, a log pseudo likelihood estimation will be used to estimate values of unknown or missing population parameters that maximize the probability of observing the study sample.

Model Specification

Bivariate logistical hierarchical linear model.

As previously stated, this study will employ HLM. In particular, we will be looking at SNAP participation as a bivariate dependent variable in a logistical regression hierarchical linear model including both a within state model and an across state model. Similar to other studies that conduct multilevel modeling with binary data (Guo & Zhao, 2000), the within state model (level 1) allows the exploration of differences across individuals within each state to examine determinants of SNAP participation and the differences between individual characteristics and human capital versus differences in each state's social structure. The across state model (level 2) allows us to examine how SNAP participation varies by each state depending on the differences between each state's social structure, as defined by the theory (Bryk & Raudenbush, 1987).

The level 1 model.

The level 1 model represents the change expected by each individual of the study sample to experience over the 12 waves of data collection within their respective states; they are examined within their respective states since many of the structural factors hypothesized to impact SNAP participation vary by state. See table 4 for descriptive statistics on individuals and SNAP participation. Because the state level variables are consistent within each state, the level 1 model is able to examine individual change and determine what role the variables from the individual characteristics/human capital domain have in SNAP participation. The level-1 equation is:

$$\text{Log}[p_{ij}/(1-p_{ij})] = \beta_{0j} + \beta_{1j}(X_{ij}) + e_{ij}$$

Where $\text{Log}[p_{ij}/(1-p_{ij})]$ refers to the log odds of participation in SNAP for an individual observation at level 1 (subscript i refers to the individual, subscript j refers to the state); X_{ij} refers to the level 1 predictors (the individual characteristics/human capital variables); β_{0j} refers to the intercept of the dependent variable (log odds of SNAP participation) in group j (the state); β_{1j}

refers to the slope for the relationship in group j (the state) between the level 1 predictors (the individual characteristics/human capital variables) and the dependent variable (log odds of SNAP participation); e_{ij} refers to the random errors of prediction for the level 1 equation (Singer & Willett, 2003).

The level 2 model.

The level 2 model represents the relationship between interstate differences in the change trajectories of SNAP participation and time-invariant characteristics of the states. In this model, the state level variables (the weakened social structure domain) are averaged to generate a mean score across the 12 waves of data collection. By averaging the state level variables, change in SNAP participation on the state level is not a function of time, but rather a function of the variation in states social structures. . See table 5 for descriptive statistics on various structural factors and SNAP participation. Because the state level variables fluctuate across states, the level 2 model is able to examine state differences and determine what role the weakened social structure domain has on SNAP participation in each respective state. See table 6 for descriptive statistics on each state and SNAP use. In the level 2 model the dependent variables are the intercepts and the slopes for the independent variables (individual characteristics/human capital) at level 1 in the groups (states) of level 2. The level 2 equations are:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}W_j + u_{0j}$$

$$\beta_{1j} = \gamma_{10} + u_{1j}$$

γ_{00} refers to the overall intercept. This is the grand mean of the scores on the dependent variable (the log odds of participation in SNAP) across all the states when all the predictors are equal to 0; W_j refers to the level 2 predictors (state structural factors). γ_{01} refers to the overall regression coefficient, or the slope, between the log odds of participation in SNAP and the level 2 predictors

(state structural factors); u_{0j} refers to the random error component for the deviation of the intercept of a state from the overall intercept; γ_{10} refers to the overall regression coefficient, or the slope, between the log odds of participation in SNAP and the level 1 predictors (individual characteristics/human capital variables); u_{1j} refers to the error component for the slope (meaning the deviation of the state slopes from the overall slope) (Singer & Willett, 2003). See table 7 for a list of all variables and their values

Study Limitations

Several limitations existed in conducting this analysis. A key limitation of this study is that clustering took place at the state level. If more data existed on participant's neighborhoods, zip codes, or another localized area, it would be possible to further correct the standard errors and thus the confidence intervals and significance testing. This could help identify more of the variation that exists between smaller social structures.

Time is another limitation that could be addressed in future research. By aggregating the data to an average over the 4 year data collection time frame, much of the variation may be unaccounted for in the study model. Further analysis could be done that incorporates a third level to the model, this level would include time and capture more of the change that occurs. Several variables that could be considered problematic due to the aggregation of the data include marriage status and state of residence. Because marriage status doesn't track changes in status of marriage over the course of the study, changes in household structure could be overlooked in their impact on SNAP participation. Marriage status does have an effect on SNAP participation, but how a change in that status may have effected program participation is unaccounted for in the current model. The same holds true for the state of residence variable. Because the variable used is their state of residence when they begin the study, the model fails to account for how a change

in state (social structure) could affect SNAP participation. The possible variation that exists with these two variables could be better captured in a model that includes time as an additional level.

In addition, the SIPP study design includes up to four observations for each participant per wave. This study only includes the most recent observation per wave. Because of the exclusion of several months of observation, the potential for seam bias is increased. However, by using responses from the month in which the interview occurs, decreases seam bias since those responses are known for being more accurate than reflecting on months past (Moore, 2008).

An additional limitation of the study was that the BLS data comes from multiple sources, some collected on a monthly basis and some on an annual basis. The monthly data is averaged for each participant's duration of responses, however the annually collected data is assuming that from month to month there is little variation amongst the state level variables. This could give a biased estimate when examining some of the state level variables that use annual, rather than monthly data.

RESULTS

In analyzing the determinants of food stamp participation throughout the recession, a multilevel regression model was estimated using the sample of interest, which was previously described. The dependent variable of interest was participation in SNAP (food stamps) at some point throughout the first 12 waves of data collection, this value ranged from 0-1. Based on the literature review, the independent variables were separated into different components of variables that affect welfare program participation; and the analytic approach examined the association between the variables and participation in the Food Stamp program. Additionally, the multi-level model was used to control for state fixed effects. It is important to note that all variables referred to as significant from here on out were found to be significant at the .05 level.

As previously mentioned, Tables 4-6 provide descriptive statistics on variables used in the analyses and SNAP participation. These tables inform that from our study sample, 55 percent of females used SNAP at least once in comparison to only 25 percent of males. Those individuals who listed their highest level of education as no high school degree had the highest quantity of SNAP participants, with 57 percent of this group having participated in SNAP. Among the various racial groups, African Americans had the largest percent of SNAP participants with 55 percent having reported participation at least once throughout the twelve waves of data collection. Those living in rural communities (40 percent) were slightly more likely to have reported participating in SNAP at least once than those living in urban areas (35 percent). Additionally, a higher percentage of unmarried individuals (43 percent) reported SNAP use in comparison to those who were married (29 percent). See Table 4.

Thirty-seven percent of individuals living in states with right to work laws reported using SNAP compared to 36 percent of individuals in non right to work states. In states with a

Republican governor, 34 percent of the sample reported SNAP participation at least once in comparison to 40 percent in states with a Democratic governor. Participation in SNAP was fairly similar among the sample population regardless of political party of the legislature. Thirty-five percent of those residing in states with Democratic legislatures reported SNAP use compared to 38 percent in states with Republican legislatures and 39 percent in states with a politically split legislature. See Table 5.

Table 6 identifies the percentage of individuals from each state in our sample population who reported participating in SNAP at least once over the 12 waves of data collection.

Wyoming had the smallest percentage of SNAP users in the study population with 19 percent reporting SNAP use. In contrast, Wyoming had the largest percentage of SNAP users with 49 percent of those from the study population living in Wyoming reporting SNAP participation

Model Estimation

The two components included the nature of poverty (in relation to human capital and individual characteristics), and the weakening social structure (as evidenced by a depressed economy and a growing low-wage labor market where the chances of impoverishment are high, and a shrinking safety net) that creates a system that ensures that failure will occur for many.

This study found mixed results in examining the impact the effect of a weakened social structure as a determinant of SNAP participation. When analyzing the fixed effects of each component of the poverty as a structural failing framework, many of the results are consistent with previous research. These include the findings about gender, race/ethnicity, education, age, number of kids in the household, marital status, an individuals closeness to the poverty line, politics and the low wage labor market (Cancian, Maria & Reed, Deborah, 2001; DeNavas-Walt et al., 2011; Gruber

& Madrian, 2002; Moffitt, 2002; Rank & Hirschl, 2001; Seccombe, 2000; Winkler, 1991; Yelowitz, 1995). However some results pointed to new findings.

Human capital and individual characteristics.

The first component, human capital and individual characteristics, included the gender, race/ethnicity, education, age, number of kids in household, marital status and urban or rural residence. The majority of these variables resulted in significant findings. See table 8 for all human capital and individual characteristic fixed effects variable coefficients.

Starting with gender, being male did have a significant negative relationship to SNAP participation. An individual who identified as male was less likely (OR=.54) to participate in SNAP versus their female counterparts, holding all other variables constant. Race and ethnicity had mixed results. Being black, Asian or other compared to being white did have a positive and significant effect on SNAP participation, holding all other variables constant. In comparison to whites, if a respondent was black, they were more likely (OR=2.28) to participate in SNAP. If a respondent was Asian, they were less likely (OR=.57) to participated in SNAP than their white counterparts. If a respondent was other, they were more likely (OR=1.59) to participated in SNAP than their white counterparts. However, being Latino, had no significant effect compared to whites. In post-test analysis to examine contrasts of marginal linear predictions, examining race as a whole did have a significant effect on SNAP participation.

The education variables were consistent with previous research findings on SNAP participation (Moffitt, 2002); those with a high school diploma or less were significantly more likely to participate in SNAP compared to those with a college degree, holding all other variables constant. An individual with only an eighth grade education were 1.5 times as likely as an individual with a college degree to participation in SNAP. High school dropouts were 2.35

times as likely to have participated in SNAP in comparison to those with a college degree. High school graduates were 1.67 times as likely as a college graduate to participate in SNAP. Those with some college education had no significant effect on SNAP participation in comparison to those with a college degree. Those with a graduate or professional degree were once less likely to participate in SNAP than those with a college degree, holding all other variables constant. Those with a graduate or professional degree were .68 less likely to participate in SNAP as their college graduate counterparts.

Age had a positive significant effect on SNAP participation, holding all other variables constant. For every one additional year in average age, likelihood of participation in SNAP decreased by .018; as small as the odd ratio appears, we must remember that the minimum age of our sample was 18, which means the odds ratio would have grown to .324 at just the minimum age, making the age effect much greater than it appears. The number of children under 18 in the household did have a significant effect on SNAP participation in the modified model. For each additional child in the household under the age of 18, the likeliness of SNAP participation increased by 1.42, holding all other variables constant.

Marital status was found to have a negative significant effect on SNAP participation, holding all other variables constant. Individuals who were married at some point over the twelve waves of data collection were .49 less likely to participate in SNAP than those who were never married during this same time frame.

Urban or rural place of residence did not have significant effects in the model. Those who responded to having lived in a metropolitan area were not statistically different to those who responded to living in urban areas.

Weakened social structure.

The second component, which examines the weakened social structure included variables of most significant for this analysis. The weakened social structure, as evidenced by a depressed economy, a low wage labor market, a shrinking safety net, and politics, also showed a mix of significant results. See table 8 for all weakened social structure fixed effects variable coefficients.

Depressed economy.

Variables used to represent a depressed economy included average state unemployment and union membership rates throughout the 12 waves of data collection, as well as whether a respondent reported engaging in involuntary part-time employment and the number of times the individual reported being under 150% of the Federal poverty line.

When analyzing state unemployment rates and involuntary part-time work, the findings were not significant, however being under 150% of the Federal poverty line and union representation was significant.

Union representation was found to be significant. For every additional 1000 individuals represented by a union within a state, the likelihood of food stamp participation increased by 1.03, holding all other variables constant. Status of poverty was also significant. For every additional time a respondent reported having been under 150% of the poverty line, their likelihood of participation in SNAP increased by 1.26, holding all other variables constant.

Low wage labor market.

The low wage labor market measurement included each state's average hourly median wages and a states status as right to work. Neither average hourly median wages or status as a

right to work state had a significant effect on SNAP participation. This finding could be due to issues of multicollinearity which will be discussed in the following chapter.

Shrinking safety net.

The conceptualization of the shrinking safety net includes a state's level of maximum TANF benefit over the course of the 12 waves of data collection to examine the impact of a state's safety net generosity on SNAP participation. Additionally, as previously cited, the amount of resources allocated to social welfare programs is often found to be a function of state politics (Rank, 2004). Due to this relationship, state political variables were included in the model including the political party of the governor as well as the political party of the state legislature.

The state's maximum benefit amount for a family of 3 on TANF was not found to have a significant effect on SNAP participation. The state political variables did have mixed results. The political party of the governor had a significant effect on average SNAP participation. Living in a state with a Democratic governor, versus a Republican governor, increased the likelihood of SNAP participation by 1.53, holding all other variables constant. Additionally, living in a state with a Democratic Legislature, in comparison to a Republican Legislature were .22 less likely to participate in SNAP, holding all other variables constant. For those living in a state with a legislature that had a split political party there was no significant effect in comparison to those living in a state with a Republican led legislature.

Random effects of state differences.

When analyzing the random-effects parameters the estimates of the variance components of state differences were examined. The estimate of .038 with a 95% confidence interval ranging from .016 to .09 reflects that inclusion of the state variable has accounted for some of the variance in average SNAP participation, however it is only a small amount. This could

demonstrate that either how the model is operationalized is in need of modification, or the theory's implication that state level differences impact SNAP participation is not as evident as originally thought. These findings will be discussed in detail in the next chapter.

DISCUSSION

This research examined within and between state differences in regards to individual characteristics and structural factors, and their impact on SNAP participation during the recession. What we can conclude from the statistical analysis can be broken down into several categories worthy of further discussion. The first includes the major findings in regards to the research questions set forth at the beginning, and what we may deduce from the analysis. This will be followed by policy implications as a result of the findings, as well as future directions for this research.

Major Findings

In order to compensate for the shortcomings of both the individual approach and the empirical literature testing this approach, this study employed a conceptual framework that examined poverty as a structural failing. Because the majority of research that examines welfare participation investigates individual incentive and motivation for work, the goal of research was to examine aspects of a weakened social structure that could impact welfare participation.

The previous chapter detailed the statistical findings of this research (see Tables 8 – 9 for parameter estimates), however interpreting these statistical findings is still of great importance.

This research dealt with two major research questions:

- How does participation in SNAP change when individual characteristics and human capital variables associated with the structural vulnerability of poverty within states is examined?
- Do differences in SNAP participation change by structural factors associated with poverty across states?

This study hypothesized that reliance on SNAP wasn't the result of the individual; rather it was the economic, political and social system that limit opportunities and access to resources, especially for those lacking human capital and who are more at risk for poverty (Bradshaw, 2007; Rank, 2004).

The analysis employed allowed examination of whether Food Stamp participation would vary by states structural factors. The theory of poverty as a structural framework infers that SNAP participation will rise during times of uncertainty because there is a system in place that ensures failure will occur for many resulting in an increased poverty and a need of assistance; the vulnerability of poverty that creates this system is predicated on a weakened social structure made up of a depressed economy, low wage labor market, shrinking safety net, and political forces.

Overall, this expectation was supported and the structural factors did have an overall significant effect on Food Stamp participation. However, not all of the variables had the significant effect hypothesized, bringing some of the assumptions of the weakened social structure into question. Understanding the results of this study and how they contrasted with the theoretical framework is addressed by discussing each of the major research questions separately.

Research question 1: within state differences.

Many of the individual characteristics were consistent with previous research examining Food Stamp participation (Fraker & Moffitt, 1988; Hagstrom, 1996; Hoynes & Schanzenbach, 2012). In the level 1 analysis of the model estimation, the individual characteristics were consistent with previous research that showed that African Americans, unmarried households, households with more children are more likely to participated in SNAP. As previously stated, this helps identify who is participating in SNAP, but does little to explain why.

To explain the within state differences of why these individuals participate in SNAP, several weakened social structure variables were included. These variables included involuntary part-time employment, and how often an individual was within 150% of the Federal poverty line. Only one of these structural variables showed significant results in their effect on SNAP participation within states. Similar to previous research, this study finds that those who were consistently in danger of falling into poverty (within 150% of the Federal poverty line) and are more at risk for poverty are more likely to participate in social welfare programs like SNAP (Mykerezzi & Mills, 2010; Shaefer & Gutierrez, 2012). This could lead to the conclusion that the depressed economy resulted in individuals not being able to obtain the work they wanted, and being paid too little in that work, which increased their reliance on SNAP participation. Surprisingly, involuntary part-time employment did not have the significant effect expected. It is thought that this could be because how many times an individual reported participating in involuntary part-time employment is not an adequate measure for structural factors, and instead a state level variable on underemployment may be better suited to evaluate the weakened social structure.

Research question 2: across state differences.

To measure across state differences, level 2 variables included structural factors including unemployment rates, union representation rates, average hourly median wages, status as a right to work state, maximum benefits allotted through TANF and political parties of the Governor and state legislature.

Unemployment was not significant. The lack of significance for this variable could be due to the fact that all states experienced a heightened decrease in employment rates and little

variation existed on the state level in regards to unemployment. Because of the lack of variation, the variable may have not had the expected impact on SNAP participation. Another possibility is that unemployment is a better measure of increased poverty and not necessarily program participation in a welfare program. Again, underemployment may have been a better option in evaluating a depressed economy.

Union membership was significant, however not in the direction hypothesized. This may be indicative of those in better paying jobs this variable may have been too similar to the right to work status, since right to work states are known for having lower levels of union membership. Post test estimations found a correlation of .82 (see Appendix III for correlation matrices), signifying that these two variables are likely measuring the same thing.

Two more variables without significant findings in this study included state median wages and status as a right to work state. It was hypothesized that the higher the median wage, the lower the chance of SNAP participation and that right to work states would have a higher likelihood of SNAP participation than their counterparts. From previous research it is known that wages are lower in right to work states (Eisenbrey, 2015; Lafer & Allegretto, 2011; Shierholz & Gould, 2011). However, the right to work variable had a highly negative correlation to average hourly median wages. Posttest estimations showed a correlation of -.60, another sign of possible multicollinearity (see Appendix III). This correlation is consistent with previous research that says right to work states have lower wages than their counterparts (Shierholz & Gould, 2011). This correlation could have minimized the significance that the conceptualization of a low-wage economy really has on SNAP participation.

It can be concluded that those in states with Democratic Governors are more likely to have increased food stamp participation, and alternatively, those in states with Democratic

legislatures are less likely to have SNAP participation. This is consistent with previous research that policy programs and expenditures are shaped by political forces (Soss et al., 2001). The maximum benefit for a family of 3 was not significant in the analysis. This could point to the fact that this may not have been the best measure of a shrinking safety. It was surprising that Democratic legislatures were found to have the opposite effect of Democratic Governors, however this could be because changes in SNAP programs on the state level are not as frequent. In the period from 2008-2012 that this study examines, state legislatures saw more shifts in their political leadership as opposed to Governor seats, which stayed more constant. This could imply that a Governor is more representative of the political forces that participated in implementing SNAP programs on the state level, which were more consistent over time.

The random effect parameters for the model did show significant results, which lead us to believe that there are differences in states. However, the small parameter estimates allow us to conclude that differences in states are small (see tables 9.) This finding points to a potential flaw in the theory. The theory would lead one to believe that variations in each states structural factors would show significant effects on SNAP participation, so in states with weakened social structures there would be a heavier reliance on SNAP. Instead, the small variation in state differences implies that there is little statistical difference between each state and their SNAP participation rates.

All of these findings point to the fact that either the theory or the conceptualization of the theory may be somehow flawed. The relationship of each of the individual domains and poverty has been established through previous research (Rank, 2004; Rank et al., 2003; Seccombe, 2000). However, when examining SNAP participation (as a proxy for poverty) with all of the domains together did not produce the expected results. This leads to two possibilities, first, that SNAP

participation is not an adequate proxy for poverty. This could be because not all of those who are impoverished participate in food stamps, so the variable underestimates poverty and the effect of the structural vulnerability variables. The other possibility is that the operationalization of the structural vulnerability variables are not adequate measures for a depressed economy, a low wage labor market and a shrinking safety net. Although the selection of these variables was based on previous research, it could be that coupled together, issues arose in estimating their combined effect on SNAP participation. Additionally, because the outcome variable is a dichotomous value on the individual level where many variables are rates and averages, there could be an inconsistency when comparing the two different types of values, resulting in an underestimation of estimates.

Policy Implications

When a study focuses on a policy, such as this one, it is important to reflect on what it means for the future of the program and the impact of the program. With limited resources geared at welfare programs, SNAP is currently one of the last remaining entitlement programs that service a large population of the country. How this program allocates its resources and targets participants is worth more examination. This study, along with others, has identified who is likely to participate in food stamps, and has started to inform us about why they participate.

The increased food stamp usage of the past several years has been indicative of an economic downturn and a low-wage labor market. The recent shift in reliance on food stamps has resulted in more widespread SNAP participation than ever before. While some questions have started to be answered, it is important to continue this search and understand why people use this program. If it is not possible to understand why people use a program, how is the need for the program justified?

The information obtained from this study is important in deciding how to make the largest impact on those in need, while addressing what their concerns really are. From this study, one can conclude that the concerns for those on food stamps are low wages and involuntary part-time work, as well as state political forces.

Given these findings, policy efforts to curb poverty should be targeted at the “working poor” since they are engaged in employment, however many are limited to part-time work regardless of a desire to obtain full employment. Additionally, because low wages are a strong indicator of SNAP use, developing state policy to address minimum wages is imperative. Research has found that raising the minimum wage does not have the often argued negative effect on employment (Bernstein et al., 2015) and instead have a positive effect on low wage workers, pulling many out of poverty (Congressional Budget Office, 2014).

Another possible option would be to increase education programs for the poor or near-poor populations. Returning to school is often cost prohibitive for this population, however a lack of education has a direct link to SNAP participation. If policies and programs could be directed at increasing the education of SNAP participants, many of these individuals who find themselves using SNAP would have new skills and opportunities to find higher paying employment.

Because of the highly polarized political nature of many entitlement programs, a states political party is indicative of SNAP participation. Welfare participation is often thought of as part of the Democratic agenda, so there is no surprise that states with Democratic Governors have an increased likeliness of SNAP use, especially given that SNAP is a Federal program that's implementation goes through a states Governor. To decrease the impact of political forces, SNAP policy should change to give states less autonomy in implementing the program if they

want to continue receiving the Federal funds from this program. In a sense this could even the playing field of low-income individuals regardless of state politics.

These issues are emblematic of a weakened social system that increases the need and reliance of welfare participation. Until these issues of a weakened social system can be addressed on a grander scale, SNAP participation will continue and the need for public assistance will continue.

Future Directions

The addition of variables to measure within state differences on structural factors allows us to understand why individuals participate in SNAP. Overall, the analysis showed significant results and is a positive step in adding to the literature to understand SNAP participation. By using this framework, it can be concluded that structural factors do impact participation in Food Stamps, although not all structural issues impacted SNAP participation as expected.

Albeit there are still many unanswered questions regarding structural factors, this study has still made a significant contribution to the research and allows the poverty research community to expand their analysis to include these types of structural variables.

By applying poverty as a structural failure framework, research can begin to explore the relationship between poverty, welfare participation and labor force participation. By examining the factors that contribute to poverty and Food Stamp Participation, this research investigates the correlation between the determinants of program participation as it relates to labor force participation and poverty.

Despite the possible flaws in the conceptualization of the theory, an opportunity to examine structural issues and their impact on poverty and welfare participation exists. Whether the state union representation, individual unemployment, individual involuntary part-time

employment and welfare participation are adequate measures in the structural factors domain deserves further analysis. Instead of asking how welfare participation acts as a determinant to labor force participation, poverty research should examine what factors act as a determinant to welfare participation and allows the research to move in a new direction when examining what factors really act as a determinant to impoverishment.

TABLES

Table 1. Number of Observations by Wave

Wave	Heads of Household	Individuals	Observations	Final Sample
1	42,030	105,663	421,911	
2	38,930	98,504	392,702	
3	37,583	95,252	380,200	
4	36,147	91,219	364,285	
5	35,812	90,477	361,559	
6	34,850	88,164	352,469	
7	33,795	85,397	341,568	
8	33,379	84,400	337,766	
9	32,524	82,260	329,124	
10	31,418	79,321	317,510	
11	30,964	78,101	312,606	
12	30,671	77,287	309,419	
Totals	418,103	1,056,045	4,221,119	17,169

Table 2. Descriptive Statistics on Survey Respondents Across Waves

Variable	Mean	Standard Deviation
Age	41.95	13.05
Kids under 18	.81	1.15
Monthly Household Income	2,957.41	2,705.41

Table 3. Descriptive Statistics (Total n = 17,169)

Sample	Female	Male	White	Black	Asian	Other	Latino	Received SNAP at least once
Total	10,026	7,143	10,294	3,005	577	719	2,587	6,201
Percentage	58.40	41.60	59.96	17.50	3.36	4.19	15.07	36.45

Table 4. Descriptive Statistics: Individual Characteristics and SNAP participation

Variable	Snap Use at least once	%	No SNAP Use	%	Total
Gender					
Female	5,491	55.28%	4,442	44.72%	9,933
Male	1,759	24.84%	5,321	75.16%	7,080
Highest level of education					
8th grade or below	472	45.91%	556	5.41%	1,028
No high school degree	964	56.81%	733	43.19%	1,697
High school diploma or equivalent	2,127	43.14%	2,804	56.86%	4,931
Some college, no degree	883	32.87%	1,803	67.13%	2,686
Associate or bachelors degree	1,678	28.99%	4,110	71.01%	5,788
Masters, professional or PhD degree	76	8.62%	806	91.38%	882
Race and Citizenship					
White	3,086	30.27%	7,110	69.73%	10,196
African American	1,628	54.50%	1,359	45.50%	2,987
Asian	90	16.07%	470	83.93%	560
Mixed Race	330	46.54%	379	53.46%	709
Hispanic	1,067	41.66%	1,494	58.34%	2,561
Metro Status					
Metro	4,507	35.26%	8,274	64.74%	12,781
Rural	1,417	40.52%	2,080	59.48%	3,497
Marital Status					
Married	2,245	28.98%	5,502	71.02%	7,747
Unmarried	3,956	42.69%	5,310	57.31%	9,266

Table 5. Descriptive Statistics: Structural Factors and SNAP participation

Variable	Snap Use at least once	%	No SNAP Use	%	Total
Right to Work State	2,649	37.41%	4,432	62.59%	7,081
Non Right to Work	3,552	35.76%	6,380	64.24%	9,932
Republican Governor	2,917	33.72%	5,734	66.28%	8,651
Democratic Governor	3,284	39.27%	5,078	60.73%	8,362
Democratic Legislator	3,032	34.97%	5,639	6503.00%	8,671
Republican Legislator	1,927	37.61%	3,197	62.39%	5,124
Split Legislator	1,242	38.60%	1,976	61.40%	3,218

150% FPL	SNAP Use at least once	%	No SNAP Use	%	Total	%
1	380	6.13%	3,290	30.43%	3,670	21.57%
2	452	7.29%	1,837	16.99%	2,289	13.45%
3	495	7.98%	1,297	12%	1,792	10.53%
4	510	8.22%	927	8.57%	1,437	8.45%
5	537	8.66%	724	6.7%	1,261	7.41%
6	498	8.03%	574	5.31%	1,072	6.3%
7	505	8.14%	488	4.51%	993	5.84%
8	468	7.55%	401	3.71%	869	5.11%
9	498	8.03%	349	3.23%	847	4.98%
10	506	8.16%	291	2.69%	797	4.68%
11	564	9.1%	255	2.36%	819	4.81%
12	788	12.71%	379	3.51%	1,167	6.86%
Total	6,201		10,812		17,013	100%

Table 6. Descriptive Statistics: State Residency and SNAP participation

State	Snap Use at least once	%	No SNAP Use	%	Total
Alabama	115	40.64%	168	59.36%	283
Alaska	24	55.81%	19	44.19%	43
Arizona	180	36.51%	313	63.49%	493
Arkansas	82	41.84%	114	58.16%	196
California	433	25.76%	1,248	74.24%	1,681
Colorado	63	25.20%	187	74.80%	250
Connecticut	53	41.41%	75	58.59%	128
Delaware	15	36.59%	26	63.41%	41
Washington, DC	22	52.38%	20	47.62%	42
Florida	287	31.37%	628	68.63%	915
Georgia	214	36.77%	368	63.23%	582
Hawaii	16	35.56%	29	64.44%	45
Idaho	38	38.00%	62	62.00%	100
Illinois	207	37.70%	342	62.30%	549
Indiana	212	36.05%	376	63.95%	588
Iowa	60	40.00%	90	60.00%	150
Kansas	41	30.83%	92	69.17%	133
Kentucky	97	41.99%	134	58.01%	231
Louisiana	119	44.07%	151	55.93%	270
Maine	48	48.48%	51	51.52%	99
Maryland	100	30.21%	231	69.79%	331
Massachusetts	173	38.62%	275	61.38%	448
Michigan	208	42.54%	281	57.46%	489
Minnesota	67	29.65%	159	70.35%	226
Mississippi	108	48.00%	117	52.00%	225
Missouri	179	37.61%	297	62.39%	476

Table 6. Continued Descriptive Statistics on State Residency and SNAP participation

State	Snap Use at least once	%	No SNAP Use	%	Total
Missouri	179	37.61%	297	62.39%	476
Montana	21	42.86%	28	57.14%	49
Nebraska	21	29.58%	50	70.42%	71
Nevada	44	30.99%	98	69.01%	142
New Hampshire	16	30.19%	37	69.81%	53
New Jersey	129	25.15%	384	74.85%	513
New Mexico	51	35.66%	92	64.34%	143
New York	333	39.36%	513	60.64%	846
North Carolina	178	35.53%	323	64.47%	501
North Dakota	12	37.50%	20	62.50%	32
Ohio	260	43.05%	344	56.95%	604
Oklahoma	91	42.72%	122	57.28%	213
Oregon	103	48.82%	108	51.18%	211
Pennsylvania	225	41.06%	323	58.94%	548
Rhode Island	23	44.23%	29	55.77%	52
South Carolina	113	41.39%	160	58.61%	273
South Dakota	15	48.39%	16	51.61%	31
Tennessee	246	47.67%	270	52.33%	516
Texas	472	38.82%	744	61.18%	1,216
Utah	33	29.46%	79	70.54%	112
Vermont	15	42.86%	20	57.14%	35
Virginia	174	29.24%	421	70.76%	595
Washington	223	38.45%	357	61.55%	580
West Virginia	49	41.88%	68	58.12%	117
Wisconsin	187	36.38%	327	63.62%	514
Wyoming	6	18.75%	26	81.25%	32

Table 7. Variable List and Values

Variable	Measurement
Gender	Male/Female
Age	Years (18-64)
Education	8th Grade or below, Less than HS diploma, HS diploma, Some college, College or associates degree, Graduate or professional degree
Race/Ethnicity	White, African American, Asian, Latino, Other
Household Structure	Number of people in household
Metropolitan Status	Urban/Rural
Unemployment Rate	Percentage
Union Membership Rate	Percentage
Involuntary PT Work	Number of times engaged (0-12)
150% Federally Poverty Line	Number of times below 150% (0-12)
Median Hourly Wages	Dollar amount
Right to Work Status	Yes/No
TANF State Generosity	Dollar amount
Political Party of Governor	Republican/Democrat
Political Party of State Legislature	Republican/Democrat/Split

Table 8 Model Estimation : Weakened Social Structure

Fixed Effects	Model	Standard Error	Confidence Interval
Gender (Male)	0.459*	0.018	(0.426,0.495)
Age	0.982*	0.002	(0.978,0.986)
Marital status	0.511*	0.025	(0.464,0.563)
#children under 18	1.419*	0.04	(1.343,1.499)
Metro status	0.923	0.058	(0.817,1.043)
Race			
Black	2.281*	0.132	(2.036,2.556)
Asian	0.57*	0.099	(0.405,0.802)
Other	1.589*	0.144	(1.33,1.897)
Latino	1.023	0.107	(0.833,1.255)
Highest level of education			
Eighth grade	1.534*	0.194	(1.196,1.966)
No high school	2.349*	0.135	(2.099,2.63)
HS diploma	1.668*	0.082	(1.514,1.837)
Some college	1.004	0.056	(0.899,1.121)
Masters, professional, PhD	0.32*	0.05	(0.236,0.433)
Unemployment Rate	0.97	0.019	(0.932,1.009)
Union Representation	1.034*	0.014	(1.006,1.061)
Involuntary PT Work	1.009	0.01	(0.989,1.03)
150% FPL	1.259*	0.01	(1.239,1.279)
Median Hourly Wages	0.994	0.031	(0.935,1.058)
Status as Right to Work	1.123	0.154	(0.859,1.468)
Politics			
Democratic Governor	1.525*	0.121	(1.306,1.781)
Democratic Legislature	0.787*	0.084	(0.639,0.969)
Mixed Legislature	0.875	0.112	(0.681,1.124)
TANF Maximum Benefit	0.999	0	(0.998,1)

* Significant at the .05 level

Table 9. Model 1: Random Effects Parameter Estimates

Random Effects	Model	Standard Error	Confidence Interval
State: Identity			
Intercept	0.038	0.017	(0.016,0.09)

APPENDIX I

Poverty

The early 1900's saw a Progressive Era with a period of social activism and political reform. This time period saw an America shifting from an agrarian to an urban society. While many saw the Progressives as a threat to the old ways of doing things in America, many saw new brand of leadership navigating through a "new" America and its changing landscape with an influx of new immigrants. The Progressives were middle-class elites who felt a sense of responsibility to advocate for the poor. When US Progressives tried to bring their ideals abroad and entered World War I their popularity shrunk. The nation was tired of war and lacked the devotion to the moral crusade of the Progressives. While this Progressive Era was halted before achieving its goals, it would be the foundation for the New Deal and a response to the Great Depression (PBS).

The 1920's were a time of widespread economic growth in the United States. Led by supply side policies, the economy had successfully transitioned from a wartime economy to a booming peacetime economy. Several industries remained stagnant, in particular farming and mining; however the constantly increasing consumerism, mass production, new technologies and infrastructure led the United States to become one of the richest countries in the world. This period of sustained prosperity continued until what became known as Black Tuesday, the Stock Market Crash of 1929. On Tuesday, October 20, 1929 the most devastating stock market crash in

the history of the United States began and signaled the beginning of a 10 year Great Depression (*Stock market crash of 1929*, 2013).

There are multiple causes of the stock market crash of 1929, including a rapid growth in bank credit and loans, buying stocks on the margin, speculation and false expectations of profits from the stock market, a great mismatch between production and consumption, a struggling agricultural sector that meant small farmers couldn't compete in the new economy with advanced technology, and a weakening banking system that saw banks that ran on deposits go bankrupt.

The Great Depression had devastating effects both in the United States and abroad. Within the U.S. personal income, tax revenue, and profits and prices dropped. By 1933, unemployment reached a peak of 25% and government programs were suddenly being promoted as an answer to the country's problems. These programs came to be known as the New deal and included the "3 Rs": Relief, Recovery, and Reform. That is Relief for the unemployed and poor; Recovery of the economy to normal levels; and Reform of the financial system to prevent a repeat depression. One program started under the New Deal was the Food Stamp Program (US Department of Agriculture, 2013). The first Food Stamp Program ended in the spring of 1943 when many of the conditions that brought the program into being (widespread poverty and unemployment) no longer existed. With the onset of World War II, the US reached full employment through massive war spending (Jensen, 1989). This led to a decrease in reliance on welfare programs created through the New Deal. Between 1940 and 1945, unemployment dropped to 2 percent (Bureau of Labor Statistics, 2013).

Despite continued prosperity of the times, by 1960 nearly one-quarter of all American families were living below the poverty line. Moreover, the good-paying, unskilled jobs of the

wartime manufacturing were disappearing, and those without education and skills were being left behind as technological advances in industry were also changing job requirements for American workers (PBS, 2001).

This gave rise to then President Lyndon Johnson declaring a “War on Poverty” in his 1964 State of the Union address and led to the Great Society, a set of domestic programs aimed at eliminating poverty and racial injustice. Included in the Great Society was the return of a permanent Food Stamp Program (see detailed history of the Food Stamp Program/Supplemental Nutrition Assistance Program below). In addition to the Food Stamp Program, the Great Society included the passage of other welfare programs targeted at eliminating poverty such as, Medicare, Medicaid, Community Action Programs, Job Corps, Head Start, and more (Cuciti, 1986).

In the decade following the introduction to the War on Poverty, poverty rates in the US dropped to its lowest level since records began resulting in a recorded poverty rate of 11.1 percent by 1973. Since then, they have remained between 11 and 16 percent (Wimer et al., 2013). The increase to 16 percent in 2012 can be attributed to another economic recession.

The United States began experiencing a recession, commonly known as the Great Recession, in December 2007. Making a sharp decline in 2008, the Great Recession led to record numbers of people in poverty within the U.S. According to a report by the Census Bureau, the poverty rate in the United States climbed to 15.1 percent in 2010 from 14.3 percent in 2009 (DeNavas-Walt et al., 2011). A depressed economy coupled with high rates of unemployment (8.5%) and underemployment (15.2%) has only increased the struggle for low-income families; many have lost wages and benefits that were crucial to their families well being (Bureau of Labor Statistics, 2012). From 2010 to 2012, the poverty rate has held steady at around 15 percent with 46.5 million people still living in poverty (DeNavas-Walt et al., 2011).

Inequality

Examining inequality helps identify the context of the poor and the political issues associated with addressing the poverty problem. Inequality in America has reached an all time high. Since the 1970s, growth in inequality has outpaced all other industrialized nations making it the country with the worst income inequality in the developed world (Alvaredo et al., 2013). Over that same period of time, in the United States, the income amongst those at that top has increased exponentially in comparison to those in other income groups. The top 1 percent of income earners in the US has roughly doubled its share of total American income from 9 percent in 1976 to nearly 20 percent in 2011. Even those close by this income group haven't seen their share of income rise as significantly, those in the 95 to 99 percentile saw a total increase of 3 percent in share of American income (Alvaredo et al., 2013). Identifying the state of inequality and the growing number of low-income individuals helps us recognize the importance of addressing the needs of low-income individuals and households.

Additionally, because of the growth in inequality, many view poverty as a social pandemic. Poverty is no longer a problem faced by only a minority of communities; instead poverty occurs throughout cities, suburbs, and rural communities and limits the opportunities of upward mobility.

While wealth accumulation continues for those at the top, everyone else has seen stagnating and depleting incomes (Stiglitz, 2012). From 2007 to 2010, after the recession hit, median wealth (the wealth of those in the middle income group) fell by almost 40 percent (Ackerman et al., 2012). For those in the bottom income group, their average wealth decreased at an even greater rate falling six-fold. Prior to the Great Recession their average wealth equaled negative \$2,300, after the crisis it had fallen to a negative \$12,800 (Ackerman et al., 2012).

Measuring Poverty

Poverty can be measured in several different ways. The most common measures include either an absolute measure or a relative measure. In the United States, the definition of poverty is considered an absolute measure since it uses an absolute dollar amount to determine whether or not someone is considered in poverty. An absolute measure of poverty is based on the notion that people who fall below a measurable subsistence level should be economically disadvantaged or impoverished. This needs standard remains constant over time. Alternatively, most other industrialized nations use a relative measure of poverty. By measuring poverty this way, poverty is viewed as socially defined and dependent on social context of that particular society. The underlying assumption of a relative measure of poverty is that people are social beings, and their ability to survive and fully participate in society is based on their ability to operate within relationships and social organizations. What is needed to operate is dependent on societal standards as a whole and can vary over time and place (Iceland, 2006).

In the United States, the absolute measure of poverty is defined in terms of both individual and family income (Burtless & Smeeding, 2001; Haveman, 2009). It is considered absolute since it is adjusted each year only for changes in prices, not changes in living standards. This includes a comparison of a household's economic resources with their needs, as well as the household unit's size and composition. When the resources fall short of needs, a household (either the individual or family) is considered poor or in poverty (Haveman, 2009). For the purposes of this study, poverty will be defined as the official US Census Bureau measure that was adopted in the late 1960's.

The Census Bureau definition counts an individual as poor if his/her current money income falls below the official poverty line. Originally developed in 1964, the threshold used as

the official poverty line includes all pre-tax income for all individuals related by blood or marriage in a household. The income threshold is based on the Department of Agriculture's Economy Food Plan, which calculated an amount needed to purchase foods deemed necessary to meet nutritional needs. This amount is then multiplied by a factor of three since research showed that low-income families spent an average of one-third of their income on food. The poverty threshold is further differentiated by family composition (including number of children, sex of the head of household, age of family members) and farm or nonfarm status (Fisher, 1992). In 2012, the poverty threshold for a family of four with two children under the age of 18 was \$23,283. Many scholars identify many problems with this absolute measure of poverty in regards to family composition, cash income, taxes, work related expenses, and/or cost of living differences (Blank, 1997; Haveman, 1993).

Because of these problems, many other industrialized countries use a relative measure of poverty. The European Union employs a relative poverty measure equal to 60 percent of the median income. If this relative measure of poverty were employed in the United States, the poverty rate would surely rise since US median household income has risen at a much greater rate than inflation and the current absolute measure of poverty employed has only been increased to reflect changes in inflation, not income growth throughout the United States.

Regardless of using an absolute or relative measure of poverty, it is important to think about poverty in a complex way. This includes considering the context and social stratification. This issue of poverty is not simply a question of economics, rather it is a moral and political issue in which definitions, results, and solutions are influenced and developed by a moral subtext.

APPENDIX II

History of SNAP

The first food stamp program can be traced back to 1939 under President Roosevelt as part of the New Deal. Then Secretary of Agriculture Henry Wallace and the program's first Administrator Milo Perkins operated the program. Families on relief purchased "orange stamps equal to their normal food expenditures; for every \$1 worth of orange stamps purchased, 50 cents worth of blue stamps were received. Orange stamps could be used to buy any food; blue stamps could only be used to buy food determined by the Department to be surplus." From 1939-1943 over 20 million people participated in this program at one time or another (US Department of Agriculture, 2013). Peak participation reached 4 million people, however the program ended since the widespread unemployment and unmarketable food surpluses that inspired the creation of the program no longer existed. Additionally, with World War II underway, agriculture products were being used to feed Allied soldiers and a European market (Moran, 2011).

While it appeared to most of the public that the Food Stamp program was providing relief for the unemployed and poor, it was also popular for helping revive the agricultural economy. Prior to 1939, various programs had been proposed to help the needy in food assistance, however there was widespread discontent among those in the business community who would see no benefit in these programs. Instead, the Food Stamp Program of 1939 was designed with the interests of the agricultural community, grocers, wholesalers and the needy. This program allowed wholesalers to buy goods from the agricultural community, and then sell them to grocers that would subsequently sell them to consumers. By turning those who participated in the program into consumers, they gave the needy a certain amount of purchasing power that the business community would benefit from (Moran, 2011). Because of the connection to the

agricultural economy, the Food Stamp program was placed within the Department of Agriculture and continues to be authorized under Congressional Farm Bills.

18 years passed before the next food stamp program was established. In September of 1959, P. L. 86-341 authorized the operation of a new food stamp program through January 1962. The program was not implemented until February 1961 when newly elected President Kennedy called for expanded food distribution through food stamp pilot programs in his first Executive Order. The new program would still require food stamps to be purchased, but no longer would the concept of special stamps for surplus food exist. The new program would focus on the increased consumption of perishables. Isabelle Kelley, who was part of the four-person team that designed the new program, became its first director and the first woman in USDA to head an action program. By January 1964, the program expanded to 22 states with 380,000 participants (US Department of Agriculture, 2013).

From 1965 until the early 1970's increases in participation led to program expansion. Most of this increased participation was attributed primarily to geographic expansion. Major milestones are detailed in Table A2-1. The program began operating nationwide in July of 1974 with participation at almost 14 million (US Department of Agriculture, 2013).

Table A2-1: Food Stamp Program Participation Milestones

Date	Program Participation*
April 1965	Over 500,000
March 1966	Over 1 Million
October 1967	Over 2 Million
February 1969	Over 3 Million
February 1970	Over 4 Million
May 1970	Over 6 Million
February 1971	Over 10 Million
October 1974	Over 15 Million
December 1979	Over 20 Million
March 1994	Over 28 Million
August 2008	29 Million
July 2012	Nearly 49 Million

*Participation is measured by number of people receiving food stamp benefits

Many changes took place in the FSP through major legislation dating back to the Food Stamp Act of 1977 through the Farm Bill of 2008 to give us the present day Supplemental Nutrition Assistance Program (SNAP). Legislative changes in 1981 and 1982 cut food stamp spending by nearly 13 percent under normal spending levels. In 1985, 1986, and 1987 further changes, combined with the recession of the early 1990's led to sharp increases in spending (Scholz & Levine, 2001).

The new law expanded eligibility, acknowledged EBT cards as the standard for benefits and de-obligated the use of coupons. Expansion of the program eligibility guidelines increased the number of people eligible for the program. By using EBT cards, participation was increased by most likely decreasing the stigma associated with the program. The goal was to increase access and use of the program to those who qualified. These programmatic changes and the expansion to eligibility led to new program participation milestones through the early 1990's (US Department of Agriculture, 2013). From the late 1990's, with a thriving economy, low unemployment and changes to the welfare system, Food Stamp participation decreased.

Participation in the Food Stamp program sharply increased from over 17 million in 2000 to nearly 26 million in 2005 (Rosenbaum, 2006). These increases can largely be attributed to the increase in the poverty rate, modest changes to expand legal immigrants eligibility, an increase in the take-up rate by eligible households, as well as the use of food stamps as Federal disaster aid in response to Hurricane Katrina, Rita and other natural disasters (Rosenbaum, 2006). In August 2008, participation in the program reached a new high of 29 million people, however this too was quickly surpassed, and can be attributed to the recent economic recession, high unemployment and underemployment, and an increase in poverty rates. Even as the end of the financial crisis ended in 2009, program participation continued to expand by 70% since 2008. Additionally, the Welfare reform of 1996 included laws to allow states to ease asset and income tests for would be participants which has increased the eligible participant pool in recent years (Paletta & Porter, 2013).

Regardless of today's record high participation rates, the SNAP program has come under scrutiny with many proposing major cuts to the program (Dean & Rosenbaum, 2013). Currently in Congress, the most recent Farm Bill was just passed that will cut the SNAP program by \$8

billion over the next decade. President Obama is expected to sign the bill into law, which is expected to harm about 1.7 million people with an average cut of about \$90 per month in benefits (Nixon, 2014).

APPENDIX III

Correlation Matrix 1: Human Capital/Individual Characteristics Domain Variables

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	SNAP use	1															
2	Male	-0.205	1														
3	Age	-0.128	0.016	1													
4	Marital status	-0.142	0.085	0.021	1												
5	Own kids under 18	0.217	-0.118	-0.319	0.278	1											
6	Metro	-0.049	0.01	-0.021	-0.05	-0.014	1										
7	White	-0.156	0.052	0.081	0.038	-0.141	-0.151	1									
8	Black	0.177	-0.1	0.007	-0.178	0.003	0.101	-0.568	1								
9	Asian	-0.078	0.053	-0.01	0.062	-0.009	0.07	-0.223	-0.086	1							
10	Other	0.038	-0.002	-0.013	-0.012	-0.006	-0.027	-0.249	-0.097	-0.038	1						
11	Latino	0.043	0.011	-0.106	0.115	0.198	0.078	-0.512	-0.198	-0.078	-0.087	1					
12	Eighth grade	0.045	0.026	0.059	0.072	0.087	-0.021	-0.159	-0.069	-0.006	-0.02	0.306	1				
13	No high school	0.146	-0.024	-0.035	-0.028	0.048	-0.029	-0.092	0.038	-0.029	0.02	0.089	-0.085	1			
14	HS diploma	0.087	0.032	-0.015	0.001	0.011	-0.065	-0.01	0.025	-0.036	0.006	0.002	-0.162	-0.213	1		
15	Some college	-0.031	-0.029	-0.122	-0.035	-0.01	0.013	0.052	0.005	-0.021	0.006	-0.07	-0.111	-0.145	-0.278	1	
16	Grad school	-0.136	0.029	0.068	0.024	-0.045	0.06	0.057	-0.048	0.105	-0.017	-0.069	-0.058	-0.077	-0.147	-0.1	1

Correlation Matrix 2: Weakened Social Structure Domain Variables

	Variable	1	2	3	4	5	6	7	8	9	10	11
1	SNAP use	1										
2	Mean Unemployment	-0.025	1									
3	Average union	-0.017	0.222	1								
4	Involuntary PT work	0.046	0.03	0.017	1							
5	Under 150% FPL	0.411	0.022	-0.059	0.149	1						
6	Average hourly median wage	-0.051	0.093	0.692	0	-0.094	1					
7	Right-to-work	0.018	-0.181	-0.816	-0.014	0.064	-0.604	1				
8	TANF Maximum	-0.045	0.137	0.851	0.02	-0.078	0.761	-0.71	1			
9	Democrat governor	0.061	-0.179	0.305	-0.01	-0.024	0.109	-0.414	0.202	1		
10	Democrat legislature	-0.03	0.108	0.543	0.025	-0.031	0.523	-0.442	0.586	0.188	1	
11	Split legislature	0.021	-0.065	0.024	-0.019	-0.009	-0.096	-0.203	-0.11	0.101	-0.492	1

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