

**Innovation and Extension Relevancy in the 21<sup>st</sup> Century**

A Dissertation

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by

Teresa McCoy



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Dr. Chris Spencer, Chair  
University of Baltimore



Dr. Laura Wilson-Gentry  
University of Baltimore



Dr. Bonnie Braun  
University of Maryland

College of Public Affairs  
University of Baltimore  
Baltimore, Maryland  
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A special thank you is due to all of the Extension Educators across this nation who have worked on the Smart Choice Health Insurance™ project. The Health Insurance Literacy Initiative team at the University of Maryland Extension is an amazing and dedicated team that has improved the health insurance literacy of thousands of Americans.

**DEDICATION**

This dissertation is dedicated to my husband, Jim Jarrett. He taught me how to love and enjoy life. Without his support and encouragement (and patience), this journey would not have been completed.

I also dedicate this work to my paternal grandparents, Raymond Griffin and Lydia Croy McCoy, who only had the opportunity for a seventh-grade education but taught me the love of reading.

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Finally, Marin Elizabeth and Lydia Mae, this work is dedicated to you. I know you will be amazing, phenomenal women.

**ABSTRACT**Innovation and Extension Relevancy in the 21<sup>st</sup> Century

Teresa McCoy

Rogers (2003) cites the agricultural Extension Service as being the most successful organization in diffusion of research given the tremendous progress made in food production (165). However, he also acknowledges that Extension's diffusion work "has been more effective in diffusing agricultural production technology to farmers than in diffusing other subject-matter content to farm and nonfarm audiences" (394). Yet, as the literature review shows, there is not further theoretical understanding beyond what Rogers' (2003) developed to help the Cooperative Extension Service (CES) understand how to mobilize its vast resources and expertise to respond to a national educational need. Without this understanding, CES relinquishes opportunities to serve the public as it was envisioned in the Smith-Lever Act of 1914 and the land-grant universities jeopardize their contemporary relevance. Therefore, additional theory for CES needs to be generated that goes beyond the existing diffusion of innovations framework.

The purpose of this research is to: 1) understand the experiences of Extension educators and specialists involved in the nation-wide Smart Choice Health Insurance™ program innovation and diffusion process and 2) generate theory that makes meaning of the processes and conditions that were present before and during the CES Smart Choice™ program innovation and diffusion process. This study is designed to add to the theoretical understanding of program innovation and diffusion in CES, which was Rogers (2003) initial reference point for the DOI framework.

The research aids in understanding a program innovation that is in process as a result of a national policy innovation diffusion--the Patient Protection and Affordable Care Act (Public Law 111-148). A mixed-methods design allows a qualitative process to explore the processes, experiences, and situations of the people involved (Brower and Jeong 2008) while examining quantitative secondary data about the external environment. The benefit of this research is that Extension administrators and educators at the national, state, and local levels can better understand the experiences, conditions, and processes that occur if and when CES mobilizes to address a public educational issue, opportunity, or need. This understanding will contribute to Extension and public administration about what is needed to create a culture of innovation, make program or policy decisions about resource placement, and enhance program and/or policy development and diffusion.

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## CHAPTER ONE: INTRODUCTION

### Diffusion of Innovation Theory

Contemporary diffusion of innovations (DOI) theory literally began in the Iowa farmlands in the 1950s when a newly graduated agricultural researcher from Iowa State University began to observe farmers in his home county of Carroll. Everett Rogers, this new researcher, was perplexed and frustrated when he observed that farmers did not adopt new ideas or innovations that would have been beneficial to their operations (Rogers 2003). These observations were the start of Rogers' decades-long research and work into the diffusion of innovations (DOI) theory.

Rogers (2003) DOI theoretical foundation is built on the definition of diffusion as "a special type of communication in which the messages are about a new idea" (6). Diffusion of something new, he argues, introduces uncertainty because individuals must make a choice about some set of alternatives (Rogers 2003). Diffusion also involves social change because something is going to be altered if the innovation is adopted (or perhaps even if it is not). Rogers (2003) says that DOI has four main elements: 1) the innovation, 2) communication, 3) time, and 4) social systems.

Throughout his career and research, Rogers (2003) believed that, "the government agency that has been by far the most successful in securing users' adoption of its research results is the agricultural extension services" (165). As Rogers (1976) noted, it was not surprising that other federal agencies wanted

to copy this successful diffusion model. Because of this, the Institute for Communication Research at Stanford University, with funding from the National Science Foundation, engaged Rogers and two other researchers in the mid-1970s to lead a study to "describe the main elements of the U.S. agricultural extension model and its effects on the agricultural revolution" and to "analyze attempts to extend this model to non-agricultural technology" (Rogers, Eveland, and Dean 1976, 1).

The researchers noted that the agricultural extension model had undergone major changes since its inception and that it was not possible to describe just one model. Extension had been able to adapt and change over the years as its environments changed and that could be "its most striking and important aspect" (Rogers, Eveland, and Dean 1976, 55). The efforts to copy the extension model by the U.S. Department of Health, Education, and Welfare, the U.S. Office of Education, the U.S. Department of Commerce, and the National Aeronautics and Space Administrators had little or minimal success. The researchers concluded that, "Extension efforts in education, social and rehabilitation services, and industry appear woefully under-funded and to have been treated like unwanted children of over-expectant parents" (Rogers, Eveland, and Dean 1976, 119).

In 2003, writing in the final edition of *Diffusions of Innovation*, Rogers pointed out that government agencies had tried without success to replicate the Extension model (166). Rogers blamed these failures on those agencies not including "one or

more of the main elements in the model" (166). As was the case almost 30 years before, "the attempts to copy the agricultural extension model in such fields as education, public transportation, vocational rehabilitation, energy conservation, and family planning have ... not been very successful" (Rogers, 2003, 166).

### **Problem Statement**

While Rogers (2003) cites the agricultural Extension Service as the most successful organization in diffusion of research because of the tremendous progress in food production, he acknowledges that Extension's diffusion work "has been more effective in diffusing agricultural production technology to farmers than in diffusing other subject-matter content to farm and non-farm audiences" (394). In addition, Rogers (2003) recommended that future DOI research take into account the entire innovation-development process and not just focus on the traditional "S-shaped diffusion curve" process (rate of adoption) (Rogers 2003, 166). Research into DOI should be "broadened" to include "all of the decisions, activities, and their impacts" (166) that occur from the time of need recognition through development, adoption, and consequences of an innovation. He also recognized that the innovation itself should be evaluated for "efficacy, safety, and other factors" (Rogers 2003, 167).

As the literature review shows in Chapter Two, there is not a great deal of research beyond Rogers' (2003) framework to help today's Cooperative Extension Service (CES) understand how

innovation occurs and diffuses throughout this vast network. Specifically, there is a gap in the research literature and in theory about the non-agricultural innovation-development process. Without this understanding, it is possible that CES will limit the success of the Extension model and jeopardize opportunities for innovations to occur in response to public issues and needs. Questions about what is needed in CES today, both in terms of internal and external environments, may be left unanswered. This could mean that CES will not be able to serve the public as it was envisioned in the Smith-Lever Act of 1914 (Public Law 107-293) and the land-grant universities (LGUs) could relinquish their contemporary relevance as non-agricultural issues move to the forefront of public concerns. Therefore, there is a need to generate additional theory for CES that complements the diffusion of innovations (DOI) framework.

#### **Significance of the Study**

This study is designed to add to the theoretical understanding of program innovation and diffusion in the CES, which was Rogers (2003) initial reference point for the DOI framework. Rather than empirically testing a set of variables or trying to determine rates of adoption, this research seeks to explore processes, experiences, and situations of the people involved and the conditions internal and external to Extension organizations (Brower and Jeong 2008). The qualitative component of this mixed-methods design will aid in understanding a program innovation that is in process as a result of a national policy

innovation diffusion: the Patient Protection and Affordable Care Act (ACA) (Public Law 111-148). Both the qualitative and quantitative research components will help to understand the external environment in which an Extension innovation is occurring.

The Health Insurance Literacy Initiative (HILI) case was chosen for this study for multiple reasons. The passage of the ACA was a major policy shift that caused health insurance literacy to become an immediate concern. Within a one-year period, over 42 million Americans, often without much knowledge or practical experience, had to make critical decisions about their health insurance (United States Census Bureau 2014). Consumers Union (2012) found through its research that consumers were not prepared to make health insurance decisions and “dreaded shopping for health insurance” (2). One recommendation made by Consumers Union was that health insurance education be developed that could be used by consumers when shopping for health insurance (10).

Key individuals within CES also recognized the need that had been created and planned an educational response. Therefore, HILI offered the opportunity to study a program innovation that was in the process of being implemented and diffused across the U.S. Within two years of when HILI began, the National Committee on Policy (ECOP) recognized in the *Cooperative Extension's National Framework for Health and Wellness* (2014) that a window



of opportunity was open for CES to “do for the nation’s health what it did for American agriculture” (2).

The benefit of this research is that Extension administrators at the national and state levels and Extension Educators at the national, state, and local levels will be better able to understand the experiences, conditions, and processes that need to occur if and when the CES system mobilizes to address a public educational need. This understanding will contribute to CES and potentially other public-sector organizations by enabling innovation through strategic decision-making about resource placement, program development, and educational outreach to the nation’s people—either through policy or programs. In addition, this understanding and strategic decision making can help to make wise use of funds in an era when budgets are limited.

#### **Health Insurance Literacy Initiative**

A current example of Extension mobilizing nationally is in response to the ACA (Public Law 111-148) of 2010. Realizing that the legislation did not provide funding for research-based, unbiased consumer education, faculty with the University of Maryland Extension (UME) (Consumers Union, University of Maryland College Park, and American Institutes for Research) launched the HILI in 2012 with the goal of conducting consumer education prior to the start of the Health Insurance Marketplace open enrollment in the fall of 2013.

To start the work of HILLI, a team was formed with health literacy experts, financial literacy experts, and a project evaluator. Start-up funding was provided by UME and College of Agriculture and Natural Resources (AGNR) at the University of Maryland College Park (UMCP). The team's priority was to develop a health insurance literacy program and to diffuse that program throughout CES. The program is called Smart Choice Health Insurance™ and is a two-hour workshop devoted to basic consumer understanding of how to compare health insurance plans, how to calculate health insurance expenses, and make a smart choice from among available plans.

After initial pilot testing and evaluation, the program was refined and improved. Training for Extension Educators took place during summer 2013 in preparation for the first ACA enrollment period of October 1, 2013 through March 31, 2014. Extension Educators who attended the training were encouraged to return to their states and implement the workshops. In addition, the HILLI team encouraged the educators who planned to deliver workshops to collect pre- and post-tests evaluation data designed to test the effectiveness of the program intervention. Participation was voluntary. Some Educators did implement workshops; some did not. In total, seven states agreed to participate in the pilot phase. A general timeline of the project is shown in Table 1.1.

Table 1.1. HILI timeline milestones 2012-2014

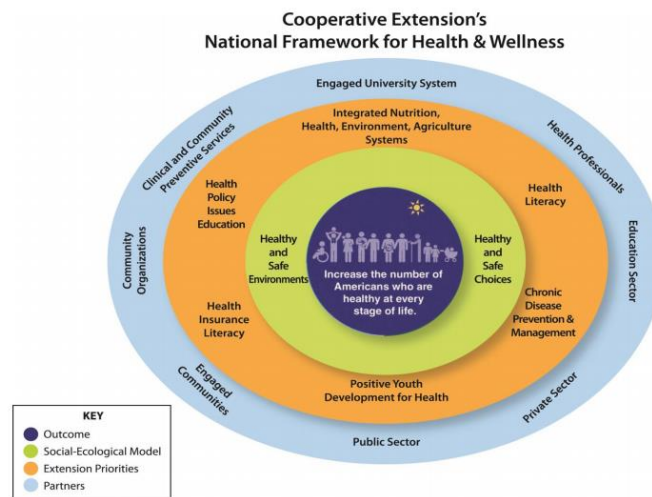
Time Period	Activities
Spring 2012	<ul style="list-style-type: none"> <li>- Proposal submitted by a team from UME Health Smart, Money Smart, and Community Resource Economic Development Impact Teams to UME for a Health Insurance Literacy Initiative (Rodgers et al.)</li> </ul>
Summer 2012	<ul style="list-style-type: none"> <li>- Funding received from UME to begin HILI program development</li> <li>- First organizational meeting of HILI project team (August 29)</li> </ul>
Fall 2012	<ul style="list-style-type: none"> <li>- Collaboration with University of Delaware Extension begins</li> <li>- Literature review of health insurance and financial literacy</li> <li>- Linkages made with Consumer's Union and American Institutes of Research (This occurred in 2011 with the Roundtable that produced a definition of health insurance.</li> <li>- Proposal submitted to eXtension to fund an UME Educator to develop an Ask the Expert component of HILI</li> <li>- ECOP appoints multi-state Health Task Force (leader of HILI appointed)</li> <li>- Program, Curriculum and Materials Assessment tools developed</li> <li>- Three webinars conducted to engage other states in work of HILI</li> </ul>
Winter 2013	<ul style="list-style-type: none"> <li>- Project with eXtension begins to develop health insurance literacy Ask an Expert</li> <li>- Phase I HILI curriculum development of Smart Choice Health Insurance begins</li> <li>- HILI presentation delivered at Mid-Atlantic Women in Agriculture Conference and Kansas State Extension Conference</li> <li>- Logic model developed</li> <li>- Evaluation design developed</li> </ul>

Time Period	Activities
Spring 2013	<ul style="list-style-type: none"> <li>- Phase I curriculum development ends</li> <li>- Material and curriculum reviewed by Extension Specialists</li> <li>- Pilot testing of curriculum in 7 states begins in April</li> <li>- Evaluation plan implemented--data collected, analyzed and presented via webinar</li> <li>- UM College of Agriculture &amp; Natural Resources commits \$100,000 to HILI program development and delivery and post-doctorate position</li> <li>- Review of literature article submitted for review.</li> <li>- UME Extension Education Theoretical Framework with Criterion-Referenced Assessment Tools submitted for external review</li> <li>- Insuring Your Health website launched and (extension.umd.edu/insure)</li> <li>- Half-day workshop conducted at National Priester Health Conference</li> <li>- Presentations at state and national conferences</li> <li>- Experts recruited for Ask an Expert</li> <li>- Proposal submitted by a team from Health Smart, Money Smart and Community Resource Economic Development Impact Teams to UME for a Health Insurance Literacy Initiative for second year funding (Rodgers et al.)</li> </ul>
Summer 2013	<ul style="list-style-type: none"> <li>- Phase II HILI curriculum revision begins</li> <li>- Phase I HILI evaluation data reported to multi-state team and pilot states</li> <li>- Phase II HILI Extension Educator resources developed (notebook, web site)</li> <li>- HILI Phase II curriculum development stops end of August</li> <li>- Agreement entered into with AIR to use their health insurance literacy measures</li> <li>- Monthly HILI Briefs published for administrators</li> <li>- AskHealthLit launched on eExtension</li> </ul>

Time Period	Activities
Fall 2013	<ul style="list-style-type: none"> <li>- Phase II HILI certified educator workshops begins</li> <li>- Phase II HILI consumer workshops delivery begins</li> <li>- Phase II evaluation begins</li> <li>- HILI post-doctorate position established and filled</li> <li>- Review of literature manuscript published</li> <li>- Presentations at multiple national association meetings</li> <li>- Webinar promoting Smart Choice Health Insurance</li> <li>- Certification trainings held via the Creating Healthy Communities COP</li> <li>- Collaboration with Rutgers Extension and K-State Extension on Smart Choice Farm Families Begins</li> <li>- Smart Choice Health Insurance Consumer Workbook posted to website</li> <li>- Work begins on Smart Choice Young Adults</li> </ul>
Winter 2014	<ul style="list-style-type: none"> <li>- Phase II pilot testing ends March 31, 2014</li> <li>- All data analyzed September 2014</li> <li>- Work begins on Smart Use Health Insurance</li> </ul>

In March 2004, ECOP, after two years of work by their Health and Wellness Task Force, released the Cooperative Extension's National Framework for Health and Wellness (Extension Committee on Organization and Policy 2014). The task force conducted environmental scanning to identify trends in health priorities, engaged in a strengths and weaknesses analysis of CES, and developed a set of program priorities for CES related to health. These program priorities are contained

within a socio-ecological model with a goal to “increase the number of Americans who are healthy at every stage of life” (Extension Committee on Organization and Policy 2014) and are shown in Figure 1.1



Based on the National Prevention Strategy Action Plan, U.S. Department of Health & Human Services

Figure 1.1. Cooperative Extension's national framework for health and wellness

### **Land-Grant Universities**

America's land-grant universities (LGUs), established in 1862 when President Lincoln signed the Morrill Land-Grant College Act (Public Law 37-108) brought education to the common person and are a foundation of democratic governance (Cross 2012). Congressman Justin Morrill was deeply concerned about the decline in American agriculture and wanted to make sure that both farmers and mechanics could secure needed education to boost agricultural production (Cross 2012). The Land-Grant Act initially established 48 public universities that were tuition-free and open to all people who enrolled (Cross 2012). Women eventually enrolled in

these colleges and, while agriculture was the initial focus, courses in home economics were added. Racial segregation, however, as practiced particularly in the South, predominantly excluded African-Americans from these institutions.

The newly-established LGUs needed money to operate and Congressman Morrill led several unsuccessful attempts to secure funding from Congress until 1890 (Cross 2012). In 1890, several years after the Civil War, and again with the leadership of Senator Morrill, the second Morrill Land-Grant Act (Public Law 37-108) established funding that would only be available to LGUs that did not discriminate against African-Americans (Mahoney 2012). However, the states had two options: 1) African-Americans could be admitted to the existing land-grant university, or 2) the state could use funds to establish a separate institution for African-Americans (National Academy of Sciences 1995). The Southern states choose to have separate institutions that would be designated as the land-grant institutions for African-American people, and these schools are traditionally called the 1890s or 1890 institutions (because of the year of the Act) and are also known as historically black colleges and universities (HBCUs). The original land-grant schools are traditionally referred to as the 1862s or the 1862 institutions.

The first Morrill Act of 1862 (Public Law 37-108) was followed by the Hatch Act of 1887 (Public Law 107-293) to provide federal funding for the LGUs to establish agricultural experiment stations to engage in research activities. Then, in 1914, the

Smith-Lever Act (Public Law 107-293) established the Cooperative Extension Service (CES) to extend the research knowledge and expertise of the LGUs to the people by placing "Extension educators in communities and on land-grant campuses all across America" (Franz 2008, 6). Specifically, the Smith-Lever Act (Public Law 107-293) stated that CES was, "To aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics, and to encourage application of the same."

Other colleges and universities have been admitted as land-grant institutions over the years: American Samoa, Guam, Micronesia, Northern Marianas, Puerto Rico, and the Virgin Islands. In 1994, as part of the legislative action known as *Improving America's Schools*, Congress extended the designation of land-grant to 29 colleges and universities of Native-American tribes (Public Law 103-382). Today in 2016, there are 34 of these institutions that also have the mission of teaching, research, and outreach (USDA nd). The 1994 institutions, according to the United States Department of Agriculture (USDA), are located in the states of Arkansas, Arizona, Kansas, Michigan, Minnesota, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Washington, and Wisconsin. Many of the 1994s are two-year community college or technical schools and are governed by the American Indian Higher Education Consortium Leadership Group (AIHEC) (USDA np).



Together, these Acts created the teaching, research, and outreach (Extension) triumvirate mission of today's LGUs. In 2015, there are 110 land-grant universities and a map of these institutions is contained in Appendix A (Cross 2012). The land-grant system is governed by the Association of Public Land-Grant Universities (APLU). To understand the impact of this system, Cross (2012) says:

The land-grant institutions have granted twenty million degrees, including one-third of all master's degrees and more than one-half of all doctorates awarded in the United States. The 18 predominantly African-American land-grant colleges and universities have awarded more than seven hundred thousand degrees. These universities have obviously strengthened American democracy (15).

Gee (2012) calls the land-grant universities "the social conscience of American higher education" and believes that the land-grant universities are the "principled paradigm of what colleges and universities should be in a nation that cherishes equality, democracy, and opportunity for all" (51).

#### **Cooperative Extension Service**

The land-grant schools and the CES have a history of innovative educational techniques and approaches. Seaman Knapp, known as the father of Extension, believed that teaching by demonstration was the key to effective adult education. He was a minister, a teacher, a farmer, a banker and a writer. Knapp "was elected Professor of Agriculture at Iowa State College, where he

gained a reputation for his practical methods of teaching" (Seevers, Graham, and Conklin 2007). Eventually, he became the President of Iowa State and later went to work for USDA. He continued to believe in and promote the practice of teaching by demonstration. Examples of this type of teaching were the Farmer's Institutes held throughout the country on land-grant campuses, which eventually included classes for women (Seevers, Graham, and Conklin 2007).

George Washington Carver, in his work with African-American farmers, used the "movable wagon" (or "Carter wagon" as known today), loaded with supplies, to travel through the countryside to teach farmers. Keeping up with technology, faculty members would travel on trains and stop in rural communities to deliver lectures and hold demonstrations (Seevers, Graham, and Conklin 2007). By the early 1900s, boys and girls clubs were being established (known today as 4-H) and home demonstration agents were hired to teach cooking, sewing, food preservation, and other topics for women.

The CES diffusion of knowledge today is still mainly by programs with practical demonstrations, although technology has changed delivery modes. Extension Educators use distance technologies and social media to deliver information and to teach classes in many of the same subject areas of decades past. For example, the past 10 years has seen a resurgence in interest in home gardening and home food preservation. New topics have

been introduced into Extension's repertoire as new research has led to scientific discoveries in health and nutrition, water quality, seafood and aquaculture, and other areas. Agriculture remains a priority area for CES as an adequate food supply will be needed for a projected population of nine billion by 2030 (United Nations 2004).

While the LGUs and CES form a system, each state CES remains an autonomous entity when it comes to choices about which programs are developed, adopted, and implemented. For the system to mobilize and act as a whole, ECOP generally provides the call-to-action for leadership. One example of system-wide mobilization occurred in 1996 when the Personal Responsibility and Work Opportunity Reconciliation Act (PROWORA) (Public Law 104-193), often known by its common name of "Welfare Reform," was passed under the leadership of then President William J. Clinton. It was the Board of Human Sciences of the National Association of State Universities and Land-Grant Colleges and Universities (later to be known as ECOP) that called for the land-grant system to engage in welfare and workforce education. The CES responded with programs that taught life skills to enable individuals and families to manage budgets and "to balance family and work demands" (Braun and Benning 2001). In total, 45 state Extension Services engaged in some type of research projects or Extension programs related to the PROWORA (Braun and Benning 2001).

### **Methodology Overview**

The research methodology for this dissertation is the mixed-methods sequential exploratory design (Creswell 2009). This approach is appropriate when the researcher intends to “initially explore a phenomenon,” uncover an emergent theory, and use quantitative data to enhance the qualitative data (211). With a sequential exploratory design, emphasis is placed on the first phase of qualitative data collection. In the second phase, quantitative data are used to build “on the results of the first qualitative phase” (Creswell 2009, 211). The temporal frame for this research is phase one of the initiative, September 2013 through March 2014. The final selection of quantitative secondary data was informed by what was discovered in the qualitative phase (Creswell and Plano 2011).

#### **Qualitative Phase One**

The qualitative phase used semi-structured interviews conducted either in person or over the telephone with 27 individuals and one person who chose to respond to the interview questions in writing. Therefore, a total of 28 interviews were completed in the time period of January-April 2015. Interviewees represented five strata: 1) State administrators at UME who had supported and funded the HILI project; 2) ECOP members who had supported HILI; 3) HILI team members; 4) Extension Educators who implemented the Smart Choice™ program developed by HILI (implementers); and, 5) Extension Educators who were trained to

teach Smart Choice™ but did not conduct any workshops (non-implementers).

Interviewees were recruited from all Extension regions with the exception of the 1890 region (which did not have any trained Educators at the time of the research). The interview questions were first peer-reviewed by content experts and then pilot tested with two Extension Educators in Maryland. Adjustments were made in the questions based on testing. In addition to the interviews, content analysis was performed on selected project artifacts, such as meeting minutes, webinar presentations, and project products.

Grounded theory, as described by Strauss and Corbin (1998), was used for content analysis for interviews and projects artifacts. This analysis approach “begins with an area of study and allows the theory to emerge from the data” (Strauss and Corbin 1998, 12). There is not a hypothesis to test because the purpose of grounded theory is to build theory. The approach emphasizes the “interplay between researchers and the data” (Strauss and Corbin 1998, 13). While it is an emergent process, systematic data-collection methods, coding procedures, and analysis were used to bring rigor to findings. Steps in the coding process included initial reading of transcripts and artifacts, initial coding, axial coding, and, finally, selective coding. This approach also recognizes the art and creativity that a researcher brings to the process through crafting questions, discovering themes, and exploring possibilities (Patton 1990,

Strauss and Corbin 1998, Miles and Huberman 1994). The challenges to a grounded-theory research project are that researchers have to set aside their own ideas or hypotheses, use systematic processes while undertaking an emergent process, and know when data saturation has occurred (Creswell 2007, Miles et al. 2005, Miles and Huberman 1994).

### **Quantitative Phase Two**

Given that the LGUs and CES operate predominantly within a state environment, a secondary database was constructed to explore certain characteristics of that environment. In particular and based on comments made in the interviews, variables associated with the political environment around the ACA were collected and explored. Variables of particular concern were rural and urban state populations, populations with and without health insurance, political ideology, states challenging or supporting ACA in the King v. Burwell Supreme Court case (Supreme Court of the United States 2015), legislative control by party, governor control by party, and federal share of state revenues.

### **Mixed Method Structure**

As a mixed-methods study, it is important to be clear about how the quantitative and qualitative phases and data interact or are mixed. The approach taken here is one of complementarity, "in which results from one dominant methods type are enhanced or clarified by results from another method type" (Caracelli and Greene 1997). The mixed methods in this study occurred in the

research design with the choice of a sequential exploratory approach, in the data analysis process, and in the interpretation and findings processes (Creswell and Plano 2011).

#### **Dissertation Overview**

This dissertation contains five chapters. The first chapter is an introduction to the overall context of the study (including LGUs and CES) and the phenomenon to be studied: DOI. The second chapter is a review of the literature most pertinent to this study. The research methodology is laid out in detail in the third chapter. Chapter four presents the findings from both the qualitative and quantitative phases. Finally, chapter five provides a discussion of findings, along with recommendations for further work in this topic area.

## CHAPTER TWO: LITERATURE REVIEW

### Literature Review Organization

A literature review in grounded theory studies may present a conundrum for researchers. If theory is to emerge from the data, Strauss and Corbin (1998) warn that a literature review may bound or inhibit thinking. Barry Glaser (2006), Strauss' original partner in the development of grounded theory, advises graduate students to do one if required, but does not believe they are necessary and can actually bias the researcher if done before theory emerges. However, there are methodologists who believe that the literature review is helpful because it provides "a rationale for the problem" (Creswell 2007, 102). McCallin (2003) says that the literature review is helpful if only because researchers will know if their type of study has been previously conducted.

The approach chosen for this literature review was to conduct an initial review to help: 1) inform the development of interview questions, 2) assist in understanding themes that might emerge from the data, and 3) stimulate curiosity and creativity that will be brought to the data collection process. The literature review covers the following broad areas:

- 1) Diffusion of innovations (DOI) origin;
- 2) Diffusion of innovations contemporary theory;
- 3) Major studies that have added to the DOI framework;
- 4) Major policy DOI studies; and
- 5) Major DOI studies in CES.



### Diffusion of Innovations Origins

While Rogers is most often associated with diffusion of innovation research, he points out that diffusion research began in France with Gabriel Tarde, a social psychologist. Tarde explained diffusion as "laws of imitation" (Katz 1999, 4). These laws dealt with 1) the needed compatibility between the innovation and the adopter, 2) the needed benefits outweighing the risks of adopting, and 3) the one-way direction of knowledge that flows from the media to the masses to form public opinion (Katz 1999). Tarde understood that communication was integral to diffusion and theorized the process as a concentric spiral with knowledge moving in one direction from a center to a wider audience as shown in Figure 2.1.

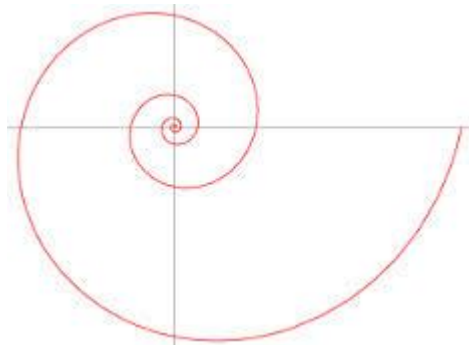


Figure 2.1. Tarde's theory of diffusion from the media to the masses

Source: Figure based on Elihu Katz, *Theorizing Diffusion: Tarde and Sorokin Revisited* (Philadelphia: University of Pennsylvania, 1999)

In addition to Tarde and in response to the evolutionary theory of Darwin, the German-Austrian and British schools of diffusionism arose with theories about knowledge movement (Erickson and Murphy 2008). These schools advocated two ideas: 1)

there were centers of culture from which society diffused (with Egypt being identified as the center by the British school), and 2) people “are inherently uninventive and invariably prefer to borrow the inventions of another culture rather than develop ideas for themselves” (Erickson and Murphy 2008, 20). As with Tarde, the British-German scholars saw diffusion as a one-way process and involved imitation.

Katz (1999) argues that the next paradigm shift in diffusion theory occurred in the 1940s with the publication of Pitirim Sorokin’s (1957) *Social and Cultural Dynamics*. While Tarde and the British and German schools approached diffusion as a one-way process, Sorokin (1957) believed that innovations were transformed as they moved through the diffusion process—a back and forth movement occurring as the diffusion progressed (Katz 1999). Sorokin (1957) theorizes a network of diffusion much as what today would be characterized as a social network with movement occurring in complex patterns across multiple nodes as seen in Figure 2.2.



Figure 2.2. Sorokin’s theory about innovation diffusion  
Source: From Pitirim Sorokin, *Social and Cultural Dynamics*  
(Thousand Oaks, CA: Sage, 1957)

### **Contemporary Diffusion of Innovations Theory**

Everett Rogers' (2003) work on the DOI has been the scholar-accepted theoretical framework since he originally published his work in 1962. Since that time, Rogers published book editions in 1971, 1983, 1995, and the fifth and final in 2003. As Rogers (2003) points out in the fifth edition of *Diffusions of Innovation*, multiple research and theoretical contributions by a plethora of scholars have been made to his original framework and his fifth edition was a synthesis of those contributions.

According to Rogers (2003), in America, DOI research started at Iowa State University in agriculture with the Iowa corn hybrid seed study conducted by Bryce Ryan and Neal Gross. Rogers, just discharged from the Korean War, was employed by Iowa State as a graduate student and joined George Beal in his research about the adoption of hybrid seed corn by farmers in Collins, Iowa (Rogers, 2003). He became curious as to why some farmers adopted agricultural innovations while others did not. From that start came Rogers' life work in DOI research. While at the Ohio State University, employed as an Associate Professor of Rural Sociology, he published his first article in 1963 in the *Journal of Extension* (JOE) about the adoption of innovations.

Before beginning a discussion of the framework, it is important to know how Rogers (2003) defines diffusion. He says that diffusion is "The process of which (1) an innovation (2) is communicated through certain channels (3)

over time (4) among the members of a social system” (Rogers 2003, 11). These four elements are present in any diffusion research study or program, according to Rogers (2003), and are defined as:

- 1) Innovation: “Is an idea, practice, or object that is perceived as new by an individual or other unit of adoption” (12).
- 2) Communication: “The process by which participants create and share information with one another in order to reach a mutual understanding. Diffusion is a particular type of communication in which the message content that is exchange is concerned with a new idea” (18).
- 3) Time: “The time dimension is involved in diffusion in (1) the innovation-decision process by which an individual passes from first knowledge of an innovation through its adoption or rejection, (2) the innovativeness of an individual or other unit of adoption ... compared with other members of the system, and (3) an innovation’s rate of adoption in a system, usually measured as the number of members of the system who adopt the innovation in a given time period” (20).
- 4) Social System: “A set of interrelated units that are engaged in joint problem solving to accomplish a common goal” (23).

There are two distinct processes in this framework: 1) the innovation-development process, and 2) the innovation-decision process (Rogers 2003). The innovation development process is triggered by a need or problem that rises to the top of a research agenda or become a societal priority through the agenda-setting process (Rogers 2003, 137). After the need or problem is identified, research takes place that will provide some sort of technological innovation development. At this point, commercialization and diffusion and adoption occur. Finally, consequences occur that are changes "to an individual or to a social system as a result of the adoption or rejection of an innovation" (Rogers 2003, 157).

Once the innovation has occurred, the innovation-decision process is set in motion where individuals decide whether or not to adopt the innovation. This process is made up of five stages, first observed by Ryan and Gross (1943) in their study of farmers adopting hybrid seed corn. In the first stage, individuals learn about the innovation. There will be "early knowers" and "late knowers" (Rogers 2003, 174). Early knowers are characterized as having more education, social status, exposure to mass media and interpersonal networks, social participation, as well as being "more cosmopolite than late adopters" (Rogers 2003, 174).

Early knowers are not always early adopters of an innovation. This is because the second stage of persuasion has not occurred. In this stage, people have to form an opinion about the innovation, whether that is positive or negative. Once

opinions are formed about the innovation, individuals decide whether to adopt or not, which is the third stage in the innovation-decision process. A new tool, program, or idea causes people uncertainty, and one way to deal with that uncertainty is to adopt on a trial basis, according to (Rogers 2003). Once individuals decide to adopt an innovation, they move to the fourth stage called implementation. Finally, the innovation will either become institutionalized or discontinued in the fifth stage of the innovation-decision process.

Rogers (2003) emphasizes that innovations are often products of organizations rather than individuals. Therefore, there are three types of innovation decisions that may occur: optional, collective, and authoritative. An innovation decision is considered optional if it is up to the individual to adopt or not. If the decision to adopt is to be made by members in a group, with individuals then having to abide by the decision, then the process is collective. However, in organizations, there are times when a leader alone will make the decision and group members must abide by the decision. This is an authoritative decision process.

### **Rate of Adoption**

Research about diffusion of innovations since the 1970s has primarily focused on the perceived attributes of innovations and rate of adoption—both of which take place in the innovation-decision process (Rogers 2003). Rate of adoption is defined as “The relative speed with which an

innovation is adopted by members of a social system” (Rogers 2003, 221). According to Rogers (2003), innovations generally follow an S-curve in the diffusion process, measuring the level of adoption and time, but the curve may vary depending on the particular innovation as shown by in Figure 2.3. Overall, (Rogers 2003) says that there are five

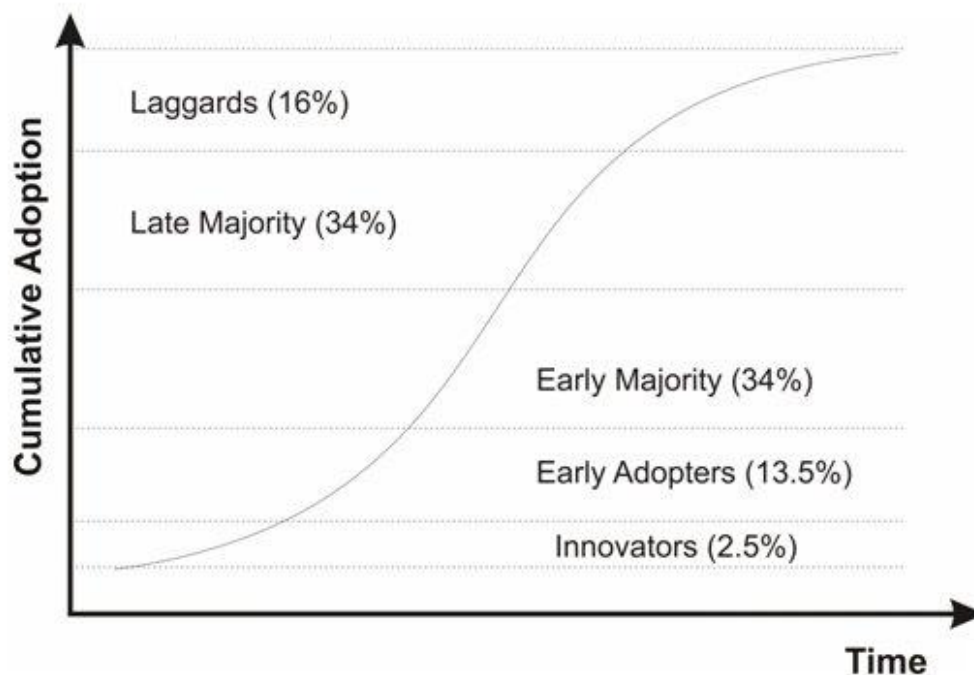


Figure 2.3. S-curve rate of adoption  
 Source: Everett Rogers, *Diffusions of Innovations*, 5<sup>th</sup> ed. (Simon & Schuster, 2003), figure 1.2

types of variables that influence rate of adoption: innovation attributes, type of innovation decision, communication channels, social systems, and change agents' promotion efforts.

### **Adopters**

Rogers (2003) identifies five categories of adopters that he states are “ideal types” (282), emphasizing that these are

categories with no clear demarcations. The first type of adopter is the innovator, who is often engaged with other innovators, has financial resources, has technical knowledge, is able to deal with uncertainty, and is cosmopolitan (Rogers 2003). Early adopters, the second category, are opinion leaders in their local systems. These early adopters are often looked at as people to seek advice from, have a great deal of respect, and help to decrease uncertainty about the innovation (Rogers 2003). The third category, early majority adopters, represent approximately one-third of all adopters but are not the opinion leaders. They take their time in making a decision about whether or not to adopt. Another one-third of adopters are made up of the late majority. These individuals are skeptical and cautious. Peer pressure is generally what causes them to adopt an innovation (Rogers 2003). The final category is laggards—those who are resistant to innovations and “are suspicious of innovations and change agents” (Rogers 2003, 284).

#### **Innovation Attributes**

Rogers, in his first article in the JOE about diffusion and attributes of innovations, says that there are five innovation attributes: relative advantage, compatibility, complexity, divisibility, and communicability. These attributes emerged predominantly through studies of agricultural Extension and technological innovations on farms in the Midwest (Rogers 1963). Ryan and Gross (1943) conclude that innovations were more apt to be adopted by farmers if the introduction and information about



the innovation came from either personal contact with corn salesmen or other nearby farmers, if other farmers had already successfully adopted the innovation, and that the adoption rate followed a bell curve. Zaltman, Duncan, and Holbek (1973), in examining innovations across multiple organizations identify 21 innovation attributes, while expressing that the list was not exhaustive.

Over the years, Rogers (2003) cites five categorical attributes of innovation that explain "most of the variance in the rate of adoption for innovations, from 49-87 percent" (221). Relative advantage, compatibility, and complexity remain as three of the five variables. Trialability and observability are the new names given to divisibility and communicability.

Relative advantage refers to the perceived benefit people see in adopting the innovation, whether that benefit be social, economic, or status enhancement (Rogers 2003). Compatibility means that the innovation is compatible or consistent with adopters' values, belief systems, experiences, and felt needs (Rogers 2003). Both relative advantage and compatibility may have a positive influence on the rate of adoption. The attribute of complexity creates barriers to adoption and may have a negative effect on adoption (Rogers 2003). Trialability is the opportunity to try an innovation on a limited or pilot basis, such as with a new type of seed with farmers. It can decrease uncertainty for the adopter, thereby creating a positive influence. Observability allows people to see the results of the

innovation may be a positive influence because it decreases uncertainty.

### **Organizational Innovativeness**

In the past, DOI research had focused primarily on the individual (such as the case with farmers) (Rogers 2003, 407). However, individuals work within systems and organizations. Therefore, studies began to treat the organization, rather than the individual, as the dependent variable and the unit of analysis (Rogers 2003). From his and others' research, Rogers (2003) identified three major independent variables that impact organizational innovation.

The first variable is the organization's leader's attitude toward change, which has a positive effect. The second variable is the internal structural characteristics of the organization. These characteristics include: centralization, complexity, formalization, interconnectedness, organizational slack, and size (Rogers 2003). These characteristics can have either a negative or positive effect on innovation.

Centralization has a negative effect on innovation because power is concentrated and there may be fewer ideas and experiments. Complexity is defined as the level of technical expertise and knowledge that exists in the organization. Both expertise and knowledge have a positive effect on innovation. Organizational formalization is associated with bureaucracy and rules and regulations inhibit innovation. For creativity and ideas to flow, interconnectedness is needed so that members can

interact with each other. Organizational slack, defined as time and resources, is necessary and has a positive effect on innovation. Large organizational size is also a positive influence on innovation. The third organizational variable is external organization openness, which is defined as the links of organization members to non-members (those external to the organization) (Rogers 2003).

### **Empirical Studies of Diffusion of Innovations Theory**

Research studies have been conducted to provide empirical evidence that either proves, disproves, or adds facets to the DOI theoretical framework. By the '70s, however, researchers had begun to express doubt about research findings and described the body of evidence as inconclusive, contradictory, not encompassing, tenuous, mixed, and instable (Damanpour 1996; Downs & Mohr 1976, Meyer & Goes 1988, Moore & Benbasat 1991). Downs and Mohr (1976) argue that the DOI empirical evidence was problematic because of instability—the variance across findings. They attributed the instability to a lack of just one theory that could explain all of the effects of independent-variable interrelationships or interactions (the predictors) on the dependent variable (innovation) (Downs and Mohr 1979).

Empirical evidence is problematic, according to Downs and Mohr (1979) because, in addition to fixed primary attributes such as cost, there are secondary attributes particular to the organization studied. Relative advantage is one example of what they referred to as a secondary attribute because it is

influenced by individuals' perceptions. One person's advantage may not be another person's advantage. In essence, innovation becomes specific to the situation (Downs and Mohr 1979).

Greer (1977), in reviewing health care diffusion studies, points out that a significant problem in the DOI studies is that adoption of innovation is treated as positive. In some instances, that may not be the case. In retrospect, Greenhalgh et al. (2004) say that the early studies of innovation attributes and adopters were theoretically flawed because of several factors, including that the individual innovation or adopter was the unit of analysis, adoption was treated as preferable to non-adoption, and the belief that findings were transferable from one context to another. The empirical research on DOI, across multiple and varied disciplines, continued despite these frustrations. The remainder of this discussion highlights those studies that are prevalent in the literature.

Tornatzky and Klein (1982) acknowledge the critique of Downs and Mohr, yet argued that the "conceptual issues can be translated into empirical questions and research design options" (29). They believed that the problems with the studies were often due to methodological issues and offered their version of seven best method practices for innovation studies. For their study, they 1) chose 75 articles that were representative of the innovation literature and coded for the seven best-practice methods to form an overall descriptive summary, and 2) performed a meta-analysis for correlation of the innovation and adoption.

Of the studies analyzed for best practice, they found all of them wanting in at least one of the seven categories. They concluded that "the lack of generalizability and inconsistency in findings in these studies is caused by a more mundane problem, poorly designed studies" (Tornatzky and Klein 1982, 33).

Damanpour's research published from 1991 to 1996 provides an empirical basis for testing the relationship between organizational size and innovation and the complex relationships between the two variables. Damanpour (1992) conducted a meta-analysis of 20 different studies using correlation and found evidence to support the positive relationship between organizational size and innovation. Yet, he concluded that the strength of the relationship may be influenced by organizational type and noted that there are moderators in the causal model of size and innovation that causes high variance in results (Damanpour 1992).

Damanpour (1996) provided further empirical research to test the relationships between innovation and organizational complexity and innovation and organization size in a meta-analysis of empirical research studies over 30 years. He defined organizational complexity as functional differentiation and role specialization. Through this work, Damanpour (1996) sought to provide stable empirical evidence and to develop a "contingency theory of organizational innovation" (556). In his analysis, he controlled for the independent variables of organizational size,

type of innovation, structural complexity, and "similarity of data sources" (Damanpour 1996, 693). He concludes that:

- 1) the association between structural complexity and innovation depends upon operational definition of complexity, environmental uncertainty, use of manufacturing organizations, use of service organizations, focus on technical innovations, focus on product innovations, and focus on implementation of innovation, and
- 2) the association between organizational size and innovation depends upon operational definition of size, environmental uncertainty, use of service organizations, use of for-profit organizations, focus on technical innovations, and focus on product innovations (Damanpour 1996, 693).

Meyer and Goes (1988) studied the assimilation of 12 medical technology innovations across 25 hospitals that represented 300 separate decision processes through interviews with doctors, nurses, administrators, and board members. Their model supposed a combined effect of context attributes, innovation attributes, and innovation-decisions attributes to explain the assimilation of innovations in an organization. The research dependent variable was innovation assimilation (considered a nine-step process) and independent variables were in the broad categories of environment (urbanization, affluence, federal health insurance), organization (size, complexity, market

strategy), leadership (CEO tenure, CEO education, staff's medical education), innovation (risk, skill, observability) and innovation decision (compatibility, CEO advocacy) (Meyer and Goes 1988, 908). In summary, Meyer and Goes (1988) conclude that: 1) their model "affords reasonably good prediction of the extent to which a given hospital will assimilate a given innovation" (916) and 2) innovation assimilation depends on the particular innovation and decision process of the situation.

### **Measures of DOI**

Moore and Benbasat (1991) conducted an extensive search for valid and reliable DOI instruments to measure "the various perceptions that an individual may have of adopting an information technology innovation" (192), including contacting Rogers. They wanted to avoid the problems, pointed out by Downs and Mohr (1976), caused by primary and secondary attributes. They found only one instrument that had similar constructs and had reliability. This instrument had been developed as part of a doctoral dissertation by Davis (1986).

Using scientific rigor, Moore and Benbasat (1991) developed an instrument to measure perceptions of adopting a technology innovation that uses the seven constructs of compatibility, relative advantage, result demonstrability, visibility, ease of use, trialability, and image, and contains 38 measures. Rogers (2003) discusses the work of Moore and Benbasat (1991) in the last edition of his book. He states his belief that, "with proper adaptation" (224) the instrument could be used across various

innovations to measure perceived attributes and adoption. However, he also goes on to say that, despite the rigor of Moore and Benbasat's work, his preference is for researchers to develop measures "afresh" (225) based on the innovation to be studied.

#### **Additions to Diffusion of Innovations Model**

Greenhalgh et al. (2004) conducted a systematic review of diffusion literature as it pertains to health care. Using a meta-narrative review technique, the researchers identified "the seminal theoretical and overview papers and books" (583) across 13 research areas, such as sociology, psychology, communications, and political science, among others. Prior to Greenhalgh et al. (2004), Greer (1977) had also examined diffusion literature with a health-care lens and had identified three major literature groups from which the DOI research emanated: classical, organizational, and political. From the work of Greenhalgh et al. (2004) and Greer (1977), a historical taxonomy of the influences from major disciplines on DOI literature is presented in Table 2.1.

Table 2.1: Discipline-based DOI literature historical taxonomy

Literature Category	Discipline
Early Diffusion Literature (Classical Theory)	Rural Sociology Medical Sociology Communication Studies Marketing
"Breakaway" Literature	Development Studies Health Promotion Evidence-based Medicine



Literature Category	Discipline
Organization and Management Literature (Organizational Theory)	Studies of the structural determinants of organizational innovativeness Studies of organizational process, context, and culture
	Inter-organizational studies (from network theory) Knowledge-based approaches to innovation in organizations Narrative organizational studies Complexity studies (from systems theory)
Political Theory	Decision-making studies

Source: Material adopted from Ann Lennarson Greer, *Advances in the Study of Diffusion of Innovation in Health Care Organizations* (The Milbank Memorial Fund Quarterly Health & Society, 1977) 505-532, and Greenhalgh et al., *Diffusion of Innovations in Service Organizations: Systematic Review & Recommendations* (The Milbank Memorial Fund Quarterly Health & Society, 2004), 581-629.

From their review of empirical studies, Greenhalgh et al. (2004) confirmed a positive relationship between innovation adoption and the six key attributes of relative advantage, compatibility, complexity, trialability, observability, and reinvention. In addition, they identified five other key attributes:

- 1) Fuzzy boundaries—or a “soft periphery ... the organizational structures and systems required for the full implementation of the innovation” (597).
- 2) Risks—a balance of risks and benefits for the innovation to be adopted.
- 3) Task issues—alignment with individuals’ work.
- 4) Knowledge required—easily packaged and transferred.
- 5) Augmentation/support—support systems in place.

Greenhalgh et al. (2004) developed a conceptual model that is supported by their review of empirical studies and theoretical research and is presented in Figure 2.4. While this model can be discussed in-depth, the critical finding is that key attributes are not stable. "Rather, it is the interaction among the innovation, the intended adopter(s), and a particular context that determines the adoption rate" (Greenhalgh et al. 2004, 598). This finding parallels (but in much more depth) the earlier research of Meyer and Goes (1988) that assimilation of innovations is an interaction among contextual attributes, innovation-decision attributes, and innovation attributes. It also reflects the complex networked system that Sorokin (1957) theorized.

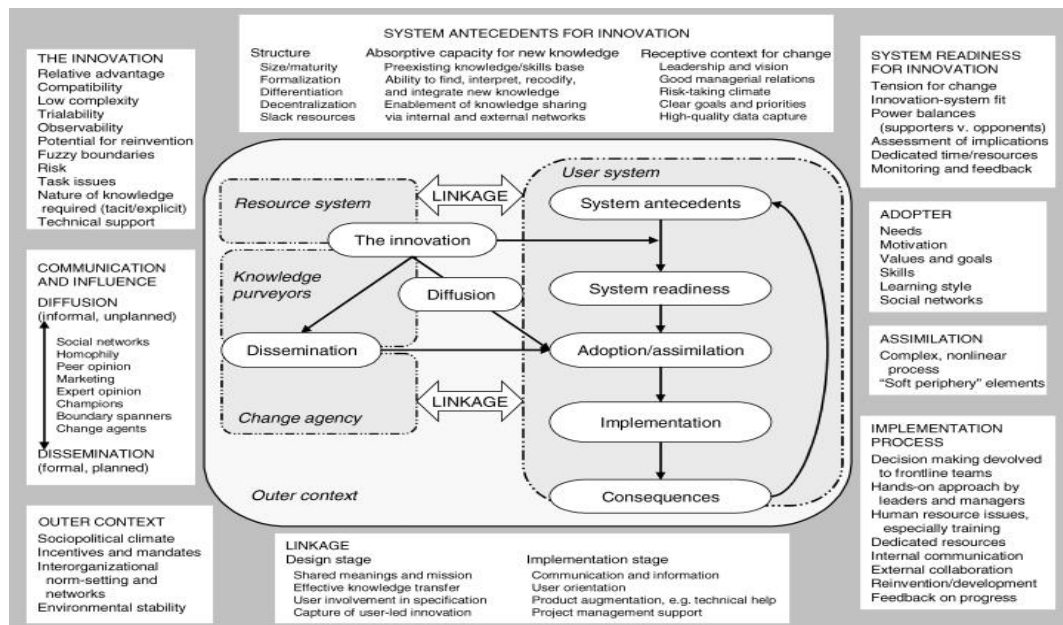


Figure 2.4. Conceptual model: Health service organizations diffusion of innovations  
 Source: Greenhalgh et al., *Diffusion of Innovations in Service Organizations: Systematic Review & Recommendations* (The Milbank Memorial Fund Quarterly Health & Society, 2004), 581-629.  
 The Milbank Quarterly © 2004 Milbank Memorial Fund

### **American Policy Innovation and Diffusion Theory**

For DOI understanding, the policy innovation and diffusion field is closely aligned to CES for several reasons. Policy is implemented through programs; CES translates research into programs. Policy diffusion takes places either horizontally or vertically among all three governmental levels; CES program diffusion also moves vertically and horizontally among all three governmental levels. Both policy and programs result from a complex maze of resources, expertise, politics, geography, and values. Policies and programs are foundation blocks of American government that public administrators manage, implement, and evaluate. In addition, both program and policy innovations are triggered by some problem, need, or issue.

#### **Innovation Triggers**

Rogers (2003) DOI model posits that innovations are driven by needs or problems. He cites two examples of how problems or needs are identified. First, scientists can perceive a future problem and begin work on a solution (Rogers 2003, 137). Second, a problem or need can be pushed to the forefront of the national U.S. agenda through the political process. It is the recognition of the problem or need that then drives research to provide a solution through innovation development and commercialization.

Policy innovation and diffusion literature add another dimension to the discussion of innovation triggers. Polsby (1984) Raises the question of "where do new policies come from?" (1). He says that new policies occur either as "acute innovations" or as

"incubated innovations" (151). Acute innovations happen quickly, often in response to some type of crisis, whereas incubated innovations take place over time. Galston and McElvein (2015) describe acute innovations as being "dominated by individuals who are close to the locus of decision making; the generation of alternatives takes place within the decision making process, not prior to it; and the level of partisan conflict is relatively low" (7). They say that incubated innovations are ones where "the general public and elected officials may not recognize the existence of the problems to which the reforms are addressed, let alone acknowledge the need to act on them" (7). This type of innovation is often based on research, and there is a "long march from private research to public visibility" (7), and they "tend to get caught up in partisan politics" (7).

### **Innovation Diffusion**

The policy diffusion literature parallels much of the DOI literature. While the DOI literature is grounded in the work of Everett Rogers, the public-policy diffusion literature is grounded in the work of Jack L. Walker from the University of Michigan. Walker (1969), like Rogers, was interested in building theory and sought to find out why some states were early adopters of policy or program innovations and how innovations spread throughout the states. Walker (1969), too, defines a policy or program innovation as being new as long it is "new to the states adopting it, no matter how old the program may be or how many other states may have adopted it" (881).

Walker (1969) was specifically interested in adoption rate and diffusion patterns. He posits that states see themselves as regions and are influenced by what other states in the region are doing. Walker (1969) found positive relationships between states' innovativeness and demographic factors, such as wealth and slack resources, and political factors, such as the degree of "urban representation" (887). He concludes that the likelihood of adoption by other states is increased when a "key decision maker" (Walker 1969, 897) state has already adopted the policy or program. The likelihood of adoption is also increased when a state feels deprived due to a need that has not been met and perceives that other state counterparts have already adopted an innovation that meets the same need. The modern expression of "keeping up with the Joneses" describes this phenomenon.

From Walker's (1969) work, a series of empirical studies were conducted and reported on in various journals. Mooney and Lee (1995) provide the most useful framework from which to summarize the research. According to Mooney and Lee (1995), there are three dimensions to state policy adoption: 1) the diffusion process, 2) the reinvention process, and 3) state adoption determinants. The adoption determinants are both internal and external factors. Much as with organizations, internal determinants are those that are internal to the state, such as the resources available, political ideology, and leadership. External determinants include such factors as federalism,

diffusion mechanisms, and crises. The review of the literature discussed here will use this framework.

### **The Diffusion Process**

Walker (1969) found geographical or regional patterns in the policy diffusion process, as have other researchers over time (Berry 1994, Berry and Berry 1992, Daley and Garand 2005, Gray 1973, Karch 2006, Mooney 2001, Mooney and Lee 1995). Policy decision makers are often faced with complex problems, limited amounts of information and time to arrive at remedies, and uncertain political environments. Therefore, they will look to neighboring states that they see as counterparts or equals to discover solutions already proving to be successful. Mooney and Lee (1995) say that states look to neighbors who are close by rather than far away because "proximity breeds familiarity" and there is a "follow the leader" effect (605). This type of state-by-state diffusion pattern is called horizontal and involves social learning that occurs between state policy makers as they learn about innovations through various communication mechanisms, such as professional associations, the media, or external interest groups (Berry 1994, Boehmke and Witmer 2004, Daley and Garand 2005, Walker 1969).

Another diffusion pattern is time. Gray (1973) posits that state innovation may be tied to issues rather than any particular characteristic of the state, such as wealth or education. A state could be an early adopter in one issue area and a laggard in another area, according to Gray (1973). Often, it may be in a

state's best interest to take a wait-and-see attitude if there are risks associated with being innovative (Mooney and Lee 1995). Berry and Berry (1992), in a study of tax innovation, found that a long time until the next election was an important variable in whether or not a tax innovation was adopted because politicians can have enough time to recover from the harmful effects of supporting a tax increase.

Vertical diffusion of innovation is a pattern found in the U.S. because of the federalist form of government. This type of diffusion occurs when the federal government learns from states' experiences and represents a bottom-up DOI. However, in a study of federalism and national health policy, Weissert and Scheller (2008) found that often the federal government does not take advantage of states' expertise and experiences. Vertical diffusion also occurs in a top-down approach. The national government can mandate policies, such as with the ACA, or it can use federal funding to entice states to adopt policies even when those policies are not legally mandated. However, Karch (2006) points out that national intervention should be more broadly defined than mandates and financial incentives. His research finds that the diffusion of policy innovation is impacted by the level of obstacles states might encounter when trying to adopt.

### **Reinvention**

The notion of policy reinvention is tied to two other factors already discussed: social learning and time. Social learning, argues Mooney (2001), is a process that must be taken

seriously. He points out that learning is not simply emulation or copying without the processes of interpretation and action. As a policy diffuses over time and the states learn from each other, it is highly likely that policy will be altered—especially those that are controversial (Boehmke and Witmer 2004, Clark 1985, Glick and Hays 1991, Hays 1996, Mooney and Lee 1995, Rogers 2003, Walker 1973). While it is agreed that the first states to adopt are innovators or pioneers, those who adopt later on may be just as innovative as policy transforms to fit new situations (Hays 1996). In addition, they will learn from the mistakes of the early adopters (Hays 1996, Mooney 2001).

#### **Adoption Determinants**

There have been more empirical findings about adopter characteristics than all other aspects of policy diffusion. This has generally been the case in other diffusion research areas as well. What is a little surprising, though, given the results in those other areas of study, is extent of contradictory findings (Savage 1985, 11).

Why does a state decide to adopt a policy or program innovation? Wealth, fiscal health, resource availability, slack and other terms are used to describe the socio-economic variables associated with an organization simply having the money to invest in adopting the innovation or to produce an innovation (Berry 1994, Daley and Garand 2005, Downs and Mohr 1979, Mooney and Lee 1995, Tolbert, Mossberger, and McNeal 2008, Walker 1969). Times of financial constraints and stretched budgets do not invite risk-taking.



Political ideology of a state may play a role in innovation adoption, but the research is conflicting (Daley and Garand 2005, Grossback, Nicholson-Crotty, and Peterson 2004, Mooney and Lee 1995, Tolbert, Mossberger, and McNeal 2008). Such items as internal or external pressures from interest groups, crises, a culture of reform or innovation, and citizen political ideologies (on a continuum of liberalism and conservatism) may also impact the decision to adopt (Berry and Berry 1992, Daley and Garand 2005, Hays 1996, Jason 2003, Mooney and Lee 1995)

#### **Cooperative Extension and Innovation Diffusion**

"In the public sector, an innovation can be a policy or program," (522) according to Jason (2003). The CES delivers hundreds of programs each year to residents of the U.S. and its territories with a combined budget approaching \$500,000,000 (National Institute of Food & Agriculture 2012). Rogers (2003) credits the success of CES to its integrated system of research and outreach. Extension specialists perform research and the county Extension Educators diffuse the research results to local residents (165). Rogers (2003) points out that "other governmental agencies have tried to copy the agricultural extension model, but with little success" (166) because they lacked some pieces of the total integrated model. In 2009, an article appeared in the *Journal of the American Medical Association* advocating for the health community to adopt the Extension model for a Primary Care Cooperative Extension Service (Grumbach and Mold 2009).

Yet, a search of JOE, where most Extension professionals publish, does not turn up any new research in CES that builds upon the work of Rogers (2003), the diffusion process within the CES system, or innovation determinants in CES. There are, however, articles and discussions about Extension as an innovative organization. The April 2012 issue contains a lead article that encourages Extension-at-large to engage in disruptive innovation (Franz and Cox 2012). The authors argue that disruptive innovation will help to change the risk-averse culture of Extension. In posting a comment on the article web page, a reader said:

Why are there so few empirical studies on the outcomes and impacts of major innovations within Extension? My hypothesis is that the costs of evaluating disruptive innovations outweigh the benefits, at least to the states in which the innovations occur. While there would be tremendous benefits to other states in learning about the consequences of these innovations, the costs of doing the research typically fall entirely to the state in which the innovation take place. If stakeholders within the innovating state see the new approach as working well, especially innovations which have been controversial in the past, many administrators will see few benefits and potential pitfalls in studying it more explicitly. What if the research finds the innovation is only 80% as good as it is generally perceived? Will this cause some stakeholders to renew old arguments and push to go back to old methodologies and structures rather than to move on to refining the new one or addressing new innovations?

If my hypothesis is correct, this suggests we will see few additional studies which use rigorous social science methods until there is funding from some national entity (NIFA, foundations, regional centers, or others). With external funding, teams of social scientists from multiple disciplines, Extension staff

and administrators and external stakeholders could design studies that cut across states to examine the outcomes of disruptive innovations

Extension has been a national leader in helping others adopt disruptive innovations (i.e. changes in farming). Now it should take a little time to apply this to itself. Certainly at the national level, the benefits of studies of the consequences of disruptive innovations within Extension will far exceed their costs (Morse 2012).

An ironic contradiction is seen in the literature in that Extension is an organization designed to help people make positive changes in their lives, yet is an organization that is said to be resistant to change by its own employees and its future relevancy called into question (Argabright, McGuire, & King 2012; Bloir and King 2010; Bull, Cote, Warner and McKinnie 2004; King & Boehlje 2000; McDowell 2004; Patton 1987).

## CHAPTER THREE: METHODOLOGY

### Researcher Orientation

Engaging in research forces the articulation of certain world views and paradigms on the part of the researcher. This is a good "medicine" (4) and one that is recommended by Miles and Huberman (1994): "To know how a researcher construes the shape of the social world and aims to give us a credible account of it is to know our conversational partner" (4). Merriam (2009) says that researchers should be forthcoming about their world views, biases, and assumptions because those have influenced their work (219). Therefore, I will make clear my research orientation in general and as the author of this dissertation.

Researchers often feel as if they must fit into an ontological category or into one of two paradigms that Tashakkori and Teddlie (1998) refer to as the constructivist/phenomenological and positivist/empiricist orientation. These two paradigms then lead to debates about methods, resulting in what is commonly referred to as paradigm wars (Tashakkori and Teddlie 1998). For public administration, scholars debate whether the field even has a paradigmatic base because of its applied and multidisciplinary nature (Rainey 1994, Riccucci 2010). My view coincides with Riccucci (2010): "All research traditions add value to public administration; the relevancy of qualitative or quantitative tools depends on the research question and underlying epistemologies and ontologies" (58).

As many authors point out today, the debates over paradigms have not been productive (Mark, Henry, and Julnes 1999, Miles and Huberman 1994, Riccucci 2010, Tashakkori and Teddlie 1998). Miles and Huberman (1994) argue that most researchers overlap in their beliefs and approaches, representing a multi-layered approach (5). Patton (2015) recommends being "practical and flexible" and to be guided by "methodological appropriateness" (92). This approach is what Tashakkori and Teddlie (1998) term "paradigm relativism" because researchers should use "whatever philosophical and/or methodological approach works for the particular research problem under study" (5).

As a researcher and evaluator, I cannot firmly plant myself in one or the other orientations of constructivist/phenomenological or positivist/empiricist. Both frame the research in this dissertation. I accept that knowledge is socially constructed "within the frame of reference of the participant as opposed to the observer of the action" (Burrell and Morgan 1979, 29). However, as a positivist/empiricist, I believe that quantitative data gathered through systematic processes, combined with the use of mixed methods and data triangulation, can describe some dimension of reality.

In addition to being the researcher, I am also an employee of CES, UME, and a member of the HILI team. Therefore, I am a part of the environment and culture which I study. That provides me with a depth of knowledge and understanding of the organization and the initiative that can be construed as both an

asset and a liability. For this research, the assets are my knowledge and experience provide me with “local groundedness” (Miles and Huberman 1994, 10) that helps provide depth in interpreting others’ experiences and constructing knowledge (Creswell 2007, Miles and Huberman 1994, Riccucci 2010).

My affiliation with CES and HILI, however, also introduces the potential for bias in the research design through biased sampling, biased questions, and biased analysis. As a professional evaluator and researcher, my approach is to practice “empathetic neutrality grounded in mindfulness” (Patton 2015, 60). This means that I was not detached from the people I interviewed or encountered, but I did practice neutrality and openness with respect to what was being said in the moment and in the particular context.

### **Ethics and Values**

As a practicing program evaluator and member of the American Evaluation Association (AEA), I uphold the guiding principles of systematic inquiry, competence, integrity and honesty, respect for people, and responsibility for the general and public welfare. My goal is to use my skills and abilities to help improve the programs that CES develops and delivers for the public.

In addition, I follow Institutional Review Board (IRB) research principles of respect for persons, beneficence, and justice. All interviewees were fully informed of the purpose of the research and voluntarily agreed to participate. All measures

possible were taken to protect the identity of the participants and to maintain the confidentiality of individuals' remarks. During interviews, I maintained a high level of professionalism and respectfulness with the interviewees and always honored what they had to say. Audio recordings will be destroyed according to the IRB approved protocol.

### **Research Purpose**

As stated in the introduction, there is a not a theoretical base to inform CES about what are the internal and external conditions under which a non-agricultural innovation can occur and diffuse throughout the system. Without this understanding of non-agricultural innovation and diffusion in CES, new programs to address emerging public issues may never be developed or may not diffuse quickly enough throughout the system to adequately meet educational needs of the public. Therefore, the purpose of this research is to add to the DOI theory for CES and to develop a model that will inform CES decision makers, whether at the federal or state levels, about how to build capacity for program innovation, plan for dealing with emerging issues as a result of public policy shifts, and engage in efficient and successful program diffusion.

### **Research Questions**

Based on Rogers' DOI theory, a conceptual framework was developed to explain "the main things to be studied" (Miles and Huberman 1994, 18). The framework aligned the: 1) research questions, 2) research domains, 3) theoretical concepts, 4)

research sub-questions, 5) population to be studied or data to be gathered, and 6) interview questions. The conceptual framework ensured congruity of questions to the DOI theoretical framework, populations, and organizational context. Figure 3.1 gives an overall schematic of the conceptual framework.

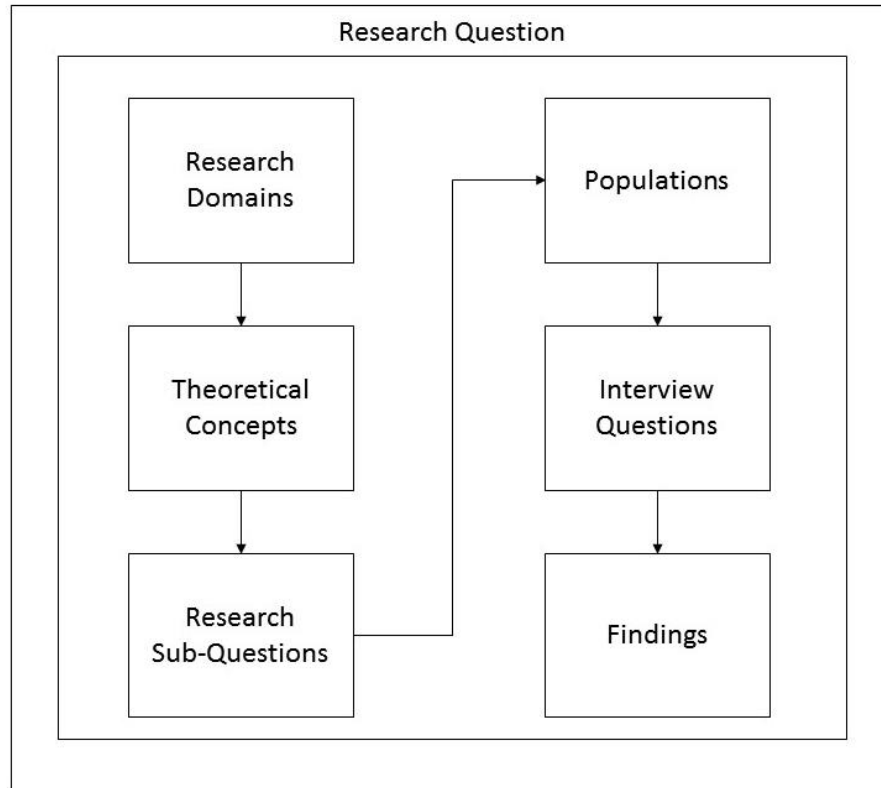


Figure 3.1. Conceptual framework

The primary research question was: What are the necessary internal and external conditions for a non-agricultural innovation to occur and be adopted and implemented in the national Cooperative Extension Service system? From the DOI theory, the domains of internal environment, the product, and the external environment were identified. The research sub-questions were then aligned with each of these domains as shown in Table



3.1. As an exploratory study, the question types used were non-causal research and non-causal evaluative (Miles and Huberman 1994, 24).

Table 3.1. Conceptual framework: Research domains, theoretical concepts, and sub-questions

Domain	Research Sub-Questions
Internal Environment <i>Theoretical Concept:</i> A. Innovation-Adoption Process B. CES Structural Characteristics	What are the factors in the innovation-adoption decision process that promote the decision to adopt?  What are the factors present in the innovation-adoption decision process that do NOT promote the decision to adopt?
Product Theoretical Concept: A. HILI Innovation Attributes	What were the attributes of the HILI innovation that promoted its adoption and implementation?  What were the attributes of the HILI innovation that did NOT promote its adoption and implementation?
External Environment <i>Theoretical Concept:</i> A. State Characteristics B. State Policy Environment	What external environmental conditions promote the adoption and implementation of an innovation in CES?  What external environmental conditions do NOT promote the adoption and implementation of an innovation in CES?

### Research Design

Before discussing methodology details, five over-arching points about the research design will be discussed. First, the research framework for this study is based on a mixed-methods

approach, specifically the sequential exploratory approach. This approach is suited to situations where theory is not well developed, instruments for quantitative data collection are not developed, and researchers need to use qualitative techniques to explore a phenomenon (Creswell and Plano 2011, 86-87). This research design starts with a qualitative phase and moves to a quantitative phase; however, emphasis is generally on the qualitative work. As Caracelli and Green (1997) state, this type of design allows for multiple paradigms (such as interpretive and post-positivism that guides my research orientation) to "produce significantly more insightful, even dialectically transformed, understandings of the phenomenon under investigation" (23).

Second, the sequential exploratory design is one of integration in that while there are two sequential phases, these are not distinct and separate from each other (Caracelli and Greene 1997). Rather, the qualitative data informs the quantitative data collection.

Third, this type of integrated design in a mixed-methods study allows for the strengths of both inductive and deductive reasoning to be used. Remler and Van Ryzin (2011) point out that qualitative research is generally an inductive process of building theory while deduction uses facts to test theory (29). Quantitative research relies on deductive thinking where hypotheses are generated and tested. The mixed-methods design allows researchers to use both induction and deduction in an

iterative process of generating knowledge (Remler and Van Ryzin 2011).

Fourth, CES is an organization that exists within a political environment. For much of its early history, CES enjoyed a favorable political environment but that has not necessarily been the situation since the 1980s as budgets have been more closely scrutinized and questioned and understanding of agriculture has decreased among politicians (Meier 1989, Thomson 1984). Without the use of secondary data about the external environment, the qualitative results would have no larger environmental context in which to be understood. This point is especially salient given the turmoil and controversy around the ACA.

Fifth and finally, this mixed-methods approach, with an emphasis on the qualitative phase, will add to the research that has already taken place with HILI and Smart Choice™. While a great deal of quantitative data has been collected about Smart Choice™ effectiveness as a program intervention, there has not been a systematic study about the experiences of those involved in the initiative. While the program intervention has proven to be successful with end-users, CES needs to understand the conditions and processes under which an effective intervention was developed in order to replicate its success.

## Qualitative Approach

### Embedded Single-Case Study

The primary qualitative approach chosen for this research is an embedded single-case study. The definition of a case study is that developed by Yin (2009): "A case study is an empirical inquiry that investigates a contemporary phenomenon in-depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (18). An embedded case-study is one in which there are embedded sub-units of analysis within the larger case (Yin 2009). Miles and Huberman (1994) advise researchers to "bound the territory" (25) by identifying the unit(s) of analysis and the samples within that unit(s).

For this study, the larger unit of analysis is CES. There are five sub-units of analysis within CES: the ECOP Health Task Force, UME administrators, Extension Educators who were involved in HILI and implemented the Smart Choice™ program (called implementers), Extension Educators who were involved with HILI but did not implement the Smart Choice© program (called non-implementers), and the HILI team. The Health Insurance Literacy Initiative is the context within which the case is being studied and the Smart Choice™ program is the product developed by HILI. In addition, HILI operated within the larger social, economic, and political contexts. Figure 3.2 shows the case configuration.

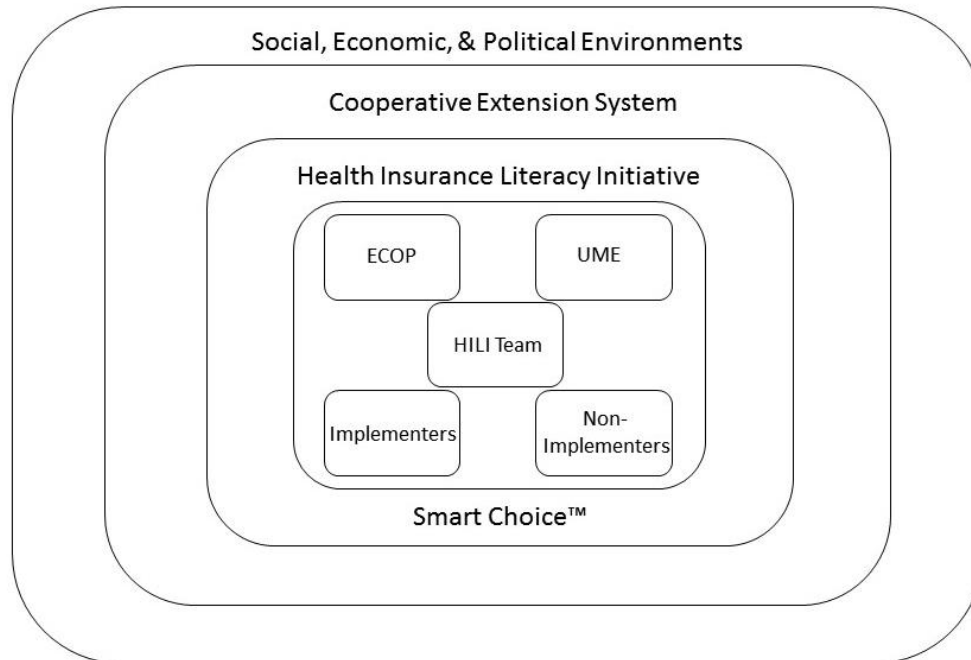


Figure 3.2. Sub-units of analysis

### **Sampling**

Sampling strategies, according to Patton (2015), are where differences in qualitative and quantitative paradigms are most distinct (264). Qualitative studies are based on a small sample whereas quantitative studies need large, randomized samples that look for statistical significance (Creswell 2009, Miles and Huberman 1994, Patton 2015). However, it can be erroneous to talk about this difference as if there is no overlap (Merriam 2009). Teddlie and Yu (2007), in fact, have developed a typology of mixed-methods sampling where both purposeful and random strategies are used (81). Creswell and Plano (2011) also argue that, "In sampling, it is possible to have a combined form of random (quantitative) and purposeful (qualitative) sampling" (179).

The nature of this case is such that purposeful sampling was used, with the exception of non-implementers, to aid in comparison and to describe the phenomenon from multiple viewpoints (Miles and Huberman, 1994). A random sampling strategy was used for non-implementers and will be described. Because the number of participants within each sub-unit was different, the number of interviews from the sub-units was different, too. Overall, 28 interviews were completed when the point of saturation or redundancy was reached (Merriam 2009, Strauss and Corbin 1998). Saturation is defined as the point at which no new data are emerging (Strauss & Corbin, 1998). A description of the sampling populations and how sampling was conducted are detailed in the next pages.

#### ECOP Health Task Force

In 2012, two years after the passage of the ACA and recognizing the future importance of health programming, the ECOP Chairperson appointed a Health Task Force that was charged to:

“identify priorities for Cooperative Extension health programs for the next 3-5 years, identify outcomes indicators for each priority, and identify potential partners, public and private, including non-traditional partners, to be engaged in resource development, program implementation, and outcomes reporting” (Extension Committee on Organization and Policy 2014, 4).

The task force was made of 14 individual, nationally-recognized experts in health literacy and education from across CES and represented states across the Extension regions.

The ECOP Health Task Force members chosen for the interviews were based on the recommendation of a health literacy expert who served on the task force (and who was not included in the potential pool of interviewees). This expert made the interviewee recommendations based on task force members who were most knowledgeable about HILI and the Smart Choice™ workshops. With the one exclusion, the potential interview pool number was 13. Five individuals were recommended and four agreed to be interviewed.

#### UME Administrators

In Maryland, Cooperative Extension is contained within the College of Agriculture and Natural Resources (AGNR), and the AGNR Dean holds the title of UME Director. The UME Associate Dean/Associate Director (AD/AD) is the day-to-day administrator. Other administrators involved in HILI include the AGNR Assistant Dean for Finance and the Assistant Director for Faculty and Consumer Sciences (FCS). As HILI started, there was an Acting AD/AD of UME while the position was being filled on a permanent basis. Therefore, there were five UME administrators responsible for funding and supporting HILI: the AGNR Dean, the Acting AD/AD, the Permanent AD/AD, the Assistant Dean for Finance, and the Assistant Director for FCS. All of these individuals were interviewed because of their level of HILI knowledge.

### Educators Who Implemented Smart Choice™ (Implementers)

Two-day training workshops were offered in the summer of 2013 for Extension Educators from anywhere in the U.S. Because data were needed for testing, Educators who wanted to implement Smart Choice™ had to agree to follow the program and evaluation protocol and return pre- and post-test assessment scores to the project evaluator. By the fall of 2013, 114 Extension Educators representing 30 states had been trained and certified in how to deliver Smart Choice™ workshops. Figure 3.3 shows the states that had Smart Choice™ trained Educators by spring 2014.

#### Smart Choice Certified Educators

● - 2013-2014 Educators

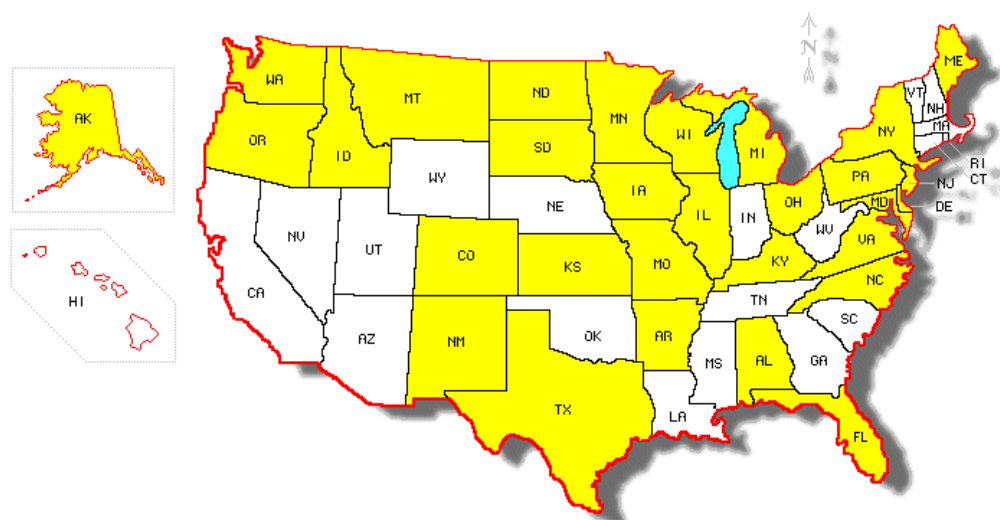


Figure 3.3. Smart Choice™ certified educators

Between September 2013-March 2014, 14 consumer workshops were conducted by 32 (out of the total 114) Extension Educators in Delaware, Iowa, Maryland, Michigan, Minnesota, North Dakota, and Oregon (seven of the 30 states that had trained Educators).



Maryland and Delaware were eliminated from the implementer pool because the majority of these states' workshops had been taught by HILI team members who would be interviewed as another sub-unit. Therefore, that left an interviewee pool of five states, shown in Figure 3.4, with 26 Educators who were implementers.

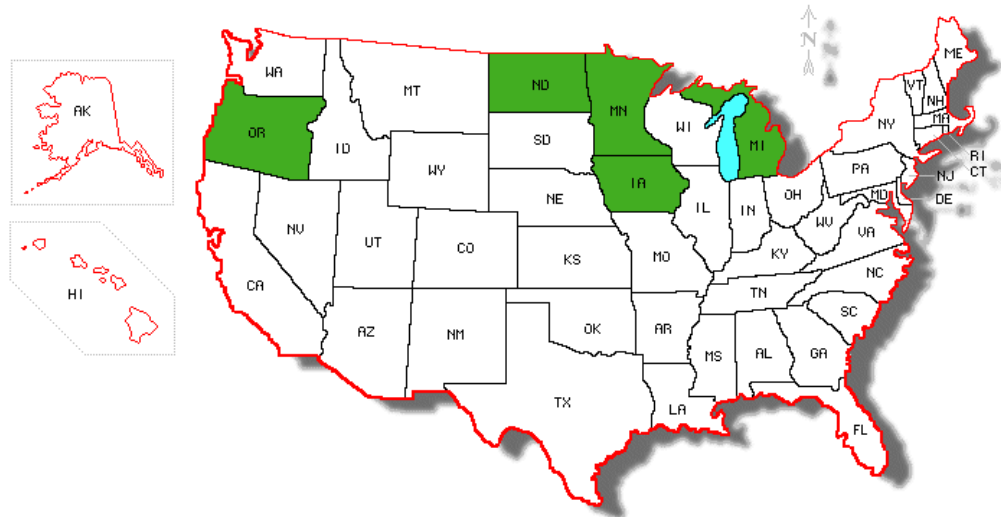


Figure 3.4. Smart Choice™ implementers

The desired interviewees in the five states were those that would be most knowledgeable of and experienced with Smart Choice™ based on the number of workshops that had been implemented or because of overall involvement in sponsoring the project. Therefore, three states where the most consumer workshops had taken place were chosen as the pool of implementers. The top three states were Iowa, Michigan, and North Dakota. Oregon was added to have representation from another Extension region because the other three states were all in the North Central region. Eight Educators from these four states were interviewed. Figure 3.5 shows the final four states from which interviewees were selected.

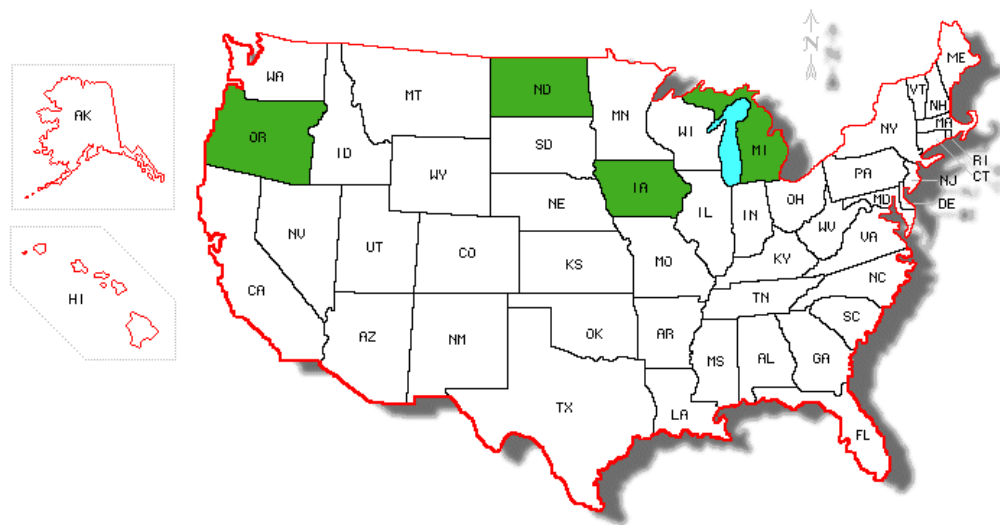


Figure 3.5. Implementer states chosen for interviews  
Educators Who Did Not Implement (Non-Implementers)

For this study, this group is made up of Educators who attended the training but did not deliver any Smart Choice™ workshops during the study timeframe of September 2013-March 2014 (non-implementers). Of the 114 Educators who completed training, 82 did not implement Smart Choice™ workshops. For this group, knowledge and experience about Smart Choice™ were not criteria that could be used for selection. Therefore, the strategy was to try for a distribution across the Extension geographical regions to search for similarities and differences in why implementation did not occur.

The Extension regions are Northeast, North Central, South, West, and 1890. In the temporal frame being used, no 1890 institutions had been involved in the project; therefore, that region was excluded. The total number of Educators across the

remaining four Extension regions was 82 (representing 29 states) and the percentage was calculated for each region. The region with the largest number of certified Educators was the North Central region (33) and represented 40% of the total of all regions. In descending order, the rankings were Western region (26) with 32%, Northeast (12) region with 14%, and Southern region (11) with 13%.

Random sampling was used to choose interviewees.

Originally, five names were drawn from North Central, four from Western, two from Northeast, and two from Southern, for a total 13 potential interviewees from the non-implementer group. For various reasons, six people either declined to be interviewed or did not respond to requests to be interviewed, leaving a total of seven interviews. Figure 3.6 shows those states from which non-implementers were chosen.

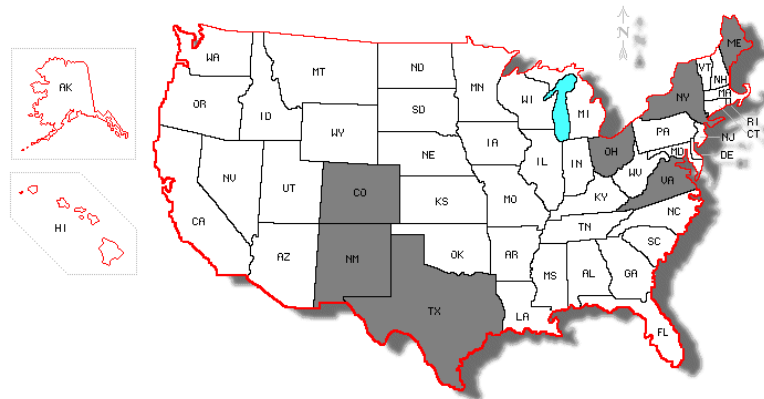


Figure 3.6. Interview states that did not implement Smart Choice™  
HILI Team Members

The HILI team is composed of two health and health literacy experts, three financial literacy experts, and an evaluator. Five

of the individuals are employees of UME and one is an employee of University of Delaware Extension. Of these six individuals, four are county-based field faculty and two are based on campus at College Park. There is also another team member from the University of Maryland Department of Facilities Management who has been involved in testing the curriculum with Spanish-speaking employees at the university. The team has been supported by graduate students as well.

Four individuals were interviewed. The HILI team leader was excluded because of her roles with the ECOP Health Task Force and as a member of the dissertation committee. Two other members were excluded due to the nature of their roles on the team (evaluator and non-UME staff member). The interviewees were all content specialists in health or financial literacy and county-based faculty members.

This descriptive narrative of sampling is summarized in Table 3.2.

### **Qualitative Data Collection**

#### **Case Study**

Based upon the conceptual and theoretical framework and for comparison purposes, general interview questions were developed to use across all five sub-units of the case study for comparison. An example of a question that was the same across all five sub-units concerned how innovation is perceived to occur in CES. However, because of differences in roles, some questions varied or had to be added. An example of this situation occurred

Table 3.2. Sub-units sampling descriptions and strategies

<b>Sub-Unit</b>	<b>Sampling Strategy</b>	<b>Positions</b>	<b>Region (if applicable)</b>	<b>Total Number</b>
ECOP Health Task Force Members	Expert Knowledge	Director	Northeast	4
		Associate Dean	West	
		County Director	West	
		Specialist	West	
UME Administration	Expert Knowledge	AGNR College Administrators	NA	2
		UME Administrators		3
Implementers	Expert Knowledge	Specialists	North Central	2
		Educators	North Central	5
		Educator	West	1
Non-Implementers	Random based on regions (weighted)	Educator	North Central	1
		Educators	Northeast	2
		Educators	South	2
		Educators	West	2
HILI Team	Expert Knowledge	Educator	Northeast	4
		Educator	Northeast	
		Educator	Northeast	
		Educator	Northeast	
			Total	28

with non-implementers. One of their questions was about barriers to implementation, which was a question that was not asked of implementers. However, implementers often talked about barriers they encountered in their respective situations. All interview questions were developed to help answer the overall research question and sub-questions.

The questions were embedded in an overcall interview protocol or guide that included an introduction, the purpose of the research, and Institutional Review Board (IRB) information about participation and consent. Use of a protocol serves multiple purposes related to reliability and practicality (Patton 2015, Yin 2009). Reliability is enhanced because the protocol helps to ensure that questions are not omitted and that the researcher is following the same systematic process. From a practical perspective, the protocol helps to keep the researcher focused and aware of timing. All five research protocols with questions are contained in Appendix B.

As recommended by Yin (2009), the protocol and questions were pilot-tested with two Extension Educators in Maryland who were familiar with HILI but not going to be included in the sample. The pilot test was conducted to test the questions, timing, and overall flow of the process. From the pilot testing, two issues had to be addressed. The first issue concerned the wording of a question and the second issue was the question sequence (flow). Both issues were addressed for the final instrument. The pilot test also confirmed that the interview

questions could be covered in a one-hour setting over the telephone. Pilot testing also provided the opportunity to try out recording techniques to make sure that digital audio quality would be high for transcription purposes.

To recruit research participants, an email letter was sent to potential participants telling them about the study, asking them to participate in the study, and requesting an email response if interested, along with potential dates they would be available. Once the affirmative response was received, another email was sent to thank them and confirm the date and time. If potential participants did not respond at all, another email was sent within the next seven days. Schedule conflicts did occur and accommodations were always made in the best interest of participants. Three people never replied to repeated email contacts and three declined. The non-implementer participant group proved to be the most difficult to recruit.

The research questions were open-ended and the interview approach was semi-structured to both ensure consistency while giving some degree of flexibility (Merriam 2009, Patton 2015). Interviews with UME administrators and the HILI team were conducted in-person; all other interviews were conducted by telephone because of distance. The first interview was conducted on January 8, 2015, and the final interview was conducted on April 6, 2015. A contact summary sheet with the interviewee name, date of interview, state, position, and type of contact (in-person or distance) was maintained.

Interviews were recorded and participants gave verbal consent to participate in the research. Digital recordings were uploaded to a web-based transcription service and then downloaded into NVivo 10™ for analysis. All research was approved by the University of Maryland IRB (Approval #671177-2). The IRB approval letter is contained in Appendix C.

### **Project Documents**

Documents are one of the major types of data sources used by qualitative researchers (Creswell 2009, Yin 2009). The use of the term documents encompasses multiple formats that are generally thought of, such as reports, meeting minutes, or articles. However, documents can include video, audio, tweets, blogs, and actual "physical artifacts" (Yin 2009, 102-103). For case-study research, Yin (2009) recommends that documents be used to "corroborate and augment evidence from other sources" (103).

The challenge today facing any researcher using documents as data is to discern what documents will be reviewed and analyzed. Databases, computers, and the Web have made it possible for huge volumes of material to be stored and retrieved, even for one project such as HILI. Therefore, the strategy to select documents for this study was based on the suggested inventory by Patton (2015). He provides an inventory of documentation and artifacts based on six broad categories: 1) individuals/families, 2) community, 3) Internet groups, 4) nonprofit organizations, 5) programs, and 6) government units (Patton 2015, 378). For this research, the program category was used (Patton 2015, 378).



To further help with bounding document review and analysis, a temporal frame was chosen. This frame is January 1, 2013, through December 31, 2014. This decision was based on having a pre- and post- case-study period. The months prior to September 2013 and after March 2014 were thought to be fruitful in terms of understanding the HILI team processes, the curriculum, funding, marketing, and questions that were being asked by potential implementers.

Given the volume of material within the temporal frame, further bounding was necessary. Strategic decisions had to be made on which documents to analyze based on time and effort. Therefore, I used my project and practice knowledge to make the final decisions. Table 3.3 provides the overview of the selections based on Patton’s (2015) framework and the temporal framework.

Table 3.3. Project documents for analysis

Type of Document	Documents Chosen from HILI
Client files	NA
Program funding proposals	HILI Insurance Literacy Initiative Status, June 2013
Critical incident reports	NA
Quarterly and annual reports	HILI briefing documents: September 2013 October 2013 November 2013 February 2014 May 2014 June 2014 September 2014

Type of Document	Documents Chosen from HILI
Staff meeting minutes	Team meeting notes 1.17.13 Team meeting notes 3.8.15 Team meeting notes 4.24.13
Staff meeting minutes continued	Team meeting notes 7.10.14 Team meeting notes 8.14.14 Team meeting notes 9.11.14
Websites	HILI internal website for certified Educators
Program implementation documents	Educator Toolkit: Case Studies Smart Choice© Curriculum September 2014 Refresh Webinar College of Agriculture & Natural Resources Convocation Presentation A Brief Look at Smart Choice™ Health Insurance
Evaluation Reports	Multi-State Report 2013-2014
Participants' outputs (projects done)	Scholarship inventory December 2014

Project documents were retrieved from the HILI electronic document archival site and coded for content analysis, including webinars. To get started, the same basic coding framework and analysis steps were used for the documents as with the transcripts.

### **Data Analysis**

Given the need to construct meaning and generate theory, the data analysis method used for transcript and document analyses was grounded theory using a systematic design (Strauss and Corbin 1998). This type of grounded theory was based on that initially developed by Glaser and Strauss (1967). However, a

philosophical break about grounded-theory procedures occurred between the two (Creswell 2007). Strauss and Corbin (1998) take toward a more positivist approach than others, such as Charmaz (2006), who are situated in the constructivist and interpretivist paradigms. Regardless, as Charmaz (2006) says:

“We may have different standpoints and conceptual agendas yet we all begin with inductive logic, subject our data to rigorous comparative analysis, aim to develop theoretical analyses, and value grounded theory studies for informing policy and practice” (14).

Patton (2015) agrees with other noted methodologists that grounded theory is the most widely used qualitative methodology today because it “comfortably incorporates and applies quantitative concepts like validity, reliability, causality, and generalizability” (109) while allowing for flexibility and adaptability. It relies on the interplay of the researcher and the data, respects the words and situations of participants, moves between induction and deduction, and helps to build theory.

Prior to the first phase of open-coding data analysis, a minimal coding schema was created in NVivo™ from which to start. This schema was developed from the conceptual framework and followed the flow of the research questions. See Figure 3.7 for this outline. To the extent possible, interviews were scheduled according to the sub-units, with the UME administrative interviews taking place first, followed by ECOP, the HILI team, and then implementers and non-implementers. Transcripts were

uploaded immediately following interviews and transcripts were then read in paper format (as a researcher preference) before moving on to the coding.

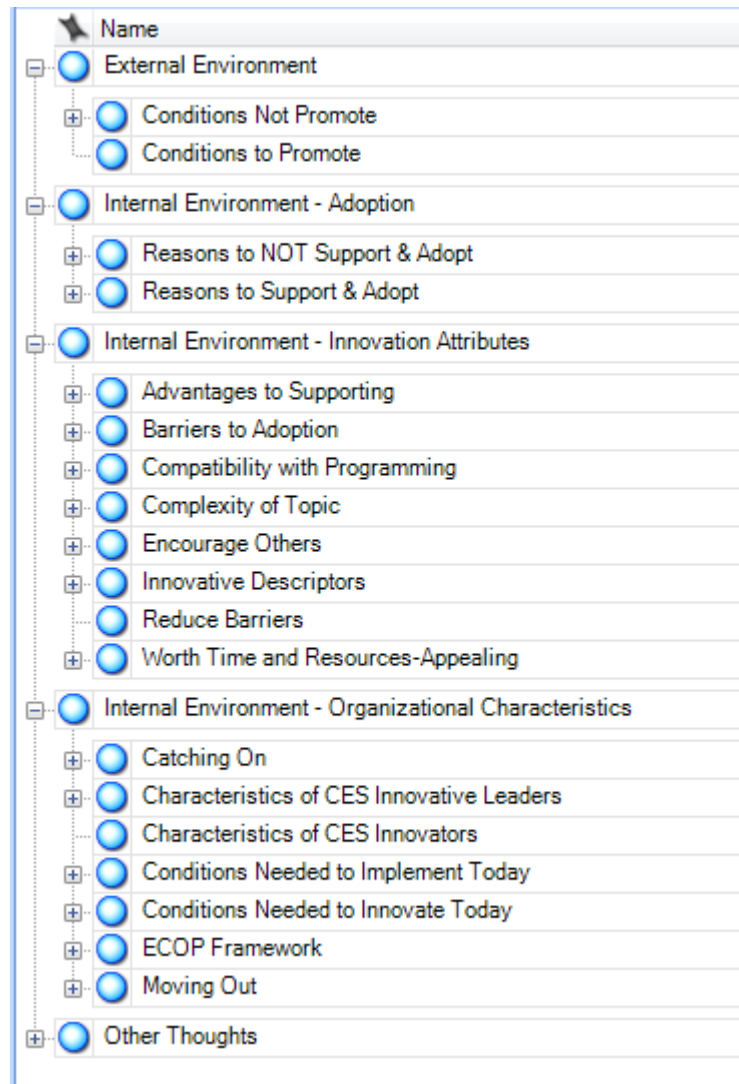


Figure 3.7. Initial coding schema

In open coding, the goal is to identify concepts, which are defined by Strauss and Corbin (1998) as “an abstract representation of an event, object, or action/interaction” (103) that can be classified according to some characteristic. The critical part of this process was to examine and “open up” the text (Strauss & Corbin, 1998, 113). After open coding was

complete, axial coding was the next step. In this process, the concepts in open coding were linked to discover patterns and relationships. Open and axial coding involve both induction and deduction as the researcher reflexively examines data, establishes relationships, and creates a conceptual map (Strauss and Corbin 1998, Urquhart 2013). Selective coding, the third step, was then undertaken to begin theory formulation. Finally, an explanatory framework and conceptual map were constructed about the experiences and processes of those involved in HILI. Table 3.4 provides the detailed steps in the total data analysis processes.

Table 3.4. Data analysis steps

Stages:	Steps:
Stage 1A: Interview Open Coding	<ul style="list-style-type: none"> <li>- Read all interview transcripts and establish familiarity with texts</li> <li>- Import transcripts into NVivo</li> <li>- Re-read the texts in NVivo and identify first level of categories</li> <li>- Produce memos to document my analysis and interpretations of interview texts</li> <li>- Create the initial codebook</li> <li>- Re-read the texts in NVivo</li> <li>- Identify subcategories (properties)</li> <li>- Modify codebook</li> <li>- Produce memos to document my analysis and interpretations and to begin theory development</li> <li>- Continue to review the literature as needed</li> <li>- Debrief with peer researcher on coding schema Select and read selected development team minutes, reports, and webinar materials to establish familiarity</li> </ul>

Stages:	Steps:
	<ul style="list-style-type: none"> <li>- Re-read the texts and code material using existing interview codes and adding new codes if necessary</li> <li>- Compare interview categories and subcategories with text categories and subcategories</li> <li>- Produce memos to document my analysis, interpretations, and comparisons</li> <li>- Continue to review the literature as needed</li> </ul>
Stage 2: Axial Coding	<ul style="list-style-type: none"> <li>- Identify properties of categories</li> <li>- Differentiate between conditions, action/interactions, and consequences</li> <li>- Establish linkages and relationships between categories and subcategories</li> <li>- Explain linkages and relationships between categories and subcategories</li> <li>- Conduct focus group with HILI development team to further explore the linkages and relationships that I have created</li> <li>- Continue to review the literature as needed</li> <li>- Member check with HILI team</li> </ul>
Stage 3: Selective Coding	<ul style="list-style-type: none"> <li>- Review and sort through memos</li> <li>- Review axial coding schema</li> <li>- Produce a diagram to capture the story line and connections and linkages</li> <li>- Continue to review the literature as needed.</li> <li>- Debrief with peer researcher</li> </ul>
Stage 4: Explanatory Framework	<ul style="list-style-type: none"> <li>- Produce a final diagram that visually represents the theory</li> <li>- Produce a story line of the theory in narrative format</li> <li>- Present story line to participants</li> </ul>

## **Quantitative Approach**

### **Secondary Data Collection**

The quantitative phase of the research, informed by the first, is a collection of secondary data about the states' external environments (one of the conceptual framework domains). Quantitative data were collected to help understand the external environment that was in place during 2013-2014 when the HILI Smart Choice™ program was implemented. For this study, the external environment is made up of two sub-domains: state characteristics and state political-policy environments (including decisions about the ACA). State characteristics were chosen as a base to include: geographical region of the land-grant, the rural/urban population make-up, and the numbers of people with and without health insurance.

The state political-policy environments were included because of the known controversy surrounding the ACA prior to the study and findings from the qualitative phase that indicated hostile political environments had an impact on whether or not to implement Smart Choice™. State characteristics included political ideology, challenging or supporting ACA in the Supreme Court, Medicaid expansion, and party control in all three government branches. The two secondary sub-domains with the type of data and data sources are contained in Table 3.5.

### **Secondary Data Analysis**

Two major types of secondary data analyses were completed: 1) narrative descriptive, and 2) relationship testing. The

Table 3.5. External quantitative data and sources

Domain: External Environment		
Sub-Domain	Data	Source
State Characteristics	- Land-grant university	- USDA-NIFA
	- Land-grant type	- USDA-NIFA
	- Extension region	- USDA-NIFA
	- Total population (2010)	- U.S. Census
	o Urban population (2010)	
	o Rural population (2010)	
	- Population with health insurance	- U.S. Census
- Population without health insurance		
	- Federal Share of State Revenues FY 2013	- Pew Charitable Trusts
State Political-Policy Environment	- Political Ideology (2013 Democrat or Republican leaning)	- Gallup Poll
	- Challenged/Support ACA	- Kaiser Family Foundation
	- Medicaid Expansion (through 2015)	
	- Legislative control by party (2014)	- National Conference of State Legislators
	- Governor control by party (2014)	
	- State control by party (2014)	

narrative descriptive analysis of the states used the sub-domain of state characteristics and was examined by three categories: 1) those states where Educators were trained in and/or delivered the Smart Choice™ workshops, 2) those states where Educators were trained in but did not deliver the workshops, and 3) those states that did not participate at all. The descriptive analysis was also sorted by geographical region and a comparison table was created.



As further exploration, the secondary political-policy environment data were analyzed to test for relationships among those states who had certified Smart Choice™ Educators and those that did not. The variables used for this relationship testing were categorical; therefore, the Chi-square test for independence, with Yates Continuity Correction, was chosen for the analysis. The specific correlation test Phi Coefficient was used based on recommendations in the research methods statistical literature (Newton and Rudestam 1999, Pallant 2013, Salkind 2011, Warner 2013).

The Chi-square test used a 2x2 table. States with certified Educator who implemented Smart Choice™ workshops and those states with certified Educators who did not implement workshops were collapsed into one category because of the small number of cases. Without doing this, the minimum expected cell frequency of chi-square would have been violated (Pallant 2013). Dummy variables were created for:

- 1) states who had trained Smart Choice™ certified Educators and those that did not;
- 2) state voter political ideology of either Democrat or Republican;
- 3) states that challenged or supported the ACA;
- 4) states that did or did not expand Medicaid; and,
- 5) states overall control by either Republicans or Democrats.

The categorical variable of land-grant type was not used for testing because there were not any 1890 institutions involved in Smart Choice™. In addition, the categorical variable of majority urban or rural population was not used because almost all states are majority urban.

### **Reliability and Validity**

A thorough understanding of reliability and validity, as applied to qualitative studies was undertaken and appropriate steps used to make the study both reliable and valid. In qualitative research, reliability concerns consistency in approach and procedures such that another researcher could duplicate the study (Creswell 2009, Merriam 2009, Yin 2009). However, from an interpretivist paradigm, this does not necessarily imply that the results from a duplicated study would be the same because human beings and their contexts change (Merriam 2009, 220).

Miles and Huberman (1994) believe that qualitative research reliability and validity "ride largely on the skills of the researcher" (38). Skills are needed to understand the phenomenon that is being studied, organize and keep records, engage in multi-disciplinary thinking and concept mapping, and employ "doggedness" (38) in the pursuit of data and meaning. Patton (2015) calls this "credibility of the inquirer" (653). Creswell (2009) also points out that reliability is the result of a quality researcher approach through documentation, case study

protocol, cross-checking, transcript accuracy, code stability, and detailed documentation (190).

Reliability in qualitative research is enhanced through the use of triangulation of data sources, investigators, methods, and theories, according to Patton (2015, 316). Triangulation of data, as in this study, occurs with the use of both primary interview data and secondary external environment data. In addition, as with this study, triangulation occurs by purposive sampling. Yin (2009) says that through the use of triangulation, "the potential problems of construct validity also can be addressed because the multiple sources of evidence essentially provide multiple measures of the same phenomenon" (116-117).

External validity in qualitative research concerns "whether the findings are accurate from the standpoint of the researcher, the participant, or the readers of an account" (Creswell 2009, 191). Techniques to check external validity include triangulation, member-check, rich narrative description, peer debriefings, and use of theory (Creswell 2009, 190), Yin (2009) recommends the use of a theoretical framework for a single case study to ensure external validity (41). Merriam (2009) recommends the use of "rich, thick description" (227) that allows others to decide if the study relates to their situation and the use of "maximum variation in the sample" (227).

Internal validity, according to Yin (2009), is a concern for explanatory case studies rather than for exploratory case studies because a direct causal chain is not being developed in

the explanatory mode (42). However, Yin (2009) says that construct validity is critical to case studies and it can be addressed through multiple sources of evidence, a solid and well-constructed chain of evidence, and through review of findings by key informants (42).

Because this research uses grounded theory as a data-analysis method, some important notes are necessary. There are grounded-theory theorists and practitioners, as well as other qualitative researchers, who would argue that even the use of the terms validity and reliability are from a positivist, empirical approach where objectivity is part of the paradigm (Urquhart 2013). However, Urquhart (2013), a grounded method theorist, recommends that a chain of evidence be used to show how coding developed and that the notion of triangulation can be replaced with the notion of corroboration (62).

Given this discussion, Table 3.6, modified from Yin (2009), synthesizes how reliability and validity have been addressed in this research study.

Table 3.6. Strategies to ensure reliability and validity

Tests	Strategy
Internal Validity	<ul style="list-style-type: none"> <li>- Multiple sources of evidence (triangulation): multiple sampling populations, use of qualitative and quantitative data</li> <li>- Chain of evidence: case study protocol, transcript database, codebook, contact summary sheet, sampling summary sheet,</li> <li>- Key informant reviews: peer debriefings, member checks</li> </ul>

Tests	Strategy
External Validity	<ul style="list-style-type: none"> <li>- Use of DOI theoretical framework</li> <li>- Maximum sampling variability (five strata used)</li> </ul>
Reliability	<ul style="list-style-type: none"> <li>- Chain of evidence: case study protocol, transcript database, codebook, contact summary sheet, sampling summary sheet</li> <li>- Transcript accuracy: audio recordings, professional transcription, transcript checks</li> <li>- Researcher skills and accuracy: protocol development, question writing, use of pilot test, reflexivity</li> <li>- Internal Memos</li> </ul>

### **Strengths and Limitations of Methodology**

All research designs have both strengths and limitations. It is the task of the researcher to choose the best methods for the research question at hand. Through attending to the issues of reliability and validity and by using a mixed-method approach, I sought to increase strengths and reduce limitations as much as possible.

#### Strengths

Qualitative research allows for in-depth investigation of a phenomenon. Because CES is a complex organization and system, a qualitative approach provides the opportunity to explore people's decision-making processes, motivations, and approaches to CES work that may not be accessed through survey research. As Miles and Huberman (1994) point out, qualitative research provides a look into "naturally occurring, ordinary events in natural settings" (10). They further discuss that qualitative research has "local groundedness:"

... data were collected in close proximity to a specific situation, rather than through the mail or over the phone. The emphasis is on a specific case, a focused and bounded phenomenon embedded in its context. The influences of the local context are not stripped away, but are taken into account. The possibility for understanding latent, underlying, or non-obvious issues is strong" (Miles and Huberman 1994, 10)

The research procedures used in this study were systematic and based on the latest literature on mixed-methods research using an exploratory approach. Therefore, the research can be replicated and the theoretical propositions added to and tested.

#### Limitations

This research was based on a single-case study in a particular organization and that context may not apply in other organizations or other situations. In addition, while CES is a department within a federal agency, all LGUs are organized and administered differently. The phenomenon studied is within the context of a complex organizational system. These issues make generalizations impossible.

Any kind of data analysis is open to error. As an employee of CES and the HILI project evaluator, I could have introduced bias into the study through the case study protocol, the questions, or during the interviews. It is possible that interviewees chose to give answers based on what they believed I would like to hear. Bias could also have been introduced during

coding procedures because of my knowledge of the organization and the project. It is also possible that other quantitative variables were excluded that could help explain the phenomenon.

### **Summary**

The research design of this study was carefully constructed to 1) build on Rogers' (2003) DOI framework, 2) begin the development of a DOI non-agricultural innovation theory for CES, and 3) create a theoretical framework that would lead to further qualitative and quantitative testing. With this knowledge, the system is better prepared to mobilize and provide education on nation-wide public-policy issues. The research methods were selected based on recommendations of expert researchers and carried out systematically.

## **CHAPTER FOUR: RESULTS**

### **Introduction**

The focus in this chapter is to present both the qualitative and quantitative findings that address the primary research question: What are the necessary internal and external conditions for a non-agricultural innovation to occur and be adopted and implemented in the national Cooperative Extension Service system? This question was explored through two dimensions: attributes of an innovation and factors present in decisions to adopt and implement an innovation in an organization. In addition, the research question was explored by using selected quantitative data about states in which Extension Educators had either implemented or not implemented Smart Choice™.

Because the methodology used was sequential exploratory (qualitative phase followed by a quantitative phase), qualitative results will be presented first, followed by the quantitative results. While the outline of specific analysis steps in the methodology are contained in the previous chapter, an overview of how the steps were carried out to ensure rigor and the ability to replicate will be discussed and illustrative examples presented from NVivo™ and from Excel™.

### **Research Participants**

Demographic data were not collected from interviewees for two reasons:



- 1) Anonymity could be compromised because it would not be difficult to take the demographic data and identify research participants given the small number of interviewees.
- 2) Typical demographic data of race, ethnicity, sex, and education level were not necessary to answer the research questions given that the research was about CES organizations and innovations within those organizations. The quantitative data contain basic demographic data about the states.

In addition, the purpose of the research was not to compare participants within the sub-units of the sample. Rather, the participant strata were selected to explore and build a comprehensive theory about an organizational system.

#### **Qualitative Coding Methods**

Qualitative data were obtained through 28 interviews that were conducted with five separate groups: ECOP, Smart Choice™ Extension Educators who implemented workshops in their respective states (implementers), Smart Choice™ Extension Educators who did not implement workshops (non-implementers), UME administrators, and the HILI team. The average interview lasted 35 minutes. In total, 930 minutes of interviews were conducted. The other source of qualitative data was content analysis of project documents. The same codebook used for interview transcripts was used for project documents.

## Open Coding

Open coding is “the analytic process through which concepts are identified and their properties and dimensions are discovered in data” (Strauss and Corbin 1998). The purpose of open or initial coding is to identify concepts, which are defined as a “labeled phenomena” that is “an abstract representation of an event, object, or action/interaction that a researcher identifies as being significant in the data” (Strauss and Corbin 1998, 103). The initial codebook is contained in the previous chapter in Figure 3.7. For open coding, interview transcripts were put into the appropriate group folder and then each interview was coded within the themes of the conceptual framework and the associated interview questions as shown in Figure 4.1. All interviews within a group were coded before moving to the next group in order to establish understanding of one group before moving on.

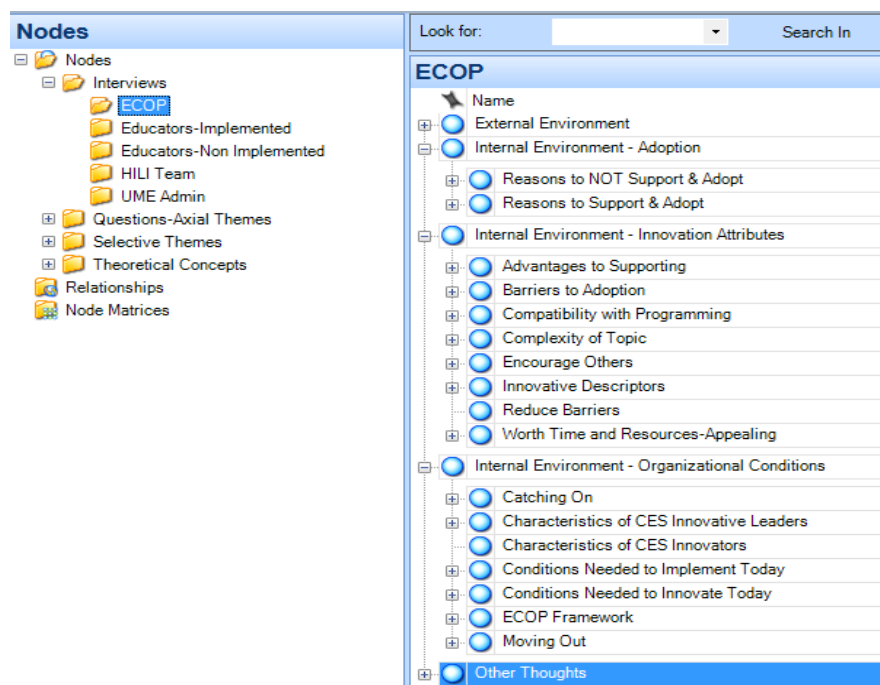


Figure 4.1. Initial codebook in NVivo™

Transcripts and project documents were printed and read on paper twice before open coding started in NVivo™. Whenever possible, code names were assigned based on the word choice of the interviewees and content words. One interview per each of the five groups, with coding, was given to a peer researcher to check for coding consistency. Memos were also used for reflecting on the material as it was coded.

Open coding produced 912 codes. However, it is important to note that overlap in codes did occur; therefore, there are not 912 completely distinct codes. The breakdown within each interview category is shown in Table 4.1. All open codes are stored in NVivo™ and an Excel™ spreadsheet.

Table 4.1. Open codes

Interview Group	Number of Open Codes
Extension Educators-Implementers	269
HILI Team Members	228
Extension Educators-Non-Implementers	149
UME Administrators	142
ECOP	124

For example purposes, Table 4.2 shows the open codes from all ECOP interviewees in response to the question about what conditions are needed in CES in order to innovate exported into an Excel spreadsheet.

Table 4.2. Open codes from ECOP interviews

Internal Environment - Organizational Characteristics\Conditions Needed to Innovate Today\Change & Evolve
Internal Environment - Organizational Characteristics\Conditions Needed to Innovate Today\Technology
Internal Environment - Organizational Characteristics\Conditions Needed to Innovate Today\Funding
Internal Environment - Organizational Characteristics\Conditions Needed to Innovate Today\National Concern
Internal Environment - Organizational Characteristics\Conditions Needed to Innovate Today\Research
Internal Environment - Organizational Characteristics\Conditions Needed to Innovate Today\Leadership
Internal Environment - Organizational Characteristics\Conditions Needed to Innovate Today\Partnerships
Internal Environment - Organizational Characteristics\Conditions Needed to Innovate Today\Administrative Support
Internal Environment - Organizational Characteristics\Conditions Needed to Innovate Today\Failure Acceptance
Internal Environment - Organizational Characteristics\Conditions Needed to Innovate Today\Pilot Testing & Evaluation
Internal Environment - Organizational Characteristics\Conditions Needed to Innovate Today\Community Engagement
Internal Environment - Organizational Characteristics\Conditions Needed to Innovate Today\Data-Driven Decisions
Internal Environment - Organizational Characteristics\Conditions Needed to Implement Today\New Employees
Internal Environment - Organizational Characteristics\Conditions Needed to Implement Today\Technology
Internal Environment - Organizational Characteristics\Conditions Needed to Implement Today\Funding
Internal Environment - Organizational Characteristics\Conditions Needed to Implement Today\Priority Setting
Internal Environment - Organizational Characteristics\Conditions Needed to Implement Today\Time
Internal Environment - Organizational Characteristics\Conditions Needed to Implement Today\Creative Energy
Internal Environment - Organizational Characteristics\Conditions Needed to Implement Today\Letting Go

**Axial Coding**

Axial coding is "the process of relating categories to their subcategories, termed 'axial' because coding occurs around the axis of a category, linking categories at the level of properties and dimensions" (Strauss and Corbin 1998, 123). There were six major steps involved in axial coding: 1) open codes were collapsed to 223 axial codes in NVivo™ when the interviews were combined; 2) axial codes were sorted in a matrix display in Excel™ and prioritized by the number of sub-units in which the codes appeared; 3) tree graphs were produced in NVivo™ from the original axial codes to begin to develop categories; 4) cluster analyses were produced in NVivo™ to help develop categories and complement the tree graphs; 5) the matrices, tree graphs, and cluster analyses were compared and analyzed to create final categories; and 6) category definitions were created based on all analyses.

Axial coding was done in NVivo™ and in Excel™, and responses from all interviewees were combined to begin the development of categories. The original codebook structure was used. Overlapping, duplicative categories from the open coding were combined, reducing the 912 open codes to 223 axial codes.

Checklist matrices were prepared for internal CES environment factors that promote the decision to adopt, attributes of the HILI innovation that promoted its adoption, and attributes of the HILI innovation that did not promote its adoption. A checklist matrix "is a format for analyzing field

data on a major variable or general domain of interest” and “includes several components of a single, coherent variable, though it does not necessarily order the components” (Miles and Huberman 1994, 105). Checklist matrices were used to visually display the basic axial categories to determine which sub-units the categories were appearing in. To help visually process the data, if a code appeared in four-to-five of the sub-units, it was given a blue color; if it appeared in three of the sub-units, it was given a yellow code. Any axial codes that appeared in two or less sub-units was omitted from this first visual display of the data. Table 4.3 contains the axial codes for attributes of the HILI innovation that promoted adoption that appeared in three or more of the sub-units.

Table 4.3. Attributes of Smart Choice™ that promote adoption

<b>Axial Codes:</b>	<b>Implementers</b>	<b>Non-Implementers</b>	<b>UME Administration</b>	<b>Extension Committee on Policy</b>	<b>Health Insurance Literacy Initiative Team</b>
Audience	X	X			X
Builds Overall Capacity	X		X		X
Clientele Needs	X	X	X	X	X
Draws on What We Do Best	X			X	X
Evidence-Based	X		X	X	X

<b>Axial Codes:</b>	<b>Implementers</b>	<b>Non-Implementers</b>	<b>UME Administration</b>	<b>Extension Committee on Policy</b>	<b>Health Insurance Literacy Initiative Team</b>
Expertise	X	X	X	X	X
Funding	X		X		X
Hot Topic	X	X			X
Important & Relevant	X			X	X
Investment in Programs & People	X	X	X	X	X
Leadership	X		X	X	X
Mission Fit	X		X		X
Partnerships	X		X	X	
Product	X	X		X	
Professional Development	X	X	X		
Proven Results	X			X	X
Quality	X			X	X
Relevancy	X	X	X		X
Useable & Doable	X	X	X		X
Working Together		X	X		X

Table 4.4 contains the axial codes for HILI innovation attributes that did not promote adoption that appeared in three or more of the sub-units.

Table 4.4. Attributes of Smart Choice™ that did not promote adoption

<b>Axial Codes:</b>	<b>Implementers</b>	<b>Non- Implementers</b>	<b>UME Administration</b>	<b>Extension Committee on Policy</b>	<b>Health Insurance Literacy Initiative Team</b>
External Environment	X		X	X	X
Topic Individual v. Organization	X	X	X	X	
New or No Audiences	X	X		X	
Lack of Capacity		X	X	X	

Table 4.5 contains the axial codes for internal conditions that promote the decision to adopt and implement that appeared in three or more of the sub-units.

Table 4.5. Internal organization conditions that promote adoption

<b>Axial Codes</b>	<b>Implementers</b>	<b>Non- Implementers</b>	<b>UME Administration</b>	<b>Extension Committee on Policy</b>	<b>Health Insurance Literacy Initiative Team</b>
Administrative Buy-in	X		X	X	X
Administrative Flexibility	X		X	X	X
Big Picture	X	X	X		X



<b>Axial Codes</b>	<b>Implementers</b>	<b>Non-Implementers</b>	<b>UME Administration</b>	<b>Extension Committee on Policy</b>	<b>Health Insurance Literacy Initiative Team</b>
Charismatic Leader	X	X			X
Clientele Need	X	X	X	X	X
Communicate		X		X	X
Conferences & Prof. Assoc.	X	X	X		X
Cutting Edge	X		X		X
Expertise	X	X	X	X	X
Failure					
Acceptance	X		X	X	
Freedom	X	X	X	X	X
Funding	X	X	X	X	X
Goals	X	X		X	X
	X	X	X	X	X
Individual Motivations	X	X	X	X	X
Journals-Scholarship		X	X		X
Leadership Support	X	X	X	X	X
Marketing-Visibility	X	X	X		X
National Concern		X	X	X	
Open	X	X	X	X	X
Partnerships	X	X	X	X	X

<b>Axial Codes</b>	<b>Implementers</b>	<b>Non-Implementers</b>	<b>UME Administration</b>	<b>Extension Committee on Policy</b>	<b>Health Insurance Literacy Initiative Team</b>
People Connections People	X	X	X	X	X
Leadership Skills	X	X	X		X
Product	X	X	X		
Program Package to Adopt	X	X		X	X
Project Champion	X	X	X	X	X
Proven Results		X		X	X
Relevancy/Up-to-Date	X	X			X
Strategic Leadership	X	X	X	X	X
Support & Encouragement	X	X		X	X
System Efficiency/Expansion	X	X	X	X	X
Teamwork	X	X	X		X
Technology	X	X	X	X	
Vision	X	X	X	X	X

**Selective Coding**

Strauss and Corbin (1998) define selective coding as "the process of integrating and refining the theory" (p. 143). They also define it as the point where saturation has occurred. At this point, central categories are developed, defined, and linked. These central categories provide a framework for a storyline or findings to be developed. The initial storyline (findings) should be reviewed for "consistency and logic" (Strauss and Corbin 1998, 156). A recommended way to do this is to go back to respondents to check if they believe the findings are a "reasonable explanation of what is going on even if not every detail quite fits their cases" (Strauss and Corbin 1998, 159). Therefore, the findings were presented to the HILI team to test for consistency and logic. The HILI team was chosen because these members, across all of the strata, have the most knowledge of the product, the processes involved in the product development, the trainings, the trainees, and organizational conditions under which the HILI innovation occurred. This feedback was gathered in a structured discussion group.

**Qualitative Findings**

The interview analysis will be discussed in the following sections: internal CES organization conditions that promote innovation; internal organization leadership that promotes innovation; internal conditions that do not promote innovation or innovation implementation; attributes of innovations that promote and do not promote adoption; internal CES organization conditions

that promote innovation implementation; and, internal conditions that promote diffusion of innovations. Each of the major factors will be presented and described, maintaining as much of the original respondent language as possible. Quotes will also be used to demonstrate meaning. The results of the content analysis will then be presented.

### **Internal Organization Conditions that Promote Innovation**

#### **Clientele Needs**

For CES, a major driver of innovation is an unmet need of clientele, which is determined by the community and not the Educator. Even if Educators believe there is a need but it is not one felt by the community, "it's not going anywhere." An example given of a recent community need that was addressed by Extension Educators in several states was the housing foreclosure and eviction crisis. Extension Educators cautioned that it is important to be "really clear" about what the community needs are and that happens by being "tapped into the community through some aspect." Having Extension offices based in counties was one example given of how Educators can understand community needs. Another way to be aware of community needs is through a needs assessment. However, as one Educator pointed out, needs assessment may only represent the "strongest voices" of people already served by CES. Therefore, CES needs to engage in "some different ways to figure out what it is that we should, in fact, do."

**Community Engagement**

In addition to understanding community needs, stakeholders in the community should be engaged in the process to develop an innovative solution or approach to the need. Respondents said that Educators must have the connections and relationships in communities to test out ideas, to reach out to audiences, and to help launch something new. In other words, there has to be a good community support system to be the "springboard" to connect with people. An example of both testing out whether something was actually a community issue and then engaging the community was given by one interviewee and reads somewhat as a script: "So my strategy in making things happen is to go into a community and I'll talk to somebody I know and I'll go, 'Okay, here's my idea. What do you think? Do you think this is a need in the community?' If they say, 'Yeah I do,' I'm like, 'Okay, who needs to be at the table to make that happen?'" Educators said that by using this type of approach, community members become part of their work team to help spread the word, get people to programs, and help determine if the innovation was successful or not.

Community engagement was also discussed in terms of how it might have to be approached differently in the future. For example, one interviewee discussed how technology would have to be used more because there was not enough funding to always do face-to-face engagement. In addition, technology could help engage community members and give voice to those with special needs, such as the hearing impaired, that have not been

traditionally engaged. Another person said we tend to engage those community members who we have traditionally engaged and "served for many, many years and obviously when we ask them what we should do in the future, they basically tell us more of the same."

### **Culture of Innovation**

According to the dictionary (Merriam-Webster 2015), one definition of culture is "a way of thinking, behaving, or working that exists in a place or organization (such as a business)." For the purposes of this study, that definition is used to discuss findings in this category. There were multiple dimensions that respondents discussed that fall into how CES thinks or behaves as an organization. These have been grouped into the categories of: acceptance of failure; freedom, flexibility, fun, and creativity; open to change; motivated individuals; and administrative support.

Interviewees said that in order to be innovative, there has to be acceptance of failure in the organization because not every innovation is going to be successful. A fear of failure will prevent people from trying new ideas or taking risks. Failure should be viewed as an opportunity to learn from mistakes and build for the future.

Acceptance of failure was particularly associated with CES administration. If administrators were seen as open to failure, the environment was described as supportive to innovation. On the other hand, respondents pointed out that failure is sometimes

penalized in the performance review process. One person commented that the fear of failure could be mitigated in the performance review process by a focus on documenting the effort that was put into the innovation and the lessons learned from the experience. Another suggestion was to actually include a performance goal to try something new and innovative, "allowing for failure" and "celebrating the fact that you tried something new."

Another aspect of an innovative culture is grouped as freedom, flexibility, fun, and creativity. Running throughout these concepts was the notion of time. Freedom and flexibility with the time to "dabble" or "explore what's possible" in some area of interest were seen as important to innovation. This was also expressed as the freedom and flexibility to change program focus and for administrators to take a "hands-off" approach and "give the Educators some room to run without micromanaging them." Respondents also discussed the ability to let go of something as a dimension of freedom and flexibility. As one interviewee explained, "You have to do less of something to do more of something else." The tendency in CES, as described by interviews, is to keep adding "one more thing" without stopping something else. Letting go of some things then allows time for fun and play and for creative energy to come forth.

Being open to change was cited as important to innovation; however, interviewees expressed their opinion that CES actually resists change. Extension was described as "very old school," being afraid of change, and needing "to evolve with the times."

Interviewees said that CES gets "stuck in the 'we've never done it that way before'" mentality but needs to be able to adapt to changing situations and environments. One interviewee expressed the opinion that it takes a crisis for CES to change; otherwise, the organization stays with "what's comfortable." Not being able to change was also linked to the issue of not letting go of things. Interviewees pointed out that CES people talk about letting go but cannot seem to do it. This inability to let go, one interviewee noted, could be because of the fear of upsetting some stakeholder groups.

Motivated individuals who are not afraid to take risks are also a part of a CES culture of innovation. These individuals were described as "more willing to take a chance," as "early adopters," and as "not afraid to try something before they have all the knowns ... before they know exactly how things are going to turn out." They were also described as "not being afraid of technology" or trying to reach out to different audiences. Motivated individuals were seen as willing to retool their careers or invest in learning new program areas. Overall, interviewees said these motivated CES individuals engaged in innovation were not afraid of failure.

Extension Educators expressed the need for administrative encouragement and support for innovation. Administration was identified as not only direct supervisors, but program leaders, department chairs and other campus-based staff. Encouragement included the support to "step outside the box" and to tackle



something considered non-traditional, to take risks, to stop doing one thing and try something new. Administrations needs to listen to field-based faculty and have an understanding of what is going on "in the field." Support included time, trust, excitement about the work, mentoring, and help with building teams of faculty.

### **Internal Organization Leadership that Promotes Innovation**

#### **Visionary and Big Picture Thinking**

For innovation to occur and be implemented in CES, leaders need to have "clarity of vision" and be willing to push the vision "to its limits." Visionary leaders were described as the force to drive and encourage innovation and providing a broad, visionary framework in which Educators can innovate. Vision involves being able to see "what's coming next" in the external environment and then be able to adapt, change, and innovate without becoming overwhelmed. Visionary leaders engage in environmental scanning to inform their vision and use data to help inform their decisions about priorities and actions as they lead the organization forward. They are able to "look across an Extension system," identify important initiatives, and reprioritize organizational focus based on what is needed for the future. These leaders are also willing to reallocate funds to support a new focus or venture even though there may not be an immediate return on investment.

Visionary leaders were also described as "big picture thinkers" in that they have a national perspective of being part

of the larger Extension system and focus on the public good. They understand how to "make things work" in this large system. Yet, they adhere to the overall mission of Extension and keep the organization from getting "too far off track" or going "rogue."

### **Strategic and Politically Savvy**

Innovation leaders are strategic and politically savvy in that they can "navigate keeping that traditional clientele happy, but also bring in new audiences and innovations." They are able to define "the scope and nature of the work that this organization is going to do in the future" and have the skills to actually make it happen by putting "some practical wheels under it." They are able to establish criteria for judging innovative ideas and can evaluate and monitor progress. Strategic leadership also involves knowing when to let go of something in order for reprioritization to occur. This requires the ability to focus and not try to "be everything to everyone."

Strategy and political savvy are required sometimes to understand what is politically necessary for the organization. An example was given of a program that was not included in the plan of work for a particular state but was offered anyway because the current state governor wanted it available to the public. In this case, it was a strategic decision to do what the governor wanted because it helped to politically position Extension to be seen as valuable. Being strategic and politically savvy then includes being able to tell the story of how Extension helps people.

**Supportive**

Innovation leaders value and support all of the organization, including the non-agricultural components. They are good at building relationships and teams, bringing people together, and expressing genuine interest in people. This involves the use of "good people skills," such as listening, caring, encouraging, clarifying expectations, paying attention to problems, recognizing individuals' strengths, and building trust. Educators want leaders who will "go to bat" for them. These leaders are seen as charismatic and dynamic and have a great deal of energy, initiative, and drive.

Educators expressed the need for leaders to listen to what is going on in the field. They discussed that state-level administrators "need to be more in touch with the people in the field" and that leaders should show up and see "what it's all about—not just depending on a report or a little impact statement or something like that." They should be willing to get out from behind a desk or computer and ask questions. This will lead to a "better understanding of what you're doing, a better appreciation." It also leads to discovery of emerging issues and a better understanding of clientele needs.

Support was also discussed as leaders giving recognition and credit to people "who are doing innovative programming." It is important to recognize those people who are willing to step "forward and try new things." Support also involves mentoring and being an advocate for Extension Educators.

**Risk Taking**

Taking calculated risks is seen as important for Extension innovation leadership. This type of calculated risk taking allows people to explore possibilities that may "be worth it a little bit later down the road." These types of leaders "aren't stuck in the 'We've never done it that way before'" and they are also not afraid of technology or new audiences. They have courage and are not afraid of failure or being out front when taking risks. As one person explained, "They're not afraid to jump in and try to start something from the beginning."

**Internal Organization Conditions that Do Not Promote Innovation  
or Implementation****Hostile Political Environment**

While a hostile political environment is not an internal organizational condition, interviewees talked about the political nature surrounding health insurance literacy as it related to the Affordable Care Act. The ACA was described as being "politically polarizing," and the "partisan politics nationally and in the state" made people wary of becoming involved with something that was associated with health insurance. Interviewees reported that there were people who "didn't want the government actually messing at all with their health insurance."

There was a great deal of negative media, especially as problems occurred in the Marketplace, even in those states that were politically supportive of the ACA. One Educator said that it was important to wait until "all of the bugs are out of the

system." In addition, those Educators who did not implement Smart Choice™ were hesitant because of the perception that they could be viewed as "competing with insurance companies."

### **Resistance**

The notion of resistance had the multiple dimensions of tension between serving urban and rural audiences, lack of time, and existing in an academic environment. With its heritage in rural areas and agriculture, interviewees talked about the resistance today of serving urban audiences that have non-agricultural issues. One interviewee described this adherence to serving agriculture no matter what as "the politics of the status quo" and noted that a colleague had almost lost his job because he challenged a traditional agricultural-based organization in the community. Offering services in urban communities or in non-agricultural programs is sometimes seen as "diluting" CES effort. This type of resistance to serving urban audiences, however, creates tension because most people today live in urban areas. As one interviewee said, however, it is difficult to change the focus of large, complex, "big bulky institutional creatures."

While the heritage of CES in agriculture is a point of pride and the importance of food production remains critical, interviewees expressed frustration with individuals who are not "interested in going outside the boundaries" and want to stay in their comfort zone. Complacency, lack of interest, and an attitude of not doing anything more than what is necessary block innovation. In addition, given the numerous needs, Educators

cannot see the slack or time to pick up one more thing to do, especially if they do not have a "personal passion" about the topic. Working in Extension was described as attending to "whatever fire's the biggest."

The other dimension of resistance is that Extension resides in academia. Once an Extension Educator attains tenure, it is almost impossible to be "directive about what Extension needs to do." While a new issue can emerge, in tenure-based systems it is not possible to direct Educators to change focus unless they choose to do so. One interviewee described this as an attitude of "do what you want to do." Even in non-tenure systems, it can be difficult-to-impossible to have people work outside of specific job responsibilities.

Figure 4.2 provides a visual summary of the findings about CES internal conditions that are either positive or negative conditions that influence innovation. Positive conditions can lead to success (denoted by the green arrow pointing up) and negative conditions can lead to failure (denoted by the orange arrow pointing down).



<b>Positive Conditions</b>	Meets clientele needs Engages community Creatives innovation culture: Accepts failure, supports freedom, fun, flexibility & creativity, motivates individuals, supports and encourages Provides leadership: Visionary, strategic, politically savvy, supports risk taking, supports people	
<b>Negative Conditions</b>	Hostile political environment Resistance: Urban-rural audiences Change resistance, Lack of time Individuals not willing to retool	

Figure 4.2. Positive and negative organization conditions that influence innovation

### **Innovation Attributes that Promote Adoption**

#### **Meets Clientele Needs**

Interviewees expressed the opinion that a CES innovation should address something that is a “high need” “common need,” “big need,” or “widespread need” in communities. They believed that health insurance literacy was of a high need “because of all the confusion about the Affordable Care Act and all the terminology that is new and different.” Across all interviews, in a word frequency query, the word “people” occurs 730 times and the word “need” occurs 588 times. This quote is an excellent example of how these words are often used, “For me, it’s something that’s addressing a big need. So, if there’s a big need in my community, then that’s going to motivate me to learn about it and figure out how I can bring resources to people.”

While interviewees believed that an Extension innovation should address a widespread need, they also believed that an innovation should be suitable for delivery to diverse audiences. Diverse audiences were described as limited-resource families,

immigrant families, low-literacy audiences—those people who need CES help the most. Interviewees expressed their belief that CES could reach these new audiences using much of the same expertise and skills already in existence in the system.

An innovation in Extension should help clientele make decisions that help solve problems, and solutions should be “doable and practical.” For the HILI innovation, a specific example given of a way it helped people with a practical solution was saving money on insurance costs or understanding tax advantages. Another interviewee said, “And that’s what Smart Choice™ really does, is helping people learn what to look for on the summary of benefits ... figuring out with a pencil and a calculator what those out-of-pocket expenses are going to be so they can make an informed decision.” People should be able to “make an informed decision that meets their particular situation and their needs.”

An example from Smart Choice™ that was used by interviewees to talk about practicality was the workbook that helps people figure out how much health insurance they need and how much they can afford. This interviewee commented, “I love the Smart Choice workbook,” because it helps people learn how to comparison shop (just as they would for car or homeowners insurance). Another interviewee described the workbook as long but as a helpful, fabulous tool that everyone should know about. Still another interviewee said that she would encourage Extension Educators to



use the workbook themselves and to offer it as a resource to their families, friends, and neighbors.

### **Creates Relevancy**

An Extension innovation should be relevant. For this study, Extension relevancy encompasses four factors that are multi-layered: compatibility and fit with the Extension mission, importance of CES, newness, and being perceived as ahead of the curve and on the leading edge. Each of these factors will be discussed; however, it's important to note that the term relevancy was taken directly from an interviewee quote, "So it gave us another piece ... because Extension relevancy in the 21<sup>st</sup> century, it gave another piece to that." The following discussion will provide the dimensions of relevancy as used by the study participants.

To be relevant, an innovation should be compatible and fit with the Extension mission. Interviewees believe that innovations are applicable on a national basis, may occur during a major national policy shift, and may be needed at "a really contentious political time." Helping consumers make good decisions was described as mission alignment. As explained by one interviewee, "It's my understanding that at Extension, it's our job to help people continue to learn and grow and for us to provide the education that's needed to be good consumers, to improve quality of life, make a difference in people's lives, and I believe that Smart Choice™ can do that." While the topic of health insurance was different and new to CES, Educators understand that they

could draw upon their existing experiences and expertise used to teach decision making about other topic areas. Even though there was undeveloped content in the area of health insurance, Educators believed that was not an impediment to innovation.

The unbiased, non-commercial aspect of CES' mission was also discussed by multiple interviewees in regards to relevancy and compatibility. In particular, CES was seen as the party with nothing to sell to consumers—unlike an insurance company that might be doing educational workshops and then trying to sell a particular plan. In this instance with Smart Choice™, that innovation attribute was seen as especially valuable given that 30 million people across the country would be enrolling in health care plans (Kaiser Family Foundation 2012).

Another theme that surfaced regarding compatibility was that CES is a nation-wide system that can come together to develop a response to a need rather than each state trying to create its own response. An interviewee noted that there simply was not enough time for each state to try a separate approach. In addition, the system, as a whole, could come together “to show the whole nation that we can lead the nation in this important area” and that “Extension has something special to offer on this topic.”

Another dimension of relevancy was the importance of CES and particularly the discipline area of Family and Consumer Sciences. First, interviewees expressed that Smart Choice™ created the opportunity for “decision-maker awareness of

Cooperative Extension as a resource" across state agency representatives and also within the LGUs themselves. This was seen as an opportunity for CES to gain visibility and demonstrate its ability to deliver education on a topic that is important to everybody. As one interviewee said, "Everybody needs to have healthcare." Another interviewee said that CES would be seen as "working on something that was in the forefront of the news."

Second, Educators in FCS saw this as an opportunity to demonstrate the relevance of their subject matter as opposed to what is considered the traditional agriculture emphasis of CES. One interviewee said that, "They knew that they could come in here, and we could send off a sample to get germination on a wheat sample, but they never thought to come in here to talk about health insurance." Another interviewee said, "Well, for Extension, the fact that we're even delving into a health insurance area, the Family Consumer Sciences, I would have say, is the most rapidly changing area within Extension because of the needs of the family are changing very quickly."

Being new was often used in the discussions about relevancy. Newness was described in multiple ways in that the approach, audience, technology, topic, or program that had not been offered or addressed before could be considered new. Therefore, an innovation could involve the same program but the approach to teaching it might be new, such as being delivered online or a "different type of workshop." Newness can occur when a program is delivered to new audiences and "the program itself

has to be adjusted." Or, the program material could be new, such as was the case with Smart Choice™, but still capitalize on the strengths of the organization—"what we do best." While health literacy was seen as a "relatively new concept," interviewees also noted that the issue of health insurance literacy was not going to go away.

Newness was also associated with a current topic—one "that was in the media and people's minds." Through addressing current topics, relevancy for the organization was enhanced. Another dimension of newness mentioned by interviewees is the opportunity for an Educator to do something new. A new program was seen as the potential to reenergize and "do new things." This quote best exemplifies this dimension: "I get bored doing the same thing over and over again ... If I don't have a new project every couple of years, I'm in trouble." The word "exciting" or "creative" was used when Educators talked about the chance to do something new.

### **Ahead of the Curve**

Extension innovations are described as being ahead of the curve or on the leading edge. An Extension innovation allows the system to "get out front" on "hot topics." Educators spoke about the fact that there was either no or very little consumer educational material on how to make good decisions about health insurance. Therefore, there was a "window of opportunity" for CES to be "out in the front." This opportunity to "position Cooperative Extension" and be out front was a motivation to be involved with the project.

Respondents specifically discussed timing of the innovation in that CES was "prepared with content at the right time." They believed that the ACA made health insurance "one of the biggest consumer changes to consumer decision making" and "that's cutting edge to be prepared and ready to help consumers at the right time." Being prepared and ready to respond was seen as innovative: "I mean, the timing of it is innovative because it was ready to roll out at the right time."

### **Builds Capacity**

An Extension innovation builds capacity within the organization. Specifically, this factor has three dimensions: partnerships, funding, and expertise. The label for this category was also taken from an interviewee's quote: "It's not a small thing, but once you get up to speed then it builds your overall capacity to answer questions and deal with people in a variety of settings, and builds your confidence as a capable professional, as well."

Extension Educators identified multiple new or enhanced partnerships that had been established based on their work with Smart Choice™. Examples of partners included libraries, investment companies, insurance companies, hospitals and medical centers, doctor's offices, marketplace navigators, and community colleges. These partners were important for a variety of reasons, but they often provided "access to the people that we want to reach."

Educators pointed out that some organizations or entities were often focused on explaining the marketplace and the insurance options offered. Extension, on the other hand, was sought out as a partner that could fill the educational role of how to “make a smart financial decision.” In fact, one Educator remarked that Marketplace navigators and enrollment assistants expressed the wish that Marketplace enrollees “would have had this [Smart Choice™] before they came to us” because it would have made the enrollment process easier and shorter in time. Extension was able to fill a niche’ with partners that valued the education being provided.

There was a shared perception from UME administration, the HILI team, and Educators who had implemented Smart Choice™ that the work would ultimately result in additional funding for further development. One interviewee expressed that the work “would lead to potential future partnerships and potential funding because ... issues around healthcare are not going to go away.” One Extension Educator believed that having the program available helped her to receive a grant for work in her state.

Multiple respondents across all of the five sub-units expressed the opinion that teaching Smart Choice™ used existing expertise to teach a new subject matter. This short quote captures the essence of this factor: “It felt good on.” Others said this innovation was a “good fit” because of CES’ financial education and risk-management expertise, as well as skills in how to convene a group and teach classes in the community.

While Smart Choice™ built upon existing expertise, Educators acknowledged it also brought “another aspect to some of the financial/consumer education” that was being conducted. Two specific examples illustrate this. One Educator said that in retirement planning workshops taught in the future, planning for health care costs would now be included. Another Educator said that in a program about aging parents and adult children, health care costs would also be included in the material. In addition, some respondents said that by teaching Smart Choice™, it would be an opportunity for some people to refocus their work and let go of other programs.

Respondents also believed that this innovation was a program investment that would build skills in faculty through training, mentoring, and peer-based support. New Extension Educators could work closely with experienced faculty to teach the workshops and be mentored in on-the-job situations. In addition, new Educators in tenure-track positions could take advantage of scholarship opportunities, as well.

### **Ensures Quality**

Extension interviewees, especially field-based Extension Educators, have to believe that a product is of high-quality in order to want to adopt and implement. Quality is described in the dimensions of proven to be effective, credibility, and ease of implementation.

An Extension program innovation should be “evaluated and proven to be successful” among target audiences. Programs that

have proven results have been pilot tested and have evaluation results. Extension Educators want to be able to say that a program works and have evidence to back-up that statement, which means that there is a "pile of data" to demonstrate that the program intervention achieves its intended outcomes. With evidence of results, Educators feel comfortable adopting a new program. In addition, proven results include the experience of having people leave the Smart Choice™ workshop "feeling like they understand things better."

Some respondents also acknowledged that Extension was not "great at building evidence for why what we do works." Two reasons were cited for this: 1) Educators often do not document what they have done through an evaluation of some type, and 2) it is difficult to collect data on a national basis that tells a story with of widespread impact. However, the ability to build and document evidence was seen as vital to encouraging others to adopt the program and to build a strong future for CES.

Another aspect of an Extension innovation is credibility, which was talked about in two different dimensions. In one dimension, credibility means that the product is non-commercial, unbiased, and non-political, especially in "a really contentious political time," such as with the ACA. One interviewee said that Extension is recognized as "being a reliable source of information, dependable ... that go-to in the community as a safe, reliable source." The fact that Extension had nothing to sell to consumers lends to its credibility.



The second dimension of credibility is associated with the program having a theoretical and/or research base and explaining that theoretical base to Educators. For example, a specific program was mentioned that uses the theory of planned change but that is only briefly explained to Educators. By having a more in-depth understanding of the theoretical and research base of the program, Educators had confidence that the curriculum was sound and reliable. This was important to them in feeling confident about their ability to deliver a quality program. As one Educator explained, it is scary "when I have to do all the research myself and find all the answers."

Respondents who conducted Smart Choice™ workshops talked about the fact that the program was easy to adopt. They appreciated having the content, evaluation instruments, and other tools built in as part of the Smart Choice™ package. The two-hour workshop format was mentioned as an attractive attribute because that is easier to offer than a sequential series of three-to-five workshops. Educators expressed they could only do so many multiple series programs during the year, but with a two-hour workshop, "you can do them whatever night of the week you can make work ... that flexibility was valuable."

#### **Innovation Attributes that Do Not Promote Adoption**

##### **Controversial Topic**

Consistently, those Educators who did not implement Smart Choice™ workshops referenced some aspect of the hostile, politicized environment surrounding the ACA and how that impacted

their decision to not adopt. The ACA was described as coming down from the national government and being associated with a single-payer universal healthcare system. Interviewees believed that Extension in some states shied away from anything to do with the ACA because there might be negative consequences with their state funding. As described by one Educator, "Some people wouldn't touch it with a ten-foot pole." In addition, the media was featuring stories about problems with healthcare.gov and the failure of the marketplace, creating more negative impressions and anxiety about trying to teach anything about health insurance. One Educator said, "I want to make sure all the bugs are out of the system."

**Complex Topic**

Topic complexity was related to both Educators and to the general public. First, interviewees acknowledged that the complexity of the topic may have created a "big challenge" for some Educators to adopt the program. It was pointed out that even for the people involved in supporting and developing Smart Choice™, all of whom were highly educated, the topic of health insurance was difficult. Educators believed they would have to know about all the different plans being offered, insurance terms, and the Marketplace. Second, Educators pointed out that the program was too advanced for people who had never had health insurance and just wanted basic information.

**Difficult Implementation**

There were two aspects of Smart Choice™ that Educators talked about that were logistically challenging for them. Educators talked about the fact that a large amount of content had to be covered in a two-hour workshop and would have liked to simplify or change the case study, in particular. The project had a research and evaluation protocol and had Institutional Review Board (IRB) requirements that some Educators found intimidating and confusing.

**Lack of Capacity**

Lack of capacity was discussed in multiple dimensions: audiences, expertise, administrative support, and time. With regards to audiences, Educators sometimes believed they simply did not have audiences that would be interested or take the time to attend a workshop. The lack of expertise was cited as problematic. Extension Educators want to feel comfortable enough with a topic area that they can answer questions. In addition, there may not be an Extension Specialist or anyone else in their state who had been trained in Smart Choice™ and the Educators would have "to go it alone." As one Educator said, "I am unwilling anymore at this point in my career to go in front of an audience with less information about what I'm talking about that maybe some of the people in the audience have."

Administrative support was considered important in making the decision on whether or not to get involved with Smart Choice™. One Educator was sent to the training but upon return to

the home state was told that the organization was changing its program focus. Therefore, there was no administrative support to implement the program. Another capacity issue for Educators was lack of time to add a new program. They said that time is “at a premium” as staff cuts have occurred and other duties have been added to what they were already doing.

In the case of Smart Choice™ as an innovation, there were positive or negative attributes that either encouraged or discouraged adoption. Another way to conceptualize this is that there were attributes of the innovation that were either positive or negative factors in its adoption. To summarize the data from this section, Figure 4.3 shows the positive innovation attributes that can contribute to innovation adoption and the negative attributes that can contribute to rejection.

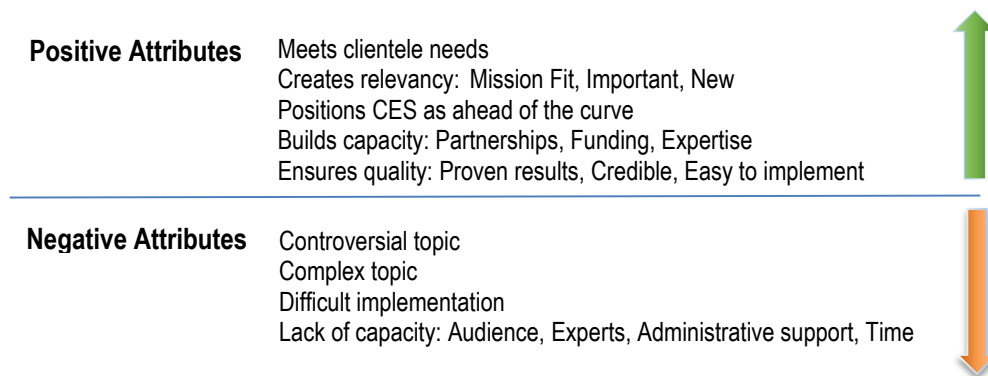


Figure 4.3. Positive and negative innovation attributes

**Internal Organization Conditions that Promote Implementation**

**Funding**

Implementing an innovation first requires funding and that is frequently an issue. Interviewees discussed the need for seed money to get a program started and then funds to sustain a

program over time. When there is funding for something new, it seems to catch on more quickly because resources do not have to be reallocated or reprioritized. Travel expenses are especially important to be able to cover in a time of limited resources. Educators noted that when there is no funding to help support a new program, people may use that as an excuse to not get involved.

One way to obtain funding is through grants, but field-based Extension Educators noted that it takes time to find and obtain grants. In addition, grant administration takes time. Field-based Educators believe that obtaining and administering grants might be better done at the state or national levels. Educators acknowledged that if grant funds are available, people are more likely to try out a new program.

Despite the fact that funding may be an issue, it was not always seen as a barrier to implementing an innovation. Interviewees suggested that county demonstration funds and/or program leader funds can help get a program innovation started. It was acknowledged that often "you don't need much money." As one interviewee stated, "When you find people who see the need or have the passion, then things come together ... the money is not as big of a challenge."

### **Partnerships**

To implement an innovation, partnerships were described as relationships, networks, connections, and collaborations. Interviewees discussed bringing together people across multiple

disciplines to network and make connections and form teams to implement innovations. Collaborations were also seen as information sharing about what is working well and techniques and strategies "for learning and teaching." Good partnerships were described as helping to implement innovations "across the system" and to helping get people on board as early adopters. Senior people who have large networks were seen as conduits who could make something "take off." In addition, the role of technology was perceived as helping to develop partnerships because people can easily do a Google search and find connections.

#### **Administrative Support**

Interviewees expressed the importance of administrative support to implement innovations. Support is more than "lip service." It is understanding and being in touch with field-faculty. Extension administrators should be advocates of innovation, enthusiastically supporting the work of innovation. They have the ability to allocate funds, add expectations to programs of work, and shift priorities. Administrators can make the decisions to let some things go in order for Educators to work on a new project. They can make the decision to have somebody become the national expert. An example given was that an administrator could say, "You know what? This is what I want you to do. I want you to be the national, well known person on logic models."

**Expertise**

To implement an innovation, expertise is needed and that is expressed in three dimensions: experts (project champions), Extension Specialists, and research. One facet of expertise is the individual—the expert in a particular subject who is well-known and recognized in that knowledge area and has a national reputation. These experts are seen as driven and focused and can create excitement around the subject. Often, these individuals are Extension Specialists who “assemble the knowledge and then educate the Extension Educators.” They are also the people “who are willing to research the topic and provide the motivation to get other Extension professionals on board.” Extension Educators look to experts (Extension Specialists) for curriculum development. Unfortunately, interviewees explained, Extension Specialist functions have been cut and those who are left must attend to the needs in departments to achieve promotion and tenure.

Research is necessary to build expertise and some interviewees acknowledged that “research can’t always keep up” with solving current issues. This creates a type of tension for field-based Educators. On one hand, they believe there should be “some ability to start creating the program ... while the research is still happening.” One interviewee said that “we spend too much time trying to prove that we have a research base for programs.” On the other hand, Educators are reluctant to teach anything that the “research does not support.”

**Time**

Time is needed to innovate and time is needed to implement an innovation. Educators spoke about the time needed to retool and be prepared to take on a new program. Time has to be invested in professional development and training. As one interviewee explained, "I can't just pick it up in five minutes and go out the door with it. It's almost like you need a mini-sabbatical to get up to speed." There may also need to be an investment of senior Educators' time to mentor and train new Educators in the innovation topic area. Some interviewees mentioned that new technologies, such as on-line course delivery and social media, demand training time.

Time to think creatively and engage in planning was described as a "luxury." Educators are described as being "over-scheduled" or having "crazy schedules" and find it difficult to say no. Therefore, engaging in anything new and innovative can be difficult if not impossible.

**Technology**

Technology was discussed from two perspectives: 1) technology itself can be innovative in how it is used by CES for program development and for outreach, and 2) training and support is needed to use technology in innovations. Interviewees discussed how CES is changing from the traditional face-to-face workshops to on-line delivery via webinars or other technologies and the use of social media, such as Facebook and Twitter, because that is expected from clientele who may no longer want to



come to a workshop on site. One interviewee pointed out that younger audiences expect to find information online and will watch a video to learn how to do something.

Educators recognize that outreach to communities is also dependent on technology, and that Extension “must have a presence on the web.” Outreach through technology is driven by the fact that “We can’t afford to do these one-on-ones anymore.” However, Educators said they often do not have the technical ability needed and that their organizations do not have or do not have enough of that expertise inside the organization. Therefore, in-service training and technology support have to be provided to the Educators or the services have to be outsourced.

Figure 4.4 summarizes the positive conditions that are needed in an organization to implement innovations as well as the negative conditions that can impede implementation.

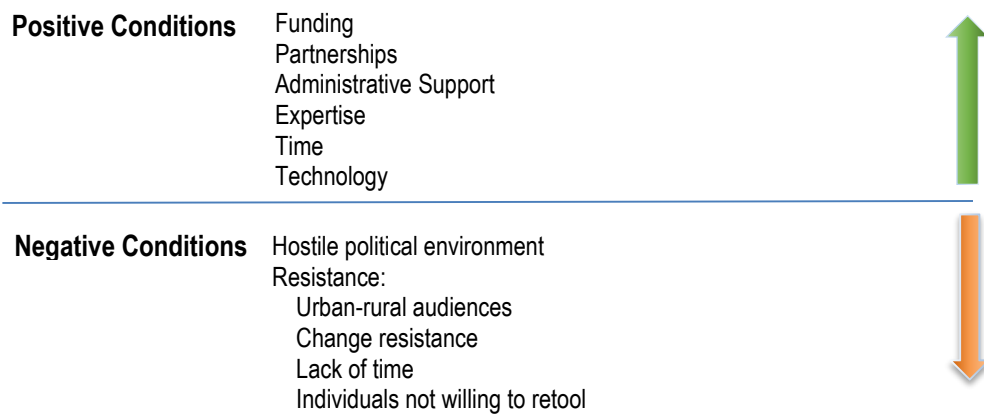


Figure 4.4. Positive and negative conditions that influence innovation implementation

## **Internal Organization Conditions for Innovation Diffusion**

### **Conferences and Professional Associations**

Extension professional associations play a large role in the diffusion of innovations throughout the system. These associations provide state and national conferences where Educators can showcase innovative programs and also take advantage of professional development. Even for those who may not attend conferences, those who do come back with the new ideas and share with colleagues. Networking occurs at these conferences, giving people the opportunity "to talk about what's new and different." In addition, the professional associations sponsor webinars throughout the year. Other professional venues and conferences also play this same role in diffusion. Professional associations can also provide opportunities for scholarship for those interviewees who are tenure-track faculty members, and articles are another way that information is diffused.

### **Experts and Key Players**

Interviewees acknowledged the role that a few experts or key players (sometimes called early adopters) take on in innovation development and implementation. These people bring an amazing reputation to a project and are not risk-averse. These experts help develop the expertise of others and "bring them into the mix to help build ... enthusiasm and reputation." They bring energy, vision, and creativity to something and can also act as cheerleaders for others. These experts or key players can be found at multiple levels of the organizations (not just the top).

**Networks and Relationships**

Multiple types of networks and relationships were discussed as diffusion methods. People establish peer-to-peer connections either in close proximity or, given the technology, through email listservs, blogs, and webinars. These networks and relationships are valued and happen at state and national meetings and can help build momentum for something new. Often, networks were described as happening by "word-of-mouth" about a hot topic. One interviewee described how these relationships and discussions happen in hallways between formal meetings rather than in the meeting itself. This was described as an organic process. Formal relationships with important decision-making groups, however, are also recognized as important.

Through these networks and relationships, people discover what other states are doing and may become convinced to try it out in their state. One respondent said, "I'm always looking for new things that other people are doing and that they're having success with." Diffusion occurs through partnerships with other organizations, as well. This was described as expanding the "circle of influence."

**Visible Success**

Interviewees expressed the belief that if people see something successful, they are more likely to adopt it. It is easier for something to catch on when there is a "demonstration of impact" that shows that the innovation can be successful and benefit community members. Therefore, it is important for

innovators to present at conferences and other venues. Visible success is also about salesmanship and that often happens through marketing and train-the-trainer models. How an innovation is packaged is important to being able to sell it to others. It has to be "eye-catching."

### **Technology**

Today's environment includes the opportunity to see new, successful innovations quickly because of technology. Numerous webinars are offered to introduce and learn how to implement new programs and ideas. With the use of technology, interviewees said they did not have to burn gas and time. Specific technologies that were mentioned included Adobe Connect, Facebook, Twitter, Box, web sites, listservs, and email. Interviewees acknowledged that both face-to-face and technology are important to diffusion, however. As one person explained, "So I think the web is the major player in access beyond the face-to-face or sharing among colleagues ... but the web and social media are playing a major role in diffusion."

The diffusion of innovations positive conditions needed for CES organizations are summarized in Figure 4.5. The negative factors were not a part of this research study.

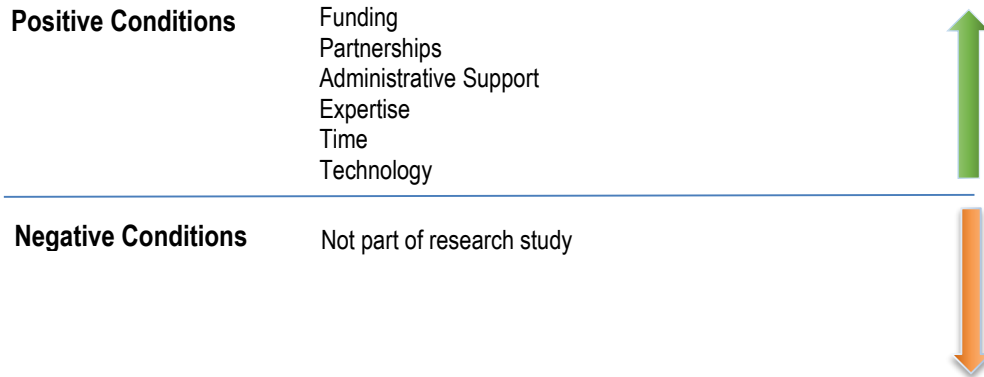


Figure 4.5. Positive conditions that influence innovation diffusion and reinvention.

### **Project Documents Content Analysis**

Within a two-year timeframe of 2013-2014, project artifacts were chosen to analyze, giving attention to what was available from the archives, variety, and time period. These artifacts are described in Chapter Three. The content analysis started with the same basic coding schema as the case-study interviews to link team concerns as shown in the project artifacts. Table 4.6 is a display of team concern themes and linkages with themes found in the case-study interviews.

### **Summary of Qualitative Findings**

Four of the sub-research questions were explored in the qualitative phase. These four questions are: 1) What are the factors in the innovation-adoption decision process that promote the decision to adopt? 2) What are the factors present in the innovation-adoption decision process that do **not** promote the decision to adopt? 3) What were the attributes of the HILI innovation that promoted its adoption and implementation? and

4) What were the attributes of the HILI innovation that did **not** promote its adoption and implementation?

These questions explored the CES internal conditions or environment. In Figure 4.6, the internal environment is represented by the dotted line that surrounds organization conditions, innovation attributes, implementation conditions, and diffusion and reinvention conditions. Positive factors that can lead toward success are shown in the top half of the model. Negative factors that can lead toward failure are shown in the bottom half of the model. The model presents a movement from left to the right, starting with organizational conditions that promote innovation and ending with organizational conditions that promote diffusion and reinvention.

Table 4.6: Content analysis

Team Concern	Project Documents in which Concern Mentioned	Case-Study Themes
Documentation of consumer need Testing case scenario with low- literacy individuals Consumer workshops across multiple states to meet needs	Proposal document for Dean June 2013 Team meeting notes 1.17.13 HILI Briefing October 2013	Consumer Need
Literature review of subject matter Status of articles submitted for publication Professional association presentation Scholarship inventory	Team meeting notes 1.17.13 Team meeting notes 4.24.13 HILI Briefing September 2013 HILI Briefing October 2013 Team meeting notes 7.10.14 Team meeting notes 8.14.14 Team meeting notes 9.11.14 Scholarship inventory briefing 12.30.14	Scholarship
Testing case scenario with low- literacy individuals Translation to Spanish Modifications needed for workbooks and curriculum Assessment of materials by peer reviewers Revision of case scenario and workbook Review of data and future plans	Team meeting notes 1.17.13 Team meeting notes 4.24.13 HILI Briefing November 2013 Team meeting notes 7.10.14 Team meeting notes 8.14.14 Team meeting notes 9.11.14 Webinar September 2014	Product Quality

Team Concern	Project Documents in which Concern Mentioned	Case-Study Themes
Peer organization recognition of work Work recognized by White House Team member receives award	Team meeting notes 1.17.13 HILI Briefing June 2014	Recognition & Rewards
Meeting with Dean for update	Team meeting notes 9.11.14	Leadership
Documentation of need Start-up and sustained funding Need for continued funding	Proposal document for Dean June 2013 Team meeting notes 9.11.14	Funding
Continued administrative support- meeting with Dean Convocation presentation	Team meeting notes 7.10.14	Administrative Support
Use of American Institutes of Research measures Recruiting community partners Initial partnerships established	Team meeting notes 4.24.13 Proposal document for Dean June 2013 HILI briefing May 2014	Partnerships



Team Concern	Project Documents in which Concern Mentioned	Case-Study Themes
Data results from Women in Agriculture and Kansas Cooperative Extension workshops First pilot workshop data results Testing curriculum with other groups Use of American Institutes of Research measures Factor analysis results on measures Reports on pilot test Reports on multi-state pilot test	Team meeting notes 3.8.13 Team meeting notes 4.24.13 HILI Briefing February 2014 Proposal document for Dean June 2013 Team meeting notes 7.10.14 Team meeting notes 8.14.14 HILI Briefing September 2014 Webinar September 2014	Evaluation
Competitor curriculum Smart Choice™ branding Social media campaigns Convocation Presentation Maryland Day attendance Educator updates about project Individual states' report of their results	Team meeting notes 1.17.13 Team meeting notes 4.24.13 HILI Briefing September 2013 HILI Briefing October 2013 HILI Briefing May 2014 Team meeting notes 7.10.14 Webinar September 2014 Template on Smart Choice™: A Brief Look at Smart Choice Health Insurance™	Marketing-Publicity

Team Concern	Project Documents in which Concern Mentioned	Case-Study Themes
Webinar to present pilot test findings eXtension.org web site development Certified educator website updates Website updates and plans for distance delivery of workshop YouTube presence established Establish data feedback loop with states participating in pilot tests	Team meeting notes 1.17.13 Team meeting notes 3.8.13 HILI Briefing October 2013 Proposal document for Dean June 2013 HILI Briefing June 2014 Team meeting notes 8.14.14 Team meeting notes 9.11.14 Webinar September 2014	Technology
Women in Agriculture conference workshops Launch of Educator workshops Personal Finance Workshop Training Consumer workshops conducted Opportunities for future work	Team meeting notes 4.24.13 Smart Choice™ Educator Training Workshop Agenda August 2013 HILI Briefing September 2013 HILI Briefing May 2014 HILI Briefing June 2014 Webinar September 2014	Training

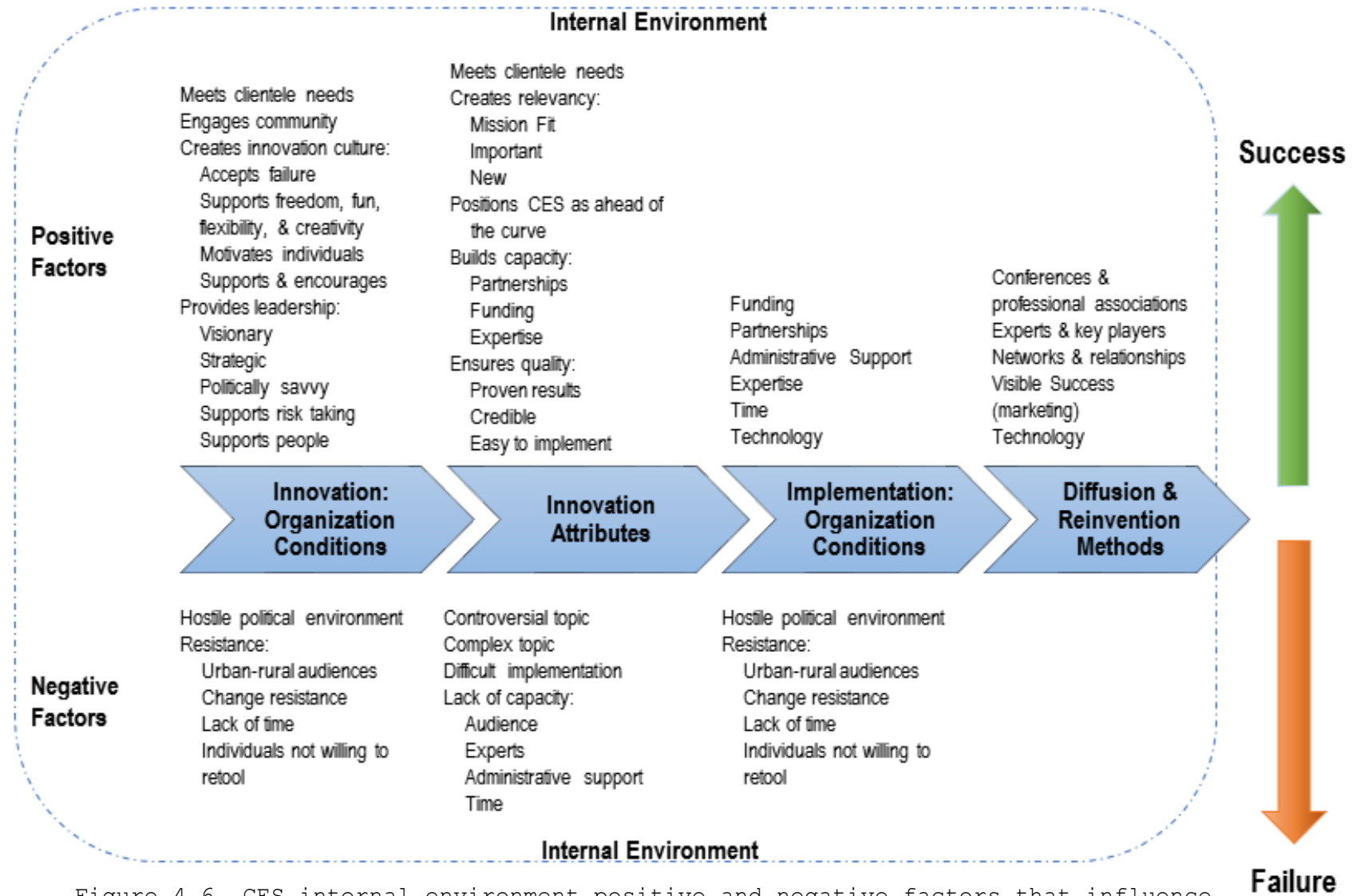


Figure 4.6. CES internal environment positive and negative factors that influence innovation, adoption, and implementation

### **Quantitative Findings**

The LGUs and CES operate within a state environment and are grouped into four geographic regions. Therefore, the quantitative second phase of the research incorporated secondary data about state environments. Data were extracted from trusted and reputable sources: the U.S. Census, Kaiser Family Foundation, Gallup, and the National Conference of State Legislators. Selection of secondary data was informed by the qualitative findings. Specifically, two themes emerged in the first phase of the research that influenced selection of secondary data: 1) the tension of serving urban and rural audiences, and 2) the hostile political environment referenced by interviewees. Data were extracted from the U.S. Census about percentages of rural and urban population. Data chosen to investigate the political environment were: state majority political ideology; legislative, governor, and state control by party; whether or not states expanded Medicaid; whether or not states challenged the ACA in the Supreme Court case; percentage of persons with and without health insurance; and federal share of revenue.

Through APLU and the Board of Agricultural Assembly (BAA), CES is divided into five regions to ensure a balanced representation in matters affecting CES. Each of the five regions also form an association of the states within that region to engage in mutual planning, professional development activities, and other collaborative efforts. The CES regions were used for comparison to look for any geographical or regional diffusion

patterns (Mooney and Lee 1995, Walker 1969). The four CES geographical regions are North Central, Northeast, South, and West. The 1890 institutions are an official fifth region, although they are part of the geographical regions as well. However, no 1890 institutions participated in the first phase of Smart Choice™.

### **Urban and Rural Population**

Traditionally, CES has been associated with serving rural communities with agricultural knowledge and skills. However, CES operates today increasingly in urban environments where agricultural and non-agricultural education takes place. In 2016, only three states are majority rural and those are Rhode Island, Maine, and Vermont—all in the Northeast District. By majority, the CES regions are urban in nature. There are a few states that are almost equal in rural-urban population, however. In the West Region, Arkansas and Montana have approximately 44% rural population; in the South, Mississippi has almost one-half of its population as rural; and, in the North Central Region, North and South Dakota have approximately 40% rural population.

### **Persons With and Without Health Insurance**

At the time of passage of the ACA, almost 42 million Americans did not have health insurance coverage (Majerol, Newkirk, and Garfield 2015). The need to provide affordable health care to these uninsured individuals, along with the need to contain the rising costs of health care, drove health-care reform and passage of the ACA. Therefore, the average percentages

of population in the CES regions with and without health insurance were compared and are presented in Table 4.7.

Table 4.7. Average percentage of population with and without health insurance

Region	North Central	Northeast	South	West
Total Number of States in Region	12	12	12	14
Average Percentage of Individuals with Health Insurance	89%	90%	84%	85%
Average Percentage of Individuals without Health Insurance	11%	10%	16%	15%

### **Political Ideology**

The Gallup organization creates an annual "State of the States" political ideology report that includes metrics on U.S. politics, economy, religion, and well-being. The political metrics includes the President's approval and disapproval ratings, the percentage of state residents that lean either Republican or Democrat, and the percentage of residents that describe themselves as either conservative or liberal. Table 4.8 extracts, for the purposes of this research, the 2014 political ideology percentages for Democrat and Republican residents sorted by CES regions and states. According to Gallup (2014), these percentages are calculated by asking state residents which party

they identify with most closely. If residents identify as independents, they are asked whether they lean to Republicans or lean to Democrats. Percentages do not equal 100%.

Table 4.8. Overall state majority political ideology by CES region

Region	North Central	Northeast	South	West
Total Number of States in Region	12	12	12	14
Average % Democrat Leaning	40%	45%	40%	38%
Average % Republican Leaning	43%	35%	44%	44%

#### **Challenging and Supporting ACA**

The ACA was challenged by 26 states in the U.S. Supreme Court concerning the mandate that individuals have health insurance and states' expansion of Medicaid (Kaiser Family Foundation 2012). Table 4.9 shows the CES regions along with the states that challenged or supported the ACA in the Supreme Court case. Some states were identified as both challenging and supporting the ACA because the governor and state's attorney took opposing positions in the legal action (Kaiser Family Foundation 2012).

Table 4.9: States challenging and supporting the ACA

Region	North Central	Northeast	South	West
Total Number of States in Region	12	12	12	14
Number and % of States Challenge ACA	8 (67%)	2 (17%)	8 (67%)	7 (50)%
Number and % of States Support ACA	1 (8%)	6 (50%)	0 (0%)	4 (28%)
Number and % of States that both Challenge & Support ACA	1 (8%)	0 (0%)	0 (0%)	1 (7%)
Number and % of States with No Position	2 (17%)	4 (33%)	4 (33%)	2 (15%)

#### **Adopting or Not Adopting Medicaid Expansion**

Medicaid provides health-care coverage to approximately 60 million eligible adults and children (Majerol, Newkirk, and Garfield 2015). It is funded by both federal and state governments. The ACA expanded Medicaid coverage beginning on January 2014 by expanding eligibility (Kaiser Family Foundation 2012). However, the lawsuit of 2012 led by Florida challenged Medicaid expansion based generally on “the proper balance of power between the federal government and the states” (Kaiser Family Foundation 2012). In the end, the Supreme Court ruled that Medicaid expansion was left to the states to decide. Table 4.10, by CES regions, gives an overview of the numbers and percentages



of states either adopting or not adopting Medicaid expansion, as well as those with no position.

Table 4.10. States adopting or not adopting Medicaid expansion as of July 2015

Region	North Central	Northeast	South	West
Total Number of States in Region	12	12	12	14
Number and % of States Expanding Medicaid	7 (58%)	11 (91%)	1 (9%)	12 (85)%
Number and % of States Not Expanding Medicaid	5 (42%)	1 (9%)	11 (91%)	2 (15%)

#### **Legislative, Governor, and State Control by Party**

The National Conference of State Legislators (NCSL) promotes itself as “the nation’s most respected bipartisan organization providing states support, ideas, connections, and a strong voice on Capitol Hill” (National Conference of State Legislatures 2014). Each year, in addition to a multitude of other databases and information, the organization publishes an on-line, one-page listing of each state, the total number of seats in each chamber, and the total number of seats in each chamber held by Republicans and held by Democrats. The overall state control by party is also contained in this information, which simply means that the legislature and the governorship is controlled by the same party. In states where neither body has a majority, it is noted as a split in the charts. Figure 4.7

presents the data for the North Central region. Nebraska has a unicameral legislature and that is indicated as not applicable on the North Central region charts. The same information is presented for the Northeast Region in Figure 4.8; South, Figure 4.9, and West, Figure 4.10.

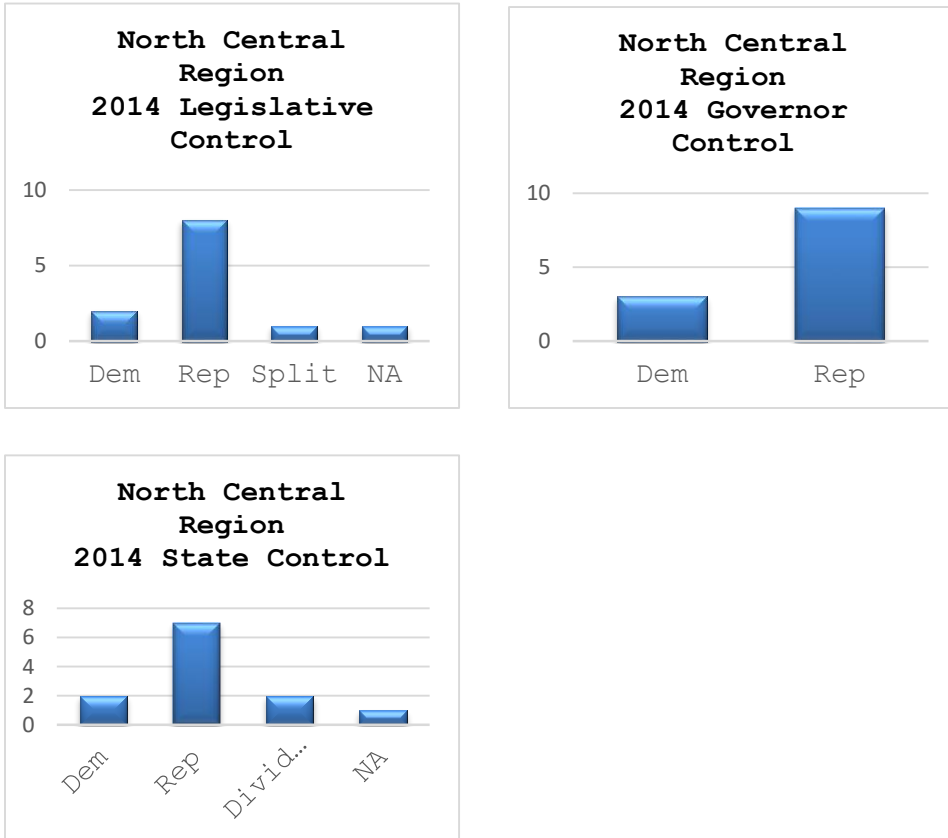


Figure 4.7. North Central region legislative, governor, and state control by party

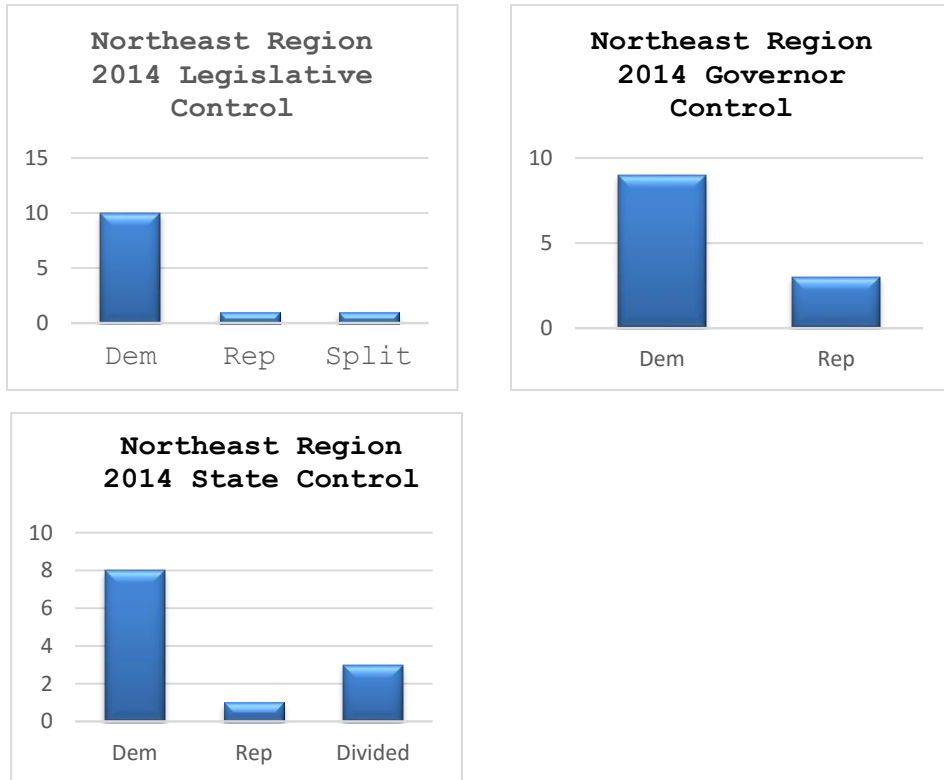


Figure 4.8. Northeast Region legislative, governor, and state control by party

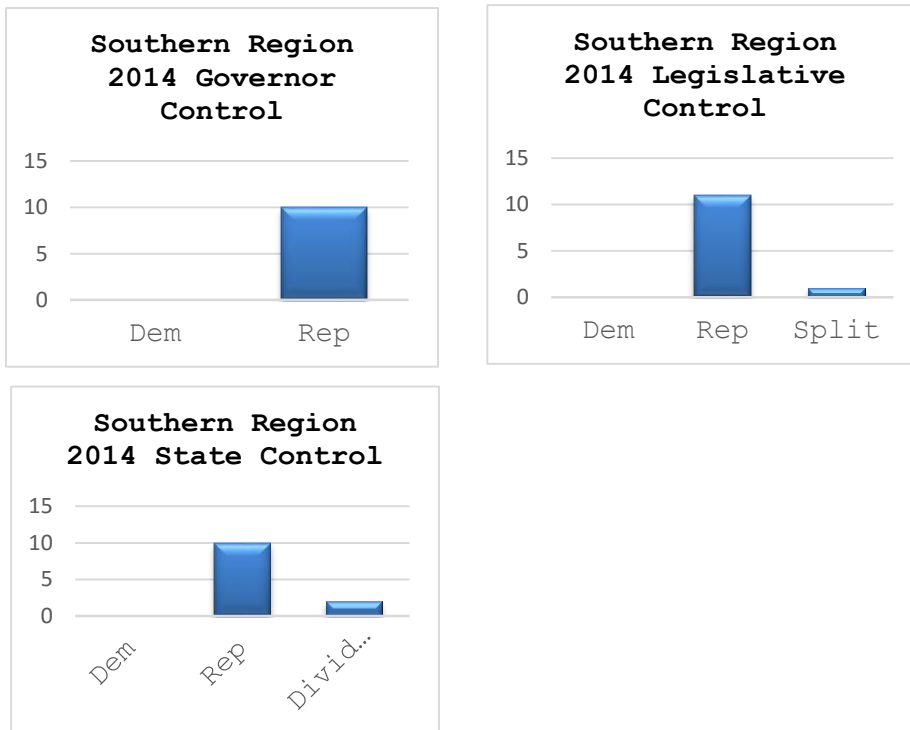


Figure 4.9. Southern Region legislative, governor, and state control by party

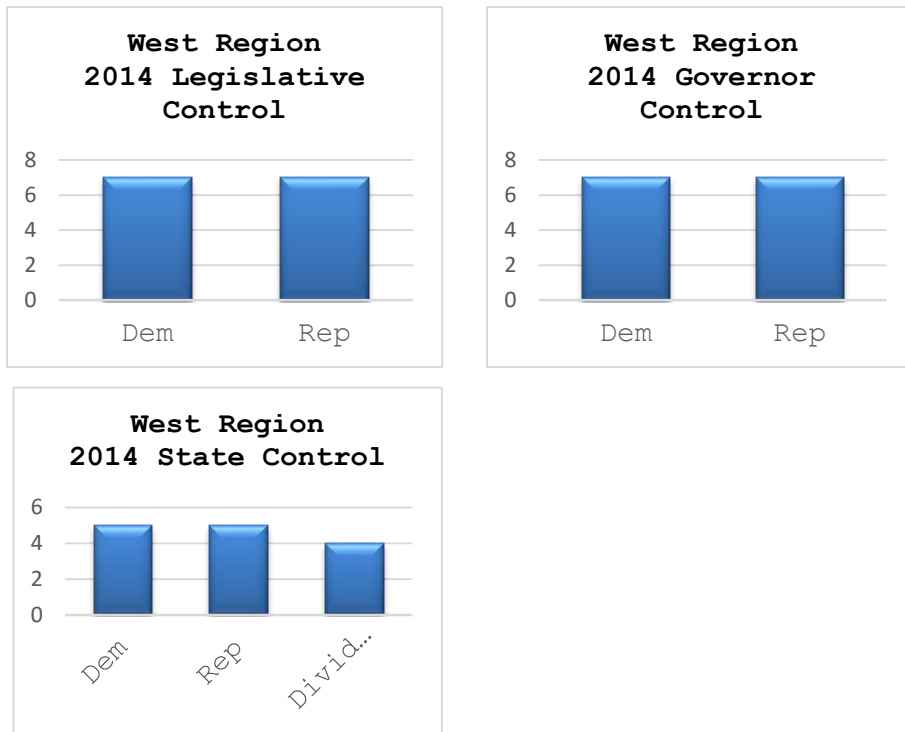


Figure 4.10. West Region legislative, governor, and state control by party

#### **Federal Share of Revenue**

As seen in Table 4.11, the CES region with the highest average and median percentage of federal revenue is the South. The other three regions are fairly equal in their averages and median percentages at about 30%.

#### **CES Regional Comparisons**

Across all four CES regions (the 50 states), the majority of the population is urban. The West Region has the largest average percentage population of urban residents at 79%, followed by the Northeast (74%), North Central (71%), and the South (69%). For health insurance coverage, the average percentages of individuals covered ranges from 84-90%, with the Northeast having the largest average percentage at 90%, followed by North Central

Table 4.11. 2013 share of federal revenue

Region	North Central	Northeast	South	West
Total Number of States in Region	12	12	12	14
Average % of Federal Revenues	30.4	29.4	34.7	30.3
Median % of Federal Revenues	31.9	28.7	34.7	30.3

at 89%, the West at 85%, and the South at 84%. The Southern Region has the smallest average urban population across its states and the smallest average percentage of individuals covered by health insurance. Yet, the Southern Region receives the largest average percentage of federal revenues at 34%, followed by the North Central and West Regions at approximately 30% and the Southern Region at 29%.

A summary comparison of the regions, states' involvement in Smart Choice™ and whether the majority of states in a region supported or challenged the ACA, expanded or did not expand Medicaid, the majority political ideology of the region, and the state control by party are compared in Table 4.11. This comparison does not allow for any conclusion-making about differences in the regions during this time period. However, there are observations that can be made and refer to the shaded cells in Table 4.12.

Table 4.12: CES region comparison

Region	North Central	Northeast	South	West
Total Number of States in Region	12	12	12	14
Number of States with Certified Educators	10	6	6	8
Number of States with Certified Educator-Implement	4	2	0	1
Number States with Certified Educators-Did Not Implement	6	4	5	2
Number of States Not Involved	2	6	6	4
Majority Urban/Rural	Urban	Urban	Urban	Urban
Average % with Health Ins.	89%	90%	84%	85%
Average % without Health Ins.	11%	10%	16%	15%
Majority Political Ideology	Rep	Dem	Rep	Rep
Majority ACA Support or Challenge	Challenge	Support	Challenge	Challenge
Majority Medicaid Expansion	Yes	Yes	No	Yes

Region	North Central	Northeast	South	West
Majority Party with Legislative Control	Rep	Dem	Rep	Divided
Majority Party with Governorship Control	Rep	Dem	Rep	Divided
State Control by Party	Rep	Dem	Rep	Divided
Average % of Federal Share of Revenue	30%	29%	35%	30%

- 1) Smart Choice™ implementation in this initial phase took place predominantly in the North Central and Northeast Regions. Between these two regions, made of up of 24 states, six states implemented Smart Choice™ workshops.
- 2) The North Central region had the lowest number of states not involved.
- 3) The Northeast region is the only region that had a majority of states supporting the ACA.
- 4) The Northeast region was the only region in which the Democratic party held majority control of any kind.
- 5) The Northeast region was the only region which the majority of individuals were Democratic leaning.
- 6) While 14 of the 26 states in the Southern and Western regions had certified Educators, only one state of the 26 actually conducted a workshop.

- 7) The South was the only region that the majority of states overwhelmingly did not adopt Medicaid expansion.
- 8) The Southern and Western regions had the highest average percentage of uninsured individuals.
- 9) The Southern region has the largest budget share of federal revenue, yet did not implement any Smart Choice™ workshops.

### **Relationship Testing**

After analysis of qualitative data, secondary data were analyzed to test for association among certain categorical variables. The state political-policy environment variables were chosen to investigate four questions:

1. Is there an association between states with Educators certified to teach Smart Choice™ and whether the state challenged or supported the ACA?
2. Is there an association between states with Educators certified to teach Smart Choice™ and whether the state chose to expand Medicaid?
3. Is there an association between states with Educators certified to teach Smart Choice™ and state political control by party?
4. Is there an association between states with Educators certified to teach Smart Choice™ and state political ideology?

The Pearson Chi-square test for independence was used with Yates Continuity Correction given that the data was in a two-by-



two table (Pallant 2013). The correlation test Phi Coefficient was used given that the variables are categorical (Newton and Rudestam 1999, Warner 2013, Salkind 2011). Cohen's effect size criteria were used (.10 considered small, .30 considered medium, and .50 or greater considered large) (Pallant 2013). The minimum cell frequency of five was used for the test. Dummy variables were created for the two categorical variables of states (based on those with certified Smart Choice™ Educators as a 1 and those without Smart Choice™ Educators as a 0). Dummy variables were also created for the categorical variables contained in the four research questions. The findings are presented in the same order as the questions were posed:

- 1) The Chi-square test for independence (with Yates Continuity Correction) indicated no significant association between a state challenging or supporting the ACA and whether or not Educators in those states choose to become certified in Smart Choice™,  $X^2 (1, n=40) = .07$ ,  $p = .78$ ,  $\phi = -.10$ ).
- 2) The Chi-square test for independence (with Yates Continuity Correction) indicated no significant association between a state expanding or not expanding Medicaid and whether or not Educators in those states choose to become certified in Smart Choice™,  $X^2 (1, n=49) = 1$ ,  $p = .93$ ,  $\phi = -.05$ ).
- 3) The Chi-square test for independence (with Yates Continuity Correction) indicated no significant

association between the state majority party control and whether or not Educators in those states choose to become certified in Smart Choice™,  $X^2 (1, n=38) = 0, p=1, \phi=.03$ .

- 4) The Chi-square test for independence (with Yates Continuity Correction) indicated no significant association between the majority state political ideology and whether or not Educators in those states choose to become certified in Smart Choice™,  $X^2 (1, n=50) = .40, p = .52, \phi=-.13$ .

#### **Summary of Quantitative Findings**

The quantitative data allowed some observations to be made about differences in the CES regions regarding whether or not states challenged or supported the ACA, whether Medicaid was expanded or not, percentages of people that were insured or not insured, and political parties in control. However, association testing of selected state political-policy environment variables with whether or not a state CES had certified Smart Choice™ Educators yielded no association between the variables at this time. Further discussion, as well as some reflections, about both the qualitative and quantitative data as they fit together will be presented in Chapter Five.

## CHAPTER FIVE: DISCUSSION

### Introduction

The purpose of this research is to add to the theoretical base of how non-agricultural innovations occur and diffuse in CES. The new knowledge generated by this research adds to Rogers (2003) work on diffusion of innovations and complements other researchers' work on the topic. The Health Insurance Literacy Initiative and the Smart Choice Health Insurance™ literacy program provided the opportunity to study an innovation that was underway during a major public policy shift in the U.S. with the passage of the ACA (Public Law 111-148). This research explored the following:

- 1) internal conditions, including the processes, experiences, and situations of the people involved in the innovation process,
- 2) innovation attributes that promoted adoption, and
- 3) external conditions under which the innovation was occurring in the political-policy state environments.

This chapter presents the theoretical model that was developed based on the HILI Smart Choice Health Insurance™ program, a non-agricultural innovation in CES. The model is presented in a visual format and followed by a narrative description and explanation of model elements. Also included is a summary checklist that can be used to prompt examination and discussion of creating an organizational culture that supports innovation development and implementation. This checklist can

also be used to begin the development of a quantitative instrument to develop variables based on the model factors. Strengths and limitations of the model are also discussed. Finally, the importance of this work, recommendations for future research based on findings, and conclusions are presented.

### **Theoretical Model**

The CES innovation development and diffusion theoretical model presented in Figure 5.1 is built upon the work of Rogers (2003) and the DOI framework. In addition, two other contributions from the literature from two different disciplines are used in the CES model. The first of these contributions from the literature comes from the field of health service delivery and was a systematic review of literature conducted by Greenhalgh et al. (2004). The second contribution comes from the public policy field and the research first completed by Walker (1969) and built upon by Mooney and Lee (1995). The innovation trigger of a public issue, opportunity, or need draws upon all of these authors' work plus the work of Polsby (1984). These authors' works were discussed in-depth in Chapter Two.

The research findings from this study were synthesized and interwoven into the work of Rogers (2003), Greenhalgh et al. (2004), Walker (1969), Mooney and Lee (1995) and Polsby (1984). The elements of the CES model will be explained using this study's findings and drawing upon the chosen literature.

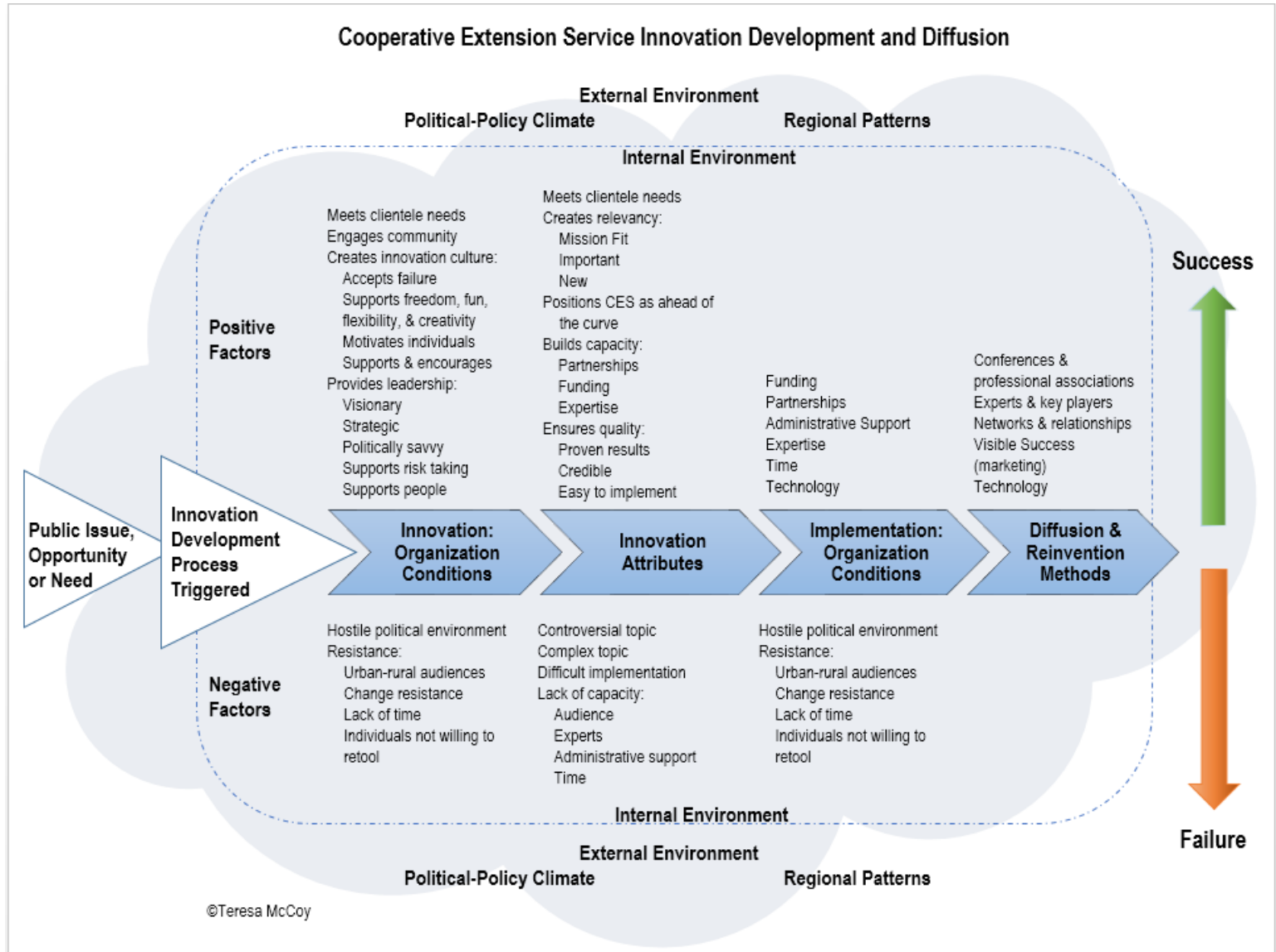


Figure 5.1. Cooperative Extension Service innovation development and diffusion model

**Model Elements Explanation**

Figure 5.1 builds upon the same model presented in Figure 4.6 and adds the external environment. In this rendering, the process appears to be linear, moving from left to the right, because the medium used to present these findings is not multi-dimensional. In reality, just as Sorokin (1957) theorized many years ago, the system is complex with multiple nodes and dimensions that cannot be represented in a two-dimensional figure.

The CES internal environment lies within the dotted rectangular area and the external environment resides outside of the dotted lines (represented by the cloud-like image). The dotted lines were used to show that CES is an organization that has permeable boundaries with the external environment given the nature of its publicness (Bozeman and Bretschneider 1994).

**Public Issue, Opportunity, or Need Triggers**

In this case study, the passage of the ACA created the need for an educational response about health insurance literacy. Millions of Americans who had never before had health insurance were faced with making major decisions about health-insurance coverage. Many of these Americans had little or no experience and skills in making health-insurance decisions (Consumers Union, University of Maryland College Park, and American Institutes for Research 2012). Even people who had had health insurance for many years, either through employer-based programs or other sources, were confused given the new provisions in the ACA (Braun 2012).

Rogers (2003) explains that it is recognition of need that stimulates the innovation research and design process. For CES, this was a federal public policy issue shift that created an enormous educational need to which the system had the potential to respond. Interviewees repeatedly discussed how clientele needs drive decisions about program development, program delivery, and priority setting. For CES, meeting clientele needs is critical to both contexts of 1) the internal conditions needed to drive innovation, and 2) the program or innovation attributes that will meet needs by solving a problem or issue.

Need also drives states' innovation adoption according to Walker (1969). He theorizes that when a state feels deprived due to an unmet need, especially when other states have already adopted something that meets that same need, innovation adoption is increased. Mooney and Lee (1995) also theorize that a crisis can be an external determinant to spur state policy innovation adoption. A response to a crisis would be what Polsby (1984) terms an acute innovation. However, as Polsby (1984) argues, innovations can be incubating, awaiting the opportunity to become a priority.

### **Organization Support for Innovation**

While need triggers innovation, the culture and climate for innovations to occur and be supported must exist within the organization. This can be thought of using the analogy of a seed (the innovation) that can either fall on fertile or barren soil (organizational conditions). Rogers (2003) identifies several

conditions that support organizational innovativeness that were also found in this research. Specifically, Rogers (2003) discusses leaders attitude toward change, the level of specialty and expertise held by organization members, the formality of the organization (rules and regulations), interconnectedness (social systems and networks), and organizational slack (uncommitted resources) (412). Greenhalgh et al. (2004) also say that systems must have a readiness for innovation, which they call "system antecedents for innovation" and "system readiness for innovation" (598).

Walker (1969) finds positive relationships between states' innovativeness and wealth and slack resources, as well as an urban population and some other political factors.

Mooney and Lee (1995) identify internal determinant variables that include such items as available resources and leadership (as found in this research). From a state or policy perspective, regardless, innovation requires available resources, specifically funding.

While there is a great deal of similarities in how organizations can support innovation, an interesting finding in this study is what CES interviewees talked about that is **not** included in these other models by Rogers (2003), Greenhalgh et al. (2004), Walker (1969), or Mooney and Lee (1995). There are two variables unique to this study: 1) CES respondents discussed aspects of organizational culture, such as acceptance of failure,



freedom, fun, and flexibility, creativity, openness to change, motivated individuals, administrative support and encouragement, and 2) the impact of a hostile political environment on innovation.

According to Argabright, McGuire, and King (2012), one characteristic of innovation culture is "freedom and self-sufficiency" (np) for employees. They describe this as employees with the freedom to decide how to achieve articulated organizational goals (Argabright, McGuire, and King 2012, np). Interviewees in this research expressed the desire for this kind of freedom in order to be both innovative and able to implement an innovation.

The second finding about a hostile political environment was not surprising given the bitter partisan politics that surrounded and continue to surround the ACA (Public Law 111-148) even as this dissertation is written. The point is that the political (federal, state, and local) environment exerts some force on the CES system, whether that be positive or negative.

### **Innovation Attributes**

Rogers' (2003) theory framed innovation attributes as the dependent variables that determine the rate of innovation adoption. These five attributes are relative advantage, compatibility, complexity, trialability, and observability. Greenhalgh et al. (2004) add to this list of attributes the potential for reinvention, fuzzy boundaries, risk, task issues, nature of knowledge required, and technical support.

In this study, all of these concepts were expressed by interviewees but in different words. For example, relative advantage was discussed as meeting clientele needs, knowledge transfer and absorptive capacity were discussed as building capacity. Observability was discussed in the context of ensuring quality because CES Educators wanted to see proven results from the innovation.

Reinvention and fuzzy boundaries have to do with the ability to make some changes around the edges of an innovation without changing the innovation itself. These concepts are in some respondents' discussion in terms of wishing they could have changed certain items in Smart Choice™ (such as the case study). Another important point is that the notion of risk to the individual as described by Greenhalgh et al. (2004) is reflected in the interviewees' discussion of the hostile political environment and how that impacts decisions about adoption.

#### **Organizational Support for Innovation Implementation**

This theoretical model recognizes that there are separate conditions that may exist between what is needed to innovate and what is needed to adopt and implement an innovation. Rogers (2003) theoretical framework did not contribute a great deal to this discussion. However, Greenhalgh et al. (2004), in their conceptual model and from their literature review, include the implementation process. The terms used to describe their variables are in parenthesis after the terms used by this study's interviewees. For example, funding was identified as needed for

implementation, whereas the term dedicated resources is used by Greenhalgh et al. (2004). States' decisions to adopt a policy or program are heavily dependent upon wealth, fiscal health, resources, and slack to invest in adoption (Walker 1969, Downs and Mohr 1979, Tolbert, Mossberger, and McNeal 2008, Berry 1994, Mooney and Lee 1995, Daley and Garand 2005).

All of the items discussed by the CES interviewees were identified by Greenhalgh et al. (2004). What was called partnerships by CES was called external collaboration in the Greenhalgh et al. (2004) conceptual model. The broad CES category of administrative support includes the items of devolved decision making, communication, and information in Greenhalgh et al. (2004). An interesting note in this category is that CES interviewees identified technology as important to implementation because it helps change products or programs into different formats. The term used by Greenhalgh et al. (2004) is product augmentation—basically what CES interviewees were discussing.

#### **Innovation Diffusion and Reinvention**

Walker's (1969) work in policy diffusion among states finds geographical or regional patterns in the diffusion process. Mooney and Lee (1995) also find these geographic patterns. As they explain "proximity breeds familiarity" (605). Greenhalgh et al. (2004, 608) say that strong evidence exists that the decision to adopt is influenced on whether or not "a threshold proportion of comparable (homophilious) organizations have done so or plan to do." However, neither in the qualitative or quantitative

findings could this geographical diffusion said to have occurred with Smart Choice™. The Northeast region was the home of Smart Choice™, yet other states in the region who had certified educators did not implement workshops. The North Central region was instrumental in conducting Smart Choice™ workshops, but there is not enough evidence to say that that was due to state proximity.

A point to consider, however, is that this research was completed in the first launch of Smart Choice™ throughout the states and CES regions. It may have been too early in the process to detect any geographical patterns of diffusion. As Gray (1973) argues, sometimes it is to a state's advantage to take a wait-and-see approach if a situation is considered risky. In addition, sometimes a state may be an early adopter on one issue but be a laggard on another issue. Despite the fact that geographical patterns did not show up as relevant to the adoption, implementation, or diffusion of Smart Choice™, this variable was included in the model because of evidence from policy diffusion studies and the fact that CES strongly identifies with geographical regions.

Rogers (2003) and Greenhalgh et al. (2004) identify the importance of communication in diffusion and that communication includes networks, peers, experts, champions, change agents, and boundary spanners. This research in CES emphasizes the importance, too, of methods of how that communication occurs. In a formal role, conferences and professional associations are

important to help Extension people find out about new programs and products. They rely on experts and key players (champions) to help keep them informed as well. Communication can be through informal methods, such as word-of-mouth and relationships with colleagues. Interviewees also stated that they rely a great deal on technology to find new ideas and programs. They discussed the importance of email, the web, and listservs to help with communication. In addition, formal marketing and publicity of new products and programs also help to diffuse innovations.

Finally, in this discussion of diffusion, is the notion of reinvention. Rogers (2003, 180) defines reinvention as "the degree to which an innovation is changed or modified by a user in the process of its adoption and implementation." Greenhalgh et al. (2004, 596) notes that the ability to reinvent an innovation will result in it being more easily adopted. With policy diffusion, states may reinvent to fit new situations as they occur and will learn from the early adopters (Mooney 2001, Hays 1996). Thus, reinvention becomes part of the diffusion process. With the first phase of Smart Choice™, reinvention was not permitted because program evaluation had to be conducted. However, document analysis provided evidence that the HILI team was aware of the need for product reinvention and was making future plans for that to occur.

### **External Environment**

The discussion of the internal context of conditions that support innovation and implementation and the attributes of

innovations shows a good deal of consistency across findings from this research study in CES, the health services delivery field, and the policy diffusion field. However, the secondary data about the external conditions in the HILI project revealed no evidence at this time that can be used with confidence. That may not be true as time goes on and the project matures and more detailed research can be conducted. The variables chosen about the external environment for this study may show statistically significant strength with more time and data.

Greenhalgh et al. (2004, 609) argue that "the evidence for the impact of environmental variables on organizational innovativeness in the service sector is sparse and heterogeneous ... environmental uncertainty has either a small positive impact or no impact on innovativeness." For this theoretical model, the external context is made of the political-policy climate and regional patterns. These two variables may exert either a positive or negative impact to some unknown extent, reinforcing what Greenhalgh et al argue. More empirical research is needed about the external environment variables.

#### **Strengths of Theoretical Model**

This model is grounded in research. First, a literature review that looked across aspects of DOI in public administration and public policy, health care services, Cooperative Extension, and general DOI research was conducted. The literature review tied together multiple theoretical frameworks that were used to inform the interview questions. Data from the interviews then

helped to refine and add to the literature review. The model shows consistency with previous theories while adding new dimensions.

Evidence for the model was collected in a high-quality, systematic fashion, using protocols, a documented chain of evidence that provides for replication, multiple sources of evidence, and qualitative data analyses that were conducted over a period of six months involving multiple readings of transcripts, project artifacts, and refinement of codes. Interviews were conducted with 28 individuals across five strata of the CES organization, across seven state CES organizations, and across the four CES geographical regions. Therefore, data used to construct this model maintained standards for reliability and validity in qualitative research.

The topic of innovation in CES is just as relevant today as it was in 1963 when Rogers published his first article in the *Journal of Extension*. While Rogers focused on agricultural innovation, these findings about a non-agricultural innovation help to re-orient CES for contemporary issues. In particular, the issue of health care and health insurance will continue to be public issues to which CES will have to provide educational responses. With acceptance of the *Cooperative Extension National Framework for Health and Wellness*, the system adopted a priority focus on health in general and health insurance literacy specifically. The findings and theoretical model from this

research can help CES adopt the framework and the innovations that emanate from it.

### **Limitations of Theoretical Model**

Despite the depth of information in this study, this is just one study of innovation in CES. Generalizations in the quantitative sense for CES in general or other innovation cases cannot be made. However, there are some caveats to this statement. The research was conducted early in the innovation process with Smart Choice™. Therefore, circumstances could have been affected by the passage of time and new data could have been added that would have changed these results. Most important, information that is not quantitatively generalizable to an entire population can still be actionable in multiple circumstances.

Two other limitations need to be acknowledged. First, given that I am an Extension employee and a member of the HILI team, it is possible that interviewees responded to questions based on what they thought was a response I would like to hear. Interviewees could have been seeking my approval in their responses and, therefore, either skewed their answers in a positive manner or withheld information. It is also possible, given that I am an Extension employee and HILI team member that I interpreted responses in a more positive light than what interviewees intended.

Second, difficulty in recruiting non-implementers could have resulted in an under-represented sample in this stratum in the interviews. Only seven non-implementers agreed to be



interviewed despite multiple attempts to secure more interviews across a broader representation than what was achieved.

Speculated reasons for difficulty in recruiting might have been: 1) professional embarrassment about not offering workshops and thinking that the interview might be about short-comings as individual Educators; 2) concern that a report would be sent to supervisors about their lack of involvement; 3) lack of interest in the project; or 4) lack of time because of workload.

While this research explored the political-policy environment with selected variables, the socio-economic conditions of states were not explored. It may be the case that states with slow or declining economies or LGUs experiencing budget reductions may not have been able to implement Smart Choice™ workshops due to limited budgets.

### **Recommendations**

This study was one step in updating the innovation adoption and diffusion literature and theoretical framework for CES. There is more systematic research that needs to be done, especially using projects focused on some aspect of health programs in CES. As ECOP (2014) stated in the *National Health and Wellness Framework*, a window of opportunity is open for CES to “do for the nation’s health what it did for American agriculture” (2). As Braun (2012) put forth in a call to action:

Following passage of welfare reform in the late 1990s, the land-grant system mobilized to address the need for understanding the law; educate state and local community members, policy makers, and students; and conduct research (Braun & Benning, 2001). We again have an opportunity to work together to fill a demand for understanding, learning,

and establishing a body of knowledge related to health reform and specifically health insurance literacy. Not only will our response help people respond knowledgeably, but also it will position Extension and the land-grant system as a leader in addressing this compelling public policy issue (np).

For CES to mobilize the resources of land-grant institutions and to be a leader in critical public-policy issues, it is possible for the system to prepare itself by assessing its capacity to both produce and implement innovations. Therefore, the following recommendations are made based on this research project:

1. The CES should create system readiness to mobilize on a state or national basis when a need, issue, or opportunity rises to the top of the national agenda and requires an educational response.
2. To create system readiness, CES should assess its organizational culture for priority-setting based on critical clientele needs, available expertise, creativity and freedom, leadership, capacity for change and risk-taking, funding and resources, support mechanisms, and diffusion strategies.
3. Leadership in CES must provide strategic, savvy vision that encourages risk taking and supports people in both success and failure of program innovation. Failure should be viewed and treated as an opportunity to learn.
4. Innovations in CES have to meet important needs, create relevancy for the organization by fulfilling its

mission, build capacity through expertise, and ensure quality.

5. Capacity in CES is built through partnerships, funding, and expertise.
6. Quality products are assured through meeting clientele needs, being grounded in research, and having proven results (evaluation).
7. Quality implementation requires that Extension Educators have the time and resources to train and prepare for program delivery.
8. Innovations in CES need to ensure ease of implementation, and when appropriate, allow for fuzzy boundaries for reinvention.
9. Innovation diffusion in CES is dependent on face-to-face professional networks, relationships, and technology.
10. The external political environment can influence decisions about whether a program is adopted or not, especially when an issue, need, or opportunity is highly politicized. Therefore, monitoring the external environment is important for any organization because that environment is dynamic and constantly shifting.

Table 5.1 provides a checklist for system readiness for innovation that can be used by CES assess and discuss creating a culture of innovation. While this research was about CES, it is

also possible that other large, complex federal organizations can benefit from this type of assessment, as well.

In the conclusion of any dissertation, the expectation is to say that more research is needed. That will always be true. My goal, however, is to provide knowledge that can be actionable for CES because Extension and the land-grant universities are vital to this country. I am confident in recommending that this theoretical model and the checklist be used as a guide to help state CES organizations begin a discussion about their ability to innovate.

From this theoretical model and this initial checklist, the next step in the research should move toward the development of a quantitative instrument. Variables can be constructed from the factors identified in the model that can be tested through both quantitative and qualitative methods. This type of instrument could be used by CES administrators and faculty to help make sure that the national system can indeed mobilize when external events trigger the need for an innovative educational response.

Table 5.1: Checklist to assess system readiness for innovation

Questions
What public issue, need, or opportunity has arisen to which our Extension organization can respond?
How is the issue, need, or opportunity being expressed in the public?
What are the ways we typically engage the community or clientele to develop a response to an issue, need, or opportunity?

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Questions

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How open is our organizational culture to:

For innovation, our leadership is:

What innovation resistance factors exist in our organization?

To what degree is our organization willing to tolerate stress caused by change?

What is the level of available resources we have to support innovative programs (out of the support of traditional programs)?

What is the amount of time we are willing to commit to innovation development?

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What expertise do we have that is needed for innovative programs?

What are the ways that we can we build expertise needed for a particular innovation?

What types of technologies do we need in our innovation culture?

What partners do we have that can work with us to create innovative programs?

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In what ways can we ensure quality when we develop an innovation?

What methods do we have to let others know about our innovations?

In what ways do we market our success?

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What are the conditions in our external environment?

What are the current conditions of our political-policy environment?

What pressures are being exerted on our organization by the current environment?

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### **Conclusion**

The benefit of this research is that Extension administrators at the national and state levels and Extension Educators at the state and local levels will be better able to understand the experiences, conditions, and processes that need to occur if and when the CES system mobilizes to address a public educational need. This understanding will contribute to Extension and public administration by enabling innovation and through more effective decision-making about resource placement, program development, and educational outreach to the nation's people—either through policy or programs. In addition, this understanding will help to make wise use of funds in an era when budgets are limited.

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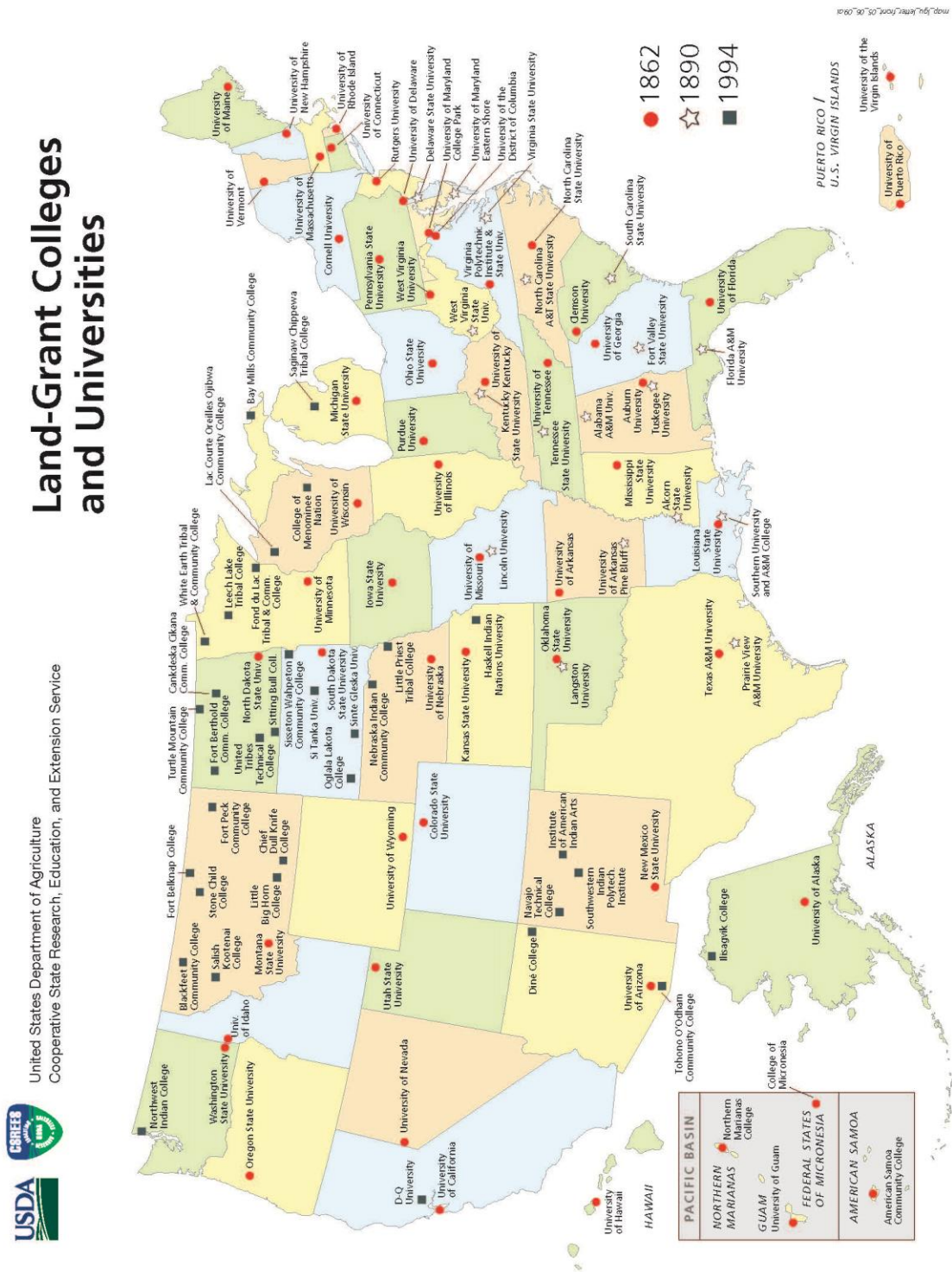
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Appendix A

Land-Grant Colleges and Universities



Source: National Institute of Food and Agriculture, U. S. Department of Agriculture



## Appendix B

## Institutional Review Board Approval Letter



1204 Marie Mount Hall  
 College Park, MD 20742-5125  
 TEL 301.405.4212  
 FAX 301.314.1475  
 irb@umd.edu  
 www.umresearch.umd.edu/IRB

DATE: January 12, 2015

TO: Teresa McCoy  
 FROM: University of Maryland College Park (UMCP) IRB

PROJECT TITLE: [671177-2] HILI and Innovation in CES  
 REFERENCE #:   
 SUBMISSION TYPE: Amendment/Modification

ACTION: APPROVED  
 APPROVAL DATE: January 12, 2015  
 EXPIRATION DATE: November 5, 2015  
 REVIEW TYPE: Expedited Review

REVIEW CATEGORY: Expedited review category # 6 & 7

Thank you for your submission of Amendment/Modification materials for this project. The University of Maryland College Park (UMCP) IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

Prior to submission to the IRB Office, this project received scientific review from the departmental IRB Liaison.

This submission has received Expedited Review based on the applicable federal regulations.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Unless a consent waiver or alteration has been approved, Federal regulations require that each participant receives a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this committee prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others (UPIRSOs) and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

This project has been determined to be a Minimal Risk project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the appropriate forms for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of November 5, 2015.

Please note that all research records must be retained for a minimum of seven years after the completion of the project.

If you have any questions, please contact the IRB Office at 301-405-4212 or irb@umd.edu. Please include your project title and reference number in all correspondence with this committee.

## Appendix C

## Interview Protocol: UME Administrators

**Introductory Text**

Good Morning/Afternoon! Again, let me thank you for taking your valuable time to talk with me about the health insurance literacy initiative and Smart Choice project developed and implemented by the University of Maryland Extension.

I am Teresa McCoy, Extension Evaluator for the project at the University of Maryland. I am also a doctoral candidate at the University of Baltimore. The findings from this interview will be used both for my doctoral research that is focused on finding out how non-agricultural innovations diffuse through the Extension system and to supplement the evaluation findings. We will specifically be talking about Phase II of the project today, which took place between September 2013 and March 2014.

Please read over and sign the consent form. Only I and a transcriptionist will have access to the notes and to the recording of this session. Your information is kept in my password protected computer that is accessed only by me.

Please feel free to ask me any questions during the interview if something does not make sense to you. I have provided you with a definition of terms that I am using and please feel free to refer to it at any point. Do you have any questions before we start?

As a reminder, I am recording the session and the recording will start now.

**Introductory Questions**

- 1) In your role with as a College of Agriculture and Natural Resources administrator, you have been a supporter of the Health Insurance Literacy Initiative (Smart Choice) through allocating operating dollars and personnel, encouragement of Maryland Extension Educators to implement Smart Choice consumer workshops, and lending your credibility and status specifically to this project. What is it about this project that made you want to support its adoption and implementation in Extension? [Probe: What were the advantages to you of supporting the Smart Choice project? What were the disadvantages, if any?] {perceived value, attitude, advantages/ disadvantages, decision}

**Product Questions**

- 2) What do you think are the advantages, if any, gained by Maryland and other states that implemented the HILI Smart



Choice project during September 2013–March 2014? [Probes: economic advantages? Social advantages?]

- 3) What about Smart Choice made it compatible, or a good fit, with Extension programming in Maryland? [Probes: Meets consumer needs, reflects community's values, already engaged in health programming?]
- 4) How do you think the complexity of a topic impacts Educators/Specialists decisions, if at all, on whether or not to adopt a new program innovation? [Probes: difficulty of subject matter, difficulty of implementing]
- 5) What about HILI Smart Choice would make you classify it as innovative?
- 6) What were the reasons that appealed to Extension Educators and Specialists to become involved in Smart Choice? [Probe for getting certified; For doing workshops during 2013-14; doing workshops in 2014-15].
- 7) What were the reasons, if any, that Extension Educators and Specialists might not have become involved in HILI Smart Choice? [Probe: Content not relevant, evaluation protocols too burdensome, lack of support back home, lack of time, etc.]
- 8) What would you say to other state CES organizations to encourage them to implement Smart Choice in their states?

#### **Internal Environment Questions**

- 9) How do you think something new catches on in the Extension system? [Probes: Do new things start on the outside or inside of the system, go top to bottom or vice-versa? Driven by a few powerful people? Driven by "opinion leaders?]
- 10) Once something new catches on, how do you think it moves out to or diffuses to the rest of the system? [Probes: Professional associations and meetings? Word of mouth? Opinion leaders? Federal mandates?]
- 11) Think about the entire Cooperative Extension System (CES)—all of us at the land-grant universities providing research-based outreach. This year, 2014, we are celebrating our 100<sup>th</sup> anniversary of the signing of the Smith-Lever Act and celebrating the many innovations that have occurred because of our work in the past 100 years. What types of conditions or circumstances are necessary for a program innovation to **occur** or be developed in the CES system currently? [Probes: Specialists with expertise?

Being connected through professional associations & meetings? Money? Time? Community Needs?]

- 12) Thinking again about the entire Cooperative Extension System, what do you think are the types of conditions or circumstances necessary for educators/specialists to be able to **implement** an innovation? [Probes: Training? Money? Time? Community Needs?]
- 13) In March, ECOP approved the new Cooperative Extension National Framework for Health and Wellness. Health Insurance Literacy is one of six priorities. What do you believe will need to happen for that priority to be emphasized across the Extension System? [Probe for actions around funding; training; data collection, external partners, etc.]
- 14) What are the most important leadership characteristics you think an Extension administrator should have to support Extension Educators who strive to be innovators or adopt innovative programs? [Probes: Open to change? Risk takers? Innovation-minded?]
- 15) What else would you like to tell me that I have not asked you about? [Probe for a response to Smart Choice as well as to innovation.]

## Interview Protocol: ECOP

**Introductory Question**

- 1) In your role with ECOP, you have been a supporter of the Health Insurance Literacy Initiative (Smart Choice) through your advocacy and marketing efforts at the national level. What is it about this project that made you want to support its adoption and implementation in Extension?

**Product Questions**

- 2) What do you think are the advantages, if any, gained by Maryland and other states that implemented the HILI Smart Choice project during September 2013–March 2014?
- 3) What about Smart Choice made it compatible, or a good fit, with Extension programming?
- 4) How do you think the complexity of a topic impacts Educators/Specialists decisions, if at all, on whether or not to adopt a new program innovation?
- 5) What about HILI Smart Choice would make you classify it as innovative?
- 6) What were the reasons that appealed to Extension Educators and Specialists to become involved in Smart Choice?
- 7) What were the reasons, if any, that Extension Educators and Specialists might not have become involved in HILI Smart Choice?
- 8) What would you say to other state CES organizations to encourage them to implement Smart Choice in their states?

**Internal Environment Questions**

- 9) How do you think something new catches on in the Extension system?
- 10) Once something new catches on, how do you think it moves out to or diffuses to the rest of the system?
- 11) Think about the entire Cooperative Extension System (CES)—all of us at the land-grant universities providing research-based outreach. This year, 2014, we are celebrating our 100<sup>th</sup> anniversary of the signing of the Smith-Lever Act and celebrating the many innovations that have occurred because of our work in the past 100 years. What types of conditions or circumstances are necessary for

a program innovation to **occur** or be developed in the CES system currently?

- 12) Thinking again about the entire Cooperative Extension System, what do you think are the types of conditions or circumstances necessary for educators/specialists to be able to **implement** an innovation?
- 13) In March, as you know, ECOP approved the new Cooperative Extension National Framework for Health and Wellness and Health Insurance Literacy is one of six priorities. What do you believe will need to happen for that priority to be emphasized across the Extension System?
- 14) What are the most important leadership characteristics you think an Extension administrator should have to support Extension Educators who strive to be innovators or adopt innovative programs?
- 15) What else would you like to tell me that I have not asked you about?

## Interview Protocol: Implementers

**Introductory Questions**

- 1) Please tell me how you first learned about HILI?
- 2) Please tell me about your role in the HILI Smart Choice Phase II pilot project during the time period of September 2013-March 2014.

**Product Questions**

- 3) As an Educator that conducted HILI Smart Choice workshops and submitted evaluation data, what made you want to implement these consumer workshops in your state?
- 4) What do you think are the **advantages or benefits**, if any, gained by your state in implementing HILI Smart Choice consumer workshops in September 2013-March 2014?
- 5) What about HILI Smart Choice made it **compatible**, or a good fit, with programming that you do in your state?
- 6) Many topics that Extension Educators teach are complex topics, such as health insurance, nutrition, or financial planning. As an Educator/Specialist, how does the **complexity or difficulty** of a topic impact, if at all, your decision on whether or not to adopt or try out a new program or curriculum?
- 7) An innovation is defined as "An idea, practice, or object that is perceived as new by an individual or other unit of adoption." What about HILI Smart Choice, if anything at all, would make you classify it as innovative?
- 8) Almost all Extension Educators are faced with limited time, resources, etc. while, at the same time, there are still many needs in our communities. What about HILI Smart Choice made you willing to invest your time and resources?
- 9) What would you say to other educators/specialists who have not implemented HILI Smart Choice to encourage them to implement it in their states?

**Internal Environment Questions**

- 10) I would like for you to think about being innovative in the Extension system. What types of conditions or circumstances are necessary **today** for Extension Educators to be innovative in programs or products? What do Educators need to practice innovation?

- 11) Now, I would like for you to think about how Extension implements or puts into practice an innovation. What do you think are the conditions or circumstances necessary for educators/specialists to be able to **implement** an innovation?
- 12) There are instances where a new program or curriculum spreads throughout many states. When that happens, how do you think the "something new" catches on in the Extension system? Alternative: If you had to make sure that a program you had developed would successfully be adopted by several states, what do you think are the necessary strategies to make that happen?
- 13) Once something new catches on, how do you think it keeps spreading out to the rest of the system?
- 14) There may be situations where certain state Extension organizations are seen as leaders in new initiatives—those who often appear to be at the forefront of ideas or initiatives. Overall, what do you believe are the characteristics of the state Extension organizations that can step out and drive forward new initiatives or programs throughout the national system?
- 15) What are the most important leadership characteristics you think an Extension administrator should have to support Extension Educators who strive to be innovators or adopt innovative programs?
- 16) What else would you like to tell me that I have not asked you about?

## Interview Protocol: Non-Implementers

**Introductory Questions**

- 1) Please tell me how you first learned about HILI?  
{awareness-knowledge}
- 2) You attended the HILI Smart Choice train-the-trainer workshop and became certified to teach consumer workshops in your state. What made you want to attend the training and become certified? [Probe: What were the advantages to you of attending the training? Disadvantages, such as time away from office, cost?] {perceived value, attitude, advantages/disadvantages, decision}
- 3) After completing the training, what were your feelings about offering the workshops to consumers? [Probes: Compatibility? Value? Complexity? Advantage?] {attitude formation-affective}

**Product Questions**

- 4) At this point, you have not had the opportunity to teach consumer workshops. Please tell me what have been barriers to you teaching workshops in your state. [Probe: Content not relevant, evaluation protocols too burdensome, lack of support back home, lack of time, etc.]
- 5) What could be done to reduce these barriers in order for you to deliver workshops in 2015? [Probe: Content more relevant, help with evaluation, more support back home, more time, etc.]
- 6) Many topics that Extension Educators teach are complex topics, such as health insurance, nutrition, or financial planning. As an Educator/Specialist, how does the **complexity or difficulty** of a topic impact, if at all, your decision on whether or not to adopt or try out a new program or curriculum? [Probes: difficulty of subject matter, difficulty of implementing]
- 7) What is it about a new program in Extension that would make you classify it as innovative?
- 8) What is it about a new program that makes you believe it is a worthwhile investment of time and resources? [Probes: Able to part of a pilot project for limited time? Access to already developed training and materials?] {Trialability, Observability}

**Internal Environment Questions**

- 9) I would like for you to think about being innovative in the Extension system. What types of conditions or circumstances are necessary **today** for Extension Educators to be innovative in programs or products? What do Educators need to practice innovation? [Probes: Specialists with expertise? Being connected through professional associations & meetings? Money? Time? Community Needs?]
- 10) Now, I would like for you to think about how Extension implements or puts into practice an innovation. What do you think are the conditions or circumstances necessary for educators/specialists to be able to **implement** an innovation? [Probes: Training? Money? Time? Community Needs?]
- 11) There are instances where a new program or curriculum spreads throughout many states. When that happens, how do you think the "something new" catches on in the Extension system? Alternative: If you had to make sure that a program you had developed would successfully be adopted by several states, what do you think are the necessary strategies to make that happen? Probes: Do new things start on the outside or inside of the system, go top to bottom or vice-versa? Driven by a few powerful people? Driven by "opinion leaders?]
- 12) Once something new catches on, how do you think it keeps spreading out to the rest of the system? [Probes: Professional associations and meetings? Word of mouth? Opinion leaders? Federal mandates?]
- 13) There may be situations where certain state Extension organizations are seen as leaders in new initiatives—those who often appear to be at the forefront of ideas or initiatives. Overall, what do you believe are the characteristics of the state Extension organizations that can step out and drive forward new initiatives or programs throughout the national system? [Probes: Open to change? Risk takers? Innovation-minded people? People skills? Power?]
- 14) What are the most important leadership characteristics you think an Extension administrator should have to support Extension Educators who strive to be innovators or adopt innovative programs? [Probes: Open to change? Risk takers? Innovation-minded?]
- 15) What else would you like to tell me that I have not asked you about? [Probe for a response to Smart Choice as well as to innovation.]



## Interview Protocol: HILI Team

**Introductory Question**

- 1) In your roles as HILI team members, you have been intimately involved in the development of the materials and project during Phase II. What is it about this project that made you want to support its creation, adoption, and implementation in Extension? [Probe: What were the advantages to you of supporting the Smart Choice project? What were the disadvantages, if any?] {perceived value, attitude, advantages/ disadvantages, decision}

**Product Questions**

- 2) What do you think are the advantages, if any, gained by Maryland and other states that implemented the HILI Smart Choice project during September 2013-March 2014? [Probes: economic advantages? Social advantages?]
- 3) What about Smart Choice made it compatible, or a good fit, with Extension programming? [Probes: Meets consumer needs, reflects community's values, already engaged in health programming?]
- 4) How do you think the complexity of a topic impacts Educators/Specialists decisions, if at all, on whether or not to adopt a new program innovation? [Probes: difficulty of subject matter, difficulty of implementing]
- 5) What about HILI Smart Choice would make you classify it as innovative?
- 6) What were the reasons that appealed to Extension Educators and Specialists to become involved in Smart Choice? [Probe for getting certified; For doing workshops during 2013-14; doing workshops in 2014-15].
- 7) What were the reasons, if any, that Extension Educators and Specialists might not have become involved in HILI Smart Choice? [Probe: Content not relevant, evaluation protocols too burdensome, lack of support back home, lack of time, etc.]
- 8) What would you say to other state CES organizations to encourage them to implement Smart Choice in their states?

**Internal Environment Questions**

- 9) How do you think something new catches on in the Extension system? [Probes: Do new things start on the outside or inside of the system, go top to bottom or vice-versa?]

Driven by a few powerful people? Driven by "opinion leaders?]

- 10) Once something new catches on, how do you think it moves out to or diffuses to the rest of the system? [Probes: Professional associations and meetings? Word of mouth? Opinion leaders? Federal mandates?]
- 11) Think about the entire Cooperative Extension System (CES)—all of us at the land-grant universities providing research-based outreach. This year, 2014, we are celebrating our 100<sup>th</sup> anniversary of the signing of the Smith-Lever Act and celebrating the many innovations that have occurred because of our work in the past 100 years. What types of conditions or circumstances are necessary for a program innovation to **occur** or be developed in the CES system currently? [Probes: Specialists with expertise? Being connected through professional associations & meetings? Money? Time? Community Needs?]
- 12) Thinking again about the entire Cooperative Extension System, what do you think are the types of conditions or circumstances necessary for educators/specialists to be able to **implement** an innovation? [Probes: Training? Money? Time? Community Needs?]
- 13) In March, as you know, ECOP approved the new Cooperative Extension National Framework for Health and Wellness and Health Insurance Literacy is one of six priorities. What do you believe will need to happen for that priority to be emphasized across the Extension System? [Probe for actions around funding; training; data collection, external partners, etc.]
- 14) What are the most important leadership characteristics you think an Extension administrator should have to support Extension Educators who strive to be innovators or adopt innovative programs? [Probes: Open to change? Risk takers? Innovation-minded?]
- 15) What else would you like to tell me that I have not asked you about? [Probe for a response to Smart Choice as well as to innovation.]