Southern Illinois University Carbondale
OpenSIUC

Research Papers | Graduate School

4-1-2011

Illinois Counties' Unreserved Fund Balances: Identifying Factors that Influence County Savings

Travis Taylor
Southern Illinois University Carbondale, travistayl@gmail.com

Follow this and additional works at: http://opensiuc.lib.siu.edu/gs_rp

Recommended Citation
Taylor, Travis, "Illinois Counties' Unreserved Fund Balances: Identifying Factors that Influence County Savings" (2011). *Research Papers.* Paper 117.
http://opensiuc.lib.siu.edu/gs_rp/117

This Article is brought to you for free and open access by the Graduate School at OpenSIUC. It has been accepted for inclusion in Research Papers by an authorized administrator of OpenSIUC. For more information, please contact jnabe@lib.siu.edu.

ILLINOIS COUNTIES' UNRESERVED FUND BALANCES: IDENTIFYING FACTORS THAT INFLUENCE COUNTY SAVINGS

by

Travis W. Taylor

B.A., Southern Illinois University Carbondale, 2009

A Research Paper
Submitted in Partial Fulfillment of the Requirements for the
Master of Public Administration

Department of Political Science
in the Graduate School
Southern Illinois University Carbondale
April 2011

RESEARCH PAPER APPROVAL

ILLINOIS COUNTIES' UNRESERVED FUND BALANCES: IDENTIFYING FACTORS THAT INFLUENCE COUNTY SAVINGS

By

Travis W. Taylor

A Research Paper Submitted in Partial

Fulfillment of the Requirements

for the Degree of

Master of Public Administration

Approved by:

Dr. La Shonda M. Stewart, Chair

Dr. John A. Hamman

Dr. John L. Foster

Graduate School
Southern Illinois University Carbondale
April 7, 2011

ACKNOWLEDGMENTS

I would like to thank Dr. La Shonda M. Stewart for her tireless dedication to this research paper. Her passion for the field and devotion to her students is inspiring and certainly deserves recognition. Additionally, I would like to extend my appreciation to the students, faculty, and staff of the Public Administration program at Southern Illinois University-Carbondale whose constant collaboration and hard work have undoubtedly contributed to my professional development.

TABLE OF CONTENTS

CHAPTER PAGE

ACKNOWLEDGMENTS i

LIST OF TABLES iv

LIST OF FIGURES v

Introduction 1

Literature Review

State Savings Innovations 3

Local Government Savings Innovations 6

Illinois County Government

Why Focus on Illinois Counties? 10

County Function 11

County Revenues 12

County Organization 13

Data and Methods

Data 14

Variables/Hypotheses 16

Data Analysis 20

Identifying Influential Factors during a Period of Economic Prosperity 21

Identifying Influential Factors during a Period of Economic Decline 25

Discussion 28

Future Studies 29

REFERENCES 32

APPENDICES

Appendix A 37

Appendix B 40

VITA 41

LIST OF TABLES

TABLE PAGE

Table 1 22

Table 2 26

Table 3 37

Table 4 40

LIST OF FIGURES

TABLE PAGE

Figure 1 12

Figure 2 15

Introduction

In 2008, the United States fell into a tragic economic recession, one which resulted in a world-wide financial decline. The financial ripples of this recession were greatly felt by individuals, businesses, and governments. As a result, individuals and businesses across the nation are decreasing expenses, looking for ways to earn more money, and dipping into their savings. The federal government is also facing trillions of dollars in debt (Cashell, 2009) and state and local governments are in similar situations. Illinois for example, has unpaid expenditures totaling about four billion dollars (Preston, 2010) and a total deficit of about twelve billion dollars (Leonard, 2010).

Governments face a very different dynamic during economic hardship than do a household or private business. Governments are constantly under the public's microscope and any misuse of revenues can be met with severe hostility. Up until the 1980s, most local and state governments were not retaining earnings (Wilson, 1989). Without a surplus of discretionary funds, governments were not prepared for unaccounted circumstances, such as a sudden economic decline. Wilson (1989) states that today's citizenry view the government as an entity that should be objective and property of the people. Withholding revenues could impede on these views, leading to public discontent. With the media publicizing the misuse of funds, such as the use of government bailout funds for bonuses (Dennis and Cho, 2009) and the use of public funds to pad local government officials' and administrators' salaries (Palmeri, 2010) it is no surprise that the public is skeptical of letting the government retain profits. The worry is that public administrators and officials will misuse this profit for personal use and thus bias their neutral judgment for public service (Wilson, 1989). Thus, governments are left in a tight

circumstance of it being unpopular to cut services, raise taxes, and take in excess revenues (Wilson, 1989; Welch, 1985).

In Illinois, a state currently blighted with deficit, a study by the Paul Simon Public Policy Institute shows voters opposed tax increases and did not support any cuts in services (Leonard, 2010). This is a problem often unique to governments as the public simultaneously opposes tax increases and cutting expenditures, forcing a government in hard financial times to be more innovative (Watson, 1997). This is the common sentiment among citizens to want more services at a lesser cost (Welch, 1985; Watson, 1997). Inherently, this type of public rigidity brings problems to the forefront. What is government to do when its citizenry ask for more services and less taxes, especially during a time of economic decline? Even beyond constituent pressures, it is still not feasible for governments to cut expenditures and increase revenues with every cyclical economic downturn. Aware of this, governments took heed of household practices and they too began to hold savings in preparation for hard economic times (Lav, 1999).

This study takes an approach similar to Stewart's (2009) study of Mississippi counties and focuses on identifying the factors effecting Illinois county unreserved fund balances during times of economic prosperity and economic downturn. To begin, this paper will highlight the history of unreserved fund balances. The paper will then discuss Illinois counties more in depth, including why they deserve to be studied, their function, their organization, and their revenue structure. The paper will then discuss the methodology of this research, identifying variables, hypotheses, and the method of analysis. The paper will conclude by reviewing the results of the analysis and discussing implications of the research.

Literature Review

State Savings Innovations

As an attempt to manage budgets during the boom-bust cycles of the economy and protect themselves from the public's "more-for-less" mentality, states began to hold savings as early as the 1940s (Hou, 2003). Often labeled as "rainy day" funds, these savings gained popularity during the recessionary period of the 1980s (Hou, 2003). By 1999 forty states had instituted a savings fund (Lav, 1999), and in 2008 all but three states had a budget stabilization fund of some type (Thatcher, 2008). Proper financial management and preparation is crucial for governments, especially during economic downturns and an increase in state debt (Robbins and Dungan, 2001). Since their institution, rainy day or budget stabilization funds have been embraced and several organizations have gone so far as to recommend the use of rainy day funds and the minimum levels for these funds to be useful. For example, the National Conference of State Legislatures (NCSL) recommends the use of rainy day funds with a minimum of five percent held for state governments (NCSL, 2004). Similarly, at one point the Government Finance Officers Association (GFOA) recommended that local governments hold a minimum of five percent of their general fund operating expenses as a level of savings in a rainy day fund.

However, in a recent update of their recommendation, the GFOA finds the minimum threshold to be more dependent of the internal and external situations of the government. The GFOA (2009) still suggests that governments hold 5 to 15% or two months of the total general fund operating revenues or expenses in unreserved funds. While this may be a useful general guide, it is important for governments to evaluate their

situation by considering its current and future commitments, revenue and expenditure volatility, liquidity, and the likelihood of future one-time expenses (GFOA, 2009). In a study of the states during the 1990-1991 recession, Sobel and Holcombe (1996) found that states needed far beyond the NCSL recommended minimum of five percent to sustain services. In the study, Sobel and Holcombe examined rainy day funds in the states to see to what extent, if any, these funds eased the fiscal stress incurred by the states during the recession. They found that to be fully capable of coping with the fiscal stress of that recession, the states would have needed around thirty percent of their 1988 expenditures (Sobel and Holcombe, 1996). They also found that states with rainy day funds typically fared better than those without, but those states paled in comparison to those with deposit requirements (Sobel and Holcombe, 1996; See also Douglas and Gaddie, 2002).

Another study by Joyce (2001) found that many factors influence the optimal amount held in rainy day funds. As noted by GFOA, each state has a different environment and relies on different revenue sources. The stability of these revenues affects the level of volatility of the state's budget. Therefore, he finds that since each state's budget is different, there is not a universal optimal level that will work for all states (Joyce, 2001). Vasche and Williams (1987), suggest that the size of the savings should be a product of many factors including error margins in revenue and expenditure forecasts of the state. While Vasche and Williams (1987) stated that there is no clear formula for calculating optimal savings levels, the benefits of holding savings versus not holding such funds are vast.

Evidenced by the recent global recession and ensuing budget crises; it is becoming more important for governments to recognize the cyclical nature of the economy and realize the usefulness of governmental savings. Hou (2003) notes that every state has some kind of balanced budget requirement and thus a greater need for a rainy day fund. In his study, Hou (2003) found that rainy day funds had a positive influence on general fund expenditures. Hou focused on the general fund since it is the largest pool of money for most states and is used for the routine, day-to-day services of government (Hou, 2003). His study provided evidence that during economic downturns, rainy day funds can help lessen the blow of the downturn by filling in the gap between revenues and expenditures.

In a study of Wisconsin, Conant (2003) found that a rainy day fund could have been used to lessen their budget crisis. However, just having these funds is not enough. As in Wisconsin's case, many states have rainy day funds but are crippled by law or politics for its use. In a study of Midwestern states, Navin and Navin (1994) found that it is likely that these funds will be raided for independent projects. If these funds are easily accessible, they can be used for political purposes. Lav (1999) also found that fiscal stress was highest in those states without adequately built rainy day funds. As mentioned before, Sobel and Holcombe (1996) found that states with explicit deposit requirements fared the best out of states with rainy day funds and states without.

While there is not a large amount of literature on local governments' savings, there is a substantial amount concerning rainy day funds and other budget stabilization funds at the state level. The amount of research in the area of local government savings

is limited as this is a relatively new phenomenon. In the following section, the paper will review some of the relevant existing literature for local government savings.

Local Government Savings Innovations

Local government savings funds mirror the state funds in that local governments use them to counter unanticipated economic boom and bust cycles accompanied by depleted revenues and/or increased expenditures (Wolkoff, 1987; Tyer, 1993). While state governments often maintain a rainy day or stabilization fund with a specific label, local governments local governments rarely establish formal counter-cyclical funds and often merely maintain a fund balance in their general fund as a level of savings (Hendrick, 2006). For example, from 1996 to 2003, no Illinois County had a designated counter-cyclical fund. This fund balance is an informal type of savings, similar to private sector profits, that can be carried over to the next year.

Tyer (1993) claims that in order to generate a level of savings, local governments can underestimate revenues, overestimate expenditures, budget specifically for reserve funds, or, more commonly, combine any of the three. Tyer (1993) also states that typically these funds are not highlighted during budget hearings or formal budget meetings due to the political implications. As stated before, government savings might be met with skepticism among constituents. Thus, it is often the case that governments quietly sweep the net assets off into their unreserved funds. Wolkoff (1987) claims that whether or not local governments should set up rainy day funds is dependent on their individual situations; however, he found that many local governments are now realizing the fiscal benefits of holding fund balances.

In a study of North Carolina and South Carolina municipalities, Hembree, Shelton, and Tyer (1999) found that nearly all of the municipalities held some sort of positive reserve fund balance. Hembree et al. (1999) suggest that it is almost in every locality's best interest to consider these funds and examine other similar governments to examine what amount, if any, would be appropriate. Hembree et al. (1999) call this act benchmarking and note that the ideal amount of funds held is dependent on the government's independent situation. When studying the fiscal responsibility of counties and cities, Carter and Vogt (1989) found that not only did the majority of their sample hold a fund balance, but municipalities normally held an adequate amount for their needs.

The fact that these local governments are now holding these balances is no secret; however, what causes these local governments to hold a certain amount is still a mystery. Currently, research is focusing on identifying the factors causing local governments to hold more or less of these balances. At the time of this paper, there are only four known studies that focus on the factors that influence unreserved fund balances in local governments, Marlowe (2004), Hendrick (2006), Gianakis and Snow (2007), and Stewart (2009)

Marlowe (2004) studied a sample of Minnesota and Michigan municipalities in an effort to explain the causes of unreserved fund balance fluctuations. His factors included fiscal effects, institutional and organizational structural effects, and the effects of the desire to be viewed as legitimate by the local government's "stakeholders" (Marlowe, 2004, p.63). He found that government's perception of and response to its fiscal environment is the most important set of determinants, while the institutional and organizational structure's effects varied. Specifically, he found property tax revenues,

rates of home ownership, and the burden of their debt service to be the most prominent factors.

The next study performed by Hendrick (2006) studied suburban municipalities of Chicago. Using an organizational approach, she found that excess resources affect how governments respond to their environment and positively affect their current fiscal situation. Hendrick (2006) studied the effects of variables such as revenue diversification, level of dependence on intergovernmental revenues, debt per capita, population change, political ideology, and the percentage of white-collar workers within the population among others. Hendrick (2006) concludes that when governments recognize increased risk and the lack of "fiscal flexibility," they tend to keep more unreserved resources (p.42)

Gianakis and Snow focused on Massachusetts' municipalities. They found that many municipalities in the state utilized stabilization funds. Gianakis and Snow (2007) found that wealthier communities were more likely to hold unreserved fund balances and poorer communities, which also tended to rely more on unreliable intergovernmental revenues, were less likely to hold unreserved fund balances. They also found that municipalities usually institute these funds after experiencing a deep recession (Gianakis and Snow, 2007). In addition, the funds were often used more to stabilize budgets when state aid decreased, rather than during economic downturns alone.

Stewart (2009) found that Mississippi counties vary in their holdings in unreserved fund balances. Counties hold anywhere from negative balances to over one hundred percent of their expenditures. Studying counties during a period of economic downturn and upturn allowed Stewart to formulate a more complete view of what and

how certain variables affect unreserved fund balances. She found that counties tended to build their revenues during times of economic prosperity and property taxes, other revenues, and income per capita were significant to the change (Stewart, 2009). She also found that debt per capita negatively affected fund balances during both periods (Stewart, 2009). The percentage of non-white residents and the changes in population were also significant in explaining the change in fund balances (Stewart, 2009). The study also found a significant relationship between the system of government and the amount of fund balances held. Typically, the system that appointed an administrator held less unreserved funds than the system that combined administrative and legislative functions (Stewart, 2009).

What these studies offer us as far as stabilization funds are concerned is not nearly as enigmatic as the fact that there are very few studies on the subject. Some of this may be attributed to the fact that this is a relatively new phenomenon only really taking hold in the 1980s (Hou, 2003). However, other studies find that there are some very fundamental barriers to this type of research. In a study of governments, Crain and Schermann (2007) found that there are definite problems in identifying these types of funds. The nature of these funds vary, thus making them difficult to find within the budget. Tyer (1993) also notes that local governments usually do not provide information on these funds in their budgets. Thus, other documents, such as annual audit and financial reports are used to retrieve this information. While the Freedom of Information Act requires this information to be public, it still requires a significant amount of paper work done by the researcher to gather these documents as they may not

be readily available to the public. With the difficulty of obtaining such information, each study on local government fund balances is invaluable to the field.

Illinois County Governments

Why Focus on Illinois Counties?

The one universal unit of local government in the United States, county governments, were formed by Illinois to perform functions the state might have been otherwise required to provide (Kenney & Brown, 1993). Illinois currently has and historically has had the most local governments in the United States (Walzer, Tobias, and Sudhipongpracha., 2010; Walzer, Baird, and Gruidl, 1990). Illinois contains 102 counties and several thousands of small local governments including municipalities, townships, school districts, and mosquito abatement districts. With such a large number of local governments, counties can serve a larger importance in Illinois as a constant in a region in which government is fragmented. A properly financed county can bring governments together to pursue activities such as broadband, public transportation, and economic development (Walzer et. al, 2010). In the future, counties in Illinois can serve as a constant source of public services as they utilize a broad tax base and can exercise economies of scale (Walzer et. al, 1990).

Illinois state law is silent on the legality of local governments, including counties, maintaining unreserved fund balances. Although, in 2004 the Illinois State comptroller's office acknowledged the benefits of maintaining positive unreserved fund balances for local governments (Illinois State Comptroller's Office, 2004). However, in recent years Illinois courts have found the excess accumulation of revenues to be illegal (Grotto, 2008). In a case pitting the citizens of the Lisle Township Road District against the

district itself, the court ruled that without proper justification a unit of local government could not accumulate excess revenues (Allegis Reality Investors, Inc v. Novac, 2008). While the term “excess" is left to the discretion of the courts, many courts have ruled that holding two to three times the amount of annual expenditures is illegal (Grotto, 2008).

County Function

Some Illinois counties, such as St. Clair, pre-date the actual formation of the state of Illinois (Snider & Howards, 1960). However, since Illinois’ inception in 1818, counties have undergone many changes in borders, function, offices, revenues, and expenditures (Snider & Howards, 1960). Under territorial control, regional executives appointed county officials, counties were large, and budgets were small (Snider & Howards, 1960). However, when the state was inducted into the Union and adopted its first constitution, county governments began to undergo some significant changes.

From the beginning of statehood, county governments in Illinois were considered an administrative organization of the state (Walzer et. al, 1990). However, county governments are also unique in that they are a responsible for responding to local needs (Walzer et. al, 1990). Combining the ever increasing amount of services provided by state and local governments, county government functions have grown. Some of the functions counties engage in include elections, property tax collections and distributions, public safety services (including police, courts, and jail facilities), and public health activities (Walzer et. al, 2010). In recent years, county governments have also increasingly been involved in economic development, forest preserves, and parks. (Walzer et. al, 2010; Hamilton, 2008). These activities often cover a wide area of land that pass between governmental jurisdictions.

County Revenues

Illinois counties' main source of local revenue has been and remains from property taxes. Other local sources include sales taxes, fines and fees, and utility taxes in cases where local governments provide utilities, and other local taxes (Walzer et. al, 1990). The remainder of revenues received by county governments derive from intergovernmental revenues from state and federal funds (Walzer et.al, 1990). The state intergovernmental revenues includes the sharing of revenues from state income taxes, sales taxes, motor fuel taxes, and many others. The majority of federal intergovernmental revenue is provided through federal aid and grants in general support, public welfare, housing, and community development among others. Figure 1 highlights the various revenue contributions in 2003 to the general fund among the 102 Illinois counties. It can be seen that the majority of revenues derived from other local revenues, which includes local fines, fees, and taxes. The second highest contributing revenue was property taxes, followed by state sales taxes.

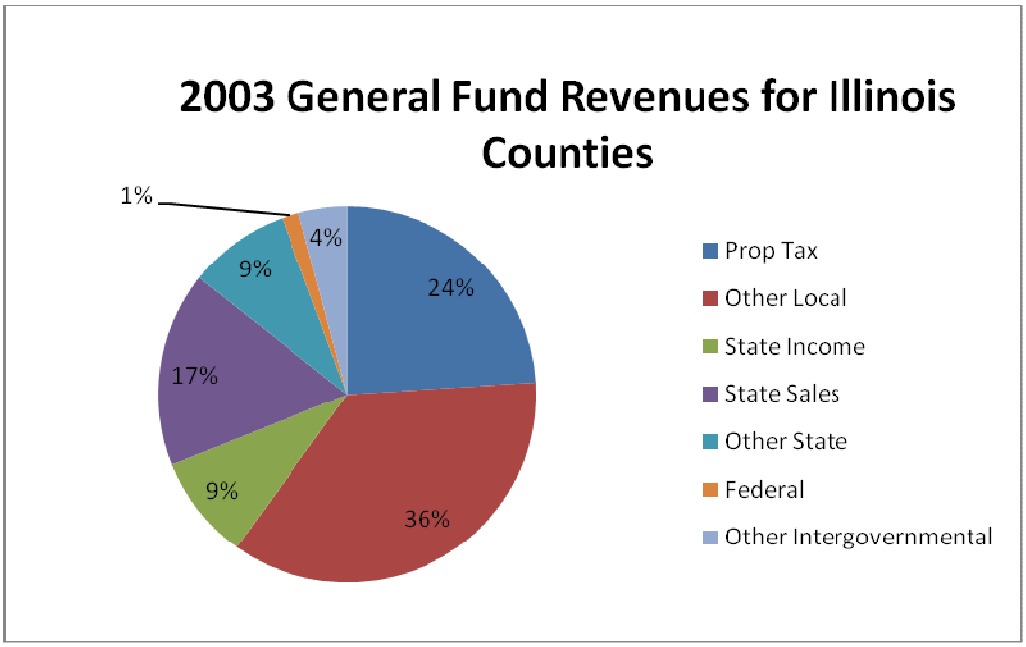

Figure 1. 2003 General Fund Revenues

County Organization

This paper classifies Illinois counties into two categories. Illinois counties either provide for townships or do not. Under the Illinois Constitution, Illinois counties can adopt townships through a popular referendum (Snider & Howards, 1960). If a county does not adopt townships, it is considered to have a commission form of government (Walzer et. al, 1990). The governing body of a commission consists of three at-large elected commissioners. This elected commission then appoints a chairperson to preside over the commission (Walzer et. al, 1990). Currently, only seventeen counties have a commission form of government. Cook county is the only exception to this. Cook is the only home-rule Illinois county and has a county-executive form of government. Due to this and its large population, Cook has been excluded from this study as it has been in other studies such as in the study by Walzer et. al (1990).

If a county adopts townships, the county forms a county board consisting of five to twenty-nine elected members. While regulated in previous constitutions, the current constitution and statutes permit township Illinois counties to decide, within limitations, the size of their county board and whether the officials will be elected at-large or by districts (Kenney & Brown, 1993). These members then make one of three choices. The members can either choose to retain both the executive and legislative functions, elect a board president to assume executive functions, or hire a professional administrator (Walzer et. al, 1990). At the time of this paper, only twenty counties employ professional administrators.

Townships are an important factor in county government as often they absorb some of the responsibilities usually attended to by the county government. Such

responsibilities include roads and bridges, general assistance to the poor, social welfare, and property assessment (Hamilton, 2008). Townships themselves are usually one of the lowest taxing bodies in the state and rely primarily on property taxes (Hamilton, 2008). Thus, it seems the presence of townships can defer the responsibilities of counties. One example is that of general assistance. In township counties, general assistance is typically a township function, whereas in non-township counties the county government provides these services (Walzer et. al, 1990). Also, the township organization itself seems to have limited responsibilities only providing services that municipal governments fail to provide and providing services to unincorporated areas (Kenney & Brown, 1993).

While townships may be seeing decreasing responsibilities, Kenney & Brown (1993) argue that counties continue to expand their services. This expansion has pushed counties beyond the theorized administrative unit of the state (Kenney & Brown, 1993), and rather a responsive unit of local government. Such activities include zoning and planning, operation of libraries and airports, and levying of optional taxes (Kenney & Brown, 1993). The expansion of services further complicates county structures by adding various boards and commissions. These structures make the variance between counties even greater, providing for different procedures for property assessment, auditing, and tax collection (Kenney & Brown, 1993).

Data and Methods

Data

This study takes an approach similar to Stewart's (2009) study of Mississippi counties in both economic prosperity and decline. The financial data for each county was

gathered from the Financial Databases located on the Illinois State Comptroller's Local Government Department website. The research then utilized the national Gross Domestic Product (GDP) and Illinois' Gross State Product (GSP) from the Bureau of Economic Analysis' website to identify times of economic prosperity and decline. As seen in Figure 2, 1996-1999 was a period of clear economic prosperity, boasting high levels of economic growth. Economic growth here is measured by the annual percentage change in the United States' Gross Domestic Product and Illinois' Gross State Product. Conversely, after an economic recession in 2001, GDP and GSP growth dropped off dramatically, slowly growing till 2003. Thus, the research uses the period of FY 1996-1999 as a time of economic prosperity and FY 2000-2003 a period of economic decline. Illinois county fiscal years begin on the first of December and end on the 30th of November.

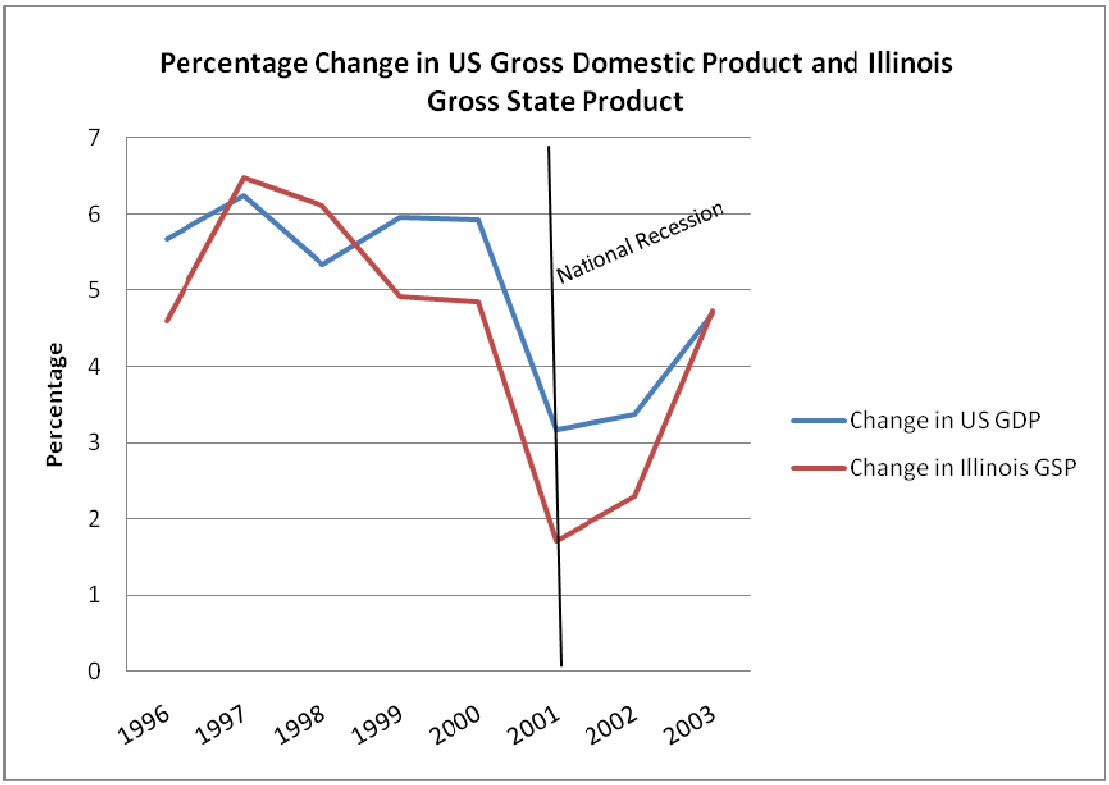

Figure 2. Percentage Change in GDP and GSP

Variables/Hypotheses

The eleven variables examined in this study are property tax revenues, intergovernmental revenues, other revenues, expenditures per capita, retirement population, non-white population, white-collar population, form of government, unemployment rate, per capita income, and change in population. The dependent variable for this study will be the percentage change in the general fund unreserved fund balance of each Illinois county. In the study, this variable is standardized as a percentage of each county's total general fund expenditures. The complete definitions, operationalization, and conceptualization for the dependent variable and each independent variable is included in Table 3 in Appendix A.

Fiscal variables. The property tax variable is the revenue collected from ad valorem taxes charged on the assessed value of real property (Illinois State Comptroller, 2010) this can include personal property, private utilities, and other forms of property (Menifield, 2009). It is hypothesized that as property tax revenues increase, the unreserved fund balance will also increase. This is due to the fact that the cyclical changes in the economy do not directly affect property values (Wolkoff, 1987). Property taxes tend to be more stable than other revenues. Other revenues, such as intergovernmental revenues, fines, fees, and sales taxes are revenues that are not guaranteed from year to year. As the economy declines, citizens and governments cut spending, which result in decrease in these revenues (Marlowe, 2004; Menifield, 2009).

The intergovernmental revenue variable is comprised of monies the county receives from the state and federal governments, which includes funding through grants and shared taxes. It is hypothesized that as intergovernmental revenues increase, the

unreserved fund balance will also increase. Hendrick (2006) proposes that this is likely if local governments recognize the political risk of intergovernmental revenue. Political risk is defined as the realization that these funds are not guaranteed from one year to the next.

Similarly, Hendrick (2006) states that the logic for intergovernmental revenue and other revenue are comparable in that both will be positively correlated to local government savings if their fiscal instability is recognized. For this research other revenue will consist of all revenues not including in property tax revenues and intergovernmental revenue. Thus, unreserved fund balances will be expected to increase as other revenue increases.

The final fiscal variable, expenditures per capita could help explain why unreserved fund balances decrease. It is held by several researchers, such as Marlowe (2005a) and Hendrick (2006), that as expenditures increase, the amount held in unreserved funds decreases. As counties find expenditures increasing, revenues that might be saved may be used to fund increasing expenses. Large amounts of expenditures per capita will place strain on what excess revenues might be available.

Structural and demographic variables. Among Illinois counties there are two main types of county government, township and non-township counties. Thus, I have established an important variable which accounts for one of the most significant differences between the two forms of organization. I have created a dummy variable that will divide the 101 counties studied into two categories. Counties that allow for townships will be assigned the value of 0 and counties that operate under the commission form of government will assigned 1. It is expected that counties with townships will hold

lower amounts of unreserved fund balances. Townships tend to over-collect taxes from their residents (Hamilton, 2008). With citizens being already overtaxed within the county, it is doubtful that they will allow for the county to maintain savings.

The research also accounts for several demographic variables including non-white population, white-collar population, unemployment rate, and per capita income. The variable measuring the non-white population is defined as the percentage of the total population that is any race or ethnicity other than white or Caucasian. For non-white population, it is assumed that as the racial and ethnic diversity of the county increases, the strain on services and funds increases. This strain on services should result in decreased unreserved fund balances as officials are pressed to focus on short-term needs of the constituents rather than long-term needs of the county (Marlowe, 2006; Stewart, 2009).

In his study, Marlowe (2004) used a variable accounting for the percentage of retired persons within the local population. This is a variable at the forefront of Illinois' fiscal politics as the State of Illinois is currently faced with looming retirement pension obligations (Schaper, 2010). Aside from pension obligations, it is believed that the retired population will place more strains on services and funds within the county, similar to the nonwhite population (Marlowe, 2004). For this reason, it is hypothesized that as the retirement age population increases, the unreserved fund balance will decrease. The variable for retirement population has been labeled as the percent of individuals sixty five and over.

The unemployment rate variable is defined as the annual average percentage of individuals living in each county who are eligible and able to work and are actively

seeking work. It is also hypothesized that an increase in the unemployment rate will decrease the level of the unreserved fund balance. Wagner (2003) finds the unemployment rate and state savings to be negatively correlated. For this reason, it is expected that as unemployment rates increase county unreserved fund balances will decrease.

The variable per-capita income is used as a measure of wealth in each county. This variable is the total amount that each individual earns per year divided by the population and is considered the average income for each county. This will allow the researcher to compare the average income levels per individual in one county with income levels in another. It is expected that as per capita income increases, the unreserved fund balance will increase as Stewart (2009) found in her studies of Mississippi counties. If so, it will indicate that as a community becomes wealthier, it is more likely to voluntarily contribute more to the county and allow for savings to be accumulated. Income per capita should exert positive influences on unreserved fund balances and wealth.

Another variable measures the percentage of white-collar workers within the county. This variable will account for those employed in professional, managerial, and similar occupations. This variable will be used to measure the level of professionalism among the constituents. Hendrick (2006) states that the white-collar population is an indicator of constituent preferences for "reformed governance that is efficient, responsive.... and promotes professionalism" (p.25). Professional communities tend to be more involved in local government and recognize the need for unreserved funds

(Hendrick, 2006). Thus, it is expected that as the percentage of white-collar workers within the county rises, so will the unreserved fund balance.

The final variable included in this model measures the change in population for each period. Gianakis and Snow (2007) found that communities with declining populations tended to hold fewer savings. However, Stewart (2009) found that contrary to expectations, as Mississippi counties populations increased, unreserved fund balances decreased. Since the unit of analysis is similar, the researcher hypothesizes that as populations increase, unreserved funds will decrease. The logic is that the decrease in unreserved funds will follow an increase in services that accompanies an increase in population.

The research assumes a linear relationship among these variables represented in the following equation:

Y (Unreserved Fund Balances) = B_0+ B_1 (property tax revenue) + B_2 (intergovernmental revenue) + B_3 (Other Revenue) + B_4 (Expenditures Per Capita) +B_5 (Unemployment Rate) + B_6 (Non-White Population) +B_7 (Retirement Age Population) + B_8 (White-Collar Population) + B_9 (Per Capita Income) + B_{10} (Population Change) + B_{11} (County Form) + Error

Data Analysis

To determine the relationship between the defined independent variables and the dependent variables, ordinary least square (OLS) regression analysis was conducted. OLS regression is used here since it was explained by Stewart (2009) as suitable for "interval and ratio level data" (p. 59). Along with Stewart (2009), Hendrick (2006) also used OLS regression in her study identifying influential factors for suburban Chicago municipalities. During analysis, several models were created, testing for multicollinearity, outliers, and heteroscedasticity. These analyses were conducted in an

effort to obtain the most significant model (F significance) and the highest adjusted R^2. The adjusted R^2 represents the extent to which the independent variables explain the variance in the dependent variables (Berman, 2007). One complete analysis was performed for both time periods and the results are presented and explained in the following sections.

Identifying Influential Factors during a Period of Economic Prosperity

In total, three models are presented in the following table for the period identified as a time of economic prosperity, 1996-1999. In model 1, all independent variables were regressed on the unreserved fund balance with all counties included. As shown in Table 1, the model is significant at the .05 level and has an adjusted R^2 of .104. The model has only one significant variable, expenditures per capita at the .01 level.

Model 2 is the resulting model after checking for and removing outliers. Outliers occur when an observation has a value that is uncommon for the variable (Berman, 2007) The researcher identified two counties as outliers using Cook's Distance, leverage, and studentized deleted measures. Once the counties (Woodford and Cass) were removed, the model had an increase in the F significance to .002, an increase in the adjusted R^2 to .193, and the per capita income variable became significant at the .10 level. of the spectrum. Woodford's change in unreserved funds was the maximum among all observations at 214.88 percentage points. Cass is clearly an outlier as it had the largest reported decrease in unreserved fund balances from 1996 to 1999. The change in unreserved fund balances for Cass is -240.92 percentage points and the county mean for 1996-1999 is 7.23 percentage points.

Table 1

Regression results for a Period of Economic Prosperity (1996-1999)

	Model 1	Model 2	Model 3
Constant	90.161	-73.270	.795
	(100.538)	(79.612)	(11.487)
County Form	-13.471	-12.817	-
	(17.517)	(13.870)	
Property Tax Revenues	-.040	-.040	-
	(.187)	(.149)	
Intergovernmental Revenues	-.003	.000	-
	(.021)	(.017)	
Expenditures Per Capita	-1.231***	-1.183***	-1.210***
	(.370)	(.294)	(.261)
Other Revenues	.121	.069	-
	(.195)	(.155)	
Per Capita Income	1.615	2.228*	2.470**
	(1.620)	(1.286)	(1.041)
Unemployment Rate	-2.357	.822	-
	(4.752)	(3.788)	
Non-White Population	.890	2.064	1.696*
	(1.592)	(1.278)	(.946)
Retirement Age Population	-4.124	-2.314	-
	(4.176)	(3.315)	
White-Collar Population	-.288	-1.426	-
	(2.090)	(1.662)	
Population Change	-3.830	-2.593	-
	(2.999)	(2.382)	
Adj. R Squared	.104	.193	.226
F Statistics	1.985	2.985	10.074
F Significance	.040	.002	.000
N	101	99	99

Note: Variables include estimated regression coefficients , with standard errors in parentheses; Asterisk indicate significance level as follows: *<.10, **<.05, ***<.01

Recognizing that the model still potentially had statistical problems, the researcher then tested for multicollinearity. Multicollinearity occurs when two independent variables are correlated to such a high degree that they have very similar effects on the dependent variable (Berman, 2007). Multicollinearity was identified by examining the variance inflation factors (VIF) of each independent variable. Those variables with VIFs between than five and ten are recognized as multicollinear and should be removed (Berman, 2007). By examining the VIFs of all the independent variables, retirement age population was found to fall within Berman's (2007) specified range. Using Pearson's Correlation to clarify the variable's relationship among other variables, it was found to be highly correlated with white-collar population (-.734) and population change (-.659) with both relationships significant at the .05 level. After removing this variable, all other statistically insignificant variables were removed from the model in an effort to obtain the most significant and simple model. The independent variables county form, property tax revenues, intergovernmental revenues, other revenues, unemployment rate, retirement age population, white-collar population, and population change were all deemed insignificant and did not contribute to the model. The final model, model 3, shown in Table 1 resulted in an increase from the previous model to an adjusted R^2 of .226 and increased F significance to .000. The variables—expenditures per capita, per capita income, and non-white population—were significant at the .01, .05, and .10 levels respectively.

Using White's test to correct for heteroscedasticity, model 3 was tested. Regression analysis assumes a linear relationship between the independent variables and the dependent variable and heteroscedasticity occurs when error term variances are not

equally distributed (Berman, 2007). Since, heteroscedasticity was determined not to exist, no further analysis was needed.

The adjusted R^2 in model 3 indicates that the independent variables account for an estimated 22.6 percent of the variance in unreserved fund balances during times of economic prosperity. Expenditures per capita and per capita income were the only variables that performed as hypothesized. The researcher expected that as expenditures per capita increased, unreserved fund balances would decrease and model 2 shows this to be the case. The table shows that for every one percent increase in expenditures per capita, unreserved fund balances decrease by 1.21 percentage points. Furthermore, per capita income performed as expected, with wealthier counties holding more savings. Specifically, model 3 shows that for every one percent increase in per capita income, the unreserved fund balance increased by 2.47 percentage points. However, contrary to expectations, the model shows that for every one percent increase in non-white population, unreserved fund balances increased by 1.70 percentage points. It was estimated that an increase in non-white population would place strain on counties and prevent them from savings funds. This could be a result of highly aware officials accurately perceiving the stresses that this population can place on county governments during economic decline. If officials appropriately forecast these changes, funds can be appropriated accordingly and thus accumulate more unreserved funds. Furthermore, this contradiction to the literature could be attributed to the fact this was a time of economic prosperity. Times were good and resources were often plentiful, allowing for governments to withhold more funds. This can be seen as the average change in the

unreserved fund balance as a percentage of expenditures for 1996-1999 was 7.23 percent while the average change for 2000-2003 was -15.87 percent.

Factors during a Period of Economic Decline

This study repeated the same process for the period of economic decline of 2000-2003 and the results are presented in Table 2. Model 1 represents the model with all counties and all independent variables. Even without any further statistical analysis, it is clear the independent variables more accurately predict the variance in unreserved fund balances than the variables did in economic prosperity. Model 1 had an adjusted R^2 of .185. The F score further suggests that the model is significant as a whole at the .01 level.

After testing for multicollinearity, model 2 was created. While examination of the VIFs did not identify any variable as multicollinear, the variables county form, property tax revenues, unemployment rate, non-white population, and white-collar population were removed due to insignificance. After removing all insignificant variables, the resulting model 2 is significant at the .01 level and has a larger adjusted R^2 at .210.

Model 3 shows the regression statistics after the removal of outliers. Five counties (Alexander, Clark, Cumberland, Lee, and Sangamon) were identified as outliers. Among these were the two counties with the highest levels of expenditures per capita. Both Lee County and Sangamon County reported levels that were several deviations above the mean. Alexander reported the highest non-white population and low levels of other revenues and intergovernmental revenues that were several deviations below the mean. Both Clark and Cumberland also reported many variables that were several deviations below the mean and were removed from the model.

Table 2

Regression Results for a Period of Economic Decline (2000-2003)

	Model 1	Model 2	Model 3
Constant	-6.553	34.386*	36.516**
	(35.739)	(17.915)	(16.411)
County Form	.049	-	-
	(35.739)		
Property Tax Revenues	.007	-	-
	(.017)		
Intergovernmental Revenues	.422***	.420***	.416***
	(.127)	(.122)	(.109)
Expenditures Per Capita	-.017**	-.018**	-.043***
	(.008)	(.008)	(.014)
Other Revenues	.238***	.252***	.254***
	(.086)	(.084)	(.075)
Per Capita Income	-1.256**	-1.314***	-1.285***
	(.519)	(.446)	(.417)
Unemployment Rate	.937	-	-
	(3.484)		
Non-White Population	.195	-	-
	(.469)		
Retirement Age Population	-1.368	-2.406**	-2.579***
	(1.314)	(.1.005)	(.944)
White-Collar Population	.771	-	-
	(.612)		
Population Change	-3.081***	-3.177***	-3.153***
	(.876)	(.824)	(.740)
Adj. R Squared	.185	.210	.299
F Statistics	2.915	5.131	7.270
F Significance	.003	.000	.000
N	101	101	96

Note: Variables include estimated regression coefficients , with standard errors in parentheses; Asterisk indicate significance level as follows: *<.10, **<.05, ***<.01

After model 3 was finished, the model was tested for heteroscedasticity. However, White's test did not yield any signs of heteroscedasticity, making model 3 the final, most significant model tested for the period. As the most complete and significant model between both periods, the model and all included independent variables were significant at the .01 level. Overall the adjusted R^2 was the highest among all the models at .299. Thus, the six independent variables in this model best explain the variance in unreserved fund balances.

In times of economic decline, the variable accounting for other revenues influenced the independent variables in the hypothesized direction. The estimated coefficient of other revenues was .254, indicating that for every one percentage point increase in other revenues, unreserved fund balances increased by .254 percent. Similarly, for every one percentage point increase in intergovernmental revenues there is an estimated increase in unreserved fund balances by .416 percent. As this study and Hendrick (2006) hypothesized, other revenues and intergovernmental revenues will increase the unreserved fund balances in counties if these counties recognize that these are an unstable revenue source. This suggests that county officials recognize that these funds are not guaranteed and thus seek to hold an unreserved fund balance to insulate their finances from these volatile revenues. Expenditures per capita also performed as hypothesized. As expenditures per capita increased unreserved fund balances decreased.

Retirement age population and population change also produced results in the expected directions. As the retirement age population and the population change increased by one percent, unreserved fund balances decreased by 2.58 and 3.15 percent respectively. However, per capita income did not align with expectations as there was a

negative correlation with unreserved fund balances. With each one percentage change increase in per capita income, unreserved fund balances decreased 1.285 percent. Overall, five of the six variables in Model 3 were in the direction of the hypotheses. The full model resulted in an adjusted R^2 of .299 This indicates that the model is a "moderate fit" for the variance in the dependent variable (Berman, 2007, p. 218).

Discussion

The independent variables presented in this research were able to account for 29.9 percent of the variance in the unreserved fund balance during a period of economic decline, while the model during periods of economic prosperity explained only 22.6 percent of the variance. What this indicates to the researcher is that even though the regression model helped explain the variance in unreserved fund balances during a period of economic decline, it still lacks explanatory power. There is significant variance in unreserved fund balances in Illinois counties not accounted for in this research.

Furthermore, some variables that helped explain the period of economic decline did not help explain during the period of economic prosperity and vice versa. Non-white population was found to be a significant variable for 1996-1999 but was not included in the final model for 2000-2003. Conversely, the variables accounting for intergovernmental revenues, other revenues, retirement age population, and population change were significant variables for 2000-2003 but not in 1996-1999. Only two variables were significant during both periods, per capita income and expenditures per capita, with expenditures per capita being the only variable that performed as hypothesized during both periods. Increases in per capita income however were shown to

produce an increase in unreserved funds during economic prosperity and a decrease in funds during economic decline.

This is inconsistent with Hendrick's (2006) findings that during economic downturns, the effects of wealth on unreserved funds decrease. In fact, for this study per capita income was more significant during the period of economic decline. It was hypothesized that wealthier communities would have less strain on services and recognize the benefits of the accumulation of savings. The research here suggests that wealthy communities not only recognize the benefits of saving during economic prosperity, but also the benefits of using such funds during economic decline.

Future Studies

The more interesting question with these results is "what variables are missing from these models?" While the research presented in this paper studied several fiscal, structural, and demographic variables identified in the literature, there are a few that are missing. For example, using voting statistics during the 2004 presidential election, Hendricks (2006) studied political ideology of local governments as a possible factor of influence. Debt per capita is also a variable studied by Hendrick (2006) and Stewart (2009) that proved to influence savings levels for both studies. Also, it should be noted that the variable accounting for county structure did not prove to be significant during this study. Unreserved fund balances could possibly be influenced more by the type of administrator, as opposed to the structure of the legislature. A variable can be studied that accounts for whether or not the legislative branch within the county legislature hires a professional administrator, elects a chief executive official, or performs the duties itself. Furthermore, most of the demographic variables studied here were not significant

for the models. I suggest the study be expanded in ten year increments so the Census data on demographics are more accurate. Overall, however, the study finds that many counties in Illinois are also maintaining excessive levels of savings. Amounts identified ranged from a low of -36.22 percent of general fund expenditures during economic decline to 510.29 percent during times of economic prosperity. On average counties maintained about 161.25 percent of general fund expenditures during times of economic prosperity and about 40 percent during times of economic decline.

Future studies should also seek to gather more data. While substantial, the dataset used for this study of Illinois counties was not complete. Missing values were prevalent in the Illinois Comptroller's Financial Databases. I suggest future studies on Illinois counties use financial audit reports and Compiled Annual Financial Reports to gather data. This will be important for future studies as after 2003 Illinois county financial statistics were scarce in the financial databases. Another study should also be expanded to include the recent recession as it was deeper and longer than the 2001 recession. Study of the most recent recession could shed more light on the factors influencing unreserved fund balances in Illinois since this study revealed only an estimated 29.9 percent of those factors for 2000-2003.

With the United States struggling to form a financial comeback, it will be interesting to see what other factors can be identified that influence savings for local governments. Due to recent fiscal stress, there is little doubt that interest in this field will grow. At this time, this study is one of few that only skim the top of the mystery of local government savings. However, if Illinois counties continue grow in importance as

Walzer et. al (2010) suggest, studies as the one performed here and of similar nature will be of great significance to future local government professionals.

REFERENCES

Allegis Realty Investors, Inc. v. Novak, (2008). N.E.2d , 2008 WL 614806 (2d Dist, Ill.App.Ct.)

Berman, E. M. (2007). *Essential Statistics for Public Managers and Policy Analysts.* 2nd Edition. Washington: CQ Press.

Carter, L. & Vogt, J. A. (1989). Fund balance in local government budgeting & finance. *Popular Government,* 54, 33-40.

Cashell, B. W. (2009, March 4). The federal government debt: Its size and economic significance. *Congressional Research Service,* Report for Congress.

Conant, J. K. (2003, Summer). Wisconsin's budget deficit: Size, causes, remedies, and consequences. *Public Budgeting and Finance*.

Crain, G., & Schermann, K. R. (2007). Fund balance reporting in state and local governments: A current look from a user's perspective. *Journal of Government Financial Management.*

Dennis, B., & Cho, D. (2009). Rage at AIG swells as bonuses go out. *The Washington Post*. Retrieved from http://www.washingtonpost.com/wp-dyn/content/article/2009/03/16/AR2009031602961.html

Douglas, J. W., & Gaddie, R. K. (2002) State rainy day funds and fiscal crises: Rainy day funds and the 1990–1991 recession revisited. *Public Budgeting and Finance,* 22(1), 19–30.

Gianakis, G., & Snow, D. (2007). The implementation and utilization of stabilization funds by local governments in Massachusetts. *Public Budgeting & Finance*, 86-103

Government Finance Officers Association. 2009. Appropriate level of unreserved fund balance in the general fund. Retrieved from http://www.gfoa.org/downloads/budget-appropriate.pdf

Grotto, M. (2008, Spring). Unsubstantiated opinions are insufficient to convince court that levy is proper. *Legal Insights for Local Government*. Ottosen Britz Kelly Cooper and Gilbert, LTD. Naperville, IL. Retrieved from http://ottosenlaw.com/article.asp?a=316

Hamilton, D. K. (2008). Township government: A tale of one state. *National Civic Review*, Wiley Periodicals, Inc.

Hendrick, Rebecca (2006, Spring). The role of slack in local government finances. *Public Budgeting & Finance*, 14-46.

Hembree, H., Shelton, M., & Tyer, C. (1999). Benchmarking and local government reserve funds: Theory versus practice. *Public Management*, *81*(9), 16-21.

Hou, Y. (2003). What stabilizes state general fund expenditures in downturn year-budget stabilization fund or general fund unreserved undesignated balance? *Public Budgeting &Finance,* 23(3), 64-91.

Illinois State Comptroller's Office. (2004, April). Local government line. *Fiscal Focus Quarterly5,* p. 14

Kenney, D. & Brown, B. L. (1993). *Basic Illinois Government: A Systematic Explanation*. Southern Illinois University Press: Carbondale, IL

Lav, I. J. (1999, May). When it rains it pours: A look at the adequacy of state rainy day funds and budget reserves. *State Tax Notes*.

Leonard, C. W. (2010, February). Ethical reforms, the budget crisis, and perceptions of quality of life in Illinois: Results analysis of the Paul Simon Public Policy Institute statewide poll. *Southern Illinois University-Carbondale: Paul Simon Public Policy Institute; The Simon Review*, Paper # 17.

Marlowe, J. (2004). The local fund balance: Explanations and implications. Unpublished doctoral dissertation, University of Wisconsin–Milwaukee.

Marlowe, J. (2005). Fiscal slack and counter-cyclical expenditure stabilization: A first look at the local level. *Public Budgeting & Finance,* 25(3), 48–72

Menifield, C. E. (2009). *The basics of public budgeting and financial management: A handbook for academics and practitioners*. Maryland: United Press of America.

National Conference of State Legislatures. (2004). Rainy day funds. Retrieved from http://www.ncsl.org/?TabID=12652

Navin, J. C. & Navin, L. J. (1994, Fall). An evaluation of state budget stabilization funds among midwestern states. *Growth and Change*, 445-466.

Palmeri, C. (2010). City that outsourced everyone is snared by pay scandal in Bell. Retrieved from http://www.bloomberg.com/news/2010-08-03/california-city-that-outsourced-everyone-is-snared-by-pay-scandal-in-bell.html

Preston, D. (2010). Illinois 'poster child' of debt crisis draining state services. *Business Week*. Retrieved from http://www.businessweek.com/news/2010-04-13/illinois-poster-child-of-debt-crisis-draining-state-services.html

Robbins, M. D. & Dungan, C. (2001). Debt diligence: How states manage the borrowing function. *Public Budgeting & Finance* , 21(2), 88-105.

Schaper, D. (2010). Shortfall threatens Illinois pension system. Retrieved from http://www.npr.org/templates/story/story.php?storyId=125076655

Snider, C. F. & Howards, I. (1960). *County Government in Illinois*. General Publications, Southern Illinois University: Carbondale, IL

Sobel, R. S. & Holcombe, R. G. (1996, Fall). The impact of state rainy day funds in easing state fiscal crises during the 1990-1991 recession. *Public Budgeting and Finance,*. 28-48.

Stewart, L. M. (2009). Examining factors that influence Mississippi counties' unreserved fund balance during relative resource abundance and relative resource scarcity." *Public Budgeting & Finance,* 45-73

Thatcher, D. G. (2008). State budget stabilization funds. National Conference of State Legislatures. Retrieved from http://www.ncsl.org/?TabId=12630>

Tyer, C. B. (1993, June). Local government reserve funds: Policy alternatives and political strategies. *Public Budgeting & Finance, 13*(2), 75-84.

Vasche, J. D. & Williams, B. (1987). Optimal governmental budgeting contingency reserve funds. *Public Budgeting and Finance*, 66-82.

Wagner, G. (2003). Are state budget stabilization funds only the illusion of savings? Evidence from stationary panel data. *The Quarterly Review of Economics and Finance* 43(2): 220.

Walzer, N., Tobias, R. A., and Sudhipongpracha, T. (2010). County governments in Illinois 2009. Center for Governmental Studies, Northern Illinois University

Walzer, N., Baird, N., and Gruidl, J. (1990). Administration and finance of Illinois counties. Illinois Institute for Rural Affairs, Western Illinois University, Macomb, Il

Watson, D. J. (1997). *Innovative Governments: Creative Approaches to Local Problems*. Praeger Publishers: Westport, CT

Welch, S. (1985). The 'more for less' paradox: Public attitudes on taxing and spending. *The Public Opinion Quarterly,* 49(3), 310-316

White, H. (1980). A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica,* 48(4), 817-838

Wilson, J. Q. (1989). *Bureaucracy: What Government Agencies do and why they do it*. Basic Books, Inc.

Wolkoff, M. (1987, Summer). An evaluation of municipal rainy day funds. *Public Budgeting & Finance*, 52-53.

APPENDICES

Appendix A

Table 3

Conceptualization and Operationalization of Variables

Variable	Definition	Measurement/Source
Dependent Variable		
Unreserved Fund Balance	The undesignated unreserved fund balance indicates the remaining portion of the unreserved fund balance remaining in the general fund at the end of the fiscal year.	The difference in percentages of amount of the general fund unreserved fund balance for each county standardized as a percentage of the county's general fund expenditures. Unreserved fund balance and total expenditures gathered for each county for 1996, 1999, 2000, and 2003 from the Illinois Office of the Comptroller, Local Government Division (http://www.ioc.state.il.us/Office/LocalGovt/index.cfm?DisplayPage=53).
Independent Variables		
Form of Government	The form of government the county adopts. This includes two classifications of counties as counties that allow for townships and those which do not.	A dummy variable was used to account for township and non-township counties. Counties that allow for townships equal 0 and counties that do not equal 1. This information was gathered from the Illinois Association of County Board Members (www.ilcounty.org).
Unemployment Rate	The percentage of workers who are currently unemployed but are willing, able, and seeking employment within the county.	Difference in the unemployment rate from 1996 to 1999 and 2000 to 2003. Unemployment rate is measured as a percentage of the total civilian workforce that is unemployed. Gathered from the Bureau of Labor Statistics (www.bls.gov).
Non-White Population	Percentage of total population within the county that does not identify as "white only." This includes african american, hispanic, latino, asian, native american, etc.	Standardized as a percentage of the total population. Data gathered from the 1990 Census for the 1996 and 1999 years and the 2000 Census for the 2000 and 2003 years. Gathered from the United States Census Bureau (www.census.gov)

Per-Capita Income	The average income per year per person within the county.	Annual average income per person gathered from the Bureau of Economic Analysis (www.bea.gov) for years 1996, 1999, 2000, and 2003.
Retirement-age population	The percentage of population that is age 65 and over.	Individuals which are age 65 and over standardized as a percentage of the total county population. Gathered from the 1990 Census for the 1996 and 1999 years and the 2000 Census for the 2000 and 2003 years. Gathered from the United States Census Bureau (www.census.gov).
White-Collar Population	Percentage of the population whose occupation is identified as professional, managerial, executive, etc.	White-collar population standardized as a percentage of civilian workforce gathered from the 1990 Census for the 1996 and 1999 years and the 2000 Census for the 2000 and 2003 years. Gathered from the United States Census Bureau (www.census.gov).
Population Change	Change in the population estimates for each county.	The percentage change from 1996-1999 and 2000-2003. Estimates gathered from the United States Census Bureau (www.census.gov).
Property Tax Revenues	General fund property tax revenues. Property taxes defined as the local ad valorem taxes levied on the assessed valuation of real property.	Percentage change of the annual general fund property tax revenue for 1996-1999 and 2000-2003. Gathered from the Illinois Office of the Comptroller, Local Government Division (http://www.ioc.state.il.us/Office/LocalGovt/index.cfm?DisplayPage=53).
Inter-governmental Revenues	Includes all revenue received from state, federal, and other non-local governmental sources.	Percentage change of the annual general fund intergovernmental revenue for 1996-1999 and 2000-2003. Gathered from the Illinois Office of the Comptroller, Local Government Division (http://www.ioc.state.il.us/Office/LocalGovt/index.cfm?DisplayPage=53).
Other Revenues	Local revenue from fines, fees, service charges, interest, utility taxes, sales taxes, and other local revenues.	The percentage change in other general fund revenues from 1996-1999 and 2000-2003. Gathered from the Illinois Office of the Comptroller, Local Government Division (http://www.ioc.state.il.us/Office/LocalGovt/index.cfm?DisplayPage=53).

Total Expenditures per Capita	The sum of all county general fund expenditures and expenses per person.	Calculated as the percentage change in annual expenditures per capita for 1996-1999 and 2000-2003. Gathered from the Illinois Office of the Comptroller, Local Government Division (http://www.ioc.state.il.us/Office/LocalGovt/index.cfm?DisplayPage=53).

Appendix B

Table 4

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
1996-1999					
Unreserved Fund Balance	97	-240.92	214.88	7.23	58.89
Property Tax Revenues	99	-64.58	165.65	21.20	31.24
Intergovernmental Revenues	99	-86.98	2994.21	115.01	304.92
Expenditures Per Capita	99	-45.55	68.85	20.43	17.69
Other Revenues	97	-83.46	113.98	-11.60	34.49
Per Capita Income	101	-2.74	19.09	10.03	4.49
Unemployment Rate	101	-6.10	2.00	-1.12	1.34
Non-White Population	101	.20	33.10	4.43	5.71
Retirement Age Population	101	8.41	21.72	16.16	3.16
White-Collar Population	101	13.30	35.80	19.49	4.58
Population Change	101	-3.23	11.92	.75	2.90
2000-2003					
Unreserved Fund Balance	94	-76.86	56.15	-15.88	22.92
Property Tax Revenues	96	-38.54	1243.27	30.23	127.11
Intergovernmental Revenues	96	-58.61	79.89	-5.58	20.62
Expenditures Per Capita	95	-38.81	1812.70	70.86	282.07
Other Revenues	96	-56.41	118.46	15.99	29.89
Per Capita Income	101	-4.05	28.26	10.87	5.91
Unemployment Rate	101	-.30	3.5	1.7	.75
Non-White Population	101	.49	36.17	5.96	6.97
Retirement Age Population	101	5.24	20.85	15.54	3.08
White-Collar Population	101	19.50	47.10	27.88	4.70
Population Change	101	-3.23	11.92	.75	2.90
UFB as % of Expenditures					
1996	99	42.19	398.55	158.20	78.83
1999	99	3.89	510.29	164.31	82.04
2000	100	-1.60	213.71	47.67	34.25
2003	95	-36.22	192.05	32.87	31.79

Note: N values vary due to missing values in the financial database. Maximum N=101 due to exclusion of Cook county from the data.

VITA

Graduate School
Southern Illinois University

Travis W. Taylor Date of Birth: May 19, 1988

4194 W. Sycamore Road, Carterville, Illinois 62918

travistayl@gmail.com

Southern Illinois University Carbondale
Bachelor of Arts, Political Science, May 2009

Special Honors and Awards:

Pi Alpha Alpha National Honor Society for Public Affairs and Administration

Illinois City/County Management Association's James M. Banovetz Fellowship

Research Paper Title:

Illinois Counties' Unreserved Fund Balances: Identifying Factors that Influence County Savings

Major Professor: Dr. La Shonda M. Stewart

Publications:

Taylor, T., & Hamman, J. (2010, May). Institutional reform and state government corruption: An analysis of institutional reforms proposed by the Illinois Reform Commission. *The Paul Simon Public Policy Institute; The Simon Review*, Paper 19