January 2014

A Ten-Year Study Of Earned Income Tax Credit Utilization In Western South Dakota: Where You Live Matters

Lizabeth Ann Diers

Follow this and additional works at: https://commons.und.edu/theses

Recommended Citation
https://commons.und.edu/theses/1643
A TEN-YEAR STUDY OF EARNED INCOME TAX CREDIT UTILIZATION IN WESTERN SOUTH DAKOTA: WHERE YOU LIVE MATTERS

by

Lizabeth Ann Diers
Bachelor of Science, Minnesota State University, Mankato, 1980
Master of Business Taxation, University of Minnesota, 1988

A Dissertation
Submitted to the Graduate Faculty
of the
University of North Dakota
in partial fulfillment of the requirements
for the degree of
Doctor of Philosophy

Grand Forks, North Dakota
August
2014
This dissertation, submitted by Lizabeth Diers, in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

Dr. Mary Baker, Chair

Dr. Myrna Olson

Dr. Pamela Beck

Dr. Wayne Swisher

This dissertation is being submitted by the appointed advisory committee as having met all of the requirements of the Graduate School at the University of North Dakota and is hereby approved.

Wayne Swisher
Dean of the School of Graduate Studies

July 24, 2014

Date
PERMISSION

Title A Ten-year Study of Earned Income Tax Credit Utilization in Western South Dakota: Where you live matters

Department Teaching and Learning

Degree Doctor of Philosophy

In presenting this dissertation in partial fulfillment of the requirements for a graduate degree from the University of North Dakota, I agree that the library of this University shall make it freely available for inspection. I further agree that permission for extensive copying for scholarly purposes may be granted by the professor who supervised my dissertation work or, in her absence, by the Chairperson of the department or the dean of the School of Graduate Studies. It is understood that any copying or publication or other use of this dissertation or part thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the University of North Dakota in any scholarly use which may be made of any material in my dissertation.

Lizabeth Ann Diers
June 20, 2014
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF FIGURES</td>
<td>ix</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>x</td>
</tr>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>xi</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>xiii</td>
</tr>
<tr>
<td>CHAPTER I</td>
<td></td>
</tr>
<tr>
<td>I. Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Study Background</td>
<td>1</td>
</tr>
<tr>
<td>Earned Income Tax Credit</td>
<td>6</td>
</tr>
<tr>
<td>Higher Education</td>
<td>13</td>
</tr>
<tr>
<td>Purpose of Study</td>
<td>14</td>
</tr>
<tr>
<td>Research Questions</td>
<td>14</td>
</tr>
<tr>
<td>The Research Project</td>
<td>15</td>
</tr>
<tr>
<td>Conclusion</td>
<td>17</td>
</tr>
<tr>
<td>Chapter Overviews</td>
<td>17</td>
</tr>
<tr>
<td>II. REVIEW OF LITERATURE</td>
<td>19</td>
</tr>
<tr>
<td>Background</td>
<td>19</td>
</tr>
<tr>
<td>Conceptual Framework</td>
<td>20</td>
</tr>
<tr>
<td>Poverty</td>
<td>20</td>
</tr>
<tr>
<td>Cultural Diversity and Poverty</td>
<td>23</td>
</tr>
<tr>
<td>Geographic Locations &amp; Poverty</td>
<td>27</td>
</tr>
<tr>
<td>Chapter</td>
<td>Title</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Welfare Programs to Improve Poverty</td>
</tr>
<tr>
<td></td>
<td>Earned Income Tax Credit Program</td>
</tr>
<tr>
<td></td>
<td>College Accounting Programs</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
</tr>
<tr>
<td>III.</td>
<td>METHODOLOGY</td>
</tr>
<tr>
<td></td>
<td>Introduction</td>
</tr>
<tr>
<td></td>
<td>Research Design</td>
</tr>
<tr>
<td></td>
<td>Mixed-Method Design</td>
</tr>
<tr>
<td></td>
<td>Data Collection and Analysis</td>
</tr>
<tr>
<td></td>
<td>Quantitative Venue</td>
</tr>
<tr>
<td></td>
<td>Database</td>
</tr>
<tr>
<td></td>
<td>Quantitative Analysis</td>
</tr>
<tr>
<td></td>
<td>Qualitative Venue</td>
</tr>
<tr>
<td></td>
<td>Instrument</td>
</tr>
<tr>
<td></td>
<td>Interview Participants</td>
</tr>
<tr>
<td></td>
<td>Chapter Summary</td>
</tr>
<tr>
<td>IV.</td>
<td>DATA ANALYSIS</td>
</tr>
<tr>
<td></td>
<td>Introduction</td>
</tr>
<tr>
<td></td>
<td>Earned Income Tax Credit Demographic Characteristics</td>
</tr>
<tr>
<td></td>
<td>Geographic Location</td>
</tr>
<tr>
<td></td>
<td>Poverty</td>
</tr>
<tr>
<td></td>
<td>Research Question Number One</td>
</tr>
<tr>
<td></td>
<td>Higher Education Demographic Characteristics</td>
</tr>
</tbody>
</table>
Research Question Number Two ...............................................................62
Research Question Number Three .............................................................66

V. FINDINGS, LIMITATIONS, RECOMMENDATIONS, AND CLOSING STATEMENT ...............................................................................72

Findings ......................................................................................................72
Summary of Study .....................................................................................73
Discussion ..................................................................................................74
Research Question One .....................................................................74
Research Question Two ....................................................................76
Research Question Three ..................................................................78
Significance for the Researcher .................................................................80
Significance for Low-income Families.........................................................80
Significance for Earned Income Tax Credit Administrators .....................80
Limitations of the Study .............................................................................81
Future Research ...........................................................................................81
Final Thoughts ...........................................................................................82

APPENDICES ...................................................................................................................85

A. Descriptive Statistics for Percent of Tax Returns With EITC Claims ...............................................................86

B. Paired Locations T Tests Data for Percent of Tax Returns With EITC Claims ...............................................................87

C. Descriptive Statistics for Tax Returns With EITC Claims in Dollars ...........................................................................88

D. Paired Locations T Tests Data for EITC Claim Amounts ...............................................................89
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. EITC Structure by Income, Tax Year 2008</td>
<td>10</td>
</tr>
<tr>
<td>3. Map of South Dakota Counties, Divided by the Missouri River</td>
<td>48</td>
</tr>
<tr>
<td>4. Average EITC Claim Amounts per Region</td>
<td>59</td>
</tr>
<tr>
<td>5. Percentage of Tax Returns Claiming EITC</td>
<td>60</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 2012 Poverty Guidelines</td>
<td>4</td>
</tr>
<tr>
<td>2. Tax Year 2011 Income Limits and Range of EITC</td>
<td>9</td>
</tr>
<tr>
<td>3. Demographics of Counties in Western South Dakota</td>
<td>47</td>
</tr>
<tr>
<td>4. Percent of Population Living in Poverty</td>
<td>58</td>
</tr>
</tbody>
</table>
ACKNOWLEDGMENTS

The journey to a Ph.D., including completing this dissertation, would have been difficult without the support, encouragement and assistance of many individuals, and I would like to take this opportunity to show my appreciation. While it is not possible to list everyone by name, I would like to express my heartfelt thanks to all. You have helped me to reach the final destination, and I will be forever grateful.

In particular, I would like to thank my committee members: Dr. Mary Baker, Dr. Myrna Olson, Dr. Pam Beck and Dr. Wayne Swisher. You have all shown great patience, kindness, and understanding during this dissertation process and, without your support, this dissertation would not be complete. Dr. Baker and Dr. Olson spent endless hours assisting me, personally and professionally. Your guidance has helped me to become a better researcher and writer, and I am so thankful. I could not have selected a better committee to work with during this process. The University of North Dakota is fortunate to have all of you in its ranks.

I would also like to thank all of my classmates at UND, too numerous to mention individually. The journey was rich and rewarding because of all of you. Specifically, Renae Bjorg, Kasey Young, and Yee Han Chu have provided continual support through the final stages of this project, and I am grateful for your persistence and I hope to return the favor.
Special thanks to my colleague, Dr. Pam Carriveau, at Black Hills State University for her assistance with data analysis and for sharing her wisdom. Without the support of BHSU colleagues Dr. Priscilla Romkema, Dr. Ron DeBeaumont, and Dr. Kay Schallenkamp, this journey would not have been possible and I am so grateful. Also, I would like to thank all my colleagues in the BHSU School of Business for their endless encouragement.

My doctoral degree process would not have been as enjoyable or bearable without the friendship and support of Alana Fosse, Deby Pankonin, and Karen Harrie. You showed extreme compassion and friendship to me during my time at UND, and my life has been enriched by each of you. Also, special thanks to Sharon Fields and Sandy Krom for help with formatting and navigating graduate school requirements.

Last, but not least, I must thank my family members. My husband, Kermit, has shown love and support throughout this four-year process, and I am thankful for his encouragement from the beginning to the culmination. My daughters (Rosa, Sarah, Hannah and Jenna) have all supported my efforts, and I am grateful to each of you. Sarah’s assistance with data analysis was noteworthy and her daily phone calls kept me connected while away, and I appreciate the time she spent helping me. I would also like to thank my sister, Molly, and my mom, Lu Morphew, for their unswerving love, support, and encouragement during this process. I feel extremely blessed with my terrific immediate and extended family.
ABSTRACT

The Earned Income Tax Credit (EITC) is one of the largest government anti-poverty programs, helping low-income families to build and maintain economic security. The purpose of this mixed methods study was to determine if where taxpayers live in western South Dakota impacts the utilization of EITC. Results of analysis of tax return information, higher education accounting programs, and interview records were combined to answer the study questions.

Ten years of data (tax return averages) were retrieved from the Brookings Institution and were analyzed to determine if geography was a predictor of the likelihood of filing for EITC and the amount of the EITC claimed. The tax return averages were segregated by county and grouped into six regions: metro, rural, and four Indian reservations (Pine Ridge, Rosebud, Cheyenne River and Standing Rock). Three groups emerged: the metro/rural region, the northern reservations Cheyenne River/Standing Rock, and the southern reservations Pine Ridge/Rosebud. Significant differences were found among the three groups in the propensity to claim EITC in all ten years studied. The results were mixed in the analysis of the amount of EITC claimed.

Examination of accounting program curriculum, syllabi, textbook, and faculty interviews was performed to test for a connection between what was taught at higher education institutions and utilization of the EITC in that corresponding geographic region. Inconsistent access to a higher education institution between regions and a
distinct dissimilarity in the content of EITC training students received was found. Taxpayers living on reservations with tribal colleges were more likely to claim EITC, and the amounts of their claims were larger than for taxpayers on reservations without tribal colleges.

Taxpayers and accounting professionals were interviewed to gain understanding of taxpayers’ perceptions about EITC. Taxpayers’ lack of understanding of EITC was widespread, yet their expectations of large tax refunds were predominant. It is recommended that accounting professionals incorporate financial education and wealth-building tools into tax preparation meetings to promote understanding of EITC and to help poor families to escape poverty.
CHAPTER I
INTRODUCTION

Study Background

The Earned Income Tax Credit (EITC) is a refundable federal income tax credit available to low-income taxpayers filing tax returns and is intended to help low-income individuals improve their living conditions. It is one of the largest government anti-poverty programs, helping low-income families to build and maintain economic security by providing cash assistance and helping them contribute to the economy as they become employed or increase employment. According to the Center on Budget and Policy Priorities website, “In 2012, the EITC lifted about 6.5 million people out of poverty, including about 3.3 million children” (Reducing Poverty, para. 1). The cash provided by EITC refunds provided a temporary lift out of poverty, but more must be done to help poor families to build long-term financial security (Biewen, 2006). According to Smith and DeBord (2005), education is a critical component of any effort to break the generational cycle of poverty by providing a means of escape. While education is frequently thought of as only “higher education” or “job training” education, education about taxation is also equally important to break the poverty cycle. People must understand how to receive the maximum benefit from all available resources. They must be counseled on how to use those resources to improve their lives and the lives of those they support. A key source of that education is the tax professionals who aid them in their
income tax preparation. To that end, well-educated tax professionals are needed to assist low-income taxpayers to build financial security and receive maximum benefit of all available resources, including EITC, financial planning, and other wealth-building tools.

Poverty is not a new problem in the United States. According to the U.S. Census Bureau report on 2010 demographics, 15.1% of Americans live below the poverty level. The Census Bureau report indicated that about 2.6 million more people slipped into poverty in the United States in 2010, and “the number of Americans living below the official poverty line, 46.2 million people, was the highest number in the 52 years the bureau has been publishing figures on it” (Tavernise, 2011).

Poverty is a serious problem in the United States. According to America’s Children: Key National Indicators of Well-Being, 21% of all children ages 0–17 (15.5 million) lived in poverty in 2009. Children living in poverty are vulnerable to environmental, educational, health, and safety risks. The Children’s Defense Fund is recognized for its involvement in research on children living in poverty and, in their Policy Priorities (2012), emphasized the devastating consequences to the children and the costs to society:

Poor children lag behind their peers in many ways beyond income: They are less healthy, trail in emotional and intellectual development, and are less likely to graduate from high school. Poor children also are likely to become the poor parents of the future. Every year that we keep children in poverty costs our nation half a trillion dollars in lost productivity, poorer health and increased crime.

(para. 1)
There are many definitions of poverty and methods to measure it. The official United States measurement standard used by the Census Bureau is issued by the Office of Management and Budget (OMB). The OMB establishes new poverty threshold amounts annually. Factors that impact the OMB poverty threshold measurement are family size, ages of family members, and the number of related children. A family is considered in poverty when their total annual before-tax cash income, excluding non-cash benefits like housing assistance, is below the threshold amount. According to the Census Bureau website (census.gov/hhes/www/poverty/about/overview/measure.html), income is totaled for all family members and includes: “earnings, unemployment compensation, workers' compensation, Social Security, Supplemental Security Income, public assistance, veterans' payments, survivor benefits, pension or retirement income, interest, dividends, rents, royalties, income from estates, trusts, educational assistance, alimony, child support, assistance from outside the household, and other miscellaneous sources” (para. 2), but excludes food stamps and housing subsidies. For comparison purposes, several of the 2011 OMB poverty thresholds are as follows: $11,702 for a single adult under the age of 65 without children, $15,504 for a single parent under 65 with one child, and $22,811 for a family with two adults and two children.

The U.S. Department of Health and Human Services (HHS) website (aspe.hhs.gov/poverty/12poverty.shtml#thresholds) describes their poverty guidelines as simplified and used administratively for financial eligibility for many social programs. Calculated differently from the OMB poverty thresholds, the HHS poverty guidelines do not differentiate by family member age and are used for eligibility determination for programs including “Head Start, the Food Stamp Program, the National School Lunch
Program, the Low-Income Home Energy Assistance Program, and the Children’s Health Insurance Program” (HHS, 2012, para. 8). In Table 1, the HHS 2012 guidelines for the 48 Contiguous States and the District of Columbia are shown, which are based roughly on the 2011 Census Bureau thresholds, calculated using only the number of persons in the family/household.

Table 1. 2012 Poverty Guidelines.

<table>
<thead>
<tr>
<th>Persons in family/household</th>
<th>Poverty guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$11,170</td>
</tr>
<tr>
<td>2</td>
<td>$15,130</td>
</tr>
<tr>
<td>3</td>
<td>$19,090</td>
</tr>
<tr>
<td>4</td>
<td>$23,050</td>
</tr>
<tr>
<td>5</td>
<td>$27,010</td>
</tr>
<tr>
<td>6</td>
<td>$30,970</td>
</tr>
<tr>
<td>7</td>
<td>$34,930</td>
</tr>
<tr>
<td>8</td>
<td>$38,890</td>
</tr>
</tbody>
</table>

For families/households with more than 8 persons, add $3,960 for each additional person.


Slightly higher poverty guidelines apply in Alaska and Hawaii. Regardless of which government agencies’ (OMB or HHS) numbers are used, established poverty thresholds and guidelines determine the financial level below which a family’s basic needs cannot be met with available cash resources.
The federal and state governments are concerned about those living in poverty, and have utilized many tools to assist those individuals. Welfare programs have taken many shapes and experienced many changes over time; yet in 1935, Congress passed major legislation and created a new welfare program, Aid to Dependent Children (ADC), more commonly known as Aid to Families with Dependent Children (AFDC). “AFDC was based on the principle that a woman with a child and no husband deserved a government check to support her family” (Suarez, 2006, para. 1). Suarez studied the growing dissatisfaction with AFDC in the 1980s and 1990s, and the sweeping change to the welfare system that happened with a single new law. The new law was described by Biewen (2006) as follows:

In August 1996, President Bill Clinton signed a landmark law [the Personal Responsibility and Work Opportunity Reconciliation Act] that fulfilled his promise to "end welfare as we know it." The law killed the 60-year-old Aid to Families with Dependent Children (AFDC) program. Instead, Congress gave the states money to run their own programs and required them to move many welfare recipients into the workforce. Supporters declared it a new day, the beginning of self-sufficiency for poor families. Others warned the action would push women and children into the streets, perhaps by the millions. (par 1)

At that time, the EITC program had been in place for about 20 years. By eliminating AFDC, the 1996 law elevated the importance of EITC as it helped to fill the gap created by the loss of AFDC, while many other anti-poverty programs in place at that time began to wane (Phillips, 2001).
There are many government and private programs in place to provide assistance to those living in poverty. Federal and state governmental units sponsor a variety of welfare programs to provide for basic needs of low-income individuals, particularly those individuals who have dependent children. Current government programs include Women, Infants and Children (WIC), Supplemental Nutrition Assistance Program (SNAP) which was formerly referred to as food stamps, Temporary Assistance for Needy Families (TANF), National School Lunch Program, as well as housing and utility assistance programs. Many community-based organizations, some public and others private, provide support to low-income families with low-cost or no-cost alternatives for products and services viewed as necessities. Free clinics, food pantries and soup kitchens, homeless shelters, and thrift stores are only a few of the resources available in many communities to help the poor.

**Earned Income Tax Credit (EITC)**

The EITC was enacted in 1975 as a temporary, limited assistance plan for the poor and originally was available only to the low-income workers (Mendenhall, 2006). According to Hotz and Scholz (2001), it was put in place to reimburse the social security payroll taxes of those who worked but did not exceed established income thresholds ($8,000 in 1975), thus rewarding the working poor with income subsides. Meyers and Lee (2003) defined the working poor as taxpayers who worked at least half of the year, yet still had income at a poverty level. Mendenhall (2006) noted that “the EITC was made a permanent provision of the Internal Revenue Code” in 1978 (p. 54).

Since 1975, many of the legislative changes to the EITC have been attempts to increase the amount and the availability of the credit, helping the people who need it
most. Mendenhall described the EITC legislation expansions and increases of the maximum credit in 1986, 1990, 1993, and 2001, even though the corresponding income tax rates were sometimes increasing and deductions and other credits were being reduced or eliminated as part of the same legislation. The most significant expansions to EITC were in 1986 and 1993. As reported in The Chicago Tribune, when announcing the signing of the Tax Reform Act of 1986, President Reagan said that EITC was “the best anti-poverty, the best pro-family, the best job-creation measure to come out of Congress” (Donosky, 1986, para. 17). In 1993, President Bill Clinton committed to expand the EITC and, in the same legislation that ended AFDC, “included a small credit for childless working families and expanded the maximum credit for families with one child by 9% and for families with multiple children by 69%” (Mendenhall, 2006, p. 54).

To qualify for EITC, a taxpayer must meet several complex provisions. In A Guide to the Earned Income Tax Credit: What Everyone Should Know About the EITC, Mendenhall (2006) provided a summary of the EITC eligibility guidelines. The taxpayer (or spouse) must have earnings from work as an employee, be a self-employed person, or a farmer. Taxpayers without dependents must be between the ages of 25 and 65 to be qualified, while taxpayers with dependents are not limited by age. The more complicated portion of qualifying for EITC relates to dependent children. Policing erroneous claims of dependent children for EITC is a difficult problem for the Internal Revenue Service (IRS) and results in many audits. To claim a dependent for EITC purposes, the dependent must meet age, residency, and relationship tests. The dependent must be less than 19 years old (24 years old if a full-time student). The dependent must have lived with the taxpayer for more than one-half of the year, unless away on a temporary absence (i.e., college.) The
dependent must be related to the taxpayer(s). The IRS may request proof of age, residency and relationship of any dependent claimed for EITC, and will disallow the current EITC claim as well as future year claims, if documentation is not provided upon request.

To calculate the credit, the taxpayer can provide the necessary information to the IRS, and the IRS will compute the appropriate amount of EITC. An online program entitled *Earned Income Tax Credit Assistant* on the IRS website, apps.irs.gov/app/eitc2011/SetLanguage.do?lang=en, is available to help taxpayers determine EITC eligibility and credit amounts. Taxpayers using the EITC Assistant are asked questions in three categories:

1. Am I an eligible individual?
2. Is a child my qualifying child?
3. How much is my credit?

Based on taxpayer responses to the IRS prompts, the IRS will calculate the credit. However, many taxpayers, particularly those using tax professional or volunteer preparers, utilize tax preparation software that calculates the credit automatically. The amount of the EITC is based on earnings, filing status, and family size; it is calculated using tables provided in the instructions for the tax forms or on the IRS website.

The maximum amount of EITC for 2011 tax returns varied by family size, filing status, and income level. EITC Central (eitc.irs.gov/central/abouteitc/ranges/) is an IRS website that provides a summary of the possible range of credit amounts. For taxpayers without children, the maximum tax credit was $464. The tax credit available to taxpayers with qualifying children was substantially more: up to $3,094 for families with one
qualifying child, $5,112 for families with two qualifying children, and $5,751 for families with at least three qualifying children. The credit is phased-out completely at the income thresholds of $49,078, if married filing jointly, or $43,998 if unmarried. In Table 2, the 2011 IRS parameters of the credit, based on filing status and the number of qualifying children in the family are shown.

Table 2. Tax Year 2011 Income Limits and Range of EITC.

<table>
<thead>
<tr>
<th>Number of Qualifying Children</th>
<th>For Single, Head of Household, or Qualifying Widower. Income must be less than:</th>
<th>For Married Filing Jointly. Income must be less than:</th>
<th>Range of EITC</th>
</tr>
</thead>
<tbody>
<tr>
<td>No child</td>
<td>$13,660</td>
<td>$18,740</td>
<td>$2 to $464</td>
</tr>
<tr>
<td>One Child</td>
<td>$36,052</td>
<td>$41,132</td>
<td>$9 to $3,094</td>
</tr>
<tr>
<td>Two children</td>
<td>$40,964</td>
<td>$46,044</td>
<td>$10 to $5,112</td>
</tr>
<tr>
<td>Three or more children</td>
<td>$43,998</td>
<td>$49,078</td>
<td>$11 to $5,751</td>
</tr>
</tbody>
</table>

Source: eitc.irs.gov/central/abouteitc/ranges/

EITC provisions include a phase-in and phase-out, as depicted in Figure 1.

Taxpayers who earn very little income are entitled to only a small tax credit, similar to the small credit available to taxpayers whose earnings total near the top end of the eligible income range.

Mendenhall (2006) described the increases (phase-in), plateaus, and decreases (phase-out) in the EITC benefit amounts. She found that the phase-out for 2008, created a distinct disincentive to increase earnings past the plateau range. Some taxpayers
Figure 1. EITC Structure by Income, Tax Year 2008. Source: Center on Budget and Policy Priorities (2008).

attempt to stay within the plateau range (Cohn, 2010). Trampe (2007) found a small but significant negative effect of hours worked by taxpayers in the phase-out range, yet concluded that the negative effect in phase-out is overshadowed by the overwhelmingly positive effect on increasing hours while in the phase-in range.

Although EITC is only one of many welfare programs, it is unique in that it is distributed to qualified individuals through the federal income tax system. Although the tax credit is authorized by law, the IRS is responsible for administration of the EITC program, including: education and outreach, tax return credit processing, refund distribution, and audit enforcement. Claiming EITC is accomplished by filing a federal tax return and completing the appropriate paperwork to identify the qualified individuals (Mendenhall, 2006). The IRS does not contact individuals and request that a tax return be filed solely to claim EITC. However, according to their website (irs.gov/individuals/article/0, id=123675,00.html), as a courtesy the IRS mails a notice to taxpayers who filed but failed to claim EITC as follows:
We send CP 09 to inform certain taxpayers that they may qualify to take the Earned Income Credit. Information included on a tax return filed by the recipient of this notice indicates they may qualify to receive the Earned Income Credit.

We're sending the notice to inform them of this and to tell them how to claim the credit.

The statute of limitations allows taxpayers to file federal tax returns up to three years in arrears and receive refunds. A claim for EITC is lost if not filed within three years of the due date of the return (IRS Publication 17, 2011).

According to Eissa and Hoynes (2011), the most important feature of the EITC is that it is a refundable credit. The authors portrayed the IRS as an efficient administrator of the welfare benefit, and reported recipients feeling “lower ‘stigma’ with a tax-based benefit, which increases participation in the program and individual welfare” (p. 726). Mendenhall (2006) described how the refundable credit works. The credit is first used to offset tax owed, but the remainder is then refunded to the taxpayer. Many low-income taxpayers do not owe any income tax, and the EITC is then paid out to the taxpayer. For 2011, the EITC refunded amount might have been as high as $5,751. The refund is a windfall to low-income families and is often used for food, clothing, rent, utilities and other necessity items (Smeeding, Phillips, & O’Connor, 2000).

According to EITC Central (the IRS website dedicated to providing EITC resources), 26.8 million tax returns were processed during 2011, claiming $59.5 billion in EITC. The EITC program has grown from humble beginnings in 1975, with a maximum tax credit of $400 per family, to one of the largest federal anti-poverty program in existence (Eamon, Wu, & Zhang, 2009). According to the Center on Budget Policies and
Priorities website (http://www.cbpp.org/cms/index.cfm?fa=view&id=2506), 25 states have implemented supplemental EITC programs offering state EITC credits in addition to those of the federal EITC program. The growth in the program over its history would appear to be accompanied with rave reviews. According to Alstott (2010), “politicians, advocates, and scholars have praised the EITC” (p. 285). However, not everyone is 100% supportive of the EITC as it is structured today.

EITC is a redistribution of wealth program; taxes paid by middle-income and wealthy taxpayers are distributed to the poor as EITC refunds (Eissa & Hoynes, 2011). To qualify for EITC, a taxpayer must have earnings; yet, as one website offering investment advice notes, “to qualify for the [EITC] credit, a taxpayer must earn money, but not too much” (Bell, 2012). While the EITC program encourages taxpayers to work, there is a built-in incentive to limit earnings to maximize EITC refund potential (Eissa & Hoynes, 2011; Mendenhall, 2006; Trampe, 2007).

The complexity and structure of the EITC rules have also produced several unintended consequences. The IRS is very concerned about the perceived lack of participation of EITC eligible taxpayers. According to EITC Fast Facts (eitc.irs.gov/ptoolkit/basicmaterials/ff/), the IRS estimates that about 20% of eligible filers fail to claim EITC and the refund is lost. The complexity is also credited as the reason for taxpayer noncompliance in claiming EITC when not eligible, falsifying income, and claiming dependents fraudulently. Trampe (2007) noted the system incentive to understate income while in the phase-out range and overstate income while in the phase-in range and concluded that “there is believed to be considerable fraud in the EITC” program (p. 315). The EITC is viewed as a generous program with no restrictions
on how the benefit is spent; there is rarely integration with other public benefit programs or wealth-building resources (Mendenhall, 2006). Mendenhall stated that simplification of the EITC rules is a continual goal, yet the complexity seems to grow. The EITC rules are complex and difficult even for educated tax professionals to understand. The key to increasing the correct utilization of the EITC tax credit may lie in the education of these professionals.

Higher Education

Graduating from college with a degree in accounting is likely to lead to assisting others with tax return preparation at some point in the graduate’s future, whether as a paid tax preparer, a volunteer preparer, or simply as a friend or family member. With an undergraduate accounting degree, graduates are often perceived as tax experts.

The curriculum for accounting professionals at many higher education institutions generally includes completion of a course in taxation. However, the taxation course is usually designed to prepare students to work with complex tax issues of wealthy taxpayers or to provide the basics needed to become tax lawyers, with minimal coverage of taxation issues relevant to the poor. Additionally, tax textbooks and course curriculum content rarely focus on tax issues of low-income taxpayers and include only limited information regarding the EITC.

Many higher education institutions sponsor Volunteer Income Tax Assistance (VITA) sites and encourage or require accounting students to participate to satisfy their service learning experience requirement. At the University of Wisconsin-Eau Claire, students must volunteer for at least 30 hours before graduating, half of which can be completed through VITA. VITA sites provide free tax preparation for people earning less
than $50,000 annually, the income limit set to match the EITC maximum earnings limit. If students do not have the opportunity to volunteer at a VITA site, then they may have had little to no exposure to assisting low-income taxpayers with the EITC program.

**Purpose of Study**

This study addressed a gap in current literature by investigating the geographic dispersion of EITC utilization during a ten-year period. The purpose of this study was to provide information for educators and tax policy decision-makers regarding the utilization of this credit, as well as the preparation future accounting professionals have with regard to this program. Tax policy in the United States is in a continual state of reform, and the EITC is always a target whenever tax reform is addressed. With billions of dollars at stake annually and in the nation’s current difficult economic times, the temptation may be to shift EITC funding to other needed areas. This study focused on the dispersion of EITC utilization in western South Dakota, including comparing average EITC credit amounts claimed in metropolitan, rural, and Indian reservation counties. Additionally, higher education institutions were contacted for information on EITC content in accounting program curriculum and textbooks. Finally, educators’ and taxpayers’ perceptions regarding EITC were collected and analyzed to support recommendations for improvements to EITC education and administration.

**Research Questions**

This study was designed to answer three main research questions that relate to Earned Income Tax Credit utilization in western South Dakota:
1. Is there an equitable distribution of EITC utilization across geographic regions or is there a difference based on where taxpayers live (metropolitan vs. rural vs. Indian reservation)?

2. Is there a connection between what is being taught at different higher education institutions and utilization of the EITC in that geographic region?

3. How did the taxpayers who have claimed EITC for multiple years find out about this credit?

The Research Project

In this study, county-level tax return data from 1999-2008 for western South Dakota taxpayers was retrieved from the Brookings Institution and analyzed to determine the utilization of EITC. Summarized tax return “data are derived from the Internal Revenue Service's Stakeholder Partnerships, Education, and Communication (IRS-SPEC) Return Information Databases, [and] compiled by the IRS Wage and Investment Research Unit” (Brookings Institution, 2012b, General Questions, para. 1) before being provided to the Brookings Institution for sharing with the public. The tax data retrieved was quantitatively analyzed to ascertain if there is a significant sustained difference that exists in the average amount of EITC claimed by taxpayers residing on Indian reservations when compared to taxpayers living in metropolitan and non-reservation rural areas. Tax return data and college curriculum data were correlated to determine if there was a connection between EITC utilization and EITC content in higher education institutions close to the locations of the EITC-claiming taxpayers.

A 2011 pilot study, utilizing five years of summary tax return data for western South Dakota taxpayers, indicated that a significant difference exists in EITC utilization
based on the taxpayers’ place of residence. When aggregate level testing was done, no significant difference was found in EITC averages between taxpayers living in metropolitan versus rural areas. However, when the zip code level data was regrouped and tested, segregating the data for counties designated as Indian reservations, EITC utilization differences emerged. In this study, analysis of the data expanded the five-year pilot study to ten years and tested for financial impact of the EITC; additional research utilizing interviews of educators, taxpayers and tax professionals provided insight to the study and helped to explain differences discovered.

The colleges located in western South Dakota (two tribal colleges, one public university, and one private university) that include accounting curriculum were also studied. An analysis of accounting curriculum offered at each institution compared the level of inclusion and emphasis of EITC instruction to accounting students. Textbook comparison analysis focused on EITC content. Tax return data and college curriculum data were correlated to determine if there was a connection between EITC utilization and EITC content in higher education.

This study provided additional information about EITC from a unique vantage point, and will be particularly useful to those who educate accounting students in higher education institutions as well as scholars who study and influence tax policy, particularly legislation specific to the EITC. Educational and outreach materials, generated and utilized by governmental agencies, community organizations, and educational institutions, may benefit by updating that material as a result of this study.
Conclusion

This study provided important information and will be useful to accounting educators, the IRS, tax policy makers, and low-income families. Teaching in higher education regarding tax issues of low-income families might be enhanced, and tax textbooks' coverage of EITC expanded. Future EITC legislation may be impacted because of this new information. Perhaps the most significant impact of this study is that some low-income families may realize that they are cared about by giving them voice and encouragement.

Chapter Overviews

To help readers conceptualize the layout of this study, an outline of the remaining chapters is provided. In Chapter II, the researcher provides a review of current scholarly literature and relevant practitioner resources in the areas of poverty, the impact of poverty on Native Americans, welfare programs and EITC, as well as, higher education accounting programs.

In Chapter III, details are provided to guide the reader through the methodology that was used to collect data for this mixed-methods study. The quantitative portion of the study involved database manipulation and analysis, extracting tax return data from Brooking Institution, using Excel to aggregate it into the regions studied, and calculating averages for comparison. The qualitative part of the study consisted of higher education accounting course curriculum and textbook analysis, and interviews of accounting educators, tax professionals, and taxpayers. The interview questions consisted of several open-ended questions. Accounting program syllabi, course descriptions, curriculum, and textbook selections were scrutinized for level of inclusion of EITC training.
Chapter IV is a report of the findings of this study. Ten-year trend line charts plotting the EITC average refunds and percentage of tax returns filed claiming EITC by region are included with other statistical descriptives. For each group interviewed and accounting education program analyzed, Inductive Analysis was used to group emergent themes.

In Chapter V, the researcher discusses the findings of this study as they relate to the three research questions. Additional information presented includes discussion of practical implications of this study to accounting education in higher education institutions and tax-policy makers. Limitations of this study as well as the future research topics prompted by this research are also described.
CHAPTER II

REVIEW OF LITERATURE

The purpose of this study was to investigate Earned Income Tax Credit (EITC) utilization in western South Dakota. The purpose of this chapter is to report the results of the researcher’s review of related literature, setting the baseline of the state of Earned Income Tax Credit (EITC) and the level of its inclusion in accounting education today. Included will be an introduction to the conceptual framework utilized, as well as a review of the history of the EITC program, federal tax mandates and programs designed to eliminate or alleviate poverty, and accountancy education programs.

Background

There is an abundance of recent studies and writings about EITC, but there seems to be limited research regarding the study of EITC demographics. There has also been an extensive amount of time and effort spent studying ways to assist those in poverty. Add cultural diversity to the mix with poverty and EITC, and the existing relevant literature is scarce, creating a need for this study. College accounting education of future tax professionals has received some research interest. An additional component of this study, combining accounting education, EITC demographics, and EITC utilization, created a ground-breaking area of research with significant practical implications, and includes suggestions for improving higher education accounting curriculum and the efficiency and
effectiveness of the EITC program, with potential parallel application to other welfare programs.

**Conceptual Framework**

Payne (2005) postulated that individuals accustomed to living in poverty think and act differently when compared with those living above poverty levels, implying that behavior choices determine which individuals stay in poverty. Berube (2007) adds a demographic focus and said that where low-income families live impacts the decisions they make and limits their choices; living in poverty and living in geographic areas of poverty give rise to vulnerable households. “The inability of vulnerable households to accumulate assets that increase their income-generating potential perpetuates the vicious cycle of poverty and limits economic development” (Siegel & Alwang, 1999, p. 54) and is the conceptual framework for this study. Siegel and Alwang identified that individuals in low-income households make different choices as they “allocate their assets in response to risk [uncertainty] in the short-term, and how these short-term decisions affect households' welfare and social welfare in the longer-term” (p.vi).

**Poverty**

The measure of poverty is “the extent to which an individual does without resources” (Payne, 2005, p.7). Payne used a holistic approach while defining resources and included not only financial resources, but emotional, mental, spiritual, physical, support system and role models as integral pieces in the definition and study of poverty. Payne asserted that low-income individuals, led with knowledge, resources, opportunities, and support, will make better choices and over the long-term, be lifted out of poverty.
Many individuals perceive poverty with a financial focus, and view the lack of financial resources as the cause of homelessness, hunger, unemployment, and poor health. Others expand the financial focus to include geography. The Federal Reserve System and the Brookings Institution co-sponsored a study, entitled *The enduring challenge of concentrated poverty in America*, in which they construed:

Most Americans view of poverty elicits thoughts about inner cities, isolated rural areas, and Native American reservations. That is, poverty connotes places as well as people. Going further, poverty implies something about the local conditions faced by poor individuals and families in these places: unsafe neighborhoods, failing schools, substandard housing, inadequate private services, and diminished community hope. (2008, p. 3)

The same study introduced the concept of ‘concentrated poverty’ as the tendency of “poor populations to be clustered into very poor communities...placing additional burdens on the poor families that live within them” (p. 3) and suggested that many of the poor exhibit “destructive individual behaviors [that perpetuate] poverty and disadvantage” (p. 4), including violent crime, apathy, lack of skills development, single parenthood, and unemployment.

Based in Washington, D.C., The Brookings Institution, a nonprofit public policy think tank, has an extensive online library of research findings regarding poverty. A Brookings fellow, Alan Berube, testified about poverty before the Committee on Ways and Means, the tax-writing arm of the U.S. House of Representatives. In his 2007 testimony, captured in *The Geography of U.S. Poverty and its Implications*, Berube noted that many problems originate from living in high poverty. The list of problems he cited
included a widening mismatch between skilled workers and employment opportunities, neighborhoods with high crime rates, negative health outcomes, and of particular relevance to this study, a growing lack of interest “in the education and training necessary for labor market success” (2007, p. 3). These problems compound, increasing the number of families living in poverty, and culminate in significantly higher costs of government welfare programs.

Behaviors that contributed to a family’s slip into poverty are repeated and tend to keep them in poverty (Payne, 2005). Lewis (1961) coined the term “culture of poverty” and claimed that the poor have a distinct culture that is self-perpetuating and keeps them in poverty. Franz (2010) agreed, and noted that “the ability to rise above generational poverty is increasingly more difficult” (para. 5). Wiederspan and Danziger (2009) criticized Payne’s (2005, p. 61) claim that people in "generational" poverty share common characteristics of physical aggression, dislike of authority, and an inability to monitor their own behavior, while living in survival mode. “Theoretically grounded, methodologically sound, and carefully executed research has found that, by and large, poor people share mainstream values, but their behavior is often constrained by the structural disadvantages of their environments” (Wiederspan & Danziger, 2009, p. 2). Lamont and Small (2010) agree and stated that “the worldviews of the poor should be captured not by what they are not, but by considering how the living conditions of the poor limit the range of choices available to them” (para. 3). Regardless of shared or differing values, unfortunately, as shown in Figure 2, poverty is on the rise. Although the number of people living in poverty was at an all-time high of 46.2 million in 2010, the
percentage of the population in poverty has consistently fluctuated between 10% and 15% over the last 44 years as depicted by Figure 2.

![Figure 2. Population and Percent in Poverty: 1959 to 2010.](image)

**Cultural Diversity and Poverty**

Studies of the relationship between cultural diversity and poverty have yielded varying results, particularly when determining causation. Studies found that, in cultures outside the mainstream, norms and expectations led to poverty by conditioning poor individuals to fail to succeed (Copestake & Camfield, 2010; Payne, 2005). Lamont and Small (2010) strongly disagreed with the “common and controversial belief about the relationship between culture and poverty [that] posits that the former causes the latter – specifically, that individuals either are or remain poor because of their cultural beliefs and attitudes” (par. 2). They found that within a culture, individuals have unique attitudes and beliefs, and that behaviors are shaped by economic, political, and educational conditions.
as well as cultural conditions. Niskanen (1996) studied the social and cultural indicators related to poverty and welfare dependency and found that poverty is both a consequence and a cause of several conditions best described as social pathologies. These conditions included dependency, poverty, out-of-wedlock births, unemployment, abortion, and violent crime. Niskanen found a poverty decline with an increase in education. Regardless of the direction of causation between culture and poverty, the connection is obvious.

Native Americans. According to the 2010 U.S. Census Bureau statistics, the percentage of South Dakota residents living in poverty was 13.7% overall, yet poverty in each of the four regions of Indian reservations in this study, was in excess of 40.0%. The following statistics of Indian reservation residents living in poverty are: Standing Rock is the lowest at 40.9%, then Cheyenne River at 41.5%, followed by Pine Ridge with 47.3%, and Rosebud at 49.1%. Willeto’s (2007) study compared the 10 indicators of the Kids Count (Annie E. Casey Foundation, 2003) model dimensions of physical health, educational, economic, and social well-being, and concluded that “Native Americans in South Dakota have extremely worse well-being than their non-Native peers” (pp. 168-169). Studies involving Native American families confirmed cultural differences, and those differences created barriers to escaping poverty while living on reservations. Attitudes of leniency, noninterference, and ambivalence to long-term health risks were noted by Hodge and Struthers (2006) and influence behaviors that contributed to perpetual poverty for those living on reservations. Native American community interdependence and family reliance and connectedness, as well as cultural life skills taught to American Indian youth are contradictory to the independence and emancipation
valued in non-reservation society, making it difficult for American Indian youth to break free from generational poverty (Long, Downs, Gillette, Kills in Sight and Konen, 2006). Lyons (2011) mentioned the unique aspect of reservations as Indian sovereign nations, encouraging tribal autonomy; tribal cultural was viewed as an “oppositional culture, a set of attitudes and beliefs fundamentally at odds with those of mainstream society” (Lamont & Small, 2010, par. 14) and on or off reservation. “[Indian] communities confront numerous challenges, such as high rates of poverty, unemployment, teenage suicide, high school dropouts, poor health, and low incomes” (Willeto, 2007, p. 153). Offering a glimmer of hope, Lamont and Small (2010) said that the cultural and behavioral differences, once understood, could be utilized within anti-poverty programs to increase the effectiveness of the programs. Knowledge and recognition of cultural differences help to alleviate the barriers and make it more likely to escape poverty while living on reservations.

Wagner, Edwards, Jorgenson, and Klar (2005) studied the American Midwest Indian reservations households’ spending habits of tax refunds, surveying 2,700 taxpayers who were using Native Volunteer Income Tax Assistance (VITA) sites for tax preparation. They found that more than half of the taxpayers used their EITC refund to “meet basic consumption needs such as groceries, rent, utilities, children’s clothing, and other monthly expenses” (p. 12), rather than saving or wealth building, although 24% did indicate a desire to save in the future. In a follow-up study, Wagner, Edwards, Jorgenson, and Klar (2006) focused on the economic impact to the community of the EITC, and noted that 32% of the Native participants were unbanked, one of the barriers to saving (p. 12).
In their 2006 study, taxpayers again indicated plans to use EITC refunds for basic consumption needs. The authors offer this reflection:

One could interpret this to mean that many people aren’t using this particular extra income to build assets; however, one could also interpret this that respondents are attempting to prevent themselves from falling deeper in debt or poverty…(p. 14).

The authors indicated that saving or wealth building may be less important when taxpayers are struggling just to fund their basic consumption needs, as low-income families may be using EITC refunds to pay debt incurred meeting those basic needs, keeping them in perpetual poverty.

Education is a critical component of any effort to break the cycle of poverty (Smith and DeBord, 2005). Willeto (2007) compared all children in the United States with Native American children nationally, those in New Mexico, and those in South Dakota and concluded that Native American children have comparatively worse well-being rates and that “American Indians have the lowest educational attainment and highest school dropout rates” (p.155). Wagner, et al (2005) inquired about the educational level of the VITA taxpayers they surveyed and found that, of the taxpayers identifying themselves as Native American/Alaska Native, “twenty percent reported having less than a high school degree” (p. 8). In addition to lack of education, Deschenie (2006) described some of those difficulties that remain today for those on the reservations including “high rates of alcohol and substance abuse, suicide, broken families, poverty, and related mental health issues” (p. 1) all of which limit academic achievement. Overcoming the barriers to
further education that reservation inhabitants face as a result of cultural differences makes escaping poverty extremely difficult.

**Geographic Locations & Poverty**

Whether on or off reservation, remote rural locations with small populations exhibit patterns of poverty, including high unemployment, economic isolation, and social problems (Berube, 2007). In *The enduring challenge of concentrated poverty in America* (2008), the authors pointed out that “on many reservations, the problem of poverty is of both people and place, encapsulating the same patterns of geographic and economic isolation, social problems, and unemployment as [those in poverty] in urban settings” (p. 5). Attaining or increasing employment is usually noted as necessary to provide the resources to climb out of poverty; however, many studies ignore the barriers and costs of being employed. Austin and Lemon (2005) called attention to the issue of lack of proximity to good employment opportunities, limiting the ability of those in poverty to build economic self-sufficiency. Austin and Lemon suggested that programs to promote banking, home and vehicle ownership, health improvement, and a community network are needed in poverty neighborhoods. “In the absence of access to banking services, or banking services that offer adequate flexibility to low-income users, customers are forced to use alternate financial services, many of which charge moderate to extremely high transaction costs” (Wagner, et al, 2006, p. 11). The inability to utilize banking services perpetuates poverty as low-income families spend all that they earn.

**Welfare Programs to Improve Poverty**

Hope is not lost, however; many studies focus on the strategies to lift low-income people out of poverty. Most scholars agree that the reduction of poverty and creation of
citizen wealth is good for the society, and many focus on the EITC as the most significant welfare program to accomplish those goals. Austin and Lemon (2005) studied programs (including EITC) that address the challenges that individuals in poverty face to increase economic self-sufficiency. The programs addressed: (a) earnings and asset development, (b) family strengthening, and (c) neighborhood strengthening (p. 91); suggestions included work incentives, assistance establishing banking relationships, tax credits, early childhood education, and community initiatives. In addition to providing tax preparation and information about EITC, free income tax preparation sites (i.e., VITA) for low-income families “provide a venue for linking to benefits programs and financial services” (Holt, 2011, p. 8), connecting low-income taxpayers with asset building resources.

Montoya and Brown (2006) concluded that EITC is a successful instrument for helping to improve taxpayers’ self-sufficiency as their study found a positive association with hours worked and EITC, and noted that the tax credit serves as a supplement to earnings.

Noonan, Smith, and Corcoran (2007) determined that during the economic expansion between 1991 and 2000, a significant increase in the EITC parameters correlated positively with an increase in the percentage of women employed. For unmarried (primarily female) taxpayers with children, the EITC provided financial incentive to work (Meyer & Rosenbaum, 2000). The decline of poverty in the 1990s within inner-city Chicago was attributed to an increase of the number of females employed in response to an incentive to work because of an expansion of the EITC (McDonald, 2004). EITC, coupled with asset development tools, promoted self-sufficiency if combined with family and community strengthening programs.
**Earned Income Tax Credit Program**

As previously mentioned, the EITC program is one of the largest government anti-poverty programs and is a refundable federal income tax credit available to low-income taxpayers. Kneebone (2009) noted that “in 2007, 17% of all tax filers claimed the EITC” during a speech at the National Community Tax Coalition Day of Action in Washington, DC. According to the Internal Revenue Service (IRS), “for 2009, over 26 million people received nearly $59 billion through the EITC” (2012). The EITC program affects almost one in every five taxpayers and is a significant drain on the federal budget. Consequently, the EITC has been an extensively studied area of taxation.

Many studies to date are descriptive, providing a chronicle of EITC since its inception in 1975 (Alstott, 1995; Holt, 2011; Mendenhall, 2006; Phillips, 2001; U.S. Dept of HHS, 2012). Mendenhall’s (2006) article, *A Guide to the Earned Income Tax Credit: What Everyone Should Know About EITC*, provided the historical background of the EITC program from its inception in 1975, detailing the goals and administration of the program. He touted that the EITC “successfully addresses all three of its goals” (p. 58) including lifting poor families out of poverty with financial assistance, providing incentives to work with tax incentives, and reducing the number of families reliant on other welfare programs as poor taxpayers became employed. Mendenhall found that “poverty, as defined by the poverty thresholds, decreases as a result of the credit, and individuals are reinforced for staying in the workforce rather than relying on welfare” (p. 58). Alstott (1995) reported that, when compared with administration of other welfare programs, tax-based administration of the EITC program was cheaper, provided greater accessibility, and reduced stigma for the participants. Holt (2011) called EITC “an
extraordinary public program” and summarized: “its administrative costs to government are low, its participation rates high, and it has proven successful at encouraging work and reducing poverty” (p. 20). The U.S. Department of Health and Human Services, in *Earned Income Tax Credit (EITC): An Overview, March 2012*, described EITC and encouraged participation in the program, but was concerned that many eligible individuals were missing out, and said that on 2010 tax returns, “twenty to twenty-five percent of EITC eligible workers did not claim it, leaving over one billion dollars on the table last year” (para. 1).

Outreach and education about EITC is critical for maximizing participation in the program. Holt (2011) pointed out the sometimes forgotten “need to inform families about the importance of filing a tax return even when not legally required to do so” (p. 2) to claim EITC, and stressed the importance of VITA sites, saying that in 2008, all VITA sites grouped together “may be seen as one of the nation’s largest return preparers” (p. 9), with a strong network for outreach and promotion of the EITC. “VITA programs help low-income, working families make their way through the complicated tax code, claiming the full amount of any tax refunds for which they’re qualified” (NCTC, 2012, p. 7). Supporting the need for EITC outreach and promotion, Phillips (2001) found that knowledge of the program increases participation, encouraged non-working individuals to work, and “knowledge about the program and its ability to ‘make work pay’ helped to improve its political and public appeal” (p. 418). Phillips’ studied demographic differences in knowledge of EITC and suggested additional outreach to low-income Hispanic parents, very poor parents, and Food Stamp participants.
The social policy impact of EITC and its effectiveness has been a focus of many studies and continues to be debated. The National Community Tax Coalition’s (2012) report, *The Earned Income Tax Credit: Good for Our Families, Communities and Economy*, concluded that the EITC helps families avoid poverty, increases educational attainment and strengthens local economies; “yet despite the EITC, the U.S. continues to have a relatively large percentage of its children living in poverty, even among families who participate in the workforce” (Eamon, Wu, & Zhang, 2009, p. 922). Hotz and Scholz (2001) compared EITC to other anti-poverty programs and determined that the EITC was more effective in increasing the standard of living for the poor; however, “EITC recipients are more likely to have bad credit and are more likely to have late debt payments” (Athreya, Reilly, & Simpson, 2010, p. 256). Rathke claimed that the “national consensus around the value of EITC…insures its continuance, protection, and perhaps even its expansion” (2009, p. 1). Nonetheless, Lim, Livermore, and Davis’s (2010) study of EITC eligible families found it “alarming that more than one third of all families receiving the EITC experience food insufficiency” (p. 277) and other material hardships.

The EITC enables a minimum-wage worker to support herself and up to three children at a level of extreme economic and social distress, *provided that* the worker defies the profile of the typical low-income worker and manages to work full-time, year-round, without interruption due to unemployment, underemployment, disability, or family emergency. (Alstott, 2010, p. 313)

As a result of EITC, the increase in employment and income of low-income families was found to correlate positively with health and access to health care (Arno, Sohler, Viola, & Schechter, 2009). On the other hand “just being employed does not represent economic
well-being” (Bialik, 2011, p. 180). Furthermore, because of the phase-out, “on average the EITC reduces the recipient’s incentive to work” (Horowitz, 2002, p. 346). The EITC program is obviously not perfect, but in this researchers agree: without EITC, more low-income families would be living in poverty.

There are a limited number of longevity studies regarding EITC. In one of those studies, an IRS employee (Masken, 2006) tracked actual selected taxpayer data for ten years and determined patterns in tax returns claiming EITC. Masken found consistency in the patterns of filing of tax returns and claiming EITC throughout the ten years, substantiating the propensity of taxpayers to repeat behaviors. Due to the confidential nature of individual tax return information, outside the IRS, researchers are limited to using summarized tax data or survey data for their studies. Horowitz (2002), using the Panel Study of Income Dynamics for 1975-1992, found less consistency and reported that low-income families flow in and out of EITC eligibility. Caputo’s (2010a) seven-year study, using data from the National Longitudinal Survey of Youth 1979, suggested underutilization of the EITC program, finding that about 20% of eligible taxpayers did not claim the credit. Caputo found that “separated, divorced, or widowed persons and their families, as well as women, participate in the [EITC] program at higher rates and more consistently” (p. 13). Holt (2011) reflected on the past ten-years’ accomplishments of the EITC program from a systemic viewpoint, coining the term “EITC Movement”, and described advocacy efforts for the benefit of low-income families, including increased participation in direct deposit of refunds and establishing financial institution relationships. Holt also described the EITC Movement impact on federal tax policy, influencing changes to make the child tax credit refundable for working families and
persistently fighting against paid tax preparers’ use of costly refund anticipation loans. Grogger (2004) utilized the Survey of Income and Program Participation data from 1986 to 1999 to study the relationship between EITC, and confirmed the decline in reliance on other welfare programs as the EITC program expanded.

Many recent EITC studies attempted to draw a correlation between EITC and behaviors, several of which focused on family size and marital status. Baughman and Dickert-Conlin (2009) studied the relationship between EITC and fertility, and speculated that the lure of an EITC refund would be an incentive to have a child. Their overall findings were counterintuitive, and indicated an overall small reduction in births as EITC increased. However, they noted that their finding indicated a small increase in birthrates for white women, and concluded “that white women are more sensitive to the financial incentives of the EITC than non-white women” (p. 559). Chaney (2012) determined that an increase in EITC encouraged unmarried black families, and the author concluded that the EITC should be limited to taxpayers who are married. The EITC for children can only be claimed by the custodial parent, matching the refund to where the children reside; however, Wheaton and Sorensen (2010) suggested that EITC should be extended to include non-custodial parents who fully pay their child support commitment, in spite of the associated administrative difficulties that would be created. Herbst (2011) noted a significant reduction in the abortion rate when associated with an increase in the EITC, and estimated that “a $1000 increase in the EITC maximum credit is expected to reduce the abortion rate by 7.6%” (p. 1650).

Additional studies deal with other behaviors impacted by EITC. Dahl and Lochner (2011) noted an increase in the reading and math achievement of children from
low-income families when associated with extra family income from an increase in
EITC, and stated “since EITC payments explicitly depend on having children in the
household, families may feel some obligation to spend it on their children” (p. 22). The
investment in the children was direct, like buying reference materials and school supplies,
or indirect when the increase in financial resources reduced parental stress or improved
studied the spending habits of EITC recipients, and found that they “spend at least a
portion of their refund immediately upon receipt” (p. 30), and the large tax refund “may
provide low-income, credit-constrained households with a rare opportunity to make
important big-ticket purchases” (p. 17). Larrimore (2011) studied a connection between
increased EITC and health effects and stated that “the evidence of a positive correlation
between individuals’ socioeconomic status and their health outcome is extensive”
(p. 695), although the direction of causation was unclear. The author found that families
with more income are healthier, but concluded that further study was needed to determine
causation. Larrimore suggested that positive health outcomes may result from access to
better health care services available to higher earning families, but also suggested that
being healthier may allow individuals to earn more. While outside the primary focus of
this study, these studies emphasize the importance of the EITC.

According to the Brookings Institution research on fiscal policy and EITC,
(http://www.brookings.edu/research/topics/earned-income-tax-credit), “the Earned
Income Tax Credit (EITC) is a largely successful component of American labor and
antipoverty policy, increasing the ability of workers in low-paying jobs to support
themselves and their families. Work remains to improve the EITC’s effectiveness
including expanding eligibility and increasing participation among those already eligible” (para 1). Berube (2007) stated “to improve economic and social mobility, public policy should first and foremost aim to provide incentives and supports that foster healthy family environments and more equitable opportunities for children regardless of where they live” (p. 7).

The Internal Revenue Service (IRS) is the gatekeeper of EITC administration, and effectively utilizes formal and informal networks to encourage EITC education and outreach and looks to other welfare program successes for additional outreach ideas. In response to President Johnson’s poverty initiatives, “millions of new participants enrolled” in the Food Stamp program, because there was an expansion of the U.S. Department of Agriculture’s (USDA) outlook and outreach program, encouraging rather than discouraging participation (Rathke, 2009, p. 22). The IRS learned from the USDA’s success of enrolling Food Stamp recipients that education is crucial, and currently uses the internet to provide EITC information to taxpayers and tax preparers.

In an effort to improve EITC participation and knowledge, the IRS established EITC Central at www.eitc.irs.gov, a dedicated IRS website for EITC outreach and education. Several IRS publications describe in detail the EITC program and encourage participation of eligible taxpayers. IRS Publication 596, entitled *Earned Income Credit* and available at irs.gov/pub/irs-pdf/p596.pdf, is updated annually and, for 2011 tax returns, is a 68 page brochure explaining, in laymen’s terms, how EITC works. The EITC rules are extremely complex, and the IRS is continually searching for ways to effectively communicate the requirements and benefits of EITC.
Prior studies have documented the reluctance of taxpayers to give up resources in the redistribution of wealth, yet those receiving the benefits are sometime reluctant as well, and are less studied. Caputo (2010b) found a significant under-utilization of EITC claims and suggests lack of education and unwillingness to participate as factors. Barriers to claiming EITC include the stigma associated with being a welfare recipient, limited banking relationships when direct deposit of refunds are encouraged, limited access to free tax preparation services, and lack of education regarding the availability and applicability of EITC (Eamon, Wu, & Zhang, 2009). Limited proficiency in speaking English was a barrier to EITC participation found by Gudmunson, Son, Lee and Bauer (2010); their study confirmed that higher level of education of mothers, access to tax preparation services and participation in other welfare programs encouraged EITC participation. Nonetheless, they speculated that interviews with the study participants had an intervention effect, as participation increased 21% from the first year of their study to the second year. They noted an association of EITC with financial distress and concluded “even with the receipt of the EITC, families earning very low income may be overwhelmed with the inability to meet their financial needs and responsibilities, which keeps them in persistent financial stress” (p. 379). Lim and Lemieux (2008) also say that the EITC amount is not enough to be a viable wage subsidy, and stress that EITC should not be considered a replacement for other welfare programs:

The EITC cannot and should not replace the financial safety net for those who either cannot work or should not be expected to participate in the labor market, including single mothers with few work support resources who are rearing young children. (p. 61)
The EITC requirement to work may have unintended consequences, leaving low-income families ineligible for other welfare benefits like Medicare. Facing material hardships and disadvantages (including lack of access to medical services), food insufficiency, utility disconnections, and housing problems were found to be common themes among the EITC eligible families studied by Lim, Livermore, and Davis (2010). They found that the hardships partially resulted from the lack of banking relationships, employment in jobs not providing health insurance, and the inability to afford good housing.

EITC, like other welfare programs, was not meant to keep those receiving the benefits in the system, but to assist those in poverty to survive through difficult times and begin to build wealth, increasing self-sufficiency. Cohn (2010) discussed the concept that some EITC recipients develop a dependence on the system and view the “IRS as sugar daddy” (p. 1). Unfortunately, EITC has a built-in disincentive to growing out of the program and it “created deep disadvantages for low-wage workers and their children” (Alstott, 2010, p. 287). Also, the EITC requirements are standardized, “ignoring the frequent spells of job disruption due to unemployment, disability, and family needs that are common among low-wage workers” (p. 288). In calculating EITC, when earnings exceed roughly $1,000 per month, EITC benefits are reduced, creating a work disincentive (Beamer, 2005); “taxpayers familiar with the structure of the EITC can manipulate their earned income” (Schmidt & Werner, 2005, p. 28) to remain within the phase-in and phase-out limits. “The EITC may discourage work for some taxpayers (such as families with two earners) who can decrease hours worked and still have the same amount of money due to the credit” (Mendenhall, 2006, p. 60). Mendenhall pointed out that combining the work disincentive with an insufficient benefit level for larger families
and the very poor makes the EITC inadequate for lifting those groups out of poverty and summarized this effect as follows: “An insufficient benefit could have opposite the desired effect by driving individuals or families back to welfare” (p. 64).

Alstott (1995) warned of the “inherent disadvantages of a tax-based program: less accurate targeting, less responsiveness to changing needs, and vulnerability to noncompliance” (p. 589). Mendenhall agreed that “noncompliance has been a longstanding weakness of the EITC” (2006, p. 65). Noncompliance, claiming EITC in error, may result from honest mistakes, intentional or inadvertent misinterpretations, intentional fraud, or lack of knowledge of EITC criteria (IRS, 2010). Masken (2006) described the difficulty when determining the number of children for EITC purposes; after applying age, relationship, and residency tests, concludes that “it is possible for a child to be claimed correctly by one taxpayer as a dependent and by another as a qualifying child” (p. 112). Masken suggested that more study is needed to “understand why some children are claimed by more than one taxpayer, particularly in one given year” (p. 113). Understanding the complexities of the EITC rules is difficult and “the final key to battling ignorance about the EITC is to ensure that professionals and those who work with low-income individuals know about and understand the EITC” (Mendenhall, 2006, p. 62), including accounting graduates trained as tax professionals.

**College Accounting Programs**

“[John] Dewey’s idea of systematically solving problems coincides with how most accountants view their work role and appears to be a major force driving the framework of accounting education to this day” (Crawford, 2008, p. 5). Dewey (1916) advocated for progressive education and interactive learning, and emphasized
incorporating problem solving with critical thinking skill development. Dewey believed that education should balance imparting content knowledge with hands-on learning opportunities for students, and he stressed the importance of learning with reflection and critical thinking. According to DeLaune (2004), accounting education is effective as graduates are equipped with the necessary technical knowledge and resources, and have also developed competencies in problem-solving, reflection, and critical analysis.

Two major areas of current research in accounting education are: an increased focus on ethics (Main, 2009), and the increased undergraduate credit hour (150) requirement needed before students or graduates are eligible to take the Certified Public Accounting (CPA) exam (Crawford, 2008; DeLaune, 2004). Another theme of study is comparative analysis of education delivery style, comparing online and traditional methods (Connor, 2009). In other scholarly studies, Burke, Katz, Handy and Polimeni (2008) make the case for training accounting students to be more “research literate” (e.g., extracting, critically analyzing, and applying relevant information). Although worthy accounting education study topics, ethics in accounting education, the 150-credit hour requirement, course delivery style and graduates’ research abilities are all peripheral to this study.

**Summary**

This literature review provided an overview of the history and importance of the EITC program, analysis of the need for cultural sensitivity and welfare programs to eliminate or alleviate poverty, and addresses current higher education accountancy education program standards with focus on education about EITC. This study will
combine accounting education, EITC demographics (cultural diversity), and EITC utilization to fill a gap in literature.
CHAPTER III

METHODOLOGY

Introduction

The purpose of this study was to investigate Earned Income Tax Credit (EITC) utilization in western South Dakota. This study addressed a gap in current literature by studying the geographic dispersion of EITC utilization during a ten-year period. This chapter contains a description of the methods used to conduct this study, both quantitative and qualitative. The procedures used for data collection (database retrieval and interviews) as well as the data analysis methodology used are also described. This study was approved by the University of North Dakota’s Institutional Review Board (IRB) under project number IRB-201112-159.

The study was designed as a mixed-methods study with the following questions as guides for the research:

1. Is there an equitable distribution of EITC utilization across geographic regions or is there a difference based on where taxpayers live (metropolitan vs. rural vs. Indian reservation)?

2. Is there a connection between what is being taught at different higher education institutions and utilization of the EITC in that geographic region?

3. How did the taxpayers who have claimed EITC for multiple years find out about this credit?
The researcher selected a mixed-methods approach for this study. According to Creswell (2012) “a mixed methods design involves the collection, analysis, and ‘mixing’ of both quantitative and qualitative data to understand a research problem” (p. 558). Research is accomplished with a three-step process that starts with posing a question, followed by collecting and analyzing data, and culminates in communicating the results with the goal of increasing understanding and suggesting improvements with practical application. This definition of the research process is not unique to qualitative, quantitative, or mixed method design of research; it is universal. However, in a mixed methods design, establishing sequence and priority is critical (p. 558).

A portion of this study will focus on quantitative research. Quantitative research “leads us to regard the world as made up of observable, measurable facts” (Glesne & Peshkin, 1992, p. 6) and requires “thinking of the world in terms of variables and correlations [instead of] in terms of events and processes” (Maxwell, 2010, p. 477). The information obtained during quantitative research is precise, narrow, and reductionist according to Merriam (1988, p. 18). Merriam stresses that, in quantitative research, quantity takes priority over quality, and deductive (statistical) analysis is performed on data collected with inanimate instruments. Golafashani (2003) described quantitative research as “logical positivism” (p. 597). Positivism, according to Lincoln and Guba (2000), is a viewpoint that assumes an objective external reality and emphasizes the need for the researcher to be objective in accessing that reality, with focus on assessing cause-effect correlations and generalizability.
Qualitative research is less about measuring or using statistical analysis to explain commonalities; it is about gathering thick descriptive data and, during data analysis, recognizing common themes as they emerge to develop understanding. Merriam (1988) described the kinds of information obtained in qualitative research as comprehensive, holistic, and expansive; the focus of the research is to search out the nature or essence or to develop deeper understanding or discovery (p. 18). “Qualitative research seeks to probe deeply into the research setting to obtain in-depth understandings about the way things are, why they are that way, and how the participants in the context perceive them” (Gay, Mill, & Airasian, 2009, p. 12).

Not all researchers agree that quality research should be purely quantitative or qualitative. Glesne (2011) believes that similar elements are used by qualitative and quantitative researchers and “their methods should be viewed as more on a continuum than as a dichotomy” (p. 4). Golafshani (2003) agreed and asserted that “reliability, validity, trustworthiness, quality and rigor” are important regardless of the type of study (p. 602), but noted that generalizability is the most significant factor that distinguishes quantitative and qualitative research methodologies.

**Mixed-Method Design**

This study used a mixed-method research design, combining quantitative and qualitative methods. The sequence and priority chosen for this study followed the explanatory sequential design (Creswell, 2012, p. 542), in which quantitative data collection and analysis is followed by qualitative collection and analysis. According to Creswell, “the rationale for this approach is that the quantitative data and results provide a general picture of the research problem; more analysis, specifically through qualitative
data collection, is needed to refine, extend or explain the general picture” (p. 542). In this
study, quantitative data (tax return data) collection and analysis was followed by
accounting education program comparison and analysis and interviews with
administrators and taxpayers. Gay, Mills and Airasian (2009) entitled this type of research
the QUAN-Qual model (p. 463). Quantitative analysis was collected first to determine the
effects of the EITC program, and qualitative analysis helped “to explain or elaborate on
the quantitative results” (p. 463). This research design, “using both forms of data allows
researchers to simultaneously generalize results from a sample to a population and to gain
a deeper understanding of the phenomena of interest” (Hanson, Creswell, Plano Clark,
Petska, & Creswell, 2005, p. 224). Generalizability of the findings of this study to the
population is one goal of this research, particularly the findings enhanced by the thick
data obtained through qualitative methods.

Triangulation strengthens the validity of this mixed methods study by combining
database analysis with interviews of taxpayers and regional educational program analysis.

The core premise of triangulation as a design strategy is that all methods have
inherent biases and limitations, so use of only one method to assess a given
phenomenon will inevitably yield biased and limited results. However, when two
or more methods that have offsetting biases are used to assess a given
phenomenon, and the results of these methods converge or corroborate one
another, then the validity of inquiry findings is enhanced. (Greene, Caracelli &
Graham, 1989, p. 256)
Data Collection and Analysis

This section contains a description of the venue for each portion of the study, the data to be collected, and the procedure utilized for data analysis. The study covers six regions of western South Dakota; this included metropolitan, rural, and four Indian reservations. The data collected included tax return information from 1999-2008, accounting program curriculum from higher education institutions in the regions under study, and taxpayer and tax professional perceptions of EITC. Related to the mixed-methods nature of this study, data analysis will be described immediately after the data collection narrative.

Quantitative Venue

A premise of this study was that location matters; where people live makes a difference in their behaviors and attitudes, impacting the effectiveness of welfare programs. The researcher chose to study EITC utilization in western South Dakota, because the demographics included the desired geographic dispersion of metropolitan, rural and Indian reservation counties. The U.S. Census Bureau reports on 2010 statistics indicated that approximately 10% (roughly 82,000 people) of the population in South Dakota are Native American, the majority of who reside in the western half of the state.

West of the Missouri River, there are 22 counties in South Dakota. According to the Census Bureau, two of the counties (Pennington & Meade) are considered metropolitan. The Census Bureau labeled population centers as metropolitan regardless of actual population count, but defined metropolitan as population centers with economic and social integration with surrounding communities. Based on Census population estimates for 2011, Pennington County (102,815) and Meade County (25,546) are the
only metropolitan counties in South Dakota, and they comprised the social, economic, and population center of the area for this study. According to the Census Bureau website (quickfacts.census.gov/qfd/states/46000.html), 2011 estimates of the population in western South Dakota totaled 246,792, which is roughly 30% of the population of the state of South Dakota (824,082). For the purpose of this study, counties will be classified as metropolitan or rural, consistent with Census Bureau classification of each county. Counties entirely within reservation boundaries were then reclassified as Indian reservation. Table 3 shows the Census Bureau estimated population, population density, and classification for each county in this study. The population density is provided to give the reader perspective on the rural nature of the geographic regions being studied, including one rural county (Harding) with a population density of less than one person per square mile.

Five of the counties in western South Dakota are entirely within an Indian reservation. The counties and associated Indian reservations are: Dewey and Ziebach counties – Cheyenne River; Corson county – Standing Rock; Shannon – Pine Ridge; and Todd – Rosebud. Although some reservation land lies outside the county borders, the data from the counties specified will be used in this study and deemed representative of each reservation. The South Dakota county map (Figure 3) gives the reader of this study perspective as to the geography studied. The dark line indicates the path of the Missouri River, and illustrates how the river divides the state between east and west. Note that two reservations (Cheyenne River and Standing Rock) are near the North Dakota border,
Table 3. Demographics of Counties in Western South Dakota.

<table>
<thead>
<tr>
<th>County</th>
<th>2011 Estimate of Population</th>
<th>2010 Persons per Square Mile</th>
<th>Study Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bennett</td>
<td>3,441</td>
<td>2.9</td>
<td>Rural</td>
</tr>
<tr>
<td>Butte</td>
<td>10,259</td>
<td>4.5</td>
<td>Rural</td>
</tr>
<tr>
<td>Corson</td>
<td>4,022</td>
<td>1.6</td>
<td>Reservation</td>
</tr>
<tr>
<td>Custer</td>
<td>8,338</td>
<td>5.3</td>
<td>Rural</td>
</tr>
<tr>
<td>Dewey</td>
<td>5,421</td>
<td>2.3</td>
<td>Reservation</td>
</tr>
<tr>
<td>Fall River</td>
<td>6,981</td>
<td>4.1</td>
<td>Rural</td>
</tr>
<tr>
<td>Gregory</td>
<td>4,216</td>
<td>4.2</td>
<td>Rural</td>
</tr>
<tr>
<td>Haakon</td>
<td>1,907</td>
<td>1.1</td>
<td>Rural</td>
</tr>
<tr>
<td>Harding</td>
<td>1,269</td>
<td>0.5</td>
<td>Rural</td>
</tr>
<tr>
<td>Jackson</td>
<td>3,169</td>
<td>1.6</td>
<td>Rural</td>
</tr>
<tr>
<td>Jones</td>
<td>1,003</td>
<td>1.0</td>
<td>Rural</td>
</tr>
<tr>
<td>Lawrence</td>
<td>24,312</td>
<td>30.1</td>
<td>Rural</td>
</tr>
<tr>
<td>Lyman</td>
<td>3,806</td>
<td>2.3</td>
<td>Rural</td>
</tr>
<tr>
<td>Meade</td>
<td>25,546</td>
<td>7.3</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>Mellette</td>
<td>2,067</td>
<td>1.6</td>
<td>Rural</td>
</tr>
<tr>
<td>Pennington</td>
<td>102,815</td>
<td>36.4</td>
<td>Metropolitan</td>
</tr>
<tr>
<td>Perkins</td>
<td>3,001</td>
<td>1.0</td>
<td>Rural</td>
</tr>
<tr>
<td>Shannon</td>
<td>13,928</td>
<td>6.5</td>
<td>Reservation</td>
</tr>
<tr>
<td>Stanley</td>
<td>3,002</td>
<td>2.1</td>
<td>Rural</td>
</tr>
<tr>
<td>Todd</td>
<td>9,822</td>
<td>6.9</td>
<td>Reservation</td>
</tr>
<tr>
<td>Tripp</td>
<td>5,615</td>
<td>3.5</td>
<td>Rural</td>
</tr>
<tr>
<td>Ziebach</td>
<td>2,852</td>
<td>1.4</td>
<td>Reservation</td>
</tr>
<tr>
<td>Total-western SD</td>
<td>246,792</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Created from data at: quickfacts.census.gov/qfd/states/46000.html

while the other two reservations (Pine Ridge and Rosebud) share their southern border with the state of Nebraska.

Database

A trend study longitudinal design (Creswell, 2012) was used for this portion of this study. Creswell described the trend study as a useful design for studies that “involve
Figure 3. Map of South Dakota Counties, Divided by the Missouri River.

identifying a population and examining changes within that population over time” (p. 379). In this study, the researcher did not collect the data over time, but relied on a database of tax return data collected by the IRS.

Tax return information is confidential, and the IRS is unable to provide individual taxpayer data without taxpayer consent, even for research purposes. However, the IRS does value research, and has entrusted the Brookings Institution with summary tax data from 1997 through 2008, and relies on the Brookings Institution to maintain a downloadable database available to the public through the internet. At the website, brookings.edu/research/interactives/eitc, reports were generated to select tax data separately for each of the ten years being studied. The tax return data available for download included the number of tax returns filed by ZIP code, the county of residence,
the number of tax returns claiming EITC, and the aggregate dollar amount of EITC claimed. The tax data is only summary data; therefore, no individual taxpayer can be identified.

**Quantitative Analysis**

Tax return information for 1999–2008 for each ZIP code in South Dakota was downloaded from the Brookings Institution database website into separate reports for each year, all with a Microsoft Excel format. Using Excel, the data for each year were sorted into counties, and the data records for the counties east of the Missouri River were eliminated. The data were then sorted by county into the regions of metropolitan, rural or entirely within Indian reservation boundaries. The tax data for residences on the Indian reservations were then further disaggregated into the four reservations of Cheyenne River, Pine Ridge, Rosebud, and Standing Rock. The average EITC refund claimed was calculated for each year studied and was based on the number of EITC tax returns filed and the aggregate number of EITC claims in each region. Tables and graphs were prepared in Excel to display the ten-year trend of average EITC claims and percentage of tax returns claiming EITC by region. Descriptive statistical analysis, including trend analysis, was used to describe the relationship between residence and EITC utilization between 1999 and 2008.

**Qualitative Venue**

Western South Dakota is host to a variety of higher educational institutions, which are geographically spread throughout the regions studied. Four higher educational institutions offer bachelor-level undergraduate accounting degrees in western South Dakota: two are tribal colleges, one is a private university, and the other is a public
university. Oglala Lakota College (OLC), a tribal college on the Pine Ridge reservation, was recently recognized as the only tribal college among 32 colleges applauded for “showing promise in increasing [degree] completion for underrepresented students” (Hawkins, 2011, p. 1). This recognition is particularly impressive when realizing that “more than 65% of entering freshmen at OLC require some remedial education to prepare them for college-level coursework”, and the odds of completing college are reduced for low-income and minority students (“OLC recognized”, 2012, p. 1). The vision of Sinte Gleska University (SGU), the other tribal college in this study, is to develop graduates who are motivated toward community building, as well as understanding and reflecting Lakota values and culture. SGU is located on the Rosebud Indian Reservation. The private institution in the region studied, National American University (NAU), offers accounting education at the Rapid City campus (Lawrence County) as well as providing online instruction. Rounding out the group of institutions is Black Hills State University (BHSU), a public institution offering both types of accounting degrees: a four-year (120 credit hours) program and a five-year (150 hours) program to accommodate students planning to take the Certified Public Accountants (CPA) exam. BHSU is located in Spearfish (Lawrence County), only ten miles from the Wyoming border.

Accounting program curriculum requirements at all four institutions were retrieved from the institutions’ websites. Syllabi were collected for courses on taxation from each institution when applicable. A table was created in Excel to provide a side-by-side comparison of educational credit hour requirements at each institution. The textbook used for each taxation course was reviewed for depth of coverage of EITC, and the course instructor was interviewed regarding the level of EITC coverage within the
course. In addition to the study of accounting programs at educational institutions, taxpayers and tax professionals were interviewed to determine their perceptions of EITC and how they first learned about EITC.

**Instrument**

An important data collection method used in qualitative research involves interviewing participants. Roulston (2010) stressed importance in developing the expertise to conduct “authentic interviews, and reflecting on those experiences” (p. 6). The researcher chose to briefly interview three groups of participants: educators teaching higher education accounting courses in taxation; IRS employees and VITA site coordinators; and taxpayers located in each geographic region studied. Interview questions were designed by the researcher, following the advice of Patton (2002) with “open-ended, neutral, singular and clear” questions (p. 353).

All interviews were conducted over the telephone. The researcher documented the participants’ responses to each of the open-ended questions by taking detailed notes of their responses. The responses recorded were not intended to be verbatim, and participants were told that they would not be quoted without their permission. However, several participants were asked during the telephone conversations for permission to include a particular quote from them, and upon agreement, the quote was repeated back to the participant to verify accuracy. No tax data unique to any taxpayer was collected to assure anonymity of interviewees. Immediately after each interview, hand written notes were typed into Microsoft Word by researcher, including notations made by researcher of interview impressions.
One accounting professor teaching the taxation course was identified at each institution, and was interviewed about EITC coverage within the course that each taught. The questions asked of accounting professors were as follows:

1. In the courses you teach, what do you teach about Earned Income Tax Credit (EITC)?
2. Is there anything in the textbook you use that mentions EITC? If yes, which textbook do you use?
3. Do you use any other resources to educate students of EITC? Specify.
4. Is there anything else you would like to add?

The textbook identified for each taxation course was reviewed for depth of coverage of EITC. Themes from the educator interviews and textbook analysis results were correlated with quantitative data analysis of EITC utilization by region to answer the second research question.

Four IRS employees and four VITA site coordinators were contacted via telephone and asked for their voluntary participation in a brief interview. They were asked to answer five open-ended questions regarding their involvement with taxpayers and EITC. The questions were to provide insight regarding taxpayers’ knowledge of EITC from the tax return preparer perspective. The questions were as follows:

1. How long have you worked within the region?
2. How do you explain the Earned Income Tax Credit (EITC) to taxpayers?
3. How do you think taxpayers first learn about EITC?
4. In what ways do you think the EITC helps to improve taxpayers’ lives?
5. Are there any ways that the EITC hurts taxpayers?
The final research question of this study related to how taxpayers originally discovered EITC. To collect data to answer that question, two taxpayers in each region being studied were asked to respond to the following questions:

1. What City is listed as your residence on your most recent tax return?
2. How long have you lived in the region?
3. Do you prepare your own tax return? If not, who does?
4. What do you know about the Earned Income Tax Credit (EITC)?
5. How did you first learn about EITC?
6. In what way does the EITC help improve your financial condition/life?

**Interview Participants**

The researcher had previous experience assisting low-income taxpayers with tax problems and chose to interview taxpayers previously assisted and known to have experience with EITC. These taxpayers possessed the information sought by the researcher through interview questions regarding how the taxpayers first learned about EITC. Two taxpayers were selected in each of the regions to be studied (metropolitan, rural, and each of the four reservations) and were contacted by telephone to participate in this study. This type of selection of taxpayers for interviews is what Creswell (2012) described as a convenience sample, because “the participants are convenient to the researcher and are available for the study” (p. 146). The conversations were not recorded, and the participants were assured that any information they provided would not be recorded in any way identifiable to them. The participants were informed that they could terminate the telephone call at any time, although no call was ended before the interview questions were completed. The researcher’s previous contacts with IRS employees and
Volunteer Income Tax Assistance (VITA) site coordinators in western South Dakota were selected as interview participants. The participants were contacted by telephone to discuss their experiences assisting taxpayers with EITC.

Qualitative analysis of syllabi, textbooks and interviews with faculty at institutions of higher education in the geographic region under study provided data regarding what is currently being taught to future tax professionals. Interviews of individual taxpayers, a convenience sample from each region, were analyzed for recurring themes. Creswell’s (2012, p. 248) theme categories of ordinary themes, unexpected themes and hard-to-classify themes were utilized for data analysis. Emerging themes were matched to the results of the quantitative statistical analysis, and provided support for any differences found between regions.

As previously mentioned, triangulation was used in this study and strengthened the validity of the study. Lincoln and Guba (1985) stated that: "Since there can be no validity without reliability, a demonstration of the former [validity] is sufficient to establish the latter [reliability]" (p. 316). Patton (2002) concurred, and said that establishing reliability is reliant on establishing validity. Roulston (2010) used the term “quality” to encompass reliability and validity, as well as trustworthiness and transferability and suggested utilizing triangulation to demonstrate “quality” (p. 83). Even Creswell (2012) admitted that “reliability and validity are bound together in complex ways” (p. 159) and encouraged using triangulation “in order to provide a more complete picture” (2012, p. 536). Golafshani (2003) declared triangulation “a strategy (test) for improving the validity and reliability of research or evaluation of findings” (p. 603). Scholars agree that triangulation, validity and reliability are interrelated. Data credibility is
also important and thick descriptions, rather than just summaries, are critical to lend credibility to the qualitative data collection process.

Chapter Summary

This chapter was divided into three main sections. In the first section, the researcher described quantitative and qualitative research methods, as well as their sequence and priority in this mixed methods study. The second section included a description of the quantitative portion of this study that included the venue, description of the data that was retrieved, the data retrieval process, and the procedures used for data analysis. The study covered six regions of western South Dakota, that included metropolitan, rural, and four Indian reservations. The final section outlined the qualitative study, data collection process, and identification of emerging themes. The following chapter contains the results of this study.
CHAPTER IV

DATA ANALYSIS

Introduction

The purpose of this study was to investigate Earned Income Tax Credit (EITC) utilization in western South Dakota. This chapter describes the demographic components of the study and provides the results of the research conducted to answer the research questions.

Earned Income Tax Credit Demographic Characteristics

Geographic Location

The 22 counties in western South Dakota that were studied were initially grouped into six regions. Two counties were metropolitan (Rapid City), four Indian reservations (Cheyenne River, Pine Ridge, Rosebud, and Standing Rock) were in five counties, and the remaining 15 counties were identified as rural. Although the Indian reservation land overlapped into several counties, for statistical analysis purposes, the only counties included as Indian reservation were those in which the entire county lay within reservation boundaries.

Calculations from the 2010 U.S. Census Bureau report indicated that more than 32% of the residents of South Dakota live in the western half of the state, with an overall average of almost 20% of those living in poverty. Significantly higher poverty percentages were found within Indian reservation counties.
Poverty

U.S. Census Bureau 2010 Quick Facts estimates illustrated that the percentage of persons living below the poverty level is similar in South Dakota (13.7%) to the nationwide average (13.8%). However, the percentage of people in poverty is significantly higher in counties that are within western South Dakota Indian reservations. Ziebach County, one of the two counties within the Cheyenne River reservation, made national news as the poorest county in the nation when the 2010 poverty statistics were released, where more than half of the population lived in poverty (Rampell, 2011).

Table 4 is a compilation of the U.S. Census Bureau estimates of the average percentage of all people living in poverty within each region studied, presenting averages from 1999 and 2010. The United States and South Dakota averages are displayed for comparison purposes. One notes that while the percentage of people living in poverty increased from 1999 to 2010 in the United States (11.3%) and in the metropolitan (10.3%) and rural (10.9%) regions of South Dakota, the overall percentage for South Dakota decreased by 13.8%. Each of the reservation regions studied showed reductions, while Pine Ridge exhibited the highest percentage reduction of 25%.

As shown in Table 4, each of the four reservations in this study revealed reductions in poverty from 1999 to 2010; however, over 40% of all reservation residents still lived in poverty in 2010. In contrast, the percent of residents in the United States in poverty in 2010 was only 13.8%, while South Dakota had 13.7% living in poverty.
Table 4. Percent of Population Living in Poverty.

<table>
<thead>
<tr>
<th>Region</th>
<th>1999 Percent Living in Poverty</th>
<th>2010 Percent Living in Poverty</th>
<th>Percent of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>12.4</td>
<td>13.8</td>
<td>11.3</td>
</tr>
<tr>
<td>South Dakota</td>
<td>15.9</td>
<td>13.7</td>
<td>-13.8</td>
</tr>
<tr>
<td>Metro</td>
<td>11.7</td>
<td>12.9</td>
<td>10.3</td>
</tr>
<tr>
<td>Rural</td>
<td>13.8</td>
<td>15.3</td>
<td>10.9</td>
</tr>
<tr>
<td>Cheyenne River</td>
<td>47.8</td>
<td>41.1</td>
<td>-14.1</td>
</tr>
<tr>
<td>Standing Rock</td>
<td>42.5</td>
<td>40.9</td>
<td>-3.8</td>
</tr>
<tr>
<td>Pine Ridge</td>
<td>63.1</td>
<td>47.3</td>
<td>-25.0</td>
</tr>
<tr>
<td>Rosebud</td>
<td>50.2</td>
<td>49.1</td>
<td>-2.2</td>
</tr>
</tbody>
</table>

Adapted from U.S. Census Bureau Quick Facts

Research Question Number One

Research question number one asked if EITC utilization is different based on where people live. This question was answered with several calculations, the results of which are presented in the figures and tables to follow. As a first step, yearly averages of EITC claim amounts were calculated for each of the six regions and plotted on a line graph (Figure 4). As a result of visual inspection of the graph, the researcher noted a consistent increase in the average dollar amount of EITC claims, with the tax returns from Indian reservation counties averaging higher claim amounts than Metro and Rural returns.

Because differences were observed between the regions and each of the reservations, additional analysis was performed to determine the percentage of returns filed that included an EITC claim. Figure 5 illustrates the percentage of tax returns for each region that included an EITC claim. Pine Ridge and Rosebud consistently grouped
Figure 4. Average EITC Claim Amounts per Region.

together at the top, with a higher percentage of returns claiming EITC, significantly higher than Cheyenne River and Standing Rock. In descending order, the region and the 2008 average percentage for each region in this portion of the study were Pine Ridge (58%), Rosebud (57%), Cheyenne River (42%), Standing Rock (42%), Rural (18%), and Metro (17%).

Initial analysis of Figures 4 and 5 led the researcher to conclude that three regional groups existed: the southern reservations of Pine Ridge and Rosebud; the northern reservations of Cheyenne River and Standing Rock; and the combined Rural and Metro regions. To determine if three distinct groups existed, the zip code level data was
aggregated into the three regional groups identified above, both for the percentage of returns including EITC and the dollar amount of those EITC claims.

Figure 5. Percentage of Tax Returns Claiming EITC.

T-tests were performed in SPSS using the percentage of returns including EITC, with each of the ten years tested independently. The descriptive statistics for the percentage of returns claiming EITC are reported in Appendix A, including the number of zip records in each group (N), the mean (M) and the standard deviation (SD) for each year. The most recent year studied was 2008, in which the mean of the percentage of returns claiming EITC for each group was as follows: 59.1% for Pine Ridge/Rosebud; 36.4% for Cheyenne River/Standing Rock; and 19.8% for Metro/Rural. Each of the three
regional groups were then subjected to paired t-tests, finding significance at the p<.001 level for all ten years among all three groups (Appendix B).

Utilizing SPSS, t-tests were performed on the average EITC dollar amounts claimed for each of the ten years studied. The descriptive statistics of the average EITC dollar amount claimed in each year for each group are reported in Appendix C, including the number of zip code records in each group (N), the mean (M) and the standard deviation (SD) for each year. The most recent year studied was 2008, in which the mean of the EITC claimed for each group tested was as follows: $2,275 for Pine Ridge/Rosebud; $2,039 for Cheyenne River/Standing Rock; and $1,860 for Metro/Rural. Appendix D includes the t-test results, and reports a statistically significant difference among the three groups at the p< .05 level.

There was only one group comparison that did not have significant distinction; comparing the Metro/Rural with Cheyenne River/Standing Rock groups resulted in inconsistencies. The t-test results of the percentages of returns filed confirmed a significant difference between the groups in all ten years studied. Analysis of the same ten years of t-test results comparing the average EITC amounts revealed inconsistencies (Appendix D). From 1999 through 2003, and again in 2005 and 2007, there was a lack of statistical significance in the difference between the two groups.

**Higher Education Demographic Characteristics**

It has frequently been said that knowledge is power, and the tax knowledge gained by accounting students within higher education is powerful when shared with the members of their communities, empowering taxpayers to receive full benefit of tax credits like the EITC. Four higher educational institutions offer accounting degree
programs within the region studied. All four institutions are accredited; however, two of the four are tribal colleges, one is a public institution and the other is a private university. The tribal colleges are Oglala Lakota College (OLC) and Sinte Gleska University (SGU). Black Hills State University (BHSU) is a public university, and National American University (NAU) is private.

Many higher educational institutions have associations with VITA programs, to ensure that low-income community members have access to free income tax preparation. The association may be informal, providing the network to connect the VITA programs with student volunteers. Other institutions sponsor their own VITA sites and require “volunteer” participation as part of the accounting program curriculum, utilizing the students as a captive group of trained tax preparers.

Research Question Number Two

Research question number two asked if there is a connection between the proximity of a higher educational institution offering an accounting program when compared with the EITC utilization in the corresponding region. The EITC utilization in each region was previously discussed above. This question was answered with analysis of the accounting program requirements at each higher educational institution with the study locality, including examination of EITC content coverage within required courses. It is noteworthy that for the years of this study, there is an absence of a higher education institution located within either of the two northern reservations in western South Dakota (Cheyenne River and Standing Rock). Standing Rock reservation straddles the South Dakota border into North Dakota, and Sitting Bull College (a tribal college) is located in
Fort Yates, ND, within the Standing Rock reservation. This study was limited to South Dakota; therefore, Sitting Bull College was not included in this analysis.

The two tribal colleges in South Dakota are Oglala Lakota College (OLC) and Sinte Gleska University (SGU). OLC is located on the Pine Ridge reservation and SGU is located on the Rosebud reservation, both serving the southern reservations in South Dakota.

SGU offers a bachelor’s degree in Business Management, with a minor in Accounting. Within the curriculum, a total of 18 credit hours of accounting courses are required, including a requirement to take one three-credit course titled Federal Income Tax Procedures, within which students partner with the VITA program that SGU sponsors. A total of 126 semester credit hours are required for the degree.

OLC offers a Bachelor of Science in Business Administration Degree, with a specialization in accounting. The specialization requires completion of 15 credit hours of accounting classes. Although OLC offers a course in government and nonprofit accounting, it does not require students to take a course in taxation for their accounting specialization. A total of 121 credits are required at OLC for the accounting degree.

Black Hills State University (BHSU), a public institution, is located within the rural region of South Dakota. BHSU offers two different accounting degree alternatives. One degree is the Business Administration degree with a specialization in accounting, which requires 120 credit hours (including 15 credit hours of accounting and one 3 credit income tax class). The other path to a bachelor’s degree is to complete the Professional Accountancy program, completing a total of 150 credit hours, including 18 hours of
accounting courses and six credit hours of taxation courses. BHSU sponsors a VITA program and students in the taxation courses serve as volunteer tax preparers.

The private higher educational institution in western South Dakota is National American University (NAU). NAU is located in Rapid City, the metro area of this study. NAU offers a Bachelor of Science Degree in Accounting, requiring students to complete 189 credits, including 48 credits of accounting courses and 9 credits of taxation classes.

The accounting professor teaching the taxation course was identified at each institution and interviewed about EITC coverage within the course that each teaches. There is currently no taxation course offered at OLC; therefore, no interview was possible with faculty there. The questions asked of the SGU and NAU accounting professors were as follows:

1. In the courses you teach, what do you teach about Earned Income Tax Credit (EITC)?
2. Is there anything in the textbook you use that mentions EITC? If yes, which textbook do you use?
3. Do you use any other resources to educate students of EITC? Specify.
4. Is there anything else you would like to add?

The emphasis placed on teaching the EITC varied at each university, as was evident from the professors’ responses to the first question. The SGU tax professor teaches from a practical viewpoint, using the IRS provided VITA materials. The VITA program is designed to serve low-income taxpayers, many of whom qualify for the EITC. Therefore, significant emphasis is placed on teaching about EITC at SGU, first from a
theoretical standpoint and later, applying the knowledge serving taxpayers in calculating their EITC credit within the tax return preparation process.

According to the NAU tax professor, EITC is addressed from a legal and theoretical perspective only. She believes that most students at NAU are being educated to become accounting professionals, and those students need tax knowledge relevant to high earning individuals. Therefore, she places a low level of importance and priority on teaching about EITC.

The researcher is the taxation teacher at BHSU, and the BHSU responses are added from her experience. BHSU combines theory and practice. Because some BHSU students are being trained as tax professionals and other as accountants, the BHSU tax course includes coverage of tax law and theory regarding EITC. BHSU sponsors a VITA program to provide students with hands-on experience, and many of the taxpayers served are EITC eligible. Participation in the VITA program provides the practical application knowledge to students.

A different textbook was used at each of the three institutions, with varying depth of coverage of EITC. SGU uses the materials provided by the IRS, which prepares students for VITA participation. VITA materials explain in depth what the EITC is, how it works, and who is eligible to claim it. NAU uses a tax textbook that is geared toward teaching tax law, and only includes EITC from the law viewpoint, with coverage limited to one page of text. BHSU combines approaches, teaching from a law-based textbook (two pages of coverage) and supplementing with the VITA materials.

In response to the request for any additional comments, the NAU professor commented that there are tax preparation software packages available that calculate the
EITC and, therefore, less emphasis on the topic of EITC within the classroom was appropriate. She did encourage tax students to become involved in a local VITA program, but there was no classroom requirement to do so.

**Research Question Number Three**

Research question number three asked how the taxpayers who claimed EITC found out about this credit. This question was answered by interviewing taxpayers who had claimed the EITC on past returns. IRS employees and VITA site coordinators were also interviewed, as they work closely with low-income taxpayers eligible for EITC.

The researcher’s prior experience with income tax return preparation provided a convenience sample of EITC taxpayers throughout western South Dakota. During telephone interviews, the selected taxpayers were asked about their experience with EITC, including how they first learned about it. The taxpayers were asked the following questions:

1. What City is listed as your residence on your most recent tax return?
2. How long have you lived in the region?
3. Do you prepare your own tax return? If not, who does?
4. What do you know about the Earned Income Tax Credit (EITC)?
5. How did you first learn about EITC?
6. In what way does the EITC help improve your financial condition/life?

In response to the first question for EITC taxpayers, taxpayers identified their tax residence as listed on their tax return, and each response was matched to the regions of this study. The South Dakota cities of tax residence of the taxpayers interviewed were two from Rapid City and Eagle Butte, and one each from Spearfish, Newell, Kyle, Pine
Ridge, White River, Mission, McIntosh and Mobridge. The taxpayers in these localities represent two taxpayers for each of the six regions of the study.

The length of time living within the region, the second question of this portion of the study, was asked to limit participation in this study to those taxpayers who had lived within the regions of the study for the years being studied. The question was answered with a range of ten to over forty years, consistent with the established criteria for participation.

When taxpayers were asked if they prepared their own tax return, most emphatically stated that they do not do so, and several taxpayers explained that they would not know how to prepare a tax return on their own. Nine of the taxpayers used a VITA program to utilize a free tax preparation service, two taxpayers utilized a paid preparer, and one taxpayer prepared his own return using free tax software that he had available as a member of the military.

The taxpayers interviewed initially seemed more hesitant to answer the questions relating to the EITC. When the taxpayers were asked what they knew about EITC, they seemed reluctant to answer. Six of the taxpayers said that they did not know what EITC was, but four more responded that, because of their children and the EITC, they received a large tax refund. When taxpayers were unsure what EITC was, the researcher reminded them that the EITC is a credit on their income tax return. One taxpayer complained that he was expecting a large refund of EITC, but he did not receive his refund at all, because he owed back child support, and the IRS kept his refund. He did not know how to explain EITC, but he knew that he did not receive his EITC refund. The final taxpayer described the EITC as an extra payment to poor people to help pay the bills.
The taxpayers who knew about EITC had learned about it from their tax preparer (paid preparer or VITA volunteer) or the tax preparation software. Several thought they heard about EITC on the television or radio, but could not recall a reference point. One taxpayer recalled receiving a payroll stuffer with tax and EITC information on it at tax time.

The last question addressed to the taxpayers related to what impact the EITC had on their lives, specifically to improve their financial condition. Many of the taxpayers realized that they only received the EITC, because they worked. Several talked about the difficulty of finding jobs, knowing that with less employment income, they may also get less in EITC refund dollars. One taxpayer remembered when he worked a lot and then did not get as much EITC, which he felt was unfair. Most taxpayers said they used the tax refund to pay bills and buy groceries, and if anything was left, they would buy a bigger item such as a television. One taxpayer said that one year he used his tax refund to buy a car. There was no mention of saving any of the tax refund or of having a savings goal.

The researcher noted the pattern that taxpayers seemed reluctant to respond to interview questions without additional prompting. Some taxpayers seemed unfamiliar with the terminology surrounding EITC, while others seemed nervous to discuss tax related issues. After documenting and coding the responses, several themes emerged. Taxpayers have come to expect large income tax refunds as a result of EITC. Taxpayers realize that they must work to qualify for EITC; they also recognize that EITC is reduced when they earn too much. Most of the taxpayers interviewed anticipated receiving a large tax refund, which they planned to use for survival needs rather than saving for the future.
In addition to interviewing taxpayers, four IRS employees and four VITA site coordinators were contacted by telephone and asked for their voluntary participation in a brief interview. They were asked to answer five open-ended questions regarding their involvement with taxpayers and EITC. The questions were to provide insight regarding taxpayers’ knowledge of EITC from the tax return preparer’s perspective. The questions were as follows:

1. How long have you worked within the region?
2. How do you explain the Earned Income Tax Credit (EITC) to taxpayers?
3. How do you think taxpayers first learn about EITC?
4. In what ways do you think the EITC helps to improve taxpayers’ lives?
5. Are there any ways that the EITC hurts taxpayers?

All of the IRS employees interviewed had worked within the region for over five years. They explained the EITC to taxpayers as a tax credit for working families, focusing on the eligibility requirements. They were unsure how taxpayers first learn about EITC, but they hoped that the IRS marketing efforts regarding EITC were effective, including the implementation of the annual EITC Awareness Day, a nationwide marketing campaign. The main benefit of the EITC, from their vantage point, was that it provides a financial resource to struggling families, and many times is used to help pay their bills. One IRS employee mentioned the reliance on the EITC refund as a way taxpayers are disadvantaged, and they witnessed angry taxpayers when the refund was not as large as expected. He explained that taxpayers plan for their refund, and they assume that their refund will be about the same amount as in the previous year.
The VITA site coordinators had varying levels of longevity in their positions, ranging from 3-15 years. They consistently mentioned using the IRS provided VITA resource materials help to explain EITC, as well as showing people the impact on the tax return. VITA site coordinators have many repeat customers from year to year, and they were not certain how the taxpayer served had originally learned about EITC. However, they felt that the VITA program is effective in spreading the word about EITC, particularly as the VITA program serves the people with income levels eligible for the credit. The site coordinators felt that the EITC is a critical program, helping low-income families survive in difficult economic times. Many site coordinators offer financial education and planning tools during the tax preparation meeting, to help the low-income families build financial security. The site coordinators mentioned the same concern as IRS employees regarding ways in which taxpayers are hurt by the EITC; taxpayers anticipate the refund will be available and spend before the refund is received. When the refund is delayed, the taxpayers experience financial difficulty.

To allow these interview participants’ anonymity, the comments were grouped separately. As mentioned previously, the theme emerged that there is a concern that taxpayers become too dependent on EITC, anticipating the refund. “Expecting a large income tax refund because of EITC provides a false sense of security for taxpayers and encourages them to overspend,” stated one interviewee. Another person said that taxpayers refer to EITC as “Christmas in January”, because many who expect large EITC refunds file their returns in January, resulting in a boost to local economies, (e.g., like the car dealer who boasts that “it is his best time of the year”). Those interviewed mentioned that they hope the refunds do improve the lives of recipients, particularly if there is “more
money for the kids”, “more money in taxpayer pockets”, and “more dollars infused into the local communities”. A tax preparer mentioned that, in the process of the tax return preparation meeting, he made certain to discuss financial planning while he had the taxpayer “captive”.

The researcher noted the pattern that all tax professionals interviewed seemed concerned about taxpayer expectations of repeated large tax refund amounts from EITC. After documenting and coding the responses, several themes emerged. Tax professionals enjoyed assisting taxpayers, and they felt that the taxpayers’ lives were improved by the financial assistance received because of EITC. For most, the tax return preparation process included information sharing about EITC and financial education. The VITA tax preparers were pleased to provide the free service, acknowledging the inability of many of their clients to pay for quality tax preparation.
CHAPTER V  
FINDINGS, LIMITATIONS, RECOMMENDATIONS,  
AND CLOSING STATEMENT  

Findings  
The purpose of this study was to investigate Earned Income Tax Credit (EITC) utilization in western South Dakota. This mixed-methods study addressed the EITC, as a tool to lift out of poverty and build financial stability for low-income families, and assessed the likelihood of taxpayers to claim EITC. The study also tested for predictability of the amount of EITC claimed based on where taxpayers lived. An examination was completed of higher educational institutions that train tax professionals within the regions studied, and an analysis was accomplished testing the correlation between higher EITC claims and the presence of a higher educational institution. This study also examined taxpayer and tax professional perceptions of EITC, including how they first found out about the credit.  

This study addressed three main research questions:  
1. Is there an equitable distribution of EITC utilization across geographic regions or is there a difference based on where taxpayers live (metropolitan vs. rural vs. Indian reservation)?  
2. Is there a connection between what is being taught at different higher education institutions and utilization of the EITC in that geographic region?
3. How did the taxpayers who have claimed EITC for multiple years find out about this credit?

In this chapter, a summary and discussion of the findings for each research question is presented. Limitations of the study, significance of the findings, and recommendations for practical application are offered in this chapter as well as suggestions for further investigation are also presented here.

**Summary of Study**

In this study, tax return data from 1999-2008 for western South Dakota taxpayers was retrieved from the Brookings Institution and analyzed to determine the utilization of EITC. The tax data retrieved was quantitatively analyzed (independent sample t-tests) to ascertain if there was a significant, sustained difference that existed in the average amount of EITC claimed by taxpayers residing on Indian reservations when compared to taxpayers living in metropolitan and non-reservation rural areas. Statistical significance indicated that where taxpayers live is a predictor of the amount of EITC they will claim on their tax return and the likelihood that they will claim the EITC. Themes from the educator interviews, accounting program analysis at higher educational institutions, and textbook analysis results were correlated with quantitative data analysis of EITC utilization by region to answer the second research question. The third question was answered by analyzing the responses and developing themes of open-ended questions asked of taxpayers and tax professionals who are familiar with EITC.
Discussion

Research Question One

Is there an equitable distribution of EITC utilization across geographic regions or is there a difference based on where taxpayers live (metropolitan vs. rural vs. Indian reservation)?

With respect to the percentage of tax returns with EITC claims, when tested in the three regional groups (Pine Ridge/Rosebud, Cheyenne River/Standing Rock, and metro/rural), the results showed significant difference in each of the ten-year periods studied. Testing 2008 data, the percentage of EITC returns in each region was 59.1% for Pine Ridge/Rosebud; 36.4% for Cheyenne River/Standing Rock; and 19.8% for Metro/Rural. Over the ten-year period the percentages remained relatively consistent, with only small deviations as follows: 53.5% to 62.7% for Pine Ridge/Rosebud; 32.3% to 36.5% for Cheyenne River/Standing Rock; and 17.7% to 20.4% for Metro/Rural. These results indicate that where a taxpayer lives is a predictor of the likelihood that their tax return will include an EITC claim.

The results of the analysis of the EITC claim amounts by regional groups were mixed. Significant differences were found in all ten years studied between Pine Ridge/Rosebud and Cheyenne River/Standing Rock, as well as between Pine Ridge/Rosebud and Metro/Rural. The average EITC claim amount in 2008 for each group was: $2,275 for Pine Ridge/Rosebud, $2,039 for Cheyenne River/Standing Rock, and $1,860 for Metro/Rural. The range of EITC claim amounts include steadily increasing amounts, and over the ten years of the study for each group, were as follows:
$1,864 - $2,275 for Pine Ridge/Rosebud, $1,378 - $2,039 for Cheyenne River/Standing Rock, and $1,459 - $1,860 for Metro/Rural.

As mentioned previously, differences were found in all ten years studied between Pine Ridge/Rosebud and Cheyenne River/Standing Rock, as well as between Pine Ridge/Rosebud and Metro/Rural. However, there was a lack of statistical significance when testing for differences between the Cheyenne River/Standing Rock and Metro/Rural regional groups. Significance was found between the EITC amounts claimed in 2004, 2006, and 2008, but not in 1999-2003, 2005 and 2007. There was more volatility in the average EITC amounts for Cheyenne River/Standing Rock over the ten years when compared to both of the other two groups, as well as exhibiting higher standard deviation amounts. The amount of change in the average EITC amounts claimed for Cheyenne River/Standing Rock group was $661, as compared to $411 for Pine Ridge/Rosebud and $401 for Metro/Rural. The standard deviation amounts peaked at $525 for Cheyenne River/Standing Rock group, as compared to $182 for Pine Ridge/Rosebud and $330 for Metro/Rural. The trend since 2004, seems to indicate less volatility and more statistical significance in the EITC amount differences when comparing Cheyenne River/Standing Rock and Metro/Rural regional groups. When combined with the definitive results mentioned previously, this study found that differences in the amount of EITC amounts claimed do exist based on where taxpayers live.

As discussed above, taxpayers living on reservations are more likely to claim EITC, and the amounts of their claims are larger than for taxpayers off the reservation. The cash provided by EITC refunds provides a temporary lift out of poverty for those taxpayers, yet more must be done to help poor families to build long-term financial
security (Biewen, 2006). While it is encouraging that, on average, more taxpayers on reservations receive larger EITC refunds, the percentage of people living in poverty there remains higher than adjacent regions that are off reservation. The cycle of poverty is difficult to break and behavior choices of low-income families keep them in poverty (Payne, 2005; Siegel & Alwang, 1999). Berube (2007), Lamont and Small (2010), and Lewis (1961) agreed that where low-income families live impacts the decisions they make and limits their choices. Education is a critical component of any effort to break the generational cycle of poverty by providing a means of escape (Niskanen, 1996; Smith and DeBord, 2005), which led researcher into the next research question.

**Research Question Two**

Is there a connection between what is being taught at different higher education institutions and utilization of the EITC in that geographic region?

Themes from the educator interviews, curriculum requirements, and textbook analysis results were correlated with data analysis of EITC utilization by region to answer this question. There was inconsistency with respect to access to higher educational institutions within western South Dakota. The southern reservations of Pine Ridge and Rosebud are well represented with two tribal colleges. The Metro region is home to the one private university, and the Rural region is home to the public university. Void of a higher educational institution presence are the northern reservations of Cheyenne River and Standing Rock.

Analysis of the accounting program requirements at the higher educational institutions in the regions studied showed a distinct dissimilarity in the content of EITC training students received. The textbook coverage in the Metro and Rural regions
emphasized the legal aspects of EITC and was brief, although both institutions did require income tax accounting classes. Because the two universities in the Metro and Rural regions were focused on training students to work in careers as tax professionals in larger accounting firms, the tax training was geared toward tax issues impacting higher earning taxpayers, with only limited exposure to tax issues for low-income individuals.

The tribal colleges have a focus of helping those in their local communities, which on South Dakota reservations, are a majority of low-income families. The VITA training materials and the textbook used for the tax course at Sinte Gleska University, include extensive EITC coverage. The tribal colleges encourage students to participate in VITA programs, and extensive emphasis is placed on training students regarding low-income tax issues within the VITA training. Therefore, the lack of a tax course and EITC training at Oglala Lakota College (the tribal college within the Pine Ridge Reservation) is minimized by the strong VITA program participation there.

The presence of a higher educational institution provides trained income tax preparers for a local VITA program, which is essential in low-income areas. A VITA program offers free income tax preparation to assist low-income taxpayers to comply with filing requirements and as a vehicle to encourage deserving taxpayers to claim their EITC refund. In addition to serving taxpayers with tax compliance, many VITA sites use the tax return preparation meeting to introduce financial education tools and resources, encouraging taxpayers to save a portion of their tax refund.

There appears to be a connection between the presence of a higher educational institution in the southern reservations (Pine Ridge and Rosebud), when compared with the utilization of EITC. In the southern reservations, roughly 60% of the taxpayers claim
EITC and the claims are consistently higher amounts than the other regions studied. In the northern reservation regions with no higher educational institutions, roughly 40% of the returns filed claim EITC. In the metro and rural regions, the average is approximately 20%. Although the metro and rural regions do have higher educational institutions, less focus is placed on EITC, and there are a greater number of higher-income taxpayers who are ineligible for the EITC.

Past research results support that education is beneficial in helping to break the cycle of poverty (Niskanen, 1996; Smith & DeBord, 2005), including educating future tax professionals. Well-educated tax professionals are needed to assist low-income taxpayers build financial security and receive the maximum benefit of all available resources, including EITC, financial planning, and other wealth-building tools. A factor blamed for under-utilization of EITC (e.g., failing to file a rightful EITC claim) is lack of education (Caputo, 2010b; Eamon, Wu, & Zhang, 2009; Gudmunson, Son, Lee, & Bauer, 2010). Therefore, research supports the findings of this study; the close proximity of a higher educational institution that teaches about EITC is critical for assisting local taxpayers with EITC tax filings, and ultimately helps to lift low-income taxpayers out of poverty.

**Research Question Three**

How did the taxpayers who have claimed EITC for multiple years find out about this credit?

Most taxpayers who were interviewed learned of the EITC while at a VITA site. Tax preparation can cause anxiety, particularly for low-income taxpayers, and they focus on the verdict: the amount of the tax refund. Some of the taxpayers seemed uninformed
about why they were receiving the large tax refunds and, although they had come to
expect the annual windfall (Smeeding, Phillips, & O’Connor, 2000), were not convinced
that it was the result of EITC. VITA sites are required to explain the tax return to the
taxpayers, but many taxpayers rely on the VITA sites and do not want to understand tax
law or the reasons behind the tax refund.

VITA site coordinators and income tax professionals talked about income tax
preparation, not only as providing tax compliance, but as an opportunity to help taxpayers
understand the income tax system (including EITC) and to provide financial education
and wealth-building tools. Although each taxpayer is responsible for his/her own tax
return, the low-income taxpayers served at the VITA sites trust the VITA site to
accurately prepare the return, and taxpayers have little to no concern for understanding
their own tax return (Masken, 2006; Mendenhall, 2006). Unfortunately, this blind trust
opens up the door for unscrupulous tax preparers to create fraudulent EITC claims for
some low-income families; when discovered by the IRS, fraudulent EITC claims often
create financial hardship when repayment of the EITC claim is required (along with
penalties and interest) (Alstott, 1995; Mendenhall, 2006).

The Internal Revenue Service (IRS) EITC marketing campaigns were mentioned
briefly as a way to increase awareness of EITC with low-income taxpayers. The IRS
partners with organizations that provided other benefits to low-income families,
requesting assistance with outreach, spreading the word about EITC. The IRS’s EITC
Awareness day, including national media concentration, is in late January; by late
January, many low-income taxpayers have already filed their tax returns and received
their refunds. The marketing campaigns are a great start, but could be more effectively timed.

**Significance for the Researcher**

This study was important for several reasons. During the study, the researcher developed an understanding of additional research tools, data sources, and educational materials that will be utilized for future research endeavors. The study elevated the researcher to a new level of understanding of EITC education and utilization, which will improve her classroom instruction. This study also allowed the researcher the opportunity to learn about the perceptions of EITC of educators and taxpayers.

**Significance for Low-income Families**

The researcher believes that the results of this study support the continued need of the EITC, and the study gives voice to low-income taxpayer’s perceptions of the credit. Millions of families benefit annually and depend on the EITC program to continue in existence. This study demonstrated the importance of close proximity of a higher educational institution. The suggested improvements to outreach materials will timely encourage more families to participate in EITC.

**Significance for Earned Income Tax Credit Administrators**

The study will provide a new way to look at EITC; where taxpayers live does make a difference in the amount and likelihood of claiming EITC. Tax policy makers now have additional information useful for EITC policy discussions and tax law updates. As shown in the study, improvements are needed in accounting textbooks and EITC outreach information relevant to the tax issues of low-income families, and undergraduate
accounting educators should elevate the importance of training accountants as future tax professional in low-income taxpayer issues.

**Limitations of the Study**

This study was developed using tax data from western South Dakota. The results may not be representative of other geographic areas. However, the researcher believes that the demographics of western South Dakota provided the needed diversity for this study.

The more significant limitation relates to the data. Because of the confidential nature of tax return data, only the IRS is able to study taxpayers over time with individual tax data. Aggregate data, with averages calculated by county of residence, were utilized in this study to best simulate tracking individuals over time. Individuals selected for the interviews may or may not have been represented in the 1999-2008 data sets. Triangulation with IRS studies and interviews with EITC taxpayers increased the validity of the study findings.

**Future Research**

In the course of completing this study, the researcher has not only acquired an appreciation for the research process, but she has also developed an interest in further research on EITC. More research is needed in geographic correlation to EITC to determine if these study results are generalizable to other geographic areas. The EITC outcomes and the residence of the taxpayers between different reservations should be further studied. Hopefully, this study will be viewed as a starting point for that additional research.
Partnering with other VITA site coordinators to survey low-income taxpayers, the researcher hopes to continue study of the impact of EITC on people’s lives. There is a limited amount of research available regarding what taxpayers use their tax refund for, and including both EITC and non-EITC taxpayers in that study would provide useful comparative information.

This study supported other research findings, concluding that education is important to help poor families escape poverty. This education can be in the form of an educated professional to assist taxpayers as well as in educational material. Financial education that is available at VITA sites should be further studied to determine if enhancements in the educational tools might be increased for greater effectiveness.

Finally, the researcher hopes that in reading this study, other researchers will be encouraged to further study tax policy, particularly the impact of the widening income gap. As this study shows, there are many studies on poor taxpayers, but additional research focus should be placed on the middle-income taxpayers with focus on ways to utilize tax policy to prevent their slip into poverty.

**Final Thoughts**

EITC is one of the largest government anti-poverty programs, helping low-income families to build and maintain financial security. From another perspective, EITC is a redistribution of wealth program; taxes paid by middle-income and wealthy taxpayers are distributed to the poor as EITC refunds (Eissa & Hoynes, 2011). The EITC program requires claimants to have earnings, encouraging people to work; however, the EITC income phase-outs limit many low-income taxpayers from working too much. Many low-
income taxpayers have become dependent on the EITC, and are annually lifted out of poverty by the EITC tax refund.

This study is important, because it shows a connection between where people live and the likelihood of claiming EITC, with a correlation to the proximity of a higher educational institution. While there are numerous research studies on poverty, welfare programs and the EITC, there is a shortage of research addressing where taxpayers live, particularly EITC claimants living on or off reservations. It is hoped that this study will prove useful in future tax policy decisions regarding EITC.

Conducting this study was a learning experience for the researcher. Scouring the literature on poverty and welfare programs painted a dim picture of the state of our economy, with a widening gap between the rich and the poor. Not only do people living in poverty make choices that keep them in poverty (Payne, 2005), tax policies encourage low-income families to limit the amount of their earnings in fear of losing the benefits of government programs, such as the EITC refund (Trampe, 2007).

Conducting the research for this study was an invaluable experience. The researcher gained experience in selecting and refining the study topic, obtaining appropriate quantitative data from a database, completing the literature review, designing interview questions, connecting with willing participants for interviews, collecting and coding data for qualitative review, analyzing the data, presenting the findings and discussing the implications. The work done to complete this dissertation provided the researcher with a framework for future research in her chosen profession as an accounting professor. She has developed an appreciation for research, not only in the study results, but in the research process.
The researcher would like to share a thought to close this study. According to Greenstone and Looney (2012),

The United States is contending with three economic problems: a daunting outlook for budget deficit that imperils our well-being, an increasingly competitive global economy for many American workers and industries, and rising income inequality. The tax code affects each of these problems.

(Conclusion, para. 2)

It is often perceived that the tax code is geared toward helping the wealthy with tax loopholes; yet the tax code also contains provisions to benefit the poor, such as the EITC, and at least temporarily address the income inequality issue. The EITC does help low-income families, and the economy is improved as those families are the American workers mentioned previously. This study provides a new perspective and additional understanding of the EITC, and may prove useful for future tax code revisions and EITC enhancements.
Appendix A
Descriptive Statistics for Percent of Tax Returns With EITC Claims

<table>
<thead>
<tr>
<th>Variable</th>
<th>Year</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pine Ridge/Rosebud</td>
<td>2008</td>
<td>27</td>
<td>59.1%</td>
<td>9.2%</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>27</td>
<td>53.5%</td>
<td>7.5%</td>
</tr>
<tr>
<td></td>
<td>2006</td>
<td>27</td>
<td>61.7%</td>
<td>8.8%</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>27</td>
<td>61.7%</td>
<td>9.2%</td>
</tr>
<tr>
<td></td>
<td>2004</td>
<td>27</td>
<td>61.9%</td>
<td>9.2%</td>
</tr>
<tr>
<td></td>
<td>2003</td>
<td>27</td>
<td>62.7%</td>
<td>9.8%</td>
</tr>
<tr>
<td></td>
<td>2002</td>
<td>27</td>
<td>61.5%</td>
<td>8.9%</td>
</tr>
<tr>
<td></td>
<td>2001</td>
<td>27</td>
<td>59.6%</td>
<td>8.7%</td>
</tr>
<tr>
<td></td>
<td>2000</td>
<td>27</td>
<td>61.1%</td>
<td>8.6%</td>
</tr>
<tr>
<td></td>
<td>1999</td>
<td>27</td>
<td>61.9%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Cheyenne River/Standing Rock</td>
<td>2008</td>
<td>37</td>
<td>36.4%</td>
<td>18.4%</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>37</td>
<td>32.3%</td>
<td>17.2%</td>
</tr>
<tr>
<td></td>
<td>2006</td>
<td>37</td>
<td>36.5%</td>
<td>20.5%</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>36</td>
<td>34.6%</td>
<td>21.3%</td>
</tr>
<tr>
<td></td>
<td>2004</td>
<td>35</td>
<td>35.5%</td>
<td>20.6%</td>
</tr>
<tr>
<td></td>
<td>2003</td>
<td>35</td>
<td>35.3%</td>
<td>20.2%</td>
</tr>
<tr>
<td></td>
<td>2002</td>
<td>38</td>
<td>33.8%</td>
<td>19.5%</td>
</tr>
<tr>
<td></td>
<td>2001</td>
<td>36</td>
<td>33.0%</td>
<td>22.3%</td>
</tr>
<tr>
<td></td>
<td>2000</td>
<td>37</td>
<td>33.7%</td>
<td>21.8%</td>
</tr>
<tr>
<td></td>
<td>1999</td>
<td>35</td>
<td>36.0%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Metro/Rural</td>
<td>2008</td>
<td>181</td>
<td>19.8%</td>
<td>10.7%</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>188</td>
<td>18.1%</td>
<td>9.7%</td>
</tr>
<tr>
<td></td>
<td>2006</td>
<td>189</td>
<td>19.5%</td>
<td>11.1%</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>188</td>
<td>20.1%</td>
<td>11.6%</td>
</tr>
<tr>
<td></td>
<td>2004</td>
<td>188</td>
<td>19.3%</td>
<td>10.4%</td>
</tr>
<tr>
<td></td>
<td>2003</td>
<td>188</td>
<td>19.5%</td>
<td>10.3%</td>
</tr>
<tr>
<td></td>
<td>2002</td>
<td>185</td>
<td>20.4%</td>
<td>10.9%</td>
</tr>
<tr>
<td></td>
<td>2001</td>
<td>186</td>
<td>17.7%</td>
<td>10.2%</td>
</tr>
<tr>
<td></td>
<td>2000</td>
<td>192</td>
<td>17.9%</td>
<td>10.8%</td>
</tr>
<tr>
<td></td>
<td>1999</td>
<td>188</td>
<td>17.8%</td>
<td>9.9%</td>
</tr>
</tbody>
</table>
## Appendix B

Paired Locations t Tests Data for Percent of Tax Returns With EITC Claims

<table>
<thead>
<tr>
<th>Variables Paired</th>
<th>EITC</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pine Ridge/Rosebud with</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheyenne River/Standing Rock</td>
<td>2008</td>
<td>-6.48</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>-6.66</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>2006</td>
<td>-6.67</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>-6.82</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>2004</td>
<td>-6.77</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>2003</td>
<td>-7.04</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>2002</td>
<td>-7.69</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>2001</td>
<td>-6.54</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>2000</td>
<td>-6.95</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>1999</td>
<td>-5.59</td>
<td>0.000</td>
</tr>
<tr>
<td>Metro/Rural with</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cheyenne River/Standing Rock</td>
<td>2008</td>
<td>-5.31</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>-4.88</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>2006</td>
<td>-4.90</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>-3.99</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>2004</td>
<td>-4.53</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>2003</td>
<td>-4.52</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>2002</td>
<td>-4.12</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>2001</td>
<td>-4.05</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>2000</td>
<td>-4.29</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>1999</td>
<td>-4.25</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Metro/Rural with Pine Ridge/Rosebud

|                                  | 2008     | -18.18 | 0.000 |
|                                  | 2007     | -18.20 | 0.000 |
|                                  | 2006     | -18.95 | 0.000 |
|                                  | 2005     | -17.80 | 0.000 |
|                                  | 2004     | -20.16 | 0.000 |
|                                  | 2003     | -20.48 | 0.000 |
|                                  | 2002     | -18.67 | 0.000 |
|                                  | 2001     | -20.24 | 0.000 |
|                                  | 2000     | -19.82 | 0.000 |
|                                  | 1999     | -21.62 | 0.000 |
### Appendix C

**Descriptive Statistics for Tax Returns With EITC Claims in Dollars**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Tax Year</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pine Ridge/Rosebud</td>
<td>2008</td>
<td>27</td>
<td>$2,275</td>
<td>$105</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>27</td>
<td>$2,184</td>
<td>$182</td>
</tr>
<tr>
<td></td>
<td>2006</td>
<td>27</td>
<td>$2,145</td>
<td>$135</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>27</td>
<td>$2,082</td>
<td>$  73</td>
</tr>
<tr>
<td></td>
<td>2004</td>
<td>27</td>
<td>$2,080</td>
<td>$  45</td>
</tr>
<tr>
<td></td>
<td>2003</td>
<td>27</td>
<td>$2,085</td>
<td>$  89</td>
</tr>
<tr>
<td></td>
<td>2002</td>
<td>27</td>
<td>$1,974</td>
<td>$  72</td>
</tr>
<tr>
<td></td>
<td>2001</td>
<td>27</td>
<td>$1,908</td>
<td>$  75</td>
</tr>
<tr>
<td></td>
<td>2000</td>
<td>27</td>
<td>$1,898</td>
<td>$  76</td>
</tr>
<tr>
<td></td>
<td>1999</td>
<td>27</td>
<td>$1,864</td>
<td>$  66</td>
</tr>
<tr>
<td>Cheyenne River/Standing Rock</td>
<td>2008</td>
<td>37</td>
<td>$2,039</td>
<td>$360</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>37</td>
<td>$1,903</td>
<td>$331</td>
</tr>
<tr>
<td></td>
<td>2006</td>
<td>37</td>
<td>$1,869</td>
<td>$282</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>36</td>
<td>$1,736</td>
<td>$390</td>
</tr>
<tr>
<td></td>
<td>2004</td>
<td>35</td>
<td>$1,807</td>
<td>$259</td>
</tr>
<tr>
<td></td>
<td>2003</td>
<td>35</td>
<td>$1,706</td>
<td>$269</td>
</tr>
<tr>
<td></td>
<td>2002</td>
<td>38</td>
<td>$1,661</td>
<td>$464</td>
</tr>
<tr>
<td></td>
<td>2001</td>
<td>36</td>
<td>$1,478</td>
<td>$525</td>
</tr>
<tr>
<td></td>
<td>2000</td>
<td>37</td>
<td>$1,378</td>
<td>$516</td>
</tr>
<tr>
<td></td>
<td>1999</td>
<td>35</td>
<td>$1,486</td>
<td>$465</td>
</tr>
<tr>
<td>Metro/Rural</td>
<td>2008</td>
<td>181</td>
<td>$1,860</td>
<td>$304</td>
</tr>
<tr>
<td></td>
<td>2007</td>
<td>188</td>
<td>$1,824</td>
<td>$288</td>
</tr>
<tr>
<td></td>
<td>2006</td>
<td>189</td>
<td>$1,739</td>
<td>$306</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>188</td>
<td>$1,701</td>
<td>$269</td>
</tr>
<tr>
<td></td>
<td>2004</td>
<td>188</td>
<td>$1,633</td>
<td>$248</td>
</tr>
<tr>
<td></td>
<td>2003</td>
<td>188</td>
<td>$1,669</td>
<td>$256</td>
</tr>
<tr>
<td></td>
<td>2002</td>
<td>185</td>
<td>$1,640</td>
<td>$274</td>
</tr>
<tr>
<td></td>
<td>2001</td>
<td>186</td>
<td>$1,537</td>
<td>$289</td>
</tr>
<tr>
<td></td>
<td>2000</td>
<td>192</td>
<td>$1,459</td>
<td>$330</td>
</tr>
<tr>
<td></td>
<td>1999</td>
<td>188</td>
<td>$1,513</td>
<td>$243</td>
</tr>
</tbody>
</table>
### Appendix D

**Paired Locations t Tests Data for EITC Claim Amounts**

<table>
<thead>
<tr>
<th>Variables Paired</th>
<th>EITC</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pine Ridge/Rosebud with Cheyenne River/Standing Rock</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>-3.77</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>-4.33</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>-5.20</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>-5.20</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>-6.12</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>-7.81</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>-4.10</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>-4.85</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>-6.04</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>-4.74</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td><strong>Metro/Rural with Cheyenne River/Standing Rock</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>-3.17</td>
<td>0.002</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>-1.35</td>
<td>0.182</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>-2.38</td>
<td>0.018</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>-0.51</td>
<td>0.610</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>-3.77</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>-0.77</td>
<td>0.440</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>-0.26</td>
<td>0.796</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>0.65</td>
<td>0.517</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>0.92</td>
<td>0.365</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>0.34</td>
<td>0.734</td>
<td></td>
</tr>
<tr>
<td><strong>Metro/Rural with Pine Ridge/Rosebud</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>-13.69</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>-8.79</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>-11.84</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>-15.78</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>-22.25</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>-16.43</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>-13.65</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>-14.46</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>-15.72</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>-16.05</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>
REFERENCES


Bell, K. (2012). Earned income tax credit could pay off. Retrieved from: 

the Committee on Ways and Means Subcommittee on Income Security and 

Bialik, J. (2011). Surviving the early years of the personal responsibility and work 
opportunity reconciliation act. *Journal of Sociology & Social Welfare, 38*(1), 
163-182.

Retrieved from: http://americanradioworks.publicradio.org/features/welfare/


Journal of Contemporary Social Services, 91*(1), 8-15. doi 10.1606/1044-3894.3950


Larrimore, J. (2011). Does a higher income have positive health effects? Using the earned income tax credit to explore the income-health gradient. Milbank Quarterly. 89(4), 694-727.


from: http://peerta.acf.hhs.gov/index.cfm?event=viewTopic&sectionTopicId=21&topicId=11&tabtopic=11&sectionId=2&nav=11#etic


102