AN ABSTRACT OF THE THESIS OF

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Abstract Approved:

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This thesis examines food insecurity in Oregon among food bank users over the course of The Great Recession. Analyzing data from the Oregon Food Bank, this thesis tells the story of the change that the recession brought upon low-income families. In examining the regional differences in food insecurity, the local structure of important governmental programs is highlighted revealing potential needs for improvement. The analysis (a) describes changes in the composition of Oregon Food Bank clients during The Great Recession and (b) examines how enrollment in the Supplemental Nutrition Assistance Program changed among food bank clients. The statistical analysis compares data from 2006, 2010, and 2012 to examine the course of the recession and to highlight change. The results show that while SNAP enrollment only increased 6.5 percent among food bank users, every region increased in enrollment over time except three regions. Eastern Oregon, The Coast, and the North Valley saw a decrease in enrollment from 2006 to 2010. Food insecurity was found to increase 13.3 percent during the recession. Further research is needed to understand why three regions in Oregon decreased in SNAP enrollment while food insecurity increased steadily.

Key Words: Food Insecurity, The Great Recession, SNAP, Food Banks

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Food Insecurity Among Oregon Food Bank

Clients over the Course of the Great Recession

by

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I understand that my project will become part of the permanent collection of Oregon State University, University Honors College. My signature below authorizes release of my project to any reader upon request.

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FOOD INSECURITY AMONG OREGON FOOD BANK CLIENTS OVER THE COURSE OF THE GREAT RECESSION

INTRODUCTION

Before the most recent recession, the Great Depression was the ultimate expression of the devastating effects of economic instability on the American populace. The Great Recession, from 2007 to 2009, was the “longest period of economic decline since the Great Depression of the 1930s” (Kumcu and Kaufman 2011:11). When this time period is reflected back on, the newsreels will show footage of empty houses, Wall Street business people looking chagrined, and rapidly dropping numbers at the New York Stock Exchange. What it will not show, unless some reporter wants a different angle, is hunger.

With unemployment levels extremely high, many families struggled to make ends meet, and many experienced food insecurity or "the lack of consistent access to healthy affordable food" (Bruening, et al. 2012). In fact, during the recession the greatest numbers of U.S. households recorded since federal monitoring began in 1995 were food insecure (Andrews 2010). Throughout this period, Americans of all incomes changed their dietary habits by eating out less to decrease expenditure (Kumcu and Kaufman 2011). Lower income households were additionally further impaired from being able to consume adequately nutritious diets (Carney 2012). The Great Recession changed the fabric of American life with its effects still felt today, and for the foreseeable future.

With the advent of the recession came the development of the newly poor. The recession “disproportionally affected families with no prior history of poverty and two-parent households that are normally immune from poverty” (Porter 2010:1). The newly poor became a unique subset of Americans experiencing poverty. It is critical to
recognize the impact of this group in conjunction with the federal program SNAP, or the Supplemental Nutrition Assistance Program, formerly known as the food stamp program. In 2009, 82,000 recipients of benefits from SNAP in Oregon were new beneficiaries with no prior history with the program (Porter 2010). During the recession, these new recipients nearly totaled the same amount as all Oregon SNAP recipients in the year 2005 (Porter 2010).

Part of what remains unique about the Great Recession is that not only did the poor become poorer, but households that were usually food secure suddenly were not. While there are numerous methods that families use to pay for food, most low-income households utilize both SNAP and the food pantries in their area. In the state of Oregon, food pantries are directed by the Oregon Food Bank (OFB). The Oregon Food Bank Network is comprised of 20 regional food banks and more than 900 partner agencies that combine food banks, food pantries, soup kitchens, shelters, and other programs to help low-income families; they also work to help eliminate hunger with education and advocacy (OFB 2012). The Oregon Food Bank’s mission statement is “To eliminate hunger and its root causes…because no one should be hungry” (OFB 2014).

As part of their education and advocacy, the Oregon Food Bank completes the Hunger Factors Assessment survey every two years to analyze a multitude of factors surrounding food insecurity in Oregon. This survey will be used in this thesis, especially in examining SNAP. As SNAP serves nearly 1 in 7 Americans, it is important to examine the food bank users that receive benefits from the program (Bean and Mattingly 2011). As SNAP enrollment increased by 25 percent during the recession, this time period is
critical to analyze in context with other variables in the survey data (Nord and Prell 2011).

The data from the Hunger Factors Assessment provides a unique look at hunger in Oregon over the period of The Great Recession. This thesis will analyze these historical data to (a) describe changes in the composition of Oregon Food Bank clients during The Great Recession and (b) examine how enrollment in the Supplemental Nutrition Assistance Program (SNAP) changed among food bank clients during that time. This analysis will not only provide a historical picture of Oregon’s experience of the Great Recession, but its response to helping needy families.
LITERATURE REVIEW

Food Insecurity

One of the most important impacts of the Great Recession was the material hardship it caused for so many families. Many households struggled to retain food security defined as the access to sufficient food for a healthy life (Andrews and Nord 2009a). Food security particularly affects children, as the food security of their household is directly linked to their nutrition (Oberg 2011). “Very low food security” occurs when the food intake of household members is reduced, and normal eating patterns are disrupted because the household lacks appropriate resources (Nord and Coleman-Jensen 2010). The prevalence of very low food security in the United States increased 116 percent between 1998 and 2008, from 3.1 to 6.7 million households with half of the increase in the 2007-2008 time period (Andrews and Nord 2009a). The recession led to the greatest level of households classified as food insecure since the beginning of federal monitoring of food insecurity in 1995 (Andrews and Nord 2009a). Approximately 14.7 percent of American households were food insecure at the end of the recession in 2009 (Andrews 2010b). Food insecurity rates unsurprisingly run parallel to the national poverty rate (Nord and Prell 2007).

Times of economic hardship are major factors in a family's food security, but it is critical to note that more factors than a harsh economy affect whether a family is food secure:

Food-insecurity rates differ across states due both to the characteristics of their populations and to State-level economic conditions. Households with low incomes, low education levels of adult members, single-parent household heads, adults with a disability, or adults who are unemployed are more likely to be food insecure. Similarly, states with larger shares of households with these characteristics are likely to have higher prevalence rates of food insecurity. State-level economic conditions such as average
wage, cost of rental housing, unemployment rate, residential instability, high tax burden on low-income households, and participation in food and nutrition assistance programs can also affect the prevalence of food insecurity in the state. (Coleman-Jensen 2013)

Food security is not just an issue during recessions; the economic consequences are far-reaching and long lasting. Even at three years after the recession, the U.S. food insecurity rate was high, estimated at 16 percent for adults and 25 percent for children (Bruening, et al. 2012). This could partially be explained by the lasting consequences of the economic fall and rising food prices. From 2009 to 2011 Oregon’s food insecurity rate was 13.6 percent of households (OFB 2012). The rate of very low food security from 2009 to 2011 was 5.9 percent, down from the 2008 to 2010 rate of 6.1 percent (OFB 2012).

**Food Spending and Prices**

The economic damage of the recession to many households is even more debilitating when coupled with the increase in food prices and consequently the food consumption practices of many Americans changed. Sometimes the change was as simple as eating out less, but the way Americans shopped in grocery stores inherently altered. Food spending is often one of the more flexible items in a household’s budget and is often decreased when faced with high unemployment levels, decreasing wages, and increasing costs of housing and fuel, leading to increasing food insecurity (Carney 2012). Away-from-home spending from 2006 to 2009 was reduced by 20 billion dollars (Kumcu and Kaufman 2011). While the economic recession was the result of a multitude of factors, the situation was worsened by the increased acceleration in food prices after numerous years of low inflation (Wilde 2013). Price therefore, was the “primary factor in food purchase decisions” rather than nutritional value or other factors (Miller and Branscum
2012:104). Regardless of the economy, lower income households suffer disproportionately as they spend a larger proportion of their wages on food than households with higher incomes (Miller and Branscrum 2012).

Nutrition

Not only was food more expensive during the recession, but purchasing nutritious foods, which are often even higher priced, was an impossibility for many lower income families. As a result, sufficient nutrition is a prevalent problem among food insecure populations. With fewer resources for food purchasing, households often resorted to less healthy options. Food insecurity leads to "harmful health consequences due to undernutrition or overnutrition with unhealthy foods, leading to overweight and obesity" (De Marco and Thorburn 2008b:2104). This is a consequence of binge eating, less access to fruits and vegetables, and poorer quality of food being served in food insecure households (Bruening, et al. 2012). Food bank users in particular have a higher incidence of diet-related chronic diseases such as diabetes, high blood pressure, and obesity (Martin, et al. 2013). While adequate nutrition is important at all ages, it is particularly important in childhood:

Further, children in food-insecure households are often sent to school hungry, which is associated with poor concentration. Poor concentration in school has been linked to cognitive, behavioural, and physiological delays that, in already disadvantaged children, contribute to the cycle of poverty. (De Marco and Thorburn 2008b:2104)

To rectify this reality, SNAP spends $375 million on nutrition education programs and their efforts have led to a reduction of at least 5.3 percent in childhood obesity (Zedlewski, Waxman, and Gundersen 2012). A financial recession not only affects a family's ability to survive on a daily basis, but also their health in the long term, because
it cannot be adequately sustained on an unbalanced diet.

Households with Children

In his study "The Great Recession’s Impact on Children," Oberg (2011) found that in the first decade of the twenty-first century the child poverty rate increased by a rate of 33.4 percent. In accordance with this, in 2008, 21 percent of households with children were food insecure, the highest rate that has been recorded since 1995 when monitoring began (Oberg 2011). Parents have reported going without food themselves to adequately feed their children an acceptable diet (Miller and Branscrum 2012). Those households that experience “very low food security” have reported that one or more of their children have gone hungry, missed a meal, or even not eaten for an entire day due to the cost of food (Oberg 2011). Household composition is important; in particular single mothers are the most food insecure population (Bernell, Weber, and Edwards 2006). Women are adversely affected for multiple reasons, but one study cites that there are “disproportionate costs of the global-industrial system for women, particularly how women as consumers are increasingly vulnerable to fluctuations in food prices” as they are often the head of single-parent households (Carney 2012:186). Self-evidently, food insecurity is more likely in families with children than without (Bruening, et al. 2012). The change in composition of low-income households during the recession is important to study, including how economic and housing factors affected the population. Critical to understanding this shift is recognizing the emergence of the newly poor, which often took the form of two-parent households with children.
**Housing and Relocation**

One variable that is often overlooked while examining food insecurity is a family's housing situation. Some policy makers have promoted more affordable housing and even lowering land prices to address the fact that as much as 50 percent of people's incomes pay their rent; Oregon in particular has a high share of renters (Tapogna, et al. 2004). In states characterized by high rent and relocation “for example, a highly developed network of food banks may prove more important (in Oregon) than in states in other regions with more stable populations” (Tapogna, et al. 2004:20). Highly mobile states are vital areas to examine in regard to how to improve housing situations as they already have vulnerable populations such as newcomers, seasonal workers, or displaced renters (Tapogna, et al. 2004). It is just not the cost of housing that adversely affects households, but also moving to other locations: moving decreases resources available to purchase food, and reduces community ties increasing chance of food insecurity (Bernell, Weber, and Edwards 2006). Therefore, regional data can reveal important factors regarding the reality of renting or moving in different locations affecting food insecurity.

**Community and Social Supports**

While characteristics such as high rent affect a household's ability to provide food for their family, where they live and the local community can prove to be more important than the monetary factor. In a study of food insecurity in Oregon, Bernell, Weber, and Edwards' (2006) found that while “cross-county variations in average wages and
unemployment do not significantly affect household food security," households in rural communities are more food secure; rural households "may have more extensive social networks, which include both familial and nonfamilial members, than their urban counterparts" (207). The food security of local communities are a product of their outreach and publicity, especially in regards to SNAP as certain methods such as “less frequent recertification requirements, more application sites, extended hours at application sites, greater outreach efforts, and fewer vehicle restrictions and job search requirements” are vital to the enrollment process on the local level (Bartfield and Dunifon 2006b: 939). For this reason, it is helpful to examine regional data as both a product of these influences and as a starting point for system improvements.

Not only do local organizations have a significant effect on enrollment in federal aid programs, but the complex interworkings of local communities often aid the food insecure. Therefore, food insecurity is affected by the community that a household resides in, and rural communities are characterized by “a greater sense of social connectedness or more effective social policies” (Bernell, Weber, and Edwards 2006:194). If all other factors remain consistent, a move from an urban to rural environment will produce a five percent reduction in probability of food insecurity (Bernell, Weber, and Edwards 2006). It can therefore be determined that some element (perhaps social and community support) in rural communities is important to lowering food insecurity (Bernell, Weber, and Edwards 2006). There is some disagreement among studies whether social support is an important condition to supporting food security: DeMarco and Thorburn (2008b) found no association between social support and food
insecurity. However, Bartfield and Wang’s (2006a) study of Wisconsin cautions against absolutes and warns that while social capital in rural areas likely plays a role in reducing food insecurity, other factors may be involved and further research is necessary (21). As Bernell, Weber, and Edwards’ study suggests, a move to a rural area is significant in reducing food insecurity and is perhaps explainable by social capital. Intriguingly each of the separate studies agreed that the variable of social capital is hard to define. Without a concrete definition of social capital, the effects of this particular variable are difficult to capture. Just as local outreach is intrinsically effective, during times of economic hardship in particular, social welfare programs become increasingly important in aiding families in need, regardless of their (rural or non-rural) location.

*Government Assistance Programs*

The Supplemental Nutrition Assistance Program is the most extensive of the USDA’s food and nutrition assistance programs and is the foundation of the nation’s fight against reducing food insecurity and hunger (Nord 2011). Monthly benefits used for food purchases are distributed based on a household’s income, assets, and certain basic expenses (Nord and Prell 2011). SNAP is a vital part of the United States welfare system, as it is a large part of the federal safety net. It is the most costly of all of the USDA’s programs (Wilde 2013). SNAP is characterized as “an antipoverty program, a work support, a promoter of health and nutrition, and an automatic stabilizer in recessions—filling in the gaps that other safety net programs leave behind” (Zedlewski, Waxman, and Gundersen 2012:1). SNAP was particularly important during The Great Recession in
alleviating some of the monetary strain of low-income families; in fact, enrollment increased by 25 percent during the time period (Nord and Prell 2011). SNAP supports nearly one in seven Americans, or approximately 40 million people monthly, 49 percent of which are children; accordingly, this encompasses a substantial fraction of U.S. food demand (Bean and Mattingly 2011; Wilde 2013; Andrews and Smallwood 2011).

During the recession, a time of weak economic growth and high unemployment, many Americans who had not previously qualified became eligible for SNAP (Andrews and Smallwood 2012). Near the end of the recession in May 2009, nearly 11 percent of the United States population received SNAP benefits (Andrews and Nord 2009a). These statistics are surprising however, when considering the fact that in 2009, 58.4 percent of households living below the poverty line did not receive SNAP benefits (Bean and Mattingly 2011). It is difficult to reconcile why households whom are eligible for SNAP, especially during the recession, do not participate in the program. This thesis seeks to understand this quandary more thoroughly. There are numerous qualifiers to receiving benefits:

The…program, for instance, has nationwide income and asset criteria, but states and localities differ in other criteria, such as vehicle restrictions, frequency with which eligibility recertification is required, number and location and hours of application sites, extent of outreach about program availability, and job search requirements, and recent research has linked a variety of state program characteristics to participation rates. (Bartfield and Dunifon 2006b:924)

Comprehension of why eligible households are not enrolled is fundamental as a measure of the Supplemental Nutrition Assistance Program’s ability to reach its target demographic (Newman and Scherpf 2013). Statewide and regional data is exceptionally important, as certain estimates of SNAP access would revolutionize and reform the way
that program administrators perform their outreach in regards to underutilization in
certain areas and populations (Newman and Scherpf 2013).

Numerous factors contribute to the fact that SNAP enrollment is lower than
estimated need in the United States. One seemingly simple reason for the
nonparticipation of households eligible for aid, yet not enrolled, is that they were in fact
unaware that they were eligible (Bean and Mattingly 2011). Unexpectedly, in rural areas,
which typically have higher rates of SNAP use, less than half of eligible households
(incomes below the poverty line) are enrolled (Bean and Mattingly 2011). Stigma still
affects enrollment as many families did not believe they needed food stamps and that
they should not have to rely on the government for assistance (Bean and Mattingly 2011).
SNAP is no longer called the “food stamp” program, and the environment around it has
been carefully worded to alleviate some of the stigma surrounding the program.

In response to the hardships of the recession, Congress included benefits for
SNAP recipients to increase by 13.6 percent to help with the food insecurity problem in
their 2009 American Recovery and Reinvestment Act (ARRA) (Andrews and Nord
2009a). The ARRA “expanded eligibility for jobless adults without children: after these
enhancements, SNAP participation and real food spending by low-income households
increased—and food security improved” (Kumcu and Kaufman 2011:15). These
additional benefits and enrollment qualifications allowed households to enroll that would
have previously not. It is estimated that the ARRA benefits reduced households that
received SNAP benefits very low food security by 34 percent (Nord 2011). A 2012 study
found that food insecurity likelihood was reduced 30 percent and very low food
insecurity was decreased by 20 percent when households participated in SNAP
(Zedlewski, Waxman, and Gundersen 2012). The SNAP participation rate in Oregon is extremely high as it increased 58 percent from 2005 to 2009; and 1 in 5 Oregon residents utilize SNAP (Porter 2010; OFB 2012). SNAP is tremendously important in the fight against hunger in the United States; however, it is not the only program that helps relieve the burden on food insecurity.

Many American households would not subsist without the aid of government assistance programs. In 2012, approximately 1 in 4 Americans used at least one of the United States Department of Agriculture’s 15 food assistance programs (Newman and Scherpf 2013). Almost a quarter of the US population utilizes food assistance programs; however:

\[ \text{[efforts to identify the impact of food assistance programs on food security status are complicated by self-selection of participants into programs on the basis of unobservable characteristics, as persons at greater risk of food insecurity are more likely to participate. Perhaps because of this, only limited research links program participation to food security outcomes. Efforts that focus on policy differences, or proxies for such differences—rather than on household participation—have found some evidence of positive impacts. (Bartfield and Wang 2006a:6)} \]

Research shows that the more accessible programs such as SNAP and summer nutrition programs may lower food insecurity and that government policy should examine strategies to increase the program’s participation rates (Bartfield and Dunifon 2006b). Therefore, outreach and accessibility are essential to a program’s success.

Food pantries are an integral part of the fight against hunger, and help to fill the food security gap in the United States (Duffy 2006). In fact “food pantries are by far the most widely used form of private emergency food assistance” (Duffy 2006). Food pantries are encompassed by the overarching system of food banks, which are centralized warehouses that collect the food for pantries, kitchens, and shelters (Duffy 2006). Food
pantries were created with the original intent of providing food in emergency situations; this has changed over the years as many households now rely on food pantries throughout the year (Martin, et al. 2013). The federal government provides some food banks foodstuffs through The Emergency Food Assistance Program (TEFAP); these food banks must comply with state standards for identifying their clientele (Duffy 2006).

Between 2007 and 2009, food pantry use rose by 44 percent, up from 3.9 to 5.6 million households (Andrews 2010b). Some food pantries struggled with the demand, as the amount of food that the federal and state governments had consistently provided dropped by as much as two thirds due to decreased budgets (Greenberg, Greenberg, and Mazza 2010). From 2007 to 2009, food-pantry use increased at about the same rate in both metro and non-metro areas (Andrews 2010b). Rural and non-rural areas are often examined in terms of food security as in certain time periods different things are occurring in the cities and outside of them. Additionally, food is accessed differently in these regions.

As the number of food pantries has steadily increased since the early 1980’s (due to policy changes in the Reagan administration), little research has been conducted on pantries in comparison to SNAP and other government assistance programs (Duffy 2006). The relationship between SNAP users and food bank users is often ambiguous and not extensively researched (Bhattarai, Duffy, and Raymond 2005). The advantage of the knowledge of whether or not food bank users utilize SNAP can reveal a great deal of information about both programs (Bhattarai, Duffy, and Raymond 2005). Three authors studied food bank users who did or did not receive SNAP benefits. They found that low-income households in nonmetropolitan areas were more likely to use both food pantries
and SNAP (Bhattarai, Duffy, and Raymond 2005). Single parent households were more likely to use SNAP, while married-parent households were more likely to use food pantries (Bhattarai, Duffy, and Raymond 2005). The study additionally determined that if a household participated in one food assistance program, the likelihood that they would use another increased.

Including their largest assistance program SNAP, all USDA food and nutrition assistance program expenditures for the year 2008 totaled $60.6 billion, an increase of 10 percent from the previous fiscal year (Andrews and Nord 2009a). The USDA’s programs exist to decrease food insecurity, however, some advances need to be made in accessing healthy foods (Bruening, et al. 2012). Reasons that assistance programs are not fully utilized include lack of knowledge of these programs to the public, attempting previously to receive benefits and being rejected, and administrative disorganization (Carney 2012). Additionally, the stigma of enrolling in a food assistance program is still a barrier that help explains the lack of participation in federal and local programs (Carney 2012).

Solutions and Policy

Households that suffered economically during the recession often resorted to trade-offs to sustain their family. Some families went without health insurance to eat or did not eat in order to heat their homes, while others went without important medications or doctor visits to buy food, with SNAP enrollment however, there is a 30 percent decrease in participation in trade-offs (Zedlewski, Waxman, and Gundersen 2012). Policies and programs aimed towards alleviating the disparities households face are increasingly important. When people become disillusioned with the federal government,
local programs become essential to the fabric of small communities. Domestic nonprofit groups have arisen and expanded mainly due to "the public’s declining confidence in the capacity of federal programs to solve social problems and in the consequent embrace of 'New Federalism,' a political philosophy that advocates for more state and local governance in place of federal governance" (Edwards 2012:94).

Local solutions are particularly beneficial. Local housing markets continue to be a negative factor with increasingly high rents; local measures to create lower rental costs could be an important strategy (Bartfield and Wang 2006a). Access to transportation is a significant factor, as it is an area that negatively affects food insecure households (Bartfield and Wang 2006a). Therefore, examining how to positively change transportation infrastructures is a potential local solution to aid in the effectiveness of food assistance programs. Adequate access to supermarkets and grocery stores is crucial to the local dynamic and sustainability of a community in a time of economic disparity and can be considered as an appropriate intervention target (Bartfield and Wang 2006a).

While local charities and their benefits are known to most, lesser know are:

The efforts of larger networks of food banks and other anti-hunger advocates who have lobbied state and federal leaders, protested deficient service and sued human service agencies—all in an effort to improve the generosity of and accessibility to food stamps as well as other federally funded nutrition programs. (Edwards 2012:94)

Local measures are just as necessary as federal and national measures. Local level analysis of SNAP in contrast to the readily published state-levels has not been widely available; such data would be useful to help states decide where to focus their outreach expenditures (Newman and Scherpf 2013).
State and County-Level Analysis

Food insecurity statistics are not just useful as a means to study the effects of economic downfalls or of how high rent affects a family’s ability to put food on their table, but in guiding policy as well. The states of Tennessee and Idaho have used USDA statistics to suggest policy throughout their states (Tapogna, et al, 2004). Some states have started initiating county-level research to see where outreach is or is not as successful. A study conducted in Texas specifically examining Texas counties illustrated that SNAP is unevenly accessed in different counties (Newman and Scherpf 2013). Their measurement of SNAP access rates found that many counties were exceedingly above or below the average enrollment rate of 63 percent, and they suggested that program administrators should look at outlier counties on both sides of the distribution (Newman and Scherpf 2013). The Texas study suggests that the access rates for particular “demographic subpopulations within counties can allow program officials to identify geographic differences in SNAP access among vulnerable demographic subpopulations” (Newman and Scherpf 2013:27). Regional data is therefore important as a means to the geographical differences in outreach; programs such as SNAP can be utilized by all eligible populations if they know that they are eligible. Similarly, studying regional differences in food insecurity is vital, as knowing how regional characteristics affect the ability of a person to feed their family can guide policy and program changes. As the recession is a unique time period with highly studied economic changes, understanding why food insecurity and SNAP enrollment was underutilized when it was most important is imperative for social change.
Oregon

As this thesis addresses one state, Oregon, it is important to review the literature and research already conducted in that part of the country. Even before the recession, state-level data “received considerable attention in the Pacific Northwest, particularly in Oregon, where posted rates have been at or near the top of the USDA’s hunger rankings” (Tapogna, et al. 2004:12). Due to this high rate before the recession food insecurity has been a publicized issue in Oregon and there is a statewide plan to address hunger and alleviate some of the burden of low-income families (OFB 2012). Oregon’s food insecurity is affected by numerous factors: a high level of peak unemployment rates, high levels of residential mobility, a 2.9 percentage point larger share (compared to the overall United States) of renters paying half their income in rent, and a large percentage of the populace under the age of 18 (Tapogna, et al. 2004). County-level social context and policy variables are uniquely important to examine in Oregon, as its hunger rates throughout the state are exceptionally high (Bernell, Weber, and Edwards 2006). The high rates cannot be justified by either economic factors or demographics and consequently “the effects of social context and local policy are likely to play important roles in influencing the state’s distribution of hunger and food insecurity” (Bernell, Weber, and Edwards 2006:194).

On the county-level, Oregon is quite diverse in regards to housing, SNAP, social supports, and economic opportunity (Bernell, Weber, and Edwards 2006). In 2000, it was found that there were higher rates of food insecurity in rural counties, an inverse relationship between food insecurity and rurality that reversed in 2002 to 2004 with higher food insecurity in non-rural areas (De Marco and Thorburn 2008a). This reversal
is important, as mentioned above; the findings concerning social support in rural areas are often ambiguous. Oregon is ideal for studying food insecurity location-wise, as it possesses a unique county composition: “Multnomah County (with the city of Portland) has 2 percent of its population classified as rural, whereas there are five counties in which the entire population is rural” (Bernell, Weber, and Edwards 2006:203).

One characteristic of Oregon households is their low utilization of assistance programs: “Less than 3% of Oregonians had household members who had used the following programs in the last 12 months: Section Eight housing, school breakfast and lunch programs, soup kitchens, and gleaning programs…use of the following assistance programs was higher (5-9%): Medicaid/Oregon Health Plan, [SNAP], SSI, and food banks” (De Marco and Thorburn 2008a:43). Populations that used food banks were particularly likely to be food insecure; this is most likely a result of food banks typically being utilized in emergency situations as a short-term solution (De Marco and Thorburn 2008a). As food banks are a short-term solution this could inform why participation rates in programs with more involved enrollment processes (SNAP) are underutilized in comparison.

Implications

Food insecurity in Oregon is a multi-faceted and complex combination of economic, regional, housing, and governmental factors. To understand the effects and the changes brought upon by The Great Recession in food bank clients, all of these variables must be studied to give a comprehensive picture of how life altered for low-income and food insecure families during this time and even after. Food bank clients are an important
population to study both in combination with SNAP use and regional differences. The recession overwhelmed many households’ food security, and the families who had never been food insecure before, suddenly were. Through examination of Oregon Food Bank users this thesis will document the level of the federal assistance that these families were accessing.
DATA AND METHODS

Sample

Every two years the Oregon Food Bank (OFB) conducts a survey called the Hunger Factors Assessment. This survey samples people who come into OFB food banks for an emergency food box, which are a free three to five day supply of food for a household in need. The Oregon Food Bank emphasizes while handing out the survey, and on the survey itself, that the respondent will receive their food box regardless of completing the survey. They are also assured of their confidentiality and that the pantry staff will not see the survey. The Oregon Food Bank uses data from this survey to examine its own food bank network, educate the public on the condition of hunger in the state of Oregon, and inform discussion and advocacy about the issue of food insecurity and hunger.

As this survey is handed out to a highly selective group of participants—residents of Oregon who are food insecure—there are some limitations to the data. While it can be assumed that there is a selection bias as the survey only sampled a very particular population, the nature of this thesis redeems this fact. This thesis aims to discover the underlying composition and change in food bank users over the course of The Great Recession and therefore, the sample supports the research question. People who use food banks are often low-income and food insecure; therefore, studying information about this particular population is extremely pertinent.

While it may be possible to generalize these data, extrapolation to a broader context is unnecessary as the goal is to describe patterns among OFB users. However, the ramifications of studying data by specific region or area can be pertinent in other regions
similar in geography, population, etc. There was no sub-sample used in this analysis (responses are limited to about 4,000 surveys per survey year) as the population sampled is food insecure by virtue of using the food banks. The important aspect of the Oregon Food Bank’s Hunger Factors Assessment is that it is completed every two years. This is critical because time becomes very important in regards to major historical economic events such as The Great Recession.

The Oregon Food Bank codes the surveys in-house to prepare the data for analysis. While none of their data analysis was utilized for this thesis, their coded data was. The Hunger Factor Assessment was completed in 2006, 2008, 2010, and 2012. The year 2006 was chosen as it was before the recession began, and similarly 2012 was chosen, as it was post-recession. The recession troughed at the end of 2008, and as the data would only encompass the beginning of the peak of the economic downturn, it was determined that 2010 would be a more illuminating year than 2008.

Measures

The Oregon Food Bank changes their Hunger Factors Assessment survey each year. When analyzing multiple years of the data it is necessary to reconcile differently worded questions across years. For example, in 2006 the survey asks, “Does your household currently get food stamps?” but in 2010 it asks, “Does your household currently get SNAP benefits (food stamps)?” As these questions are asking the same thing with only an acknowledgment in the change in the program name, such differences are negligible. To see an effect over time, the years 2006, 2008 and 2010 were analyzed in the context of each survey question. Exceptions are the question of nutrition. The year
2006 did not have as many detailed nuances (3 possible responses instead of 5) as the year 2012. In the year 2010 there was no nutritional question asked and therefore there was no data from 2010.

The Oregon Food Bank is comprised of five different service regions in Oregon. These OFB regions are grouped by major cities where food banks are located, and by Oregon counties, plus Clark County in Washington State. The region of Eastern Oregon includes the towns of Redmond, Klamath Falls, Ontario, Harney, Pendleton, La Grande, and the Dalles, encompassing the counties of Deschutes, Jefferson, Crook, Klamath, Lake, Malheur, Gilliam, Morrow, Umatilla, Wheeler, Baker, Grant, Union, Wallowa, Hood River, Sherman, and Wasco. The Coastal region includes the towns of Astoria, Coos Bay, Newport, and Tillamook and the counties of Clatsop, Curry, Lincoln, and Tillamook. The North Valley region is comprised of Beaverton, Portland, St. Helens, McMinnville and the counties of Washington, Multnomah, Clackamas, Columbia, Yamhill, and Clark County, Washington. The Mid-Valley includes Corvallis, Eugene, Salem, and the counties of Benton, Linn, Marion, and Polk. The Southern region is comprised of the cities of Grants Pass, Medford, and Roseburg and the counties of Josephine, Jackson, and Douglas. As evident in the literature review, specific geographic data is particularly useful when examining trends.

The definition for food security is “access to enough food for active healthy living” (Andrews and Nord 2009a: 33). Therefore, to measure food insecurity, the Hunger Factors Assessment question that was analyzed was: “Have there been times in the last 12 months when you did not have enough money to buy food that you or your family needed?” The USDA measures food insecurity on a continuum which uses 18 questions
which these data were unable to collaborate; therefore, this is a measure of households who have experienced food insecurity and not the range of food insecurity which they experienced. In association with this measure was the question: “How many times have you or other members of your household gotten food from a food pantry in the last 12 months?” These data was recoded into ranges. These ranges were determined by the ranges used in the OFB's 2012 Hunger Factors Assessment data analysis. Therefore, the ranges that were utilized for the years 2006 and 2010 were coded using the same ranges as 2012. Another gauge of food insecurity is the respondent's anxiety about where their next meal is coming from. The Hunger Factors Assessment asks, "How often do you worry about where your next meal is coming from?" as a dimension of the psychological ramifications of food insecurity.

One of the major issues with The Great Recession was the unemployment and the housing situation of Americans. These two variables were selected to determine if there was a change over time in their impact on food insecurity. There were some discrepancies with the greater extent of the questions surrounding unemployment, as each question was different from year to year and only one resulting question was chosen for analysis: respondents who were “unemployed and looking for work.” Because Oregon has a very high share of renters in addition to high rent, analyzing data about respondents’ housing situations is important. "Which of the following best describes your housing situation?" had twelve answers on a spectrum from owning your own home to being homeless. The survey years of 2006 and 2010 had additional and different answers, which were not included in this analysis for benefit of comparison to 2012. Those two
years additionally had the responses listed in a different order than 2012. Due to the variable of the recession time period, housing is a very important issue. This thesis furthermore looks at three issues: if “in the preceding two year, have you [respondent] or another adult household member: moved to find work, moved to find more affordable housing, or been evicted or received an eviction notice.” This analysis should reveal some of the trends in housing in Oregon among food bank users.

Mentioned in the literature review was the advent of the newly poor. A characteristic of this phenomenon was the unusual amount of two parent households with children that were suddenly in need of sustenance where they had never been before. To observe this change, the household composition was examined; respondents were asked to answer “Which of the following best describes your household?” responses ranged from multigenerational families to single adults. These answers were in a different order in the 2006 and 2010 surveys years and were consequently reordered for analysis. The advantage of these data will be the ability to examine how the composition of food bank user’s families changed over the course of the recession.

Households that included children were asked additional questions. A major societal concern is that childhood nutrition suffers in low-income and food insecure households, therefore it is important to examine children’s eating habits during this time. There is likely a level of stigma surrounding being unable to feed one’s children. So, there must be some caution in analyzing these data, as a parent or guardian is unlikely to want to reveal that his or her child has gone hungry or skipped meals even in a confidential survey. Respondents were asked if “in the last 12 months, did you ever cut
the size of your children’s meals or did they ever skip meals because there was not enough money for food?” In a similar vein, the food bank users were asked if “in the past 12 months, have you been able to eat balanced meals?” This was answered on a scale from never to always. These are important questions as they allude to nutrition, childhood nutrition, and even future health consequences. Being food insecure or consistently hungry have far reaching consequences. Besides the food aspect of the reality of low-income families suffering to make ends meet, their delay or trade-offs of certain healthcare needs is critical to examine. To determine if households were using the common solution of trade-offs the survey asked, “Are you or any household member putting off: prescriptions because you can’t afford them, medical care because you can’t afford it, or dental care because you can’t afford it?”

Another question that was cross-tabulated with regional data over the three year time period was that of whether or not a household received benefits from the Supplemental Nutrition Assistance Program. Respondents were asked the question: “Does your household currently get SNAP benefits (food stamps)?” Additionally, the survey also questioned: “If you get SNAP (food stamps), how long do they usually last?” Not only is discovering how many food bank users utilize this federal service important, but observing how long their benefits last is vital in examining systemic issues.
Strategy for Analysis

As the analysis focuses on the change over time, the statistical computation for each variable(s) was a frequency with percentage tabulation. This thesis examines the data with descriptive and bivariate statistics at different points in time. Regional data was cross-tabulated in regards to SNAP usage, food bank visits, and ability to purchase food (measure of food insecurity). Each data table was examined for miscoded data entries; the greatest amount of miscoded data for a variable was four miscoded entries. These cases were dropped and new totals were utilized to calculate percentages. As a percentage these miscodes were less than .0013 percent and therefore have negligible influence on the findings.
RESULTS

Figure 1 demonstrates that from 2006 to 2012, the number of food bank clients who responded that they were unable to always buy food, increased by 13.3 percentage points. While the percent difference between 2006 and 2010 were a smaller five percentage points, between 2010 and 2012 inability to always purchase food increased by another 8.3 percentage points among food bank users. This percent difference among food bank users correlates with the rise in food insecurity for the whole population, where food insecurity rose from 14.7 percent to 16 percent during the same period (Andrews 2010b; Bruening, et al. 2012).

Figure 1: Ability of Respondent to Purchase Food through the Recession

Table 1 illustrates the regional differences in food insecurity over the course of the recession. In Eastern Oregon, from 2006 to 2010 the percent increase rose 10.1 percentage points and from 2010 to 2012 the percent difference increases 7.3 percentage points. Over the course of the recession respondents in Eastern Oregon felt a 17.4 percent
increase in their inability to provide food for their families. This remains the greatest change in regions, as Eastern Oregon started in 2006 with 64.9 percent respondents, the lowest of the regions. The Coastal region, historically a more impoverished area in Oregon, had the highest rates of food insecurity across the board, but the percent difference over time was 14.8 percent, slightly less than Eastern Oregon’s. The North and Mid-Valley regions intriguingly followed the same patterns as one another in percent increases over time, totaling in each year within one percent of each other. Southern Oregon experienced the least change over time at 8.4 percent. However, Southern Oregon experienced the second greatest increase from 2006 to 2010 at 6.4 percent and the smallest percent increase from 2010 to 2012 at two percent. Therefore, in Southern Oregon, food insecurity was more stagnant from the height of the recession to after, unlike the other regions in Oregon, which revealed an increasingly worse effect of the recession on food security. The general trend is therefore, an increasing severity of need among all regions, and the growth in each region was of a roughly similar magnitude.
Table 1: Ability of Respondent to Purchase Food through the Course of the Recession by Region

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2010</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Eastern Oregon</td>
<td>64.9% (240)</td>
<td>75.0% (318)</td>
<td>82.3% (503)</td>
</tr>
<tr>
<td>Coast</td>
<td>73.0% (218)</td>
<td>74.5% (263)</td>
<td>87.8% (310)</td>
</tr>
<tr>
<td>North Valley</td>
<td>71.6% (886)</td>
<td>76.0% (1316)</td>
<td>84.6% (1508)</td>
</tr>
<tr>
<td>Mid-Valley</td>
<td>71.3% (590)</td>
<td>75.3% (773)</td>
<td>85.6% (903)</td>
</tr>
<tr>
<td>South Oregon</td>
<td>72.7% (351)</td>
<td>79.1% (394)</td>
<td>81.1% (425)</td>
</tr>
<tr>
<td>Total % of Responses</td>
<td>71.0% (2285)</td>
<td>76.0% (3064)</td>
<td>84.4% (3649)</td>
</tr>
</tbody>
</table>

Figure 2: Regional Food Pantry Use in 2006
Figure 3: Regional Food Pantry Use in 2010

Regional Differences in Food Pantry Use in 2010

Eastern Oregon
Coast
North Valley
Mid-Valley
South Oregon

Figure 4. Regional Food Bank Use in 2012

Regional Differences in Food Pantry Use in 2012

Eastern Oregon
Coast
North Valley
Mid-Valley
South Oregon
Figure 2, 3, and 4 illustrate the regional differences in the frequency of food pantry visits per year. Each Figure (2, 3, and 4) shows an interesting taper of visits around 12 visits with the primary bulk of food pantry use being between 1-10 times in the last year. Almost 75 percent of responses in 2006 occurred in the 1-10 visit range. In 2010, 68.3 percent of respondents visited in this range and in 2012, 65.4 percent visited in this range. Although in Figures 2, 3, and 4, the North Valley and Mid-Valley frequencies appear large, this is where most of the population lives in Oregon and is therefore, spurious. The frequency of Oregon Food Bank users in the North Valley and Mid-Valley totaled 65.3 percent of respondents in 2006, 68.7 percent in 2010, and 65.9 percent in 2012.

An aspect or psychological effect that is often not analyzed in terms of food insecurity is the “worry” about where a person’s next meal is coming from. While a qualitative analysis of this anxiety would be similarly useful, Table 2 is helpful in illuminating this. From 2006 to 2012, respondents answering “never” decreased from 11.6 to 7.4 percent. Therefore, even after the end of the recession, food bank clients continually worried about where their next meal will come from in increasing percentages. Most respondents (about 40 percent each year) responded that they “sometimes” worried about their next meal, which could collaborate with the 1-10 visits a year to the food pantry. Responses in the “often” category surprisingly decreased by 2 percent from 2006 to 2010 but increased by 5.4 percent after the end of the recession. While these are small percent changes, it is interesting that there is a decrease followed by an increase in an area that in terms of the recession should have been increasing. The number of respondents that answered “always” increased by a small three percentage
points. While a more dramatic increase was expected in the “often” to “always” ranges, it is critical to note when answering questions on a sliding scale there are differences of perception on what an answer may imply.

Table 2: Yearly Change in Clients’ “Worry” About Their Next Meal

<table>
<thead>
<tr>
<th>Year</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>11.6% (377)</td>
<td>21.0% (682)</td>
<td>42.8% (1387)</td>
<td>17.9% (579)</td>
<td>6.60% (215)</td>
</tr>
<tr>
<td>2010</td>
<td>12.5% (512)</td>
<td>21.4% (876)</td>
<td>43.5% (1778)</td>
<td>15.9% (648)</td>
<td>6.70% (273)</td>
</tr>
<tr>
<td>2012</td>
<td>7.40% (322)</td>
<td>16.1% (704)</td>
<td>45.6% (1993)</td>
<td>21.3% (932)</td>
<td>9.60% (419)</td>
</tr>
</tbody>
</table>

Table 3 reveals data about a respondent’s ability to afford balanced meals. This was used as one measure of nutrition. There was no data for year 2010 and limited data for 2006. While 2006 has partial answers, in comparing it to 2012 the “often” section are similar at around 30 percent. As stated in the literature review, poor nutrition leads to harmful health consequences that certain programs such as SNAP try to alleviate through educational programs. There is no data, at least in this sample, that examines both education and ability to procure balanced meals.
Table 3: Nutritious Meal Affordability over the Course of the Recession

<table>
<thead>
<tr>
<th>Year</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>12.1% (389)</td>
<td>No Data</td>
<td>54.5% (1751)</td>
<td>33.4% (1075)</td>
<td>No Data</td>
</tr>
<tr>
<td>2010</td>
<td>No Data</td>
<td>No Data</td>
<td>No Data</td>
<td>No Data</td>
<td>No Data</td>
</tr>
<tr>
<td>2012</td>
<td>2.8% (122)</td>
<td>12.1% (525)</td>
<td>46.7% (2032)</td>
<td>28.3% (1229)</td>
<td>10.2% (442)</td>
</tr>
</tbody>
</table>

As a measure of the recession, unemployment among respondents was analyzed. Unexpectedly, unemployment remained the same for 2006 and 2010, and only increased by 2.5 percent in 2012 as shown in Table 4. This could be due to those that are unemployed and not looking for work while receiving unemployment benefits, or those that are part-time or underemployed. This question addressed the question of only the respondents and not other family members; further information might explain this percentage.

Table 4: Unemployment Among Respondents

<table>
<thead>
<tr>
<th>Year</th>
<th>Unemployed and looking for work</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>23.5% (864)</td>
</tr>
<tr>
<td>2010</td>
<td>23.5% (1030)</td>
</tr>
<tr>
<td>2012</td>
<td>26.0% (1003)</td>
</tr>
</tbody>
</table>
The household composition of food bank users throughout the recession time period is important, especially in regards to the *newly poor* which was comprised of two parent households with children who had typically not been food insecure previously. Figure 5 shows that a high proportion of two parent households use food pantries. Table 5 shows that 29.8 percent of respondents are two parents with children in 2010, increasing slightly (.3 percent) from 2006, and decreasing slightly in 2012 to 26.8 percent. There could be many explanations for the slight decrease, but it is possible that there was limited recovery after the recession. Percent changes for all household composition remained within 4 percent increasing or decreasing overall. As seen in Table 5, the percentage of couples with no children using food banks increased from 2006, this increase could be attributed to the recession.

**Figure 5: Household Composition of Food Bank Users over the Course of the Recession**

- Single female parent with children under 18
- Single male parent with children under 18
- Two parents/adults with children under 18
- Grandparent(s)+parent(s)+children under 18
- Single person living alone
- Single person living with housemate
- Two adults (couple), no children
- Other
Table 5: Household Composition of Food Bank Users over the Course of the Recession

<table>
<thead>
<tr>
<th>Year</th>
<th>Single female parent with children under 18</th>
<th>Single male parent with children under 18</th>
<th>Two parents/adults with children under 18</th>
<th>Grandparent(s) + parent(s) + children under 18</th>
<th>Single person living alone</th>
<th>Single person living with housemate</th>
<th>Two adults (couple), no children</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>13.4% (453)</td>
<td>2.6% (87)</td>
<td>29.5% (996)</td>
<td>6% (204)</td>
<td>22.4% (755)</td>
<td>5.7% (192)</td>
<td>13% (437)</td>
<td>7.4% (247)</td>
</tr>
<tr>
<td>2010</td>
<td>9.5% (399)</td>
<td>2.9% (117)</td>
<td>29.8% (1244)</td>
<td>10% (419)</td>
<td>20.2% (846)</td>
<td>6.7% (282)</td>
<td>15.1% (631)</td>
<td>5.8% (244)</td>
</tr>
<tr>
<td>2012</td>
<td>9.3% (403)</td>
<td>2.3% (101)</td>
<td>26.8% (1159)</td>
<td>8.6% (371)</td>
<td>20.6% (888)</td>
<td>6.8% (293)</td>
<td>14.3% (618)</td>
<td>11.3% (487)</td>
</tr>
</tbody>
</table>

Table 6 demonstrates that over the course of The Great Recession children's meals were affected negatively. Respondents answering that they had to decrease or eliminate their children's meals increased by 9.5 percentage points. While this is not a measure of childhood food insecurity, it demonstrates that children's nutrition is affected in times of economic disparity. In 2008, rates of childhood food insecurity were 21 percent (Oberg 2011). As food security is defined as access to adequate food for a healthy active lifestyle, lack of meals and reduction can be included in children's food insecurity.

Table 6: Food Insecurity of Children

<table>
<thead>
<tr>
<th>Year</th>
<th>Yes</th>
<th>No</th>
<th>No Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>12.6% (387)</td>
<td>54.7% (1686)</td>
<td>32.7% (1006)</td>
</tr>
<tr>
<td>2010</td>
<td>17.9% (706)</td>
<td>50.4% (1985)</td>
<td>31.7% (1246)</td>
</tr>
<tr>
<td>2012</td>
<td>22.1% (952)</td>
<td>42.9% (1847)</td>
<td>35.0% (1504)</td>
</tr>
</tbody>
</table>
In contrast to other forms of housing, Oregon has a high frequency of renters, and, as shown in Figure 6, this category is followed by people who own their own homes. Some believe that Oregon's high percentage of renters might have to do with high property taxes in lieu of sale taxes. Renters consistently encompassed around 40 percent of the population of food bank users, while home owners increasingly visited food banks in the time period: 14.6 percent in 2006, 15.5 percent in 2010, and 18.3 percent in 2012.

**Figure 6: Housing of Food Bank Users during the Recession**

With so many Oregonians renting, it is advantageous to discover some of the reasons that respondents move. Shown in Table 7, in 2010 there was less moving to find work or housing and less receipt of eviction notices. This could be due to the fact that moving does initially require some expense and that people could not afford to leave during the recession. It is interesting to note that eviction notices decreased by 9.6
percent. However, the question does ask about the preceding two years, which changes the outlook somewhat. The 2012 respondents had the highest percentages of relocation to either find work or find more affordable housing.

### Table 7: Reasons for Relocation of Food Banks Users

<table>
<thead>
<tr>
<th>Year</th>
<th>Moved to find work</th>
<th>Moved to find more affordable housing</th>
<th>Been evicted or received an eviction notice</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>20.6% (601)</td>
<td>27.8% (636)</td>
<td>17.3% (499)</td>
</tr>
<tr>
<td>2010</td>
<td>16.7% (640)</td>
<td>24.8% (828)</td>
<td>7.7% (287)</td>
</tr>
<tr>
<td>2012</td>
<td>22.4% (757)</td>
<td>33.0% (1097)</td>
<td>12.2% (390)</td>
</tr>
</tbody>
</table>

Enrollment in the Supplemental Nutrition Assistance Program is an important measure of the utilization of government assistance programs. As shown in Figure 7 there is no percent change in SNAP enrollment from 2006 to 2010. This stability in SNAP enrollment could possibly be explained by the fact that the low-income families who use the food bank are already below the poverty line and their jobs are typically lower pay and the recession did not effect them as much as the newly poor. Rates did, however, increase slightly from 2010 to 2012 by 6.5 percentage points.

Figure 8 reveals the length of time that respondents’ benefits lasted through the month, over the course of the recession. As Figure 8 shows, SNAP benefits last “all month” at an increasing rate after 2006. This is most likely due to the increase in benefits allowable due to the ARRA. Contrasting this is the fact that the largest percentage of
SNAP benefits lasting “less than two weeks” is also in 2006. While over time SNAP benefits have been slightly increasing, lasting “3 weeks” and surprisingly, lasting “2 weeks” remained almost stagnant. This is important, as about 30 percent of the food bank users only saw their benefits lasting them two weeks and SNAP benefits are intended to last all month.

**Figure 7: SNAP Participation by Year**

![SNAP Enrollment by Year Chart]

SNAP%Enrollment%by%Year
While there was only a seven percentage point increase in SNAP enrollment from 2006 to 2012, the regional differentials changed moderately, as demonstrated in Table 8. Eastern Oregon’s percentage point change was 10.9, but from 2006 to 2010 respondents who received SNAP decreased 5.9 percentage points. This led to a 16.8 percentage point increase in SNAP enrollment in Eastern Oregon from 2010 to 2012. Similarly, the Coast experienced a percentage point change overall of 10.7, a decrease from the percentage point change between 2006 to 2010 of 1.5, and a increase in enrollment from 2010 to 2012 of 12.2 percentage points. While earlier in the results section North Valley and Mid-Valley were similar in their percentage point changes in regards to being able to purchase adequate food for a family, they differ in SNAP enrollment. North Valley’s enrollment only increased 7.6 percentage points overall, and from 2006 to 2010 decreased by 1 percentage point. Mid-Valley enrollment steadily increases 12.9 percentage points with no decrease at all; only the Mid-Valley and Southern Oregon did not decrease from the
year 2006 to 2010. Southern Oregon experienced a steady increase of 11 percentage points.

One of the ways that families dealt with the recession was through trade-offs. For example, to feed their family, they might not heat their house. Often trade-offs are medical in nature. Table 9 shows that numerous respondents delayed purchasing prescriptions; however, use of this type of trade off decreased steadily throughout the recession. Interestingly, deferring dental care has increased over the course of the recession, while deferment of medical care only decreased slightly while increasing in in 2010.

<table>
<thead>
<tr>
<th>Oregon Food Bank Regions and SNAP Usage by Year</th>
<th>2006</th>
<th>2010</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region</td>
<td>Recieves SNAP</td>
<td>Recieves SNAP</td>
<td>Recieves SNAP</td>
</tr>
<tr>
<td>Eastern Oregon</td>
<td>57.1% (220)</td>
<td>51.2% (215)</td>
<td>68.0% (419)</td>
</tr>
<tr>
<td>Coast</td>
<td>55.8% (174)</td>
<td>54.3% (188)</td>
<td>66.5% (234)</td>
</tr>
<tr>
<td>North Valley</td>
<td>49.0% (646)</td>
<td>48% (829)</td>
<td>56.6% (1016)</td>
</tr>
<tr>
<td>Mid-Valley</td>
<td>52.8% (468)</td>
<td>57.3% (583)</td>
<td>65.7% (696)</td>
</tr>
<tr>
<td>South Oregon</td>
<td>55.5% (280)</td>
<td>58.0% (284)</td>
<td>66.5% (350)</td>
</tr>
<tr>
<td>Total % of Responses</td>
<td>52.5% (1788)</td>
<td>52.5% (2099)</td>
<td>62.4% (2715)</td>
</tr>
</tbody>
</table>
Table 9: Deferment in Health Care over Course of Recession

<table>
<thead>
<tr>
<th>Year</th>
<th>Delay Prescriptions</th>
<th>Delay Medical Care</th>
<th>Delay Dental Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>47.9% (1234)</td>
<td>55.3% (1414)</td>
<td>66.5% (1777)</td>
</tr>
<tr>
<td>2010</td>
<td>45.6% (1399)</td>
<td>57.7% (1839)</td>
<td>67.7% (2268)</td>
</tr>
<tr>
<td>2012</td>
<td>41.5% (1386)</td>
<td>54.3% (1882)</td>
<td>71.0% (2636)</td>
</tr>
</tbody>
</table>
CONCLUSIONS

The results show that there was an increase in food insecurity among Oregon Food Banks Users (measured by ability to always afford food) by 13.3 percent over the course of the recession. This correlates with the overall rise in food insecurity during the recession in Oregon and the entire country. An examination of the regional variation in Oregon reveals a similar effect over time with increases in a range of as high as 17.4 percent in Eastern Oregon and as low as 8.4 percent in Southern Oregon. This reveals that the region of Southern Oregon had a lower overall food insecurity increase than any other region and the state of Oregon as a whole.

Not only are respondents not able to always feed their families, but they are consistently worrying about where their next meal is coming from. This has increased steadily since the start of the recession with fewer people responding that they “never” worry about their next meal. In a similar vein, the ability to afford nutritious meals is important in looking at overall food insecurity. While there was limited data, approximately half of respondents answered they could afford balanced meals only “sometimes.” Adequate nutrition is vital, and with half of Oregon Food Bank Clients responding that could only “sometimes” afford a balanced meal, the trend of the food insecure eating unhealthy will lead to poorer public health.

There have been numerous studies illuminating that certain factors, such as single motherhood and presence of children, increase likelihood of food insecurity. Surprisingly, in The Great Recession the newly poor were comprised of two parent households with children. In 2010, in the height of the recession, about a third of respondents were in this category. Previously, this group as a whole has not been as
likely to be food insecure. The food insecurity of children in the study increased by 9.5 percentage points over the course of the recession, which correlates with the overall rise in children's food insecurity.

Oregon's high percentage of renters is generally assumed to be a part of the high levels of food insecurity in the state. This study found that about 40 percent of the respondents were renters consistently through the recession, supporting the fact that the food insecure in Oregon are renters, and that renting affects food security among Oregon Food Bank Users.

As mentioned previously, SNAP benefits are distributed to nearly one in seven Americans and participation increased by 25 percent over the course of the recession (Bean and Mattingly 2011; Nord and Prell 2011). This study found no increase in SNAP enrollment among the Oregon Food Bank users from 2006 to 2010, and a minimal 6.5 percent increase from 2010 to 2012. Presumably, this could be a product of the fact that the populace that uses food banks were food insecure before the recession and already low-income families were less affected by the recession. There were some regional differences in SNAP enrollment, however. Eastern Oregon, the Coast, and the North Valley regions had percent decreases from 2006 to 2010, with fewer respondents being enrolled in SNAP. Further research would be needed to discover why SNAP enrollment dropped in these regions during the recession, especially regarding the increase in benefits due to the ARRA. Increases in enrollment by region ranged from a low 7.6 percent in the North Valley to a higher 12.9 percent in the Mid-Valley. Both regions intriguingly encompass the largest cities in Oregon.
Overall, this analysis confirms and illuminates trends of food insecurity across the United States. In examining a sample that is already selective, some nuances could be extrapolated better. While some percentages seem negligible, such as SNAP enrollment increasing by a mere 6.5 percentage points among the food bank clientele, the regional variations revealed complex percent increases and decreases that with further research could be quite illuminating. While some trends stayed the same, about 40 percent of food bank clients are renters. Some trends were different, as just stated, regional differences in SNAP enrollment throughout the recession were dramatically different from year to year. The Great Recession affected many aspects of American life, and it is critical to recognize the importance of feeding the hungry despite the state of the economy.

Recommendations for further research would include examining the regions that decreased in SNAP enrollment in 2010 to see what dynamics of the local area might have caused this downward trend. Outreach and stigma elimination is an intrinsic part of SNAP across the board as seen in the literature review. Further research would need to be conducted to see if the regions experiencing a decrease had a more local idea of stigma, less outreach in those years, or some factor about the region that determines whether someone will enroll. It is important that people know that they are eligible for benefits, and some of the trends in increases of certain households utilizing SNAP may correlate to this. Forty percent of Oregon Food Bank Users are renters and as touched on in the literature review alleviation of the high rent in certain areas, alterations if possible of the local housing markets, and lowering land prices are all structural changes that could assist in this issue. Transportation, while not directly analyzed is an important infrastructure that helps alleviate food insecurity. Additionally access to summer nutrition programs
was seen in the literature review as a means to decreasing food insecurity. While many of
these solutions are complex and large in nature, local concerns are an important
consideration and probable solution for the future of food insecurity.
REFERENCES


Nord, Mark and Alisha Coleman-Jensen. 2010. “Food Insecurity After Leaving SNAP.”


