

LOCAL GOVERNMENT DECISIONS IN A TIME OF ECONOMIC DECLINE:  
A STUDY OF COUNTY GOVERNMENT BUDGET POLICY  
DURING THE GREAT RECESSION

by

Darrin Hugh Eugene Wilson

A Dissertation Submitted to the Faculty of  
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Doctor of Philosophy

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This dissertation was prepared under the direction of the candidate's dissertation advisor, Dr. Clifford P. McCue, School of Public Administration, and has been approved by the members of his supervisory committee. It has been submitted to the faculty of the College of Design and Social Inquiry and was accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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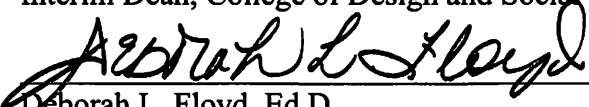
  
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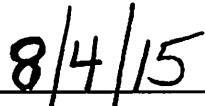
  
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My desire to study public administration comes from the people I have met during my life and I hope this work can help make their lives a little better.

## ABSTRACT

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This dissertation examined the literature of cutback management in the context of the Great Recession. Specifically, it studied the relationship between cutback management policies used by county governments during the recession and revenue changes.

The purpose of this dissertation was to test whether or not the percent change in revenue had an impact on the probability that cutback management policies were used in the recession. According to the cutback management literature developed in the 1970s and 1980s, there should be a relationship.

The theoretical framework used for this study was the rational-approach framework, which proposes that every expenditure reducing and revenue increasing policy is enacted based on the percent decrease in revenue the government faces. This suggests that the cutback management policies are a proportional response to revenue decline. The framework was operationalized by using a binary logistic regression that

used policy enactment as the dependent variable and the percent change in revenue as the independent variable. Eighty-six counties were sampled and 7 years of each county's budget book were examined for policies and financial data.

The research found that eleven expenditure policies and three revenue policies had a statistically significant relationship with the percent change in revenues. This resulted in the conclusion that the framework and, therefore, the cutback management literature were useful in explaining primarily expenditure policies.

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## CHAPTER 1: INTRODUCTION

“Those who cannot remember the past are condemned to repeat it.” —George Santayana, *Life of Reason, Reason in Common Sense* (1905, p. 284).

Dealing with the fiscal impact of economic recessions and depressions are nothing new for state and local governments. According to the National Bureau of Economic Research (NBER, 2014), since the Great Depression of the early 1930s, governments have experienced 13 periods of economic decline. During economic decline, governments must make difficult choices, whether it is increasing taxes, cutting public programs, or laying employees off. It is important to reassess those actions in order to develop better budgeting tools for future recessions. With the knowledge of previous recessions and the development of new ways of managing the organization, public officials can make better decisions for their citizens and employees.

During the most recent recession in 2007, known as the “Great Recession,” governments faced unprecedented revenue decline while dealing with continual increases in expenditures. From September 2008 to January 2013, an estimated 744,000 state and local government jobs were cut (Long, 2014). This was a result of state and local governments having to operate with a balanced budget, which limited their budget policy options. Every budget policy enacted had a direct impact on the citizens within the community, whether it was closing an elementary school, reducing the number of police officers patrolling the streets, cutting medical programs, or closing libraries. Therefore, it

is important to reexamine the policy measures taken by county governments during the most recent recession in order to create better policies for future recessions.

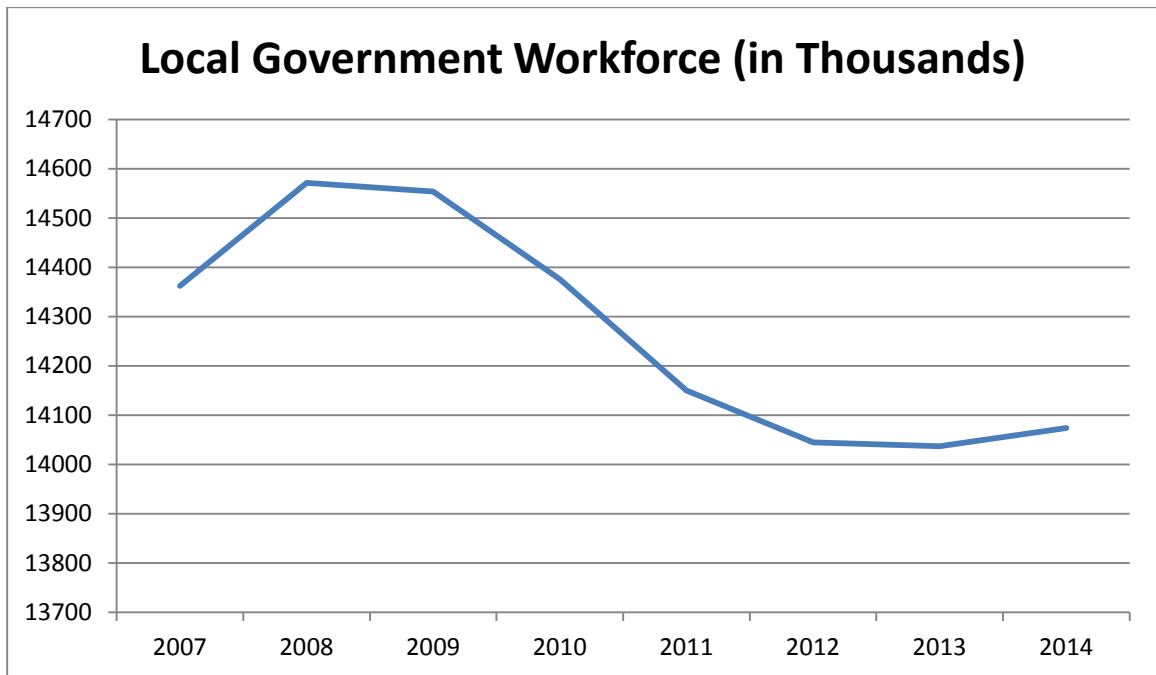


Figure 1. Total local government workforce in the United States (in thousands). Adapted from Bureau of Labor Statistics (2015).

In public budgeting, the area of literature that focuses on how local governments respond to revenue declines because of recessions is known as *cutback management*. The expression is derived from the recessions during the 1970s and early 1980s and describes the budget policies local governments used to close their budget deficits (Levine, 1978). When a recession occurs it puts pressure on the fiscal health of local governments by creating a financial situation where the governments are less solvent (Rivenbark, Roenig, & Allison, 2010; Wang, Dennis, & Tu, 2007). In other words, when a local government is in an economic recession they have fewer resources available to meet their current financial obligations. Therefore, the local government finds ways to balance their budget

by using cutback management strategies that reduce their expenditures or increase revenues.

One of the developments discovered in the literature was the Rational-Approach Framework, which concluded that local governments implement similar expenditure reducing and revenue increasing policies based on how much revenue is lost from year to year. However, the framework has not been tested since the 1980s primarily because the U.S. economy has only experienced one recession, lasting only 8 months, between 1991 and 2007. Having few recessions in recent times has resulted in a lack of opportunities to test the framework to see if there is a relationship between budget policies and the amount of revenue loss.

The Great Recession provides scholars an opportunity to test the premise of the rational-approach framework. This dissertation attempts to address this need in the cutback management literature. The research question proposed is, “What cutback management policies are used by county governments during a prolonged economic decline?” The findings from this research will contribute to the literature by identifying what cutback management policies were used in the most recent economic recession and what factors contribute to their adoption. Additionally, the findings will help county lawmakers understand what cutback management policies other county governments used during the recession, which can make them better informed for future recessions.

### **Cutback Management**

Cutback management scholars have shown that local and state governments use a wide variety of cutback management policies to close their budget deficit during recessions. Some governments have cut expenditures by laying employees off (Berne & Stiefel, 1993; Chackerian, 1996; Levine, Rubin, & Wolohojian, 1981), placing a hold on

hiring new employees (Levine, 1978; Miller, 1983), and deferring planned capital expenditures (Berne & Stiefel, 1993; Levine et al., 1981). Additionally, some governments have chosen to increase their revenues by borrowing more (Miller, 1983), increasing taxes (Maag & Merriman, 2003), and finding intergovernmental funding (Levine et al., 1981). One of the recent developments emanating from the cutback management literature was the rational-approach framework developed by Levine, Rubin, and Wolohojian (1981). Their framework addressed on what rational basis cutback management policies would be implemented. The rationality of the framework is based on the idea that policymakers are forced to manage their organization's decline during an economic recession and therefore budget decisions are based on efficiency versus political needs (Cameron & Zammuto, 1983; Scorsone & Pierhoples, 2010).

However, during the 1990s and 2000s there was very little advancement of the cutback management literature and why certain policies were chosen over others (Pandey, 2010). The main reason for the lack of advancement was due to the economic growth experienced in most communities in the U.S.

### **The *Great Recession* of 2007**

A number of scholars contend that the recession of 2007–2009 was one of the worse economic downturns since the Great Depression (Elsby, Hobijn, & Sahin, 2010; Jenkins et al., 2012). In fact, this economic downturn started in December 2007 and lasted through June 2009 (NBER, 2014). It was during this time that most state and local governments had to refocus their attention from managing growth (experienced over the preceding two decades) to a position of fiscal retrenchment. Unfortunately, those responsible for managing the public finances had little direction, both academically and practically, on what strategies to use to address the growing disparity between revenues

growth and increasing public service demands. In fact, public administrators had to look back to the cutback management literature of decades ago for potential policy solutions to their growing fiscal stress because organizations such as the International City/County Management Association (2009) and the National League of Cities advocated these policies to local governments as tools to manage revenue decline (Kemp, 2009; Miller & Svara, 2009; Scorsone & Pierhoples, 2010).

As the quote from George Santayana noted, if you fail to learn from the past you are condemned to repeat your mistakes (1905, p. 284). Within this context, the purpose of this study is to determine what policies local governments enacted during the Great Recession and compare those actions to the actions of local governments during the recessions of decades before. Specifically, this study applies the rational-approach framework developed by Levine et al. (1981) to see whether or not local governments “learned from the past” by applying the tenets of their approach.

According to the rational-approach framework when local governments face declining revenue they will use expenditure reducing and revenue increasing budget policies to balance their budget. Expenditure reducing policies include laying off full-time employees, reducing or eliminating public services, and deferring maintenance. Revenue increasing policies include increasing the millage rate, selling assets, and increasing user fees. The framework suggests that the probability of enacting these policies will be statistically significant with the change in revenue because each of the policies are a response to different levels of revenue decline.

The data used to determine whether or not there was a significant relationship between revenue decline and the enactment of each cutback management policy were gathered from 86 county governments from 2006 to 2012. For each year and each



government in the sample, their budget books were examined for policy and revenue data. In order to study specific budget policies this dissertation sampled the county governments awarded the Government Finance Officers' Association Budget Presentation Award every year between 2006 and 2012. The reason why this was necessary is due to the lack of a national budget document standard in which every local government gives a detailed account of what budget policies differed from the previous year.

This study provides significant conclusions for the future of cutback management by testing whether or not the enactment of cutback management policies during the Great Recession followed the same pattern as in the previous cutback management literature. If the rational-approach framework confirms a significant relationship between cutback management policies and a percentage drop in revenue, then it can be concluded that the thesis of cutback management still holds true. However, if the framework does not confirm significance, then future research needs to be done to examine what other causes there may be for cutback management policies to be enacted.

### **Budgeting During a Recession**

Schick and LoStracco (2000, p. 33) wrote it best, "Every budget is hostage to economic performance." One area of the body of cutback management literature focuses on why policies to decrease expenditures and/or increase revenues during a recession are enacted. This area of the literature tries to address what Key wrote in 1940, but instead of how to allocate X dollars when X is growing, how to determine which activity, A or B, to cut when X is declining.

The strategies used when government policymakers cut their budget consist of a wide swath of changes to expenditures and revenues when they face a fiscal crisis. Berne

and Stiefel (1993) found that New York City cut staff salaries, staff positions, and capital expenditures. Miller (1983) looked at what cuts were made by state governments during a recession and found state governments made across-the-board cuts, introduce hiring freezes, restricted travel, and use bonds. On the revenue side, Maag and Merriman (2003) found some states used rainy-day funds and tax increases to make up the shortfall of revenue. However, from a review of the literature on cutback management, governments are more likely to focus their efforts on cutting expenditures rather than raising revenues because citizens typically do not want to be taxed during a recession (Afonso, 2013).

### **The Great Recession and Local Government**

According to Pagano (2013) there have been four eras of municipal finance. The first was the pre-Depression era when local governments were dependent on property taxes, and property was primarily owned by families with wealth. The second was the crash of 1929 until the end of the Great Society programs. In this era municipalities diversified their tax base by introducing non-property taxes, such as the sales tax. Additionally, the federal government offered financial help to local governments to pay for infrastructure improvements and social programs. The third era was the advent of the *tax revolt* in the late 1970s when there was a sudden and sharp decline in property tax revenues and a reduction in financial help from the federal government. During this era a significant number of local governments implemented user fees to pay for services when the traditional sources of revenue dried up. Finally, the fourth era is the post Great Recession period in which we are living.

In the United States, local governments were hit hard during the recession. Local governments experienced some of the largest decreases in tax revenue in more than 20

years (see Figure 1), and pessimism about meeting the financial needs of local government was at an all time high among administrators (see Figure 2).

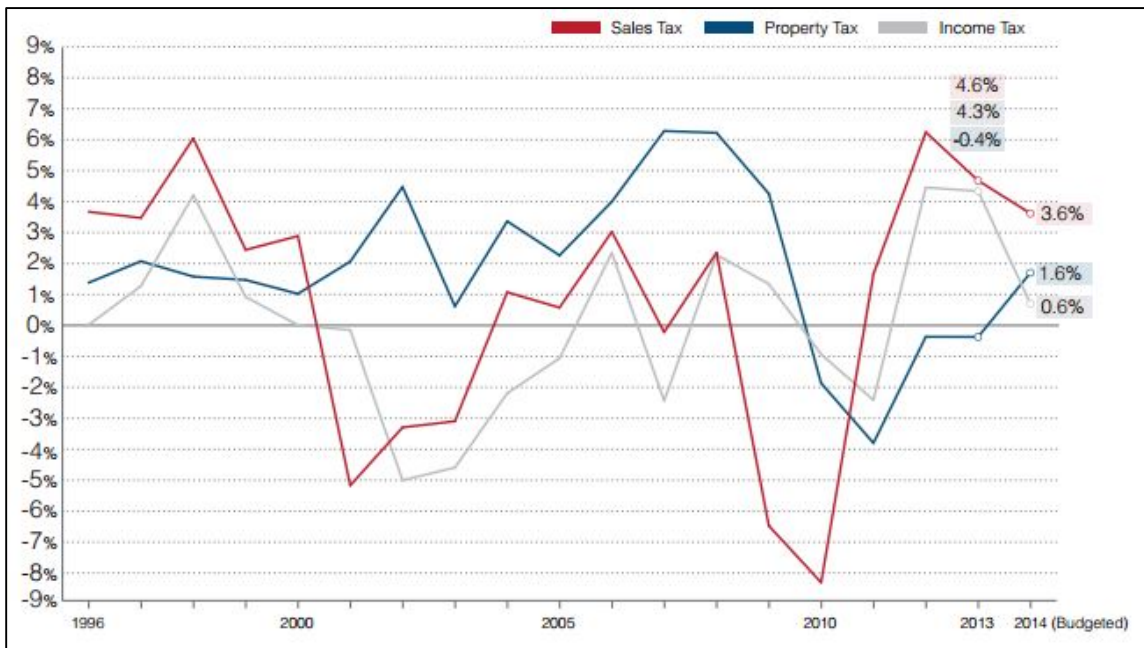


Figure 2. Year-to-year change in general fund tax receipts (constant dollars). Adapted from McFarland and Pagano (2014).

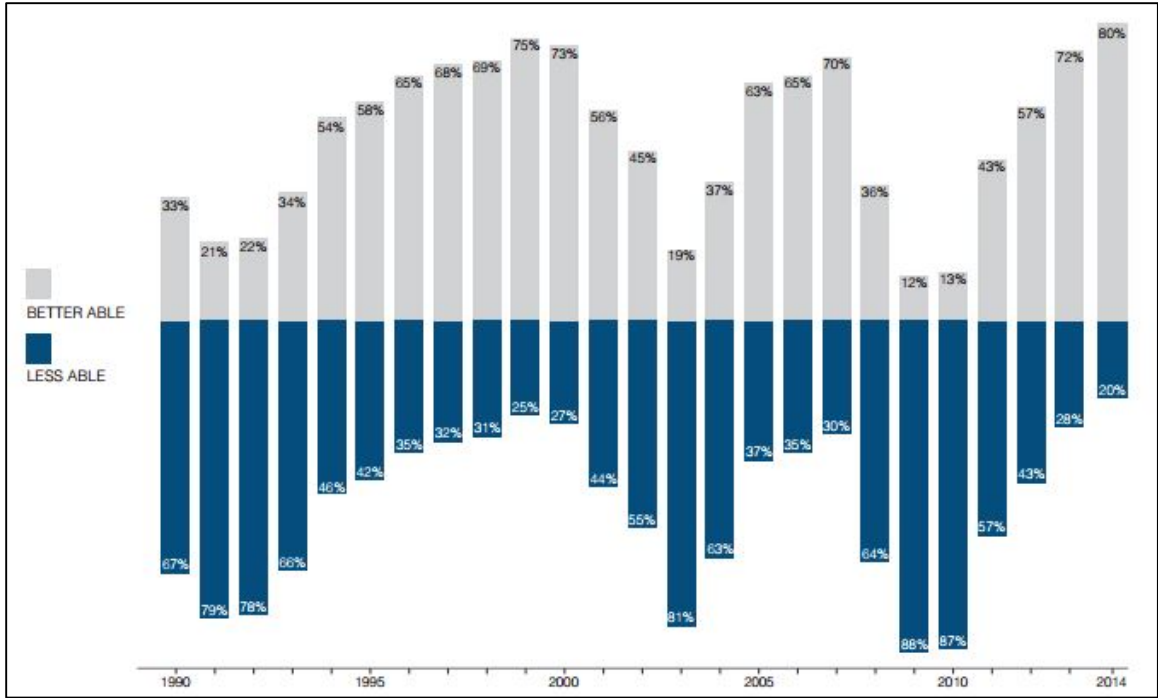


Figure 3. Percentage of cities “better able/less able to meet financial needs in FY 2014.” Adapted from McFarland and Pagano (2014).

The period of austerity that is going on now has been dubbed by some scholars the *New Normal* (Martin, Levey, & Cawley, 2012). It is defined as local governments having to reexamine their role in their community and determine what public goods they can provide with fewer resources and smaller workforces. Additionally, many local governments are constrained by state laws that cap how much they can tax and spend, similar to Colorado’s Taxpayer’s Bill of Rights (TABOR).

By 2009, 90% of city governments had cut their expenditures, and 82% of them planned on cutting them again (Hoane & Pagano, 2009). At the county level, 78% had adopted a hiring freeze, 53% decreased employee benefits, 47% instituted furloughs, 46% increased user fees, and 39% fired employees, according to a 2010 study by Afonso (2013). All of this suggests that local governments felt the effects of the recession and were using cutback management strategies to deal with their declining revenue.

As of today, we know what policies local governments, specifically counties, used during the recession. They are identical to the policies described by the cutback management literature in the 1970s and 1980s. According to the literature, the enactment of each policy should be driven by the severity of declining revenue and, therefore, follow a pattern, similar for each local government (Levine et al., 1981).

### **Scope of Research**

This dissertation focuses on the effects declining revenues have on the probability of county governments enacting cutback management policies during the Great Recession. The years examined were fiscal years 2006–2012 with the recession officially beginning in December 2007 and ending June 2009 (NBER, 2014). All budgets were adopted the previous year. For example, the 2006 budget document was developed in 2005. Fiscal years 2006 and 2007 were chosen in order to capture the revenue and policy changes before the recession as a baseline. Fiscal years 2011 and 2012 were chosen to capture any lingering effects the recession had on revenue and policy, such as the new normal.

In order to conduct this analysis, the source of data must be similar for all the county governments studied. In the United States there are no national laws on how local governments must present their budgets. Therefore, in order to study the policies county government enacted in any given year a standard must be found. The Government Finance Officers Association (GFOA) has an award program that encourages local governments to publish their budget in a way that is transparent and standardized. One of the criteria to receive the award is to have a section of the budget, typically a transmittal letter, outlining the policies and budget priorities in the upcoming fiscal year (Appendix). From this basis, there were 164 county governments that won the award each year of the

study. Of those 164 counties, 86 offered all of their budget books, through either their website or by request.

There are limitations in using such a small and narrow sample of county governments. First, there are 22 states represented in this study, which leaves over half of the states not represented in the study. Each state has unique laws for their local governments, and every state has a unique economy. Second, the time it takes to put together an award-winning budget may prohibit small counties with limited resources and staff to apply for the award. Finally, the results rely on the policy data that is supplied by the county government, and while policy changes should be mentioned in the budget book, there is a chance that some may be left out. As a result, having a small sample from which to draw conclusions may limit the generalizability of the conclusions drawn from this study.

### **Methodological Approach**

The policy data came from the administrator's message in each budget book. Each cutback management strategy implemented by the county government was identified through content analysis. Additionally, the budget book provides the county revenue data, which include the general and special revenue funds. Variables to account for the state, unemployment rate, population, political ideology, and recession year were used. All of the data were analyzed using IBM SPSS 22.

The methodological tool for this dissertation was the binary logistic regression. Unlike OLS, the binary logistic regression is used for a dichotomous variable as its dependent, and interval, ratio, and dichotomous variables as its independents. The dependent variables tested were the 19 cutback management strategies used by county governments, dichotomously coded to represent if the policy was used or not in that fiscal

year. The predictor variable tested in this study was the percentage change in revenues from year to year.

### **Outline of the Argument and Dissertation**

The main purpose of this dissertation is to determine whether or not revenue decreases, because of the recession, impacted the probability of implementing the cutback management policies examined in this study. Therefore, the rational-approach framework is used to determine if this was the case or not. According to the descriptive statistics of recent studies of the Great Recession cutback management strategies were used by most if not all county governments (Afonso, 2013; Hoane & Pagano, 2009). The original cutback management literature suggests these strategies are deployed in a systematic way, based on the change in revenue compared to the previous fiscal year (Levine et al., 1981; Wolman, 1980).

Chapter 2 establishes the theoretical framework used in this study by discussing the competing theories on local government budgeting, as well as a detailed discussion of the main topics in the cutback management literature. Chapter 3 discusses the methodological approach taken in this dissertation, specifically the role content analysis played in the binary logistical regression. Chapter 4 reveals and discusses the findings of the research. Chapter 5 discusses the implications of the findings, as well as the future research that should come from this dissertation.

## CHAPTER 2: LITERATURE REVIEW

This chapter of the dissertation details the rational theory of behavior that provides the foundation of all budget theories, main theories of public budgeting, literature on cutback management, and the framework tested in this dissertation—the rational-approach framework.

The rational theory of behavior is an integral part of how the fields of political science and public administration examine budget policy change. The predominant budget theories—Incrementalism to Punctuated Equilibrium Theory—explain changes to budget policy through the lens of political behavior. The main idea of these theories is that budget changes occur on the basis of competing political interests seeking to maximize what they can out of the government's budget. In local government budget theory, the competing actors tend to be the elected officials and the bureaucracy. In general, these theories are useful when explaining budget changes. However, they do not address the impact economic factors, such as a change in revenue have on budget decisions in good and bad economic times. Cutback management, specifically the rational-approach framework addresses that gap when governments face declining revenues over a prolonged period of time.

The literature on cutback management focuses on why local government policymakers choose expenditure reducing and revenue increasing policies, known as cutback management policies, during a recession. The main argument of the literature is that these policies are enacted based on rational economic, not political, reasons. The



policies are chosen for their financial impact with little consideration for their political impact because the most important thing for policymakers is to close the budget gap.

The following sections of this dissertation were designed to show the foundation of budget theory and show the differences between the political views of public budgeting versus the economic view of public budgeting. This is an important distinction to lay out in the literature review because for decades the main theories of public budgeting have dominated the literature because for the most part the U.S. economy has been performing very well, whereas the rational-approach framework explanatory power comes from how local government budget during an economic recession.

### **Rational Theory**

The predominant view about the role government plays in the U.S. economy stems from the neo-classical, rational tradition (Galbraith, 2014). Small government, personal self-interest, and public choice have been the themes from economists such as Hayek (1944), Friedman and Schwartz (1963), and Buchanan (1965).

The theory argues that individuals advocate a policy that makes them better off. In other words, people will always choose something that makes them better off, rather than something that makes them worse off. In the case of cutback management, the focus is on finding policies that adequately close the budget gap because that is the top priority of policymakers. Decisions are derived from the outcome of measuring marginal cost (MC) and marginal benefit (MB). When the outcome of a decision provides greater MB than MC, the individual will choose that decision. When the outcome will have the opposite impact on an individual,  $MB < MC$ , the individual will choose a different course of action. In cases where  $MB = MC$  the individual is indifferent because he or she will not be better or worse off than before.

The rational theory has been applied to public budgeting by examining the behavior of two primary players in the budget process, politicians and bureaucrats. According to Key (1940) the elected official should be motivated to maximize the social welfare of their community. On the other hand, the elected official is motivated by the number of votes they can secure for their re-election (Peltzman, 1976). However, in most cases the budget is developed by the bureaucracy. The elected official relies on the knowledge and expertise of the chief administrator, chief financial officer, and their supporting staff, as is the case in most hierarchies (Gianakis & McCue, 1999; Meier & O'Toole, 2006). As with all rational creatures, the bureaucrat will attempt to maximize their budget during each budget cycle (Niskanen, 1971). Since merit pay is typically set by regulation, the bureaucrat will try to maximize their discretionary budget in order to gain the benefit from the additional resources provided. In order to accomplish this, they will use their advantage of asymmetric information, because elected officials usually are reliant on the bureaucracy to provide them with the information needed make decisions.

Public officials and the bureaucracy compete with one another for the allocation of resources. The political tension created because of the rational behavior of the actors is the main focus of public budgeting theory.

### **Incrementalism**

Incrementalism is derived from the rational theory in economics. The incremental approach to budgeting is about making decisions on the margins (Lewis, 1952). Rational actors will try to gain what they can from the overall budget growth. Therefore, with many actors, each actor tries to increase their total utility by making decisions that increase their marginal utility.

Wildavsky (1964) and Fenno (1966) originally argued the incremental approach of budgeting at the federal level. Both of them argued that the political environment surrounding congressional appropriations did not allow for significant changes to the federal budget from year to year. Wildavsky (1964) explained that incrementalism was a form of conflict resolution among political interests that ordered policy preferences. The conflict arose from a decentralized budgeting system consisting of multiple congressional committees overseeing different agencies. The agencies and outside political organizations used their allies in Congress to fund their activities. By giving everyone no more than 10%, the appropriations committee could ease the political friction surrounding the budgeting process (Fenno, 1966). However, as a consequence of small year-to-year changes, it creates a limited amount of policy choices for congressional leaders to choose from. Therefore, it was more difficult for leaders to push large policy changes that would require a significant amount of funding.

Incrementalism has been found at the state level as well. Two studies conducted by Sharkansky (1967, 1968) suggested widespread use of incremental budgeting in state governments. Legislators and governors used the previous budget as a baseline for allocating resources to agencies. The baseline was found to be the single most important factor in allocating resources (1967). This was found particularly true when the legislature and government had significant input in the budgeting process. Anton (1966) conducted a study on the state of Illinois' budget process. In Illinois, there was significant friction between negotiating parties and in order to pass the budget incremental changes were made.

Finally, at the local level, incremental budgeting also has been found. Crecine (1969, 1970) developed a computer simulation to understand how political factors

impacted the municipal budgets of Cleveland, Detroit, and Pittsburgh. On the whole, the cities incrementally changed their budget every year of the study. The reason for the incremental change was due to the political fragmentation in each city. Only when the federal government injected additional funds into the cities did they deviate from the incremental pattern. In another study, Meltsner (1971) looked at the budget environment in Oakland, California. He found that Oakland had the same outcome as the cities in Crecine's 1970 study, but for a different reason. In Oakland, Meltsner concluded that incremental budgeting was a result of the city having little autonomy over its own finances because of state laws and very little political desire to increase taxes.

At every level of government in the United States incrementalism has been observed. This is mainly due to the political environment surrounding the budgetary process, which exists no matter if observing the federal government, a state government, or local government. Political friction among competing interests is a political reality and that is the foundation of incrementalism's argument.

Since the publications of Wildavsky (1961) and Fenno (1966), incrementalism has come under fire by those who believe it is too simple of a theory of budgeting (Tucker, 1982). Each side has made good points about the validity of incrementalism. However, there are some arguments from those questioning incrementalism that cannot be addressed by its supporters.

At the extreme, LeLoup (1978) called incrementalism a "myth" because it bias "towards stability and against change" (p. 509), and Bailey and O'Connor (1975) do not believe budgeting is an appropriate venue for incrementalism to be applied. Nevertheless, there is no doubt that incremental budgeting does happen sometimes, or most of the time.

Wanat (1974) took issue with Davis, Dempster, and Wildavsky's (1966) version of incrementalism as an explanatory tool. Wanat believes that incrementalism is a descriptive tool to talk about the budgetary process. However, that is as far as he will go. He argues against the notion that political friction among participants explains why incrementalism occurs. Wanat (1974) proposes an alternative reason for incremental budget changes, laws mandating incremental budget increases for agencies. According to Wanat, there are mechanisms in the federal government to automatically increase an agency's budget from year to year without approval from the Appropriations Committee.

In situations with automatic approval of incremental increases there is still room to doubt incrementalism's explanatory behavior. Natchez and Bupp (1973) highlighted two characteristics of incrementalism. First, the term does not explain the chaotic political dealings between actors in order to maintain a stable budget. Incrementalism takes a stable budget as given, and assumes the political horse-trading is only in the incremental increase. Second, it doesn't take into account major shifts of policy. For example, the creation of the Medicare and Medicaid systems was a major policy shift in the federal government, and the budgetary reaction to that change would not be explained by incrementalism. Additionally, the Patient Protection and Affordable Care Act, also known as Obamacare, made significant policy changes to the U.S. healthcare system such as not allowing insurance companies to deny coverage because of pre-existing conditions and allowing dependents to be covered on their guardian's insurance until they are 26.

Since no government can operate in a perpetual state of incremental change, what causes government budgets to move from incremental to non-incremental change? Some have argued that non-incremental changes stem from significant shifts in the economic and political environments (Jordan, 2003). According to Punctuated Equilibrium Theory

(PET), non-incremental budget shifts occur when the policy agenda significantly changes (Baumgartner & Jones, 1993; True, 1995; Jones, Baumgartner, & True, 1998). Policy shifts can occur for three reasons: (a) changes to GDP growth, (b) changes in political control of government, and (c) changes in the political mood of the people (Jones et al., 1998). Tohamy, Dezhbakhsh, and Aranson (2006) specifically found that a high discount rate of borrowing, a large financial deficit, and a change to Democratic control of government created periods of non-incremental budgeting. Most studies of non-incremental budgeting have focused on the federal budget. However, Jordan (2003) and Mortensen (2005) found the practice of non-incremental budgeting in local governments.

Incremental budgeting is typically the normal operating procedure for most governments but there are periods of non-incremental budgeting (True, 1995). Based on Fenno's (1966) work, policymakers will change an agency's budget within 10% during periods of incremental budgeting. However, how do policymakers change an agency's budget when they are forced to make non-incremental changes? Most governments, primarily local, keep the status quo when they can and therefore it is reflected in their budget. Even so, this isn't the case when they are faced with an economic recession. There has been a large body of literature created to explain non-incremental budgeting during a period of economic decline.

### **Garbage Can Model**

The Garbage Can Model (Cohen, March, & Olsen, 1972) explains non-incremental policy change as a product of structure variability, such as organized anarchies. Structures are a "loose collection of ideas than as a coherent structure; it discovers preferences through action more than it acts on the basis of preferences" (Cohen et al., 1972, p. 1). Unlike incremental policy change, decisions are not solely

based on previous incremental behavior. In organized anarchies, policy change occurs because of three characteristics of the organization: problematic preferences, unclear technology, and fluid participation.

First, problematic preference is the problem the organization has in obtaining a consensus. Similar to the observations of Samuelson (1948) and Lindblom (1959), people will not show their true preferences. Therefore, conflict can occur between individuals as they maximize what benefit they can and limit the cost of showing their preference. The lack of a clear consensus and policy direction creates a variable environment of preferences, rather than a coherent structure.

Second, unclear technology refers to the specialization of each individual in the organization. Information is fragmented among various departments and individuals. Since the information is not centralized, it prohibits policymakers of knowing the full capabilities of the organization. There is the potential of adopting a policy without knowing if the organization has the capability of implementing it and can lead to the policy being adopted in ambiguity.

Finally, the characteristic of fluid participation dictates that participants can easily enter and leave the policy process as they wish. When the subject matter changes, the decision makers could change as well. However, even if the subject matter does not change, the individuals making the decision could change. The fluid participation of individuals in the policy process could lead to a chaotic environment, which in turn could lead to differing opinions on how to solve policy problems.

The Garbage Can Model says there are four streams that flow through an organization: policy problems, policy solutions, participants, and choice opportunities. All four streams are independent of one another. Policy problems and solutions are

placed into the *garbage can* (i.e., the choice opportunity) by participants. When a policy problem matches a solution, policy change occurs.

The main point of the Garbage Can Model is that all policy changes happen under the veil of ambiguity. Participants do not share their true preferences, do not know the full capabilities of their organization, and can leave the policy process anytime they want. Together, this creates an unstructured environment for policy change.

### **Policy Streams**

Similar to the garbage can model, Kingdon's (1984) Policy Streams use the same three characteristics of an organization. Where Kingdon differs from Cohen et al. (1972) is the type of streams flowing through the organization. The three policy streams he proposes are problem recognition, the formation of policy proposals, and politics. The streams are mostly independent from one another; however, the same actors typically influence each stream.

According to Kingdon (1984), there are three mechanisms that bring policy problems to public officials' attention. The first are indicators, measurements that monitor the policy area, and if the indicators show potential policy problems then public officials will seek to address the problem. For example, the unemployment rate or the debt-to-GDP ratio could rise to a level that triggers action by policymakers. The second mechanism encompasses events or crises that bring attention to a particular problem. The financial crisis of 2008, specifically the bankruptcy of Lehman Brothers, forced federal officials to recognize the potential collapse of the world financial system. Finally, feedback from formal evaluations or citizen input can bring a policy problem to the forefront of the policy agenda. In the case of all three mechanisms, information heightens the awareness of policy problems.



In Policy Streams (Kingdon, 1984), there are two major contributors to the formation of policy proposals. The policy communities consist of researchers at universities, think tanks, and government agencies. The policy community can have very low fragmentation, which results in a similar language, way of thinking, and common belief among all of the participants. However, the community can be highly fragmented. This results in conflict between participants on everything from how to define the problem to what actions should be taken. The second major contributor to policy proposals is what Kingdon (1984) calls the policy entrepreneur. The entrepreneur advocates for a particular policy solution and invests his or her time and money to promote its adoption. He or she builds a coalition of support for their solution and tries to protect against competing interests.

In the political stream, there are three ways of building consensus that match the problem and solution streams. The first is the national mood. As the mood of the nation changes, so does the window of opportunity to push policy changes. For example, when the national economy is on the minds of the majority of people it is easier to pass major economic legislation. The second way of building consensus is through organizing political forces. Proponents of a particular policy solution will work with political forces outside of their policy area in order to push through legislation. As the window of opportunity shifts from one policy area to another, the organization that received help before now returns the favor. Finally, changes in government administration create windows of opportunity. As the administration changes from one group to another they bring on new personnel and ideological views. For example, if the new administration changes the government focus to cutting the deficit they can place administrators capable

of implementing cost-cutting measures in key positions and create a window of opportunity for change in this policy area.

Policy Streams (Kingdon, 1984) focused on the political environment surrounding policy change, whereas the Garbage Can Model (Cohen 1972) focused on the internal environment of institutions. Both models do not address incremental policy change; instead, they try to explain why non-incremental policy change occurs.

### **Punctuated Equilibrium Theory**

Punctuated Equilibrium Theory (PET) takes the non-incremental theories of Cohen et al.'s (1972) Garbage Can Model and Kingdon's (1984) Policy Streams and combines them with incrementalism (Baumgartner & Jones, 1993). It is an agenda-based theory that explains why after long periods of having a steady (i.e., incremental) policy environment there can be a sudden policy change, sometimes triggered by a recession, that results in a new steady state (Baumgartner & Jones, 1991).

According to PET the political agenda is where policy change occurs. A policy must make it to the top of the agenda in order to gain recognition, enactment, and implementation. In periods of incrementalism the agenda doesn't change very much. This is primarily due to the checks and balances of the American political system.

There are three ways policies can reach the top of an agenda. The first consists of a variety of policy subsystems that contains citizens, elected officials, and civil servants, all advocating for a particular position, similar to Lowi's (1964) Iron Triangle. When the subsystem at the top of the political agenda is defeated and replaced with another subsystem, the agenda changes. For example, the subsystem of people opposing smoking regulation was at the top of the political agenda for decades. Once the anti-regulation group was replaced, the federal government enacted smoking regulations. Second,

images and symbols can place a new policy area at the top of the agenda. In this scenario, advocates change the national opinion of a subsystem through stories and information.

Members of Mothers Against Drunk Driving used the loss of their own children to change the national opinion on drunk driving, which then forced policymakers to address drunk driving laws across the country. Finally, advocates of policy change can change the venue away from where the dominant subsystem operates. After realizing there was little hope of changing the federal laws on the minimum wage, advocates focus on the states and local governments to bring about policy change.

There have been a number of studies conducted to test Punctuated Equilibrium Theory, most of which are empirical (Baumgartner, Jones, & Mortensen, 2014). It is now one of the major policy change theories in political science. It recognizes the importance of the incremental approach and uses the non-incremental theories to explain the policy change that incrementalism cannot.

Incrementalism, the garbage can model, policy streams, and punctuated equilibrium theory focus on the political environment surrounding the budget but leave out the impact the economics of budgeting. Incrementalism assumes steady growth, and the other theories only recognize the economy as an externality that impacts politics, not policy directly. However, an area of public budgeting literature called cutback management was developed that focuses on the direct impact economic conditions have on budget policy within the context of an economic recession.

### **Cutback Management**

Schick (1983) developed the concept of “decrementalism.” This was one of the first works to identify that policymakers have to deviate from incrementalism during an economic decline. He laid out three key differences between decrementalism and

incrementalism. First, decremental budgeting is redistributive. When revenues decline during a recession, policymakers cannot simply incrementally increase the budgets of all agencies. Instead, they have to make value judgments to maintain funding for some agencies and decrease funding for others. Second, decrementalism isn't as sustainable as incrementalism. Over time, continual cuts to an agency's budget will force policymakers to decide whether to close an agency or not because it does not have enough funding to fulfill its mission. Finally, decrementalism causes more political friction between actors. When economic times are tough, some if not all departments must carry the burden of budget cuts. Therefore, actors want to protect their resources and would rather see someone else face the budgetary chopping block. In total, decrementalism is the reverse of incrementalism in the budget process. However, Schick (1983) does not elaborate on specific policies or ways decrementalism is implemented.

Others recognized the recessions of the late 1970s and early 1980s forced local government policymakers to go beyond the incremental model of budgeting. One of the most prominent authors on the subject was Levine and in a series of publications he established the concept of cutback management (1978, 1979, 1980). Cutback management addresses process and strategies used by policymakers when their organization (i.e., government) faces a situation of resource scarcity. One of the major causes of resource scarcity is what Levine calls, environmental entropy (Levine, 1978). It is based on external economic forces that cause the deterioration of a government's economic base or some hindrance that does not allow a government to extract the necessary taxes for at least the maintenance of the status quo. For Levine, the successful passage of California Proposition 13 in 1978, which placed a cap on the ad valorem tax,

and New York City's near bankruptcy scare in 1975 are prime examples of environmental entropy (Levine, 1978).

Cutback management touches every aspect of the organization. When local governments are forced to cut their budget it opens the door to question the mission of the organization (Levine & Posner, 1981), the role of the employees (Levine, 1984), and how essential services such as police and fire departments are managed (Levine, 1985).

Over the years, researchers have found that state and local governments use a variety of policies to reduce expenditures or increase revenues during times of revenue decline. On the expenditure side, policymakers introduce hiring freezes (Levine, 1978; Miller, 1983), restrict travel (Miller, 1983), reduce rainy-day funds (Koven & Koven, 1989; Maag & Merriman, 2003), make across-the-board cuts (Miller, 1983), defer capital expenditures (Berne & Stiefel, 1993; Levine et al., 1981), cut staff salaries (Berne & Stiefel, 1993), lay-off employees (Berne & Stiefel, 1993; Chackerian, 1996; Levine et al., 1981), and eliminated, reduced or privatized government programs (Behn, 1978; Brewer, 1978; Danzinger & Ring, 1982; deLeon, 1982; Levine et al., 1981). On the revenue side, some governments have borrowed more (Miller, 1983), increased taxes (Maag & Merriman, 2003), and increased intergovernmental funding (Levine et al., 1981). Yet, in the end most policymakers are more willing to reduce expenditures than increase revenues (Afonso, 2013).

Every cutback management policy has a characteristic that is based on the consequence of its implementation. Two particular paradigms categorize the consequences of cutback management policies. First, Levine (1978) proposed the efficiency versus equity paradigm of cutback management policies, such as policies that have the efficiency characteristic to cut the inefficiencies in government and have little to

no direct impact on citizens. For example, policymakers could ban employees from taking their government vehicle home. This policy reduces the expenditure of maintaining the vehicle and more than likely has no impact on the citizens. Another policy in this category is the reduction of healthcare benefits for employees. In this case, the policy is a financial tool that is directed solely at the employees of the government rather than the citizens. Citizens may be aware of the policy but it does not directly impact the government's ability to provide them services. Second, Berne and Stiefel (1993) viewed cutback management policies as having a short-term or long-term negative impact on the community. The use of reserve funds to help fill the budget deficit caused by a decline in revenue has only short-term consequences. The reason why it is considered short-term is that it hurts the short-term liquidity of the government, but the money used can easily be replaced once the government has a surplus. The policy of deferring maintenance is an example of a policy that has long-term consequences. Deferring maintenance for buildings, motor fleets, and other government assets in the current period can drive up any future costs associated with future maintenance. With regard to deferring road maintenance, not making the planned investment in the infrastructure can have long-term negative consequences for the local economy.

These two paradigms describe the challenges local officials face when implementing cutback management policies. However, cutback management authors believe the enactment of policies is based on a rational, efficient model that is built on revenue changes from year to year (Levine, 1978; Jick & Murray, 1982; Scorsone & Pierhoples, 2010). Levine et al. (1981) developed the rational-approach framework to connect the enactment of cutback management policies to the decrease of revenues that local governments experience. Their framework says local government officials will

choose to a cutback management policy based on how much the revenue will decline in the next budget year, using previous experience as guidance. The authors see each policy used as a proportional response to different levels of revenue decline. As Table 2.1 shows, the enactment of some policies will be triggered at smaller amounts of revenue decline compared to others that will be enacted at larger amounts of revenue decline.

Table 1

*Examples of Revenue Decline and Policy Enactment*

Percentage change in revenue from the previous year	Policy enacted
0-3%	Use reserve funds, reduce travel, sell assets
4-7%	Furlough days, increase user fees, FTE reduction
>8%	Service reduction, increase millage rate, increase alternative taxes

*Note.* Adapted from Levine et al. (1981); Wolman (1980).

The rational-approach framework has similarities to the rational theory in economics. Policymakers make budget decisions based on marginal financial benefit versus marginal financial cost. For example, when there is a one or 2% decline in revenue, it is easier for policymakers to use reserve funds or reduce travel because stakeholders will see those policies as an appropriate response to the budget gap because they has very little impact on employees and citizens (Levine, 1978). However, as the gap becomes wider, using reserve funds and reducing travel are not able to erase the deficit. Therefore, it becomes reasonable to use cutback management policies that stakeholders might see as severe such as laying off full-time employees, increasing the millage rate, or reducing government services.

The rational-approach framework is a tool for explaining how changes to revenue can impact the probability of cutback management policies being enacted. The framework, like the cutback management policies it explains, was based on observations of the recessions in the late 1970s and early 1980s. The policies from this period were the



primary options for local governments needing to close their budget gap due to the Great Recession. Since the policies were used during the recession, it is necessary to test the rational for using them. According to the main authors of the rational-approach framework the change in revenues drives how government officials will determine what cutback management policies to implement. Therefore, this study uses the rational-approach framework as the basis of determining how the change in revenue impacts the probability of implementing individual cutback management policies during the 7-year period studied.

Unlike the main theories of public budgeting such as Incrementalism, the garbage can model, policy streams, and punctuated equilibrium theory, the rational-approach framework addresses the impact an economic recession has on local government budgeting. Therefore, since the Great Recession's impact on local government budgeting is the focus of this study, it is necessary to use the rational-approach framework to understand the policy decisions made by county governments during the recession.

### **Chapter Summary**

The purpose of this chapter was to explain the rational theory that public budget theories are based on, the theories of public budgeting in political science and public administration, the literature on cutback management, and the rational-approach framework. A limitation of explaining the rational-approach framework is the lack of empirical research conducted to test its value. For the most part, the U.S. economy has performed very well over the past decades, and recessions before the Great Recession have been short. Therefore, the amount of data needed to test its value has not been available until the Great Recession.

The theory of rational behavior in economics argues that bureaucrats, elected officials, and citizens act in their own self-interest and make decisions based on ensuring MB of the decision is greater than the MC. Incrementalism and subsequent policy change theories that have been applied to public budgeting look at the budget decisions from a political point of view, during good and bad economic times. They address the political negotiation that takes place between actors in order to pass budget policies, but do not address the economic reasoning behind them. Cutback management, specifically the rational-approach framework, takes a different view. Authors of cutback management view budget policies, primarily during a recession, as economic decisions. It was important to recognize that difference because cutback management deviates from traditional public budgeting theory.

## CHAPTER 3: METHODOLOGY

### **Introduction**

This dissertation examines the relationship between cutback management policies implemented during the Great Recession and the changes in revenue among county governments in the United States. When local economies are experiencing revenue growth, it is rare to find them using cutback management policies beyond occasionally increasing taxes or debt for future growth. Therefore, by isolating the study to the Great Recession, we know two things that happen: revenues decline and cutback management policies are implemented.

The cutback management policies in this study came directly from county governments' budget books. The policies came from the management discussion and the revenue data came from the financial data sections of every budget book. This chapter discusses the methodological approach taken by this study. This chapter outlines the conceptualization of the theoretical framework used in this dissertation, research method, research design, research question, hypotheses, assumptions, research philosophy, assumptions, sample, data selection process, regression model, and limitations of this study.

### **Conceptualization of the Theoretical Framework**

In the previous chapter, the theories of public budgeting were outlined. Most theories focus on the political environment of budgeting and view the economy as an externality that impacts the political environment. However, when local governments create their

budget during an economic recession financial considerations are weighted more heavily compared to budgets developed during growth years (Levine, 1978). This dissertation focuses on how revenue decline stemming from the Great Recession directly impacted budget policy for county governments. Since the cutback management literature addresses this relationship, it is the basis of this study.

The rational-approach framework is a tool for examining the relationship. The recession reduces the amount of revenue available for the county government, resulting in the use of cutback management policies to balance their budget. The framework itself is tested to see if there is a direct correlation between revenue changes and the cutback management policies enacted during the recession.

The following sections in this chapter describe the operationalization of the framework.

### **Research Method**

This dissertation uses the rational-approach framework, to describe what causes cutback management policies to be enacted. According to the framework, cutback management policies are correlated as to how much revenue is lost from year to year. Each policy is used as a proportional response to the amount of revenue lost from the previous year. Therefore, in this dissertation, the framework is used to describe the interaction between each policy and the percent change in revenue from year to year for each county government studied.

The ration-approach framework is used in this study because it is as a way of explaining how revenue changes impact budget policies during periods of organizational decline. The framework was established as a way to try to understand how revenue changes interact with cutback management policies. Specifically, it theorizes that each

budget policy used to manage the organization's decline is correlated to the change in revenue from year to year. Some budget policies such as travel reductions and furlough days have a higher probability of being implemented when there are small declines compared to other policies such as firing employees and reducing government services. Therefore, the framework is a useful tool to understand how revenue losses due to the recession may indicate which cutback management policies were implemented by county governments.

In order to use the rational-approach framework, this study uses a mixed-methods approach. The mixed-methods approach includes the use of qualitative and quantitative methods, both of which strengthen the methodological approach of studying cutback management policies.

Qualitative methods create the opportunity, through content analysis, to examine documents, in this case the counties' budget books, and look for policy statements. This dissertation applies qualitative methods in their simplest form. Most qualitative studies attempt to interpret interviews, observation, and artifacts. However, in this study, the method is used to code what each cutback management policy was used by county governments, not to understand its meaning.

Content analysis has one outweighing positive, it allows the researcher to look at policy documents and extract necessary data for analysis. In this dissertation summative content analysis is used to summarize or add up the type of cutback management policies used by the sample governments (Hsieh & Shannon, 2005). However, content analysis can be subjective because the data are collected through the researcher and that person might have a bias (Deegan & Rankin, 1996; Frost & Wilmshurst, 2000). This is not a major concern for this dissertation because summative content analysis is not about

interpreting the content in order to find meaning, it is simply about coding the exact cutback policies mentioned in the texts.

The problem of using qualitative methods in a limited way, as in this dissertation, is that it does not take into account the symbols and narratives that drive policy decisions. However, the positives of using qualitative methods outweigh the negatives. Some studies such as Jordan (2003) use only quantitative data to explain budget changes. She used expenditure changes for local government departments to show budget punctuations. The limitation of this approach is that it does not explain what budget policies were used to carry out the punctuations. That is where qualitative data can fill the gap. By analyzing the budget message in government budget books, the researcher can identify the specific policies that lead to changes in the budget. The benefit of this approach is necessary to collect the policy data needed to study the rational-approach framework.

Quantitative methods enhance this dissertation by explaining if and how revenue changes impact the probability of enacting cutback management policies. In economics and political science quantitative methods are the primary way of studying a public budget. Financial, economic, and political quantitative data are used as representatives of a phenomenon happening in reality. In this dissertation quantitative methods were also used because there was a need to explain how revenue changes, a representative of economic conditions, impact policy choices. The limitation of using a quantitative method is the data. Financial data do not explain the specific policy choices made by public officials, as in the case of Jordan (2003).

Combining qualitative methods and quantitative methods balance each of their strengths and weaknesses. Qualitative methods provide the in-depth description of which

cutback management policies were used, whereas quantitative methods cannot. On the other hand, the rational-approach framework suggests that revenue changes impact policy decisions. Therefore, quantitative methods are used to collect the revenue data that impact the policy decision. Additionally, quantitative methods are able to test the relationship between policy enactment and revenue changes. Jefferson, Rudin, Brodney Folsie, and Davidoff (2006) argued that qualitative methods can help researchers create a dataset of public policies that can be used in conjunction with economic (i.e., quantitative) data. By connecting qualitative data that represent policy decisions and quantitative economic data, this research plan can help close the gap between public policy and economic conditions.

### **Research Design**

The research design of this dissertation revolves around using mixed-methods and the tools they provide to test the rational-approach framework during the Great Recession. This study is set up as a correlational model with the percent change in revenue and the enactment cutback management policies as the interacting variables.

There are two characteristics of correlational design that make it useful for this study (Privitera, 2012). First, the revenue changes from year to year and the enactment of cutback management policies are independent events that cannot be manipulated by the researcher. The lack of randomization, manipulation, and comparison in this study does not allow this study to explain causation. Since causation cannot be explained, the strength and direction of the relationship between the two variables is the focus of this research design. Second, this study is an exploratory study of the rational-approach framework during the Great Recession in order to understand the relationship between cutback management policies and revenue changes. The lack of previous quantitative

research on this topic in the literature does not allow this study to immediately go into the study of revenue decreases that cause policy change. Therefore, correlational design is a useful method of examining the relationship between two variables to understand any relationship between revenue decline and the enactment of cutback management policies.

### **Research Question**

This dissertation attempts to answer the research question, “During the Great Recession, was there a correlation between the enactment of cutback management policies and revenue decline from year to year as theorized by the rational-approach framework?” According to the rational-approach framework, all cutback management policies are enacted as a response to differing levels of reduction in revenue. Therefore, if the framework is correct then each of the cutback management policies in this study should have a significant and negatively correlated relationship with the decline in revenue but at different levels of reduction.

Hypotheses 1 through 19 are structured in a way that allows this study to use the rational-approach framework. The framework says a decrease in revenue will trigger the use of cutback management policies. The choice of cutback management policy used will be determined by how much of a decrease in revenue the county government faces because each policy is a proportional response to the decrease in revenue. Therefore, the hypotheses are designed to try to understand if decrease in revenue correlates with the implementation of each cutback management policy. If a null hypothesis is rejected then we can conclude that the percent decline in revenue was correlated with the implementation of that cutback management policy. Once the significance is established then this study can address how the probability of implementing the cutback management policy changes as the percent change in revenue differs.



## **Hypotheses**

Nineteen cutback management policies were identified during the course of this study. Since the framework uses the policies as the unit of analysis it is appropriate to create a hypothesis for each policy. After accepting or rejecting each null hypothesis then the research question of significant correlation can be addressed. The results of this study could show that none, all or some of the policies were significantly correlated with the percent decline in revenue. This would result in a better understanding of if and how revenue decline correlates with the implementation of cutback management policies.

**Hypothesis 1.** The probability of reducing the number of full-time employees (FTE) has no statistically significant relationship with the decrease of revenue.

Numerous scholars of cutback management have found that FTE layoffs are a common practice during organizational decline (Berne & Stiefel, 1993; Chackerian, 1996; Levine et al., 1981). Hypothesis 1 is a direction hypothesis that tests the relationship between FTE layoffs and the percent decline in revenue. This study assumes a rejection of the null hypothesis would show an increase in the decline of revenue would result in a higher probability of FTE being laid off.

**Hypothesis 2.** The probability of reducing or eliminating public services has no statistically significant relationship with the decrease of revenue.

The reduction or elimination of public services has been well documented by cutback management scholars and is another common policy for governments to utilize during organizational decline (Behn, 1978; Brewer, 1978; Danzinger & Ring, 1982; deLeon, 1982; Levine et al., 1981). Hypothesis 2 is a direction hypothesis that tests the relationship between the policy of reducing or eliminating public services and the decline in revenue. This study assumes a rejection of the null hypothesis would show an increase

in the decline of revenue would result in a higher probability of counties reducing or eliminating public services.

**Hypothesis 3.** The probability of deferring maintenance has no statistically significant relationship with the decrease of revenue.

Another common policy used during organizational decline is deferring maintenance (Berne & Stiefel, 1993; Levine et al., 1981). This policy allows county governments to put new construction and maintenance on hold which helps reduce expenditures. Hypothesis 3 tests the directional relationship between the probability of implementing the policy and the percent decline in revenue. A rejection of the null hypothesis would show that as the percent decline in revenue increases the probability of the county government to defer maintenance in order to reduce expenditures.

**Hypothesis 4.** The probability of reducing employees' monetary compensation has no statistically significant relationship with the decrease of revenue.

Berne and Stiefel (1993) found that reducing the salaries of employees was used by governments to reduce their expenditures during organizational decline. During a recession employees may be forced to accept compensation decreases because the policy would allow them to keep their job in a tough job market. Hypothesis 4 is a directional hypothesis that examines the relationship between the probability of reducing monetary compensation and the percent decrease in revenue. If the null hypothesis is rejected it would mean that as the percent decrease in revenue grows the probability of reducing employees salaries increases.

**Hypothesis 5.** The probability of freezing new hiring has no statistically significant relationship with the decrease of revenue.

Many times one of the first cutback management strategies used during a period of organizational decline is placing a freeze on new hiring (Levine, 1978; Miller, 1983). This freeze forces administrators to keep positions unfilled which can translate into more work for the current employees in the organization. By holding the position vacant, the government essentially saves money. Hypothesis 5 tests the relationship of the probability of freezing new hiring and the percent decline in revenue. This is a directional hypothesis with the assumption that the two variables will have a negative relationship; meaning as revenue decline grows the probability of placing a hiring freeze increases.

**Hypothesis 6.** The probability of changing healthcare benefits has no statistically significant relationship with the decrease of revenue.

Employee healthcare benefit changes weren't a policy that showed up in the original cutback management literature. However, as it has been discussed for over a decade, healthcare costs are rising and governments are feeling the pressure. Therefore, it is necessary to include this policy in the study because it is a potential area of expenditure reduction for county governments. Hypothesis 6 tests the probability of county governments changing healthcare benefits for employees and the percent change in revenue. It is a directional hypothesis and if the null hypothesis is rejected the results should show a negative relationship between the two variables.

**Hypothesis 7.** The probability of making across the board cuts has no statistically significant relationship with the decrease of revenue.

A less targeted way of reducing the government budget is to implement across the board cuts. Historically, it is not uncommon for government leaders to ask every department to reduce their budget by the same amount (Miller, 1983). Hypothesis 7 tests the relationship this policy has with the decrease in revenue. This is a directional

hypothesis and if the null hypothesis is rejected then it is assumed that the probability of implementing across the board cuts increases as the decrease in revenue grows.

**Hypothesis 8.** The probability of renegotiating supplier contracts has no statistically significant relationship with the decrease of revenue.

The renegotiation of supplier contracts is a policy that can help governments reduce their expenditures over time (Levine, 1978). County governments will try to renegotiate for better deals for themselves, especially in long-term contracts. Hypothesis 8 is a directional hypothesis that assumes the relationship between the percent decrease in revenue and the probability of a county government renegotiating a supplier contract is negative. The larger the decline in revenue the county faces the larger the probability of a contract to be renegotiated.

**Hypothesis 9.** The probability of furloughing employees has no statistically significant relationship with the decrease of revenue.

Furloughing employees became common practice during the recession. It was not uncommon to see government employees in state and local governments being asked to forego working days during the year so the government could save money. Hypothesis 9 looks at this relatively new practice and how the probability of implementing it correlates with the percent decrease in revenue. If there is a statistically significant correlation between the two variables then it is expected that they have a negative relationship with one another. Therefore, as the revenue decline increases so does the probability of the county government implementing furlough days.

**Hypothesis 10.** The probability of renegotiating labor agreements has no statistically significant relationship with the decrease of revenue.

Not all counties have public sector unions. However, during the recession many communities with unions needed to work with the bargaining units to reduce labor costs. Hypothesis 10 examines the relationship between the decision to renegotiate labor agreements and the percent decline in revenue. If a correlation is found it is expected that relationship is negative. Therefore, the probability of renegotiation increases as the percent decrease in revenue grows.

**Hypothesis 11.** The probability of reducing travel has no statistically significant relationship with the decrease of revenue.

Reducing travel is typically one of the first expenditure reducing policies to be introduced during organizational decline (Miller, 1983). Many times the policy is justified because the travel being reduced is non-essential such as employees attending conferences or travelling for meetings. Other times travel restrictions could include a reduction in the motor pool or limitations on employees taking government cars home. Hypothesis 11 tests the relationship between the reduction of travel and the percent decline in revenue. This is a directional hypothesis and if the null is rejected the expectation is that the variables will have a negative relationship with one another.

**Hypothesis 12.** The probability of allowing early retirement has no statistically significant relationship with the decrease of revenue.

Sometimes governments encourage older employees to take early retirement in order to reduce their labor cost. Early retirement allows governments to move employees from their operating budget to a pension system therefore shifting the cost to another fund. Hypothesis 12 examines the relationship between the probability of implementing early retirement and the percent decline in revenue. It is assumed that the relationship

between the two variables is negative meaning that as revenue declines the probability of implementing early retirement increases.

**Hypothesis 13.** The probability of using reserve funds has no statistically significant relationship with the decrease of revenue.

Reserve funds are built up for times like a recession. Policymakers are able to draw on the reserve funds early during the organizational decline to balance their budget. However, at some point reserve funds dry up and are no longer available. Hypothesis 13 examines the relationship between the probability of the county government using their reserve funds and the percent decrease in revenue. If a correlation is found then it is expected that it would be a negative relationship between the variables.

**Hypothesis 14.** The probability of increasing user fees has no statistically significant relationship with the decrease of revenue.

User fees have played a bigger part in revenue generation for local governments over the past few decades. Instead of raising revenue from the entire population through taxes it has been popular to charge the users of public services such as parks for access. Hypothesis 14 tests the relationship between the probability of increasing user fees and the percent decrease in revenue. The assumption is that the probability of increasing user fees will increase as the percent decrease in revenue grows.

**Hypothesis 15.** The probability of increasing state or federal aid has no statistically significant relationship with the decrease of revenue.

The reliance on state and federal aid by local governments has been common practice for decades. Those funds help local governments purchase equipment, maintain roads, and in some cases keep staff hired. Levine et al. (1981) hypothesized that when revenues decline local governments will attempt to find additional state and federal aid.

Hypothesis 15 tests this assumption and if the null hypothesis is rejected then the relationship will have a negative correlation.

**Hypothesis 16.** The probability of increasing the millage rate has no statistically significant relationship with the decrease of revenue.

The main source of revenue for county governments is property tax which comes from the set millage rate. Raising taxes is always a tricky proposition because of the political climate surrounding taxation. However, if property tax revenues fall too much, policymakers may have to raise the millage rate in order to make up for the lost revenue. Hypothesis 16 tests this assumption and if the null hypothesis is rejected then it will show that the probability of increasing millage rate increases as the percent decline in revenue grows.

**Hypothesis 17.** The probability of creating or increasing a non-property tax has no statistically significant relationship with the decrease of revenue.

Some counties have revenue sources beyond just property taxes. Those counties are located in states that allow them to raise additional revenue through sales tax, occupation tax or other types of tax. According to Maag and Merriman (2003) taxes will be increased by local governments at some point when revenues decline. Hypothesis 17 tests this relationship and if the null hypothesis is rejected that means the two variables are correlated. The relationship will be negative because the probability of increasing or introducing non-property taxes will increase as the percent decrease in revenue grows.

**Hypothesis 18.** The probability of increasing debt has no statistically significant relationship with the decrease of revenue.

Miller (1983) proposed that state and local governments should consider borrowing money to close their budget gap during organizational decline. While this

policy is not as common as others it is one way of managing a budget deficit. Hypothesis 18 tests the relationship between the probability of increase the debt of a county government and the percent decline in revenue. It is assumed that the relationship will be negatively correlated because the probability of borrowing money increases as revenues decline.

**Hypothesis 19.** The probability of selling assets has no statistically significant relationship with the decrease of revenue.

One way county governments can increase their revenues is by selling their assets. While it is a short-term solution, it can provide significant funds during organizational decline. Some of the assets that could be sold are equipment, vehicles, undeveloped land, and buildings. Hypothesis 19 tests the probability of selling assets with the percent decline in revenue. If the variables are correlated it is assumed they will be negatively correlated.

Table 2

*Summary of Hypotheses*

Hypothesis	Main independent variable	Other independent variables	Dependent variables	Test
H1-12	Percentage change in revenue	Recession year, population, presidential vote, unemployment rate, state	Expenditure policies	Binary logistic regression
H13-19	Percentage change in revenue	Recession year, population, presidential vote, unemployment rate, state	Revenue and debt policies	Binary logistic regression



## **Research Philosophy**

The literature describing cutback management in state and local government has used case studies of individual governments primarily, and a few have used surveys. However, to study the relationship between enacting cutback management policies and a change in revenue in the rational-approach framework empirical analysis is needed. The key data source for this analysis is the GFOA award-winning county budget books. They provide the detailed policy description needed for the dependent variables and the financial data needed for the independent variable.

Since the 1980s there has been an interest in the published budget documents local government publish. MacManus (1984) concluded that local government needed to restructure their public documents because of the cutback management strategies adopted. She pointed out that the implementation of cutback management strategies is politically sensitive and policymakers have trouble connecting revenues and expenditures. To overcome these two limitations for implementation, she recommended that governments restructure the budget document to include greater policy and financial detail.

In the same year as MacManus' article, the GFOA created its Distinguished Budget Presentation Award program. The program was created to encourage local governments to follow the publication guidelines created by the National Advisory Council on State and Local Budgeting and GFOA's best practices (2014). Kelly and Rivenbark (2011) concluded that GFOA's award program forces local governments participating in the program to establish performance measurements and policy statements in order to help those inside and outside of the bureaucracy understand what the governments are doing.

This dissertation supports the idea that the GFOA's Distinguished Budget Presentation Award program created a good source of information. The budget book is also a policy document; therefore, it connects policy decisions (i.e., statements) with financial data. For the purpose of this study, it provided a rich source of data on revenues and policies that helped test the rational-approach framework.

### **Assumptions**

In this study only one assumption is made: county administrators honestly lay out all of the cutback management policies implemented in each corresponding budget message and the budget policies are affected by the recession starting in FY 2008/09. According to the GFOA's award criteria, the administrator must outline the policy changes the county has made in the budget message. It is assumed the administrators are able to describe what measures will be taken over the next fiscal year to respond to projected changes to their revenues.

### **Population and Sample**

In the United States there are 3,144 counties and county equivalents (U.S. Census Bureau, 2013). Being able to take a representative sample of all counties in the United States would be ideal; there is a particular hindrance to doing so. No mandated budget document format exists for county governments in the United States. The closest standard available is the GFOA's Annual Budget Presentation Award program. In order to meet the standard of internal validity, it was important to ensure all budget documents examined were in a similar format. Therefore, using GFOA's award winners as the target population was necessary.

In order to receive the award the county government must meet all of the standards listed in program's checklist (see Appendix). Two key requirements of winning

the award are: highlighting primary issues the government will face in the upcoming budget, including policy and economic issues; and a description of action taken to address the issues. As a result of these requirements, this dissertation can utilize the detailed list of the cutback management policies implemented in each fiscal year in addition to the financial data provided by the budget book.

Between FY 06/07 and FY 12/13, 164 county governments won the GFOA's Budget Presentation Award every year. Starting in June 2014, each of the 164 county governments' websites was visited to find every budget book from FY 06/07 to FY 12/13. Each budget book was downloaded and coded as "found" in an Excel spreadsheet created to organize which documents were available. After all the county websites were reviewed, emails were sent to the office in charge of the budget requesting any missing budget books. In total, 86 counties, representing 23 states supplied all seven budget books necessary for this study, resulting in 602 individual observations. Table 3 outlines the descriptive information about the sample.

Table 3

*Sample of Descriptive Statistics*

State	Frequency	Population	Frequency	Republican percentage of vote	Frequency
Alaska	2	0-100K	11	0-25%	4
Arizona	2	100K-250K	21	25-50%	46
California	5	250K-500K	24	50-75%	35
Colorado	1	500K+	30	75-100%	1
Florida	15				
Georgia	7	Mean	599,577	Mean	49%
Hawaii	2	Median	322,177		
Illinois	4				
Iowa	2				
Louisiana	1				
Maryland	3				
Michigan	5				
Missouri	1				
North Carolina	8				
Ohio	1				
Oregon	2				
Pennsylvania	1				
South Carolina	4				
Tennessee	2				
Texas	4				
Virginia	9				
Washington	2				
Wisconsin	3				
<i>N</i>	86				

**Data Collection**

The policy data for this dissertation were collected using a content analysis on the budget message included in each budget book. This methodological tool is not new to public budgeting. Moynihan (2006) conducted a content analysis on state documents,

including budget documents, in order to understand performance measures used by those governments. Additionally, Ho and Ni (2005) studied how the 30 largest U.S. cities reported performance measures by conducting a content analysis on their budgets.

In this study, the dependent variables are the individual cutback management policies implemented. The variables were coded as 1 or 0, whether or not the policy was used or not used in that particular budget year. The policies examined in this study were originally based on the previous cutback management literature. However, since most of the cutback management literature is from the late 1970s and early 1980s, there were some new expenditure reduction and revenue increasing policies used by county governments during the recession. Therefore, the researcher did not only look for previously mentioned policies, but for others that fit the mold of being a cutback management policy.

For Hypotheses 1 through 19, the independent variable used is the percentage change in total revenue from year to year. The reason why this study uses the percentage change is because of the framework being tested. The rational-approach framework says the cutback management policies implemented will be chosen based on the percent change in revenue (Levine et al., 1981). Percentage change was chosen instead of a raw dollar amount because the revenue variability between small and large counties. Therefore, using a percentage change created a normalized scale to compare counties.

Total revenue versus general fund revenue was used because of the accounting structure used by most county governments. Fund accounting has become an important accounting tool for governments of all sizes. At the county government level multiple funds are utilized to manage the resources of specific projects like public safety, public libraries, road maintenance, and utilities. Using government-wide revenues instead of

general fund revenues can capture government and business-type activities that may not be included in the general fund.

The control variable, population, is the number of citizens residing in the county according to the annual estimates by the U.S. Census Bureau (2013). The purpose of this variable is to account for the size differences between the counties. The population size contributes towards the size and scope of county government itself. Counties with a smaller population probably will not have the same number of police officers, libraries, parks, and health clinics as their larger counterparts. Additionally, counties with a larger population will more than likely have political pressure to offer more public programs than smaller counties. For example, counties with smaller populations may only need a volunteer fire department, whereas larger counties may need to have a full-time, professional fire department.

The second variable used, presidential vote, is the percentage of the total vote the Republican candidate for President received. The 2008 election results were assigned to FYs 2006/07, 2007/08, 2008/09, and 2009/10, and the 2012 election results were assigned to FYs 2010/11, 2011/12, and 2012/13. The election data came from the *New York Times'* (2014) 2008 and 2012 election results maps. This variable was chosen to control for the political ideology of the county's population. The Republican candidate's percentage of the total vote moved the county's ideology toward a more conservative zone. As a result, the more conservative the voters are in a county, the less likely they will support tax increases and more likely to support expenditure cutting policies.

The county's annual average unemployment rate was used to control for the economic conditions in the community. The data came from the U.S. Bureau of Labor Statistics' Local Unemployment Statistics program. Tolbert, Lyson, and Irwin (1998)

used those data as proxies for the health of the local economy when studying political engagement. The unemployment rate is a standard basis from which all of the counties can be measured. Economically speaking, some counties may have performed better than others before, during, and after the recession. Counties that had a better economy than others during the recession may have been able to avoid raising taxes or decreasing revenues.

The categorical variable, state, was used to account for any regulatory, economic, and political differences there are between states. For example, most states have adopted Dillon's Rule, an Iowa Supreme Court ruling from 1886 that interprets what powers local governments can have. However, some states—West Virginia and New Mexico—have not adopted the ruling; therefore, the local governments in those states operate within a different legal framework than others. Additionally, some states have adopted the Taxpayer's Bill of Rights (TABOR), which caps county governments' revenue and expenditure increases. For those reasons, it is important to control for data in a particular state.

Finally, in Hypotheses 1 through 19, the Recession Year will be used as a variable. The reason for its inclusion is to differentiate between revenue fluctuations between non-recession years and recession years. County governments, like all levels of government, experience revenue changes from year to year. The recession was coded for FYs 2008/09, 09/10, and 10/11. According to the National Bureau of Economic Research (2015), the recession started in December of 2007 and lasted until June 2009. The reason why fiscal years 08/09, 09/10, and 10/11 were considered recession years in this study was that county government officials introduced cutback management policies in their 08/09 budget and continued into their 10/11.

In total, the dependent variables and explanatory variables were selected for specific purposes. In combination, the variables provided a reasonable foundation to build a predictive statistical model to test the probability of implementing individual cutback policies.

### **Binary Logistic Regression**

To test the probability of county governments implementing cutback management policies, the right methodological tool was needed. The policy data are coded as dichotomous variables based on whether or not, 1 or 0, the policy was chosen. This created a limitation on what tools were available to determine how the revenue and recession variables impacted the probability of implementation. The standard choice would be to use the method of OLS, but it only works for dependent variables with no constraints. Since the dependent variable in this study is bounded between 0 and 1 the binary logistic regression (LOGIT) is the best regression to use (Woolridge, 2002). The dependent variable is a measure of probability; therefore, its distribution function is S-shaped. The logit model is a non-linear transformation of the linear regression. So,  $p(Y)$  is transformed into  $\ln(p/1-p)$ .

There were two steps taken to interpret the regression output. The first was to check the goodness-of-fit statistics of the model. The -2 Log likelihood statistic and chi-square test are the best ways of checking a model's goodness-of-fit. Additionally, the Nagelkerke R-Square statistic was used to examine the model's explanatory power. Another pseudo  $R^2$  output was offered by SPSS, Cox & Snell R-Square, but it was not utilized because the statistic can never reach 1.

The next step was to interpret the coefficients of the significant independent variables. In SPSS, the Exp(B) output is the indicator of direction and odds ratio. This





Therefore, there must be caution when interpreting the results of this study for county governments that are not similar to the ones sampled.

The policy information provided in the budget books is bounded by the transparency of the county administrator. The GFOA requires a detailed description of policy changes in the budget message. There is always the possibility that the county administrator does not want to fully disclose all policy decisions made for the budget year because of political reasons. However, Justice, Melitski, and Smith (2006) found local governments that follow GFOA disclosure guidelines tend to be more transparent than others.

The limitations of this study should not preclude other researchers from studying GFOA award winning counties. The benefit of learning about budget policy during an economic recession utilizing a standardized source of data outweighs any decision not to conduct such a study.

### **Chapter Summary**

This chapter introduced the research design that will be used to study the relationship between implementing cutback management policies and revenue changes. The chapter explained the research questions and hypotheses, assumptions, research philosophy, population and sample, data collection process, binary logistic regression model, and limitations of this study.

As stated before, the reason why the GFOA Budget Presentation Award winning counties were selected as the sample, rather than taking a sample of all counties in the United States, was due to the standard budget format the GFOA award provides. To study budget policy, it is important to have full disclosure of what policy choices were made and a standard format to compare the counties. The choice to use a binary logistic

regression came down to the need of testing the factors that contribute to the probability of implementing a cutback management policy. The binary logistic regression, unlike the OLS regression, is built for such a task. Therefore, it was necessary to design a binary logistic regression model for this study.

## CHAPTER 4: RESULTS AND DISCUSSION

### **Introduction**

In this chapter the results of the study are introduced and interpreted. The first part of this chapter reveals the results of the 19 hypotheses. The second part of this chapter interprets the results.

### **Interpretation of Policies**

Conducting a summative content analysis requires several steps (Hsich & Shannon, 2005). After determining the research question and hypotheses, the first step was to reduce the text from the management discussion section into categories for coding. In this dissertation, the researcher looked for keywords that show the county government's intent of using one of the 19 cutback management policies (see Table 4). Keywords were derived from the literature review and other sources affiliated with the researcher's ongoing study of public budgeting and finance. While the researcher read the management discussion section a "1" was used to code the variable in an Excel spreadsheet if they recognize the county's intent to use one of the 19 cutback management policies for that budget year. If the researcher was in doubt of the county's intention of using a cutback management policy, he coded the variable as a "0" in the Excel spreadsheet. After all of the management discussion sections are read and the codes are input into Excel, the analysis began. The coded data for each of the 19 policies are used as the dependent variable for one of 19 regression models to test the hypotheses.

Table 4

*Sample Terms to Identify Policy Intentions*

Policy	Terms
Reduction of FTE	“reducing full-time staff”, “laying off employees”, “firing staff”
Reduction or elimination of public services	“reducing hours”, “eliminating programs”, “cutting back services”
Deferred maintenance	“reducing funding for infrastructure or maintenance”, “deferring maintenance, building, or infrastructure projects”
Reduction of employee financial compensation	“cutting staff salaries”, “eliminating bonuses and financial rewards”
Freeze of new hiring	“freezing hiring for unfilled vacancies”, “asking department heads to keep unfilled vacancies open”
Changes to healthcare benefits	“changing insurance provider”, “asking employees to contribute more to their healthcare plan”, “bring health services in-house”
Across the board cuts	“all department will cut their budget”, “across the board cuts will be applied to all departments”
Renegotiation of supplier contracts	“renegotiate with suppliers”, “service suppliers will be asked to renegotiate their terms”
Furloughing employees	“employees will be furloughed”
Renegotiation of labor agreements	“renegotiate with bargaining unit or union”, “union employees have been asked to reduce their compensation”
Reduction of travel costs	“employees have been asked to return county vehicles”, “funding for conferences has been reduced”, “mileage will not be reimbursed”
Early retirement	“some employees have been offered early retirement”, “severance packages will be available for employees leaving for early retirement”
Reduction of reserve funds	“rainy-day or reserve funds will be used”, “rainy-day or reserve funds are reduced this year”
Increase of user fees	“user fees are implemented for the first time”, “user fees are increased”
Increase of state or federal aid	“the state has provided additional funds”, “revenue from the state has increased”, “we received a state or federal grant this year”, “we have received ARRA money this year”
Increase of millage rate	“the property tax rate will go up this year”, “we have increased the millage rate”
Increase of non-property taxes	“we have increased our sales, hotel, occupational tax, or other tax”
Increase of debt	“a bond will be issued this year”, “our debt will increase”
Selling of assets	“assets will be sold”, “we will auction or sell”

The 19 hypotheses use the dichotomous codes of “1” or “0” to recognize if the cutback management policy in the hypotheses was utilized or not by each county during each budget year. The dichotomous variable is used as the dependent variable for each hypothesis. This section shows how the researcher interpreted the management discussion section to find each policy in each county’s budget book.

Hypothesis 1 examined the policy of reducing the number full-time employees. The researcher looked for any reference to the layoff or firing employees. The strength of this coding was that the researcher was limited to terms that tie the number of employees to a reduction or layoff, which did not allow for very much interpretation on the researcher’s part. However, the weakness of this coding was that the county’s management may not have stated explicitly in the management discussion section their intention of reducing the number of full-time employees and instead using raw numbers in a separate section. Additionally, this coding does not include part-time and seasonal employees, both of which may constitute a significant amount of labor for the counties. When there was a mention of a reduction of the full-time workforce the policy was coded as a “1” for that county in that budget year. If the hypothesis is rejected, it means an increase of the budget deficit would result in higher odds of full-time employees being laid off. In other words, as revenue decreases, the odds,  $\text{Exp}(B)$ , increases.

Hypothesis 2 examined the policy of either reducing or eliminating public sector services. The researcher looked for phrases such as “reducing hours,” “closing locations,” and any other mention of the county government reducing or eliminating opportunities for citizens to consume public goods. The advantage of this coding was that it allowed the researcher a little more room for interpretation than other policies because there are various ways county governments can reduce government services. However, because

there are many ways the governments can reduce public services, some terms might not have been identified by the researcher. When the researcher found mentions of reducing or eliminating public sector services, the policy variable was coded as a “1” for that county in that budget year. If the hypothesis is rejected, it means an increase in the budget deficit would result in higher odds of public services being reduced or eliminated. In other words, as revenue decreases, the odds,  $\text{Exp}(B)$ , increases.

Hypothesis 3 examined the policy of deferring maintenance. The researcher looked for statements in the management discussion section that showed the county government decreasing funding for transportation, facilities, or equipment even though there were needed maintenance or upgrades. The benefit of coding this policy with phrases that showed intent of reducing infrastructure, facilities, or equipment funding was that it captures all tangible assets that require maintenance. However, the downside of this coding was not always clear in the management discussion section if the maintenance or building was a priority in the first place. Therefore, it may or may not have been easy for the county’s management team to defer funding of those projects. If the county was planning on deferring maintenance, the policy variable was coded as a “1” for that county in that budget year. If the hypothesis is rejected, it means an increase in the budget deficit would result in higher odds of maintenance being deferred. In other words, as revenue decreases, the odds,  $\text{Exp}(B)$ , increases.

Hypothesis 4 examined the policy of reducing employee compensation. Employee compensation includes a reduction in employee salaries, bonuses, and financial rewards for performance. The researcher looked for statements in the management discussion section that showed the county government’s plan for reducing at least one of these financial benefits for employees. By limiting this coding to only financial compensation,

it recognizes that county governments have a variety of tools to reduce their labor cost and the researcher can separate those tools. However, the limitation of this coding was that the employer may not have always mentioned small reductions in compensation such as seniority or productivity bonuses. Additionally, if the management discussion section does not specify what type of compensation was going to be reduced, it can be difficult to determine the category in which to place that statement. When the statement was made in the management discussion section, then the policy variable was coded as a “1” for that county in that budget year. If the hypothesis is rejected, it means an increase in the budget deficit would result in higher odds of employee compensation being reduced. In other words, as revenue decreases, the odds,  $\text{Exp}(B)$ , increases.

Hypothesis 5 examined the policy of freezing new hires. The researcher looked for statements that showed the county’s plan to not fill current vacancies. County governments are explicit in explaining a moratorium or freeze of new hiring, and it does not require the researcher to interpret the county’s intention. However, there is a chance that this policy remained unchanged after the first year of its implementation, and therefore may not be mentioned in subsequent budgets. The policy variable was coded as a “1” if the management discussion section showed a hiring freeze for that county in that budget year. If the hypothesis is rejected, it means an increase in the budget deficit would result in higher odds of implementing a freeze on new hiring. In other words, as revenue decreases, the odds,  $\text{Exp}(B)$ , increases.

Hypothesis 6 examined the policy of changing healthcare benefits for county employees. The researcher coded the policy variable as a “1” if the county planned to increase the employees’ contribution to the healthcare plan or change the healthcare plan to another firm in order to reduce costs. Some counties decided to move away from a



PPO or HMO to a healthcare system where employees would see a doctor that is on site at one of the county's facilities. Since there are many ways of changing the healthcare benefits the researcher was required to be more open and interpretive to phrases that related to healthcare. This allowed the coding to capture more healthcare policy changes but also assumes that the changes would result in a lower cost in the county's contribution to employee healthcare. If the hypothesis is rejected, it means an increase in the budget deficit would result in higher odds of employee healthcare benefits being changed. In other words, as revenue decreases, the odds,  $\text{Exp}(B)$ , increases.

Hypothesis 7 examined the policy of across the board cuts. The researcher looked for policy statements that showed the county government was planning on cutting every department by either the same amount or differing amounts. The key indicator of recognizing this policy was a statement that showed *all* departments were expected to decrease their expenditures no matter the amount. The researcher used a very narrow scope of finding the intention of across the board cuts by only coding the policy's use when all departments were referenced. The benefit was that it ensured the county's intention was to cut all departments and not some of them. However, the consequence of this policy was that it does not account for how the departments are going to cut their budget. They could use one of the other policy tools examined in this dissertation, but the management discussion sections may not describe which tools are used. When the management discussion section described this intention, the policy variable was coded as a "1" for that county in that budget year. If the hypothesis is rejected, it means an increase in the budget deficit would result in higher odds of implementing across the board cuts being implemented. In other words, as revenue decreases, the odds,  $\text{Exp}(B)$ , increases.

Hypothesis 8 examined the policy of renegotiating supplier contracts. The researcher looked for statements in the management discussion section that showed the government's intention to either cancel a third party contract or attempt to renegotiate a supplier contract in order to reduce their cost of maintaining the contract. The benefit of coding this variable by looking for explicit mention of third party organizations was that it showed the government's intention to reduce their expenditures to outside organizations. However, the coding of this variable did not include the cancellation of supplier contracts, which may limit how frequent county governments look at supplier contracts as a source of reducing their expenditures. Additionally, supplier contracts for items such as paper and other small items may not show up in the management discussion section therefore the researcher did not see the county's full intention to reduce expenditures to suppliers. When the researcher found a reference to this intention in the management discussion section, the policy variable was coded as a "1" for that county in that budget year. If the hypothesis is rejected, it means an increase in the budget deficit would result in higher odds of negotiating supplier contracts. In other words, as revenue decreases, the odds,  $\text{Exp}(B)$ , increases.

Hypothesis 9 examined the policy of furloughing employees. The researcher looked for statements in the management discussion section that showed the county government plans to require their employees to not work a certain amount of normal working days in the fiscal year without pay. This was different from reducing employee financial compensation because this policy specifies the employees will not come into work whereas a reduction of compensation was classified as the employee still works the same amount of days as any other fiscal year but at a reduced pay rate. If the intention of asking employees to use furlough days was shown in the management discussion section,

the researcher coded the policy variable as a “1” for that county in that budget year. The furloughing of employees is a very specific policy and the researcher looked for the term *furlough*. This allows the researcher to limit their interpretation of the management’s intention with regard to how labor costs are lowered. The downside of coding this variable by only recognizing the word furlough may be the lack of identifying other ways of the county management can furlough employees without using the specific term. If the hypothesis is rejected, it means an increase in the budget deficit would result in higher odds of furloughing employees. In other words, as revenue decreases, the odds,  $\text{Exp}(B)$ , increases.

Hypothesis 10 examined the policy of renegotiating labor agreements. This policy was coded as a “1” only if the county worked with a bargaining unit or a union with regard to employee compensation. Any changes to the labor costs that included an agreement with the labor union or bargaining unit were included in this variable. However, if the term *bargaining unit* or *union* was not mentioned in the management discussion section with the intention to change the cost of employees, those changes are captured in one of the other hypotheses. This distinction was important because county governments that have labor unions must work through a middleman to make changes to their labor costs; while governments without a union can work directly with individual employees to reduce their costs. The benefit of only looking for the terms bargaining unit or union in the management discussion section was that the researcher was not required to interpret if the county is working through a third party to reduce their labor costs. However, by limiting the interpretation to only those two phrases it assumes counties with unions will always use the terms “union” or “bargaining unit” and counties without a union will not use those terms. Counties with unions may not feel the need to use those

terms as they may assume people reading the budget document will already know any attempt to reduce labor costs will need to go through their public sector union. If the hypothesis is rejected, it means a budget deficit increase would result in higher odds of renegotiating labor agreements. In other words, as revenue decreases, the odds,  $\text{Exp}(B)$ , increases.

Hypothesis 11 examined the policy of reducing travel costs. This policy is the restriction of the employee's ability to travel for their job. This includes reducing the number of employees able to take their government car home, travel for conferences, and travel for work related activities. Also, any reference to reducing or eliminating their motor pool was included in this policy. The researcher had an expanded view of phrases to look for that could be associated with this policy compared to other policies in this dissertation because there are many ways county governments can reduce their travel expenditures. Therefore, the wider interpretation of this policy allowed the researcher to identify more ways counties can cut their travel costs. The benefit of this allowed this policy to be caught and coded more often than if a limited number of phrases were used. However, as the researcher interpreted more the possibility of mistakenly coding phrases as the intention of the county government to reduce travel costs increases. Additionally, travel restrictions may only be a small portion of a large county's budget and therefore may not be mentioned in the management discussion section. If the researcher found a reference to any of those actions in the management discussion, the policy variable was coded as a "1" for that county in that budget year. If the hypothesis is rejected, it means an increase in the budget deficit would result in higher odds of reducing travel expenditures. In other words, as revenue decreases, the odds,  $\text{Exp}(B)$ , increases.

Hypothesis 12 examined the policy of early retirement for employees. The researcher looked for references in the management discussion section that showed the government planned on offering *early retirement* to employees in order to reduce their labor costs. Identifying the term early retirement allowed the researcher to narrow the interpretation and limit mistaking other efforts by the county governments to reduce their labor costs. However, this may be an ongoing policy and may not be mentioned in subsequent budget years. It limited the researcher's ability to identify the frequency of its use. When that reference was found, the policy variable was coded as a "1" for that county in that budget year. If the hypothesis is rejected, it means an increase in the budget deficit would result in higher odds of encouraging early retirement. In other words, as revenue decreases, the odds,  $\text{Exp(B)}$ , increases.

Hypothesis 13 examined the policy of using reserve funds. The researcher looked for the county's intention to use *rainy-day* or *reserve* funds to cover any expenditure. The narrow focus on the phrases rainy-day and reserve funds with their reduction or use allowed the researcher to easily see the county's intent of using reserve funds to fund expenditures. However, as with other policies studied in this dissertation, after its initial mention in the management discussion section, it may be a foregone conclusion that they will continue to draw down on those funds without mentioning it in subsequent management discussions. When the county showed their intention to reduce these funds, the researcher coded the policy variable as a "1" for that county in that budget year. If the hypothesis is rejected, it means an increase in the budget deficit would result in higher odds of using rainy-day funds. In other words, as revenue decreases, the odds,  $\text{Exp(B)}$ , increases.

Hypothesis 14 examined the policy of increasing user fees. The researcher looked for the county's intention to either implement or increase a *user fee* for any government service. Focusing on the term fee allowed the researcher to accurately code the county's intention on raising revenue through user fees to only that category rather than inaccurately coding with other revenue streams. However, individual departments may set fees and in larger governments the policy may not be mentioned in the management discussion section. Only when the government showed their intention to ask users of public services to pay more for direct use of a government service, the policy variable was coded as a "1" for that county in that budget year. If the hypothesis is rejected, it means an increase in the budget deficit would result in higher odds of increasing user fees. In other words, as revenue decreases, the odds,  $\text{Exp}(B)$ , increases.

Hypothesis 15 examined the policy of increasing state or federal funds. The researcher looked for references to receiving an increase in state or federal aid. During the recession, several county governments said they would receive new money from the federal government through the American Reinvestment and Recovery Act. Additionally, a few county governments said they would receive additional money from their increased allocation of taxes from their state government, such as the sales tax. The policy variable was coded as a "1" when the county government mentioned in their management discussion section they would receive an increase in state or federal funds. The benefit of coding the policy as a "1" only when the county has already allocated the anticipated funds was that it does not allow the policy to be miscoded when the county is attempting but not yet succeeded in receiving the funds. However, some counties discuss their efforts to receive new state or federal aid but not have accounted for it their budget yet. If those counties receive the money during the fiscal year, this coding process could not

have anticipated that and it may have led to inaccurate coding. If the hypothesis is rejected, it means an increase in the budget deficit would result in higher odds of increasing state or federal funds. In other words, as revenue decreases, the odds,  $\text{Exp}(B)$ , increases.

Hypothesis 16 examined the policy of increasing the millage rate. The researcher looked for the county's plan to increase the millage rate in order to raise additional revenue. The reference of an increase in the millage rate can come from both the text and numbers in the management discussion section. The flexibility of identifying an increase through the numbers in the management discussion section allowed the researcher to recognize an increase in the millage rate even if it was not explicitly described in the text. However, this required the researcher to keep track of numerical changes from year to year and mistakes could have been made. If there was a reference to this policy in the management discussion section, the researcher coded the policy variable as a "1" for that county in that budget year. If the hypothesis is rejected, it means an increase in the budget deficit would result in higher odds of increasing the millage rate. In other words, as revenue decreases, the odds,  $\text{Exp}(B)$ , increases.

Hypothesis 17 examined the policy of increasing non-property taxes. The researcher looked for references in the management discussion section that showed the county government's plan to increase a tax that was not the millage rate. For some counties this included an occupational tax, hotel tax, or sales tax. With the growing number of non-property tax revenue opportunities for county governments, the researcher needed to code them separately from the property tax. However, some counties may not explicitly separate the property and non-property taxes when making a general statement about increases in taxes. Therefore, this could have led to misidentification of which

taxes were increasing. When the intention was found in the management discussion section, the policy variable was coded as a “1” for that county in that budget year. If the hypothesis is rejected, it means an increase in the budget deficit would result in higher odds of increasing non-property taxes. In other words, as revenue decreases, the odds,  $\text{Exp}(B)$ , increases.

Hypothesis 18 examined the policy of increasing debt. The researcher looked for the county’s intention to issue a new debt in the management discussion section. The researcher focused on traditional debt sources such as bonds, which allowed for easy identification of this category. However, it did leave open the possibility of not identifying debt that was accrued through the deferment of payments to suppliers. When the county government expressed their intention to issue a new bond, the policy variable was coded as a “1” for that county during that budget year. If the hypothesis is rejected, it means an increase in the budget deficit would result in higher odds of increasing government debt. In other words, as revenue decreases, the odds,  $\text{Exp}(B)$ , increases.

Hypothesis 19 examined the policy of selling assets. The researcher looked for references in the management discussion section to the county’s intention of selling any asset. Those assets included any tangible asset including land, buildings, and equipment. Having a wide definition of assets that could be sold by the government allowed the researcher to identify more types of assets that could be included in the management discussion section. However, there was a possibility that larger counties may not mention in their management discussion section when a department sells a small percentage of their assets to raise money. This limited the researcher’s ability to identify how frequently this policy is used. When the policy was mentioned in the management discussion section, the policy variable was coded as a “1” for that county in that budget year. If the



hypothesis is rejected, it means an increase in the budget deficit would result in higher odds of selling assets. In other words, as revenue decreases, the odds,  $\text{Exp}(B)$ , increases.

## **Results**

The binary logistic regression model tested 19 dependent variables, with six independent variables. Table 5 shows the individual policies tested and the frequency with which county governments used them over the course of 7 fiscal years. The predictor variable in this study is the percentage change in revenue from the previous year. Additional variables are added to the model: recession year, annual population, percentage of Republican voters in 2008 and 2012 presidential elections, annual unemployment rate, and a categorical variable identifying the state in which the county is located. Table 6 shows the descriptive statistics for each of the independent variables.

Table 5

*Cutback Management Policies and Frequency*

Expenditure policies	<i>N</i>	Frequency	Revenue policies	<i>N</i>	Frequency
FTE staff reduction	202	33.5%	Used reserve funds	165	27.4%
Service reduction or elimination	166	27.5	Increased user fees	77	12.7
Deferred maintenance	141	23.4	Increased state or federal aid	63	10.4
Reduced employee monetary compensation	105	17.4	Increased millage rate	51	8.4
Hiring freeze	87	14.4	Created or increased a non- property tax	36	5.9
Changed healthcare benefits	73	12.1	Increased debt	23	3.8
Across the board cuts	52	8.6	Sold assets	7	1.1
Renegotiated supplier contracts	51	8.4			
Furloughed employees	23	3.8			
Renegotiated labor agreements	21	3.4			
Reduced travel	20	3.3			
Allowed early retirement	15	2.4			

Table 6

*Descriptive Statistics for the Independent Variables*

Variable	<i>N</i>	Range	Min.	Max.	Mean	Std. deviation	Variance
	Stat.	Stat.	Stat.	Stat.	Stat.	Std. error	Stat.
Revenue	602	67.61	-34.94	32.94	1.722	.3088	7.575
Change							
Recession	602	1	0	1	.43	.02	.495
Population	602	5168653	45445	5214098	596678	32982	809253
Pres.	602	.61	.20	.81	.476246	.0051	.1256
Unemp. rate	602	.9390	.0210	.960	.0711	.0019	.0462
State	602	22	1	23	11.08	.276	6.773
Valid <i>N</i> (listwise)	602						45.872

For logistic regression there are two tests that determine how well the model fits the data. The Hosmer-Lemeshow Test divides the observations into deciles based on the expected probabilities and then develops the chi-square value from the observed and expected frequencies (Hosmer & Lemeshow, 2013). For the Hosmer-Lemeshow Test, the model fits the data if the p-value is greater than .05. The other test is the Omnibus Tests of Model Coefficients. The Omnibus Tests is used to ensure the model with explanatory variables explains more of the variance than the model without explanatory variables (Pallant, 2005). The model fits the data if the p-value is lower than .05. Table 7 outlines the results of the Hosmer-Lemeshow Test and Omnibus Tests of Model Coefficients for each of the binary logistic regression models. Each model has degrees of freedom of eight.

Table 7

*Hosmer-Lemeshow Test and Omnibus Results*

Policy	H-L Chi-square	H-L Sig.	Omnibus Chi-square	Omnibus Sig.
Reduction of FTE	11.978	.152	184.895	.000
Reduction or elimination of public services	22.591	.004	135.279	.000
Deferred maintenance	15.341	.053	92.198	.000
Reduction of employee financial compensation	15.391	.052	91.467	.000
Freeze of new hiring	11.198	.191	55.779	.000
Changes to healthcare benefits	6.180	.627	36.142	.000
Across the board cuts	7.785	.455	57.367	.000
Renegotiation of supplier contracts	16.268	.039	36.545	.000
Furloughing employees	7.604	.473	20.549	.002
Renegotiation of labor agreements	5.379	.716	33.840	.000
Reduction of travel costs	8.262	.408	19.119	.004
Early retirement	11.454	.177	16.068	.013
Reduction of reserve funds	5.720	.679	74.144	.000
Increase of user fees	1.988	.981	32.463	.000
Increase of state or federal aid	7.909	.442	41.429	.000
Increase of millage rate	10.275	.246	7.970	.240
Increase of non-property taxes	9.228	.323	12.473	.052
Increase of debt	8.974	.345	23.430	.001
Selling of assets	7.447	.489	6.691	.350

Most of the models passed both the Hosmer-Lemeshow Test and Omnibus Tests of Model Coefficients. However, there were some that passed only one. The differing results may stem from a limitation of each test (Hosmer, et. al., 1997; Allison, 2014). Both tests require the grouping of the data into profiles in order to compare the observed and expected frequencies. However, the data in this dissertation is complex because it uses dichotomous, categorical, and continuous data; therefore, it may be difficult for each test to determine a goodness of fit.

### **Hypotheses**

The study uses a binary logistic regression model to test the nineteen hypotheses. Each policy is based on a cutback management policy used by county governments during the course of this study. This section outlines the results of each regression and hypothesis. The significant independent variables are highlighted ( $*p<.05$ ,  $**p<.01$ ,  $***p<.001$ ).

The focus of interpreting a binary logistic regression is the  $\text{Exp}(B)$ .  $\text{Exp}(B)$  is the exponential of the coefficient,  $B$ , and is considered the log odds ratio. To determine what a one unit increase, or in this case a one percent decrease, means we calculate  $\text{Exp}(B)$  minus one. If  $\text{Exp}(B)$  is below one then the odds of the policy being implemented has an inverse relationship with a change in the independent variable. If  $\text{Exp}(B)$  is above one then the odds of the policy being implemented has a converse relationship with a change in the independent variable. Finally, if  $\text{Exp}(B)$  is one, that means the odds of the policy being implemented has no relationship with the change in the independent variable.

**Hypothesis 1.** The probability of reducing the number of full-time employees (FTE) had no statistically significant relationship with the decrease of revenue.

Table 8

*Regression Output: Hypothesis 1, FTE Reduction*

Policy	Variables	B	Std. error	Sig.	Exp(B)
	Intercept	-1.942	.576	.001	.143
	Revenue	-.121	.018	.000***	.886
	Recession	.267	.210	.204	1.306
FTE reduction	Population	.000	.000	.162	1.000
	Presidential	-1.181	.887	.183	.307
	Unemployment	25.323	4.272	.000***	9.949E+10
	State	-.019	.016	.242	.981
N		602			
Chi-Square		184.895			
Nagelkerke R <sup>2</sup>		.367			

Reducing full-time employees had a significant relationship with both the change in revenue and unemployment at 99% level of confidence. The change in revenue had a negative relationship with the enactment of the policy while the recession had a positive relationship. Therefore, we reject the null hypothesis and interpret what this means for the relationship between revenue change and the laying off of FTEs.

For revenue, with a Exp(B) of .886, the odds of a county government laying off full-time employees increases by 11.4% when revenue drops by 1% from the previous year.

**Hypothesis 2.** The probability of reducing or eliminating public services had no statistically significant relationship with the decrease of revenue.

Table 9

*Regression Output: Hypothesis 2, Reduce or Eliminate Public Service*

Policy	Variables	B	Std. error	Sig.	Exp(B)
	Intercept	-1.556	.580	.007	.211
	Revenue	-.029	.017	.000***	.912
	Recession	.367	.212	.084	1.443
Service changes	Population	.000	.000	.545	1.000
	Presidential	-3.062	.912	.001**	.047
	Unemployment	24.638	4.264	.000***	5.012E+10
	State	.009	.017	.590	1.009
N	602				
Chi-Square	135.279				
Nagelkerke R <sup>2</sup>	.291				

The policy to reduce or eliminate public services had a statistically significant relationship with the change in revenue, political ideology, and the unemployment rate. The relationship between revenue changes and service changes had a negative relationship at a 99% level of confidence. Political ideology had a negative relationship with the policy at a 99% level of confidence. Finally, the unemployment rate had a positive relationship with service changes at a 99% level of confidence. Therefore, we reject the null hypothesis because revenue had a statistically significant relationship with the percent change in revenue.

With the rejection of the null hypothesis the next step is to examine the odds of implementing public service cuts when revenue falls. Revenue had a Exp(B) of .912 which translates to a 8.8% increase in the odds of county governments cutting or eliminating public services when they face a 1% drop in revenue from the previous year.

**Hypothesis 3.** The probability of deferring maintenance had no statistically significant relationship with the decrease of revenue.

Table 10

*Regression Output: Hypothesis 3, Deferring Maintenance*

Policy	Variables	B	Std. error	Sig.	Exp(B)
Deferred maintenance	Intercept	-2.982	.616	.000	.051
	Revenue	-.051	.015	.001**	.950
	Recession	1.015	.220	.000***	2.760
	Population	.000	.000	.447	1.000
	Presidential	.603	.904	.504	1.828
	Unemployment	14.226	4.161	.001**	1507177.34
	State	-.011	.017	.430	.989
N	602				
Chi-Square	92.198				
Nagelkerke R <sup>2</sup>	.214				

Deferring maintenance had a significant relationship with revenue, recession, and the unemployment rate. The recession had a positive relationship with the policy at a 99% level of confidence. The unemployment rate had a positive relationship with the recession at a 99% level of confidence. Revenue had a negative relationship with deferred maintenance at the 99% level of confidence. Therefore, we reject the null hypothesis. Exp(B) for revenue was .950 which translates to a 5% increase in the odds of the policy being implemented with a 1% decrease in revenue.



**Hypothesis 4.** The probability of reducing employees' monetary compensation had no statistically significant relationship with the decrease of revenue.

Table 11

*Regression Output: Hypothesis 4, Reducing Employees' Monetary Compensation*

Policy	Variables	B	Std. error	Sig.	Exp(B)
Employee compensation	Intercept	-3.132	.694	.000	.044
	Revenue	-.062	.017	.000***	.940
	Recession	1.139	.255	.000***	3.124
	Population	.000	.000	.937	1.000
	Presidential	-.557	1.013	.582	.573
	Unemployment	16.161	4.648	.001**	10442461.5
	State	-.002	.019	.919	.998
N	602				
Chi-Square	91.467				
Nagelkerke R <sup>2</sup>	.233				

The percent change in revenue had a negative relationship with the odds of reducing employees' monetary compensation at a 99% level of confidence. Therefore, we reject the null hypothesis. Additionally, the recession and unemployment rate had a positive relationship with the enactment of the policy at a 99% level of confidence.

Revenue had a Exp(B) of .940 which translates to a 6% increase in the odds employees' monetary compensation will be reduced for every 1% decrease in revenue. Additionally, the recession years increased the odds of reducing employees' monetary compensation by 212% compared to non-recession years.

**Hypothesis 5.** The probability of freezing new hiring had no statistically significant relationship with the decrease of revenue.

Table 12

*Regression Output: Hypothesis 5, Hiring Freeze*

Policy	Variables	B	Std. error	Sig.	Exp(B)
	Intercept	-2.586	.650	.000	.075
	Revenue	-.063	.017	.000***	.939
	Recession	.995	.263	.000***	2.706
Hiring freeze	Population	.000	.000	.866	1.000
	Presidential	1.501	1.061	.739	2.032
	Unemployment	.709	2.130	.014*	.951
	State	-.050	.020	.014*	.951
N		602			
Chi-Square		55.779			
Nagelkerke R <sup>2</sup>		.157			

The percent change in revenue and the recession had negative relationships with putting a freeze on hiring at the 99% level of confidence. Therefore, we reject the null hypothesis. Additionally, the unemployment rate and the state the county is located in had a statistically significant relationship with the policy's enactment at the 95% level of confidence.

According to the Exp(B) statistic, a 1% decrease of revenue results in a 6.1% increase of the odds a county government would place a freeze on hiring. Additionally, recession years increase the odds of implementing a hiring freeze by 170% compared to non-recession years.

**Hypothesis 6.** The probability of changing healthcare benefits had no statistically significant relationship with the decrease of revenue.

Table 13

*Regression Output: Hypothesis 6, Healthcare Benefit Changes*

Policy	Variables	B	Std. error	Sig.	Exp(B)
Employee healthcare	Intercept	-2.592	.681	.000	.075
	Revenue	-.073	.018	.000***	.929
	Recession	.347	.273	.204	1.414
	Population	.000	.000	.183	1.000
	Presidential	.771	1.120	.491	2.162
	Unemployment	2.001	2.303	.385	7.399
	State	-.020	.021	.331	.980
N	602				
Chi-Square	36.142				
Nagelkerke R <sup>2</sup>	.112				

Changes to the employees' health care benefits had only one statistically significant relationship. The change in revenue had a negative relationship with the odds of implementing the policy at a 99% level of confidence. Therefore, we reject the null hypothesis.

The Exp(B) statistic for revenue suggests that a 1% drop in revenue increases the odds of making healthcare benefit changes by 7.1%.

**Hypothesis 7.** The probability of making across the board cuts had no statistically significant relationship with the decrease of revenue.

Table 14

*Regression Output: Hypothesis 7, Across the Board Cuts*

Policy	Variables	B	Std. error	Sig.	Exp(B)
Across the board cuts	Intercept	-.474	.789	.548	.622
	Revenue	-.087	.020	.000***	.917
	Recession	.698	.331	.035*	2.009
	Population	.000	.000	.739	1.000
	Presidential	-3.045	1.358	.025*	.048
	Unemployment	.273	2.314	.906	1.314
	State	-.106	.032	.001**	.899
N	602				
Chi-Square	57.367				
Nagelkerke R <sup>2</sup>	.204				

The policy to cut the budget across the board had a negative relationship with the change in revenue, the recession, political ideology, and state. Revenue and state were significant at the 99% level of confidence, while the recession and political ideology were significant at the 95% level of confidence. Therefore, we reject the null hypothesis because revenue was statistically significant.

The Exp(B) statistic for revenue suggests that a 1% drop in revenue increases the odds of county policymakers implementing across the board cuts by 8.3%. Additionally, recession years increase the odds of across the board cuts by 100% compared to non-recession years.

**Hypothesis 8.** The probability of renegotiating supplier contracts had no statistically significant relationship with the decrease of revenue.

Table 15

*Regression Output: Hypothesis 8, Renegotiating Supplier Contracts*

Policy	Variables	B	Std. error	Sig.	Exp(B)
	Intercept	-2.388	.784	.002	.092
	Revenue	-.108	.021	.000***	.898
	Recession	.052	.325	.873	1.053
Contracts	Population	.000	.000	.432	1.000
	Presidential	-.776	1.308	.553	.460
	Unemployment	.595	2.560	.816	1.813
	State	.012	.024	.616	1.012
N		602			
Chi-Square		36.545			
Nagelkerke R <sup>2</sup>		.134			

Changing supplier contracts had only one significant relationship. The change in revenue had a negative relationship with the policy at the 99% level of confidence.

Therefore, we reject the null hypothesis.

The odds ratio for revenue suggests that a 1% decrease in revenue from the previous year would increase the odds of counties renegotiating supplier contracts by 10.2%.

**Hypothesis 9.** The probability of furloughing employees had no statistically significant relationship with the decrease of revenue.

Table 16

*Regression Output: Hypothesis 9, Furlough Days*

Policy	Variables	B	Std. error	Sig.	Exp(B)
	Intercept	-4.571	1.183	.000	.010
	Revenue	-.069	.025	.006**	.933
	Recession	1.027	.507	.043*	2.792
Furlough days	Population	.000	.000	.797	1.000
	Presidential	1.607	1.900	.398	4.989
	Unemployment	2.210	2.504	.377	9.115
	State	-.022	.036	.536	.978
N	602				
Chi-Square	20.549				
Nagelkerke R <sup>2</sup>	.121				

Furloughing employees had a negative relationship with the change in revenue and a positive relationship with the recession at the 99% and 95% level of confidence respectively. Therefore, we reject the null hypothesis because revenue had a statistically significant relationship with the implementation of furlough days.

The odds ratio for revenue suggests that a 1% drop in revenue from the previous year would increase the odds of furloughing employees by 6.7%. Additionally, recession years increase the odds of furloughing employees by 179% compared to non-recession years.

**Hypothesis 10.** The probability of renegotiating labor agreements had no statistically significant relationship with the decrease of revenue.

Table 17

*Regression Output: Hypothesis 10, Renegotiating Labor Agreements*

Policy	Variables	B	Std. error	Sig.	Exp(B)
Labor agreements	Intercept	-3.042	1.320	.021	.048
	Revenue	.063	.032	.051	1.065
	Recession	1.705	.595	.004**	5.499
	Population	.000	.000	.905	1.000
	Presidential	-3.632	2.062	.078	.026
	Unemployment	12.808	8.544	.134	365156.690
	State	-.098	.050	.049*	.907
N	602				
Chi-Square	33.840				
Nagelkerke R <sup>2</sup>	.209				

Renegotiating labor agreements had one significant relationship. The recession years had a positive relationship at the 99% level of confidence. However, the change in revenue from the previous year did not have a statistically significant relationship with the renegotiation of labor agreements. Therefore, we cannot reject the null hypothesis.

Recession years increase the odds of renegotiating labor agreements by 449% compared to non-recession years. This suggests that county governments are more likely to ask for concessions from their bargaining units during a recession compared to non-recession year.

**Hypothesis 11.** The probability of reducing travel had no statistically significant relationship with the decrease of revenue.

Table 18

*Regression Output: Hypothesis 11, Reducing Travel*

Policy	Variables	B	Std. error	Sig.	Exp(B)
Travel reduction	Intercept	-4.531	1.275	.000	.011
	Revenue	-.066	.027	.013*	.936
	Recession	1.420	.586	.015*	4.139
	Population	.000	.000	.489	1.000
	Presidential	.677	1.998	.735	1.968
	Unemployment	1.537	3.438	.655	4.652
	State	-.007	.037	.856	.993
N	602				
Chi-Square	19.119				
Nagelkerke R <sup>2</sup>	.124				

Restricting travel for county officials had a negative relationship with the change in revenue and the recession at the 95% level of confidence. Therefore, we reject the null hypothesis.

The Exp(B) statistic suggests that a 1% drop in revenue results in a 6.4% increase of the odds county governments introduce travel restrictions. Additionally, recession years increase the odds of travel restrictions by 314% compared to non-recession years.



**Hypothesis 12.** The probability of allowing early retirement had no statistically significant relationship with the decrease of revenue.

Table 19

*Regression Output: Hypothesis 12, Early Retirement*

Policy	Variables	B	Std. error	Sig.	Exp(B)
Early retirement	Intercept	-4.559	1.403	.001	.010
	Revenue	-.062	.030	.042*	.940
	Recession	1.454	.667	.032*	4.281
	Population	.000	.000	.153	1.000
	Presidential	-1.613	2.258	.475	.199
	Unemployment	.471	3.440	.891	1.602
	State	.035	.043	.414	1.035
N	602				
Chi-Square	16.068				
Nagelkerke R <sup>2</sup>	.127				

Encouraging employees to take early retirement had a significant relationship with two independent variables. The change in revenue had a negative relationship with the policy at the 95% level of confidence and the recession had a positive relationship with the policy at the 95% level of confidence. Therefore, we reject the null hypothesis because revenue had a statistically significant relationship with the implementation of early retirement.

The odds ratio for revenue suggests a 1% decrease in revenue compared to the previous year results in a 6% increase in the odds that early retirement would be offered

to at least some employees. Additionally, recession years increase the odds of county governments offering early retirement by 328% compared to non-recession years.

**Hypothesis 13.** The probability of using reserve funds had no statistically significant relationship with the decrease of revenue.

Table 20

*Regression Output: Hypothesis 13, Reserve Funds*

Policy	Variables	B	Std. error	Sig.	Exp(B)
	Intercept	-.853	.547	.119	.426
	Revenue	-.061	.015	.000***	.941
	Recession	.578	.205	.005**	1.782
Reserve funds	Population	.000	.000	.569	1.000
	Presidential	-1.401	.839	.095	.246
	Unemployment	8.467	3.886	.029*	4757.272
	State	-.033	.016	.037*	.967
N		602			
Chi-Square		74.144			
Nagelkerke R <sup>2</sup>		.168			

The policy to use reserve funds to close the budget gap had a statistically significant relationship with revenue and recession years at the 99% levels of confidence. The unemployment rate and the state the county is located in had a statistically significant relationship with the policy at the 95% level of confidence. Therefore, we reject the null hypothesis because revenue had a statistically significant relationship with the implementation of using reserve funds.

The Exp(B) for revenue suggest that a 1% drop in revenue results in a 5.9% increase in the odds reserve funds are used to cover expenditures. Additionally, recession years increase the odds of county governments using reserve funds by 78% compared to non-recession years.

**Hypothesis 14.** The probability of increasing user fees had no statistically significant relationship with the decrease of revenue.

Table 21

*Regression Output: Hypothesis 14, User Fees*

Policy	Variables	B	Std. error	Sig.	Exp(B)
	Intercept	-1.578	.699	.024	.206
	Revenue	-.036	.017	.034*	.964
	Recession	.344	.269	.200	1.411
User fees	Population	.000	.000	.095	1.000
	Presidential	-1.659	1.081	.125	.190
	Unemployment	6.074	4.492	.176	434.473
	State	-.033	.021	.133	.968
N		602			
Chi-Square		32.463			
Nagelkerke R <sup>2</sup>		.098			

The change in revenue had a negative relationship with the increase and/or implementation of user fees at the 95% level of confidence. The null hypothesis should be rejected. The Exp(B) output shows that a 1% drop in revenue increases the odds of increasing user fees by 3.6% However, the Naglekerke R-Squared was extremely low so the model doesn't fully explain the enactment of the policy.

**Hypothesis 15.** The probability of increasing state or federal aid had no statistically significant relationship with the decrease of revenue.

Table 22

*Regression Output: Hypothesis 15, State or Federal Aid*

Policy	Variables	B	Std. error	Sig.	Exp(B)
State or federal aid	Intercept	-3.238	.759	.000	.039
	Revenue	-.040	.018	.024*	.961
	Recession	.765	.297	.010*	2.150
	Population	.000	.000	.163	1.000
	Presidential	2.272	1.229	.064	9.703
	Unemployment	2.121	2.467	.390	8.338
	State	-.075	.025	.003***	.929
N	602				
Chi-Square	41.429				
Nagelkerke R <sup>2</sup>	.136				

The policy of receiving more state and/or federal aid had three significant relationships. Revenue and the recession year had a statistically significant relationship with the policy at the 95% level of confidence. Additionally, the state where the county is located had a statistically significant relationship with the policy at the 99% level of confidence. We reject the null hypothesis.

According to the log odds ratio, a 1% decrease in revenue increases the probability of attempting to receive more state and/or federal aid by 3.9%. Recession

years increase the probability of this policy happening by 115% compared to non-recession years.

**Hypothesis 16.** The probability of increasing the millage rate had no statistically significant relationship with the decrease of revenue.

Table 23

*Regression Output: Hypothesis 16, Millage Rate*

Policy	Variables	B	Std. error	Sig.	Exp(B)
	Intercept	-2.752	.780	.000	.064
	Revenue	.011	.020	.576	1.011
	Recession	.553	.309	.074	1.738
Millage rate	Population	.000	.000	.241	1.000
	Presidential	1.004	1.269	.429	2.729
	Unemployment	1.177	2.980	.693	3.245
	State	-.029	.023	.212	.971
N		602			
Chi-Square		7.970			
Nagelkerke R <sup>2</sup>		.030			

The policy of increasing the millage rate had no statistically significant relationship with any of the independent variables. Additionally, the Nagelkerke R-Squared was extremely low and this suggests the model cannot adequately explain the increase in the millage rate. Therefore, we cannot reject the null hypothesis.

**Hypothesis 17.** The probability of creating or increasing a non-property tax had no statistically significant relationship with the decrease of revenue.

Table 24

*Regression Output: Hypothesis 17, Non-Property Tax*

Policy	Variables	B	Std. error	Sig.	Exp(B)
Non-property tax	Intercept	-.936	.867	.280	.392
	Revenue	-.002	.023	.933	.998
	Recession	.296	.365	.417	1.345
	Population	.000	.000	.492	1.000
	Presidential	-2.078	1.478	.160	.125
	Unemployment	.171	3.420	.960	1.186
	State	-.095	.033	.004**	.909
N	602				
Chi-Square	12.473				
Nagelkerke R <sup>2</sup>	.056				

The increase or implementation of a non-property tax did not have a statistically significant relationship with any of the independent variables except for the state where the county is located. The Nagelkerke R-Squared was very low and this suggests the model does not adequately explain the increase or implementation of the tax. Therefore, we cannot reject the null hypothesis.

**Hypothesis 18.** The probability of increasing debt had no statistically significant relationship with the decrease of revenue.

Table 25

*Regression Output: Hypothesis 18, Debt*

Policy	Variables	B	Std. error	Sig.	Exp(B)
	Intercept	-.704	1.219	.564	.495
	Revenue	.056	.032	.076	1.058
	Recession	.066	.513	.898	1.068
Debt	Population	.000	.000	.203	1.000
	Presidential	.182	1.811	.920	1.200
	Unemployment	-22.107	10.936	.043*	.000
	State	-.124	.042	.003**	.883
N	602				
Chi-Square	23.430				
Nagelkerke R <sup>2</sup>	.138				

The use of debt to close the budget gap was statistically significant with the unemployment rate and the state variables at the 95% and 99% level of confidence respectively. However, relating to the null hypothesis, the percent change in revenue from year to year did not have a statistically significant relationship with the odds of using debt. Therefore, we cannot reject the null hypothesis.

**Hypothesis 19.** The probability of selling assets had no statistically significant relationship with the decrease of revenue.

Table 26

*Regression Output: Hypothesis 19, Assets*

Policy	Variables	B	Std. error	Sig.	Exp(B)
	Intercept	-1.767	1.090	.355	.171
	Revenue	-.043	.047	.358	.958
	Recession	-.263	.832	.752	.769
Assets	Population	.000	.000	.467	1.000
	Presidential	-4.102	3.440	.233	.017
	Unemployment	1.473	3.551	.678	4.361
	State	-.121	.090	.178	.886
N		602			
Chi-Square		6.691			
Nagelkerke R <sup>2</sup>		.093			

Finally, the selling of assets did not have a statistically significant relationship with any of the independent variables. Additionally, the Nagelkerke R-Squared was very low which shows the model does not adequately explain the selling of assets. Therefore, we cannot reject the null hypothesis.

As stated in the previous chapters, the purpose of this dissertation was to test the relationship between the percentage change in revenue from year to year and the odds of implementing cutback management policies. According to the regression output, it was necessary to retain hypotheses 10 (labor agreements), 16 (millage rate), 17 (non-property tax), 18 (debt) and 19 (assets). On the other hand, hypotheses 1 (FTE reduction), 2



(service reduction or elimination), 3 (deferred maintenance), 4 (employee financial compensation), 5 (hiring freeze), 6 (healthcare benefits), 7 (across the board cuts), 8 (supplier contracts), 9 (furlough days), 11 (travel reduction), 12 (early retirement), 13 (reserve funds), 14 (user fees), and 15 (state and/or federal aid) should be rejected.

### **Interpretation of Findings**

The research question was, “During the Great Recession, was there a correlation between the enactment of cutback management policies and revenue decline from year to year as theorized by the rational-approach framework?” The findings of this study show mixed results. Of the 19 policies, only 14 policies had a significant relationship with the percent change in revenue, meaning the odds of implementing those policies was impacted by the percent decrease in revenue.

In order to calculate the odds of implementing the policy based on the percent change in revenue, the Exp(B) output was used. As expected, the decrease in revenue increased the odds of implementing the policies. Therefore the equation to calculate the increased odds of implementing the statistically significant policies per 1% change in revenue was:

$$\text{Change of Odds} = 1 - \text{Exp(B)}$$

Table 27 shows the increased chance of implementing those policies due to a 1% drop in revenue from the previous year. Only policies with a statistically significant relationship with revenue are listed in the table.

Table 27

*Odds of Enactment Based on a One Percentage Point Drop in Revenue*

Policy	Odds increase (%)
FTE reduction	11.4
Contract changes	10.2
Service reduction	8.8
Across the board cuts	8.3
Reducing employee health care benefits	7.1
Furlough days	6.7
Travel reduction	6.4
Hiring freeze	6.1
Early retirement	6.0
Reducing employee financial compensation	6.0
State and Federal Aid	5.9
Reserve fund use	5.9
Deferred Maintenance	5.0
User Fees	3.6

In general, the percent decline in revenue is a good indicator of which cutback management policies would be adopted. With regard to the research question posed in this study, it seems to be true that most cutback management policies have heightened odds of being enacted based on the decline in revenue. This suggests the individual components of the rational-approach framework holds up when examined during the Great Recession. However, there is more to the story once the specific policies are examined.

Of the 14 policies showing an inverse relationship with the percent change in revenue, 11 focus on reducing expenditures compared to the three that focus on revenues. This shows the odds of using internal, i.e. expenditure policies, are greater than using external, i.e. tax and debt policies, when revenues decrease by 1%. Additionally, two of the top three policies with the highest odds of being implemented primarily focus on the labor cost of government. As with most organizations, labor is the greatest cost, and the same is true in government (Savas & Schubert, 1987). Therefore, it is understandable that policymakers focus their attention on cutting the labor costs of government. Offering early retirement to employees who are eligible and/or laying off full-time employees reduces labor expenditures by a significant amount (Savas & Schubert, 1987). Other human resource policies used during the recession focused on reducing healthcare benefits, furloughing employees, placing a freeze on hiring, and reducing employees' financial compensation. These policies retain the number of employees while trying to reduce the cost of maintaining them. One reason to use these policies might result from the generally high unemployment rate due to the recession. Government employees might be more willing to take cuts in their overall compensation because the alternative would be to enter a bad job market. In general, these policies focus on making government more efficient with little impact on citizens until there is an impact on service delivery. Since labor costs are the highest of all costs of operating an organization, it would make sense to reduce this cost as much as possible, which was reflected in the results.

The significant expenditure reducing strategies that did not directly address the labor costs of government were contract renegotiation, across the board cuts, travel reductions, and service reduction. The policy of renegotiating contracts had a 10.2% odds increase of occurring when there was at least a 1% reduction in revenue, meaning it was

one of the first policies used by county administrators. County governments used supplier contract renegotiations to reduce their current supplier costs, contract out public services, and shift costs to the private sector through private-public partnerships.

Cutting government expenditures across the board by requiring all departments to reduce their expenditures by 1%, 5%, or even 10% had high odds of being implemented. Like contract renegotiating, the policy to cut across the board was not used as frequently as others during the recession and yet had high odds of usage. The reason may be it is a policy used within one of the first two years of the recession but could not be sustained during the entire recession.

The reduction of travel for county employees was another policy with a statistically significant relationship with the change in revenue. Travel costs do not account for a significant amount of the total government expenditures, but is one of the easiest to eliminate or reduce because the funds used are often discretionary. Employees may be encouraged to conduct video conferences rather than traveling or employees may not be allowed to take their county vehicle home after their work hours.

Reducing or eliminating county programs was one of the most frequently used cutback management policies yet had one of the lowest probabilities of enactment out of all of the policies used during the recession. Once a county was forced to cut or eliminate public services it directly impacted their citizens and that could have led to political consequences for policymakers. Therefore, as the results of this study show, it took a bigger reduction in revenue for policymakers to be comfortable with enacting this policy compared to others, primarily those focused on cutting labor costs.

Using reserve funds was an easy go-to for most county governments and is reflected in its frequency and odds. As stated in the cutback management literature, it is a

likely source of funds to help fund short-term expenditures (Koven & Koven, 1989; Maag & Merriman, 2003). There are few political consequences to this policy because it has no direct bearing on employees and citizens. However, it is not a long-term solution because it is limited to the amount of money reserved for occasions like a recession.

State or federal aid was another policy with a statistically significant relationship with the change in revenue. Once again, this policy was mentioned as a potential source of revenue in the cutback management literature (Levine et al., 1981). The key reason for its significance was during the Great Recession the American Recovery and Reinvestment Act of 2009 offered county governments the opportunity to receive federal grant money to be used for infrastructure, education, health, and other public programs.

Finally, the increase in user fees was another revenue policy that had a statistically significant relationship with revenue. This suggests that county governments were willing to raise revenue through something other than taxation. As the percent change in revenue decreases the odds of implementing or increasing user fees increases.

According to the regression output, over half of the tax and debt policies did not have a statistically significant with revenue decreases. Over the course of this study, the change in revenue did not correlate with the odds of increasing the millage rate, non-property taxes, or debt. There are two possibilities of why this occurred. First, if the framework holds true then the percent change in revenue was never great enough to trigger their enactment. Second, the framework may not apply for county governments with a tax limitation. The rise of tax limitations on local governments has risen over the past few decades and it caps how much a local government can tax its citizens (Mullins, 2004). This has resulted in county government policymakers being restricted on the millage rate or another form of taxation during good and bad economic times.

In total, the rational-approach framework provided mixed results. On the one hand, all but one of the expenditure reducing policies had a significant relationship with the percent change in revenue, therefore, confirming the current cutback management literature. On the revenue side, reserve funds, increasing state and/or federal aid, and user fees had a significant relationship with the decrease in revenue. Employees have a higher probability to bear the burden of the recession through layoffs and reductions to their compensation than citizens. Additionally, there seemed to be a bias toward policies that have consequences primarily in the short term rather than policies that spread out the consequences over time. For example, efficiency policies such as supplier renegotiations and across the board cuts were more likely to be implemented than deferred maintenance and the reduction in employee compensation. The percent change in revenue had a similar impact to the cutback management policies during the Great Recession as it did during the recession of the 1970s and 1980s.

### **Chapter Summary**

This chapter revealed the outcomes of the empirical analysis on 19 cutback management policies and their statistical relationship with the percent change in revenue. The research question proposed in this study was answered with mixed results. Expenditure policies followed the rational-approach framework as theorized by the cutback management literature. However, revenue policies used to raise revenue from the citizens did not follow the framework most of the time, which is different than the literature.

The mixed outcome of this study leads into the next chapter of this dissertation. Chapter 5 discusses the implications of these results and the recommended path for future research.

## CHAPTER 5: CONCLUSION

### **Introduction**

This chapter serves three purposes: (a) integrate the findings of this research into the current body of literature on cutback management, (b) interpret the findings for policymakers, and (c) outline recommendations for future research. These purposes serve to further the intellectual discussion of cutback management's role in helping county governments find solutions to budgetary problems during a recession.

### **Relevance for Cutback Management**

Levine et al. (1981) established the rational approach framework to explain why each cutback management policy was chosen when local governments faced falling revenues. As explained in Chapter 2, it was theorized that financial considerations outweigh political consequences during a recession; therefore, policy decisions are driven by the decline in revenue. The results of this dissertation show the framework holds up for some, but not all policies. Fourteen cutback management policies had a significant relationship with the change in revenue and almost all of them were expenditure reducing policies. Less than half of the tax or debt increasing policies had a statistically significant relationship with the change in revenue. Therefore, the framework is useful for explaining the relationship between the percent change in revenue and expenditure policies, and not percent change in revenue and tax and debt policies.

Pandey (2010) pointed out the lack of research in the area of cutback management since the 1980s. Therefore, it is necessary to compare which policies were significant

then versus now. By doing this side-by-side comparison it will be easier to integrate the findings of this study with the current body of literature. Table 28 shows the policy findings of the current body of cutback management literature and whether or not this study was able to confirm the policies' significance with revenue decline.

Table 28

*Past Policies in Current Literature*

Policies in previous literature	Current study
Hiring freeze (Levine, 1978; Miller, 1983)	Yes
Travel reduction (Miller, 1983)	Yes
Across the board cuts (Miller, 1983)	Yes
Reducing employee financial compensation (Berne & Stiefel, 1993)	Yes
FTE reduction (Berne & Stiefel, 1993; Chackerian, 1996; Levine et al., 1981)	Yes
Reducing or eliminating services (Behn, 1978; Brewer, 1978; Danzinger & Ring, 1982; deLeon, 1982; Levine et al., 1981)	Yes
Used reserve funds (Koven & Koven, 1989; Maag & Merriman, 2003)	Yes
Deferred maintenance (Berne & Stiefel, 1993; Levine et al., 1981)	Yes
State and/or local aid (Levine et al., 1981)	Yes
Increased debt (Miller, 1983)	No
Increased taxes (Maag & Merriman, 2003)	No

This study confirms 9 out of 11 policies from the current literature had a significant relationship with the revenue decline. What's significant for this study is the two policies that did not have a relationship with the decline in revenue—increased debt and taxes. These results would give weight to Afonso's (2013) conclusion that policymakers are not very willing to shift some of the financial burden of the deficit to the citizens. It could be concluded that policies having a significant relationship with



revenue provided an amount of financial relief for governments that outweighed the political consequences of their use. For the two policies not having a significance, it could be concluded that the opposite was true by which the political consequences outweighed the financial benefits from those policies being enacted.

A significant finding from this study was the cutback management policies used by county governments during the recession that had not been seen in the previous literature. Table 29 shows the new policies that fit the definition of cutback management because they were used to reduce expenditures or increase revenues during the recession and the frequency of their use.

Table 29

*New Cutback Management Policies*

Policy	Frequency
User fees	77
Changed healthcare benefits	73
Renegotiated supplier contracts	51
Furlough days	23
Renegotiated labor agreements	21
Early retirement	15
Selling of assets	7

These policies followed the same pattern as the policies previously found in the literature because the majority of them focused on reducing the labor costs of government rather than shifting the burden to taxpayers. One possible reason for these policies to show up in the study is the increased sophistication of managing government compared to decades ago. For years local governments have increased the use of user fees for

government services by shifting pure public goods to club goods by charging people for their use (Sandler & Tschirhart, 1997). The cost of healthcare for employees is becoming an increasingly large portion of the labor cost for local governments (Coleman & Kemp, 2013). Therefore, this specific portion of employees' compensation package is a prime target for reduction in the recession. The new cutback management policies found in this study highlights the increased amount of policy tools administrators have at their disposal during the Great Recession as compared to the 1970s and 1980s.

This dissertation contributes to the cutback management literature in two ways. First, it reaffirms the usefulness of the rational approach framework in explaining the relationship between revenue decline and cutback management policy enactment. With this affirmation, it opens the door for other budget scholars to delve deeper into the use of cutback management policies during the Great Recession. Second, it adds to the list of policies that are considered as cutback management. With the knowledge of these additional policies scholars can explore the role these policies play in the context of cutback management with more depth.

### **Significance for Policymakers**

One of the important roles budget scholars can play is to connect budget theory to practice for policymakers. This dissertation used the rational approach framework to connect the enactment of cutback management policies to the declining revenues. This connection can help policymakers understand the policy consequences of recessions.

Levine (1978) proposed the efficiency versus equity paradigm of cutback management. Some policies are focused on increasing efficiencies within government operations and others create inequity amongst the stakeholders of government. The policies of renegotiating service contracts and restricting travel are attempts by

policymakers to find efficiencies within government without impacting stakeholders. The policies addressing the cost of labor in government are more than likely seen by policymakers as ways of increasing government efficiency for the taxpayers by having employees do more with less. From the equity view the policies of reducing or eliminating public services and charging user fees could be seen as hurting citizens who need the services that were cut and citizens who cannot afford the user fees.

For policymakers, they need to determine what stakeholders are considered under efficiency and equity policies. Typically, policymakers might view efficiency policies as tools to save taxpayer money or prevent them from having to pay more taxes. However, as this study has shown, much of the burden during the recession fell on the employees in the form of layoffs, furlough days, and benefit cuts. Policymakers need to consider if those policies create inequity within the community or simply ways of “trimming the fat.”

A second cutback management paradigm was proposed, and it addressed the short-term versus Long-term consequences of implementing those types of policies (Berne & Stiefel, 1993). Some policies have greater short-term consequences than long-term consequences and vice versa. The results of this study showed that almost all of the policies tied to the drop in revenue have clear short-term consequences. The two exceptions were changes to public programs and deferred maintenance, both of which were in the lower half of the odds to be implemented with a 1% decrease in revenue. Policymakers can take the results of this study and examine how revenue changes have directed them towards policies with short-term consequences rather than long-term.

Policymakers can apply the results of this study within the context of the two paradigms of cutback management. With this knowledge and understanding of how

finances drive policies, all of which have consequences on the stakeholders and the well-being of their community, policymakers may be better able to create better budget policies in the future.

### **Future Research**

This dissertation constructs the foundation for further research on cutback management and the Great Recession. It is important to reassess the policy actions taken during the recession in order to develop better policies for the future. There are three specific areas scholars should consider to advance this work. First, examine the cutback management policies with more detail. This study only looked at whether or not the policy was used, and it will be helpful to examine the relationship between declining revenue and the percentage of the workforce laid off, the dollar amount user fees increased, and other similar items. Doing this would give scholars a better comparison between revenue changes and the degree to which policies are implemented. Second, instead of applying the framework to all functions of government in total, apply it to specific government departments. More than likely all departments in a county government are not treated equally and seeing how revenue changes impacted the policies enacted by department would give scholars better insight into the choices made by policymakers. Lastly, more work should be done study the short-term and long-term consequences of cutback management policies. This would enable policymakers to better understand what consequences there could be from revenue declines, and they could better prepare for future recessions.

### **Summary**

This chapter outlined the contribution this dissertation has made for the area of cutback management, policymakers, and future research. With regard to the expenditure

reducing policies most of them were statistically significant with the percent change in revenue. This means policymakers and citizens will now know that with a 1% drop in revenue there is significantly high chance certain policies like FTE layoffs and the encouragement of early retirement will be implemented. For most revenue and debt increasing policies there was very little significance between their adoption and revenue decline. This suggests that county governments do not respond to revenue decline by trying to find additional sources of revenue. In total, the rational approach framework showed its usefulness in explaining the relationship between expenditure focused cutback management strategies and revenue decline. Therefore, Levine et al.'s (1981) framework is only useful under certain conditions in modern times.

This dissertation looked at the individual cutback management policies in a limited way. The pure act of implementing them was examined rather than how they were implemented and to what degree. Future research should be conducted on the affect these policies had on the counties' budgets and the employees of the governments. Additionally, future research should expand on this dissertation by making a stronger connection between budget theory and practice, so that future policymakers and scholars can learn from the Great Recession.

## APPENDIX

### Award Criteria for the GFOA Distinguished Budget Presentation Award

#### Distinguished Budget Presentation Awards Program Government Finance Officers Association

##### Awards Criteria (and explanations of the Criteria)

**#C1. Mandatory:** The document shall include a table of contents that makes it easier to locate information in the document.

###### Criteria Location Guide Questions

###### Table of Contents

1. Is a comprehensive table of contents provided to help the reader locate information in the document?
2. Are all pages in the document numbered or otherwise identified?
3. Do the page number references in the budget or electronic table of contents agree with the related page numbers in the budget or electronic submission?

*Make sure every page in the budget document is sequentially numbered.*

###### Explanation

Detailed indices preceding individual sections can be helpful, but they are not a substitute for a single comprehensive table of contents. Care should be taken in developing budget or electronic page number references in the table of contents, so they agree with the related page numbers in the budget document or electronic submission. The use of whole numbers as page numbers is easier to follow.

**#P1: The document should include a coherent statement of organization-wide, strategic goals and strategies that address long-term concerns and issues.**

###### Criteria Location Guide Questions

###### Strategic Goals and Strategies

1. Are non-financial policies/goals included?
2. Are these policies/goals included together in the Budget Message or in another section that is separate from the departmental sections?
3. Are other planning processes discussed?

*Look at GFOA best practice on Establishment of Strategic Plans.*

###### Explanation

This criterion relates to the long-term, entity-wide, strategic goals that provide the context for decisions within the annual budget. Consider including action plans or strategies on how the goals will be achieved.

Refer to GFOA's best practice on [Establishment of Strategic Plans](#).

**#P2: The document should describe the entity's short-term factors that influence the decisions made in the development of the budget for the upcoming year.**

###### Criteria Location Guide Questions

###### Short-term organization-wide factors

1. Are short-term factors addressed?
2. Does the document discuss how the short-term factors guided the development of the annual budget?
3. Is a summary of service level changes presented?

*Factors should include a mix of operational and financial items.*

###### Explanation

This criterion requires a discussion of the key factors that guide the development of the upcoming year's budget. Factors that might be included relate to: salary and benefit guidelines, fees, capital improvements, program enhancements or reductions, tax levels,

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