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WASHINGTON UNIVERSITY IN ST. LOUIS

George Warren Brown School of Social Work

Dissertation Examination Committee:

Michael Sherraden, *Co-Chair*

Ramesh Raghavan, *Co-Chair*

Marion Crain

Carolyn Lesorogol

Shanta Pandey

Itai Sened

THE EARNED INCOME TAX CREDIT AND FINANCIAL CAPABILITY

AMONG NATIVE HOUSEHOLDS

by

Kristen Wagner

A dissertation presented to the
Graduate School of Arts and Sciences
of Washington University in
partial fulfillment of the
requirements for the degree
of Doctor of Philosophy

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS	ii
CHAPTER I: INTRODUCTION AND SIGNIFICANCE	1
CHAPTER II: BRIEF HISTORY OF EITC	9
CHAPTER III: THEORETICAL AND EMPIRICAL BACKGROUND	18
CHAPTER IV: CONCEPTUAL MODEL	35
Key Research Aims.....	35
Key Research Questions and Hypotheses	37
CHAPTER V: DATA AND METHODOLOGY	44
Research Design.....	44
Instrumentation	44
Description of Study Sites.....	46
Sampling Procedures	48
Survey Administration	48
Concept Measurement.....	50
Data Analysis Plan.....	53
CHAPTER VI: RESULTS.....	62
Who Receives EITC?.....	62
How do People Use the EITC?	64
Characteristics of Regular Savers	71
What Utilization Patterns Emerge among EITC Recipients	72
What are the Individual and Institutional Factors Associated with Saving the EITC?	82
Distribution of EITC Savers	83
Bivariate Relationships among Factors.....	86
Full Model of Relationships among Factors	92
Main Effects Models of Relationships among Factors	94
CHAPTER VII: SUMMARY AND DISCUSSION.....	99
CHAPTER VIII: TESTING A POSSIBLE MEASURE OF FINANCIAL CAPABILITY	120
CHAPTER IX: POLICY, PRACTICE, AND RESEARCH IMPLICATIONS	124
REFERENCES	134

LIST OF TABLES AND FIGURES

Table 1. Estimated EITC Amounts for 2010	14
Table 2. List of Community Partners Engaged in the Study.....	47
Table 3. Sample Characteristics of Native and Non-Native Households	62
Table 4. Bank Account Ownership among Study Participants	68
Table 5. Types of Financial Education among Study Participants	70
Table 6. Characteristics of Native and Non-Native Regular Savers.....	71
Table 7. Parameter Estimates of Two Class LCA Models with Categorical Outcomes.....	74
Table 8. Parameter Estimates of Three Class LCA Models with Categorical Outcomes	77
Table 9. Parameter Estimates of Four-Class LCA Models with Categorical Outcomes	79
Table 10. Model Fit Statistics for LCA Models with Categorical Outcomes.....	81
Table 11. Distribution of EITC Savers by Individual and Institutional Factors	84
Table 12. Bivariate Relationships: Factors Associated with Saving EITC – Native Households	87
Table 13. Bivariate Relationships: Factors Associated with Saving EITC – Non-Native Households.....	88
Table 14. Individual and Institutional Factors Associated with Saving the EITC.....	92
Table 15. Individual Factors Associated with Saving the EITC.....	95
Table 16. Institutional Factors Associated with Saving the EITC.....	96
Table 17. Correlation Matrix of Factors Associated with Financial Capability	120
Table 18. Total Variance Explained by Factors Associated with Financial Capability.....	121
Figure 1: Factors Associated with Saving EITC Dollars among EITC Recipients	38
Figure 2: Possible Indicators of Financial Capability	39
Figure 3. Household Utilization of EITC.....	64
<i>Appendix A: Native Community EITC Survey</i>	<i>144</i>

CHAPTER 1: BACKGROUND AND SIGNIFICANCE

The tax system is increasingly being used to deliver social policy programs to working households. One social policy, the earned income tax credit (EITC), provides substantial sums of money to households of working families each year (Berube & Forman, 2001; Dickert-Conlin, Fitzpatrick, & Hanson, 2005; Llobrera & Zahradnik, 2004; Romich, Simmelink, & Holt, 2007; Smeeding, Ross & O'Connor, 2000). This benefit is also paired with the value of personal responsibility in which individuals are expected to understand how to access the EITC and make financial choices accordingly. For these reasons it is necessary to consider ways that recipient households can be better equipped with the information and skills necessary to access this earned benefit and utilize available financial opportunities to leverage this financial resource.

One-third of America's families with children are low-income, meaning their incomes fall below twice the federal poverty level (approximately \$40,000 for a family of four in 2006). Many do not bring home enough money to cover basic costs of daily living¹. Yet, four in five of these families work (DeNavas-Walt, Proctor, & Smith, 2007). Low-income families face great risks in today's unpredictable economy. The loss of a job, a serious health problem, or rise in housing costs can create severe hardship for these families including greater debt or even homelessness. One social policy, the EITC, moves families closer to achieving self-sufficiency.

The EITC provides a refundable tax credit, administered through the Internal Revenue Service (IRS), to workers with and without children. The EITC is a percentage

¹ The income poverty level of 2006 was used as a reference point for this study as it was the first tax year that data collection was implemented.

of the person's earnings, based on the number of children, up to a maximum earned income amount. Unlike most tax credits, the EITC is a "refundable" credit meaning that a person need not owe or pay any income tax to receive the EITC. For over thirty years, the EITC has contributed to improved economic circumstances for working families. The EITC is the largest cash income support program contributing to improved economic circumstances for low-income families, particularly those with children, in the U.S (Berube & Forman, 2001; Eissa & Liebman, 1996; Llobrera & Zahradnik, 2004)². Approximately 60% of EITC payouts are received by families living below the poverty line (Scholz & Levine, 2000). Therefore, the EITC has become a critical safety net for low-income families. A recent study of EITC in Indian Country suggests that on average, Native American households received \$1,233 in tax return dollars in tax year 2008 (Schramm, 2009). It is estimated that refund distributions such as the EITC have lifted over four million of the nation's poor above the poverty line each year over the past decade (Berube, 2003; Rankin, 2005).

Programs that facilitate uptake of benefits like the EITC, such as Volunteer Income Tax Assistance (VITA) sites, can serve as a gateway to other financial services all of which may contribute to the development of financial capability among low-income working households (Beverly, Tescher, & Marzahl, 2000). However, despite these efforts, many households continue to rely on costly financial services such as commercial tax preparers, high cost refund anticipation loans, and check cashing services). Increased knowledge of financial service needs of underserved populations would allow social workers to connect low-income households to services that would help them to retain

² For purposes of this discussion, household income is broadly defined as "earnings from wage work". Individual studies cited throughout this paper constructed income based on a varying definitions some of which include non-taxable income.

their hard-earned dollars rather than spend them on costly services and financial products; an important consideration for low-income families.

The EITC not only increases income it also contributes to the purchasing power of working families (Berube & Forman, 2001; Meyer & Rosenbaum, 2001). Many families utilize these resources to establish bank accounts, smooth consumption, pay off debt, make substantial investments in durable goods such as transportation, or make long term investment decisions like home ownership. Each of these investments help individuals rise above the poverty threshold and move them toward a higher level of economic well-being (Smeeding, Ross, & O'Connor, 2000).

The redistributive properties of the EITC structure have been well-documented but few studies have examined how this resource affects the economic well-being of low-income households in terms of their ability to meet their basic needs, establish their own personal financial safety nets, or invest in assets. This can be accomplished by inquiring about individuals' access to financial systems and ability of existing financial systems to meet individual needs. This study will consider these factors through the lens of financial capability. For purposes of this dissertation, financial capability is defined as the ability of people to understand and assess financial options while making financial choices that will help them live the life they choose (Johnson & Sherraden, 2007).

EITC provides an economic foundation on which to build financial capability. The very act of filing taxes is one way of exercising capability: individuals interact with institutions whether it is through a paid tax preparer, a free tax service, or via the internet directly to the Internal Revenue Service (IRS). In addition, workers gain access to an earned benefit and have an opportunity to make decisions about how they will utilize this

resource. Tax time may be the only time all year when some households consider their current and future financial plans or talk with someone about money issues. In addition, it may be the only time these families have access to liquid funds that provide an opportunity for savings or investment that may leverage this resource (Brown, 2005). Therefore, tax time provides an opportunity to build financial capability.

Native Households: An Important Context for Examining EITC and Financial Capability

Native communities face a range of economic challenges similar to those found in other high-poverty areas. Many Native families struggle to build economic security for themselves, their children, and their communities due to a lack of job opportunities, lack of access to financial and other services, and an historical exclusion from the economic mainstream. Similar to many other high-poverty areas, years of disenfranchisement have produced communities with low levels of business activity, low home ownership rates, and families with little experience with money management. It is for these reasons, and others, that the solutions to poverty in these communities must be multi-dimensional, comprehensive, and innovative. While there is no “one-size-fits-all” model for development in the diverse range of Native communities, there are some common strategies and resources that present possible solutions.

In addition to the income supplement properties of the EITC, it is seen as a potential foundation on which to build more long-term financial security. In order to examine the contributions of EITC to Native American households, it is important to understand the socio-economic context for this group. Native American households are among the poorest in the United States. Data from the 2000 Census indicates that the

median household income for these households is approximately \$33,144 compared to \$54,698 for Whites (U.S. Census, 2000). For Native Americans living on reservations, per capita earnings are substantially less at an average of \$7,942 (Taylor & Kalt, 2005). Moreover, poverty rates among Native American households total approximately 25.7%; nearly twice the national average (U.S. Census, 2000). For low-income households, particularly those in Native communities, the EITC has important poverty alleviation characteristics³.

Access to financial services is a key component of building financial capability (HM Treasury, 2007; Johnson & Sherraden, 2007; PRI Report Canada, 2004; Sherraden, 2008). However, Native American households tend to have less experience with financial institutions, more limited credit histories, and fewer assets compared to other U.S. households. Much of this is due to the absence of financial services available in Native communities (Pickering, 2000; Pickering & Mushinski, 2001, 2004). A study by the U.S. Department of the Treasury finds there are financial institutions located in only 14% of reservation communities. Among those with financial services, 50% offer automated teller machines (ATM) as their primary service. In many of these communities must travel over 100 miles to reach a bank branch (CDFI Fund, 2001).

Limited interactions with financial institutions can contribute to mistrust among Native Americans and misunderstanding of financial needs of this population by investors and lenders (CDFI, 2001; Pickering & Mushinski, 2004). Due to limited access to financial institutions, financial transactions in many Native communities have been conducted using cash providing little to no experience with banking processes. As a

³ For purposes of this paper, Indian Country refers to Native American reservations, lands, or communities throughout the United States, including Alaska and Hawaii.

result, Native American households have limited opportunities to acquire the financial knowledge, experience, and skills needed to achieve financial capability. These statistics of income insufficiencies and lack of access to financial services and information provide insight to the need for programs and policies that strengthen the financial well-being of Native Americans. The receipt of EITC alone will not alleviate poverty in Indian Country, but it can be a viable start by serving as a gateway to financial opportunities.

It is important to note that the way financial capability has been defined in recent literature does not necessarily resonate with the experience or goals of households in Indian Country (Landvogt, 2006). A recent study examined economic goals and values among Native households. Findings suggest that Native people do not necessarily shun mainstream economic development of the economic changes brought about through community development. Rather, community members saw value in economic development efforts as long as their culture or traditional teachings and practices can be preserved along the way (Hertel, Wagner, Phillips, Edwards, & Hale, 2007). Achievement of financial capability has largely been determined by a number of behavioral outcomes that are based on individual wealth building that do not always resonate with Native communities.

In Native communities, the family is one of the most important social units and family bonds are very important. Not only is family defined as immediate relatives (i.e. spouse, children, and siblings) but the definition also includes extended family and community members. Furthermore, collective resources, collective ownership of property, generosity, and reciprocity are much more valued symbols of wealth compared to stores of material wealth. These collective goals are in many ways, in opposition to

mainstream economic development strategies and definitions of financial capability that focus on individual economic security. Many outside observers have identified these collective values as presenting a barrier to economic development and individual self-sufficiency in Native communities. However, programs and policies that are developed with these cultural values in mind have the potential to contribute to positive outcomes for Native households and communities.

Dissertation Overview

The conceptual framework for this study is supported within the context of the financial capabilities approach, psychological and sociological theories of economic behavior, institutional theory, and the asset building approach. Many of the research questions employed by this study have not previously been undertaken within the context of Native American households. Therefore, a substantial portion of this research was exploratory in an effort to better understand outcomes associated with receipt of the EITC within this population.

This dissertation begins with a history of the EITC along with a survey of the theoretical and empirical background that serves as the foundation for this study. Next, findings from an analysis of ways that Native and non-Native households utilize EITC are presented. Following this discussion, patterns of use are examined with a particular focus on consumptive versus savings patterns. Following these descriptive findings, results from a series of logistic regression analyses are discussed. This series of analyses includes bivariate models of individual and institutional factors associated with the decision to save EITC dollars, a full model of all proposed factors, and main effect models with selected variables found to be significant in the bivariate and/or full

regression models. Following the presentation of results, a discussion of the findings and potential implications is provided.

Although the primary purpose of this study was to examine ways that Native and non-Native households utilize the EITC, the study data provided an additional opportunity to explore how these factors may be related to financial capability in low-income households. Results from this exploratory portion of the study are presented in the final chapter of the dissertation along with recommendations for next steps in this field of inquiry. This part of the study examined whether or not factors such as owning and utilizing a bank account, saving at least a portion of EITC resources, and investing in asset building activities, contribute to financial capability among Native and non-Native EITC recipients.

CHAPTER II: BRIEF HISTORY OF THE EARNED INCOME TAX CREDIT (EITC)

The EITC is the largest cash income support program for low-income families in the U.S.⁴. Administered through the Internal Revenue Service (IRS), it is part of the personal income tax system allowing recipients to receive the benefit without certification of eligibility criteria required by other cash assistance programs. Unlike other federal income-transfer programs the EITC is received by almost all families as an annual, lump-sum, tax refund check paid during the spring of the tax filing year (Smeeding et al., 2000). The original intention of the EITC was to encourage participation in the labor force in substitution of dependency on public welfare benefits; particularly among low-income families with children. A number of other policies attempted to include work incentives (e.g. negative income tax and guaranteed annual income) but were too administratively costly. The following chapter will outline the original intentions of the EITC, debates surrounding its acceptance, and policy amendments over time.

Welfare policy discussions in the 1960s were in direct response to President Lyndon Johnson's declaration that poverty was one of the main social problems of the time (Ventry, 2002). During this time there was a strong antipoverty, pro-work sentiment; but this attitude was also in direct conflict with the need to address the 'poverty gap' – the income deficiency between family income and level and specified poverty level. Arguments distinguished between poverty and welfare dependency. Poverty was seen as a temporary condition for some and a permanent condition for the aging and those with disabilities. Welfare dependency was viewed as a character flaw – a voluntary condition

⁴ For purposes of this discussion, household income is broadly defined as "earnings from wage work". Individual studies cited throughout this paper constructed income based on a varying definitions some of which include non-taxable income.

of those uninterested in work. A number of solutions were proposed to reduce the poverty gap. The debate about how to reduce the poverty gap and welfare dependency led policymakers to determine that the most viable option was to make changes to the tax system. Traditional tax adjustments such as raising personal exemptions would not help low-income households with zero tax liability. Initial proposals suggested applying a negative rate per capita credit or applying negative rates to unused exemptions or deductions would eliminate poverty (Hotz, 2002).

While policymakers in the 1960s talked of guaranteed annual incomes, those in the 1970s debated work-oriented programs, as welfare dependency was seen as an increasing problem. The debates surrounding President Nixon's Family Assistance Plan (FAP), which allowed for a guaranteed minimum income for all, illuminate this change. They represent a transitional period between the perceived social ills of poverty on one hand and welfare dependency on the other. Additionally, the political discussions of Nixon's welfare initiative highlight trade-offs in tax-transfer programs that not only doomed FAP, but also engaged policymakers for the next thirty years (Ventry, 2002). The fight over FAP alerted politicians to how the tax policy could alleviate or perpetuate social problems. It also generated alternative tax transfer proposals, including the Earned Income Tax Credit (Ventry, 2002).

The EITC was seen as an improved alternative to the existing payroll tax in 1975, which was criticized for its regressivity. After undergoing a number of amendments, it became part of the permanent tax code in 1978 through bi-partisan support. This refundable tax credit was aimed to relieve the tax burden for low-wage workers, particularly those with children, by offsetting the social security payroll tax. The EITC

appeared to politicians an attractive, work-oriented alternative to existing welfare programs. It was more than simply an income subsidy; it was both an anti-poverty and anti-welfare instrument. The EITC complemented national concerns over welfare caseloads, unemployment rates, and the working poor (Hotz, 2002; Ventry, 2002). The most desired characteristics of the EITC included a work incentive and tax relief for moderate and lower-income working families and individuals. Tax relief is provided in the form of a cash refund to families whose incomes are low enough that they wouldn't typically owe Federal taxes (Cronin, 2005).

The initial structure of this income subsidy offered a minimum credit of 10 percent on earnings up to \$5,000, for a maximum credit of \$500 for taxpayers with children. The maximum credit offered was 12.5 percent on incomes between \$6,000 and \$10,000. Liberal supporters applauded the policy for its redistributive nature, in some ways making up for low wages. Conservative supporters appreciated that recipients only received the credit if they had earned it through employment and filed their taxes. The EITC has grown to become the largest cash transfer program for lower-income families implemented at the federal level (Hotz, 2002; Ventry, 2002).

EITC Expansion

Following its inception in 1975, modifications have expanded the reach of the program to include a greater number of low-income households. Program expansions occurred under Presidents Reagan, Bush, Clinton, and Obama providing benefits to substantially more low-income households across the U.S. Expansions took the form of both increasing income eligibility as well as credit amounts to working families. In 1984, the Deficient Reduction Act was enacted to allow states to count the EITC when

calculating the Aid to Families with Dependent Children (AFDC) benefits only when they could verify that the individual actually received the EITC payment. (Edwards & Wagner, 2007) This policy change meant that people who were benefiting from the EITC continue to receive other welfare support. The Tax Reform Act of 1986 adjusted the tax credit for inflation and increased the phase-in and phase-out rates to allow more working families to qualify and receive larger credits than in previous policy provisions (Hotz & Scholtz, 2003; U.S. House of Representatives, Committee on Ways and Means, 2004).

Expansions continued throughout the 1990s. The Omnibus Reconciliation Acts of 1990 (OBRA91) distinguished between families with one child and those with two or more and prohibited the inclusion of EITC as income for means-tested programs such as Medicaid, food stamps, SSI and housing benefits within the month that it is received. OBRA93 substantially increased the subsidy rate so that a family of four would have enough after-tax income to live above the poverty line with the ability to support themselves rather than become dependent on welfare. In addition to this expansion, the 1993 legislation provided the benefit to childless workers. Also, the 1993 policy stipulates that the EITC cannot be counted against food stamp eligibility for the first twelve months after it is received (Hoffman & Seidman, 2003; Steurle, 1995; Tax Policy Center, 2007; Ventry, 2002).

In 2001, Congress passed the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA), which increased the amount of income that married couples with children can earn before the credit begins to phase out. Additional changes in the 2001 Act include adjustments in the calculation of 'qualified income'. Households with

investment income⁵ that exceeds \$2,450 (in 2001 dollars) become ineligible for EITC (Hoffman & Seidman, 2003). In 2002, married couples could earn an additional \$1,000 before the EITC began to phase out⁶. This amount increased to \$2,000 in 2005 and again to \$3,000 in 2008 when it was also indexed with the rate of inflation (Hoffman & Seidman, 2003; Relave 2003)⁷.

One of the most important outcomes of the EITC is the effect on income distribution. The EITC refund is not only based on income but it also takes into consideration the number of children one has, up to three children. This follows the notion that someone with two kids has more burden than someone with no children. On average, the EITC raises household income by 3% for households with no children, 8% for households with one child, and as high as 12% when there are two or more children in the household (Berube & Thacher, 2004). The amount of EITC to which a taxpayer is entitled depends on their earned income (i.e. wage and salary income, business self-employment income, or farm self-employment income), adjusted gross income, and the number of children in the household⁸. The level of benefit varies by household and

⁵ Investment income may include taxable income from dividends, royalty incomes, capital gains, as well as nontaxable income from retirement accounts such as pensions and annuities (Hoffman & Seidman, 2003).

⁶ This increase was applied to the beginning and end of the phase-out range (Hoffman & Seidman, 2003).

⁷ Despite this ‘marriage allowance’ some married couples, in effect, are subject to a marriage penalty. Since the EITC is targeted to families with children, married couples without children are unable to claim the credit. Furthermore, the combined income of married couples is usually higher than single household filers, further reducing their eligibility (Eissa & Hoynes, 2008; Ellwood & Sawhill, 2004).

⁸ It is important to note that the EITC is based on annual earnings. Therefore, the effect of wage earnings is indirect. Even if the hourly rate an individual receives varies, eligibility may not be affected. This is especially important since low-income workers are often employed at multiple jobs, including seasonal employment, at varying hourly rates. If taxpayers are working multiple (seasonal) jobs – this may be the reason they do not take the advanced payment.

depends on characteristics such as income level, married status, and number of children. Furthermore, benefits increase with work effort, up to a point.

Current EITC Parameters

Currently, the EITC policy provides over 19 million working families with an average tax credit of \$1,700 and a maximum credit of up to \$5,666 (see Table 1). It is estimated that the current credit structure will lift over 4.7 million families out of poverty (including 2.6 million children) in the 2010 tax filing season.

Table 1. Estimated EITC Amounts for 2010

# of Qualifying Children	2010 Taxable Income	Estimated EITC
0	<\$13,460 (or <\$18,470 for married workers)	\$457
1	<\$35,535 (or <\$40,545 for married workers)	\$3,050
2	<\$40,363 (or <\$45,373 for married workers)	\$5,036
3+	<\$43,352 (or <\$48,362 for married workers)	\$5,666

Source: Internal Revenue Bulletin No. 2005-47, IRS Rev. Proc. 2005-70

The EITC is the largest, and arguably the most effective, poverty reduction program in the country. Examinations of the policy expansions listed above claim that nearly five million people, over half of them children, were removed from poverty each year as a result of the federal EITC (Greenstein, 2005; Eissa & Liebman, 1996; Hotz & Scholz, 2003; Llobrera & Zahradnik, 2004). These EITC dollars had a significant impact on the lives and communities among the nation’s lowest paid working people. Hotz, Mullin, and Scholz (2001) estimate that 40% of payments are paid to households with wages in the bottom 25th percentile of all workers with children and that more than 80% of benefits go to workers with below-median wages. In the absence of the credit, approximately 60% of EITC recipients would fall below the poverty line (Scholz &

Levine, 2000). What distinguishes the EITC program from other welfare programs is the requirement that at least some income be earned in order to receive the credit.

Who Receives EITC and How Do They Use It?

Policymakers set parameters for the target population in an effort to meet a set of policy goals. Based on the original intent of the EITC, policy goals include work incentives, decrease in welfare dependency, and reduction of income inequality. To meet these goals, target recipients are identified. It is important to understand who is currently benefitting from this tax transfer program. IRS Statistics of Income (SOI) Reports provide profiles of EITC recipients (IRS, 2008). In 2009 there were over 26 million EITC recipients (IRS, 2010). Among EITC eligible households, 49% are African American, 30% Latino/Hispanic, and 20% Caucasian or other (Smeeding et al., 2000). Single and head-of-household filers made up three-quarters of all EITC returns compared to married filers. The disproportionate share of unmarried filers is primarily made up of single, female-headed households with children many of whom are just cycling off of welfare. Eligible households with children were evenly split between those with one child and those with two or more children (IRS, 2008). Single mothers with two or more children and less than a high school diploma are more likely to be eligible (Meyer & Rosenbaum, 2001). Food stamp eligible households with children are more likely to be eligible (Mikelson & Lerman, 2004).

The EITC program has grown consistently in both the number of participants and the allotted amount of refund money that each receives. Unfortunately, millions of families who are eligible for the tax credit still do not receive it, leaving billions of additional tax credit dollars uncollected (Blumenthal, Erard, & Ho, 2005; Holt, 2006;

Holtzblatt & McCubbin, 2004; Scholz, 1994). Research by the Brookings Institution indicates that between 15% and 25% of households who have qualified for the EITC do not claim their credit (Berube, 2003). There are a number of reasons for this including the fact that many eligible households do not know about the EITC, others fear that they may owe taxes and therefore choose not to file, still others are concerned that they may lose other benefits such as Food Stamps or Medicaid and do not file taxes (Berube, 2003). Those less likely to claim the EITC include households that receive other welfare benefits, those living in rural areas, and households with either no children or more than three children (Berube, 2003; Burman & Kobes, 2002; Hirasuna & Stinson, 2004; Mammen & Lawrence, 2006; Robles, 2007). By not claiming a tax credit they have earned, eligible taxpayers are missing out on dollars that could help them meet basic needs, move out of poverty, or even get ahead financially. Since 2001, a national campaign that includes outreach and information and free tax preparation services through VITA sites has sought to increase participation rates, particularly among these groups.

State EITC

The success of the EITC to boost household incomes of low-income working families has led to the enactment of state EITCs. To date, nearly half of the states in the U.S. supplement federal EITC with a state EITC financed either through general revenue or from the federal Temporary Assistance to Needy Families (TANF) block grant. Of the 24 states EITC programs, 23 of them have replicated the structure of the federal EITC. For example, these 23 states use federal eligibility rules and define the state credit as a specified percentage of the federal credit. A majority of state EITC programs follow the

federal practice of making the credit refundable. This means that a filer receives the full amount of earned credit even if the credit amount is greater than the household's state income tax liability. The amount by which the credit exceeds annual income taxes is paid as a refund. A few states, Delaware, Maine, and Virginia, chose to offer credits that are nonrefundable. Although households in these states do not receive a cash refund, a nonrefundable EITC can provide substantial tax relief by offsetting a family's income tax liability. However, for households with zero tax liability, a refundable credit provides no benefit (Center for Budget and Policy Priorities, 2008; Hotz & Scholz, 2003). Therefore, a nonrefundable credit assists somewhat fewer working-poor families with children. This study does not distinguish between the Federal and State EITC but rather, examines intended use of any tax refund a household receives and ways the benefit contributes to economic well-being.

CHAPTER III: THEORETICAL AND EMPIRICAL BACKGROUND

Economic theory predicts that individuals will act in their best interest and save income over the course of their lifetime. Behavioral and institutional theories identify factors related to savings decisions that are not necessarily considered in economic theory. Institutional factors which include access to financial products and services, financial education, facilitation of savings and prior experience with financial products and services are increasingly considered in studies of low-income families.

Studies on EITC and low-income households offer relatively little in terms of a theoretical foundation that explains real and anticipated effects of the policy on poor working families. Furthermore, existing studies are limited in their ability to examine the link between EITC and financial capability. Typically, implications are drawn from savings and consumption theories; particularly the behavioral life-cycle theory (Ando & Modigliani, 1963; Modigliani & Ando, 1957; Modigliani & Brumberg, 1954) and the permanent income hypothesis (Friedman, 1957) in an attempt to explain why EITC recipients utilize the benefit in various ways. However, it is also important to understand the institutional mechanisms by which eligible recipients access this benefit and possible ways access to this benefit contribute to financial capability. In addition to the financial capabilities approach, institutional theory, savings and consumption theories, along with asset building paradigm will provide insight regarding the possible link between EITC and financial capability of low-income households.

Behavioral Life-Cycle Hypothesis

Consideration of the association between EITC and household saving and consumption centers on the degree to which the credit allows households to smooth

consumption. The two most recognized economic theories are life-cycle hypothesis (LCH)⁹ (Ando & Modigliani, 1963; Modigliani & Ando, 1957; Modigliani & Brumberg, 1954) and the permanent-income hypothesis (Friedman, 1957). The life-cycle hypothesis provides a useful starting point for understanding the relationship between a household's income and patterns of consumption and saving. Shefrin and Thaler (1988) augmented this theory with claims that individuals treat components of their wealth as non-fungible. In other words, they divide their total assets into different mental accounts with different marginal propensity to consume. This theory provides an effective framework to predict consumer behavior related to how families view and use the EITC.

A lump sum payment, such as the EITC, may be viewed differently than income from a regular paycheck (e.g. it may be considered wealth-building and more suitable for asset building investments). The choice to save or consume will depend on the way the income source is viewed. People may be more likely to save money or invest in assets with resources they have categorized as wealth and provide for daily consumption needs using funds categorized as income. Research suggests that for some households, the EITC may be viewed as wealth and tax time seen as an opportunity to reduce debt or get ahead by investing this newly acquired resource (Romich & Weisner, 2000).

Permanent-Income Hypothesis

The permanent income hypothesis provides an important framework within which to examine the relationship between the receipt of income and tax credits and behaviors such as consumption and savings (Brady & Friedman, 1947; Friedman, 1957). Similar to the behavioral life-cycle hypothesis, the permanent-income hypothesis suggests that

⁹ Modigliani and Brumberg (1954) deserve credit for development of this theory. Thaler and Shefrin (1981) augment this theory to include psychological concerns. Their revised theory is called the behavioral life cycle hypothesis.

consumption choices are determined by income over time. However, according to the permanent-income hypothesis, saving decisions are based on whether income is perceived as permanent or temporary (Friedman, 1957). Therefore, when a household perceives an increase in income to be temporary, they are more likely to save it. Conversely, when a household perceives an increase in income to be permanent, consumption is more likely to increase. Similarly, the buffer-stock model of saving asserts that households tend to accumulate small amounts of assets to buffer the times of financial uncertainty over time, especially in young households or households with borrowing constraints (Carroll, 1997; Deaton, 1991; Ziliak, 1999). A few recent studies indicate that EITC recipients identify precautionary savings as a priority use for their tax refund (Beverly, Tescher, & Marzahl, 2000).

Psychological and Sociological Theories of Economic Behavior

The relationship between income, consumption, and savings frequently centers on permanent income, but it is also important to consider transitory income. Generally, transitory income and transitory consumption are not correlated but windfall income such as the EITC may contradict this assumption. Friedman (1957) suggests that if windfall income is expected the correlation with consumption is similar to that of permanent income. However, if windfall income is unexpected shifts in consumption may occur typically with at least a temporary consumption increase. Lutz and Lux (1979) expand this framework suggesting the application of a hierarchy of needs to household decision-making. Based on this approach, Lutz and Lux propose that households first allocate money to necessities such as food and shelter, then to discretionary needs. Furthermore,

basic needs are taken care of in order of priority. The separability of needs allows individual decision-making to be accomplished in smaller steps (Lavoie, 2003).

Savings theory follows this principle in that the choices about consumption affect decisions to save (Duesenberry, 1949; Hubbard, Skinner, & Zeldes, 1995). As income increases, theory would suggest that savings would increase as well but empirical evidence suggests otherwise. In many cases, when consumption increases, savings either remains the same or declines (Brady & Friedman, 1947). For many low-income families, the intent to save and accumulate assets is obstructed by expenses of daily living. In some households, monthly income does not meet their consumption needs and debt builds over time. For these families, an infusion of cash from the EITC provides a way to pay to meet their financial obligations, but does not lead to asset accumulation (Spader, Ratcliffe, & Stegman, 2005).

Tax increases or decreases may constitute income changes and therefore, may affect consumer saving or spending depending on how well they understand the effect of the tax change on their household portfolio. Much of the research on EITC utilization suggests that recipients plan to allot their refund dollars for such purchases (Barrow & McGranahan, 2000; Dickert-Conlin, Fitzpatrick, & Hanson, 2005; Goodman-Bacon & McGranahan, 2008; Romich & Weisner, 2000; Smeeding et al., 2000).

Assets Framework

Low-income households face multiple risks associated with economic security. These risks may include income shocks related to illness, job loss, or marital breakup. These income shocks may push many families near the poverty line or into poverty. Assets have been found to cushion these income shocks by bridging resource shortfalls,

reducing stress, and thus, preventing families from spiraling into chaos (Scanlon & Page-Adams, 2001; Sherraden, 1991; Shobe & Boyd, 2005). In addition to the psychological effects of economic well-being, assets have also been found to be associated with better economic outcomes (Dietz & Haurin, 2003). Asset holding in the form of homeownership has also been found to be associated with shorter spells of unemployment and better labor market outcomes. The effects are twofold; homeowners tend to have shorter spells of unemployment, and homeownership has a positive effect on the probability of finding employment in the labor market (Goss & Phillips, 1997; Munch, Rosholm & Svarer, 2006).

Assets may contribute more to long-term well-being than income. Tax policy provides a number of asset-building opportunities for middle-class households, but relatively little for low-income families. However, the EITC targets low-income families and may provide opportunities to build assets. There is some disagreement in the literature regarding the asset-building potential of this policy with some arguing that EITC is only able to help families meet consumption needs while others argue that households already view the EITC as wealth and use it to invest in assets. In recent years, policy-makers have encouraged the use of EITC toward asset-building goals for low-income families (Smeeding et al., 2000). Numerous studies indicate that despite poor economic circumstances, low-income individuals are aware of and interested in building assets, particularly through the possible investment of EITC dollars. Yet, even with this subsidy, they struggle to make ends meet.

Recently, policy analysts have begun to examine the relationship between EITC receipt and asset building activity among low-income households. Considering two key

aspects of the behavioral life-cycle hypothesis, mental accounting and self-control, recent studies have begun to examine the role of EITC in asset building strategies of low-income households. Preliminary evidence suggests that EITC recipients view the lump sum tax refund differently than their monthly or annual income (i.e. mental accounting). The potentially substantial financial resource that EITC provides is viewed by some households as an opportunity to invest in long-term assets such as a home or toward general savings for retirement or emergency savings fund (Johnson, Parker, & Souleles, 2004; Rhine, Su, Osaki, & Li, 2005; Romich & Weisner, 2000; Smeeding et. al, 2000). Furthermore, EITC recipients may view the institutional structure of EITC as a mechanism for automatic savings. Romich and Weisner (2000) conducted a qualitative study with EITC recipients in which several respondents explicitly state that they would not be able to save on their own but EITC allowed them to accumulate a large sum of money to be used for the purchase of high-ticket items (e.g. vehicles and furniture) or long-term investments (assets). Additional research in this area would contribute to a better understanding of the role and importance of automatic savings mechanisms such as the EITC versus mainstream financial services toward asset building for low-income families.

Institutional theory

Neoclassical economic theory assumes that actors possess information necessary to evaluate alternatives and make choices that will achieve a desired end. In contrast to neoclassical economics that presumes a rational decision maker, institutional theory suggests that individual decisions are made within a social context or institution (Hall & Taylor, 1996). An important feature of an institution is that it is in some sense a

structural component of society. One proposed function of institutional structures is that they organize human interaction through informal and formal rules, compliance procedures, and standard operating practices in ways that bridge information gaps (North, 1990; Peters, 1999).

Institutional theory would suggest that the more an institution contributes to the resolution of societal dilemmas, such as poverty, the more robust it will be (Hall & Taylor, 1996). Despite progress in the current structure of welfare policies in the U.S. there are still a number of barriers for low-income individuals to move out of poverty. Institutional theory would propose that people do not move out of poverty because there are not institutional structures in place that allow them to do so. However, institutions could play a critical role in the welfare of a nation's citizens, particularly their financial well-being if such mechanisms include explicit connections between subsidies, incentives, and rules. With these connections in place, financial well-being could be improved (Sherraden, 1991).

In the context of this study, institutions are defined as formal policies and programs designed to include the participation of low-income individuals in a way that may change their economic outcomes. Neoclassical economic theory would suggest that in order for such institutions to work, individuals must be fully informed of their choices in order to make rational decisions (North, 1990). This is an important consideration as participation of eligible recipients in the EITC program still has not reached full participation. Despite having been in place for over three decades, participation of eligible households still remains under 80%. Compliance issues are largely due to inaccurate information or lack of awareness regarding eligibility. Limited access to

information and affordable tax preparation services substantially reduces the number of eligible taxpayers who receive the benefit (Phillips, 2001; Scholz, 1994) Free tax preparation services have been available since the inception of EITC policy but have been sparse and relatively unknown to low-income tax payers. For the past decade, efforts to improve outreach to EITC eligible recipients and provide free tax preparation services have grown exponentially. As a result, more eligible households are claiming the benefit and error and non-compliance rates are declining (Blumenthal, Erard, & Ho, 2005; Phillips, 2001; Scholz, 1994).

Neoclassical economic theory assumes that actors possess information necessary to evaluate alternatives and make choices that will achieve a desired end (Hall & Taylor, 1996; Pressman, 2003). An important feature of an institution is that it is in some sense a structural component of society that organizes human interaction through informal and formal rules in ways that bridge information gaps (North, 1990; Peters, 1999). This matters because institutions can shape and influence political behavior and decision making in a wide range of ways. In the context of this study, financial services and products are considered institutions in that their presence in a community offers an opportunity for inclusion and may reduce costs associated with saving and investing by making providing a formal mechanism to do so. Since the presence of financial institutions is still relatively new in Native communities, it is important to better understand to what extent and in what ways Native households utilize them.

EITC Utilization Decisions in the Literature

Policymakers set parameters for the target population in an effort to meet a set of policy goals. Based on the original intent of the EITC, policy goals include work

incentives, decrease in welfare dependency, and reduction of income inequality. To meet these goals, target recipients are identified. It is important to understand who is currently benefitting from this tax transfer program. IRS Statistics of Income (SOI) Reports provide profiles of EITC recipients (IRS, 2008). In 2009 there were over 26 million EITC recipients (IRS, 2010). Among EITC eligible households, 49% are African American, 30% Latino/Hispanic, and 20% Caucasian or other (Smeeding et al., 2000). Single and head-of-household filers made up three-quarters of all EITC returns compared to married filers. The disproportionate share of unmarried filers is primarily made up of single, female-headed households with children many of whom are just cycling off of welfare. Eligible households with children were evenly split between those with one child and those with two or more children (IRS, 2008). Single mothers with two or more children and less than a high school diploma are more likely to be eligible (Meyer & Rosenbaum, 2001). Food stamp eligible households with children are more likely to be eligible (Mikelson & Lerman, 2004). Native American families are often not included in these assessments which makes this study so important.

Social policy in the U.S. has traditionally relied on consumption-based maintenance programs to aid the poor. However, it is only through wider economic and social policies that the problems of poverty and deprivation in American society can be solved. Poor families need opportunities to achieve and maintain long-term financial security in order to rise out of poverty and keep from falling back in. The ability of families to meet their basic needs is an important measure of economic stability and well-being. Household well-being depends on the ability of its members to meet their basic needs. What constitutes a necessity or basic need is relative to a given place and time.

Typically, basic needs are defined as goods required for survival (i.e. food, energy products, clothing, and housing).

The EITC was originally established to help working families meet their basic needs. However, increasing evidence suggests that EITC may contribute to economic well-being in other ways. A number of studies have begun to examine how EITC recipients currently use their tax credit refunds and find that use is separated into two primary categories: making ends meet and social mobility or asset building. Households who use EITC dollars to make ends meet typically allocating resources to regular bills including rent, utilities, food, groceries, clothing, and household expenses. On the other hand, social mobility investments include debt repayment (e.g. credit cards, automobiles, medical bills, etc.), savings, and other expenditures (Romich & Weisner, 2000; Smeeding, et al., 2000).

In addition to planning for consumption needs, previous studies suggest that low-income families also save the EITC in an effort to protect themselves against income shocks and unexpected expenses (Oliver & Shapiro, 1995; Shapiro, 1998). Romich and Weisner's (2000) findings suggest that families view the EITC as such a resource and invest their tax refund dollars in asset building goals.

Decisions to Consume the EITC

Economic theory suggests that consumption choices depend on assets, current and expected income, along with current and expected prices and interest rates. For those with limited income, decisions will be based on need. The drive to consume can be attributed to the desire to improve one's standard of living including satisfaction of needs, comfort, and convenience. In some cases, individuals may trade financial security for an

improved standard of living (Duesenberry, 1949). However, Lutz and Lux (1979) propose that households first allocate money to necessities such as food and shelter, then to discretionary needs. Furthermore, basic needs are taken care of in order of priority. Unfortunately, household wage earnings for these families are not enough to meet even the most basic needs including food, housing, and utilities. The income subsidy characteristic of the EITC offers these families a means to fulfill unmet consumption needs.

Much of the research on EITC utilization suggests that recipients disproportionately plan to spend their EITC and allot their refund dollars for basic needs and the purchase of durable goods rather than save their refund dollars (Edwards, 2004). In addition to meeting basic needs, evidence suggests that families use their refund dollars to invest in durable goods such as a vehicle, washing machine, dishwasher, etc. (Barrow & McGranahan, 2000; Mammen & Lawrence, 2006; Romich & Weisner, 1999; Smeeding, et al, 2000; Souleles, 1999). These findings are further supported by Johnson, Parker, and Souleles (2004). Their study used data from the Consumer Expenditure Survey and find that the average household spent about 20% to 40% of their tax rebate on the purchase of nondurable goods. Households also use the EITC to invest in the maintenance of these goods, including vehicles, appliances, and other home repairs (Goodman-Bacon & McGranahan, 2008; Mammen & Lawrence, 2006; Romich & Weisner, 1999).

Smeeding, Phillips, and O'Connor (2000) find that households with children were more likely to use their EITC refund to make ends meet and that half of recipients would not have been able to meet their priority need without the EITC. Romich and Weisner

(2000) find that two-thirds of parents spend the EITC on their children; usually for clothes or school expenses such as books, supplies, and tuition, followed by large ticket items (60%), appliances and furniture (25%), forms of transportation such as a car purchase or public transportation (20%) and housing (20%). Smeeding et al. (2000) expanded on these findings and categorized utilization based on recipients' expectation of EITC receipt and how they would use it. In their study, approximately 65% of EITC recipients expected to use their refund dollars for consumption purposes related to basic needs and 70% planned to support economic and social mobility goals (e.g. child care, savings, loan payments, educational expenses, etc.) with at least a portion of their refund dollars.

Decisions to Save the EITC

For many low-income families, the intent to save and accumulate assets is obstructed by expenses of daily living. However, for some families, an infusion of cash from the EITC provides a way to both meet their financial obligations and save or invest in more long-term financial goals. In a study conducted by Spader et al. (2005), 97% of respondents agreed that saving is important, 75% thought saving was easier with a bank account; and 86% indicated that saving is difficult. Those who found it difficult indicated that they need to allocate most of their financial resources to necessities with little left for saving.

Despite these challenges, the EITC does provide a potential pool of resources that can be saved for long-term economic goals or security. Results from a number of studies find that EITC recipients do save at least a portion of their tax refund dollars (Beverly, Tescher, & Romich, 2004; Edwards & Wagner, 2007; Romich & Weisner, 2000).

Smeeding et al. (2000) examined differences in EITC spending patterns and found that single parenting, being Hispanic, expecting a refund, and having access to credit all increase the likelihood of using EITC for social mobility purposes. The study also concluded that for each \$1,000 of EITC, the recipient is 1.24 times more likely to use the funds for social mobility. It is important to note that social mobility is not exclusively defined as savings in these studies. Investments in education and homeownership are included along with saving.

Numerous studies indicate that despite poor economic circumstances, low-income individuals are aware of and interested in building assets, particularly through saving and investment of EITC dollars (Romich & Weisner, 2000; Smeeding et al., 2000). However, these households experience a number of challenges to saving. EITC recipients who also receive other welfare benefits know that saving their EITC refund dollars in a formal savings account will negatively affect their eligibility for other welfare benefits. For this reason, some choose not to save these dollars and instead purchase big-ticket items or pay off outstanding bills. Such barriers substantially limit the asset building and social mobility effect of the EITC. However, Smeeding, et al. (2000) found that recipients with access to financial services were more likely to save part of their refund.

Families who indicate a desire to save typically use the funds for financial security purposes such as guarding against emergencies, but are hesitant to invest these resources in structured savings plans such as an IDA (Romich & Weisner, 2001; Smeeding et al., 2000). In a study conducted by Smeeding et al. (2000) half of the families with children indicated that savings was one of their top priorities. Recent studies suggest that a notable proportion of EITC recipients plan to save at least a portion

of their refund (Beverly & Dailey, 2003; Smeeding et al., 2000; Spader, et al., 2005). Romich and Weisner (2000) found that most families either had large saving goals or were keeping the money for future emergencies. This finding is supported by Barrow and McGranahan (2000), who found EITC recipients have some preference for balancing consumption and savings goals. Generally, families used the refund dollars to improve family well-being.

Recently, a number of programs designed to promote savings options for EITC recipients have been developed. This trend, paired with more relaxed means testing across welfare programs, requires a more careful consideration of existing savings behavior among EITC recipients and desired savings goals so that the most appropriate policies and programs can be offered to match the goals of these low-income, working families.

One of the most basic strategies being used to establish savings is to encourage tax filers to set up direct deposit for their tax refund dollars. For households with an existing bank account, only direct deposit is needed. Unbanked households must first open a bank account before direct deposit may be established (Beverly, Tescher, & Romich, 2004). The number of households without bank accounts is estimated to fall between 12% and 20% (Carney & Gale, 2001). The long-term effects are further enhanced when those who save also establish a relationship with a financial institution (Bates & Dunham, 2003). It is possible that if EITC recipients are able to save then the antipoverty effect of the EITC tax policy may be enhanced. The antipoverty consequences associated with saving are worth inquiry.

Individual Characteristics Associated with Saving

Research on savings among low-income households suggests that despite constrained household budgets these families can and do save. Grinstein-Weiss, Wagner, and Ssewamala (2006) find a number of individual characteristics associated with savings. For example, race, education, employment, and income were all associated with saving outcomes. African Americans had lower levels of savings than Whites, while Latino/Hispanics and other ethnicities had higher levels of savings compared to White. A college education was associated with higher savings when compared to those with no high school degree. Even controlling for income, several studies indicate a strong, positive relationship between education and savings (Avery & Kennickell, 1991; Dynan, Skinner, & Zeldes, 2004). One study of low-income households contradicts this finding that college graduates had lower savings than high school graduates (Hogarth & Anguelov, 2003).

Others have examined savings outcomes associated with receipt of welfare benefits. Disincentives, such as a reduction or elimination of benefits, associated with means-tested programs that include SSI, Medicaid, and food stamps have resulted in lower savings among recipient households. However, since these programs have increased asset limits, savings among households with children have also increased (Hubbard, Skinner, & Zeldes, 1995; Hurst & Ziliak, 2004; Grinstein-Weiss et al., 2004).

Financial Capability

Unequal social and economic circumstances contribute to unequal capabilities. Resource-based economic development approaches, such as an income subsidy like the EITC, may provide a way for individuals and households to meet survival needs, but they

do not necessarily allow for the opportunity to convert those resources into functioning which is the basis of the capabilities approach developed by Nussbaum and Sen (Nussbaum, 2000; Robeyns, 2005; Sen, 1999). The framework of financial capability is aligned with the capabilities approach and will provide guidance in examining the role of EITC in financial capability development among low-income working families.

First, it is important to understand the basic tenets of capability theory. Capability is defined as the ability of an individual to lead the kind of life they choose (e.g. where they want to live and work and who they want to become). Furthermore, opportunities should be made available to allow this freedom to choose (Sen, 1993; Nussbaum, 2000). The goal for society (in the context of this dissertation, the goal of programs and policies) is to create an environment in which opportunities are presented to all and that all individuals are able to choose among such opportunities. The number and type of opportunities an individual chooses to take advantage of is determined only by that individual. However, in order for them to make choices that help them live the life they choose, individuals need information about how each opportunity can facilitate their path to achieving their life goals (Robeyns, 2005).

For purposes of this dissertation, the concept of financial capability draws on the original conception of capability but it is further defined as the ability of people to understand and assess financial options while making financial choices that will help them live the life they choose (Johnson & Sherraden, 2007). For financial capability to be achieved, economic policy must allow individuals to move beyond basic consumption to choice: choice in the marketplace, choice in economic goals, and choice in how those goals are achieved. Much like the capabilities approach, proponents of financial

capability seek to provide individuals with information and access to opportunities to increase their functioning in the economic world (Hilgert, Hogarth, & Beverly, 2003).

People may possess a basic level of understanding about financial concepts that may have been obtained through parents, friends, school, or other sources. Experts now assert that through exposure to information and experience with financial institutions, knowledge of available services and products will grow and an understanding of how financial choices will affect well-being will result. Recent evidence suggests that by pairing financial instruments with financial education individuals may score scored higher on tests of financial knowledge. Examples of this information/services connection may include bank account ownership or filing a tax return (Zahn, 2006).

In the context of this study, financial capability includes the following components: 1) EITC as an economic means on which to base economic choices, 2) individuals' access to information related to personal financial choices, 3) individuals' access to financial services and products, and 4) individuals' financial choices given these opportunities (Financial Services Authority, 2005). However, it is important to note that measuring the achievement of financial capabilities is not the primary goal of this study. Rather, the purpose of this study is to gain a better understanding of how each of these capability tenets currently manifests in Native communities. It should also be noted that individual choices may be largely based on structural differences that include social institutions such as norms, traditions, and culture.

CHAPTER IV: CONCEPTUAL MODEL

The conceptual framework for this study is supported within the context of the financial capabilities approach, psychological and sociological theories of economic behavior, institutional theory, and the asset building approach. These theories are consistent with the original intention of EITC policy as a safety net for low-income working families but takes this idea to the next level to suggest that EITC may contribute to increased financial capability, which may in turn, lead to increased self-sufficiency. Many of the proposed research questions have not been undertaken within the context of Native American households. Therefore, a substantial portion of this research was exploratory in an effort to better understand policy effects on this population.

In addition to exploring how Native households utilize EITC, this study examined factors that may or may not contribute to financial capability among Native EITC recipients. The following model represents an approach which suggests that EITC recipients who own and utilize a bank account, save at least a portion of their EITC resources, and invest in asset building activities will be more likely to achieve financial capability.

Key Research Aims

Evidence suggests there are a number of factors involved in leveraging EITC to build financial capability among low-income, Native American households. First, individuals must have sufficient means with which to allow for financial choices. EITC provides such a resource for working families. Second, individuals must have access to information about how to apply for EITC and basic financial services such as a checking or savings account that can facilitate receipt and management of the benefit. Third,

freedom to make financial choices depends on the availability of information about financial options. Once information is provided, individuals can then make choices about how to use that information. Using EITC as an example, once individuals know they are eligible and that they will potentially receive a tax refund, they can then decide how they will use it. This study will test related hypotheses by pursuing the following three aims:

Aim 1: To understand ways that Native and non-Native households utilize the EITC.

Aim 2: To identify individual and institutional factors that predict savings decisions among Native and non-Native households.

Aim 3: To identify a measurement model of financial capability.

First, this research will assess and compare how Native and non-Native households decide to use their EITC dollars. Second, because the EITC provides a substantial resource that could be leveraged through savings, factors that increase the odds of making the decision to save will also be examined. Third, since financial behaviors, such as saving, has been identified as a key component of financial capability, this research will attempt to identify a possible measurement model that includes savings decisions along with additional factors including the role of financial information, financial service needs, service utilization, and financial choices. This is important for developing financial policies, services, and products that are relevant for Native American households and ways to incorporate EITC receipt in these processes. Taken together, this research contributes to the general knowledge about financial capability and effects of social welfare policies for low-income Native American households.

Key Research Questions and Hypotheses

Research question 1: How do Native and non-Native households utilize the EITC?

There are no specific hypotheses associated with this question.

Research question 2: What types of consumptive and savings patterns of EITC utilization do Native and non-Native households display?

There are no specific hypotheses associated with this question.

Research question 3: What individual characteristics increase the odds that Native and non-Native EITC recipients will save their EITC dollars? (see Figure 1).

Hypothesis A: Married/joint tax filing status will increase the odds of saving the EITC.

Hypothesis B: Living in an urban geographic area will increase odds of saving the EITC.

Hypothesis C: Higher education levels will increase the odds of saving the EITC.

Hypothesis D: No welfare receipt will increase the odds of saving the EITC.

Hypothesis E: A regular savings habit will increase the odds of saving the EITC.

Research question 4: What institutional characteristics increase the odds that Native and non-Native EITC recipients will save their EITC dollars? (see Figure 1).

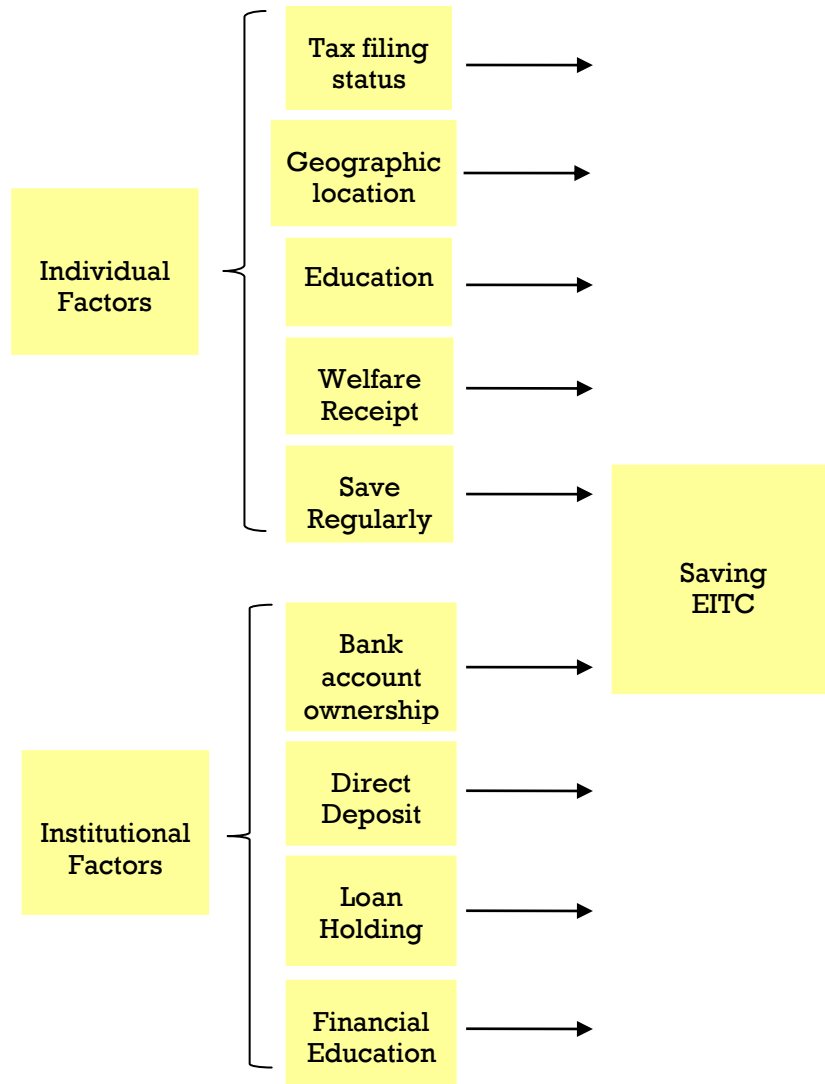
Hypothesis F: Bank account ownership will increase the odds of saving the EITC.

Hypothesis G: Direct deposit will increase the odds of saving the EITC.

Hypothesis H: No loan holdings will increase the odds of saving the EITC.

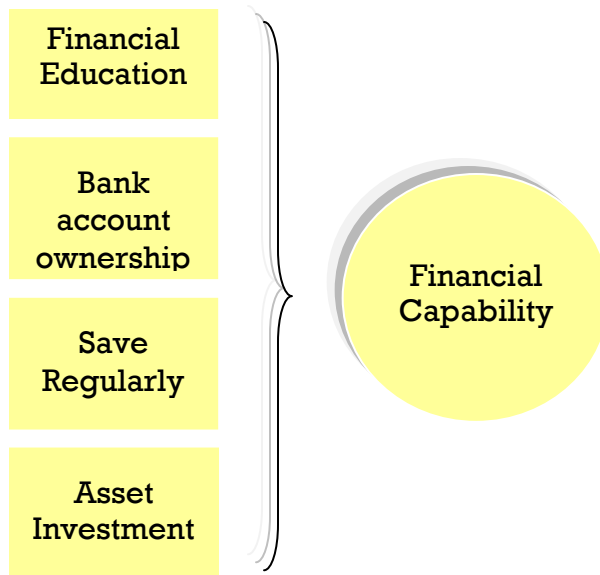
Hypothesis I: Financial education will increase the odds of saving the EITC.

Figure 1: Factors Associated with Saving EITC Dollars among EITC Recipients



Research question 5: Can a measure be identified that describes the construct of financial capability? (see Figure 2).

Figure 2: Possible Indicators of Financial Capability



Before testing these models, it is important to understand why each of the variables is included in the model. A review of the literature in this area provides a more clear definition of each concept along with application of each context, particularly in Native communities. The literature on financial capability suggests that knowledge of financial concepts alone (i.e. through financial education) will not result in financial capability and positive economic change for individuals and households. This knowledge must also be paired with access to and use of financial products such as bank accounts and loans. In addition to knowledge and use of financial products, economic behaviors or choices such as saving regularly and investing in assets also contribute to financial capability.

Saving Regularly

Savings, both short and long term, cushion families against income shocks and unexpected expenses offering greater personal financial security (Oliver & Shapiro, 1995; Shapiro, 1998; Tufano & Schneider, 2009). The lump-sum nature of the EITC provides an automatic savings mechanism for eligible families. Hotz and Scholz (2001) find that 98% of eligible households view the tax system as a savings mechanism and opt to receive the credit as a lump sum when they file their taxes. Several studies have explored why households save their EITC dollars and find that typically, households save to guard against emergencies (Beverly & Dailey, 2003; Romich and Weisner, 2001; Smeeding et al., 2002). Spader et al (2005) conducted interviews with EITC recipients to assess savings attitudes and behaviors and banking needs. Romich and Weisner (2000) found that most families either had large saving goals or were keeping the money for future emergencies. This finding is supported by Barrow and McGranahan (1999), who found EITC recipients balance consumption and savings goals.

Bank Account Ownership

With regard to the EITC and other tax return dollars, an important advantage of having a bank or other financial transaction account is the ability to use direct deposit for receipt of these funds (Beverly, Tescher, & Marzahl, 2000; Beverly, Tescher, & Romich, 2004; Beverly, Tescher, Romich, & Marzahl, 2005; Zahn, Anderson, & Scott, 2006). However, financially capable individuals must have information about how and where to access financial services. Increasingly, VITA sites serve as a bridge to other financial services for unbanked households. This study asked Native American households to

indicate whether they currently have a checking account, savings account, or both¹⁰. A relatively high percentage of households have bank accounts (66%) but there is still a substantial percentage with no bank account (33%), which is quite low compared to national data that suggests 10% of households are unbanked (Aizcorbe, Kennickell, & Moore, 2003; Hogarth, Anguelov, & Lee, 2005).

Financial Education

One factor that may contribute to financial capability is whether an individual has participated in classes or workshops on financial topics (Johnson & Sherraden, 2007; Sherraden, 2008). Increasingly, VITA sites are supplementing their services with other types of financial education such as basic financial management, credit repair, home ownership, and small business development. As a result, participation rates of financial education participation have continued to grow in Native communities as illustrated in Table 4. VITA providers offer these services, typically outside of tax time, to share information about how EITC recipients may further leverage their EITC dollars. As Native American households learn about these opportunities, they are taking advantage of these opportunities to increase knowledge and skills at increasing rates. For example, participation in basic financial management courses increased from 6% to 12% from 2005 to 2007. Home ownership rates increased similarly from 6% to 11% in the same time period. Nationwide, many VITA sites not only provide customers with such information, but these “service” sites are beginning to establish critical links to asset-building programs and services.

¹⁰ In this discussion, “banked” refers to owning a transaction account or having access to other financial services including credit, prepaid card accounts, etc., while “unbanked” refers to customers who do not currently utilize any type of financial transaction account or service (Berke, Lopez-Fernandini, & Herrmann, 2008).

Asset Ownership

In recent years, policy-makers have encouraged the use of the EITC toward asset building goals for low-income families as a way to further contribute to financial capability. For some EITC recipients, this lump sum resource provides such an opportunity. In addition to providing consumption smoothing related to basic needs, the EITC contributes toward long-term household development by providing recipients opportunities to invest in financial options they might not have otherwise such as buying a home, paying for college tuition, or establishing a bank account (Federal Reserve Bank of San Francisco, 2005; Smeeding, Phillips, & O'Connor, 2000).

Asset building, typically characterized by home ownership, was not evident in this study sample (Sherraden, 2008). For many Native American households, home ownership is not possible due to legal, economic, and social constraints on owning property within reservation land (e.g. land trust laws between Tribal and U.S. governments, limited household resources, and a communal value of collectively owned assets) (Community Development Financial Institutions Fund, 2001; HUD, 2009; Miller, 2001). However, evidence from this study suggest that Native American households are likely to invest in financial security of their household by saving some of their EITC dollars in an emergency fund for both anticipated and unanticipated expenses.

Summary

Continued contributions of the EITC to the economic security of low-income household depend on how we define the aims of the policy: who should benefit and to what extent. Clarifying these goals may lead us in a number of directions, including revision to EITC policy, improved linkage between the tax transfer system and other

components within the social welfare system, or a reconsideration of “welfare as we know it”. Some argue that the survival of the EITC depends on advocates’ ability to distinguish it from a tax policy rather than welfare. Sensitivity to criticism and thoughtful reconsideration of policy structures will allow us to build on the success of the EITC. Continued research on the needs of working families and the ability of tax policy and income supports to fulfill these needs and contribute to economic well-being would inform these efforts and provide guidance regarding possibilities for sustainable improvements. The set of research questions proposed for this study will expand our knowledge in these areas for a historically underserved and misunderstood population, Native Americans. The exploratory nature of this study is necessary given the lack of information on EITC effects and contribution to financial well-being among Native American households.

CHAPTER V: DATA AND METHODOLOGY

To examine the proposed research questions and test the associated hypotheses, this dissertation used cross-sectional data from the Native Communities EITC Survey (NC-EITC) (see Appendix A). The following section outlines details of the research design, instrumentation, sampling procedures, and administration of this survey. A description of how the survey data was used to test the study hypotheses, including concept measurement, is also included below.

Research Design

The nature of EITC policy places limitations on the research design. Ideally, a comparison and counterfactual group would be desired in order to study the economic and behavioral effects of the EITC. Because the EITC is a federal level program open to all low-income, low-wage taxpayers, there is no natural control group. Eligible recipients who choose not to claim the EITC are likely to be an anomalous group. This study used survey results from the NC-EITC (N = 9,482). The NC-EITC survey is a primarily closed-ended, quantitative survey developed to assess household utilization of EITC and access to tax preparation and other financial services. The survey was administered using a convenience sample of 18 VITA sites serving over 80 Native communities. It was administered in hard copy to VITA site customers at the time of tax preparation. This study used cross-sectional data from VITA customers during tax years 2005 – 2008.

Instrumentation

The NC-EITC survey was developed by the Center for Social Development and the Kathryn M. Buder Center for Native American Studies both at Washington University in St. Louis along with 18 Native community partners. The author of this

dissertation study was a member of the project team and contributed to all phases of the study including study design, partner development, survey development, data collection, and analysis. The NC-EITC survey was designed to help build an evidence base on EITC access and utilization among Native families; a data set not currently established anywhere else in the U.S.

Through a series of categorical questions, the survey instrument was designed to collect data on access to the EITC through VITA site services, use of financial services and products, and utilization of EITC dollars based on current literature in this area that identifies three main areas of use including basic needs, financial security, and asset building. No standardized instruments have been developed to assess these factors, therefore; the instrument was developed to fill the need for measurement tools that can be administered to EITC recipient households, particularly Native families. However, it has yet to be rigorously tested for validity and reliability. Despite these limitations, the NC-EITC is currently the only known instrument related to EITC utilization among Native tax filers.

In addition to household surveys, interviews with VITA site coordinators were used to collect information about program characteristics (n = 15). These interviews inquired about length of time in service to the community, number of tax returns completed, amount of tax return dollars claimed for community members, an assessment of community partners (particularly those in the financial service sector), and other financial services offered in coordination with tax preparation.

Description of Study Sites and Samples

Native American families have not been included in previous research of EITC utilization which makes this study so important. Reasons for exclusion of Native households from these studies often include the claim that the size of the population is not considered significant enough. In addition, due to a history of exploitive research on Native families, many are reluctant to participate in research studies of any kind. This study of Native families was possible because of the trusting relationship between the study partners and the communities in which they reside. Community partners invited research on this topic and participated in the development of the research questions and methodology. As a result of this community partnership, Native community members trusted the process and agreed to participate in the study.

A collaboration of 19 Native community-based VITA sites worked in partnership with CSD and BCAIS at Washington University during the 2005 - 2008 tax seasons to gain a better understanding of ways in which VITA sites and EITC receipt might better assist Native families and communities meet economic needs. A list of these sites is included in Table 2:

Table 2. List of Community Partners Engaged in the Study

Current VITA Site Partners	State	Organization Type	Years in Operation
1. ALU LIKE	HI	Native CDFI*	3
2. Alaska Business Development Center	AK	Non-profit business services	9
3. Black Hills State University	SD	Business school	4
4. Cherokee Nation	OK	Tribal Government	8
5. Chief Dull Knife College	MT	Tribal College	4
6. Four Bands Community Fund, Inc	SD	Native CDFI	2
7. Intertribal Council of Arizona	AZ	Tribal Government	4
8. Lac Courtes O'reilles Ojibwa College	WI	Tribal College	4
9. Menominee Indian Tribal Association	WI	Tribal Government	3
10. Native American Youth and Family Center (NAYA)	OR	Non-profit	4
11. Navajo Partnership for Housing	AZ/NM	Native CDFI and Housing Authority	3
12. Northern Pueblos Housing Authority	NM	Tribal Housing Authority	3
13. Spotted Eagle, Inc.	WI	Non-profit	4
14. Red Cliff Housing Authority	MN	Tribal Housing Authority	4
15. Rural Dynamics, Inc.	MT	Non-profit	5
16. Tohono O'odham Tribe	AZ	Tribal Government	3
17. White Earth Investment Initiative	MN	Native CDFI	4
18. Ysleta del Sur Pueblo	TX	Tribal Government	6
19. Sinte Gleska College	SD	Tribal College	1

*CDFIs are Community Development Financial Institutions that specialize in providing financial education and start-up capital for small businesses. Many CDFIs also offer Individual Development Accounts and other asset building programs.

This study examined data collected from 19 study sites that differ across key characteristics, including tribal affiliation, geographic location, and length of time in service to the community. Among the 19 study sites, six represent urban centers serving Native customers, one site serves approximately 75 Native Alaskan villages, one site serves approximately 20 Native Hawaiian villages, and the remaining 11 sites include

Native American reservations located in eleven states. Survey respondents represent over 100 tribes across the U.S.

VITA programs operate in community-based organizations that often work in partnership with financial institutions or other community-based service organization. In this sample, there are a number of VITA programs directly sponsored by a Tribe.

Financial education classes typically cover topics such as basic money management and saving strategies, while more specifically focused classes such as home ownership or business start-up provide information directly related to that financial goal.

Sampling Procedures

This study engaged 19 VITA campaigns serving Native urban, rural, and reservation communities in a research partnership. Site partners were identified and recruited with the support of the Native Financial Education Coalition and First Nations Oweesta Corporation. Site partners were chosen to assure a diverse sample that would allow for an assessment of geographic, cultural, and governance differences in EITC receipt and proposed use. Data collection efforts took place during Tax Years (TY) 2005-2008. The total number of surveys totals 9,482.

Survey Administration

The NC-EITC survey was administered in hard copy during tax preparation hours at Native-serving VITA sites. Respondents were greeted upon entering the VITA site where a volunteer offered customers the opportunity to participate in the survey. Customers were informed that participation was voluntary and any information they shared would be kept confidential. In addition, respondents were assured that a decision not to participate would in not affect their tax preparation service in any way. In order to

preserve confidentiality, each survey was assigned an identification number which could be linked to the tax preparation site. However, due to high opposition to release of personal information, these identification numbers could in no way be linked to individual identifiers such as tax payer identification numbers, social security numbers, birthdays or addresses. At the end of tax preparation season (after April 15th of each year), site coordinators mailed completed surveys to the research team at Washington University in St. Louis where the data were entered.

Management of Human Subjects

Written documentation of consent was waived because survey data was not associated with any identifiers. A project information sheet was included as a cover page of the survey to explain the purpose, advantages, and potential risks to potential participants. Participants who chose not to participate in the survey returned the blank form to VITA site volunteers. Survey data was stored on a secured server and is password protected. Only individuals with a secure password had access to the data. Analysis of the data is in aggregate form to further reduce the ability to identify individuals in the data set. There were minimal anticipated risks for survey respondents. Survey completion may have caused fatigue or boredom for respondents, or may have caused respondents to feel frustration towards the VITA program due to the growing volume of paperwork they are asked to complete.

Concept Measurement

The following section describes how the concepts described in this study were operationalized and measured.

Dependent Variables

The dependent variables in this study focused on EITC recipients' choice to utilize their EITC dollars. This was measured through two variables:

1. *Consuming the EITC*. A nominal level variable that asks how a respondent plans to spend some or all of their EITC refund.
2. *Saving the EITC*. A nominal level variable that asks whether a respondent plans to save some or all of their EITC refund. Qualitative data is also available regarding reasons for saving.

Independent Variables

The following set of variables represents a set of individual and institutional characteristics of survey respondents.

Participant Individual Factors:

3. *Tax-filing status*. A nominal level variable that describes the tax-filing status of each respondent. Categories include single heads of household or married-joint filers.
4. *Race/ethnicity*. A nominal level variable that asked respondents to identify his/her race/ethnicity. Options include Native American, Native Alaskan, Native Hawaiian, African American, Caucasian, Latino or Hispanic, Asian American or Pacific Islander, Multi-ethnic, and "other" category. For purposes of this study, race was dummy-coded into a dichotomous variable with Native American,

Native Alaskan, and Native Hawaiian, combined to create a “Native” category and all other race categories combined to form a ‘non-Native’ category.

5. *Education level.* A nominal level variable that asked respondents for their highest level of education completed. Options include “less than high school or GED,” “high-school or GED,” “some college or tech school,” and “2 or more years of college.”
6. *Geographic location.* A nominal variable that indicates whether a participant lives in a rural (rural areas are defined as towns or areas with populations of less than 2,500) or urban (populations of 2,500 or more) area.
7. *Receipt of welfare benefits.* A nominal level variable that asks whether a respondent is currently receiving welfare benefits. Specific benefits are not indicated but may include any combination of Medicaid, Food Stamps, SSI, etc.
8. *Save regularly.* A nominal level variable that asks individuals if they save on a regular basis. In addition to this indicator, individuals could write an estimate of their current savings amount and the reasons why they save.

Participant Institutional Factors

9. *Account ownership.* A nominal level variable that asks respondents to indicate if they have a bank account and what type. Categories include no account, checking account only, savings account only, or both a checking and savings account. If they do not currently have a checking account respondents could indicate that they would like one.
10. *Direct deposit.* A nominal level variable that asks whether a respondent receives their paycheck or other benefit check through direct deposit.

11. *Loan holding*. A nominal level variable that determines if respondents have ever taken out a loan for investments such as a car, home, business, education, furniture, or other investment. Respondents could choose more than one category which provides some indication of how often they access loan services.
12. *Financial education*. A nominal level variable that indicates the types and number of financial education classes a respondent has taken. Choices include basic financial management, homeownership, building or repairing credit, retirement planning, and small business start-up. This variable was also be transformed into a ratio level variable by adding up the number of classes taken.

Financial Capability

Financial capability is defined in numerous ways in the literature. This study used the following definition of financial capability: the ability of people to understand and assess financial options while making financial choices that will help them live the life they choose (Johnson & Sherraden, 2007). For financial capability to be achieved, individuals must have choice in the marketplace, choice in economic goals, and choice in how those goals are achieved. The NC-EITC survey included a number of variables associated with financial capability although measurement of this concept was not the original intention of the survey. Furthermore, although the instrument is not standardized, indicators were chosen that were consistent with current operationalization of this concept in the literature. Indicators of financial capability in this study, given the data available, included 1) account ownership measured by the type of account or no account, 2) participation in financial education, 3) saving regularly as self-reported by respondents, and 4) asset investment measured as homeownership.

Data Analysis Plan

A series of analyses were used to test the research hypotheses including latent class analysis, logistic regression, and exploratory factor analysis. Descriptive characteristics of the household sample and associations between selected variables were obtained through frequency distributions. Upon completion of this step, latent class analysis was utilized to examine patterns in ways that households intend to use their EITC dollars. Clusters identified in the LCA analysis indicated how best to transform variables (into composite variables) for the logistic regression analyses. Composite variables were then entered into the regression equations. Finally, to test a measurement model of factors associated with financial capability, relationships between indicators were determined. This was accomplished through exploratory factor analysis (EFA). Following these steps, structural equation modeling was used to test the proposed measurement model of factors associated with the latent dependent variable financial capability.

Descriptive Analysis

The first phase of the analysis involved explaining the data using descriptive statistics. Frequencies and percentages were determined for categorical variables. These variables included gender, age groups, education level, welfare receipt, EITC use, savings behavior, savings intentions, account ownership, factors associated with being unbanked, loan holding, direct deposit, and financial education experience.

Latent Class Analysis

The second phase of the analysis involved latent class analysis (LCA) to identify patterns of EITC utilization. Identification of patterns in the data is often accomplished

using factor analysis; similarly, LCA provides an opportunity to examine patterns in dichotomous data (Lazarsfeld & Henry, 1968; McCutcheon, 1987; Muthén & Muthén, 2007). Therefore, this study used latent class analysis (LCA) to determine class structures of EITC utilization that exist among households in the study sample. This method of analysis has not been used in previous studies examining EITC utilization. Additionally, patterns of use were examined for Native and non-Native households to determine whether patterns of use were similar or in what ways they differ. This is also a unique contribution to the literature.

In LCA, estimated model parameters are used to predict the correlations or covariances between measured variables. Next, the predicted correlations or covariances are compared to the observed correlations or covariances. For LCA models with categorical outcomes, the item parameters correspond to the conditional item probabilities. The objective is to categorize people into classes using the observed items and identify items that best distinguish between classes. This type of analysis provides information on the probability of an individual in each class to endorse each item (Muthén, 2004).

There are a number of assumptions associated with LCA that are important to understand. First, LCA does not assume linearity, normal distribution of data, or homogeneity of variances. Second, LCA is appropriate when the dependent variable is truly categorical (e.g. binary data). Third, it is assumed that the population may be divided into a finite number of classes which are mutually exclusive and exhaustive. Fourth, if the data includes multi-category variables such that the number of possible rating combinations for the set of variables becomes much larger than the sample size. In

this case it is best to compare multiple indicators of model fit. Finally, within each latent class, observations are assumed to be independent (McCutcheon, 1987).

There are two ways by which the number of the latent classes in the LCA is determined. The first and more popular method is to perform an iterative test of goodness of fit models with the latent classes using the likelihood ratio chi square test. Using this method, the larger the value of the statistic, the more inefficient the model is to fit the data. The second method is bootstrapping of the latent classes. In this case the rho estimates refer to the item response probabilities. Odds ratios measure the effective sizes of the covariates in the model and are calculated by carrying out multinomial regression. The dependent variable in this regression is the latent class variable, and the independent variable is the covariate. The posterior probabilities in LCA refer to the probability of that observation that is classified in a given class (Vermunt, 2003).

Concepts such as financial security or basic needs cannot necessarily be directly observed. However, using financial resources to pay a utility bill, purchase groceries, or deposit in a savings account get closer to these constructs. Groups of these more readily observable indicators can represent underlying, or unobservable variables, called latent constructs. For this reason, co-variation among observed variables is expected if they are representative of the underlying construct. Furthermore, if there are multiple observed and unobserved variables, the observed variables may also cluster according to their relationship with the latent construct (McCutcheon, 1987; 2002).

In this study, LCA of EITC utilization patterns was conducted using *Mplus* Version 5.1 (Muthén & Muthén, 2007). Survey data included categorical variables with primarily dichotomous indicators which served as latent class indicators in this analysis.

The number of classes and variables included in each model was drawn from the literature. In previous studies of this issue, utilization of the EITC has been categorized into three areas (or classes). Therefore the analysis began by testing a three-class model. Dependent variables included: 1) rent, 2) utilities, 3) groceries, 4) clothing, 5) home ownership, 6) auto insurance, 7) down payment on a vehicle, 8) appliances, 9) computers, 10) furniture, 11) helping a family member, 12) property tax, 13) medical expenses, 14) small business startup, 15) school expenses, 16) ceremonies, 17) savings, and 18) retirement. Each of these variables was chosen based on the literature indicating common uses of EITC dollars among recipient households.

Nine different models were tested using combinations of variables from the core set of indicators to examine patterns of use. Two, three, and four class models were tested; each with 18, 15, and 13 items. For each household in the study sample, *Mplus* estimated class membership and the probability that the household belongs to each respective class. In this analysis, only data for simple structure models¹¹ with nine different population attributes was generated. The number of items, item probabilities, and the number of classes in the population defined the nine model populations for this study. Patterns of EITC utilization that emerged from this analysis were examined to better understand how Native and non-Native families use this resource.

Model fit statistics for LCA. In addition to examining factor loadings across variable, model fit statistics including the Aikike Information Criterion (AIC) and the

¹¹ Simple structure models are defined by having item probabilities or means that are particularly high or low for a given class so that these items discriminate among the classes. This structure is similar to a factor analysis model where there are unique items that identify each of the factors (i.e., no cross-loadings). In simple structure models, the class prevalence (i.e., class size) is the same across classes (Nyland, Asparouhov, & Muthén, 2007).

Bayes Information Criterion (BIC), Entropy R-squared, and the Vuong-Lo-Mendell-Rubin (VLMR), Lo-Mendell-Rubin (LMR) provided additional information regarding EITC utilization patterns. The two most widely used model fit criteria in LCA are the AIC and the BIC (McCutcheon, 2002). In LCA, the more complex the model (i.e. more parameters) the more likely it is to yield a greater likelihood.

The AIC and BIC take this into account and reduce the degrees of freedom in the assessment of model fit.¹² Therefore, better fitting models typically have more degrees of freedom. However, as the number of indicators increases, the possibility of model misspecification also increases (Williams & Holahan, 1994). Tests that utilize these fit measures look for values less than the independence baseline. The lower the AIC and BIC values the better the model in comparison with another (Williams & Holahan, 1994). The entropy R-squared is an indicator of how well the model predicts class memberships or factor scores. Two additional tests, the VLMR and the LMR adjusted test, compare models with k-1 classes for goodness of fit. For example, results for a three class model are compared with two class models and those with four classes are compared with three class models.

Logistic Regression Analysis

The third phase of the analysis involved logistic regression analysis to assess the association between the independent and dependent variables and to examine models that tests predictors of saving the EITC among Native and non-Native households. Bivariate models were tested first followed by a model that included both individual and institutional factors. Main effects models tested the individual characteristics associated

¹² To account for increased parameters, AIC and BIC reduce the degrees of freedom in the model: $AIC = G^2 - 2df$ and $BIC = G^2 - df * [\ln(N)]$ (McCutcheon, 2002).

with saving the EITC. The model predicts that decision to save the EITC is a function of education level, welfare receipt (a proxy for income), and regular savings (an already established savings behavior). The second model tested institutional characteristics associated with saving the EITC. The second main effects model predicts that the decision to save the EITC is a function of bank account ownership, direct deposit, loan holding (whether a household has ever taken out a loan), and financial education. The third model included both individual and institutional characteristics to test for partial effects. Each of these models were run separately for Native and non-Native households to provide a measure of comparison between these two groups.

A logistic regression was employed since the dependent variable, an indicator of saving the EITC, had two possible outcomes (0 or 1). In this study, a value of 0 indicates that the participant did not plan to save their EITC and a value of 1 indicates that the participant did make a decision to save their EITC. Goodness of fit statistics determined whether the model with the predictor variables is better than one that would have been achieved by chance. In addition, the contribution of individual predictor statistics was assessed using a regression coefficient $\text{Exp}(B)$ representing the change in the log of odds of being in the group that planned to save their EITC (Lewis-Beck, Bryman, & Liao, 2004). An $\text{Exp}(B)$ value greater than one indicates that the odds of saving the EITC increase with increases with the scores on the predictor.

Exploratory Analysis of the Latent Construct Financial Capability

The primary purpose of this study was to examine EITC utilization and factors related to the decision of recipient households to save their EITC dollars. This information is important as saving decisions have been linked to economic security, asset

building, and have recently been identified as a key component in building financial capability. Even though the available data does not allow a test of the direct association of saving the EITC with financial capability, there are a number of other indicators in the survey data that provided an opportunity to test a potential measurement model of financial capability. Therefore, an additional set of analyses were included as part of this dissertation as a next step forward in studying financial capability among Native households.

Financial capability is still a relatively new concept. Therefore it is important to consider how well various indicators fit together in terms of a measurement model. The dependent variable, financial capability, is not directly measured in this study but a measurement model was constructed and tested with a number of observable constructs that were collected as part of the dataset (Bollen, 1989). Indicators were drawn from the literature as examples of access points to financial services and financial behaviors that may contribute to financial capability. However, since there have not been empirical tests of the latent construct, financial capability, and therefore, no established criteria for variable type and measurement model construction, the use of these data will serve as a beginning step toward a more clear understanding of model criteria in this area of research. As the final step in this study, exploratory factor analysis and structural equation modeling were used to test one possible model of financial capability among Native American households.

There are no standard measures of financial capability to date, but based on the literature, a measure of financial capability should include indicators that provide information about access to financial information, financial choice, access to financial

institutions and utilization of financial services (Financial Services Authority, 2005). Given these suggestions in the literature, this study utilized a set of related indicators which included financial education, bank account ownership, loan holding (as a proxy for access to credit), saving regularly, and asset investment.

The available dataset contains mostly binary variables, which limits the type of analyses that may be performed. Therefore, structural equation modeling techniques designed to deal with categorical data were used to identify underlying dimensions in the data (Muthen, 1983). The first step was to conduct an exploratory factor analysis. Due to the importance of proper measurement of constructs for the social sciences, EFA is becoming widely used for construct validation (Brown, 2006; Russell 2002). In general, factor analysis attempts to define theoretical constructs by determining which sets of observed variables share variance-covariance characteristics. EFA seeks to assess a hypothesized factor model using sample data to more precisely specify phenomenon of interest.

EFA can provide some information about the potential for model fit with a particular set of observed variables. For example, there must be enough information to produce a unique estimate for each parameter. In a just-identified model, there is just enough information to accomplish this task. An over-identified model is preferred and requires enough indicators to demonstrate clustering of variables on a factor or multiple factors. Typically, a single indicator model will not accomplish this. Typically, two-indicators per factor will produce an overidentified model given several criteria: 1) factors should be correlated, 2) residuals of the indicators should be uncorrelated, and 3) indicators load only one factor with no cross-loadings (Bollen, 1989; Kline, 2005).

Exploratory factor analysis (EFA) was conducted using SPSS 18. Model analysis procedures used in this study include a correlation matrix with maximum likelihood estimation, a varimax rotation method to extract principal components, and scree plot that produced a visual representation of relationships among indicators. Missing data were addressed using listwise deletion. This information was used to estimate a structural equation model.

Model Testing with Amos

After examining the relationships between factors in the EFA phase, the variables were entered into a structural model using *Amos 18* to test how well they measured the latent construct, financial capability. The model was specified with the four observed variables (i.e. account ownership, financial education, saving regularly, and asset holding) along with measurement error variances for each. All parameters, including measurement error were allowed to remain free to most accurately test independence of terms in the model. Next, tests of model identification were run to see if the model could be identified and model fit statistics generated.

CHAPTER VI: RESULTS

Who Receives the EITC?

Demographics of VITA site customers inform site coordinators of who they are reaching and who might be missing from the customer base, so that they may better target future outreach efforts. Table 3 includes a summary of individual characteristics among Native and non-Native households in this study sample.

Table 3. Sample Characteristics of Native and Non-Native Households

Characteristic	Native (n = 3,754)	Non-Native (n = 1,996)
Gender (Head of Household)		
Male	42.6%	40.5%
Female	48.1%	49.9%
Married	9.3%	9.6%
Age		
16-20	10.7%	8.7%
21-30	25.7%	22.6%
31-40	18.8%	14.3%
41-50	20.8%	19.0%
51-60	13.8%	16.5%
61+	10.2%	19.0%
Education		
< high school	16.8%	11.2%
High school or GED	51.1%	42.2%
Some college	17.7%	24.6%
2 year, Associate degree	7.4%	7.6%
4 year, Bachelor degree	3.2%	9.1%
Welfare receipt		
Yes, receive some type	38.4%	27.9%
Geographic location		
Rural/reservation	88.0%	33.5%
Urban	12.0%	66.5%

Age and gender. Aggregate results for gender of tax filer showed a relatively equal split among Native households for which 42.6% male single filers, 48.1% female single filers, and 9.3% married/joint filers use free VITA services. The make-up of non-Native households is similar with respondent demographics that include 40.5% male

single filers, 49.9% female single filers, and 9.6% married/joint filers. A majority of the tax filers were between 21 – 50 years of age in both Native (65.3%) and non-Native (55.9%) households. However, tax filers under the age of 21 did utilize VITA sites for filing their taxes and were willing to complete the survey (10.7% Native; 8.7% non-Native). Individuals aged 51 – 60 made up 13.8% of the Native sample and 16.5% of the non-Native sample. Heads of household aged 61+ was a smaller group comprising 10.2% of Native households and 19% of non-Native households.

Education. A majority of the population surveyed (67.9% Native; 53.4% non-Native) had a high school diploma or less. Among this group, 16.8% of Native tax filers and 11.2% of non-Native tax filers had not completed high school. Though 32% of Native and 46.6% of non-Native tax filers reported completion of at least some college courses and higher levels of education the percentage of those with higher levels of education were notably smaller than those with lower levels of education. In general, non-Native households had higher levels of education. Among Native households, 17.7% reported that they had taken at least some college courses. The percentage was higher for non-Native households with 24.6% who had some college credit. The proportion of tax filers that completed a two year degree was substantially less (7.4 Native; 7.6% non-Native). The proportions dropped even further for those who indicated they completed a four year degree (3.2% Native; 9.1% non-Native).

Welfare receipt. We asked respondents to indicate if they or their families received public assistance or were eligible for public assistance in the past year. Among Native respondents, approximately 38.4% indicated that they received or qualified for public benefits including food stamps, Medicaid (or other forms of healthcare assistance),

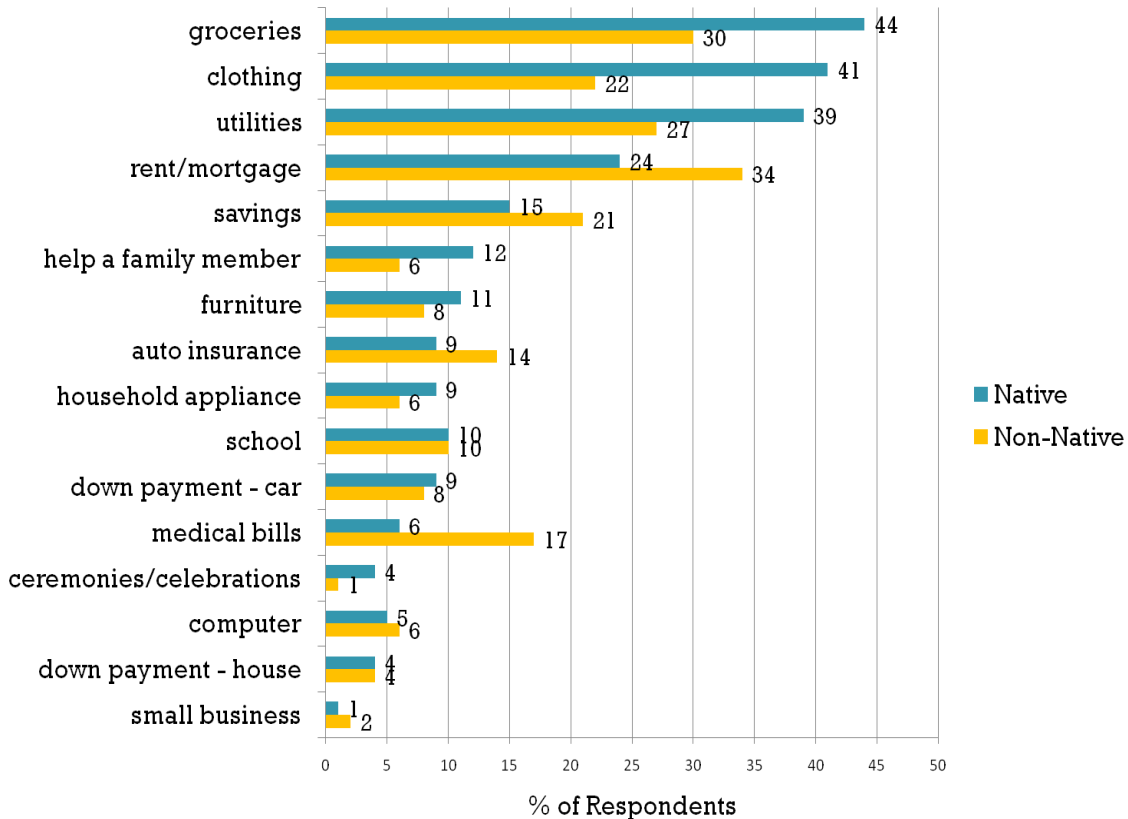
and SSI at some time during the past year. The percentage of welfare recipients among non-Native households was slightly lower at 27.9%.

Geographic location. Funders and partners wanted to better understand the needs of the most hard to reach families. A majority of Native participants in this study live in rural or reservation communities that are also rural (88%). Non-Native households were less likely to live in rural communities within this sample (33.5%).

How Do People Use the EITC?

Understanding how recipients utilize the EITC is an important step toward examining the effectiveness of income transfers and whether resources are reaching the target population. Before examining various categories of use, frequency distributions across all types of use were examined (see Figure 3).

Figure 3. Household Utilization of EITC
(Native n = 3,754; non-Native n = 1,996)



Survey respondents were asked to indicate how they planned to use their tax refund and were allowed to choose multiple answers. As illustrated in Figure 3, a notable percentage of respondents allocated EITC dollars to cover basic needs such as groceries (44% Native, 30% non-Native), utilities (39% Native, 27% non-Native), clothing (41% Native, 33% non-Native), and rent (24% Native, 34% non-Native). In addition to indicating how EITC dollars were used, participants were asked to estimate the percentage of their EITC they planned to allocate toward basic needs. Among Native respondents, approximately 32% anticipated using at least half of their EITC dollars for necessities such as those listed above, compared to 27% of non-Native households. Nearly a fourth of respondents (22% Native, 20% non-Native) planned to allocate a majority (at least 75%) of their EITC to cover essential expenses. A substantial proportion of households indicated that they must put all of their EITC dollars toward daily living expenses (18% Native, 15% non-Native).

In addition to ensuring basic needs, survey results indicated that 15% of Native recipients and 21% of non-Native recipients hope to save their tax return dollars. In addition to saving, there are a number of other ways working families protect themselves from economic shocks such as: maintaining auto insurance (9% Native, 14% non-Native), keeping up with medical bills (6% Native, 17% non-Native), and purchasing a vehicle to get to and from work (9% Native, 8% non-Native). Respondents were also asked to list and discuss other ways they planned to use their EITC dollars. Many of the responses were centered on ways households create a personal safety net as a buffer for emergency expenses, illness, or loss of income. In other cases, respondents stated that they save their EITC dollars for car repairs or medical costs not covered by insurance.

Both Native and non-Native respondents noted that they plan to use the EITC to build emergency funds, cover home and auto repairs, and catch up on overdue bills. The intention to use EITC to help a family member was higher among Native households compared to non-Native households (12% Native, 6% non-Native). Similarly, use of the EITC for ceremonies and celebrations is higher among Native households (4%) compared to non-Native households (1%).

For some households in this study, the EITC was used as a resource to make human capital investments in education and investments in products and activities that may generate income. Both Native and non-Native respondents planned to invest at least part of their EITC dollars in education for themselves or a family member (10% Native; 10%, non-Native). Others demonstrated this intention by allocating their dollars toward a computer indicating that they saw this as an investment in their own or their child's education or as part of their small business (5% Native, 6% non-Native).

Investments in asset related choices such as homeownership (4% Native, 4% non-Native), and small business (1% Native, 2% non-Native) were relatively low for all households. However, approximately 18% of respondents indicated that they will invest at least half of their tax refund dollars in income generating items and activities. In open-ended questions related to EITC use, respondents indicated that they plan to reinvest their tax dollars in small business and subsistence-related items such as tools, hunting and fishing gear, and vehicles. Many also listed payment of professional licenses and training as investments in sustainability of their income source.

Individual Factors Associated with Saving

Before examining the relationship between individual and institutional characteristics with saving it is important to understand how each of these variables was measured and the distribution of each factor among Native and non-Native households in this study. The individual characteristics included in this analysis are education level, welfare receipt, and whether individuals save already.

Education level, welfare receipt, and a regular savings habit are all individual characteristics that have been supported in the literature as having an association with savings decisions. As noted earlier, 85% of the study participants reported completion of at least some college or tech school. Among Native households, 16% of respondents indicated they had completed an associate degree or higher, while 15% reported having less than a high school degree or GED certification. A majority of the population surveyed (58%) had a high school diploma or less. Income data is not available for this sample, therefore a measure of welfare receipt was used as a proxy for income with the assumption that those receiving welfare benefits may have lower income than those who do not. Among households in this study, approximately 40% indicated that they received or qualified for public benefits including food stamps, Medicaid (or other forms of healthcare assistance), and SSI at some time during the past year. The third individual factor selected for this analysis was an indicator of existing financial behaviors related to saving. Among Native households in this study, 31% indicated that they save money on a regular basis compared to 44% of non-Native households who reported that they save regularly.

Institutional Factors Associated with Saving

Several institutional characteristics were chosen for this analysis including bank account ownership, loan holding, financial education, and direct deposit. Descriptive statistics of these variables in the study are included in Table 4.

Table 4. Bank Account Ownership among Study Participants

Account Type	Native (n=3754)	Non-Native (n=1937)
Checking account only	19.6%	25.0%
Savings account only	17.8%	12.3%
Both checking and savings accounts	25.4%	46.5%
No account	37.2%	16.2%

Bank Account Ownership. Research suggests that facilitation through conventional financial services is essential to successful financial management and building assets. Study participants were asked to indicate the types of bank accounts they currently have open and use regularly (Table 4). A relatively high percentage of customers reported that they have some type of bank account (e.g. checking, savings, or both types of accounts) with 62.8% of Native households and 83.8% of non-Native households reporting as account owners. The percentage of Native respondents with no account (37.2%) is higher than non-Native households with no account (16.2%). It is important to note that account ownership varies substantially by Native community, often depending on how accessible the financial services are to community members.

In addition to simply knowing how many households are unbanked (i.e. have no type of account) it is important to know why they do not have an account. To better understand why individuals in this study do not have bank accounts participants were asked to indicate which of the following categories best describes their unbanked status:

1) no banks nearby, 2) bank fees too high, 3) unable to qualify, 4) do not trust banks, and 5) prefer to use cash.

The most common response was that individuals prefer to use cash (61% Native households, 61.6% non-Native households). Individuals who responded that they are ‘unable to qualify’ for an account (15.4% Native and 22.2% non-Native) shared additional information that suggest a number of reasons for this including the fact that they may have poor credit due to bounced checks or overdrawn accounts, no established credit history, or that they do not have the minimum balance available to open an account. Closely related to qualifications needed to open an account are the high cost of fees associated with becoming banked. This was noted by 5.4% of Native respondents and 5.9% of non-Native respondents. A small percentage of respondents indicated that the reason they do not have a bank account is that there are no banks nearby (11.1% Native, 1.6% non-Native). Others indicated that they do not trust banks (7% Native, 8.6% non-Native).

Financial Education

There is increased evidence to support the connections between financial education, decision to save, and access to other financial services, all of which may contribute to financial capability. Study participants were asked which of the following types of financial education classes they have attended in the past two years (see Table 5).

Table 5. Types of Financial Education among Study Participants

Class Type	Native (n=3754)	Non-Native (n=1937)
Basic financial management	9.2%	13.1%
Home ownership	7.2%	11.8%
Credit repair	3.8%	6.1%
Retirement planning	2.1%	5.4%
Small business development	3.3%	3.6%

Overall, rates of participation were higher among non-Native household compared to Native households. The most notable difference can be seen in rates of participation in basic financial management and homeownership classes. Among Native respondents, 9.2% have taken a basic financial education class compared to 13.1% of non-Native households. Homeownership classes were attended by 7.2% of Native households and 11.8% of non-Native households. Credit building and repair classes were also more highly attended by non-Native households (6.1% compared to 3.8% of Native) as were retirement classes (5.4% non-Native versus 2.1% Native). Participation in small business classes was relatively close with 3.3% of Native households attending and 3.6% of non-Native households attending.

Characteristics of Regular Savers

An indicator of an established financial behavior (i.e. saving regularly) was included in this analysis to better understand the relationship between an established financial decision and how that may influence other financial decisions among low-income households. Characteristics of savers in this study are included in Table 6.

Table 6. Characteristics of Native and Non-Native Regular Savers

Characteristic	Native (n = 3,754)	non-Native (n = 1,937)
Bank account ownership		
Checking only	19.5%	21.2%
Savings only	17.8%	12.7%
Both checking and savings	27.7%	50.5%
No account	35.0%	15.6%
Direct deposit	37.6%	55.4%
Financial education		
Financial management	13.9%	15.7%
Homeownership	8.4%	13.2%
Credit	5.5%	5.8%
Retirement planning	3.7%	5.6%
Business development	6.3%	3.2%
No type of class	62.2%	56.5%

Among participants in this study, 31% of Native participants indicated that they save on a regular basis compared to 44% of non-Native participants. Among participants who save regularly, 19.5% of Native households have only a checking account (21.2% non-Native), slightly fewer have a savings account only at 17.8% of Native households (12.7% non-Native), 27.7% of Native households have both a checking and savings account compared to 50.5% of non-Native households. A surprisingly high number of Native regular savers (35%) do not have any type of bank account compared to non-Native savers (15.6%) (see Table 6). Direct deposit has been shown to be associated with more regular savings, yet in this sample, only 37.6% of Native savers had direct deposit set up for their paychecks compared to 55.4% of non-Native savers.

As noted earlier in the frequency distributions of EITC utilization, some working families are saving their EITC. Approximately 10% of survey respondents plan to save at least a portion of these tax refund dollars. Many have already established savings

accounts with an average personal savings amount of \$1500. A number of respondents indicated specific savings goals including both short-term and long-term goals. Such goals include auto and home repair, auto and home purchase, school related expenses for themselves and their children, and investment in their small business.

The proportion of non-Native households that have participated in financial education classes was slightly higher than Native households. General financial management classes have been taken by 13.9% of Native households compared to 15.7% of non-Native. Homeownership classes had fewer participants with 8.4% of Native households and 13.2% of non-Native households. Native and non-Native households had relatively similar rates of participation in credit building and repair classes at 5.5% and 5.8% respectively. Retirement planning also had relatively low participation rates (3.7% Native households and 5.6% non-Native). Native households participated in small business development classes at a slightly higher rate compared to non-Native households at 6.3% and 3.2% respectively.

What Utilization Patterns Emerge from EITC Utilization?

Frequency distributions such as those described above have been the most common method of analysis across literature in this area. The literature asserts that there are three primary categories of use that include basic needs, financial security, and social mobility. This categorization has been based on logical categorization rather than through statistical examination. This study took a different approach and used latent class analysis to determine patterns of EITC utilization among Native and non-Native households.

LCA Results

Each LCA model produced parameter estimates corresponding to the class-membership probabilities and the probability of each possible item response conditional on latent class membership. Each of the tables below includes probabilities of class membership for each model tested. A brief summary of variable clusters by class are also provided. For some subjects, class membership was strongly determined, while class membership of other subjects is less distinct. Still others exhibited partial membership in multiple classes.

Two-Class Models

Parameter estimates for LCA models with two classes and 18, 15, and 13 variables respectively are provided in Table 7.

Table 7. Parameter Estimates of Two-Class LCA Models with Categorical Outcomes

Variable	Model 1 18-item LCA (<i>k</i> =3)		Model 2 15-item LCA (<i>k</i> =3)**		Model 3 13-item LCA (<i>k</i> =3)***	
	Class 1	Class 2	Class 1	Class 2	Class 1	Class 2
Rent (1)	0.411	0.134	0.409	0.132	0.084	0.530
Utilities (2)	0.819	0.156	0.814	0.152	0.066	0.816
Groceries (3)	0.927	0.164	0.926	0.157	0.052	0.868
Clothing (4)	0.849	0.158	0.843	0.154	0.064	0.921
Home ownership (5)	0.065	0.024	-	-	-	-
Auto insurance (6)	0.189	0.039	0.186	0.039	0.034	0.457
Auto payment (7)	0.135	0.062	0.133	0.063	0.040	0.168
Appliances (8)	0.196	0.023	0.193	0.023	0.023	0.433
Computer (9)	0.106	0.023	0.104	0.023	0.018	0.233
Furniture (10)	0.245	0.030	0.241	0.030	0.025	0.428
Family help (11)	0.216	0.054	0.213	0.053	0.034	0.260
Property tax (12)	0.032	0.010	0.031	0.010	-	-
Medical expenses (13)	0.109	0.031	0.107	0.031	0.076	0.335
Small business (14)	0.019	0.007	-	-	-	-
School (15)	0.170	0.054	0.167	0.055	0.047	0.230
Ceremonies (16)	0.093	0.015	0.091	0.015	-	-
Saving (17)	0.195	0.428	0.192	0.282	0.123	0.335
Retirement (18)	0.018	0.013	-	-	-	-

* n = 5,691

**Items retirement, ceremonies, and small business were excluded from the model.

***Items retirement, ceremonies, small business, homeownership, and property tax were excluded from the model.

In Model 1 (two-class, 18-item), some clustering appeared in Class 1 and Class 2 but the clustering was not distinct between the classes. Items two through four in Class 1 had the highest probabilities of endorsement with groceries associated with the highest probability (0.927) followed by clothing (0.849), utilities (0.819), and rent (0.411)¹³. It is important to note that individuals with high probabilities in Class 1 had low probabilities of endorsing these same items in Class 2. For example, individuals in Class 1 had a 93% probability of endorsing the grocery item while the probability of endorsement of this same item is 16% in Class 2. Probabilities for item endorsement in Class 2 clustered around items similar to Class 1 with the highest probabilities associated with three items:

¹³ Endorsement in an LCA model refers to the probability that, when given a dichotomous answer choice to a survey question such as yes or no, respondents chose yes.

groceries (0.164), clothing (0.158), and utilities (0.156). Probabilities for retirement (0.018, 0.013), homeownership (0.065, 0.024), and small business (0.019, 0.007) were low across each class and therefore were not included in the analysis of Model 2. Saving also stood out with relatively high item endorsement (0.428).

Clustering in Model 2 (two-class, 15-item) resembled that of Model 1 although probabilities on each item were slightly lower. The most highly endorsed items for Class 1 include groceries (0.926), clothing (0.843), and utilities (0.814). Highly endorsed items in Class 2 include these same items groceries (0.157), clothing (0.154), and utilities (0.152) but with lower probabilities. As in Model 1, the only item with any notable probability was savings (0.282).

Low probabilities in Model 2 on several items including retirement, ceremonies, small business, homeownership, and property tax indicated that these items may not fit well in the model and were removed for further testing. In Model 3 (two-class, 13-item) the same patterns emerge, only they are associated with different classes. In Class 1, endorsement of the savings item emerged (0.123). Individuals in this class have a 12% probability of endorsing savings. Individuals in Class 2 have a higher probability of endorsing utilities, groceries, and clothing compared to other items. Item endorsement in Class 2 includes clothing (0.921), groceries (0.868), and utilities (0.816). For each model there was cross loading of variables 2-4 (utilities, groceries, and clothing). Beyond that clustering, no additional patterns emerged.

Three-Class Models

When using LCA to analyze item clustering, often adding parameters (e.g. more variables or increasing the number of classes) will both improve model fit and allow

more clear patterns to emerge. However, in this analysis, increasing the parameters did not substantially change the cluster patterns. As in previous models, most of the clustering occurred around basic needs items including groceries, utilities, and clothing, with savings as a single item in at least one class within each of the three-class models (see Table 8).

Table 8. Parameter Estimates of Three-Class LCA Models with Categorical Outcomes

Variable	Model 4			Model 5			Model 6		
	18-item LCA ($k=3$)			15-item LCA ($k=3$)**			13-item LCA ($k=3$)***		
	Class 1	Class 2	Class 3	Class 1	Class 2	Class 3	Class 1	Class 2	Class 3
Rent (1)	0.603	0.390	0.083	0.575	0.388	0.084	0.526	0.340	0.111
Utilities (2)	0.887	0.709	0.064	0.853	0.710	0.066	0.856	0.709	0.114
Groceries (3)	0.913	0.831	0.053	0.891	0.838	0.051	0.917	0.903	0.060
Clothing (4)	0.932	0.578	0.063	0.915	0.571	0.064	0.936	0.715	0.118
Home ownership (5)	0.098	0.017	0.022	-	-	-	-	-	-
Auto insurance (6)	0.546	0.138	0.034	0.520	0.131	0.035	0.411	0.086	0.042
Auto payment (7)	0.205	0.033	0.040	0.181	0.032	0.040	0.315	0.036	0.077
Appliances (8)	0.416	0.080	0.022	0.412	0.071	0.022	0.432	0.073	0.025
Computer (9)	0.276	0.022	0.018	0.251	0.019	0.018	0.274	0.020	0.030
Furniture (10)	0.406	0.088	0.023	0.405	0.078	0.024	0.535	0.088	0.036
Family help (11)	0.272	0.071	0.033	0.257	0.068	0.033	0.416	0.106	0.057
Property tax (12)	0.163	0.035	0.037	0.153	0.033	0.037	-	-	-
Medical expenses (13)	0.396	0.115	0.076	0.380	0.110	0.076	0.242	0.042	0.035
Small business (14)	0.063	0.002	0.004	-	-	-	-	-	-
School (15)	0.269	0.036	0.046	0.257	0.031	0.047	0.455	0.026	0.068
Ceremonies (16)	0.129	0.013	0.009	0.359	0.049	0.124	-	-	-
Saving (17)	0.400	0.051	0.124	0.259	0.072	0.143	0.419	0.071	0.143
Retirement (18)	0.073	0.001	0.017	-	-	-	-	-	-

* n = 5,691

** Items retirement, ceremonies, and small business were not included.

***Items retirement, ceremonies, small business, homeownership, and property tax were not included.

Notably, second tier clusters emerged that included rent, auto insurance, furniture, and appliances in the five-class models. In Model 4 this pattern was seen most clearly in Class 1 with the following items: appliances (0.416), furniture (0.406), rent (0.603), and auto insurance (0.546). In Model 5, the pattern also appeared in Class 1: appliances (0.412), furniture (0.405), auto insurance (0.520), and rent (0.575).

Four-Class Models

Parameter estimates in Table 9 included those for a series of four-class models with 18, 15, and 13 items.

Table 9. Parameter Estimates of Four-Class LCA Models with Categorical Outcomes

Variable	Model 7 18-item LCA ($k=4$)				Model 8 15-item LCA ($k=4$)**				Model 9 13-item LCA ($k=4$ ***)			
	Class 1	Class 2	Class 3	Class 4	Class 1	Class 2	Class 3	Class 4	Class 1	Class 2	Class 3	Class 4
Rent (1)	0.612	0.629	0.083	0.146	0.597	0.137	0.640	0.084	0.536	0.258	0.008	0.384
Utilities (2)	0.880	0.845	0.066	0.587	0.850	0.593	0.847	0.067	0.831	0.220	0.018	0.715
Groceries (3)	0.908	0.824	0.062	0.834	0.890	0.842	0.830	0.061	0.870	0.000	0.071	0.938
Clothing (4)	0.956	0.440	0.058	0.767	0.941	0.753	0.445	0.059	0.933	0.110	0.056	0.585
Home ownership (5)	0.105	0.024	0.022	0.010	0.093	0.012	0.024	0.022	-	-	-	-
Auto insurance (6)	0.538	0.224	0.034	0.062	0.529	0.054	0.225	0.035	0.454	0.096	0.004	0.141
Auto payment (7)	0.208	0.052	0.040	0.016	0.195	0.015	0.052	0.040	0.171	0.048	0.035	0.032
Appliances (8)	0.450	0.016	0.021	0.155	0.450	0.146	0.012	0.021	0.451	0.046	0.015	0.052
Computer (9)	0.291	0.013	0.018	0.035	0.281	0.031	0.013	0.018	0.240	0.022	0.016	0.017
Furniture (10)	0.449	0.009	0.024	0.172	0.451	0.161	0.007	0.024	0.443	0.078	0.000	0.058
Family help (11)	0.284	0.042	0.032	0.110	0.273	0.108	0.041	0.033	0.264	0.037	0.034	0.064
Property tax (12)	0.156	0.066	0.036	0.010	0.153	0.010	0.064	0.036	-	-	-	-
Medical expenses (13)	0.394	0.187	0.076	0.045	0.388	0.040	0.186	0.077	0.336	0.121	0.053	0.114
Small business (14)	0.067	0.005	0.004	0.000	-	-	-	-	-	-	-	-
School (15)	0.264	0.055	0.046	0.024	0.261	0.018	0.054	0.046	0.227	0.067	0.034	0.034
Ceremonies (16)	0.133	0.015	0.009	0.012	-	-	-	-	-	-	-	-
Saving (17)	0.407	0.061	0.123	0.047	0.376	0.043	0.065	0.123	0.331	0.044	0.162	0.055
Retirement (18)	0.080	0.000	0.016	0.001	-	-	-	-	-	-	-	-

* n = 5,691

** Items retirement, ceremonies, and small business were not included.

***Items retirement, ceremonies, small business, homeownership, and property tax were not included.

As in the three-class models (Models 4, 5, and 6) clustering around basic needs items such as utilities, groceries, and clothing appeared but with slight differences in endorsement probability. One difference to note is that rent began to emerge within the clusters on the four class models. Considering results in Model 7 (four-class, 18-item), probabilities in Class 1 mirror that of Model 1 with the highest probability associated with clothing (0.956) followed by groceries (0.908), utilities (0.880), and rent (0.612). In Class 2, clothing did not cluster with the higher probabilities of endorsement while rent emerges for the first time in this basic needs cluster with a 63% probability of endorsement. The highest probability of endorsement of any item in Class 3 was a 12% probability of endorsing the savings item. Although there were slightly lower probabilities, the same cluster around basic needs appeared in Class 4: groceries (0.834), clothing (0.767), and utilities (0.587). Item endorsement was exceptionally low for a number of variables so they were removed for further testing of the four-class model. In the 15 item LCA model retirement, homeownership, and small business were removed. These items, along with ceremonies and property taxes, were removed for the 13 item LCA model.

As in the two and three-class models, savings stood alone in at least one class, usually associated with a moderate – low probability of endorsement. This is important to note as the literature suggests that savings is a primary use of EITC dollars. The highest probability for saving (as a stand-alone item endorsement) in the four-class model can be seen in Class 3 of Model 9 (0.162).

Model Fit

In addition to consideration of item endorsement probabilities and group membership, it is important to evaluate how well a measurement model fits the data. In other words, how close the expected cell frequencies match the observed cell frequencies (see Table 10).

Table 10. Model Fit Statistics for LCA Models with Categorical Outcomes

Model	Entropy	AIC	BIC	V-L-M (P)	L-M-R (P)
2 class/18 var	0.777	25449.331	25665.539	-13814.154 (0.0000)	2206.099 (0.0000)
2 class/15 var	0.807	23288.950	23657.038	-13086.654 (0.0000)	2208.184 (0.0000)
2 class/13 var	0.768	24008.354	24189.477	-15549.013 (0.0003)	2423.369 (0.0003)
3 class/18 var	0.742	24776.138	25103.372	-12687.665 (0.0000)	705.198 (0.0000)
3 class/15 var	0.737	23390.958	23665.563	-11973.177 (0.0001)	644.262 (0.0001)
3 class/13 var	0.653	30685.469	31028.180	-24178.119 (0.0003)	528.872 (0.0003)
4 class/18 var	0.710	25381.984	25096.086	-12332.069 (0.0007)	153.059 (0.0008)
4 class/15 var	0.712	24657.827	24132.460	-11648.479 (0.0081)	132.948 (0.0084)
4 class/13 var	0.745	30532.827	30962.774	-15335.492 (0.0086)	95.534 (0.0082)

*n = 5,691

AIC and BIC. The two most widely used model fit criteria in LCA are the Aikike Information Criterion (AIC) and the Bayes Information Criterion (BIC) (McCutcheon, 2002). The lower the AIC and BIC values the better the model in comparison with another (Williams & Holahan, 1994). Regarding the LCA model fit statistics listed in Table 7, the lowest values of AIC and BIC occurred at the 15-item models for two (AIC = 23288.950; BIC = 23657.038), three (AIC = 23390.958; BIC = 23665.563), and four-class (AIC = 24657.827; BIC = 24132.460) models. The values across models were not

substantially different from one another, therefore, it is difficult to establish conclusive findings of model fit using these values as the only criteria. Therefore, additional model fit criteria were consulted.

Entropy R-squared. The entropy R-squared is an indicator of how well the model predicts class memberships or factor scores. Using this indicator, values closer to one are better. According to entropy values for each of the models, class membership is best predicted in the two class models: Model 2 (two-class, 15-item; entropy =0.807) followed by Model 1 (two-class, 18-item; entropy =0.777) and Model 3 (two-class, 13-item; entropy =0.768). The model least likely to predict class membership is Model 6 (three-class, 13-item; entropy = 0.653).

Vuong-Lo-Mendell-Rubin (VLMR), Lo-Mendell-Rubin (LMR) and Bootstrapped Tests. Two additional tests, the VLMR and the LMR adjusted test, compare models with k-1 classes for goodness of fit. Based on results from this analysis, it may be concluded that two class models produce the best fit when compared with three-class models. Model 2 holds the most significant results in this comparison (two-class, 15-items) best fits the data (VLMR = -13086.654, $p = 0.0000$; LMR = 2208.184, $p = 0.0000$). When comparing three and four-class models, the three-class model is better only with 18 items (VLMR = -12687.665, $p = 0.0000$; LMR = 705.198, $p = 0.0000$). Considering model comparisons in this analysis, it may be concluded that the best model fit can be found in two-class models; more specifically, the two-class, 15-item model (Model 2).

What are the Individual and Institutional Factors Associated with Saving the EITC?

Based on the LCA results described above, participants in this study utilized EITC dollars in two distinct ways. Households either consume the dollars by allocating

them to basic needs, durable goods, and a number of other areas or they save the EITC dollars. To begin this set of analyses, cross-tabs were conducted to assess the relationship between the dependent variable (i.e. decision to save the EITC) and each of the independent variables (see Table 11). This step was followed by a series of binary logistic regressions to determine independence of samples for EITC consumers and EITC savers. Next, a series of logistic regressions was used to predict the set of individual and institutional characteristics that are associated with saving EITC dollars and whether factors differed for Native households compared to non-Native households.

Distribution of EITC Savers

A series of cross-tabs were conducted to better understand the distribution of EITC savers by both individual and institutional factors (see Table 11).

Table 11. Distribution of EITC Savers by Individual and Institutional Factors

Variable	Native Households (N = 3754)			Non-Native Households (N = 1937)		
	Total n	EITC savers (n = 394)	% of EITC savers	Total n	EITC savers (n = 360)	% of EITC savers
Tax filing status						
<i>Single filers</i>	3289	342	87%	1745	332	92.1%
<i>Married/joint filers</i>	465	51	13%	192	28	7.9%
Education						
<i>< high school</i>	662	34	8.5%	207	32	8.9%
<i>High school/GED</i>	1888	166	42.2%	779	159	44.1%
<i>2 yr. degree +</i>	1205	92	23.3%	951	94	26.0%
Geographic location						
<i>Rural</i>	3304	326	82.7%	648	126	35.0%
<i>Urban</i>	450	68	17.3%	1289	234	65.0%
Welfare receipt						
<i>Some welfare benefits</i>	965	106	26.9%	505	63	17.5%
<i>No welfare benefits</i>	2789	288	73.1%	1432	297	82.5%
Save regularly						
<i>Save regularly</i>	1130	201	51.0%	792	211	58.6%
<i>Do not save regularly</i>	2624	193	49.0%	1145	149	41.5%
Bank account ownership						
<i>Some type of account</i>	1909	332	84.3%	1625	332	92.2%
<i>No bank account</i>	1845	62	15.7%	312	28	7.8%
Direct deposit						
<i>Direct deposit</i>	375	301	76.4%	90	334	92.8%
<i>No direct deposit</i>	3379	93	23.6%	1847	26	7.2%
Loan holding						
<i>Some type of loan</i>	548	48	12.2%	910	70	19.3%
<i>No type of loan</i>	481	36	9.1%	1847	53	14.6%
Financial education						
<i>At least one financial education class</i>	628	288	73.1%	447	267	74.2%
<i>No financial education</i>	3126	106	26.9%	1490	93	25.8%

Individual factors included in this analysis focused on tax filing status (single filer or married/joint filer), education level, geographic location of residence, welfare receipt, and regular savings habits of study participants. Institutional factors include bank account ownership, direct deposit, loan holding, and financial education of study participants. Among participants who indicated their choice to save their EITC dollars, a higher percentage were single tax filers in both Native (87%) and non-Native (92.1%) households compared to married/joint filers. The education level of EITC savers were similar when comparing Native and non-Native households. The smallest percentages of savers were those with less than a high school diploma (8.5% Native, 8.9% non-Native). The highest percentages of savers were those with a high school diploma or equivalent (42.2% Native, 44.1% non-Native). EITC savers with some college courses (26% native, 21% non-Native) and those with a two year degree or more (23.3% Native, 26% non-Native) comprised notable proportions of the sample. In terms of geographic location, a majority of Native households live in rural areas (82.7%) and a majority of non-Native households live in urban areas (65%). Individuals received some type of welfare benefit in 26.9% of Native households and 17.5% of non-Native households. In order to assess savings habits among those choosing to save their EITC, respondents were also asked if they save on a regular basis. Among Native households, 51% of respondents indicated that they save on a regular basis compared to 58.6% of non-Native households.

Institutional factors of interest associated with saving the EITC include bank account ownership, direct deposit, loan holding, and financial education. Among EITC savers, 84.3% of Native households and 92.2% of non-Native households have some type of bank account. A notable percentage of EITC savers also have direct deposit (76.4%

Native; 92.8% non-Native). Respondents were also asked if they have taken out a loan of any kind. Types of loans included auto, mortgage, education, and others. Among EITC savers, 12.2% of Native households and 19.3% of non-Native households have taken out some type of loan. More individuals with at least one financial education class (73.1% Native, 74.2% non-Native) chose to save their EITC compared to those who had never had any type of financial education.

Bivariate Relationships: Factors and Saving for EITC

Once the distribution of factors associated with saving the EITC was determined, a series of regressions were conducted to assess the bivariate relationships between each of the individual factors and saving the EITC and institutional factors and saving the EITC. Results for Native households are listed in Table 12 and those for non-Native household in Table 13.

Table 12. Bivariate Relationships: Factors Associated with Saving EITC – Native Households

Variables	Native Households (n = 3754)					Model Fit				
	β	SE	df	Sig.	OR	X^2	Pearson	Deviance	Cox and Snell	Nagelkerke
Married/joint tax filer	.43	.17	1	.01	1.65	.00	.00	.00	.00	.003
< high school	-.85	.19	1	.00	.43	.00	.00	.00	.02	.04
High school/GED	-.40	.11	1	.00	.14	.00	.00	.00	.02	.04
College degree	.56	.13	1	.00	1.75	.00	.00	.00	.02	.04
Urban	.49	.14	1	.00	1.63	.00	.00	.00	.00	.01
Welfare receipt	.07	.12	1	.57	.87	.57	.00	.00	.00	.00
Save regularly	1.00	.11	1	.00	2.73	.00	.00	.00	.02	.05
Bank account	1.31	.15	1	.00	3.71	.00	.00	.00	.04	.07
Direct deposit	1.22	.13	1	.00	3.37	.00	.00	.00	.02	.04
Auto	.45	.17	1	.01	1.56	.02	.00	.00	.00	.01
Mortgage	.35	.32	1	.27	1.41	.02	.00	.00	.00	.01
Business	.06	1.06	1	.95	1.07	.02	.00	.00	.00	.01
Education	-.62	.46	1	.19	.54	.02	.00	.00	.00	.01
Furniture	-.01	.48	1	.99	.99	.02	.00	.00	.00	.01
No loan	-.42	.18	1	.02	.66	.02	.00	.00	.00	.01
Financial education	.69	.12	1	.00	2.00	.00	.00	.00	.01	.02

*p<.05

Table 13. Bivariate Relationships: Factors Associated with Saving EITC – Non-Native Households

Variables	Non-Native Households (n = 1937)					Model Fit				
	β	SE	df	Sig.	OR	X^2	Pearson	Deviance	Cox and Snell	Nagelkerke
Married/joint tax filer	.25	.22	1	.27	1.28	.00	.00	.00	.00	.00
< high school	.31	.21	1	.13	1.37	.00	.00	.00	.00	.01
High school/GED	-.09	.12	1	.43	.91	.00	.00	.00	.00	.01
College degree	.25	.15	1	.09	1.29	.00	.00	.00	.00	.01
Urban	-.09	.12	1	.49	1.09	.49	.00	.00	.00	.00
Welfare receipt	.61	.15	1	.00	.55	.00	.00	.00	.01	.02
Save regularly	.89	.12	1	.00	2.43	.00	.00	.00	.03	.05
Bank account ownership	.97	.21	1	.00	2.63	.00	.00	.00	.02	.02
Direct deposit	.61	.24	1	.01	1.84	.02	.00	.00	.00	.01
Auto	-.54	.16	1	.00	.58	.00	.00	.00	.01	.02
Mortgage	-.43	.19	1	.03	.65	.00	.00	.00	.01	.02
Business	-.88	.74	1	.24	.41	.00	.00	.00	.01	.02
Education	-.34	.24	1	.16	.71	.00	.00	.00	.01	.02
Furniture	-.27	.41	1	.51	.76	.00	.00	.00	.01	.02
No loan	-.33	.18	1	.06	.72	.00	.00	.00	.01	.02
Financial education	.19	.14	1	.17	1.20	.17	.00	.00	.00	.00

*p<.05

Tax Filing Status and Saving the EITC

The total percentage of EITC savers in the study sample was higher among single tax filers in both Native and non-Native households. Furthermore, the cross tab analysis revealed that tax filing status predicted savings choice among Native households only. Married/joint tax filers have higher odds of saving their EITC (OR = 1.65; $p = .01$) compared to single tax filers among Native households. This finding was not significant for non-Native households.

Education Level and Saving the EITC

Among Native households, those with less than a high school education (OR = .43; $p = .00$) and those with a high school diploma or GED (OR = .14; $p = .00$) had lower odds of saving their EITC compared to those with at least two years of college (OR = 1.75; $p = .00$). Native tax filers with at least two years of college had 1.75 higher odds of saving their EITC. Among non-Native households, none of the education levels were significantly associated with saving the EITC.

Geographic Location and Saving the EITC

Living in an urban community was a significant factor related to saving the EITC among Native households but not among non-Native households. Native tax filers living in urban areas had higher odds (OR = 1.63; $p = .00$) of saving their EITC compared to those living in rural areas. Geographic location was not significantly associated with saving the EITC among non-Native households.

Welfare Receipt and Saving the EITC

Welfare receipt was not significantly related to saving the EITC among Native households. However, non-Native households that received at least some type of welfare

benefit had lower odds (OR = .55; $p = .00$) of saving their EITC compared to those who did not receive welfare benefits.

Saving Regularly and Saving the EITC

Households that indicated that they already save on a regular basis were more likely to save their EITC compared to those who do not save regularly among both Native and non-Native households. Among Native households, an established savings behavior increased the odds of saving the EITC by 2.73 times ($p = .00$). Similarly, non-Native households with an established savings habit had increased the odds (OR = 2.43; $p = .00$) of saving the EITC.

Bank Account Ownership and Saving the EITC

Native households with a bank account were more likely to save their EITC compared to Native households without a bank account. Account owners were 3.71 ($p = .00$) times more likely to save their EITC. The same was true among non-Native account holders in which the odds of saving the EITC were 2.63 ($p = .00$) times higher compared to those without a bank account.

Direct Deposit and Saving the EITC

Direct deposit was also found to be a significant factor in a household's choice to save their EITC. Both Native and non-Native households that have direct deposit had higher odds of saving their EITC (Native OR = 3.37, $p = .00$; non-Native OR = 1.84, $p = .01$) compared to households without direct deposit.

Loan Holding and Saving the EITC

Among Native households, loan holding has some effect on whether they choose to save their EITC. Those who do not have a loan of any kind have lower odds of saving

their EITC (OR = .66; $p = .02$) compared to those with some type of loan. Among loan holders, those with auto loans had higher odds of saving their EITC (OR = 1.56; $p = .01$) compared to those without an auto loan. Loan holding associated with other financing options such as business, education, and furniture loans was not significantly associated with saving the EITC.

Results were somewhat different among non-Native households. Two types of loans were significantly associated with saving the EITC; auto loans and mortgage loans. Non-Native households with an auto loan had lower odds of saving their EITC (OR = .58; $p = .00$) as did those with a mortgage loan (OR = .65; $p = .03$) compared to households with other types of loans. Never holding a loan of some kind was not significantly associated with the choice to save the EITC among non-Native households.

Financial Education and Saving the EITC

Native Households that have participated in some financial education courses had higher odds of saving their EITC (OR = 2.00; $p = .00$) compared to those with no financial education. Among non-Native households, financial education was not a significant factor related to saving the EITC.

Analysis of Factors Associated with Saving the EITC: Logistic Regression Results

Logistic regression analyses examined both individual and institutional factors associated with saving the EITC among Native and non-Native households in the same model (see Table 14). The model predicts that the decision to save the EITC (b_0) may be a function of a combination of individual and institutional factors including: tax filing status (T), education level (E), geographic location (G), welfare receipt (W), a regular

saving habit (S), account ownership (A), direct deposit (D), loan holding (L), and whether an individual has had financial education (F):

$$\text{logit} = b_0 + b_1T - b_2E + b_3G - b_4W + b_5S + b_6A - b_7D + b_8L + b_9F$$

Table 14. Individual and Institutional Factors Associated with Saving the EITC

Variables	Native (n = 3,754)					Non-Native (n = 1,937)				
	β	SE	df	Sig	OR	β	SE	df	Sig	OR
Intercept	2.16	.51	1	.00		2.15	.58	1	.00	
<i>Individual Factors</i>										
Married/joint tax filer	.11	.19	1	.56	.90	.32	.25	1	.19	.74
<High school	.55	.25	1	.03	.61	.22	.26	1	.39	.85
High school/GED	.21	.16	1	.20	.85	.05	.17	1	.77	.98
Some college	.19	.18	1	.29	.84	.20	.19	1	.29	.85
Urban community	.18	.19	1	.34	.88	.14	.14	1	.33	.87
Welfare receipt	-.24	.14	1	.08	.83	-.57	.17	1	.00	.58
Save regularly	.41	.13	1	.00	1.53	.77	.13	1	.00	2.18
<i>Institutional Factors</i>										
Account ownership	1.18	.17	1	.00	3.03	.86	.23	1	.00	2.22
Direct deposit	.40	.16	1	.01	1.50	.32	.27	1	.23	1.39
Loan holder										
Auto loan	.23	.19	1	.23	.79	.87	.18	1	.00	.42
No loan	.54	.21	1	.01	.58	.31	.20	1	.13	.74
Financial education	.39	.14	1	.01	1.42	.19	.15	1	.22	1.17
Model Fit										
X^2				.00					.00	
df				12					12	
Pearson				.58					.12	
Deviance				.88					.30	
R^2										
Cox and Snell				.06					.06	
Nagelkerke				.10					.10	

*p<.05

The overall model fit statistics for this combined model of individual and institutional characteristics were significant for both Native and non-Native households, [Native households: $X^2 = .00$; df = 12; Cox and Snell = .06; Nagelkerke = .10] [non-Native households: $X^2 = .00$; df = 12; Cox and Snell = .06; Nagelkerke = .10]. The

statistically significant result indicates that there is a strong correlation between the dependent variable and at least one of the independent variables in the model.

Individual Factors. In the combined model, the number of significant findings is lower than in the bivariate models. Native tax filers with less than a high school degree had lower odds of saving their EITC ($p = .03$; OR = .61) compared to households with a high school education or more. Native households receiving some type of welfare benefits had lower odds of saving their EITC ($p = .08$; OR = .83) compared to Native households with no welfare benefits. In addition, Native households already saving on a regular basis had 1.53 higher odds of saving their EITC ($p = .00$) compared to Native households who are not saving regularly. Among non-Native households, only welfare receipt and saving regularly were found to be significant among individual factors. Among non-Native households, those who receive welfare benefits have lower odds of saving their EITC ($p = .00$; OR = .58) compared to those with no welfare benefits. Non-Native households who save regularly had higher odds of saving their EITC ($p = .00$; OR = 2.18) compared to those who do not save regularly.

Institutional Factors. Account ownership was significant for both Native and non-Native households in which account owners have substantially higher odds (Native: $p = .00$; OR = 3.03; non-Native: $p = .00$; OR = 2.22) of saving their EITC compared to households without bank accounts. Direct deposit also increased the odds of saving the EITC among Native households ($p = .01$; OR = 1.50) compared to those who did not have direct deposit but was not a significant factor for non-Native households. The significance of loan holding also differed when comparing Native and non-Native households. Among Native households, those that have never had a loan had lower odds

of saving their EITC ($p = .01$; OR = .58) compared to those with some other type of loan, including auto loans. Among non-Native households, those with an auto loan had lower odds of saving their EITC ($p = .00$; OR = .42) compared to those without a loan. This finding was substantiated by qualitative findings in which respondents were asked to write about their savings goals. Non-Native respondents most often indicated that they were saving to make auto payments. Financial education was found to increase the odds of saving the EITC among Native households ($p = .01$; OR = 1.42) but not among non-Native households.

Filing as a married/joint tax payer, living in an urban community, having a high school education or more, and holding an auto loan were significant factors in the bivariate models for Native households but were not found to be significant in the combined model. Among non-Native households, the significance of factors also changed when comparing the bivariate models to the combined model. Having less than a high school diploma and direct deposit were both significant in the bivariate models but not in the combined model among non-Native households.

Factors Associated with Saving the EITC: Main Effect Models

The combined model revealed strong associations between institutional factors and the dependent variable, the choice to save EITC dollars for both Native and non-Native households. To further explore and substantiate these findings, logistic regression was used to examine main effects of individual and institutional factors, logistic regression analyses were conducted. The first model tested individual factors associated with saving the EITC (see Table 15). Only factors that were significant in the full model (either Native or non-Native) were included in the main effects models. The model

predicts that the decision to save the EITC is a function of individual factors that include: education level (E), welfare receipt (W), and whether an individual saves regularly (S):

$$\text{logit} = b_0 - b_1E - b_2W + b_3S$$

Table 15. Individual Factors Associated with Saving the EITC

Variables	Native (n = 3,754)					Non-Native (n = 1,937)				
	β	SE	df	Sig.	OR	β	SE	df	Sig	OR
Intercept	2.32	.21	1	.00		1.63	.24	1	.00	
<High school	.79	.20	1	.00	.46	.22	.21	1	.30	.80
Welfare receipt	.08	.13	1	.51	.92	.54	.16	1	.01	.58
Save regularly	.97	.11	1	.00	2.63	.91	.12	1	.00	2.47
Model Fit										
X^2										
df										
Pearson										
Deviance										
R^2										
Cox and Snell										
Nagelkerke										

*p<.05

The overall model statistics for both Native and non-Native households were significant, (Native households: $X^2 = .00$; df = 3; Cox and Snell = .03; Nagelkerke = .05) (non-Native households: $X^2 = .00$; df = 3; Cox and Snell = .04; Nagelkerke = .06). The statistically significant result indicates that there is a strong correlation between the dependent variable and at least one of the independent variables.

Education level remained significantly associated with saving the EITC among Native households in the main effects model ($p = .00$; OR = .46). Welfare receipt remained significant for non-Native households ($p = .01$; OR = .58) but was no longer a significant factor among non-Native households in the main effects model. A regular saving habit remained significant in the main effects model for both Native and non-Native households and with higher odds. Native households who already save regularly

have higher odds of saving their EITC dollars ($p = .00$; OR = 2.63) compared to households who do not save on a regular basis. This finding held true for non-Native households in which the odds of regular savers making the decision to also save their EITC dollars are substantially higher compared to non-Native households who did not already save on a regular basis ($p = .00$; OR = 2.47).

The second regression analyses examined main effects of institutional factors associated with saving the EITC among Native and non-Native households (see Table 16). The model predicts that the decision to save the EITC (b_0) may also be a function of institutional factors including: account ownership (A), direct deposit (D), auto loan holding (L), no loan holdings (N), and whether an individual has had financial education (F):

$$\text{logit} = b_0 + b_1A + b_2D - b_3L - b_4N + b_5F$$

Table 16. Institutional Factors Associated with Saving the EITC

Variables	Native (n = 3,754)					Non-Native (n = 1,937)				
	β	SE	df	Sig	OR	β	SE	df	Sig	OR
Intercept	1.55	.31	1	.00		1.78	.35	1	.00	
Account ownership	1.16	.16	1	.00	3.18	.95	.22	1	.00	2.58
Direct deposit	.38	.14	1	.01	1.46	.38	.25	1	.13	1.46
Auto loan holder	.24	.18	1	.18	.79	.80	.17	1	.00	.45
No loan holdings	.53	.19	1	.01	.59	.38	.19	1	.05	.67
Financial education	.34	.13	1	.01	1.41	.12	.14	1	.40	1.23
Model Fit										
X^2										
df										
Pearson										
Deviance										
R^2										
Cox and Snell										
Nagelkerke										

* $p < .05$

As with the previous model, the overall model statistics for both Native and non-Native households were significant, [Native households: $X^2 = .00$; $df = 5$; Cox and Snell = .05; Nagelkerke = .08] [non-Native households: $X^2 = .00$; $df = 5$; Cox and Snell = .03; Nagelkerke = .05]. The statistically significant result indicates that there is a strong correlation between the dependent variable and at least one of the independent variables.

Account ownership (i.e. any transaction account including checking, savings or both) was a significant factor associated with saving the EITC for both Native and non-Native households but with slightly higher odds in the Native sample. The odds of bank account holders in Native households deciding to save their EITC were significantly higher than Native households without a bank account ($p = .00$; OR = 3.18). Similarly, non-Native account holders had significantly higher odds of saving their EITC compared to those without an account ($p = .00$; OR = 2.58). Direct deposit was hypothesized to be significantly associated with saving the EITC but, as in the full model, this was only found to be true for Native households. Native households with direct deposit had higher odds of saving their EITC compared to those without direct deposit ($p = .01$; OR = 1.46).

Having an auto loan remained significant among non-Native households. Among this group, non-Native households with an auto loan had lower odds of saving their EITC ($p = .00$; OR = .45) compared to those without an auto loan. No loan holdings became a significant factor for Native households but not among non-Native households. Native households who have never taken out a loan have lower odds of saving their EITC compared to households that do have some type of loan ($p = .01$; OR = .59). The odds of saving the EITC are also lower among non-Native households with no loan compared ($p = .01$; OR = 1.46) to those with some type of loan. The final hypothesis suggested that

financial education would be significantly related to saving the EITC. However, this was only true for Native households in the main effects model. Native households who have taken at least one financial education class had significantly higher odds of saving their EITC compared to households that had never participated in a financial ($p = .01$; OR = 1.41).

CHAPTER VII: SUMMARY AND DISCUSSION

Research conducted over the past decade strongly suggests that EITC is one of the most effective federal programs supporting low-income households. Ways that families utilize this source of support have not changed substantially over the years because for low-income families meeting basic needs such as food and shelter remains a priority. Some researchers suggest that there has been one important shift worth noting. Some recipients view the EITC differently than their annual income and have become more aware of the potential for EITC to put them on a path toward economic independence (Johnson, Parker, & Souleles, 2005; Rhine et al., 2005; Romich & Weisner, 2002; Smeeding et al., 2000). Furthermore, EITC recipients seem to view the institutional structure of EITC as a mechanism for savings. Many recipients indicate that they would not be able to save on their own but EITC allowed them to create and maintain a savings plan for emergency purposes, the purchase of higher priced items such as vehicles and furniture or long-term investments such as home ownership (Romich & Weisner, 2002). Findings from this study support a number of these previous studies, but explored in more depth, factors associated with the choice to save EITC dollars.

The only way for eligible households to claim their EITC dollars is to file their taxes. Community-based organizations that offer tax filing services have become a critical access point for these low-income workers. Many of the community organizations who partnered in this study serve Native households exclusively, or Native households make up a substantial percentage of their customer base. As noted earlier, there have been no other studies to date that examine the role of EITC in economic decision-making among low-income, Native families. Therefore, it is important to understand how these

households utilize the EITC and to consider program and policy strategies that could eligible households leverage this benefit.

Who Receives the EITC?

Since this was the first study of Native American EITC recipients, it was important to examine who among this population is applying for and receiving the EITC. Not only does this information provide some insight about who receives the benefit, but also, who may not. This information may help to guide practice and policy in terms of facilitating access to the EITC for eligible households.

Head of household demographics. VITA sites are designed primarily for low-income customers as a means of facilitating access to EITC and other tax-based forms of income supplements. Across the United States low-income households are often characterized by female heads of household. Therefore, it is reasonable to expect females to comprise a large percentage of VITA site users. Yet respondents in this study were nearly equally distributed between males and females in both Native and non-Native households. This finding may indicate that VITA services are viewed as a community or tribal service without association with low-income or “welfare” programs. This reduced stigma may have increased utilization among both male and female heads of households in the community. The average tax filer age fell between 21 and 50, which is not surprising as this is typically when most people are engaged in paid employment. One noteworthy finding related to age is the relatively high percentage of low-income tax filers age 51 – 60 (Native = 13.8%; non-Native = 16.5%) and over age 61 (Native = 10.2%; non-Native = 19%). The high percentages of low-income households in this age

bracket combined with relatively low levels of education may provide some indication of the limited economic mobility and opportunities in these communities.

Education. There is much research to suggest that people with lower education levels (high school diploma, GED, or below) are more likely to also have lower incomes, and are therefore more likely to be eligible for EITC. A majority of the population in this study (67.9% Native; 53.4% non-Native) had a high school diploma or less. This suggests that VITA sites serving households in these communities are providing tax preparation services to the most likely pool of individuals and families. Also, in many of the communities included in this study, educational opportunities are quite rare. In over half of the communities, many individuals would have to travel over 50 miles to the nearest college. In most cases, this would only be a two-year community college or tech school, not an accredited, four-year university that would offer Bachelor degrees or higher. For many individuals, particularly those in rural/reservation communities, the financial cost associated with seeking educational opportunities is too great.

Welfare receipt. The EITC provides a substantial income boost for working families, but many low-income households must still rely on public benefits to make ends meet. In this study, approximately 38% of Native respondents and 28% of non-Native respondents indicated that they received or qualified for public benefits within the tax filing year. The high rate of welfare receipt in this population is another indicator of insufficient economic opportunity in Native communities. This is an important finding for tribes to consider. Employment opportunities that provide some level of economic mobility and can move households from being reliant on welfare to being self-sufficient are still needed. Given current economic conditions in many communities, tribes and

other community leaders may also want to look for other ways for low-income households to leverage their EITC dollars. One possibility is to encourage EITC recipients to save some of their EITC dollars in protected programs such as Individual Development Accounts, since this resource is considered income in means tests of some state public benefits programs.

Geographic location. A majority of Native participants in this study live in rural or reservation communities (88%) whereas; only 33.5% of non-Native participants live in rural communities. This distribution is largely a function of the sampling procedure for this study. Native households, particularly those in rural and reservation communities were specifically chosen for this study to better understand the needs of underserved Native communities in areas of tax preparation and financial services. Geographic location itself does not necessarily have a direct effect on the financial decisions of households. However, it can have an indirect effect on such decisions through limited access to employment and education opportunities, access to financial products and services, and the cost of daily living expenses (e.g. housing, utilities, food, and fuel).

How Do People Use the EITC?

Survey respondents were asked to indicate how they planned to use their tax refund and were allowed to choose multiple answers. Respondents indicated that their primary planned use of tax return dollars was to cover basic living expenses such as groceries, clothing, and utilities. 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 working and using all the money at their disposal to stay out of debt, or prevent themselves from falling deeper in debt or poverty by covering the particular

expenses they list. In addition to meeting basic needs, respondents also indicated ways they are using EITC to ensure financial security for their families, and building assets for social mobility.

In addition to ensuring basic needs, survey results indicate that 15% of Native recipients and 21% of non-Native recipients hope to save their tax return dollars. Much of the American view of saving focuses on the acquisition of material goods and wealth. Though saving money is not a new concept for Native families, the goals associated with saving differ from the contemporary American goals. The primary difference is the focus on individual rather than communal wealth that is more prominent in Native cultures. Research suggests that Native people are not necessarily opposed to individual savings or wealth accumulation as long as the purpose is connected to the practice of reciprocity or giving back to one's family and community (Hertel, et al., 2006).

In addition to saving, there are a number of other ways EITC serves as an important safety net that buffers them from severe financial hardship. In some cases, this is accomplished through maintaining auto insurance, keeping up with medical bills, and purchasing a vehicle to get to and from work. EITC dollars are also used by both Native and non-Native households as investments in education and small business development.

Patterns of EITC Utilization – LCA Findings

The purpose of this analysis was to test the current proposition in the literature that the EITC is used for three primary purposes among eligible families: basic needs, financial security, and asset building. Typically, in LCA, separate latent classes are characterized by different patterns of responses. Just as in factor analysis where it is up to the investigator to assign labels to factors by interpreting the size and direction of factor

loadings, in LCA it is the investigator's job to assign labels to latent classes. Results from this test of EITC utilization patterns indicate that among the population included in this study utilization patterns are more random than those found in studies of other populations. However, two distinct categories emerged: 1) use of EITC for basic needs such as groceries, clothing, and utilities and 2) savings.

Items associated with asset building as noted in other studies, (e.g. home ownership, small business ownership, and education) did not emerge as clusters in this analysis. In fact, the probabilities of item endorsement for both homeownership and small business ownership were so low they were removed in subsequent models in an attempt to improve model fit.

One possible reason for the discrepancy between these findings and those of other studies is that LCA analysis has not been used previously to determine utilization patterns. Typically, categories were determined based on frequency of responses to survey data and items that appear to be prioritized based on that frequency count within a population. The more rigorous test that LCA provides suggests that further inquiry into potential patterns is needed. Another reason for these contradictory findings may be related to characteristics of the study sample.

The overrepresentation of Native households in this study offers a unique contribution to the literature in this area as well. On average, income levels of Native households fall far below that of other EITC eligible households. The very low incomes of these individuals may help to explain the strong cluster of EITC utilization for basic needs that includes, utilities, groceries, clothing, and depending on the model, rent. No clear patterns emerged related to financial security except that auto insurance often

corresponds with moderate level probabilities around 40% – 60%. School, computers, and family help tended to cluster with very low endorsement probabilities (20% – 30%) indicating a possible human capital investment among participants in this study, but asset building, that is typically characterized by home and small business ownership, was not evident. For many Native households, home ownership is not a possibility due to much of tribal land being held in trust by the United States government which precludes individuals from owning such property. Savings held strong with endorsement probabilities of around 40% in at least one class across the nine models. Evidence from other studies and additional survey data in this study suggest that once basic needs have been met, households are likely to save the remaining dollars in an emergency fund or for future, anticipated expenses.

Discussion of Logistic Regression Results

Individual and institutional factors associated with the decision to save the EITC were examined using logistic regression. However, before these factors were entered into a full regression model, the relationship between each factor and the dependent variable (household decision to save the EITC) were examined separately. Results from the bivariate analysis determined which factors would be entered into the full model. Results from this series of analyses supported a number of proposed hypotheses but other findings deserve further consideration.

Bivariate Analyses of Factors Associated with Saving the EITC

Bivariate analyses yielded a number of significant individual and institutional factors associated with a household's decision to save their EITC. However, results differed when comparing Native and non-Native households.

Individual Factors

Tax filing status. Among Native households, married/joint tax filers had higher odds of saving their EITC compared to single tax filers but this finding was not significant for non-Native households. The fact that married/joint filers tend to save more compared to single tax filers is not surprising as it is possible that the combined earning potential of married/joint households is higher than that of single headed households. Furthermore, this increase in resources may make it easier for dual-earner households to meet their basic needs and still have enough money remaining to incorporate savings into their financial decision-making. However, the fact that tax filing status was not significant among non-Native households deserves further consideration. These findings should be interpreted with caution as other research in this area suggests that marriage status is not a significant factor in determining savings outcomes (Grinstein-Weiss, Zahn, & Sherraden, 2006). There are a number of additional factors that may influence a household's decision to save including the income-debt ratio of a household along with the number of dependents in the households. This data was not collected as part of this study but should be considered in any future analysis of this issue.

Education level. Education level was significantly associated with saving the EITC among Native but not non-Native households. Native households with a high school diploma or less had lower odds of saving the EITC. Individuals with at least two years of college education had substantially higher odds of saving the EITC. This finding should be considered within the context of labor market choices and potential knowledge of financial services that may be associated with higher levels of education. This finding might reflect greater knowledge of financial concepts, savings strategies, and potential

benefits of saving among those with higher levels of education. For many Native households in this study, most of whom live in a reservation community, both educational and employment opportunities are limited. Typically, lower levels of education result in lower earning potential and therefore, fewer household resources to invest beyond basic household needs. The combined effect of limited education and earning potential may require Native households to invest their EITC dollars in ways other than saving.

Geographic location. Living in an urban community was a significant factor related to increased odds of saving the EITC among Native households compared to those living in rural or reservation communities. Geographic location was not significantly associated with saving the EITC among non-Native households. It is important to note that approximately two-thirds of the sample of Native households resided in rural/reservation communities with approximately one-third living in urban areas while a majority of the non-Native households resided in urban communities. Therefore, even though there was notable variation across the total sample, within sample variation (Native versus non-Native households) was limited. This may help to explain why geographic location was not found to be significant for non-Native households. Furthermore, in many ways, geographic location served as a proxy for access to financial services. As stated earlier, rural communities, particularly reservations often have few to no financial service options. In many cases, people must travel over 50 miles to reach the nearest bank or ATM. Such limited access could influence saving decisions of these households. When more institutional options for saving money were available, as was the case in urban households of this sample, individuals may choose to save their EITC.

In addition to financial service access it is important to consider increased cost of living associated with living in rural communities. Often, fuel costs along with the price of basic goods (e.g. food, household items, etc.) are higher because of the cost of transporting them to the community. Furthermore, residents of rural/reservation communities often incur higher daily living costs because they must travel great distances to obtain products and services that are not available in their own community. Each of these factors may reduce the ability of rural families to save any portion of their financial resources.

Welfare receipt. Welfare receipt was not significantly related to saving the EITC among Native households. However, non-Native households that received at least some type of welfare benefit had lower odds of saving their EITC compared to those who did not receive any welfare benefits. Data on specific amounts of household economic resources was not collected as part of this study, however, welfare receipt served as a proxy for household income. For example, those who had received some type of welfare benefit within the year prior to filing their taxes were likely to have lower economic resources per household member compared to those who did not receive benefits. Therefore, lower levels of household resources combined with limited access to financial services (as noted above) may contribute to lower odds of saving the EITC among Native households.

Regular savings habit. Households that indicated they already save on a regular basis had substantially higher odds of saving their EITC compared to those who do not save regularly among both Native and non-Native households. This finding supports the hypothesis that households with an established savings habit will likely choose to save

their EITC. Research in behavioral economics would suggest that once individuals have been provided with education and guidance regarding savings options, the development of savings plans, and have the economic resources to set aside money for their savings goals, they will begin to look for additional opportunities to save. Results from this study may suggest that tax time and receipt of the EITC may provide an opportunity for low-income households looking to save.

Institutional Factors

Bank account ownership and direct deposit. Native households with a bank account were over three times more likely to save their EITC compared to Native households without a bank account. The same was true among non-Native account holders who were two times more likely to save their EITC compared to those without a bank account. This finding supports other research in the field that identifies the importance of bank account ownership in household economic security. First, account ownership signals some level of interest in and understanding of organizing and managing ones personal finances. Second, having a transaction account such as a savings or checking account may make it easier to transfer a portion of household income to a secure location for future needs. An additional indicator of financial sophistication or knowledge and use of financial services is direct deposit. Results from this study suggest that direct deposit is a significant factor in the decision to save the EITC for both Native and non-Native households. Those with direct deposit set up to transfer their paycheck and/or their tax refund to one of their transaction accounts had substantially higher odds of saving their EITC compared to those without direct deposit. Therefore, these findings

suggest that one way to increase savings among Native families is to assist them in opening a bank account and finding ways to encourage and facilitate direct deposit.

Loan holding. Among Native households, those who do not have a loan of any kind have lower odds of saving their EITC compared to those with some type of loan. This finding may suggest that individuals who have taken out some type of loan have already exhibited some ability to create a financial plan and save a portion of their income to make regular payments on their loan. Thus, they may be more likely to have created a financial plan and made a decision to reserve a portion of their income to achieve their future financial goals. In essence, they have already established a savings behavior. Among loan holders in this study, those with auto loans had higher odds of saving their EITC compared to those who did not have an auto loan. Loan holding associated with other financing options such as business, education, and furniture loans was not significantly associated with saving the EITC. Participants in this study were more likely to have an auto loan than any other type of loan. In qualitative portions of the survey, participants indicated that one of the primary ways they planned to use their EITC dollars was to save their EITC in order to pay off their auto loan.

Statistical results were slightly different among non-Native households but the interpretation may actually be more similar than what first appears. Two types of loans were significantly associated with lower odds of saving the EITC; auto loans and mortgage loans. In this case, non-Native households did not refer to the act of paying off their auto loans as saving their EITC; rather, they indicated that they were not able to save because of the need to allocate resources to their debt (i.e. loans). Unlike the

significant finding among Native households, never holding a loan of any kind was not significantly associated with the choice to save the EITC among non-Native households.

Financial education. Financial education is one way individuals receive information about financial products and services. This information may influence a household's decision to save or consume their economic resources such as the EITC. In this study, Native Households that have participated in at least one financial education course had higher odds of saving their EITC compared to those with no financial education. Among non-Native households, financial education was not a significant factor related to saving the EITC. It is possible that non-Native households received information about personal financial management from sources other than a formal financial education course reducing the effect of this factor as it relates to the choice to save the EITC.

Full Logistic Regression Model

The purpose of testing the full model of individual and institutional factors was to identify possible partial effects of these factors on a household's decision to save their EITC dollars. Results suggest that an already established savings habit (i.e. saving regularly) is the strongest predictor of a household's decision to save their EITC for both Native and non-Native households. A combination of individual and institutional characteristics increases the odds that Native households will decide to save their EITC. However, the most significant factors for Native households included saving regularly (individual factor) along with account ownership, direct deposit, and financial education (institutional factors). Whereas, among non-Native households saving regularly (individual factor) and account ownership (institutional factor) were the most significant

factors associated with increased odds of saving the EITC. These results varied somewhat from the bivariate analyses. Among Native households, tax filing status, having a college degree, living in an urban community, and having an auto loan were no longer significant when entered into the full model. Differences in the results were not quite as extensive among non-Native households. Direct deposit was the only factor that was no longer significant in the full model.

Education level. In this study, it is not surprising that lower levels of education were found to be associated with the saving decision in both the bivariate and the full regression models. This finding supports the proposed hypothesis that there would be a significant association between education and savings in which those with lower levels of education had lower odds of saving the EITC. This factor was not significant among non-Native households in the full model. There are two possible reasons for this. One possible explanation is that the sample of Native households consists of low-income families most of whom have education levels at high school or below, which may limit their earning potential. Non-Native households tended to have higher levels of education with a substantial proportion of them having at least a high school degree and two years of college. Even though all of the households in this study were considered low-income (i.e. eligible for the EITC and other low-income tax credits) those with higher levels of education level may also have higher income levels, allowing such households greater opportunity to save.

Welfare receipt. Welfare receipt was only found to be a significant factor in non-Native households in both the bivariate and full models. One possible explanation for this is that individuals who receive welfare benefits may underestimate asset limits associated

with welfare receipt and may, therefore, be hesitant to save EITC dollars because they do not want their welfare amounts to be reduced. The difference in welfare effects on saving the EITC of non-Native households versus Native households may be attributed to the fact that there are higher percentages of Native households receiving welfare benefits and for longer periods of time. It is possible that Native households have become more adept at managing a limited amount of resources and are able to save even small portions of their EITC regardless of their household income.

Save regularly. It was hypothesized that individuals who save regularly may be more likely to choose to save their EITC than those who have not established a savings habit. Findings from both the bivariate and full model analyses support that hypothesis. In fact, the odds of saving the EITC were the highest for this factor compared to the other individual or institutional factors. One reason for this may be that households who indicate that they save regularly have made a conscious decision to save a portion of their earnings or other monetary resources and are now in the habit of doing so. Others may view the EITC as an automatic savings plan and regularly make the decision to save this resource.

Bank Account Ownership. Research suggests that bank account ownership increases the likelihood that an individual will save. Results from this study support those findings for both Native and non-Native families. In this study, both Native and non-Native households had greater odds of saving their EITC if they have at least some type of bank account in both the bivariate and full model analyses. Given these findings, it is important to consider that account ownership varies substantially by Native community, often depending on how accessible the financial services are to community members. In

this study, 62.8% of Native households and 83.8% of non-Native households own some type of bank account whether checking, savings, or both. One reason why individuals do not have an account is that banking services are unavailable in many reservation communities or are located great distances from the customer's residence. Improving access to financial institutions such as commercial banks or credit unions by locating a branch in these communities may increase the rate of Native households opening accounts thus increasing savings among these households.

Direct deposit. Direct deposit was hypothesized to be positively associated with saving the EITC. Results from this study support that hypothesis among both Native and non-Native households in the bivariate models. However, in the full model, direct deposit only remained significant among Native households. As noted earlier in this paper, mainstream financial services, including commercial banks, credit unions, and even ATM machines are less prevalent in Native communities. Therefore, those who do have access to direct deposit increase their odds of saving quite substantially. Therefore, if Native households would like to increase their savings, direct deposit may be one way to do so. However, financial institutions would need to be made more accessible to these families.

Loan holder. Findings related to loan holding varied considerably for Native and non-Native households. Native households that had an auto loan were more likely to save their EITC dollars compared to those without a loan of any kind. In fact, those with an auto loan had increased odds of saving their EITC whereas those with no loan had decreased odds of saving their EITC. Qualitative and anecdotal evidence from this study provide a potential explanation for this relationship. The household survey asked respondents to provide information about how they planned to use their EITC dollars. In

addition to the checklist provided, a number of individuals wrote that they would use the EITC to pay off debt and more specifically, loans. Some individuals listed specific types of loans such as auto loan, mortgage payments, and student loans. It may be that these individuals had developed a personal financial plan to set aside (or save) some of their EITC dollars to allocate toward debt associated with these loans.

The findings were quite different among non-Native households. Households with an auto loan had decreased odds of saving their EITC in both the bivariate and full models. It is possible that either these non-Native households had higher loans to pay compared to Native households which reduced the amount of resources left over for saving. Another explanation of this finding may be that they considered their loan payment a cost rather than referring to this allocation as part of their savings plan.

Financial Education. There is increased evidence to support the connections between financial education, decision to save, and access to other financial services. Participants in this study took of variety of financial education courses including general financial management, homeownership education, small business development, and credit repair (Bernheim, Garrett, & Maki, 2001; Nyce, 2005; Tennyson & Nguyen, 2001). Many individuals only took one class, but those who were enrolled in a general financial management course were more likely to also enroll in a more specialized course such as home ownership. Results from this study suggest that taking at least one financial education course increases the odds of making a positive savings decision among Native EITC recipients. However, financial education was not a significant factor for non-Native households. As stated earlier, it is possible that non-Native households are receiving

financial information from sources other than a formal course reducing the significance of the financial education factor in this study.

Individual Factors and Saving: Main Effects Models

Significant factors from the full regression model were entered into separate models with the intent of studying the main effects of individual and institutional factors. Although there were slight variations in the odds ratios when comparing the full model and main effects models, results remained the same. Among Native households education level, saving regularly, bank account ownership, direct deposit, no loan holdings and financial education all remained significant factors associated with the decision to save the EITC. Among non-Native households, welfare receipt, saving regularly, bank account ownership, and auto loan holdings remained significant factors.

Study Limitations

The data source for the proposed study is unique in that it is the first collection of data on EITC utilization among Native American households in the U.S. In addition to information about consumption and savings choices, data was collected on access to financial services and asset investments among this population which makes a substantial contribution to this body of knowledge.

However, this dissertation proposal has a number of theoretical and methodological weaknesses. Past research on EITC utilization provides a poor theoretical foundation upon which to build current work. Consequently, theory and empirical support for this research draws largely from the fields of economics and institutional theory. While these fields are relevant due to their focus on economic behaviors and well-being, they do not necessarily explain why certain economic choices related to the EITC

may be made within the target population in this study. Furthermore, there is a dearth of literature on access to financial products and services among Native American households. For this reason, there are relatively few references to the financial services context for this population. However, the lack of information underscores the importance of this study. Even though the original purpose of this study was not specifically focused on the financial services landscape in Native communities, findings from this study provide some insight to this issue that existing literature does not offer.

Findings from this study may contribute to the emerging theory of financial capability but with reservation. Certain conditions of financial capability, most importantly the perception of EITC as a particular type of resource and desire for financial services were not explicitly measured in the survey and are assumed to some degree. It is possible that these assumptions are incorrect and could contaminate results. It is also likely that the way financial capability is currently conceived does not resonate with Native Americans. The potential cultural differences in what constitutes economic well-being are not explicitly captured in the data set. Therefore, the current financial capability framework may be helpful in explaining some outcomes, but unhelpful in explaining others. Outcomes specifically measuring cultural definitions of economic well-being and stated desires of inclusion in the economic marketplace would be more valuable for refining this particular theory.

In order to increase the response rate among tax filers, no identifiers were attached to the surveys. No single respondent can be identified or tracked over time. This precludes any analysis of change in access to services or change in financial choices over time. Furthermore, surveys were collected at the same partner sites over the course

of four years. Because there were no identifiers attached to the surveys it is possible that some of the same individuals completed the survey more than once. This limitation was addressed by running analyses only using individuals who indicated that they were first time customers at the tax filing site.

It was not possible to randomly assign tax filers to different types of service programs or to sample those who were eligible for EITC but either chose not to file or did not know about the benefit and therefore did not file. Consequently respondent selection bias may be an issue. The overall survey response rate of 42% may also skew results by introducing a non-response bias. Not only might the sample characteristics be different from the population from which they are drawn, but they are also likely different from each other.

The use of logistic regression procedures also presents limitations of overall study conclusions. Linear regression only provides information about the relationships between variables, but not the underlying cause of the outcome of interest. Therefore, it is not possible to conclude that EITC receipt results in the observed changes in the financial capability of Native American households, only that these factors are related. Future longitudinal research based on quasi-experimental design that more explicitly examines the availability of financial choices and underlying reasons for financial choices among Native American households may help infer causation.

Path dependence issues such as prior financial knowledge, economic choices, and access to financial services are encompassed in various ways throughout the analyses. However, to some extent, a condition of origin (e.g. prior savings choices, bank account ownership, financial education, etc.) is controlled for in the analyses. Although it was not

known at what point in time these preconditions or causes existed, the outcome (i.e. decision to save the EITC) and relationship with these factors was tested as required for path dependence analysis.

CHAPTER VIII: TESTING A POSSIBLE MEASURE OF FINANCIAL CAPABILITY

In the financial capability literature it is hypothesized that a combination of factors will result in an individual's financial capability. These factors include information about financial concepts, access to financial services and products, and financial behaviors related to the implementation of knowledge and utilization of services and products. However, no standardized measure of financial capability has been developed to date. This study sought to better understand the single latent construct of financial capability and whether each of these components holds together in one model.

Exploratory Factor Analysis

Correlations were run using EFA in order to examine relationships between variables (see Table 17).

Table 17. Correlation Matrix of Factors Associated with Financial Capability

	Type of bank account	Financial education	Home ownership	Save regularly
Correlation	Type of bank account	1.00		
	Financial education	-.12	1.00	
	Homeownership	-.01	.02	1.00
	Save regularly	-.04	.06	.16
				1.00
Sig. (1-tailed)	Type of bank account	---	.00	.39
	Financial education	.00	---	.13
	Homeownership	.39	.13	---
	Save regularly	.03	.00	.00

* N = 5,691

Factor loadings estimate the direct effects of the factors on the indicators. Most of the variables in the model had very low correlations. The highest correlations were between saving regularly and homeownership (.16) and financial education and bank account ownership (-.12). Saving regularly was weakly associated with financial education (.06) as were saving regularly and type of bank account (-.04), homeownership

and financial education (.02), and homeownership and type of bank account (-.01). Among these relationships, several were found to be significant including financial education – type of bank account. Saving regularly was significantly associated with each of the other indicators (i.e. type of bank account, financial education, and homeownership).

A low eigen value (smaller than 1) signifies that the component includes variance from more than one variable. The components with an eigen value greater than 1 are components 1 and 2, signifying that the first two components account for the greatest amount of variance (factor 1 = 1.21; factor 2 = 1.08). Therefore, these variables were maintained in the rotation analysis. Visual inspection of the scree plot further suggests that only components 1 and 2 should be retained. Furthermore, the amount of variance explained was strongest for type of bank account (30.24%) and financial education (26.98%) (see Table 18).

Table 18. Total Variance Explained by Factors Associated with Financial Capability

Factor	Initial Eigen Values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.21	30.24	30.24	1.21	30.24	30.24
2	1.08	26.98	57.23	1.08	26.98	57.23
3	.88	21.91	79.13	---	---	---
4	.83	20.86	100.00	---	---	---

*N = 5,691

One the one hand, low correlations between factors suggests that multicollinearity in the model is unlikely. This finding is further supported by the Kaiser-Meyer-Olkin test (KMO = .514). The KMO value is within the acceptable range for this test and indicates

that there is unlikely a problem with multicollinearity. Other model fit statistics suggest that there is not good model fit ($X^2 = 111.681$; $df = 6$; $p = .000$).

Model Testing with Amos

Once it was determined that multicollinearity among these indicators was unlikely, they were entered into a structural equation model to test how well they measured the latent construct, financial capability. The number of values (14) was greater than the number of free parameters (13) leaving $df = 1$ for the specified model. Furthermore, no model statistics were generated. An error message was generated stating that the model was underidentified and cannot be estimated with the selected data. There may be a number of possible explanations for the misspecification of the model: 1) binary data does not allow for a linear analysis of relationships in the model, 2) a four-indicator model may not be sufficient to estimate the model suggesting that additional indicators should be included in future analyses.

Summary of Tests for the Latent Construct - Financial Capability

An analysis the relationship between factors associated with financial capability was attempted using exploratory factor analysis (EFA) in SPSS 18 and model testing in Amos 18. Correlations were run in order to examine relationships between variables. Correlations between variables were quite low, indicating that there are likely no problems with multicollinearity. This was a positive result as the next intended step in the analysis was to enter the indicators into a model to test for a latent construct. Model testing with Amos 18 yielded an underidentified model. There may be a number of possible explanations for the misspecification of the model: 1) binary data does not allow for a linear analysis of relationships in the model, 2) a four-indicator model may not be

sufficient to estimate the model suggesting that additional indicators should be included in future analyses. This would increase the number of observations available to estimate model effects.

Despite the model misspecification, an interesting finding emerged. The exploratory factor analysis stage revealed two clusterings among the four indicators. The first cluster consisted of financial education and type of bank account and the second was comprised of saving regularly and homeownership. Drawing from the literature, this clustering makes sense. Financial education and bank account ownership could be considered institutional factors that provide information and access to households. The pairing of saving regularly and homeownership reflects suggestions in the literature that if individuals have information and access, they may be more likely to put those resources into action (i.e. financial behaviors).

This study could not further consider these relationships given the available data. However, these results suggest that additional indicators of financial capability need to be developed (e.g. other types of access points, information sources, and financial behaviors) in order to further test the concept of financial capability. In addition, indicators that allow for more variance (i.e. ordinal or continuous measures) may improve model fit and provide more meaningful results.

CHAPTER IX: POLICY, PRACTICE, AND RESEARCH IMPLICATIONS

Practice Implications

Facilitating EITC Receipt

Despite the many positive economic effects of the EITC for working families, many do not claim this benefit. Households with very low income are not required to file taxes; therefore, many low-income workers are not aware that they are eligible. It is estimated that nearly 30% of eligible recipients are unaware that they qualify for the benefit (Romich, Simmelink, & Holt, 2007). Low-income Hispanic parents, immigrant workers (Phillips, 2001; Robles, 2007), families living in rural areas (Mammen & Lawrence, 2006) married, low-income parents, and individuals receiving welfare benefits for the first time are least likely to know about the program (Phillips, 2001). Increasing awareness and knowledge of the EITC among eligible recipients could go a long way toward providing a bridge from welfare to economic self-sufficiency. Social workers could play an important role in this effort.

VITA sites serve as an important institution for leveraging the financial capability effects of EITC for Native American households. Results from this study suggest that Native-serving VITA sites are improving customers' livelihoods by connecting them to the EITC benefits they have earned and reducing costs associated with tax preparation. All of which increase the potential for reinvestment of these dollars in the household and local economy. Further, these are factors that may contribute to financial capability.

Continued and expanded support for VITA sites in and near Native communities would allow EITC recipients and other low-to-moderate income tax filers to access VITA services. In addition to providing tax preparation services, many sites have begun to

include financial counseling and assist consumers in building relationships with financial institutions through opening bank accounts or accessing other services. Furthermore, VITA sites should be located in more convenient and trusted locations for Native Americans to increase utilization among this population. For example, services could be located on or near reservation lands at tribal housing authorities, tribal colleges, tribal business centers and Native community development financial institutions (CDFIs). Locating services at familiar places such as these would build on existing relationships within the community between institutions and tribal members, increasing the likelihood that utilization of financial products and services will be maintained over time.

Assess Financial Needs and Goals of Low-Income Households

Results from this study suggest that bank account ownership, direct deposit, financial education, and an established savings habit are all significant factors associated with increased odds of saving the EITC. This further suggests the need to assess the financial needs and goals of low-income households (both Native and non-Native). Tax time presents a unique opportunity to connect with low-income Native families. They are focused on their finances and thinking about how they are going to use their refund (Beverly, 2002). If savings is a goal of EITC recipients, social workers can connect them to a number of savings options such as traditional savings accounts, IDAs, retirement savings plans, all of which could be facilitated through the split refund option that the IRS established to allow individuals to allocate portions of their tax refunds to multiple accounts (Tufano & Schneider, 2009). Finding better ways to encourage and facilitate savings of the EITC may help households to establish long-term savings with their other

economic resources. As this study suggests, an established savings habit was the most significant factor related to saving the EITC.

Much of the literature linking EITC and financial well-being focuses on what can be done to help individuals make better financial decisions. It may be true that some individuals are not aware of their product and service choices, but it may also be true that safe, relevant service options are not available to Native American households. Therefore, in addition to providing education about money management for individuals it is important to provide education and awareness to financial institutions regarding financial product and service needs of Native American households. In this way, Social Workers can serve as ‘social brokers’ facilitating relationships between Native communities and financial institutions. A recent policy report of the National Congress of Native Americans and the Department of Interior, calls for the development of financial education curricula for Native youth and adults to not only build personal financial skills among tribal members, but also develop future economic development leaders (NCAI & DOI, 2007).

Connect Native Households to Relevant Financial Services.

These findings speak to the need to increase access to financial services such as low-cost, flexible, and targeted banking services and financial education in Native communities. These may be particularly important findings for communities that are considering the development of or collaboration with a financial institution as part of their asset-building strategy. With regard to EITC and other tax return dollars, an important advantage of having a bank or other financial transaction account is the ability to use direct deposit for receipt of these funds. Direct deposit may also be used for

additional asset-building accounts, such as matched savings accounts like an individual development account (IDA). Bank accounts also accelerate the receipt of funds, which could increase the ease and likelihood of saving. Direct deposit may become even more important due to IRS rule changes that allow filers who sign up for direct deposit to split refunds between as many as three different types of accounts (e.g. checking, savings, and retirement).

Participation in the economic marketplace is largely dependent on social relationships, particularly who one trusts to handle their money or engage in financial transactions. Native communities have dealt with a history of racial tension and discrimination in the economic marketplace which has translated into limited relationships between Native households and banks (Pickering & Mushinski, 2004; Wagoner, 2002). During intake processes at social service agencies, social workers have an opportunity to assess the economic situation and goals of their clients along with their current banking practices and views regarding financial institutions. Taking the time to systematically gain a deeper understanding of the financial needs, wants, and goals of Native American households is a worthwhile investment toward the development of more effective programs and policies that are not only more tailored to meet their needs, but are also more accessible (Robles, 2007). With this information, financial services and products can be designed so that the result is increased economic security and financial capability among Native American households.

Policy Implications

Reduce Implicit Taxation Associated with EITC Receipt

Welfare receipt was found to decrease the odds of saving for many households in this study. Therefore, the implicit taxation associated with welfare receipt among low-income families is important to consider. For many low-income families, the EITC offers a powerful incentive to work but there are a number of disincentives associated with this benefit. EITC is not counted as TANF income or against Food Stamps and Medicaid in many states during the month that the benefit is received (Meyer & Rosenbaum, 2001). However, after two months, any remaining EITC dollars are counted toward liquid asset tests in TANF, SSI, and Medicaid (U.S. Congress, 1998). Understanding the complex nature of implicit tax rates (combination of increased wages and reduced benefits) is important for social work practitioners. Those who serve low-income working families should be knowledgeable about how wages affect benefit eligibility and what options are available for such families. Social workers need to learn how to recognize when implicit taxation will affect their clients¹⁴. In addition, social workers could educate low-income families about implicit taxation and what it means for them (rising wages/taxes, reduced benefits, etc.) and assist these families in taking steps to increase economic stability (connect to information and resources that can help). Advocating for policy change is another contribution that social work can make to this effort. Creating awareness of unintended consequences related to the current structure of EITC policy and other welfare programs. Advocacy may center on means-tested effects such as higher wages

¹⁴ This varies by state, so practitioners must be aware of state benefit thresholds and tax schedules.

equal lower benefit transfers. Other advocacy efforts may involve the development of asset building programs that link EITC and savings. Universal programs such as health and child care that would not impose an implicit tax would also contribute to improving the economic security of low-income working families.

Improved Access to Financial Information and Services

Improved institutional structures that support financial planning and decision-making of Native American households are needed to ensure that these households are aware of financial opportunities, know where to go for help, and have the information they need to make informed choices that may improve their financial well-being (Lim et al., 2009; Sherraden, 2008). One suggestion is to more systematically pair programs such as VITA sites and EITC outreach with financial information or referrals to other financial service providers. Evidence from a pilot savings program paired with the EITC suggests that when given an opportunity to save, particularly through direct deposit, individuals think about and utilize EITC dollars differently (Lim et al., 2009; Tufano & Schneider, 2009). Individuals are more likely to save the money or to spend it slowly over time rather than spending it all at once and were more thoughtful about how they planned to use the money (Beverly et al., 2000; Beverly, et al., 2004; Beverly, Tescher, Romich, and Marzahl, 2005; Hilgert et al., 2003). Additionally, VITA sites and individual development account (IDA) programs should partner on site to provide additional opportunities for working families to plan for their financial future, explore financial services options, and leverage the EITC resource to build toward their asset-building goals.

Involve Tribal Government in Financial Service and Product Development

In order to address the need for more relevant financial services that are responsive to the needs of Native families, it is recommended that tribes be allowed the ability to choose which financial institutions operate on their land and be afforded regulatory authority of financial institutions that do locate on reservation land. A more formal partnership between tribes and financial institutions could provide opportunities to create and customize financial services that specifically meet the needs of tribal members related to banking, investments, and mortgage financing with respect to tribal-state regulations. In addition to partnership with mainstream financial institutions, increased funding to support Native Community Development Financial Institutions, tribal credit unions, and banks would increase the availability of community-driven financial services and products (NCAI & DOI, 2007).

Expand EITC to Tribally Governed Communities.

One suggestion is to continue efforts to expand the EITC at the state and federal levels (Hoffman & Siedman, 2003). As a result of tribal treaties with the U.S. government, Native Americans living and working on reservations in many states are not subject to state or federal tax. Therefore, income for these households does not fall under the tax code definition of earned income. However, some tribes have negotiated with state governments to allow tribal members to claim state EITC even though they live and work on a reservation (Hatcher Group, 2006; Lui et al., 2006). Tribal leaders may want to consider advocating with their state governments to expand access to federal and state credits for their tribal members (Edwards & Wagner, 2007).

Research Implications

Research has been somewhat limited to aggregate analysis of outcomes associated with EITC. More work is needed that considers differences by race, gender, and geographic location because economic needs can vary substantially by these indicators. In terms of race, the ever-increasing diversity of our nation requires us to consider more broadly the policy effects for all of our citizens. Inclusion of marginalized groups in policy analysis would strengthen overall policy effectiveness. Geographic location can substantially alter anti-poverty effectiveness particularly when we consider the impact of cost of living for various households. The amount of income or resources needed to meet basic needs such as housing, food, and transportation can vary substantially whether households live in urban or rural areas. In particular, there is no information on what this looks like in Native American households. Seasonal employment and high rates of unemployment increase the importance of poverty-reduction policies in these communities. The EITC is one way for Native American households to make ends meet.

In addition, more information is needed about how specific populations, particularly Native Americans, view and use the EITC (e.g. is it considered a financial safety net, or just part of the household's annual income). . In addition, a better understanding of cultural teachings related to financial resources and decisions is needed to inform the development of finance-related policies and programs for Native households. Much of the previous research in this area has focused on how people intend to use it, but unpredictable employment, weak safety nets, little to no savings to protect against income shocks and emergencies, Native American families are often not able to fulfill their intentions. Instead, they must make alternative financial decisions in order to

survive. A better understanding of these financial choices would inform program and policy design that could assist Native Americans in building their financial capability in terms of planning and managing this resource and others.

Research in this area should consider the effects of cultural norms on financial decision-making among Native American households. For some communities, economic well-being is pursued as a collective goal while current U.S. policies promote individual economic security and wealth building. The discrepancy in approaches to economic well-being may affect who utilizes social welfare policies, such as the EITC, and the extent to which recipients benefit from them. Knowledge of the types of financial services, products and delivery mechanisms that would be most helpful in to Native American households' pursuit of economic well-being would inform more appropriate policy and program development.

While this information would inform the types of financial services and products needed and desired in Native communities, it is also important to examine the role of class, race, and ethnicity in explaining social and economic relationships. It is important to distinguish between the roles of informal and formal institutions. In other words, where social institutions help to meet economic needs and where formal institutions could fill the gaps.

There are a number of efforts underway to increase awareness of EITC eligibility. With support from funders and community-based organizations, VITA sites have both increased awareness and provided access to tax information and filing services for low-income households (Lim et al., 2009). In addition to tax filing services, a variety of financial education opportunities are also being offered which aim to improve financial

security of Native American families including basic financial management, credit repair, and home ownership. It will be important to examine the effectiveness of these efforts. Related to education and outreach efforts, attempts to link low-income tax filers with bank accounts have also expanded across the country (Beverly et al., 2000; Beverly et al., 2004; Beverly et al., 2005). Research could inform the utility of these efforts as well by examining how many Native people utilize this opportunity, who chooses this option, and how long they maintain these accounts.

Conclusion

Continued contributions of the EITC to the economic security of low-income household will depend on how we define the aims of the policy: who should benefit and to what extent. Thoughtful reconsideration of policy structures will allow us to build on the success of the EITC. Continued research on the needs of working families and the ability of tax policy and income supports to fulfill these needs would inform these efforts and provide guidance regarding possibilities for sustainable improvements.

Given the data that was available, this study provides a better understanding of how the EITC is helping families meet their consumption and savings goals. We also have a better understanding of opportunities Native families have regarding access to financial services and products and a glimpse as to the choices they are making. However, measurement of how these factors combine to improve the economic well-being of Native families is out of the scope of this study but deserves further consideration. Financial capability theory alone does not explain the circumstances of low-income families. A deeper understanding of cultural norms must be developed in order to apply this theory to Native and other populations.

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Appendix A: Native Community EITC Survey
A Study of Ways Families Use the Earned Income Tax Credit

1. What is your race or ethnicity?
 Native American
 Native Alaskan
 Native Hawaiian
 Caucasian
 African American
 Latino/Hispanic
 Asian/Pacific Islander
 Multi-Ethnic (Specify) _____
 Other (Please Specify) _____
2. Are you an enrolled member of any tribe?
 Yes (Tribe Name: _____)
 No
3. What language is spoken most in your home?
 English
 Spanish
 Native Language
 (Please specify: _____)
 Other: _____
4. The primary tax filer for your household is:
 Male
 Female
 Married-joint filers
5. What is your age?
 16-20
 21-30
 31-40
 41-50
 51-60
 61+
6. What is the highest level of education you have completed?
 Less than high school or GED
 High school or GED
 Some college or tech school
 Two- year degree (Associates)
 Four-year degree (Bachelors)
 Some graduate school
7. _____ Graduate school
 Did you receive public benefits (like Food Stamps, TANF, Medicaid, or subsidized housing) in 2008?
 Yes
 No, but I would have liked to
 No, and I am not really interested
8. What was the source of your reportable income in 2008?
 Paid employment
 Unemployment compensation
 Social security
 Self-employed
 Paid employment and unemployment
9. Are you an employee of any of the following?
 Tribal business
 Tribal government
 Tribal non-profit
10. How did you have your taxes done last year?
 Did not file
 Had them done here
 Another free place like this
 Did them myself
 Family/Friend did them for free
 Paid an individual (How much? __)
 Paid an organization (How much?)

The following questions are related to getting your taxes done and how you plan to use your refund. Answers to these questions let us know how EITC and other tax credits may be helping working families.

11. How did you hear about our tax preparation services?
 I came here last year
 Radio or TV
 I saw a flier or something in the paper
 Friend/Family member told me
 Someone else told me
 Information included in my paycheck
12. Did you receive a refund last year?
 Yes
 No
13. Did you receive a refund anticipation loan (sometime called an instant refund or rapid refund) last year?
 Yes
 (How much did you pay for this? \$____)
 No
14. How did you use last year's refund?
 Rent/mortgage payment
 Utilities
 Groceries
 Clothing
 Down payment on a home
 Auto insurance
 Down payment on a car or truck
 Household appliance
 Computer
 Furniture
 Help for a family member
 Property taxes
 Medical bills
 Small business
 School (yourself or others)
 Traditional ceremonies/celebrations
 Savings account or other form of savings
 Retirement
 Other (Please specify: _____)
15. Will you receive a refund this year?
 No
 Yes
16. Have you heard of the split refund option (the split refund option allows you to divide your refund and deposit it in up to three separate accounts)?
 No
 Yes, I am planning to choose this option
 Yes, but I will not choose this option
17. If you are choosing the split refund option, which accounts do you plan to deposit your refund into (check all that apply):
 Savings account
 Checking account
 Retirement account (e.g. IRA, etc.)
 Other _____
18. If you do not choose to have your income tax refund directly deposited into a bank account, please tell us why:
 Past problems with direct deposit
 Do not have a bank account
 Do not trust banks
 Do not want the IRS to know
 Prefer to receive a check
19. How do you plan to use this year's refund?
 Rent/mortgage payment
 Utilities
 Groceries
 Clothing
 Down payment on a home
 Auto insurance
 Down payment on a car or truck
 Household appliance
 Computer
 Furniture
 Help for a family member
 Property taxes
 Medical bills
 Small business
 School (yourself or others)
 Traditional ceremonies/celebrations
 Savings account/other form of savings

- Retirement
- Other (Please specify: _____)

20. When you receive your tax refund what percentage of it will you spend on income generating items (for example: chainsaws, fishing supplies, hunting supplies, or other business related supplies)?
- 25%
 - 50%
 - 75%
 - 100%

20a. Please list some of the items you may purchase to generate income:

21. When you receive your tax refund what percentage of it will you spend on necessities such as food, clothing, housing, etc.?
- 25%
 - 50%
 - 75%
 - 100%

22. Will you most likely use your tax refund to buy:
- items in community where you live
 - items outside your community but within 60 miles of where you live
 - items outside your community but more than 60 miles away from where you live

23. Which of the following items would you travel outside of your community to purchase?
- Medical items or services
 - Groceries
 - Appliances/furniture
 - Clothing
 - Professional services (accounting, legal, etc.)
 - Other _____

24. What is the main reason that you make these purchases outside of your community:
- Items are less expensive
 - Items are better quality
 - Items are not available

The next set of questions will ask you about the types of financial services you use. Answers to these questions will let us know what services are important to your community.

25. Do you currently have a bank account that you use regularly?
- Yes, both checking/savings accounts
 - Yes, checking account only
 - Yes, savings account only
 - No, but I would like a bank account
 - No, I am not interested in a bank account

26. If you do not have a bank account, please tell us why:
- There are no banks nearby
 - Bank fees are too high
 - Unable to qualify for an account (no credit, poor credit, etc.)
 - Do not trust banks
 - Prefer to use cash

27. Do you save money on a regular basis?
- No
 - Yes

a. If yes, what do you save for?

b. What is the most amount of money you have ever saved?

\$ _____

28. Where do you cash your paycheck?
 Grocery store/supermarket
 Check cashing places
 Bank
 Credit union
 Pawn shop
 I have direct deposit
 Other (Please specify: _____)
29. Does the place you cash your check charge a fee?
 Yes
 No
30. If you cash your checks somewhere other than a bank or credit union, why do you use that check cashing place?
 Convenience
 No bank branch close by
 Other _____
31. Do you use money orders to pay your bills?
 Yes
 No
32. Have you ever had a loan from a bank for any of the following:
 Car
 Home
 Business
 Education
 Furniture
 Other _____
 I have never taken out a loan from a bank
33. A matched savings account is one in which you save \$1 and the money is matched \$1, giving you a total savings of \$2. If such an account were offered in your community, would you be interested in participating?
 Yes
 No
34. Have you ever participated in any of the following classes?
 Financial education
 Homeownership
 Building or repairing credit
 Retirement planning
 Small business start-up/financing
 None of the above
35. Did your participation in these classes take place in the last three years?
 Yes
 No
36. Do you own a home?
 Yes, on trust land
 Yes, not on trust land
 No
37. For the home you live in, you:
 Own, but do not pay rent or mortgage
 Own and pay mortgage
 Do not own and pay rent
 Do not own and live with family/friends with no rent
38. If you would you like to purchase a home, what type of home would you like most?
 New construction
 Existing home
 Modular unit
 Land/home package
 Condo
 I do not want to purchase a home

The following questions will ask you about ways you may have learned about or invest in financial assets. Answers to these questions will let us know what types of services may be most helpful to you and others in your community.

39. What services would be helpful in buying a home?

- Down payment/closing cost assistance
- Credit counseling
- Credit repair/loan qualification
- Help finding a home
- Other (please specify: _____)

40. Which services would you like to see offered in your community?

- Energy and utility assistance
- Child care assistance
- Food assistance
- Health insurance
- Financial education
- Building or repairing credit
- Job training
- Car/truck loans
- Homeownership
- Children's savings accounts
- Opening a bank account
- Small business start-up/financing
- Retirement planning
- None of the above

TO BE COMPLETED BY PREPARER/TAX SITE USE ONLY

Zip Code of Taxpayer : _____ **Number of Dependents:** _____

Filing Status (*circle one*): Single Married-Joint Married-Separate Head-of-Household Widow or Widower

If Single or Head of Household (*circle one*): Male or Female

Type of Tax ID Number(*circle one*): SSN ITIN

Taxpayer's occupation: _____ **or Self-Employment** _____

	Form 1040		Form 1040A		Form 1040EZ	
Adjusted gross income		<i>line 37</i>		<i>line 21</i>		<i>line 4</i>
Earned income tax credit		<i>line 66a</i>		<i>line 40a</i>		<i>line 8a</i>
Schedule SE or C income		<i>line 12</i>				
Federal Refund or (amount owed)		<i>line 74a or 76</i>		<i>line 45a or 47</i>		<i>line 12a or 13</i>
State Refund or (State amount owed)						