BUDGETING IN TIMES OF FISCAL STRESS: AN ANALYSIS OF THE BUDGET PROCESS AND RESOURCE ALLOCATION OF SOCIAL PROGRAMS IN A LARGE URBAN COUNTY FROM 2006 – 2017

By

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DISSERTATION

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ABSTRACT

BUDGETING IN TIMES OF FISCAL STRESS: AN ANALYSIS OF THE BUDGET PROCESS AND RESOURCE ALLOCATION OF SOCIAL PROGRAMS IN A LARGE URBAN COUNTY FROM 2006 – 2017

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Grusky, et al. (2011) refer to the Great Recession as a transformative event that spiraled into as systemic crisis affecting both the public and private sector. Although the origin of the Great Recession was in the collapse of the housing market, it, in turn, created and sustained a crisis in both the financial sector as well as the labor market (Fligstein and Goldstein, 2012). The downturn would eventually lead to the most significant labor market dislocation in the post-Depression era, driving up high and long-term unemployment as well as involuntarily working part-time individuals (Grusky et al. 2011). Each level of government experienced long term financial affects during the periods of 2008-2010. In order to understand the relational social-spatial impact county governments have been advocated as useful units of analysis because as a government entity they play a direct active role in shaping policy.

The goal of the study was to determine if the Great Recession caused a shift in the county funding priorities regarding the provision of social services. The research examined the changes that occurred in Dallas County's budget allocation and actual expenditures as a result of the Great Recession from the period of FY2006 – FY2017. The two dependent variables of this study were the proportional change in annual budget allocation and actual expenditures to departments with appointed directors.

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CHAPTER 1

INTRODUCTION

The United States experienced a financial crisis in 2008 due to the falling housing prices (Macais, 2012). The literature (Macais, 2012; Graaf et.al, 2016; Deschenaux and Juppe, 2015; NASBO, 2009, and Byers, 2011) refers to this period as the "Great Recession" of 2008 and provides timelines of the financial meltdown that inevitably had lingering economic effects on the federal, state, and local governments from the period 2008 – 2014. Also, the literature notes (Graaf et.al, 2016; Deschenaux and Juppe, 2015; NASBO, 2009, Byers, 2011, Istrate and Handy, 2013; and Istrate and Handy, 2016) that public entity affected by the economic crisis during this "Great Recession" acknowledged that with public budgeting with limited options when dealing with a public entity i.e., cutting spending, increasing taxes, and generating additional user fees for increasing revenues (Graaf et.al, 2016; Deschenaux and Juppe, 2015; NASBO, 2009, Byers, 2011, Istrate and Handy, 2013; and Istrate and Handy, 2016).

The plummeted values of housing forced the governmental agencies at all levels to meet the challenges to maintain balanced budgets (Macais, 2012; Graaf et al., 2016; Deschenaux and Juppe, 2015). Graaf, et al. (2016) note that the housing bubble burst in 2008 and 2009 led to property taxes dropping drastically having a significant impact on local government budgets. The primary source of funding for county government daily operation is property taxes. During the periods of 2008-2013, the decrease in the local government property taxes collection was largely attributed to the national economic crisis (Benton et al., 2008; Macais, 2012 and NASBO, 2009). This reduction in housing valuations and the alarming number of foreclosures nationally led to a

decrease in valuations, which generated less revenue in property taxes for local governments (Benton et al., 2008). Specifically, funding for county governments declined significantly with some counties projecting double-digit shortfalls ranging from 15 % to 30 % in their operating budgets during the periods from 2009 - 2014 (Graaf et.al, 2016; Deschenaux and Juppe, 2015; NASBO, 2009, Byers, 2011, Istrate and Handy, 2013; and Istrate and Handy, 2016). The ongoing projected shortfalls nationally further demonstrated how the national financial crisis directly influenced county government budget through the diminishing revenues from the periods of 2009-2013(Benton et al., 2008; Macais, 2012; NASBO, 2009; Byers, 2011; Istrate and Handy, 2013; and Istrate and Handy, 2016).

1.1 - National Impact of Great Recession

The National Association of County Organizations (NACo) and the Texas Association of County Organizations documented through several research studies the impact of the "Great Recession" on County government (Byers, 2011; Istrate and Handy, 2013; and Istrate and Handy, 2016). Griffith, Harris, and Istrate (2016) note in their article, *Doing More with Less*, that county government relies on two types of revenue to finance operations for essential services:

1. Property taxes and user fees (authors reference as their "own source funding") and
2. Intergovernmental transfers (funding from state and federal government transfers). Griffith et al. (2016) found approximately 76% of the county revenue is generated from their funding and 24% from the intergovernmental transfers. The studies demonstrated the connection between the national economic crisis that trickled down to county governments (Byer, 2011; Istrate and Handy, 2013; and Istrate and Handy, 2016). The direct impact counties experienced during the

financial crisis, resulted in long-term operational challenges, nationally for many counties (Byers, 2011; Istrate and Handy, 2013; and Istrate and Handy, 2016).

In addition, the National Association of Counties (NaCO) conducted several studies detailing the national trends through the County Lens from FY2009 – FY2014 (NaCO, 2013). In FY2012, 80 elected county officials (members of NaCO Board) participated in a forum that polled the members on critical areas that the recession influenced local government. The purpose of the live polling session was to obtain the local perspective on national politics, elections, county fiscal conditions, public pensions, health, immigration, economic development, and natural disasters (NaCO, 2013). Sixty-five percent of the participants responded that state policies and programs had a negative impact on their county during the periods of FY2009 – FY2012 (NaCO, 2013). The study indicated that consistently across the United States, counties struggled to recover, make budget adjustments, and adopt a balanced budget while still maintaining mandated services (Byers, 2011; NaCO, 2013; Istrate and Handy 2016). These survey findings were reported from the FY2010 annual budget process ((Byers, 2011; NaCO, 2013; Istrate and Handy 2016), which was the second full year of the impact of the 2008 economic crisis. The survey (Byers, 2011; NaCO, 2013; and Istrate et al., 2016) indicated the following: only 35 percent of responding counties reported shortfalls between $1 million up to $25 million or more. NaCO documented this survey in their Progress Report of County Finances (Istrate, Emilia, et al., 2016) by using the fiscal data from the largest group of county governments reporting their financials in the same format (2,112 counties in 45 states and the District of Columbia). This report examined data one year prior (FY2007) to the FY2008 economic crisis through the recovery years of FY2013. In the same study, the fiscal data showed that the general revenues for the reporting counties were low nationally. The study confirmed

that nationally 72 percent of the counties revenues were primarily generated from property taxes (Istrate et al., 2016), which further demonstrated the counties dependency on the collection of this revenue for maintaining general fund operations.

Similarly, the National Association of Counties (NaCO) surveyed in October 2011 to capture information about the counties nationally as they struggled with the fiscal stress of the economic recession of 2008 (Byers, 2011). The results of the survey indicated that 64 percent of responding counties reported adopting budgets with shortfalls of less than $100,000 while 29 percent of responding counties reported shortfalls between $1 million up to $25 million or more. In the same study, 51 percent (Byers, 2011) of the counties cited reductions in state or federal funding as a reason for revenue shortfalls, 36 percent reported that continuing declines in property taxes contribute to their shortfalls, 32 percent cited sales tax decreases as a reason for continuing shortfalls, and 26 percent cited decreases in miscellaneous revenues including investment income (Byers, 2011). A more recent study conducted by NaCO in October 2016 revealed that county general revenues did not recover to 2007 levels in nearly half of counties (46 percent) by 2013, considering inflation (Istrate and Handy, 2014).

A report summarizing the results of a live polling session from December 2012, with 80 members of the NaCO Board of Directors participating revealed that 37 percent of the counties were anticipating a shortfall within the current fiscal year 2013. The top three sources of the counties revenue's shortfall were 44 percent identifying a reduction in state funding, while 35 percent indicated that the reduction in property taxes and 29 percent stated reductions in federal funding attributed to the county's revenue shortfall.

Graaf et al. (2016) conducted an exploratory study of eleven county human-service agencies during the Great Recession (2008-2013) to see how they worked through the budget

process. The study detailed the circumstances surrounding the Great Recession (2008-2013) and the principles that guided the process. Additionally, the study (Graaf et al., 2016) explored the various decision-making strategies and all the stakeholders that help to guide the process of balancing the budget. One of the key aspects of the study (Graaf et al., 2016) was the use of purposive sampling, i.e., the authors intentionally conducted interviews with the Health and Human Services Directors to include participants that could provide insight to the budget process as well as insight. Graaf et al. (2016) indicated the need to have a mix of line staff as well as managers participating in the sample. The authors (Graaf et al., 2016) viewed the inclusion of front-line and middle-line staff experience in the process as limited. This was due to their minimal inclusion in the decision-making strategies utilized throughout the budgetary process.

Conversely, the incorporation of high-level leaders to participate in the study (Graaf et al., 2016) because they provided a more comprehensive understanding of all the factors that go into the decision-making and the budget reduction process is beneficial in providing a broader participation. The diversity of the participants included in the study (Graff et al., 2016) was key to understanding the full extent of decision-making that occurs when agencies are going through a financial deficit. The higher management staff (Graaf et al., 2016) provided leaders with different levels of flexibility, resources and or influence on the budgetary decision-making throughout the budget process.

The primary function of the budgetary process is to be the fiscal management and control system that guides decision-making that results in financial policies. Local municipalities and county government are responsible for providing essential services. County government is an extension of the state government focusing on the judicial system, health and welfare service

delivery, law enforcement, and road construction. Therefore, balancing an annual budget became pivotal, with the decreasing funding from property taxes and reduction of revenues made the budget process challenging in the ongoing maintenance of daily county operations nationally for the period from FY2009-FY2014 research in this study.

Forrester, 2002 stated that during periods of fiscal stress, the exchange of information is significant during the budget process and the principles and values of the leaders of organizations guide the decision making of programs funding allocation. Understanding the budget process and how those decisions are made in the relationship to the types of services that are locally provided when the entity is facing fiscal stress is essential in adding to the body of literature of county government.

1.2 - Significance of the Study

Local government administrators are responsible for planning, examining, and applying the budget process and policies (Rossman et al., 2012; Nussle, 2012; Wildavsky, 1988). However, studies and literature regarding budgeting process, policies and the impact to social within county governments are scarce (Rossman et al., 2012; Nussle, 2012; Wildavsky, 1988; Lewis, 1952; Willoughby, 1918; and McCaffery, 2001). The county's budget influences citizens directly daily. Notwithstanding budget constraints, citizens depend on their local government, i.e., counties to provide services that build, maintain, and protect their homes, schools, and neighborhoods (NACO, 2013).

While research on the budget process is massive at the federal, state, and local levels, there is insufficient research on the dynamics of the budgetary process at the county level. Forrester (2002) notes in his article that the prior research centered on the relationships between budget participants (e.g., cutback management – Rubin 1985; congressional budgets – Fenno

1966; roles of actors and incremental budgeting – Wildavsky 1988), and the relationships were addressed unconsciously as part of the research. Forrester (2002) stresses that the success of the budget proposals is constrained by several factors, the more prominent of which include the extent other parties or networks are vying for the same budgetary dollars, the CEO's priorities, and the political culture and values within the legislature.

Research on county government budget process is scarce, let alone the relationships between the budget process and the link to social planning, specifically resource allocation of social programs. Like many county entities, Dallas County, Texas experienced a significant decline in revenues following the "Great Recession" of 2008. The most interesting aspect about this study is researching two fields of study that are in their infancy as far as research, County governments budget process as an application of the Principal-Agent Theory to a county government entity. Research detailing what county government does is lacking, let alone examining the relationships at the county level. There are many questions regarding the functions of government counties. The average citizen confuses county government with city government. The responses further demonstrate the need for more studies on the role, function, structure, and operation of the county. County governments are responsible for implementing a broad range of federal, state and local programs in a cost effective and accountable manner (NaCO, 2013).

Counties are instrumental players in America's intergovernmental system of federal, state, and local governments (NACO, 2012). The responsibilities and services of county governments vary from state to state. Steve Modlin (2008) documented that county governments continue to evolve as subunits with more responsibility delegated by the state, despite the lack of focus in the literature (Modlin, 2008). Henry S. Gilbertson (1917) wrote a classic study in 1917 called The County: The "Dark Continent" of American Politics. Gilbertson (1917) referred to county

governments as a "dark continent." The phrase "dark continent" was used primarily because county governments were viewed as inefficient, archaic, and dysfunctional approach to government, which was primarily due to that there was little known about this entity (Gilbertson, 1917). The "dark continent" Gilbertson's references are the lack of understanding of the purpose and functions of county governments. There continues to be little understanding of the function, purpose, and organization of county government. County governments are still considered ambiguous entities that are incorrectly categorized as a municipality (Dovlet, 2014; Kemp, 2009; Kemp, 2008; Gilbertson, 1917; and Wiley, 2007). Most of the current literature research focuses on analysis centered on the impacts of the 2008 financial crisis with cities, states and federal governments (Babajanov, 2014; Kemp, 2009; Kemp, 2008; Gilbertson, 1917; and Wiley, 2007). Consequently, leading to the continued perception of the county government operating in a vacuum and fostering the idea of an entity operating in mystery and a very complex organization to navigate.

1.3 - Problem Statement

During FY2007-FY2017 Dallas County struggled to balance its budget considering projected shortfalls. The challenge the County budget officer faced was that the Appointed Director's view regarding their respective department's requests as a priority. The Budget Office was tasked with prioritizing the county's needs based on reviewing departmental budget requests and then making a recommendation.

This research project focuses on the second largest urban county in Texas, Dallas County. Also, explores how Dallas County managed fiscal stress during the budget planning process from FY2006 – FY2017. It is a qualitative descriptive and exploratory case study approach utilized to examine how a Budget Office prepares and recommends budgets annually during an economic

downturn. The research is aimed at the behavior of Dallas County principals and to understand the basis of the budget process when planning and to recommend adjustments (cost reductions and tax increases and decreases).

Dallas County, founded in 1865**,** is in the Dallas-Fort Worth MSA (Texas Association, 2012). Dallas County, with a 2016-estimated population of 4.7 million, is second in population to only Harris County of the 254 counties in Texas (U.S. Census Bureau, 2016). As of 2011, census, Dallas County is the ninth most populous county in the United States (U.S. Census, 2011).

This study explored the budget process between a single Budget Office and multiple departments with twenty-nine Appointed Directors throughout Dallas County. In Dallas County, The Office of Budget and Evaluation (OBE) is responsible for overseeing the budget process, which includes the review, analysis, and recommendations that result in a balanced budget. The research study details the yearly divisions allocated resources and track operating expenditures influence of social programs within the twenty-nine departments. Principal-Agent Theory provides the theoretical structure to this research to understand the relationship that exists between entities; in this case, the entities are within the organization. Principal-Agent Theory (Dietmar, Braun and Guston, 2009; Levaçiç, 2003; Forrester, 2002; and Alireza, et al., 2014) emphasizes that throughout interactions, the principal entity takes an authoritative role, while the agent entity takes the subordinate role. This is the case throughout the budget process. The application of agency-theory by looking at the principal-agent relations throughout the budget process benefits research to formalize better the importance of understanding the principal-agent relationship to the county budget process. Throughout this study, the principal-agent theory will stipulate that when approaching the budget process there are organizational assumptions consisting of goal conflicts, risk preferences, compensation, and prioritizing to name a few as well as human assumptions that

consists of self-interest, bounded rationality and risk aversions that are intrinsic in the dynamics of the relationships.

In county government, the recommendation and approval of a county department's budget is an implied contract between Budget Office and the Commissioner office for the approved budget period to complete tasks throughout the year. Ideally, the contract is the shared agreement between the principal and agent. This study will not delve into specifically how the give and take of information exchange and relationships reached decisions. However, this study will include some of the variables (characteristics) that may affect decisions within the agency.

1.4 - Purpose of Study

The purpose of this research is to examine the relationships throughout the budget process between the Budget Office and various Appointed Department Directors to determine how a Budget Office prepares and make recommendations on budgets annually during an economic downturn. Within the county entity and explore how those decisions affect those departments with social programs. The case study is bound by the county Budget Office's budget process. In this case study Principal-Agent Theory will provide the contextual theoretical structure of the relationship between the Budget Officer and the Department Directors during the budget process and insight into how Dallas County's Budget Officer carries out the budget process as an agent for the principal (Commissioners Court) the governing body of the County and explore whether or not those departments with social program(s) budgets were adversely impacted between during the economic downturn from the period of 2006 – 2017 (by looking at periods that precedes and follows the Great Recession).

The county government budget process typically consists of some stakeholders and budget participants that influence budget decisions. Specifically, this research examines intra-organizational relationships between Dallas County Office of Budget and Evaluation and the Appointed Directors of various departments throughout the county within the context of the budget process through the stage of an approved balanced budget.

The research will explore how the approved budget was determined through principal-agent relationships. By statute, the county government being studied must have a balanced budget, and by county policy, the balanced budget must include a 10.5 percent reserve fund. This research explores how "information exchange" and "hierarchical relationships" directly influence decision-making during critical budget times. Specifically, this study attempts to determine how key relationships influenced the budget process through the exchange of information and the hierarchical relationships between primarily the Budget Office and Appointed Directors to handle fiscal stress from FY2006 – FY2017.

This focus will be very beneficial to the body of literature because it will aid the body of work for three areas that have had minimal research; social planning as it relates to the programs provided by the county and how social programs fare in the budget process. The application of principal-agent theory relationships within the county government allows the public as well as academicians to better formalize the importance of the principal-agent relationships to the budget process.

This case study proposal will primarily use secondary historical data to explore the literature and documents to explore the interactions of key individuals throughout the budget process, and implementation of the Dallas County approved budgets during the FY2006 -2017

fiscal years. The data included is archival records, budget documents, financial reports, internal documents, newspaper articles, meeting minutes, and county reports.

1.5 -Research Questions

This research studies the budget process of Dallas County during the Great Recession and subsequent years to answer the question. How do stringent economic conditions affect the social programs within the county government entity? Greater knowledge about the link between budget process and relationships as well as social planning will contribute to understanding how economic cycles alter budget processes and the services they provide in the public sectors.

H1: During the Great Recession, the proportional change in annual budget allocations to department divisions with social service programs was equal to the proportional change in department divisions without social service programs as their primary function.

H2: During the Great Recession, the proportional change in actual annual expenditures of department divisions with social service programs was equal to the proportional change in department divisions without social service programs as their primary function.

H3: During the Great Recession, the variance between the approved budget and actual expenditures of department divisions with social service programs was equal to department divisions without social service programs.

1.6 - Conceptual Framework

This research uses a single exploratory case study approach to examine the types of relationships that exist between principals and agent within the Dallas County entity. The Principal Agency Theory will be applied from a comprehensive perspective in conjunction with the budget

process to capture the challenges throughout the budget process with the information exchange from principal to agent and agent to principal. Furthermore, this study explores the relationship between the Budget Officer and the appointed directors through budget process from the periods of FY2006 – FY2017.

Once the Dallas County the adoption of the budget occurs, it becomes a fiscal plan and legal appropriation for county spending. State law forbids overall spending above the amount specified in the adopted budget and generally forbids transfers among funds more than the amount budgeted. The monitoring of the County's fiscal progress during the year is a shared responsibility of the department head, the Office of Budget and Evaluation, and the County Auditor. Figure 1 demonstrates (Macias, 2012) the interactions between two entities to understand the budget processes and expectations that exist between the principal and agent that eventually lead to a contract agreement. This general model is adopted for this case study research to simplify the interactions and relationship that exist between the Budget Office and various departments. The interaction in Figure 1 illustrates where contract agreement occurs (Macias, 2012) the budget policy.

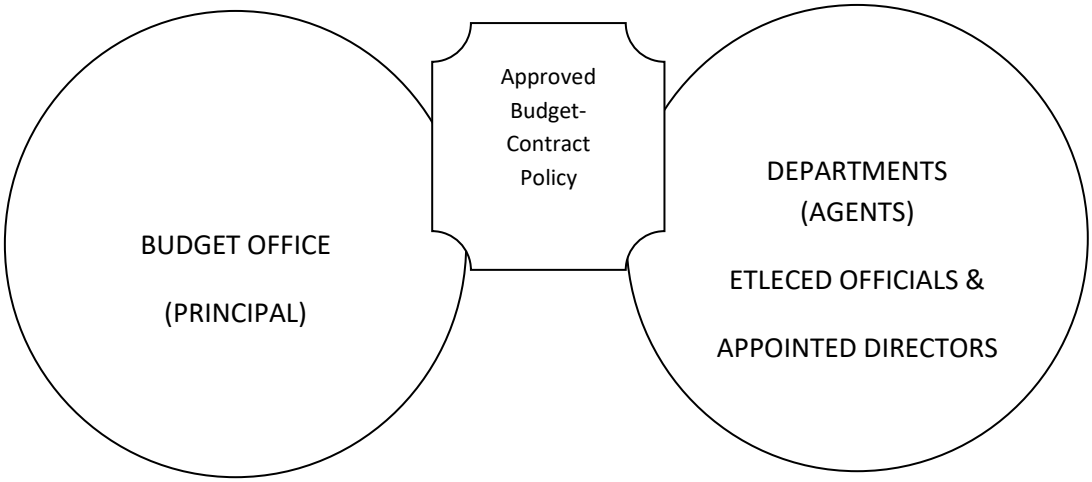


Figure 1. Illustration of Principal-Agent contract interaction in Dallas County

The outcome of the approved budget results into policy. Policy is an expression of values within an organization (Schick, 2000; Lynch, 1990, and Modlin, 2010). Setting a budget is the exercising of the power in directing the allocation of funds to create and fund policies. Principal-agent is the conceptual lens to explore how through the process the budget becomes policy. While principal-agent theory refers to an agreement between principal and agent the contract or agreement, for this research the terms are used synonymously with the term policy. While it is understood that policy is a direct result of the budget decisions, this research does not examine policy analysis of the budget process. The study compiles the decisions made during the budget process that result in resource allocation to specific departments and services. With the ten years of panel data, I will examine how the decisions affected funding for those departments that have a social service function or program (s). For this study, social service function is defined as a direct or indirect impact of resources allocation on a program to benefit the community, solve community problems or improve community condition.

1.7- Need for the Study

Studying the county budget process enables a better understanding of how county government, given economic resources, finances programs as well as addresses the public demands of the citizens. The process occurs in the context of a federalist system where federal and state decisions can affect the county budget directly and indirectly. In addition, researching budgeting practices during fiscal stress provides the ability to address potential solutions to address long-term solvency.

The literature on local government fiscal conditions, budgets, contains research primarily concentrates on municipalities. The studies attempt to assess the city government's fiscal conditions and the dynamics of the city when formulating fiscal policies (Wang et al., 2007, Ladd and Yinger 1989, Mead 2002, Hendrick 2004, and Dearborn et al. 1992). However, the studies were based within the municipal context as the "local government." There is little to no references specifically to county government development, preparation and implementation of annual budgets, operations, fiscal condition, or fiscal policy (Tyer, 1999 and Tyer, 2011). Currently, there is no study researching the interactions through the exchange of information within the county government and the allocation of the umbrella funding and resources within the institution.

Historically, county governments have provided traditional services such as welfare, health and hospitals, road improvement, corrections, legal and judicial systems, and tax assessment and collection (Benton, 2005; NACO 2012; Byers, 2008; and Byers, 2011). It is essential to study county governments because county government encompasses a diverse mosaic citizenry representing various socioeconomic, ethnicity, religious affiliations, and cultures (Commissioner John Wiley Price, March 19, 2013, Road and Bridge 3). Although there have been a growing

number of researches conducted on county governments the academic literature demonstrates that this is still an under-researched area.

1.8 - Limitations of the Study

This study provides detailed analysis regarding a sizeable urban county government balancing budget process when setting a tax rate to adopt a balanced budget during fiscal stress the designated period. Additionally, this study examines the percentage of change of funding for those departments with social programs. The lessons learned from this study will provide insight into the structural and management challenges that confront county governments. It is limited in that generalization to other counties based on this case study is restricted. It will be difficult to conclude causality because of the multiple variables that affect the decisions regarding budget adoption in Dallas County. Additional limitations include that I include participant's behaviors, experience, and perceptions throughout the budget process based on observations, notes, and review of archival data and recordings.

The validity of the study is limited by the availability of documents and thoroughness of transcriptions, knowledge, and honesty of presenters throughout the budget process. It is anticipated that this research will provide information for both practitioners and academicians. In addition, the Dallas County case study can be used as a model for other counties to provide comparative information when making their own decisions regarding budget adoption.

Although, this research will focus on how the funding occurred during the budget process to reach a balanced approved budget during the designated period will examine it from a comprehensive perspective in the overall budget process. Also, this study will only look at the

relationships of the Budget Officer and Appointed Directors (Appendix – 2) from a broad aspect based on general characteristics of each individual that has been either appointed to manage the annual "budget contract" by looking at variables (i.e., department budget size, tenure, number of years' experience at the county, previous public service experience, and party affiliation for the elected officials). Identification of the variables assist in further in understanding how the relationships between principal and agent hinge on organization assumptions and human assumptions that are based on background, tenure in the agency, experience in county government, and types of services provided by the department. The study's primary focus is exploring the relationship between the Budget Officer and Appointed Directors throughout the budget process to establish an approved budget for the periods of 2006-2017.

1.9 Summary

This chapter provides the introduction of the purpose of study outlining significance and limitations. The second chapter reviews the literature regarding public budgeting, county governments, social planning, and principal-agent theory and those characteristics of the directors that capturs info that may affect decisions. The third chapter details the methodology for executing the plan of the study. The fourth chapter details Dallas County for understanding by the reader of the dynamics and complexities of the organizational structure that is unique in County governments.

CHAPTER 2

LITERATURE REVIEW

2.1 Housing Prices and Local Government Revenues

Historically, local governments rely heavily on property taxes as the primary source of revenues for local government entities, especially county governments. Nationally the economic activity was negatively impacted by 2006-2011which was greatly attributed to the Great Recession (Macais, 2012; Graaf et al., 2016; and Alm, et al., 2014). Additionally, with the collapse of housing prices resulting in a record number of foreclosures nationwide it was anticipated that local governments would experience if not immediate, long-term revenue losses(Macais, 2012; Graaf et al., 2016; and Alm, et al., 2014) that will adversely impact local services. Although, the revenue decreased, the demand for local public services the demand for public goods did not decrease (NaCO, 2013; Brunner et al., 2015; and Alm, et al., 2014). This was a challenging period for local governments to operate under a new normal to continue providing adequate services during budget constraints (NaCO, 2013, Brunner, et al., 2015 and Alm, et al., 2014). The research demonstrates local governments left scrambling to address shortfall by putting in place immediate cutback strategies (Macais, 2012; Graaf et al., 2016; and NACo, 2013).

2.2 Budget Process

This research centers on the budget process of an urban county during the periods of fiscal austerity by focusing on the following fiscal years: FY2006 – FY2017. The purpose of the research is to conduct a social services-focused budget study in Dallas County that examines county-level budgets geared toward social programs. Fairbairn (2017) states that if you want to know what institutional values look at where they put their resources. Even during a financial downturn, local

governments are required to provide essential services and to balance their annual budget statutorily. This study examines twenty-four departments within Dallas County over a ten year period with the following objectives: 1. evaluate the budget process used each year during the designated period; 2. assess annual expenditures and resource allocation in Dallas County; 3. collect and analyze financial information on all appointed directors departments in Dallas County, with a focus on those departments with social service programs; and 4. Identify and document the link between the budget process, expenditures, and the Great Recession.

Ultimately, this research analyzes the link between the budget process and social planning by exploring: First, how a county balances their budget for eleven years, FY2006 – FY2017. Secondly, the impact an economic downturn has on the social service programs within the county government. The public government budget process encapsulates budgetary politics when setting policy within any public entity. The research will recognize the type of budget strategies used to annually balance the budget, i.e., incrementalism and cutback management. However, the primary focus of the research is the relationship of the budgeting process and social planning and the impact on funding social service programs in a county government during the Great Recession. The research questions of this study are as follows: Do departments with social programs as a primary function funding allocation decrease during FY2006-FY2017? Do departments with social programs expenditures decrease during FY2006-FY2017? What influences do administrator characteristics have on budget funding? Does the type of function determine the continued funding of services during an economic downturn?

The following paragraphs briefly describe the theoretical background of this research with emphasis on exploring how three unlikely functions intersect, i.e., budget process, social planning, and principal-agent theory, within the context of a public entity. The research applies the theory

and strategies to county government. In addition, this research explores the unique function of County government as a public entity that encompasses both shared responsibilities with municipalities in some cases and autonomy in other cases. In addition, within the county government, there is another dynamic of elected and appointed Directors running departments and overseeing their respective budget. Fairbairn (2017) stresses the importance the role of leadership plays in linking planning and budgeting. The influence leaders have within the organizational culture is essential in understanding whether programs succeed or fail. Fairbairn (2017) further notes, a strong experienced leader might succeed with a weak program whereas poor uncoordinated leadership can cause a robust program to fail. Elected Officials have a very different dynamics that influence their functions and budget allocations, which are not included in this research. The scope and depth of studying

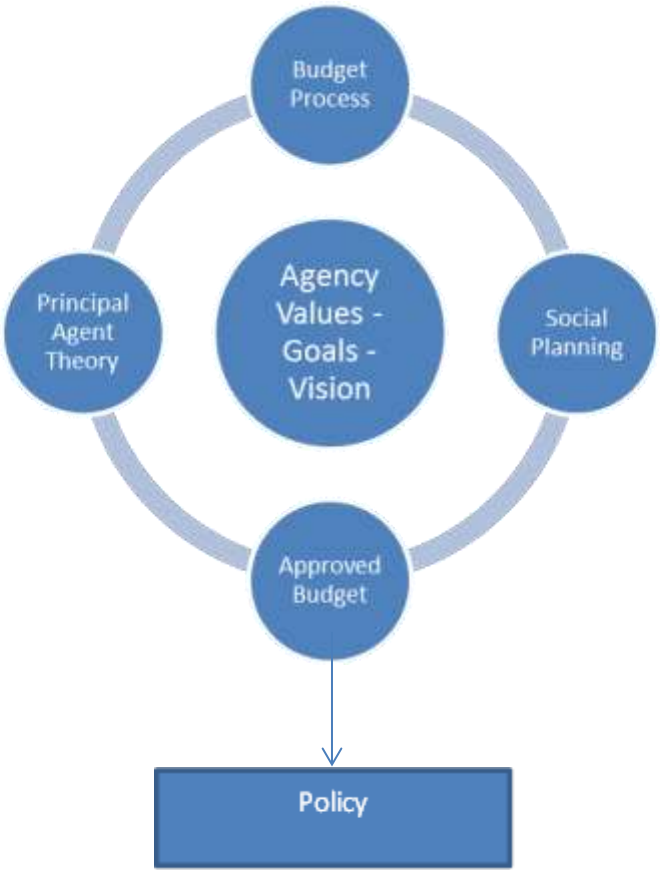


Figure 2. Budget Process

One of the consistent criticisms discussed in the literature regarding county government is the lack of a single chief executive to provide a unified administration and strong policy leadership (Duncombe, 1977, 43, and Morgan & Kickman, 1999, 317). Duncombe et al. (1999) describe a county budget in relationship to a boiling pot. The authors (Duncombe et al. 1999) reference the budget as the pot and with budget outcomes boiling inside. Figure 2 illustrates the multiple relationships that affect the approved budget.

McCaffery and Jones (2001) define in their book *Budgeting and Financial Management in the*

Federal Government that Government budgeting is a process that matches resources and needs in an organized and repetitive way, so that common choice are appropriately resourced. The product of this process is the budget-and itemized and programmatic estimate of expected income and operating expenses for a given unit of government over a set period.

The Budget is intended as a mechanism for setting goals and objectives, for determining weaknesses or inadequacies in organizations and for controlling and integrating the diverse activities carried out by numerous subunits within large bureaucracies, both public & privates (Lee and Johnson,1994). Lee and Johnson (1994) define public budgeting as involving the division of Society, economic, and financial resources between the public sector and the private sector and the allocation of such resources among competing for public sector needs.

A. Incrementalism.

Incremental funding is developing a baseline budget (starting point) by either decreasing or increasing the budget based on the previous year's budget based on the previous year's actual budget expenditures. Incremental uses projections to determine the adjustments for the proposed budget. Wildavsky (1967) described the budget theory as a calculated financial process that occurred incrementally annually. Naomi Caiden (1981) stresses in her writings that incrementalism as an informal practice utilized within the budget process. According to Lindblom (1959), decision-making is controlled infinitely more by events and circumstances than by the will of those in policy-making positions. Lindblom (1959) takes a hard look at the rational models of decisional processes of government and rejects the notion that most decisions are made by rational total information processes. Lindblom (1959) view decisions as being dependent upon small incremental decisions that tended to be made in short-term political conditions. According to Wildavsky (1961), budgeting is more than allocating the scarce resources between X and Y

activities. Wildavsky (1961) stresses it is about the meeting the conflicting needs of society by bringing about compromises in the political marketplace through incremental adjustment (s) in budget allocation.

Lindblom (1959) emphasized that there are no value-neutral lenses. All lenses are seen from the perspective of the individual. Lindblom (1959) questions managers preconceived values when making decisions. This idea of decision-making and planning as evaluative criteria does not exist. Lindblom (1959) emphasizes nothing neutral is value free. This notion is significant when setting budgets.

B. Cutback Management Literature.

Levine (1978) argues that public management strategies are based on assumptions of the continuing enlargement of revenues, which leads to incremental additions to a secure base, but events such as 911, New York City financial crisis, and recession forces reconsideration. Levine (1978) develops a typology of the different causes of organizational decline but as he concludes decline is usually due to a combination of factors. Levine (1978) argues that there is a need in understanding the causes of organizational decline in order to selecting a strategy to resist decline. Levine (1978) identifies the most commonly used cutback management methods: 1. Seniority, 2. hiring freezes, 3. even-percentages-cuts-across-the-board, 4. productivity criteria, and 5. zero-base budgeting.

Levine (1978) Laid out the management "rules" for cutback management with public-sector managers responding to revenue shortfalls based on a degree of economic and political uncertainty (that is, the probability of the cuts being restored) and the magnitude of the budget shortfall. Responses to address the budget shortfall could range from simply "stretching the

budget" to get through the fiscal year; "rationing demands" by limiting services or charging fees; "selective withdrawal" by redrawing geographic divisions of the organization or terminating specific programs; to "retrenchment" by permanently altering the structure, programs, and staffing of the organization (Levine, 1978).

Levin (1978) emphasizes that cutback management is not intended as a budget system; it was a process. The objective of the process was to fuse political-economic realities with management strategies that would reestablish in the public's mind the value of public-sector programs and service, which returns to Key's and Lewis' questions about the basis of value in resource allocation decisions (Levine 1978). McCaffrey and Jones (2001) emphasize that prudent managers will define the fiscal crisis before proceeding with the developing plans to reduce budgets to manage fiscal stress.

C. Social Budgeting.

Although, there is growing research (Nakray, 2015; and Scholz et al., 2000) on social budgeting internationally, from a national perspective social budgeting research is in the infancy stages. Social budgeting is eclectic in the approach. The social budgeting process takes into consideration the greater good of the community and neighborhoods the entity is serving. The general discussion in the literature (Nakray; 2015; Scholz et al., 2000; and Richardson, 2011) conclude that at the most basic level social budgeting encompasses planning and budgeting to develop social policy.

Theorists who have written on incrementalism and cutback management have noted the influence of the external environment, budget environment, stakeholders, and politics surrounding the budget process. The importance of mentioning these two theories is to understand that policy is a result of budget decisions. Incrementalist (Mohr, 1987) is a core perspective within the budget

process. Mohr (1987) states that the process should be the focus of research because it provides knowledge of all the components, interactions, and actions within the budget environment. Public market failures, provision of public goods and services, safety, health, and environmental laws justify the need for planning. The Great Recession had a substantial financial impact on both public and private entities revenues that lead to some budget reductions between the period of 2008-2014. It is given that during this period that calculated reductions are prioritized because of the lack of resources, which decreases funding for programs, projects, and services. Social budgeting is critical when looking at entities that provide a public good to the community it services. Figure 3. Demonstrates all of the inputs and outputs that impact social budgeting. The research will not focus on the types of budget strategies but instead, focus on the percent changes in the budgets with social implications.

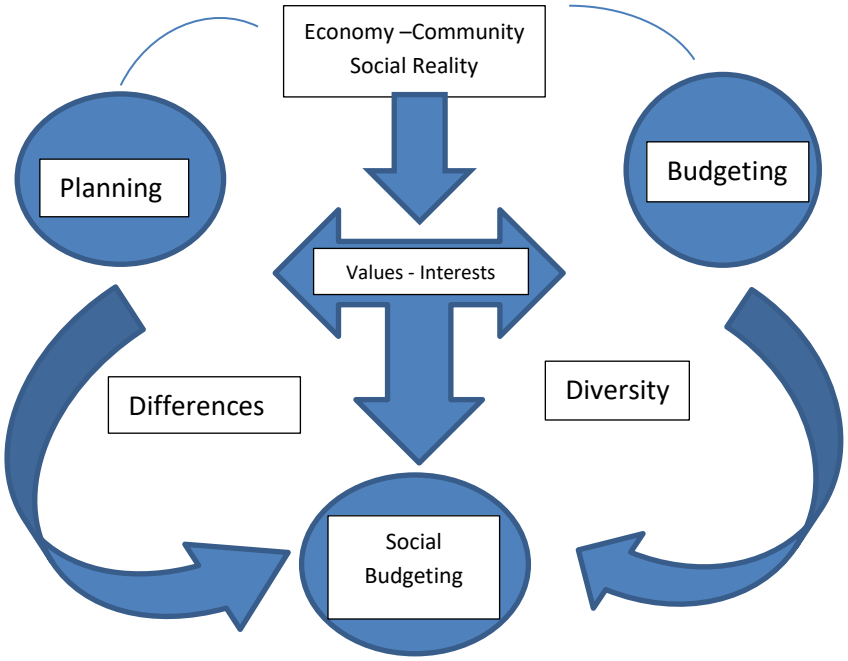


Figure 3. Social Budgeting

Scholz et al., 2000, asserts that in order to improve systems to protect communities socially there must be financial management and monitoring to provide social policymakers the tool to

create social budgets. Cichon et al., (2001) define social budgeting as those social expenditures financing social protection programs and public education. The authors (Scholz et al., 2000) define social protection in a broad sense that consist of components like pension, health and other social protection variables deemed necessary to benefit the community. Essentially, when there is a financial crisis, it adversely influences communities. There is a need for support and protection for the financial vulnerable (Richardson, 2011). For this research paper, social budgeting is the systematic development of budgets geared toward social programs with social implications. This type of budgeting ensures that the needs and interests are addressed based on the budgets, expenditures, and revenue policies guiding the agency. The term social budgeting is adopted from the concept of gender budgeting (Economic Division, 2008, Bureau for Gender Equality). The literature (Cichon et al., 2001; Scholz et al., 2000) summarizes social budgeting as a crucial tool during an economic transition. Social budgeting represents another step-in identifying budget priority through social lenses. This concept follows the more developed gender budget strategy. This research analyzes the Great Recession in the second largest urban county in Dallas, Texas.

2.3 Social Planning

Historically, social planning referred to the drawing up of plans for future action regarding social institutions and resources (Madge, 1963). Madge (1963) notes that social planning includes economic planning in the context of community planning. Friedrich List (1841) wrote, “It is the task of politics to civilize the barbarous nationalities, to make the small and weak ones tremendous and robust, but above all to secure to them existence and continuance. It is the task of the national economy to accomplish the economic development of the nation and to prepare it for admission into the universal society of the future (1841, p. 142 in 1904 edition). The genesis of social

planning activities occurred during the 1960s to meet the requirements of the federal renewal community programs (2009).

Postmodernism planning emphasizes the benefits of diversity. Postmodernism welcomes growth of localized protest as a means of promoting democracy while opening the planning process in a way that is typically denied by an emphasis on technical rationality. Postmodern politics suggest many possibilities (Goodchild, 1990). Postmodernism defines an end to simplistic notions of class alliances or urban social movements. What a postmodern politics recognizes is that there never can be one solution, which will benefit all people in all places for all time (Goodchild, 2008; Watson and Gibson, 1994; and Bureaugard, 1994). At the very least, what postmodern theory has done is to open a plethora of ways of thinking and to act politically (Watson and Gibson, 1994). A notion of democratic public spaces and cities implies a notion of planning for diversity and difference. Planning in a postmodern environment implies a different kind of planning process that seeks to respond to different interests, recognizing that interests are not fixed at any one time and will be continually contested (Watson and Gibson, 1994; Goodchild, 1990; Watson and Gibson, 1994). Goodchild (1990) suggests that for cities to be more democratic space needs to become less privatized so that individuals can interact in the open expressing both their differences and their commonalities.

For this paper, social planning is defined: "… the process by which policymakers - legislators, government agencies, planners, and, often, funders - try to solve community problems or improve conditions in the community by devising and implementing policies intended to have certain results. These policies may take the form of laws, regulations, incentives, media campaigns, programs or services, information - a wide range of possibilities." (Gore, 2004)

Planning and budgeting do interact to formulate policy (Fairbairn, 2017). Social planning is the process for policymakers to solve community problems or improve community condition through legislative, government agencies, planners, funding. Levy (2009) asserts if a planner is doing something with a social end, say administering community development funds for daycare or an adult literacy program the planner is engaged in social planning. Levy (2009) states that any decision that involves the use of sizable blocks of land or the spending of sizable sums of public money, there are inevitably social implications. In that sense, any planner who is conscientious and competent is engaged in social planning Jacob J. Lew (2011), director of the White House Office of Management and Budget states, that the "budget is not a collection of numbers, but an expression of our values and aspirations." Goodchild (1990) emphasizes postmodernism planning requiring more flexibility and inclusion of all stakeholders in the decision-making that influences the communities the entity serves. Bureaugard (2005) concludes that planning is both a science and art. He (Bureaugard, 2005 and Bureaugard, 2008) characterizes planning as an ideology infused with inscriptive judgments and normative visions. Modernist planners approach killed communities, and destroyed individuals live because they did not embrace, understand nor accept differences that existed (Bureaugard, 2015 and Bureaugard, 2005). During the urban renewal period, this was very commonplace to bulldoze and level communities. Bureaugard (2016) emphasizes that planners never act alone there is always, but always with material things such as bus lanes, affordable housing, and budgets to name a few. This research intends to link social planning to the budgeting process by demonstrating the way social programs are impacted during the ten-year study period of this research.

2.4 Institutional Background of County

"The urbanization of counties in the late 20th century has brought an increasing move into city-like services. As former city dwellers migrate into suburban areas and formerly rural areas, they carry with them the desire for the same level of service that they had become accustomed to in the city. Increasing population growth, and rising property taxes as a source of revenue fueled county expansion into new formerly urban service delivery areas such as planning, zoning, solid waste collection, mass transit, communication, parking, sanitation, transportation, utilities (including water, electricity, cable television, and gas)." (NACO Publication, November 2008, p.1)

The creation of the county government traces back as far as the inception of the national government (Kemp, 2009; Gilbert, 1917). Kemp (2009) notes in his article County Government: Past, Present, and Future that county government roots trace back to the English shire, which served as an arm of the national government and as the citizen's local government. ***The National Association of Counties identifies Virginia as the first colony that established a county jurisdiction in 1634. (NACO, 2013. p. 3). This established counties as a form of government that predated states.*** Kemp (2009) acknowledges that the Framers did not make provisions specifically for the creation and implementation of county governments but left the matter solely to the states. Consequently, there are some variations in how states chose to utilize county government entities. There are 3,069 county governments in the United States of America (NACO, 2012). County governments provide essential services to the people of America. County governments vary in size, population, and governmental structure. NACO reported that the expenditures for all counties are nearly $300 billion annually (NACO, 2012, NACO, 2018). County governments have been abolished in Connecticut, Rhode Island and parts of Massachusetts. In these states, the term county

means/designates boundaries for state-level functions as park districts (Connecticut) or judicial districts (Massachusetts). In those states where county government is weak or nonexistent, the municipality may supply some or all the local government services typically delivered by counties. The remaining states have county governments with county seats that are usually within an incorporated municipality.

Henry S. Gilbertson wrote a classic study in 1917 called *The County: The "Dark Continent" of American Politics.* Although Gilbert does not define the phrase "dark continent" in the book, he does refer to county government as the "dark continent in American politics" (Gilbert, 1917). The use of this terminology is common throughout the literature when referencing county government. The use of the phrase "dark continent" referencing county governments as inefficient, archaic, and a dysfunctional approach to government, which was primarily due to complexity in describing this entity. There was little understanding of the function, purpose, and organization of county government. Consequently, leading to the perception of the county government operating in a vacuum thus maintaining the idea that it is a mystery and a complex organization to navigate.

States decide counties' roles and responsibilities. States can allow counties to govern them by granting them home rule authority, which gives counties varying degrees of power to decide their own structural, functional and fiscal organization. Counties' demographic, geographic and economic characteristics dictate how they deliver services to their communities. The organization and structure of counties are tailored to fit their communities' needs and characteristics (NACO 2013).

County governments have a very complicated structure what Morgan and Kickham (1999) describes, "County governments as being convoluted in nature" due to the multiple elected

officials “row officers” that deters effective administration (Morgan and Kickham, 1999, 316, Giles, et.al.1980, 24). One of the consistent criticisms discussed in the literature regarding county government is the lack of a single chief executive to provide a unified administration and strong policy leadership (Duncombe, 1977, 43, and Morgan & Kickham, 1999, 317).

Tyer (1997) emphasizes that counties are a "hybrid" form of local government, operating both as an administrative arm of the State and as an urban service provider. The creation of cities are primarily in response to local needs and are not required to perform local services for the state government. Benton (2002) notes the lack of respect and acknowledgment that county government receives as service delivery agents from a political scientist. He further states (Benton, 2002) that county governments are dismissed as a “sleeping giant,” “dark continent of American government” and the “backward institution” that are treated as afterthoughts by those scholars who specialize in the study of local government (Benton, 2002). Benton (2002) argues that this type of mindset has blinded scholars to the significant emerging role of county governments in the American federal system. Benton (2002) further documents that in 1997, 39% of all spending of all local government was done by counties.

Although, County governments are no longer a complete mystery or referred to as the “dark continent” by writers, politicians, public servants, and citizens (Gilbert, 1917), gaps of County government functions still exist in the literature. There are minimal views and understanding of the purpose and overall function of county governments nationally. Understanding the functions and purpose of county government is very complicated because there exist a myriad of services and many moving parts and stakeholders i.e., Elected Officials (from the state’s Governor to the City Councils), appointed directors, civil service employees, Boards, and Commissions by focusing on the five most populous counties in Texas.

There are general core areas of services counties provide nationally. Depending on the geographical location urban versus the rural, size of entity (large urban versus small rural) population and housing valuations will dictate the priority of the services provided within the county entity. NaCO (2016) published a report noting that the large urban County governments' roles have expanded due to the increase in their population and services in the past 10 years. The expectations by the citizenry are for the counties to continue providing the existing services, manage urban growth while concurrently adopting a balanced budget during an economic downturn. Providing an in-depth study of the decision-making process of county governments will add to the body of research in this area.

2.5 County Government Structure

There is a growing interest in factors influencing the politics and process of County Government Budgeting (Duncombe et al., 1992; Schneider and Park, 1990; and Marando and Reeves, 1993). The literature review (Duncombe et al., 1992; Schneider and Park, 1990; and Marando and Reeves, 1993) demonstrates through empirical research academicians have concluded there are many influences of the budgeting process in county government. Duncombe et al., (1992) cite key factors like federal and state mandates, tax and debt limitations, and the priorities of county officials based on results of a national survey conducted in nearly 200 counties. Klase and Song (2018) discuss the amount of conflict that exists within the county government that influences county officials. The demands are unique to public entities like the county because the demands may be generated from citizen groups, or special interests group intensifies the politics within the agency. Due to the growing demands and the wide range of fragmentation of governmental units in counties, Klase and Song (2018) conclude the type of form directly influences leadership and decision-making in county government. Svara (1996) alludes to

structural conditions in counties as impeding strong leadership in counties and political partisanship as creating obstacles in county government.

Recent literature (Marando and Mavis Mann Reeves, 1993) on reform indicates that local jurisdiction size and growth dictates the county structural form. Because larger counties and growing counties may be under more pressure to reorganize their governments than smaller counties or those whose populations are static, these variables are included in the analysis. Per capita income also is a crucial indicator of urbanization.

Marando and Reeves (1993) discuss in their study how state, region and urbanization influences the adoption of government structural reform, exemplifies the desire for charter adoption, appointment of county administrators and elections of executives. The study examines 3,119 counties on which data were available, emphasizing the 78 counties with appointed administrators, 382 with elected executives, and 117 with charters. The correlation of structural reforms are link to urbanization as measured by three variables for counties nationwide: county population size, population growth, and per capita income. Marando and Reeves (1993) emphasize the need for more county research because of the counties increasingly important roles in local governance, especially in providing services within its jurisdiction, which include unincorporated areas.

In addition, Schneider and Park (1990) demonstrate that local jurisdictions size and growth are related to structural form. The larger counties and growing counties under pressure tended to reorganize their governments more than the smaller counties or counties with populations that were more static. Svara (1996) noted the third variable that was considered as a critical indicator, per capita income, in his studies that wealthier jurisdictions are more likely to adopt reform than

the less affluent counties. Svara (1996) included other key factors in the study that act as stimuli for county reform such as better management, new governmental concerns, increasingly service obligations that correlating with population growth thus requiring control over the more significant areas for service delivery (Maranda and Reeves, 1993).

Mark Schneider and Kee Ok Park (1989) state that the "independent effects of government structure on the role of county government as a service provider are striking." Consequently, understanding county government structure is essential because it may affect different aspects of county governance for example: who makes the decision, citizen access, local service delivery, collaborations, and inter-local relationships.

NACO identifies (2013) three county government forms: Commission Form, Commission/Administrator form and Council-Executive. County governments continue to evolve and adapt to changing environments and populations, with Petersburg Borough, Alaska incorporating as recently as 2013.

Historically, many of the county governments operated under the Commission form of government (Modlin, 2008; Modlin, 2010; and Kemp, 2009). However, in the past decade over 40% of county government entities have shifted to operate under the commissioner-administrator form or the elected executive form of county government (Benton, 2002; Modlin, 2008; Kemp, 2009). The authors (Kemp, 2009; Modlin, 2008; Modlin, 2010; and Modlin, 2010) note that operating under the Commissioner-Administrator form yields the most favorable results in reducing irregularities in procurement activities and creating safeguards to ensure competitive purchasing. Maranda and Reeves (1993) point out that most of the reforms of government structure

are due to better management and development of concerns due to population growth and the need to control the delivery of services within the county structure.

Forty-eight states use the term county to describe the tier of government below the state (Kemp, 2009; Modlin, 2008; Modlin, 2010; and Modlin, 2012). Only a few states follow a different tier of government, Louisiana government entities that function similarly to counties are referred to as parishes. Alaska, the lower tier government, is divided into boroughs and offers fewer services than the typical county type government. In three states, Connecticut, Rhode Island, and parts of Massachusetts county governments have been abolished (Kemp, 2009; Modlin, 2008; Modlin, 2010; and Modlin, 2010). The County structure dictates the number of influences of officials (Salant, 1998). Generally, there are three forms of government: charter government, commission-administrator, and council-executive. The literature (NACO, 2013; Marando and Reeves, 1993) notes that many of the entities may fall under a hybrid of commission form and commission-administrator form.

In 117 counties, the structure follows what was referred to as a charter rules structure. A charter rule structure provides counties with latitude for altering administrative structures and reorganizing service delivery. It confers on counties the authority to alter administrative structures and reorganize service delivery. Additionally, counties are provided the authority to make local decisions concerning county functions and organizations.

Under the *Commissioner-Administrator form* of county government, the Commissioner Board/Court/Body appoints an individual who serves at their pleasure and refers to the position as the County Administrator (Kemp, 2009; Modlin, 2008; Modlin, 2010; and Modlin, 2010). The County Administrator functions in a similar capacity as a City Manager. The *Commission*

represents all the individuals are elected to the position. The elected body has policymaking and administrative responsibilities (Modlin, 2005 and Kemp, 2009). They exercise legislative authority to enact laws and ordinances, fiscal authority adopts and approve budgets, and executive powers to implement policies and appoint county employees. The individuals are referred to as governing the body members. This form is embraced by the government reform movement because it separates politics and administration. One of the significant strengths under this form of county government structure is that this type of structure reduces political patronage and ensures that the best candidates are hired to manage the county government (Kemp, 2009; Modlin, 2008; Modlin, 2005; and Modlin, 2010).

The *Council –Executive form* of county government, the Executive is elected by the citizens. The County Executive serves as the chief administrative officer of the county. The individual has the authority to veto ordinances or laws enacted by the board and has sole responsibility to hire and fire all county government employees. Reform structure governments are those counties to promote employment of effective or professional practices and principles in the day-to-day operation of city government. This is considered to lead to greater efficiency and assist in constraining municipal tax and spending.

Unreformed of county government structures – that is, those counties that are governed by a board of county commissioners with no executive leadership – often viewed as less capable of responding to the challenges of metropolitan growth and service delivery than reformed county governments – that is ones led by an elected chief executive or an appointed professional administrator (Duncombe, 1977; DeGrove and Lawrence 1977).

Impact on government structure – Schneider and Park (1989) completed a study of 16pe2 counties located in the 50 of the largest metropolitan statistical areas (MSAs) in 1977. Spending listed in three categories (total, developmental and redistributive) was higher for the two types of reformed county governments (that is the commission-elected executive and commission-admistrator) than for the unreformed or traditional form of county government (board of commissions with no executive head) (Benton 2002). Across each of the three spending categories, counties with elected executives spent more, followed by counties with an appointed administrator (Benton 2002). The results of the study indicate that those counties governed by a board of county commissioners with no executive lagged far behind in their spending.

2.6 Principal-Agent Theory

Dietmar et al. (2009) notes that Principal-Agent theory was developed in the context of rational choice transaction cost theory. Braun introduced the concept in the context of research policy-making relationship basic logic of principal-agent figurations that is, one actor who seeks "extension" of self by delegating some tasks for execution by other actors who seem better capable of doing so. Agency relationships are established when a principal delegates some rights, to another, e.g., user's rights over a resource to an agent's rights over a resource to an agent who is bound by a formal or informal contract to represent the principal's interest in return for the payment decisions made on the allocation of resources (Dietmar, Braun and Guston, 2009). Dietmar, Braun, and Gaston (2009) introduced the principal-agent theory Model in the context of research policy-relationships. In their model (Dietmar, Braun, and Gaston, 2009), stressed that the policymakers are principal, and the agent is responsible for the implementation of the decisions within the hierarchical structure.

The underlying logic of principal-agent theory is one, the actor who seeks an extension of self by delegating some tasks for execution by other actors who seem better capable of doing so within the agency (Braun and Gaston, 2009; Forrester, 2002; and Levaçiç, 2009). Braun and Gaston (2009) introduced principal-agent theory in the context of research policy-making relationships. Braun and Gaston (2009) emphasize that policy-makers are the principal.

Rosalind Levaçiç (2003) defines principal-agent theory as the development of relationships between individuals both inside and outside the organization. While Forrester (2002) defines the theory as the relationship between those who provide the service and those who allocate the resource for the services inside the hierarchy, Alireza, Rashidpour, and Soltani in their article Citizen Relationship Management and Principal-Agent Theory (2014) insist that the application of this theory increases the accountability relationship between the management (agent) and the shareholder (principal). Although the authors stress this theory is not a complete solution for administration, they believe the theory causes agents to be more accountable to the principals as well as the citizens' interests.

A. Principal – Agent Contract

The core literature of principal-agent theory (Dietmar, Braun and Guston, 2009; Levaçiç, 2003; Forrester, 2002; and Alireza, et al., 2014) references the implied and explicit agreement as a contract. The contract is an agreement between entities (individuals, management to subordinate) which can be implicitly or explicitly implied to provide the good or service. Levaçiç (2003) notes that contracts can be between principals and agents who are in the same organization – e.g., management and workforce or management and shareholders, or outside relationship can occur outside between principals and agents from different organizations and outside the hierarchy. The term "contract" throughout the literature referred to the agreement that existed between the

principal and the agent to provide a good or service. Forrester (2002) references the term contract about the budget as the approved substantial agreement between the principal (Elected Official and Budget Officer) and the agent (department director and/or employees) depending on the make-up of the agencies hierarchical structure.

The authors in the various literatures (Dietmar, Braun and Guston, 2009; Levaçiç, 2003; Forrester, 2002; and Alireza, et al., 2014) demonstrate the various ways a contract may exist between the principal and agent and result in a conflict of interest between both parties whether the inside or outside the agency due to both parties have differing goals. The authors stress that the contract can be informal or formal within the organization or the "contracting" with an outside third party to implement the decision. For this dissertation "contract" is referring to the agreement between principal and agent within the hierarchical structure throughout the budget process.

Worsham (2011) demonstrates how the principal-agent theory applies to the public agency by comparing the theory to the public administration dichotomy. The political aspect is the elected officials elected to carry out what the citizenry elected hem to do, while appointed directors are responsible for the administration of the agency. In Worsham's (2011) explanation, he simplifies how the two entities interact within the constraints of a bureaucracy. In his explanation, Worsham identifies the principal to be synonymous with the politics and the agents represent the administration of the entities. The literature (Braun and Gaston, 2009; Forrester, 2002; and Levaçiç, 2009) demonstrate that in many instances a principal and agent role swaps throughout the engagement of the "contract." This study will focus on the term "contract" in the context of a budget contract, approved by the Commissioners Court.

One of the significant aspects of the principal-agent theory model is how information is exchanged between the principal and agent. Forrester (2002) utilizes two core themes to explain the application of principal-agent theory to a public entity when formulating a budget: information exchange, management, and the hierarchical relationships among budget participants. What is consistent throughout the literature (Dietmar, Braun and Guston, 2009; Levaçiç, 2003; Forrester, 2002; and Alireza, et al., 2014) is that principal-agent theory is about relationships and the exchange of information in that relationship as key to decision-making when setting policies that govern the organization within a hierarchical structure.

B. Principle-Agent Relationship.

There are various perspectives the research follows analyzing the principal-agent theory. Forrester (2002) concludes in his article that principal-agent theory can only partly explain the behavior of participants that are both inside and outside the framework. As the field of participants is broadened to include various principals (i.e., legislature, governor, and third party) as well as agents (directors, division heads, employees) the more challenging is the research. In addition, Forrester discusses the effect of organizational culture on influencing participant behavior as well. Lindblom (1959) emphasizes nothing neutral is value free. This notion is significant when setting budgets. Lindblom (1959) asserts that all lenses are seen through the perspective of the individual(s) making the final decisions. To narrow the scope of this research, this study will focus on the inter-organizational context of the control and distribution of the budget information and the thread the ties the budget contract with the accountable and responsible enforcement of the contract.

County governments are a unique structure with both elected officials and appointed Directors managing departments (point to one of the NACO studies). This research explores how

county governments, in an environment of severely diminishing resources and expanding demands, plan, develop and implement county budgets through a budget process in the context of the Principal-Agent Theory. The purpose of this research is to examine the interactions throughout the budget process between the Budget Office -Budget Officer (principal/agent) and the Appointed Directors (agent).

2.7 Summary

Bowen (1986) emphasizes the need for strong ties between planning, budgetary processes, and control processes. Fairbairn asserts (2017) that if a "plan and the budget are not integrated, then the budget by default is the institution's real plan." There is much research at macro-level when looking at the budget process and planning function within a public agency. However, there is very little research demonstrating the tie between financing social planning and subsequent public policy at the county government level. The funding of social programs as a priority during the budget process is a result of social planning. For this social research, planning is any program or item that has a social end or impact in the community is referred to as social planning.

Smart (1993) asserts that the relationship between planning and budgeting is complicated because of the external factors affecting the process that is outside the controls of the institution to prioritize and administer a balanced budget, i.e., like the 2008 recession. This research focuses on the budget process at the bureaucratic level within the context of principal-agent theory while exploring how planning, i.e., social planning is integrated within the budget process. This research goes further in comparing those departments that have a social service component that is impacted by outside funding allocations, i.e., federal and state agencies in comparison to those departments not funded through external public institutions. This research attempts to link those above three

commonly used strategies, perspectives and theory to apply to county government. Primarily, the intention of the research is to demonstrate the connection between social planning and budgeting by applying the principal-agent theory during an economic crisis in the second largest urban county in Texas. Much of the literature focuses on research on the macro level. This research project focuses on the budget process at the bureaucratic level.

This research focuses on Dallas County, the second largest urban county in Texas. As of the 2010 census, the population was 2,368,139. It is the second-most populous county in Texas and the ninth most populous in the United States. Its county seat is Dallas, which is also the third-largest city in Texas and the ninth-largest city in the United States. The county was founded in 1846 and was possibly named for George Mifflin Dallas, the 11th Vice President of the United States under U.S. President James K. Polk.

CHAPTER THREE

METHODS

3.1 Introduction

The researcher used a single exploratory case study approach to examine the types of relationships that exist between principals (Budget Officer) and agent (Appointed Department Directors) within the Dallas County entity during the fiscal years 2006 - 2017. This researcher utilized a single equation model to analyze panel data. According to Berrington, Smith, and Sturgis (2006) panel data is defined as the data which contain repeated measures of the same variable, taken from the same set of units over time (in this research departments within Dallas County). Data collection for Dallas County was for fiscal years 2006-2017. The researcher used the Year 2006 to include a year before the impact of recession started and 2012-2017 provides data for approximately six years after the impact of the recession ended in estimated 2011. Naomi Caiden (1981) emphasizes the complexity of public budgeting and that the current budget theory and practice lag behind the operational activity. The total sample size of this study has 26 departments with Appointed Directors of varying budget size, staffing, and functions. Appendix 2 lists the departments along with their budget, staffing, and function.

The general revenue for the County is generated from property taxes. The property tax is the largest single source of revenue for the County, comprising approximately 69% of all revenues. This research study focuses on the general fund budgets for the ten years of panel data. The amount received by the County is the product of a tax rate established by the Commissioners Court and the tax base provided for all jurisdictions within the County by the

Dallas Central Appraisal District. The tax base (the taxable value of all real estate and business inventory in the County, less certain exemptions) increases and decreases as a result of economic factors. State law requires that each public body calculates and discloses the tax rate change that compensates for the base change in a way that the only additional operating revenue available to the government is as a result of new construction (refers to new commercial and residential properties that were added to the tax base which results in the "effective rate". Increases above the effective rate - and not the prior year rate - are deemed the "true" tax increase (Appendix 4 – Definition).

Yin (2003) identifies a rationale for conducting a single case study when the researcher has the opportunity to observe and analyze a phenomenon previously inaccessible, e.g., the Tally's Corner case study of unemployed men conducted by Elliot Liebow's (1967). Like Liebow's experience, I have had the opportunity to meet and work with both county officials, department heads (elected and appointed), staff in various departments to learn about the everyday lives of a county employee before FY2009 and now after the five years of fiscal stress. I have worked in Dallas County for over 17 years in the Budget Office. I have what Yin would refer to as a rare and unique case to explore and analyze Dallas County and compare to another big county government. Yin (2003) stated "When other investigators have similar types of opportunities and can uncover prevalence phenomenon previously inaccessible to scientists, such conditions justify using the single-case study on the grounds of its revelatory nature (Yin, 2003, P. 43).

3.2 Problem Statement

During FY2008-FY2011 Dallas County struggled to balance its budget considering mid-year review projected shortfalls (Table 3). The Budget Office provides Commissioners Court mid-year projections in anticipation of any changes that occurred once the fiscal year begins. The County budget officer faced the challenge of every Appointed Director contending their respective department's request was the highest priority. The Budget Office was tasked with prioritizing the county's needs based on reviewing departmental budget requests and then making a recommendation.

Table 3.1 Dallas County Mid-year Projected Shortfalls

Fiscal Year	Budget Update Start	Projected Shortfall End of year (million)
FY2006	March 2005	$3.1
FY2007	March 2006	($3)
FY2008	January 2007	($20)
FY2009	January 2008	($13.1)
FY2010	January 2009	($20)
FY2011	January 2010	($56.5)
FY2012	February 2011	($33.25)
FY2013	February 2012	($20.7)
FY2014	February 2013	$4.74
FY2015	February 2014	$6.5
FY2016	March 2015	$9
FY2017	March 2016	$10.5

Source: Mid-year presentations 2007, 2008, 2009, 2010, 2011 – Dallas County Budget Officer

This research focuses on how the second largest county in Texas, Dallas County, managed fiscal stress during the budget planning process from FY2006 – FY2017. It is a descriptive and exploratory case study approach utilized to examine how a Budget Office prepares and recommends budgets annually during an economic downturn. The research is

aimed at the behavior of Dallas County and to understand the basis of the budget process when planning and to recommend adjustments (cost reductions and tax increases and decreases).

Dallas County, founded in 1865**,** is in the Dallas-Fort Worth MSA (Texas Association, 2012). Dallas County, with a 2016-estimated population of 4.7 million, is second in population to only Harris County of the 254 counties in Texas (U.S. Census Bureau, 2016). As of 2011, census, Dallas County is the ninth most populous county in the United States (U.S. Census, 2011).

This study explored the budget process between a single Budget Office and multiple departments with twenty-eight Appointed Directors throughout Dallas County. In Dallas County, The Office of Budget and Evaluation (OBE) is responsible for overseeing the budget process, which includes the review, analysis, and recommendations that result in a balanced budget. The research study details the yearly-allocated resources per department and track operating expenditures influence of social programs within the twenty-eight departments. Principal-Agent Theory provides the theoretical structure to this research to understand the relationship that exists between entities; in this case, the entities are within the organization. Principal-Agent Theory (Dietmar, Braun and Guston, 2009; Levaçiç, 2003; Forrester, 2002; and Alireza, et al., 2014) emphasizes that throughout interactions, the principal entity takes an authoritative role, while the agent entity takes the subordinate role. This is the case throughout the budget process. The application of agency-theory by looking at the principal-agent relations throughout the budget process benefits research to formalize better the importance of understanding the principal-agent relationship to the county budget process. Throughout this study, the principal-agent theory stipulates that when approaching the budget process organizational assumptions are consisting of goal conflicts, risk preferences, compensation, and

prioritizing to name a few as well as human assumptions that consists of self-interest, bounded rationality and risk aversions that are intrinsic in the dynamics of the relationships.

In county government, the recommendation and approval of a county department's budget is an implied contract between Budget Office and the Commissioner office for the approved budget period to complete tasks throughout the year. Ideally, the contract is the shared agreement between the principal and agent. This study did not delve into specifically how the give and take of information exchange and relationships reached decisions. However, this study will include some of the variables (characteristics) that may affect decisions within the agency.

3.3 Study Population

Elected Officials budget allocations and expenditures annually are too broad for this research. Therefore, for this research, only the twenty-nine appointed directors were included as part of this research. The researcher collected data on the characteristics of the twenty-nine appointed directors to explore if certain variables, i.e., county experience, gender, professional background, educational background, etc. impact leadership.

This study population consists of twenty-nine Dallas County Appointed Director departments (18 social services and 11 non-social services). There were two reorganizations during the study period and one newly created department during the study measurement periods. The changes in the departments did not influence collecting complete data. Therefore, the entire department's data were included in this study for the period.

3.4 Hypotheses

This research studies the budget process of Dallas County during the Great Recession and subsequent years to answer the question of how stringent economic conditions affect the social

programs within the county government entity. Greater knowledge about the link between the budget process and relationships as well as social planning will contribute to understanding how economic cycles alter budget processes and the services they provide in the public sectors.

H1: During the Great Recession, the proportional change in annually budgeted allocations to department divisions with social service programs are equal to the proportional change in annually budgeted allocations to department divisions without social service programs.

H2: During the Great Recession, the proportional change in actual annual expenditures of department divisions with social service programs are equal to the proportional change in actual annual expenditures of department divisions without social service programs.

H3: During the Great Recession, the proportional difference between budgeted allocations and actual expenditures of department divisions with social service programs and different from the proportional difference between budgeted allocations and actual expenditures of department divisions without social service programs.

3.5 Data and Methodology

This study uses panel method data. The statistical model used to test the hypotheses is the budget as the dependent variable (DV) to determine the impact of the recession on approved budgets annually. The model in this research is named *Budget Change Model*. This model captures a decade long of fiscal years (2006 – 2017) change of the approved budgets in Dallas County. Fiscal Year –Sec 70-51 Defines Fiscal Year -Allocating the county budgets resources on a fiscal year which begins October 1 and ends on the following September 30. (Admin. Policy Manual, § J (3.00)) State law references Fiscal year, V.T.C.A., Local Government Code § 112.010.

The purpose of this research is to determine whether the Great Recession had a long-term impact on the annually approved budget of those departments with social program functions versus those departments without a social program function. In order to maximize the panel data in detail for the ten years, the change model was utilized to make databased inferences about causal relations between the variables.

3.6 Sources of Data

Data was collected primarily from the County financial reports. The goal is to collect data for the entire ten-year period (FY2006 –FY2017). In the state of Texas, counties are required by statute to submit various reports and fiscal reports. The financial data was primarily collected from the Dallas County Auditor's website (https://www.dallascounty.org/departments/auditor/). In addition, the County Auditor's Office is required to complete an annual countywide report referred to as the Comprehensive Annual Financial Report (CAFR), which is available on the above-referenced link. The proposed study uses three primary methods of data gathering:

1. Secondary data from the United States Census Bureau, National Association of County Governments (NACO), Texas State Directory, Texas Association of County Governments (TACA).
2. Secondary data analyses of Dallas County's public records accessed through a web page, approved budgets, department reports, archival records, county-generated reports, expenditure reports, revenue reports, and published annual reports. The annual county CAFR's was used to fill in gaps on spending and reporting by the county. Triangulation was utilized by comparing several forms of secondary data to the responses from annually published reports via the Dallas County web pages as

well as annual reports submitted by the counties' Budget Office and Auditor's Office, expenditure reports, and county board minutes. The researcher compiled financial data from CAFRs, department budgets, expenditure reports, annual program reports, U.S. census data, National and Texas Association of County Governments documents to generate the information necessary to conduct statistical analysis regarding the budget allocation and actual annual expenditures.

A good hypothesis is a clear, testable, and precise with at least two variables. The primary variables in the three hypotheses are Approved Budget – 2006 – 2017; Actual Expenditures 2006-2017; Proportional change in Approved Budget versus Actual Expenditures between departments with social service and those without social service 2006 – 2017.

Table 3.2 Hypotheses Explanation

What is being tested?	Variables	Data	Documents utilized to collect data
H1: During the Great Recession, the proportional change in annual budgeted allocations to department divisions with social service programs was equal to the proportional change department divisions without social service programs.	Approved Budget	Approved Budget by Department • Departments Appointed Directors – descriptive data (i.e., gender, ethnicity, years of service in Dallas County and public service)	• Dallas County Financial Reports • Dallas County Annual Budget Reports • County Budget and Brief
H2: During the Great Recession, the proportional change in actual annual expenditures of department divisions with social service programs as their primary function is equal to the proportional change in actual annual expenditures of department divisions without social service programs.	Actual Expenditures	Actual expenditures posted by County Auditor's Office • Departments Appointed Directors – descriptive data (i.e., gender, ethnicity, years of service in Dallas County and public service)	• Dallas County Financial Reports • Dallas County Annual Budget Reports • County Budget and Brief
H3: During the Great Recession, the difference between budgeted allocations and actual expenditures of department divisions with social service programs different from the proportional difference between budgeted allocations and actual expenditures of department divisions without social service programs.	Approved Budget and Actual Expenditures	Pull the same data from H1 and H2 – to conduct analysis	• Dallas County Financial Reports • Dallas County Annual Budget Reports • County Budget and Brief

Variables; Fiscal Stress is operationalized as a dummy variable to determine if during the fiscal years of economic stress was there an impact on those departments with social service functions. Any year that is before the recession is coded as zero. Any year that is after the recession is recorded as 1.

3.7 Definitions

Approved Budget: The approved budget is the departments' financial plan for the designated fiscal year. The budget is based on the property tax rate. The approved budget numbers for each department is taken from the published document of the Dallas County Budget. This variable test if there was a change in the approved budget from one fiscal year to the next fiscal year. The percent of change is determined by the current year minus the previous year.

The change in the budget from each year was calculated between two data points. The percentage change of the Budgetchangemodel – [((Budgetchange$_1$-Budgetchange$_2$) *100/Budgetchange$_1$]. In this example: the two data points are 2006(Budgetchange$_1$) and 2008 (Budgetchange$_2$).

Actual Expenditures: The Actual expenditures are the actual dollar amount of funding spent and encumbered during the fiscal years. This variable test if there was a change in the actual spending of the department from the current year minus the previous year.

There are a total twenty-nine departments in Dallas County (Appendix 2). A Dallas County department is a major division carrying out an operational function. This research focused on the Appointed Directors (non-elected directors). Researcher collected additional control variables, in order to understand decision-making during the research period. Every organization takes on the cultural of leadership. The Appointed Directors are the primary decision-makers for the departments in this study. The controlled variables are general characteristics of the Appointed Directors that may attribute to the director's decision-making. This research collected data on characteristics of the twenty-nine appointed directors to explore if certain variables, i.e., county experience, gender, professional background, educational background, etc. impacts leadership.

According to the literature (Moe, 1984; Caiden, 2004; and Koch et al., 2014), there are many factors that influence decisions in the workplace. Miles Law (1978) asserts, "Where you stand depends on where you sit." An appointed director background experience and personal values and beliefs significantly influence decisions within their department. Parkins (2008) discusses the importance of understanding factors that influence the decisions of an administrator

in an organization, such as environment, culture, organization, and individual in making decisions within an organization. Parkins (2008), Moe (1984), Caiden (2004) and Koch et al. (2014) focus on the administrator and organizational factors of budget decisions. The administrator factors include the background of the individual, i.e., education, cultural, and gender.

Administrator Factors – According to Powell and Ansic (1997), gender differences are real between the employment work styles of men and women. Historically, the literature (Powell and Ansic, 1977; Parkins, 2008; Lahti & Johnson, 1992; and Graves, 2003) discusses females in the workforce as being more nurturing and less abrasive than their male counterparts. Conversely, males tend to take more risk when it comes to financial matters and is more apt to respond quickly when it comes to financial decisions. Powell and Ansic (1997) note that females tend to be more risk-averse. Broverman (1975) research details that the acceptance of gender roles is due to how we are socialized. The findings of Broverman's (1975) study emphasize the cultural acceptance of the male and female characteristics, which ascribe to men being positively valued more than the characteristics of women.

Organizational Factors - The organizational factors examine the department characteristics such as budget size, staff, and function. Hall (1982) emphasizes that structural characteristics and individual characteristics interact and inevitably influence administrator actions. The function of the organization may place limits on an administrator's actions. The literature (Hall, 1982) emphasizes that no two individuals in an organization would make the same decisions based on their personal beliefs and the influence of the organization.

The literature (Parkins, 2008; Moe, 1984; Caiden, 1981, 2004; and Koch et al., 2014) notes that the significance of including those factors is because the decisions that leaders make are essentially influenced by both formal and informal relationships within the organization. The researchers point to the different methods in which males and females approach situations. Personal beliefs have a significant effect on how individuals' function within an organization (Powell and Graven, 2003). The researcher included both administrator and organizational factors data in the statistical analysis to understand the associations of budget decisions. However, the variables are not the primary focus. Administrator and organizational factors are included in the analysis because the Appointed Directors of the departments being studied have an active role in the budget process as well as including the organizational influence on the Appointed Director's actions.

3.8 Limitations

This study examines the percentage of change of funding for those departments with social programs. The lessons learned from this study provides insight into the structural and management challenges that confront county governments. It is limited in that generalization to other counties based on this case study is restricted. It is difficult to conclude causality because of the multiple variables that affect the decisions regarding budget adoption in Dallas County.

The validity of the study is limited by the availability of documents and thoroughness of transcriptions, knowledge, and honesty of presenters throughout the budget process. It is anticipated that this research will provide information for both practitioners and academicians. Also, utilizing the Dallas County case study as a model for other counties to provide comparative information when making their own decisions regarding budget adoption.

Another consideration is the use of inter-local agreement or other cooperative mechanisms utilized by the county to provide social services within Dallas County may not be reflected in the twenty-nine departments included in this study. The level of data may not have captured all the anomalies that existed during the study period outside of the twenty-nine departments. The data collection necessary to capture those type of anomalies is well beyond the scope of this study.

3.9 Summary

This chapter provided and overview of the research design, study population, sources of data collection, limitations, hypotheses, and statistical model. This research is a quantitative descriptive and exploratory case study approach utilized to examine how a Budget Office prepared and recommended budgets annually during an economic downturn. The research is to understand the link between relationships of department heads and the Budget Office throughout the process when planning and to recommending adjustments (cost reductions and tax increases and decreases).

The next chapter provides background information on Dallas County Organization. The chapter is a narrative of the Dallas County Budget and Evaluation funding allocation processes. In addition, the chapter provides historical information regarding the county department organizational structure, county finances and revenues for the period of 2006-2017.

CHAPTER FOUR

CASE DESCRIPTION: DALLAS COUNTY AND DALLAS COUNTY OFFICE OF BUDGET AND EVALUATION

This chapter is a narrative of the Dallas County Government and the Dallas County Office of Budget and Evaluation funding allocations annual processes and outcomes and its impact on Appointed Director's budgets with social programs. Over the past ten years, Dallas County has experienced the worst economic activity since the 1930s. However, the County's tax base increased by $30 billion from 2014-2018. During the same five-year period, the area experienced near-record record development (Loessberg, 2016).

The budget decision-making processes during periods of fiscal stress from FY2006-FY2017 between the Dallas County Budget Office and appointed Department Directors are the focus of this study and the literature review that support it. The years included in the study are FY2006-FY2017. All fiscal year budgets were adopted the previous year. For example, the 2007 budget was developed in 2006. The fiscal year 2006 was included to establish a baseline of revenue prior to the impact of the recession that officially began in December 2007 and ended in June 2009 (NBER, 2014). Fiscal years 2011- 2017 was included to capture any lingering effects of the recession and provide a full ten years of data.

A single narrative approached as addressed by Yin (2009, P. 170) along with Creswell's (2007) funneling approach is used throughout this chapter to outline the history, organization structure, budget process, primary funding sources, and general characteristics of Dallas County in comparison to Texas in other data sets comparison to the United States. The characteristics have been included from 2006, 2007, 2010 and 2017 when information for those years was

available. The 2010 data is a census year, with most of the socioeconomics data utilized as the baseline data for this year.

4.1.2 - Historical Development - Texas Counties

The origin of Texas county government can be found in "municipality," the local unit of government under Spanish and Mexican rule. The municipalities were large areas embracing one or more settlements and the surrounding rural territory. In 1821, there were four major Spanish settlements in Texas-San Antonio, Bahía (Goliad), Nacogdoches, and the Rio Grande Valley—and three areas of light settlement and ranching and four major roads. Before the revolution of Texas against Mexico, the political subdivision did not exist. In 1835, Texas was divided into departments and municipalities. Three departments were established—Bexar, Brazos, and Nacogdoches—along with 23 municipalities (Texas Association of Counties, website). Under the new Republic in 1836, the 23 municipalities became counties. When Texas became a state in 1845, there were 36 counties. Under the state constitution of 1845, county government varied little from that under the Republic. The only significant change was one that made all county offices elective positions.

When Texas entered the Confederacy in 1861 and adopted a new state constitution, there were 122 counties. Adoption of the Constitution of 1876 occurred, ten years after Reconstruction from the Civil War. It is the present state constitution and contains much detail concerning the governmental organization of the county. The number of counties increased steadily until there were 254 counties in 1931. Figure 4.1 provides the geographic location of all 254 Texas Counties. Today, the 254 counties provide services to more than 28 million Texans (Texas Association,

2018). The County populations range from just under 100 residents in (Love County) to 4.6 million in (Harris County) (https://www.county.org/About-Texas-Counties - 2018).

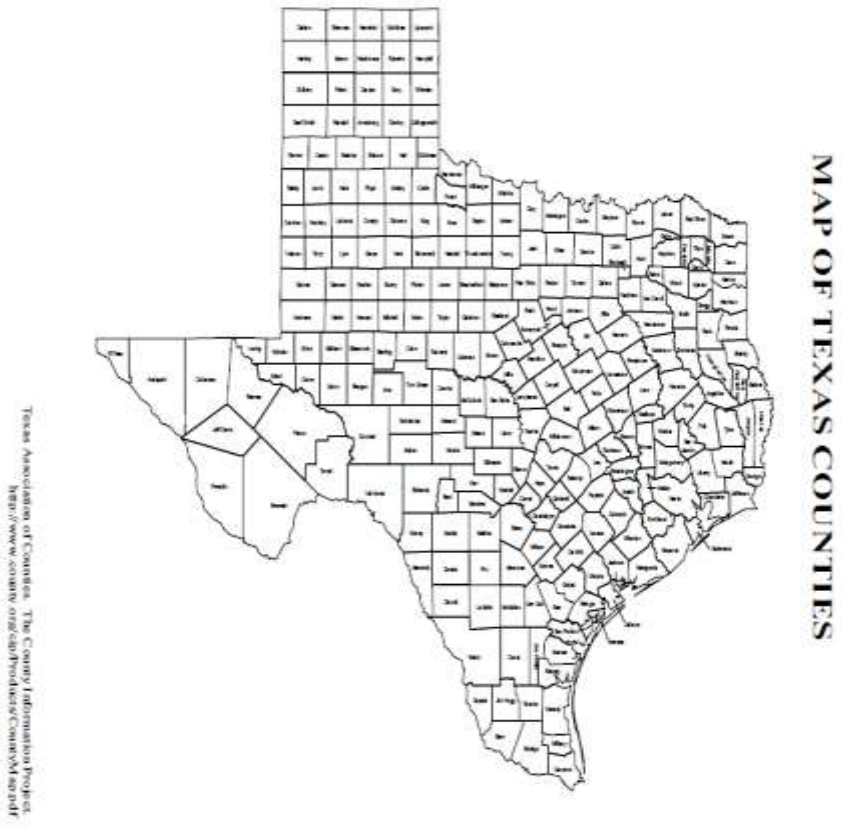


Figure 4.1 – Geographic Location of Texas Counties (Texas Association of Counties, 2018)

4.1.3 Texas Counties Essential Services

County government is the functional arm of the state government and is responsible for delivering services locally. Texas counties derive their powers from the state constitution (Modlin, 2005; Modlin, 2008; Tyer, 1979 and Tyer, 2011). Statutory duties and responsibilities of

government officials vary. The duties range from mandatory requirements about essential services to discretionary authority to carry out discretionary activities (Brooks, 2018).

County governments in Texas have no ordinance-making powers other than those explicitly and narrowly granted by state law (Texas Association of Counties – County Expenditures Survey – 2012, 2011, 2010 and 2009). In contrast to other parts of the country, Texas counties seldom have responsibility for schools, water and sewer systems, electric utilities, and commercial airports. Texas counties pay a pivotal role in providing essential services to residents. General responsibilities of the Texas county government include the following:

- *Providing public health* – Counties can establish hospitals, emergency medical service districts, and set-up 9-1-1 systems. Counties provide indigent residents with health care in some cases; maintain medical clinics that provide preventive care like check-ups and immunization.
- *Providing public safety and justice* – County government play a significant role in keeping Texas communities safe by Provided by the Sheriff, Court System and County Jails.
- *Building and maintaining roads and bridges* – Counties maintain and build over 47% of Texas roads. Counties maintain five of the state's bridges.
- *Tax Collection -Tax Assessor responsibilities include:* Collection of property taxes and issuing vehicle registrations and transfers; process motor vehicle title transfers; calculates property tax rates for the count; and may process various fees for school districts, municipalities, and state.
- *Registering voters and holding elections at every level* – Annually, County government hold elections in over 9,000 voting precincts and employ thousands of election workers. Counties ensure citizens' votes count by holding an election for various offices from local

school board members, county officials, next governor, and even the next president of the United States. Responsibility for this significant duty is with the County Clerk and Elections Administrator.

- *Providing and maintaining county record* – Counties keep important records safe for their citizens from birth certificates, marriage licenses, property deeds, and building and businesses certificates. The County Clerk's Office maintains and preserves the official and permanent records.
- *Providing emergency services* – Counties act as the first line of response in the event of an emergency both natural and fabricated. Maintaining an ongoing emergency plan is a requirement by state law for county government. Emergency Management Divisions of the county rehearse plans regularly to prepare for an unplanned disaster like an outbreak of Ebola, wildfires, and housing evacuees from neighbor states due to flooding, tornadoes, etc. Responsibility rests the County Judge for the declaration of a disaster for a county. The declaration puts the emergency plan into place. (https://www.county.org/About-Texas-Counties).

Statewide, there are over 4,400 elected county officials serving over 28 million Texas residents. County government represents a complex organization with multi-functional relationships responding to the local needs of its citizens. Texas Counties' diversification is on display from the largest five counties to the smallest five counties. Currently, there are five counties with one million or greater population in Texas counties and five counties with 1,000 or less population in Texas counties. The following tables (4.1 and 4.2) provide a snapshot of the top five largest Texas counties and the five smallest counties differences in population and county seat.

Table 4.1 Largest five counties in Texas by population in 2017

LARGEST FIVE COUNTIES IN TEXAS

County	Population (million)	County Seat -	Population (million)
Harris County	4,336,853	Houston	2.32
Dallas County	2,587,000	Dallas	1.35
Tarrant County	1,911,541	Fort Worth	895,008
Bexar County	1,817,610	San Antonio	1.53
Travis County	1,210,954	Austin	947,890

Source: www.txdirectory.com

Table 4.2 Smallest five counties in Texas by population in 2016

SMALLEST FIVE COUNTIES IN TEXAS

County	Population	County Seat -	Population
Love County	138	Menton	19
King County	296	Guthrie	160
Kenedy County	417	Sarita	238
Borden	673	Gail	231
Kent County	769	Jayton	507

Source: www.txdirectory.com

4.1.3 - Commissioners Court

Commissioner Court represents four precincts equally divided precincts no matter how large or small, suburban or urban the county (Figure 4.2). The four precincts of Commissioners along with the County Judge operate as the County Commissioners Court (https://www.dallascounty.org). The Commissioners Court conducts the general business of the county. The primary responsibilities include, adoption of the county's budget and tax rate, approval of all budgeted purchases of the county, filling vacancies in elective and appointive offices, setting all salaries and benefits, having the exclusive authority to authorize contracts, and providing and maintaining all county buildings and facilities (https://www.dallascounty.org).

4.1.4 - County Judge

The County Judge is elected at large countywide. The County Judge is the presiding officer of the Commissioners Court, represents the county in administrative functions, and serves as budget officer in counties with fewer than 225,000 residents. Most of the County Judges have broad judicial duties, such as presiding over misdemeanor criminal and small civil cases, probate matters and appeals from the Justice of the Peace Court and serves as the head of emergency management (https://www.dallascounty.org).

4.1.5 -County Commissioner

The County Commissioner represents one of four precincts within the county. Major areas of responsibility for the county commissioners are construction and maintenance of roads and bridges in the county that are not part of the state highway system. The County Commissioner is a member of the Commissioners Court and responsible for broad policy-making authority (https://www.dallascounty.org).

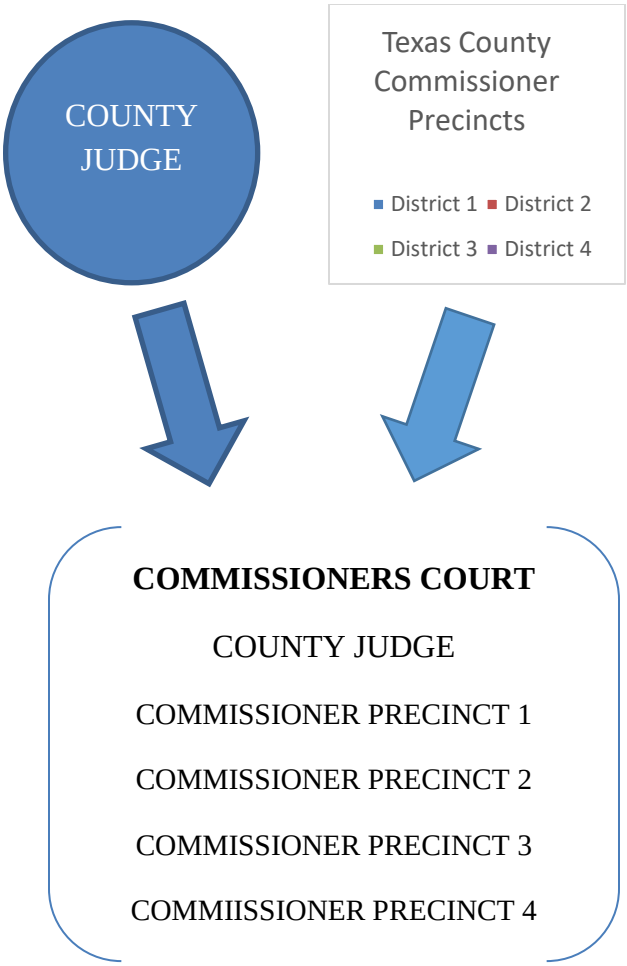


Figure 4.2. Texas Counties Association and National Counties Association (2018)

4.1.6 - Texas Budget Process

The Texas County Budget Calendar typically starts in February with the distribution of the budget manual. Under Local Government Code 112.010, the county fiscal year is the calendar year. Commissioners Court, by order, may adopt an October fiscal year. Additionally, counties with populations of 3.3 million or more may adopt either an October 1 or a March 1 fiscal year start date. Only 24% of Texas counties (61) follow the default statutory fiscal year (January 1-December 31). The most common fiscal year followed by the county government in Texas is

October 1 – September 30th. There are 76% of Texas Counties (192) uses the October 1 September 30th fiscal year period. Harris County is the only county that uses the March 1 February 28 fiscal year. Harris County has an estimated population of 4 million. Harris County is the only county with authorization to use the fiscal year. See Appendix – Texas County Fiscal Years.TEX. LOC. GOV. CODE, §112.010 (Vernon Supp. 2002).

The Texas Comptroller's Office publishes general standards for all Texas Counties to follow during the budgeting process. County government's financial records are available for public inspection and County Commissioner Court meetings are open to the public. Public transparency is key to the checks and balances within county government.

4.2 - Dallas County

Dallas County is the second-most populous county in Texas and the ninth-most populous county in the United States. Its county seat is the City of Dallas, which is also the third-largest city in Texas and the ninth-largest city in the United States. The county was founded in 1846 and was named for George Mifflin Dallas, the 11th Vice President of the United States under U.S. President James K. Polk.

The County provides a full range of services across 2,730 square miles. The major services include law enforcement, criminal justice, human services, record keeping, emergency services, and property tax collections. Maintenance of the county jails is a very significant responsibility of Dallas County. Dallas County has the seventh largest jail in the United States. The jail population drives 60% of the Dallas County budget due to jail standards, mental and health concerns, staffing, facilities, etc.

Historically, Dallas County was run by a majority Republican white male dominated Commissioners Court as well as many of the Elected Row Officers. The shift in a democratic stronghold in Dallas County in every top political race began with the 2008 election (Dallas Morning News, https://interactives.dallasnews.com/2018/shifting-tide-of-texas-politics). Elected Row Officers include the County and District Clerks, the Tax Assessor-Collector, Sheriff, District Attorney, Treasurer, five Constables. All trial court judges (District Judges, County Court Judges, and Justice of the Peace) are all elected (Budget and Brief, 2017).

4.2.1 - Dallas County Organization Structure

Dallas County shares organizational features with the state other 254 counties: its governing body (the Commissioners Court) consists of one member elected at large (the County Judge) and four members (County Commissioners) elected from districts (Dallas County Budget and Brief, 2017). In Dallas County, the County Judge is the presiding officer of the Commissioners Court. The Dallas County Judge has no judicial responsibilities, unlike those in smaller Texas counties (Dallas County Budget Brief, 2017). As stated previously, every county in Texas is broken into four districts. Figure 4-3 shows the four Dallas County Commissioner Districts.

The Commissioners Court sets the County tax rate, adopts the budget, appoints boards and commissions, approves grants and personnel actions, and oversees the administration of county government. The Commissioners Court also approves the budget and sets the tax rate for the hospital district, which is charged with the responsibility for providing acute medical care for citizens who otherwise would not receive adequate medical services. The County Judge and County Commissioners serve four-year terms. Each commissioner supervises a Road and Bridge District. Other elected officials in Dallas County are the County and District Clerks, Tax Assessor-

Collector, Sheriff, District Attorney, Treasurer, and five Constables. All trial court judges (District Judges, County Court Judges, and Justices of the Peace) are also elected (Dallas County Budget and Brief, 2017). The State District Judges in each county select the County Auditor, who serves as the chief accountant for the county (Dallas County Budget and Brief, 2017).

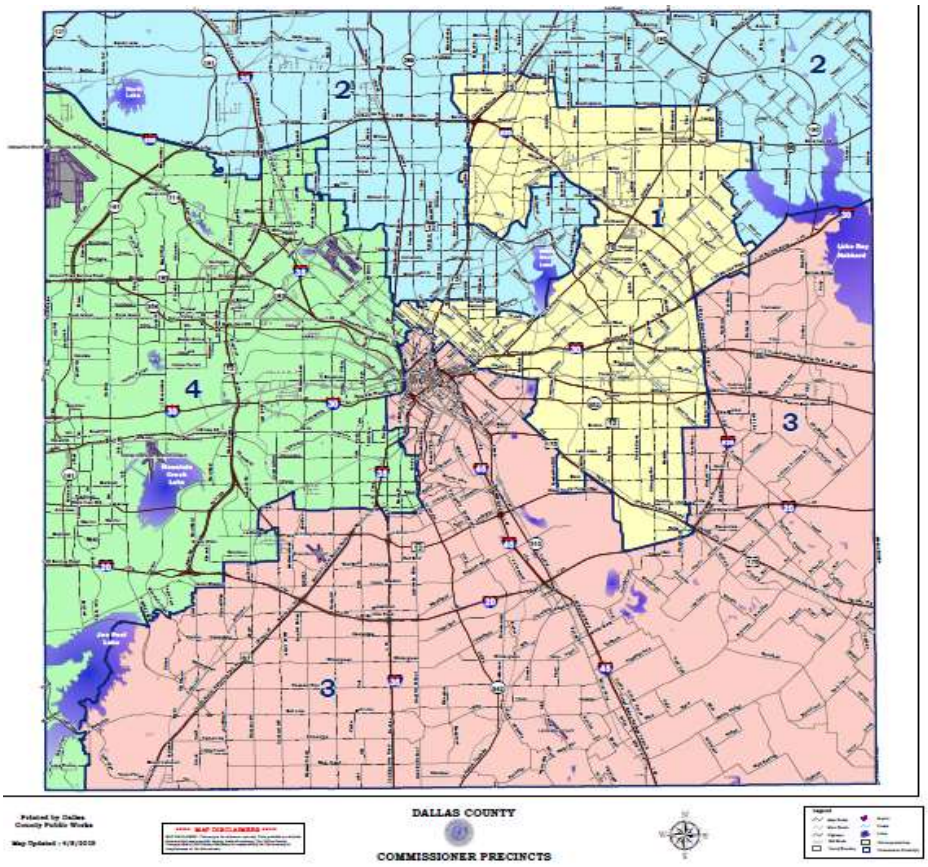


Figure 4-3. Dallas County Commissioners Court Four Districts

The Commissioners Court of Dallas County serves as both the legislative and executive branch of government, with budget authority over most county departments, including those headed by other elected officials. The high number of elected officials, including many with judicial authority, creates a unique organizational structure, unlike the more familiar council-manager hierarchy. Figure 4.4 demonstrates the entire organizational structure including Elected Officials, Committees and Advisory Boards of Dallas County (Budget in Brief Dallas County

Office of Budget and Evaluation Annual Publication 2008-2013). Commissioners Court authorizes Committee and Advisory Boards member appointees.

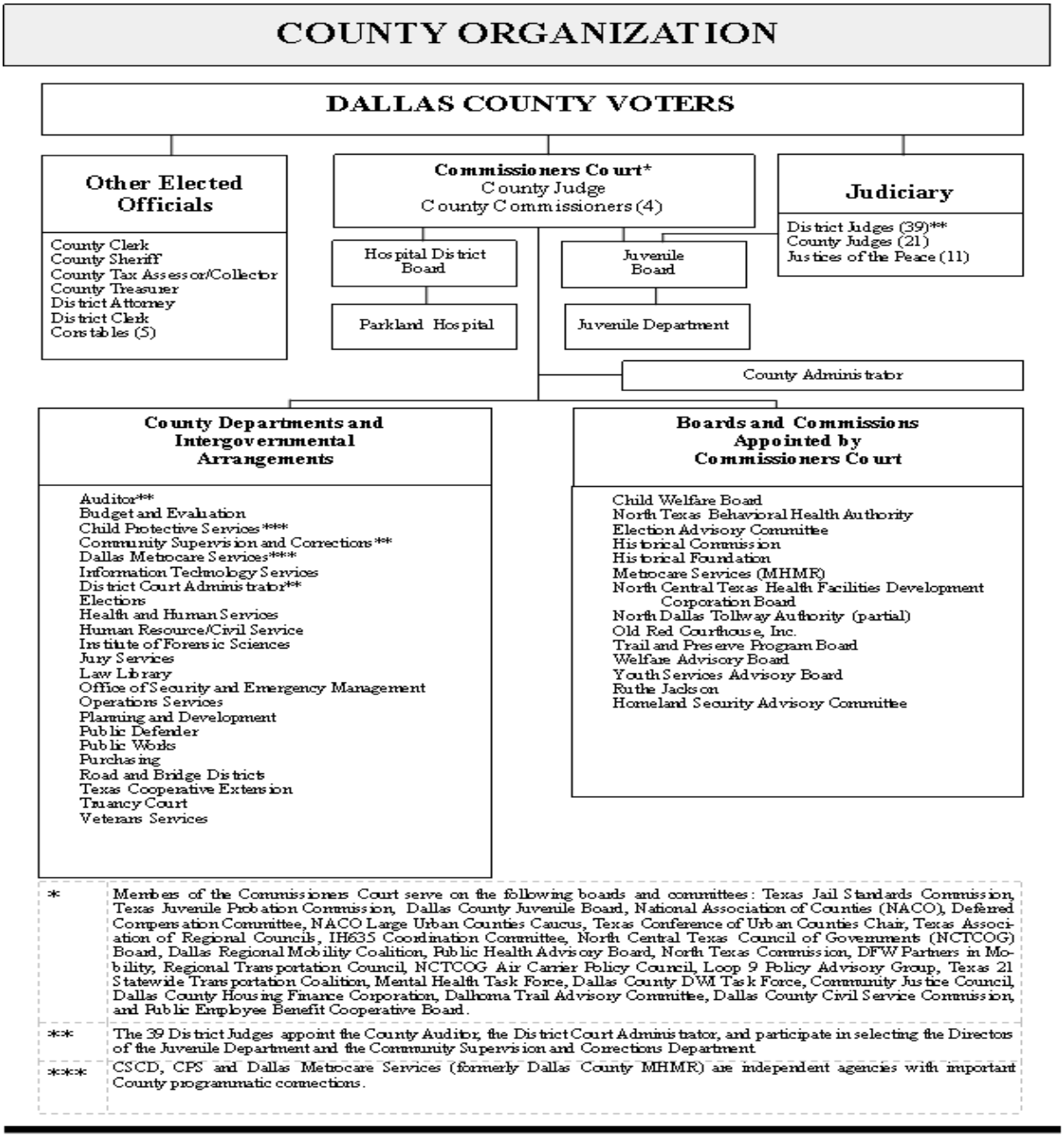


Figure 4.4. Dallas County Organization Structure

4.2.2 - Organizational Leadership

Dallas County Organizational Structure and Appointed Leadership

Figure 4.5 demonstrates only the Appointed Directors that report directly to either the Commissioners Court or the County Administrator. The Commissioners Court appoints the County Administrator along with the twenty-nine Directors. Appendix 2 provides a summary of each Director's FY2017 Approved Budget, total staff and Social Service function

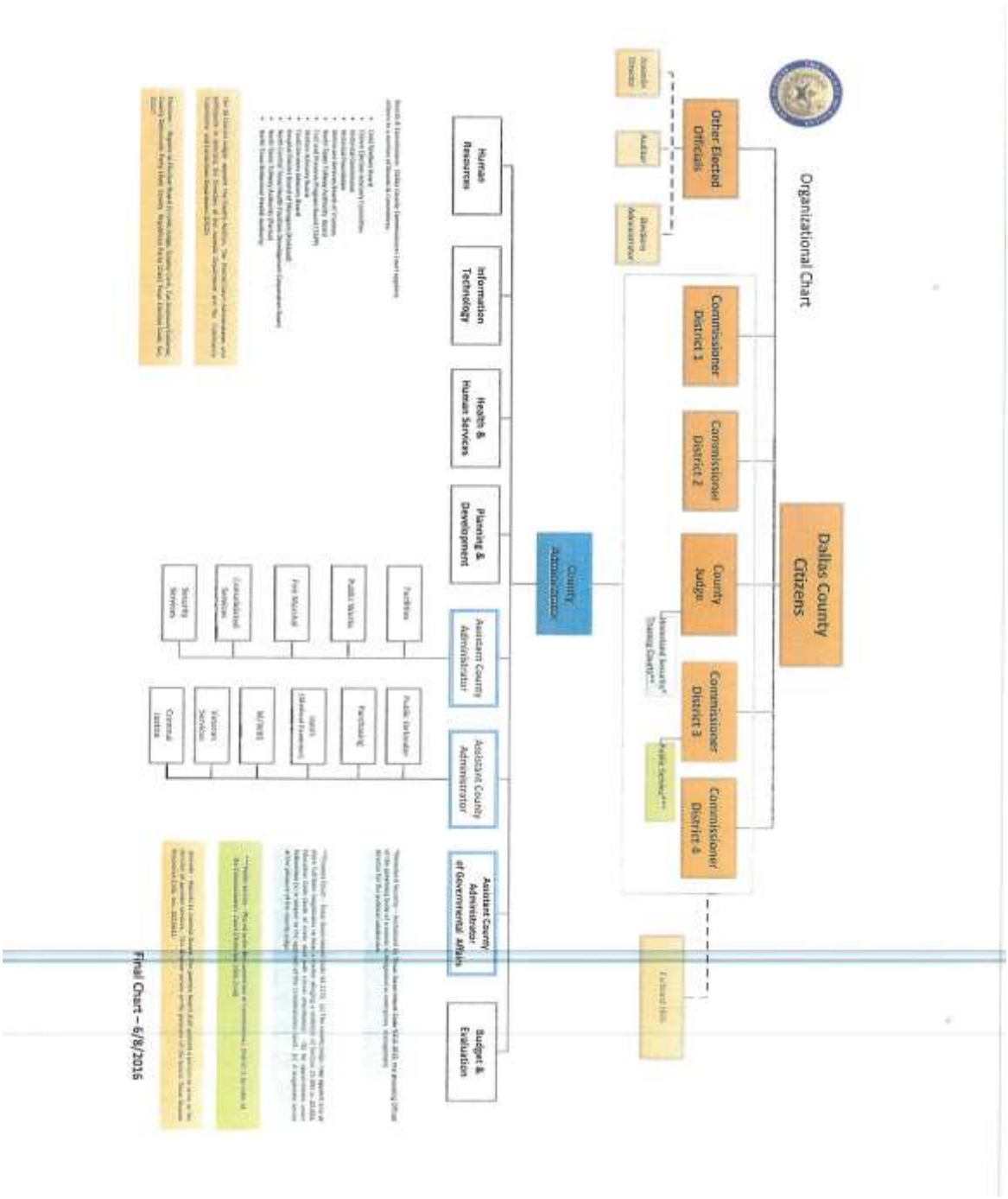


Figure 4.5. Appointed Department – Organization Structure

4.2.3 - Demographics

The socioeconomic conditions in Dallas County for the past ten years are key factors in understanding the driving forces in the County government condition and the priorities set in response to fiscal stress. Essentially, the population growth in a county signals the areas to focus county resources based on key indicators like unemployment, median age and median income. Increases and decreases in the variables inevitably effects the sustainability of development and poverty in local communities (https://www.unfpa.org/resources/population-and-poverty). Table 4.3 provides demographics for Dallas County and United States in 2007 and 2017. Figures include adjustments for inflation. The demand for local government services is directly linked to key factors like population size, growth, education attainment, homeowners versus renters, and poverty level.

As Table 4.3 shows the characteristics of the County population during the ten-year study period continue to change. Population growth trends tend to have an enormous impact on the population characteristics signals to County leaders' priorities in funding social programs serving communities.

Scorsone and Bateson (2011) note that home ownership is associated with the strength of the community's property value. Housing trends determines long-term structural budget issues the County may have to contend with since property taxes is the major revenue source (Scorsone and Bateson, 2011). As Table 4.3 shows percentage of housing units with mortgage decreased from 70 % in 2007 to 63 % in 2017.

Table 4.3 Dallas County and The United States

	DALLAS COUNTY		UNITED STATES	
	2007	**2017**	**2007**	**2017**
Population	2.291 million	2.618 million	301 million	323 million
Median Age	32.3	33.3	36.25	38
% of Unemploy.	5.4%	3.8%	5.0%	4.1%
Median Fam. Inc	$54,958	$56,718	$60,135	$60,336
Per Capita Income	$30,540	$30,678	$31,488	$32,397
% Poverty	14.8%	16.3%	12.3%	14%
Median Prop. Value	$145,000	$154,300	$200.000	$193,500
% of Housing Units with a mortgage	70.1%	63.%	67.9%	63.5%
% of Housing Units without a mortgage	29%	37%	32.1%	36.5%
% Renter Occupied	45.3%	49.5%	33.4%	36.2%
% College Degree	26.4%.	30.69%	27.5%	32%
% HS Diploma – all ages	74.5%	79.4%	84.5%	88%
1.Percentage No HS Diploma	23.6%	20.6%	23.3%	24.7%
Total Child Pop.	659,277	706,082	74 million	73.7 million

HTTPS:/WWW.DEPTOFNUMBERS.COM/INCOME/TEXAS/DALLAS-COUNTY - U.S. Census https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk

1. Percentage of No High School Diploma –represents 25 years and over for whom poverty status is determined by education attainment

2. Percentage of Unemployment represents seasonal adjustments - https://www.bls.gov/charts/employment-situation/civilian-unemployment-rate.htm#

https://www.childstats.gov/americaschildren/tables/pop1.asp

Countywide unemployment (Table 4.3) decreased from 5.4% in 2007 to 3.8% in 2017. The 2017 County unemployment percentage is slightly below the United States unemployment percentage rate at 4.1%. Unemployment demonstrates the potential hardships of unemployed within the county due to lack of savings, eligibility for unemployment compensation, food stamps, and other welfare programs. Economic hardships experienced by county resident inevitably can increase the reliance on community programs.

Education attainment refers to the highest degree that the population has attained for the study area according to the U.S. Census Bureau. Table 4.3 demonstrates that 20.6% of Dallas

County residences have no high school diploma. Education attainment does not take into consideration any training or apprenticeship programs that may influence unemployment as well.

4.2.4 – County Finances

During the study period, FY2006-FY2017 maintained strong fiscal management and accountability). Dallas' County Tax Rate continues to be one of the lowest urban counties in Texas (Budget-in-Brief, FY2017). Dallas County conducts its financial affairs pursuant to aa policy established by Commissioners Court. The maintenance of a reserve balance in excess of 10.5% of budgeted expenditures is the cornerstone of retaining the AAA/AAA ratings from the major bond rating companies (Budget-in-Brief, 2017). The County's AAA/AAA bond rating remained intact and unchallenged (Budget-in-Brief, FY2017). Implementation of a 90 Day Hiring Freeze during FY2008-FY2017 in anticipation of the end of year shortfalls demonstrates the county's proactive fiscal responsiveness (Budget in Brief Dallas County Office of Budget and Evaluation Annual Publication 2008-2017.

Dallas County Budget Officer defines shortfall as the anticipated deficit based on the mid-year revenue and actual expenditure projections. [1] The Office of Budget and Evaluation provides mid-year projections to present any unanticipated changes in allocation of funding and revenue projections. Table 4.4 demonstrates the Budget Office projections at mid-year of FY2008 anticipating a shortfall of $20 million in general revenue funding (Budget Presentation, 2008). During FY2008 –FY2011 tax levels remained steady while addressing the most difficult social challenges in Dallas County (Budget-in-Brief, FY2006-FY2017). Dallas County's Tax Rate continues to be one of the lowest urban counties in Texas (Budget in Brief -FY2006-FY2017).

[1] Ryan Brown, Dallas County Budget Director, *Interview to Discuss Breakdown of Budget Key Terms*, May 7, 2019:

Table 4.4 Project Shortfall and Budget Start Dates

Fiscal Year	***Budget Update Start***	***Projected Shortfall End of year (million)***
FY2006	*March 2005*	*$3.1*
FY2007	*March 2006*	*($3)*
FY2008	*January 2007*	*($20)*
FY2009	*January 2008*	*($13.1)*
FY2010	*January 2009*	*($20)*
FY2011	*January 2010*	*($56.5)*
FY2012	*February 2011*	*($33.25)*
FY2013	*February 2012*	*($20.7)*
FY2014	*February 2013*	*$4.74*
FY2015	February 2014	$6.5
FY2016	March 2015	$9
FY2017	March 2016	$10.5

Source: Budget Officer Presentation (2006-2017)

County Revenues

4.3.1 General Fund –Revenue

The County Auditor is constitutionally required to estimate revenue for the upcoming fiscal year, and the Adopted Budget must balance within the constraints of these projections. The policy requires that the Budget Officer present a balanced budget with a 10.5 percentage reserve balance. The five primary sources of revenue and their proportionate share of General Fund are property tax, fines and fees, parking, interest on investments, and other revenues (total of small reimbursements and fees). Property taxes generate the largest revenue to fund county operations. Figure 4.6 shows the four largest, property taxes represents on average 58% of revenue sources for this fiscal year, other various sources include fees (court fees) represent 35% of revenue sources, parking fees represent 4%, and interest on investments represents less than 3%.

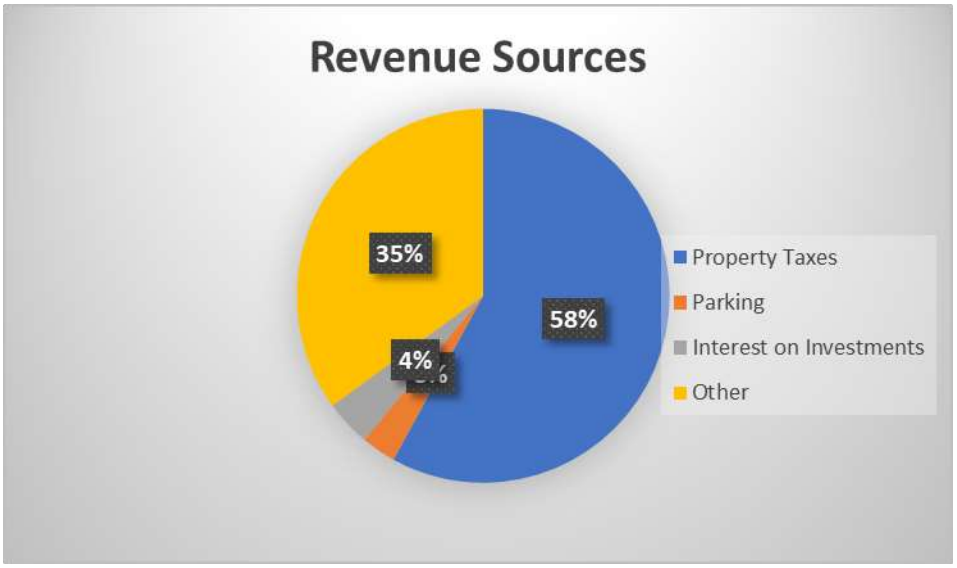


Figure 4.6. Revenue Sources Source: Dallas County Auditor's and Tax Office www.dallascounty.org)

4.3.2 - Property Tax

The property tax is the largest single source of revenue for the County, comprising approximately 58% of all revenues on average. The amount received by the County is the product of a tax rate established by the Commissioners Court and the tax base provided for all jurisdictions within the County by the Dallas Central Appraisal District. Because the tax base (i.e., the taxable value of all real estate and business inventory in the County, less certain exemptions) rises and falls as a result of economic factors, State law requires that each public body calculates and discloses the tax rate change that compensates for the base change in a way that the only additional operating revenue available to the government is as a result of new construction. The tax roll is certified by the Dallas Central Appraisal District. Figure 4.7 shows the tax base over the last eleven years. The table shows a rise for the first time in FY2014 since the FY2009 after the economic downturn (Budget-in-BriefFY2007-FY2017).

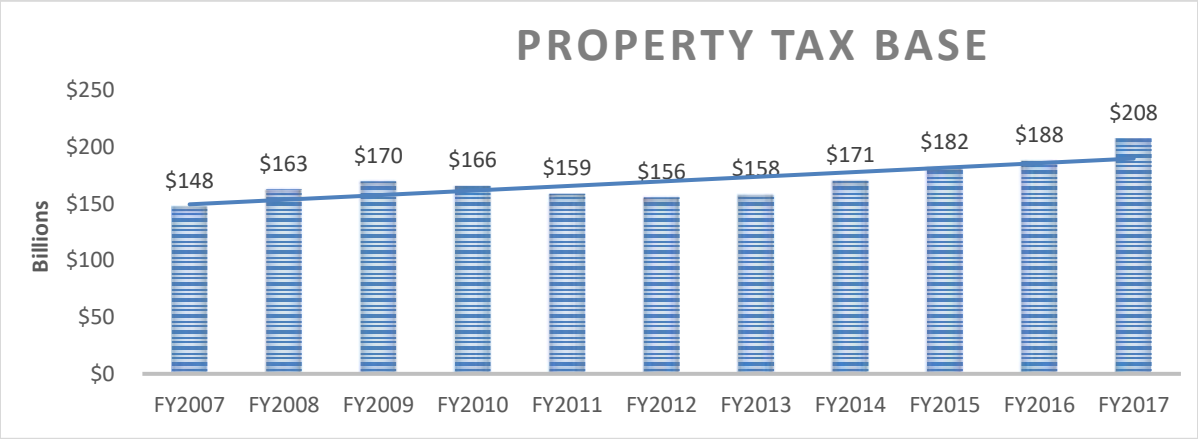


Figure 4.7. Dallas County Property Tax Base Source: Dallas County Auditor's and Tax Office www.dallascounty.org)

State law contains different provisions for taxpayers' ability to challenge and rollback tax rates. Dallas County's rates have never been challenged (Budget-in-Brief, 2017). Figure 4.8 represents a ten- year history of the property tax revenue produced by property taxes (Budget in Brief -FY2006-FY2017). Any increase in revenue is produced by (a) new construction or (b) an increase in tax rate over the effective rate.

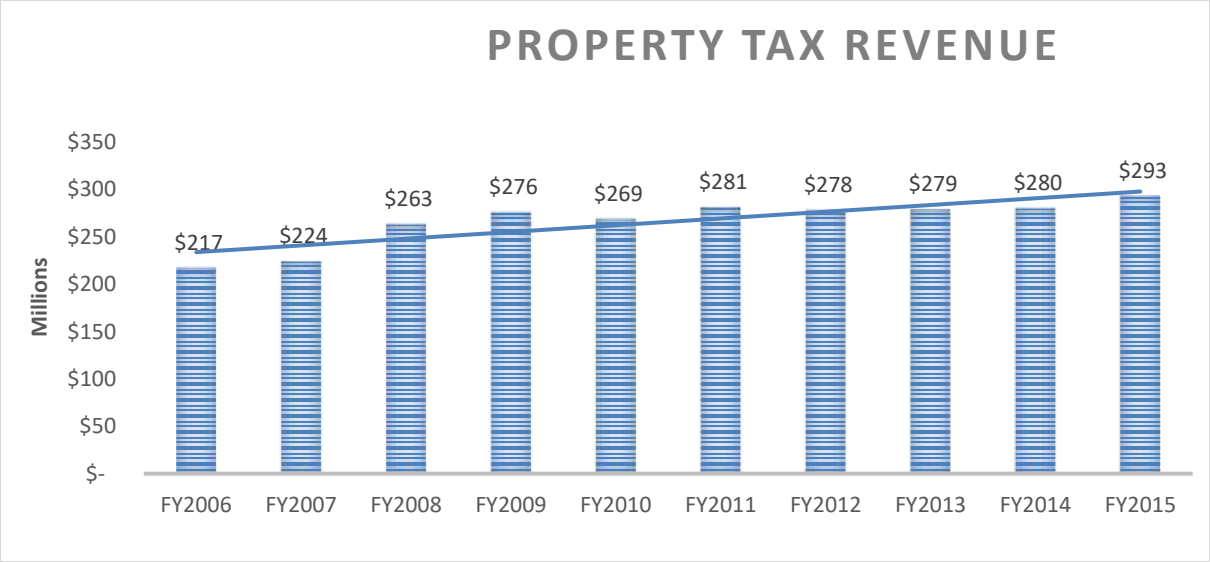


Figure 4.8. Dallas Property Tax Revenue (Source: Dallas County Auditor's and Tax Office www.dallascounty.org)

The effective rate is the starting point for each budget. The effective rate is the total tax rate needed to raise the same amount of property tax revenue for Dallas County from the same properties in both the current tax e.g., 2013 tax year and the following tax year 2014 tax year (Budget in Brief -FY2006-FY2017). Increases above the effective rate - and not the prior year rate – are deemed the true tax increase. The Dallas County Commissioners Court normally attempts to adjust the tax rate to the effective rate each year, and the Budget Officer's Baseline budget must by policy contain this assumption (Budget-in-Brief, 2017). Example of the calculation of typical fiscal years property taxes are broken out by funding account is demonstrated below. The example in Table 4.5 assumes no adjustment in the tax rate for the FY2010 year. The example breaks down the 24.31 cents per 100 assessed valuation in the General Fund.

Table 4.5 FY2010 – Property Tax Support General Funds

Tax Supported Funds	Per $100 cents per Assessed Valuation	Revenue Generated
General Fund	17.115	484,820,163
Major Capital Development Fund	3.372	51,010,939
Debt Service Fund	1.71	27,470,057
Major Technology Fund	1.933	22,492,177
Permanent Improvement Fund	0.18	4,948,415
Grand Total of Tax Supported Funds	24.31	590,741,751

Source: Dallas County Auditor's and Tax Office www.dallascounty.org

Figure 4.9 demonstrates the Dallas County's property tax rate for the past ten years. Commissioners Court establishes the property tax rate. The Figure shows an increase starting in FY2008 and remained the same for FY2009. Starting in FY2010 there was an increase in the property tax rate and for the following eight years the rate remained the same at 24.31 cents per $100 assessed valuation.

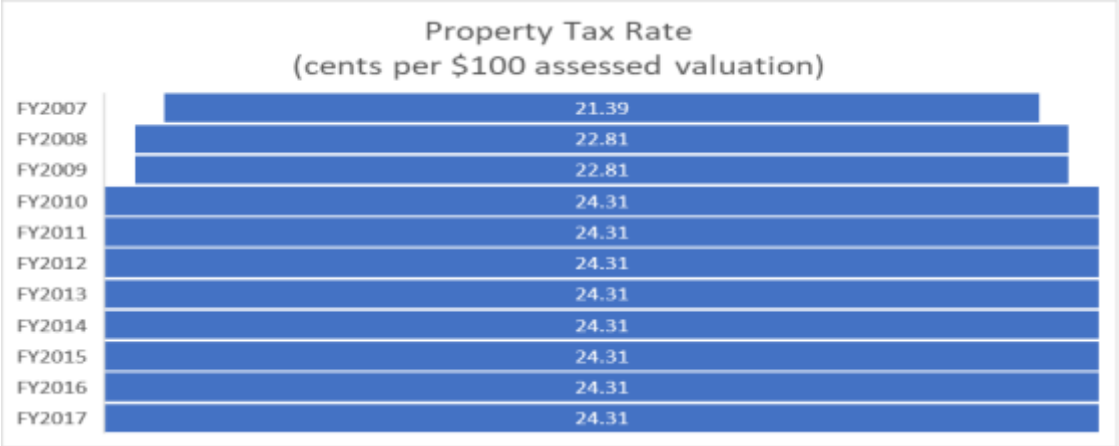


Figure 4.9. Property Tax Rate – FY2007-FY2017 (Source: Dallas County Auditor's and Tax Office www.dallascounty.org)

Table 4.5 provides the approved property tax rate, effective rate, and the rollback. As previously mentioned the effective rate provides the Commissioners Court same funding level from the previous year without additional resources to fund increases in compensation, retirement, and new programs. The Rollback Tax Rate is the highest tax rate the Dallas County Commissioners may adopt before voters are entittled to petition for an election to limit the rate they may be approved to the rollback rate.

Table 4-6 Dallas County Tax Rate

Year	Property Tax Rate	Effective Rate	Effective Maintenance & Operations Tax Rate	Rollback Tax Rate	Debt Rate
2007	.213900/100	.200828/100	.254000/100	.223446/100	.022118/100
2008	.228100/100	.228100/100	.209030/100	.246823/100	.022938/100
2009	.228100/100	.242211/100	.213062/100	.264065/100	.015871/100
2010	.243100/100	.236996/100	.232306/100	.275794/100	.019839/100
2011	.243100/100	.250748/100	.22930/100	.275794/100	.013800/100
2012	.243100/100	.242984/100	.22800/100	.263829/100	.015100/100
2013	.243100/100	.242984/100	.229079/100	.263829/100	.016424/100
2014	.243100/100	.236226/100	.214240/100	.258993/100	.019850/100
2015	.243100/100	.231328/100	.213597/100	.249683/100	.017500/100
2016	.243100/100	.226385/100	.211884/100	.249665/100	.020110/100
2017	.243100/100	.231671/100	.212127/100	.247157/100	.017100/100

Data Source – Dallas County Office of Budget and Evaluation – 2007-2017 – Notice of Public Hearing and Effective Tax Rate Worksheet - Complete Data was no available for 2006.

4.3.3 - Expenditures

Figure 4.10 outlines staff cost that constitutes the largest outlay of expenditures for most employers, especially in a service-oriented organization like county government (Budget-in-Brief, 2017). The costs include salaries, merit increases, employee benefits, and other related expenses. Other major costs include payments to other agencies, operational expenses such as utility payments and capital outlay. Salaries and benefits represent the largest expenditures for the Dallas County budget at 67.5% of the total expended budget for the noted period of FY2017.

Figure 4.10. Full-time Employees (Source: Dallas County Auditor's and Tax Office www.dallascounty.org)

The General Fund is broken down into six major operational categories: Community Services, Health and Social Services, Justice Administration, Law Enforcement, and Management Services. The table below provides the percentage of the breakdown of funding allocation to each general area by fiscal year. Because of the complexity of researching elected officials, this research focuses on the Appointed Directors listed in Appendix 2. The research looks specifically at those departments with social services/planning function. The primary categories providing social services are Community Services, Health and Social Services, and Management Services. The social

services are included in the general fund expenditures. Depending on the priorities set forth during budget preparations, the Commissioners Court determines the increase or decrease to all programs. This study analyzes the annual approved budget and actual expenditures of social programs in determining the impact of the economic downturn during the ten years of this study.

Table 4.7 represents the actual expenditure by the six major categories. Four of the categories, Community Services, Health and Social Services, Juvenile Administration and Management Services include social program expenditures. Appendix 2 demonstrates Appointed Directors by function for further understanding of resource allocation of social programs.

Table 4.7 Breakdown of General Fund Budget by service category

DALLAS COUNTY GENERAL FUND
DEPARTMENTAL SPENDING ($1,000)

Category	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Community	21,951	20,593	21,306	30,997	31,013	17,343	18,774	30,553	34,241	35,500	36,020
Health and Social	19,792	19,385	20,207	17,502	16,145	16,829	16,756	21,254	23,578	26,126	26,979
Justice Administration	108,507	114,327	123,576	109,315	108,652	118,694	117,972	129,532	136,377	130,234	140,612
Law Enforcement	161,555	166,971	175,195	165,084	172,072	160,537	171,740	176,720	143,170	192,687	192,201
Juvenile	43,039	43,415	49,226	46,211	42,202	42,512	42,945	47,187	42,547	45,538	53,272
Management Services	68,080	72,664	70,281	72,714	71,888	72,029	71,579	71,609	69,049	72,557	80,043

Source: Dallas County Auditor's Office Comprehensive Annual Financial Reports

Table 4.8 Dallas County General Funds – Ten Year Fund Balance

	Dallas County Funds - Condensed Statement of Revenues - Expenditures and Changes in Fund Balance FY2007 - FY2017 $1,000										
Fiscal Years	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Beginning Balance	$ 42,967	$ 33,033	$ 33,711	$ 39,265	$ 37,492	$ 46,339	$ 62,152	$ 60,274	$ 63,563	$ 64,131	$ 66,529
Revenues											
Taxes	223,019	269,088	276,027	269,280	279,318	277,330	280,955	280,260	297,738	315,187	343,263
Fines and Fees/Special Vehicle	27,894	30,145	32,964	42,807	19,367	14,751	18,004	16,750	12,750	-	-
Parking	-	-		-	2,200	2,960	-	-	-	3,725	3,000
Interest on Investments	10,538	10,587	5,104	3,000	3,560	-	-	-	-	1,852	689
Other	145,987	153,355	164,976	130,468	136,482	144,945	136,889	133,756	139,283	148,332	153,749
Total Revenues	407,438	463,175	479,071	445,555	440,927	439,986	435,848	430,766	449,771	469,096	500,701
Encumbrance Rollover	-	2,453	-	-	-	-	-	-	-	-	-
Total Sources	450,405	498,661	512,782	484,820	478,419	486,325	498,000	491,040	513,334	533,227	567,230
Expenditures											
Salaries	265,630	295,282	289,700	280,978	280,676	272,286	286,448	296,590	312,680	327,707	348,907
Overtime	2,592	2,830	3,069	1,722	1,797	3,297	2,896	3,082	2,912	3,077	3,118
Extra Help	4,356	5,023	5,105	5,153	4,651	4,733	4,743	4,729	4,383	3,905	4,234
Health Insurance	28,941	31,183	35,860	41,428	45,589	45,596	45,745	45,996	46,570	49,754	54,682
Operating	56,269	60,791	74,861	66,321	58,797	60,335	61,806	57,322	61,373	60,492	62,159
Court Costs	15,819	17,773	18,174	15,077	16,536	20,247	20,569	20,912	21,573	22,314	24,539
Placement	6,874	7,932	9,977	4,724	3,567	3,873	4,294	5,017	5,234	4,232	3,614
Utilities	11,660	11,660	13,856	13,466	13,500	14,944	12,697	-	-	-	-
Grant Match	5,249	5,033	5,654	5,362	4,348	3,960	3,770	4,171	3,481	3,767	4,133
Workers Comp	1,933	1,619	1,855	1,841	1,439	1,439	1,514	2,300	2,300	2,300	2,300
Capital	4,290	5,069	1,562	600	300	1,000	3,100	2,567	2,332	3,287	3,963
Welfare	2,464	2,349	2,372	2,071	1,756	1,586	1,717	1,678	1,707	1,707	1,664
Contingency	-	2,000	2,007	-	-	-	-	-	-	-	-
Total Expenditures	406,077	448,544	464,052	438,743	432,956	433,296	449,299	444,364	464,545	482,542	513,313
Net Fund Balance	44,328	50,117	48,730	46,077	45,463	53,029	48,701	46,676	48,789	50,685	53,917
Ending Balance	42,678	47,117	48,730	46,077	45,463	46,260	47,201	46,676	48,789	50,685	53,917
10.5% Target	42,638	47,097	48,725	46,068	45,460	46,207	47,176	46,658	48,777	50,667	53,898
Above/Below Target	40	20	5	9	3	53	25	18	12	18	19

Source: Dallas County Auditor's Office Comprehensive Annual Financial Reports

Unlike many of the municipalities and county entities, Dallas County financial policy requires a balanced budget with a 10.5% Reserves. Table 4.8 demonstrates the ten-year period of this research of an approved balance budget with funds above the target policy. The beginning balance of the general fund each year represents the carry forward from the previous fiscal year. Additionally, Table 4.7 shows the revenues, specifically fines and fees, steady decline especially in years 2011 -2015. The 2016 and 2017 fines and fees rolled into the other fund category. The other category represents smaller percentage revenue collections, i.e., general government fees recovered, reimbursements, user fees, etc. (Budget-in-Brief, 2017). Personnel costs related to

health insurance experienced steady increases during the ten-year period. The health insurance shows $28,941 for FY2007 and $54,682 for FY2017.

4.4 - Dallas County Budget Process

The Dallas County Commissioners Court charges the Dallas County Office of Budget and Evaluation (OBE) with the responsibility for developing a proposed County budget for consideration, modification, and adoption. Each annual budget cycle is approximately five months long, beginning with department heads preparing their requests and ending with budget and tax rate adoption in September (Budge and Brief, 2017).

The Office of Budget and Evaluation is responsible for assisting departments with their requests and with offering a funding recommendation to the Commissioners Court after evaluation of the critical nature of the need, the stated policy objectives of the Commissioners Court and the overall financial climate in which county government operates. Provision is included in the budget process for Department heads and the public at large to present their arguments for additional resources, after which the Commissioners Court renders its budgetary decision. The Budget Officer's primary goal is to present the Commissioners Court with a balanced budget encompassing the majority of the Court's priorities for the fiscal while adhere to Dallas County policy of a 10.5% reserve balance and statutory requirements set forth by the legislature in the adoption of a County Annual Budget (Budget and Brief, 2017).

Dallas County fiscal year begins on October 1st and ends September 30th. Table 4.8 displays the standard budget calendar. The development, preparation, and adoption of the county's budget depends on county housing property valuations provided by the Dallas County Appraisal

District (DCAD). The Local Government code identifies three different subsections when adopting a budget. Dallas County falls under subsection C of the code.

Table 4.9 Standard Budget Calendar

Month	**Budget Phase**
January	Budget Manual Preparation
February	Budget Manual Distribution
March	Budgets Returned to Budget Office
May	Preliminary Tax Projection Received
May	Budget Update - Presentation to Commissioners Court
June	Development of Baseline Budget
July	Certified Tax Roll Received
August	Budget Work Sessions with Departments
August/September	Two Public Hearings on Tax Rate
September	Tax Rate Set: Budget Adopted
October 1st	New Fiscal Year Begins

4.5 - Summary

This chapter provides a brief historical context of Texas County governments and key features of all the 254 Texas counties. In addition, the chapter provides organizational description of Dallas County Government and the Dallas County Office of Budget and Evaluation funding allocation annual processes and outcomes and its impact on Appointed Director's budgets with social programs. This chapter summarizes information over a ten-year-period detailing revenue generated and actual expenditures in the context of the proportional change of funding allocations for social programs.

CHAPTER FIVE

FINDINGS AND DISCUSSION

5.1 Overview

This chapter presents a discussion of the results of the statistical analysis and the findings of the research. This research examines the behavior of the Dallas County government's response to the Great Recession of 2008 by using financial data. The analysis examines the following:

(i) whether social service programs in comparison to non-social service programs experienced the same budget allocation in response to the Great Recession of 2008.

(ii) whether social service programs in comparison to non-social service programs actual expenditures changed in response to the Great Recession of 2008.

All the models for Budget Change, Expenditure Change, and Budget/Expense Difference were ran in STATA. As explained in Chapter 3, these models were also run using the Wooldridge Fixed Effects Model, which means we controlled for each department in the linear regression model and the fixed effect assigned dummy variables to each department. The results of the models are presented below.

5.2 Study Population

This study population consists of 29 Dallas County Appointed Director

departments – 18 social services and 11 non-social services. There were two reorganizations during the study period and one newly created department during the study measurement periods. The changes in the departments did not influence collecting complete data. Therefore all of the department's data were included in this study for the period. Prior to discussing the data, an overview of the department's characteristics is included. Table 5.1 displays the department by type and general characteristics. The data show that those departments with primary social services functions represent 68% of the total appointed director's budget and employ 67% of the staff.

Table 5.1 Composition of Departments by Type and General Characteristics

Type	**# by Type**	**# Staff**	**% of Staff**	**% Share of all Budgets**
Social Services	18	1,226	67%	68%
Non-Social Services	11	598	33%	32%
Total	29	1,824	100%	100%

5.3 Analytical Model – Paired Sample *t*- Tests

The first step of explaining the findings of the research involves comparison of the mean for the following: budget change mean and percent change mean between non-human services and human service departments; expenditure change mean and percent change mean between non-human service and human service departments during the Great Recession of 2008 from the period of 2006-2017.

The paired t-test was used to compare the non-social service and social service groups in

Dallas County that are appointed Directors. Specifically, for this research the t-test was used to determine if there was statistical evidence that the difference between the mean between the two groups is significantly different from zero. A series of t-tests were conducted on the two groups in this study. It was anticipated that the results would provide insight into the variability of the data between the departments with social services and the departments without social service programs. There are five general assumptions of the T test:

1. The independent variables should consist of two independent groups.
2. The dependent variable is measured on a continuous scale (interval/ratio data).
3. The data for the dependent variables should be normally distributed.
4. There should be no outliers contained in the data set.
5. There must be homogeneity of variances.

A. Comparing Group Means and Percent Change Budget Model

The results of the testing of the hypotheses were derived from the comparison of means of the paired data for each of the dependent variables. The results of the paired t-test have been compiled in the tables below. The following is a discussion of the findings. Hypothesis 1 requires an examination of the proportional change in budget allocations to the departments with social service programs in comparison to those without social service programs.

Hypothesis 1: During the Great Recession, the mean proportional change in

annually budgeted allocations for departments with social service programs is equal to the mean proportional change for departments without social service programs.

The data for Hypothesis 1 is derived from the mean change of each of the budgets of the non-social service departments and social service departments for a single population of county government departments with appointed directors (n=29) for each of the evaluated periods. The paired sample data was computed to compare the pre and post recession means for the two county groups, those departments with social service programs and those without social service programs. Tables 5.2 and 5.3 displays the results for the analysis of the mean data for Hypothesis 1.

Table 5.2 Comparison of Mean Budget Change Between Non-Social Services and Social Service Departments

Year	Mean # Non-Human Services	Mean # Human Services	Difference	Std	t	p- value
2007	673.55	-183.95	857.50	442.31	1.9387	.0631
2008	334.35	138.19	196.165	335.116	.5854	.5632
2009	441.39	430.59	10.805	498.53	.0217	.9829
2010	-459.47	-877.41	417.94	788.83	.5304	.6002
2011	199.46	-417.22	616.69	339.88	1.8144	.0807
2012	863.98	-57.32	921.30	555.91	1.6573	.1090
2013	-543.76	195.30	-739.07	440.06	-1.6795	.1046
2014	-606.29	78.17	-181.45	-684.47	-.6418	.5264
2015	-21.299	653.46	-674.76	490.66	-1.3752	.1804
2016	659.98	1538.92	-878.93	1756.13	-.5005	.6208
2017	655.18	4023.77	-3368.58	4926.24	-.6838	.4999
Overall Years Average	199.7337	502.0455	302.3177			

The paired sample t-test was conducted to compare budget changes in departments with social service programs and those without social service programs from the periods of 2006-2017. Table 5.1 describes the average mean difference of budget

allocations between the two groups. The results suggest that for the periods of 2007 (t=1.9387, p $\geq$ and .10) and 2011 (t=1.8144, p $\geq$ .10) the mean differences between the change in budget allocations of the non-social service departments in comparison to the social service departments had a significance at the .10 level.

The overall mean average for the entire study period for non-human services departments on average experienced $199,000 increase in their approved budgets, while the human services departments on average experienced an increase of $502,000 in their budgets during the same period. This can be attributed to the periods from 2015 – 2017 where the data demonstrate (Table 5.2) the difference in the budget appropriations between non-social services departments budget in comparison to social service programs was consistently less during this period.

Table 5.3 Comparison of Percent Change in Budget Between Non-Social Service and Social Service Departments

Year	Mean # Non-Human Services	Mean #Human Services	Difference	Std	t	p-value
2007	5.1706	3.85	1.3149	4.413	.2979	.7682
2008	29.787	5.06	24.72	12.981	1.9046	.0679
2009	4.359	7.443	-3.083	6.8610	-.4495	.6568
2010	-4.3231	-8.124	3.801	8.9973	.4225	.6761
2011	1.9478	-1.442	3.390	54.771	.6190	.5413
2012	1.60401	-.5612	2.165	5.2913	.4092	.6857
2013	.697677	8.8130	-8.1153	5.1365	-1.5799	.1262
2014	6.2656	2.9766	3.28901	7.1757	.4584	.6505
2015	5.17123	6.8789	-1.70768	7.1745	-.2380	.8137
2016	9.22133	10.39482	-1.17348	4.46549	-.2628	.7948
2017	2.564806	12.73076	-10.16596	9.16676	-1.1090	.2772
Overall Percent Change on Average	5.678	4.365				

Table 5.3 displays the average mean difference of budget percent change in for non-social service departments and social service departments. The results suggest that for

2008 the difference between the mean percent change for non-social service departments 29.79% and the mean percent change for social services departments was 5.06% was significant (t=1.90, p=0.068). There was a significant difference at the .10 p level in the percent change between budget allocations of the non-social service departments in comparison to the social service departments.

The overall mean percentage on average for the entire study period for non-human services departments were 5.67% on average in budget changes, while the human services departments on average experienced 4.36% change in their budgets during the same period. This can be attributed to fiscal year 2010 when departments with social services experienced 8% decrease in their budget allocation in comparison to non-human social services where (Table 5.3). The percent change difference on average the non-social services departments budget appropriations experienced a decrease in comparison to department with social service programs. Specifically, in 2016 departments with social service programs experienced a 10.39% change in their budget appropriations in comparison to departments with non-social service programs experienced a 9.22%. Additionally, in the last year of this study, fiscal year 2017 departments with social service programs experienced a 12.73% change in their budget appropriations in comparison to departments with non-social service programs that experienced a 2.56% percent change increase in their budget from the previous year.

The decision criteria for testing the mean in Hypothesis 1 requires an examination of the percent change of budget allocations from pre and post-recession for both social service departments and non-social service departments from the period of 2006-2017.

None of the years in the data set showed a significant difference in the percent change between the two groups at the .05 p level. However, the results demonstrated a significance for the fiscal year 2008 t (26) =1.9046, p=.10. The direction of the mean percent change in the mean budget for the years 2006-2008 was positive, reflecting an increase in the pre-recession mean budget percent change overall in budget allocation in non-social service departments in comparison to social service departments. Conversely, during the fiscal year of 2009 post recession the direction of the mean percent change was negative, reflecting a decrease overall in the budget allocation for non-social service departments in comparison to social service departments.

B. Comparing Group Means and Percent Change Expense Model

Hypothesis 2 requires an examination of the proportional change in expenditures between the departments with social service programs in comparison to those without social service programs.

Hypothesis 2: During the Great Recession, the proportional change in expenditures for departments with social service programs is equal to the mean proportional change for departments without social service programs.

The data for Hypothesis 2 is derived from the mean change of each of the expenditures of the non-social service departments and social service departments for a single population of

county government departments with appointed directors (n=29) for each of the evaluated periods. The expenditure data measures the impact of county government priorities (Kelly and Rivenbark, 2008). Actual expenditures of local government are considered one of the best indicators of policy priorities (Basolo, 2000).

The paired sample data was computed to compare the pre and post-recession means for the two county groups, those departments with social service programs and those without social service programs. Tables 5.3 and 5.4 displays the results for Hypothesis 2.

Table 5.4 Comparison of Mean Expenditure Change Between Non-Social Service and Social Service Departments

Year	Mean # Non-Human Services	Mean # Human Services	Diff	Std	T	p-value
2007	882.453	-356.3491	113.5413	726.7195	1.7046	.0997
2008	446.298	101.8072	344.4915	417.413	.8253	,4164
2009	-237.5305	-104.9627	-132.5678	362.9322	-.3653	.7178
2010	-1187.254	-462.3916	-724.8622	925.5978	-.7831	.4404
2011	-136.7879	-541.8918	405.1039	349.8674	1.1579	.2571
2012	382.1894	152.246	229.9434	543.3815	.4232	.6755
2013	-43.68126	-14.26009	-29.42117	434.9212	-.0676	.9466
2014	960.3872	648.7439	311.6433	677.6792	.4599	.6493
2015	-676.4447	65.75313	-610.6916	1052.15	-.5804	.5664
2016	376.5856	459.5304	-82.94478	383.8059	-.2161	.8305
2017	118.2843	2202.468	-2084.184	2939.312	-.7091	.4844
Overall Mean Change Average	80.409	2150.69	-2070.28			

Table 5.4 displays the results of the paired t-test conducted to compare the mean expenditure change of the non-social service departments to social service departments. The mean change in expenditure difference for 2007 t (27) =1.7046, p=.0997 was statistically significant at the .10 p level. The overall mean change in expenditures for both non-social

service departments and social service departments were negative for the fiscal years 2009-2011, indicating a reduction in the overall expenditures post-recession period.

Table 5.4 shows that the overall expenditure mean change on average for non-human services department was less than human services department. During the study period on average the non-human services mean change expenditures was $80,000, while during the same period the human services departments mean change expenditures was $2,150,000. The overall difference shows that non-human services departments mean expenditure change was less than social service mean expenditure change, which means social services on average spent more than non-social service departments.

Table 5.5 Comparison of Percent Change in Expenditures Between Non-Social Service and Social Service Departments

Year	Mean # Non-Human Services	Mean #Human Services	Diff	Std	T	p-value
2007	25.69706	8.972317	16.72475	12.82547	1.3040	.2041
2008	28.89689	.8741842	28.0227	21.75406	1.2882	.2090
2009	3.267483	4.220191	-.9527086	4.142375	-.2300	.8199
2010	-2.399058	3.725805	-6.124864	12.26879	-.4992	.6218
2011	-4.486275	-5.217499	.731224	3.742951	.1954	.8466
2012	.9102587	-2.734351	3.64461	5.13931	.7092	.4845
2013	7.82176	8.86661	-1.044851	6.899658	-.1514	.8808
2014	5.131078	9.014525	-3.883447	4.175977	-.9299	.3610
2015	6.575793	1.713537	4.862256	5.737604	.8474	.4045
2016	7.295634	11.49483	-4.1999194	6.019098	-.6976	.4916
2017	1.244662	6.579305	-5.334644	9.239017	-.5774	.5685
Overall Mean Change Average	7.268662	4.319041	2.949621			

Table 5.5 displays the results of the paired t-test conducted to compare the mean percent change of operational expenditures of the non-social service departments to social service

departments. The overall percent mean changes in expenditures for both non-social service departments and social service departments were negative for the fiscal years 2010-2011, indicating a reduction in the overall expenditures post-recession period. Additionally, Table 5.5 shows that overall percent change in expenditures for the 2006-2017 period was 7.2% for departments with non-human services while the overall percent change in expenditures for human services departments was 4.3% during the same period. None of the percent changes in expenditures were statistically significant at the p-value level of .05

Hypothesis 3 requires an examination of the comparison of mean percent difference between Adjusted Budget and Adjusted expense across social service program and non- social service departments.

Hypothesis 3: During the Great Recession, the variance between the approved budget and actual annual expenditures for department divisions with social service programs is equal to department divisions without social service programs.

The paired sample data was computed to compare the pre and post-recession means for the two county groups. Tables 5.6 and 5.7 displays the results for Hypothesis 3.

C. Comparing Group Means and Percent Change Adjusted and Adjusted Expenses Model

Table 5.6 Comparison of Mean Percent Difference Between Adjusted Budget and Adjusted Expense Across Social Service Departments and Non-Social Service Departments

Year	Mean # Non- Human Services	Mean # Human Services	Diff	Std	t	p-value
2006	7.975589	5.480254	2.495335	7.446343	.3351	.7403
2007	-4.125059	1.317791	-5.442849	9.793684	-.5558	.5831
2008	3.782365	5.428143	-1.645777	7.53051	-.2185	.8287
2009	6.234059	7.026341	-.792282	6.442551	-.1230	.9031
2010	4.240295	-2.585399	6.825693	6.379677	1.0699	.2945
2011	10.92741	1.055286	9.872125	4.622646	2.1356	.0423
2012	10.15415	3.681838	6.472314	5.01501	1.2906	.2082
2013	4.300261	3.727603	.5726582	6.015622	.0952	.9249
2014	-3.180492	-2.970304	-.210188	13.97344	-.0150	.9881
2015	1.453115	2.358926	-.905811	6.108508	-.1483	.8833
2016	2.391271	1.353507	1.037764	7.417936	.1399	.8898
2017	6.062092	7.409781	-1.347689	5.511799	-.2445	.8087
All Years Average	4.184588	2.773647	1.410941			

In Table 5.6 the results show that the mean percent difference for the adjusted budget and adjusted expenses for non-social services department in comparison to social service departments were negative in 2007, indicating a -4.125% decrease on average across the board for non-social service departments pre-recession between adjusted budget and adjusted expenses. Similarly, in 2010 the mean percent difference for the adjusted budget and adjusted expenses a for social services departments were negative, indicating a -2.585% decrease on average across the board for social service departments post-recession. There was a significant difference in the mean percent difference for the adjusted budget and adjusted expenses for non-social services department in comparison to social services department in 2011 t (26), p=.04.

Table 5.6 shows that the overall average mean percent difference between the non-human services adjusted budget and adjusted expenditures was 4.1% in comparison to the human-services departments mean difference between adjusted budget and adjusted expenditures was 2.77% on average during the period 2006-2017. The data indicates that on average the mean percent difference between adjusted budget and adjusted expenditures was 1.4% more for the non-human services departments during the study period.

Table 5.7 Comparison of Mean Difference Between Adjusted Budget and Adjusted Expense Across Social Service Department and Non-Social Service Departments

Year	Mean # Non- Human Services	Mean # Human Services	Diff	Std	t	p-value
2006	-539.8596	18.41548	-558.2751	756.1981	-.7383	.4667
2007	-748.7624	190.811	-939.5735	784.7405	-1.1973	.2416
2008	-860.706	227.194	-1087.9	1197.828	-.9082	.3718
2009	-181.7773	762.749	-944.5263	888.962	-1.0625	.2974
2010	546.006	347.7216	198.2845	806.7822	.2458	.80077
2011	882.2607	472.3849	409.8758	861.5051	.4758	.6381
2012	1364.054	262.8148	1101.239	769.5866	1.4309	.1639
2013	863.9658	472.3792	391.5866	628.4709	.6231	.5385
2014	-702.7185	-98.19044	-604.528	1634.804	-.3698	.7144
2015	-47.57319	621.0233	-668.5968	710.1324	-.9415	.3548
2016	235.8275	1700.417	-1464.589	2136.462	-.6855	.4989
2017	772.7273	3521.722	-2748.995	4091.834	-.6718	.5074
All Years Avg.	131.9537	708.2868	-576.333			

Table 5.7 results indicate that the mean difference between the adjusted budget and adjusted expense for non-social service departments for the years 2006-2009 was negative, indicating and overall decrease for those years. During the same period, 2006-2009, the social services mean difference between the adjusted budget and adjusted expenses were positive, indicating an overall increase for social services budgets and expenditures on average. Also, the results show that in 2014 both non-social services departments and social services departments

mean difference between the adjusted budget and adjusted expenses were negative, indicating on average there was a $604,000 decrease between the two groups.

In addition, Table 5.7 results show that the overall mean difference between the adjusted budgets and adjusted expenses for non-social service department was $131,000, which means that non-social service departments spent on average $131,000 more than their approved budgets during the study period. During that, same period social service departments tended to spend on average $708,000 more than their annual approved budgets.

5.4 Analytical Method: Multiple Linear Regression

The goal of the study was to determine if the Great Recession caused a shift in the county funding priorities regarding the provision of social services. The research examined the changes that occurred in Dallas County's budget allocation and actual expenditures as a result of the Great Recession. The two dependent variables of this study were the proportional change in annual budget allocation and actual expenditures to departments with appointed directors. Each regression model has a different dependent variable. The two independent variables of this study: 1. pre-recession, post-recession, and 2. social service and non-social service departments. Additionally, the explanatory analysis includes control variables that include attributes of each department (type of department size, administrative department head characteristics) and socioeconomic characteristics of the county.

This study utilized multiple regression as the analytical tool to test the hypotheses. The multiple linear regression model assumes that the relationship between the dependent variable (Y) and the independent variables (X_1, X_2 X_3…) is linear, if an unobserved variable (ai) is included to address random error. Each variable has a resulting regression coefficient (B), which represents the weighted significance for that specific variable. They symbol is used to depict the regression constant. According to the Wooldridge (2006) fixed effect factors such as gender, race, age, experience are difficult to control but fixed between time periods of short duration, he called unobserved or fixed effects. The fixed effects are assumed to remain constant overtime. $Y_{it}= B_{0 +} d_2+ B_1 X_{it+} a_i+ u_{it}$, $t_{it} = 1,2$

Y_{it}, i denotes the department and t denotes the time period. The variable d_2 is a dummy variable that equals zero when t=1 and one when t=2. The three dependent variables models are as shown in the following equation:

BUDCHANGE= B_0 + B_1 (Social)+ B_2 (Post_Reces)+B_3(Staff)+B_4 (Gender)+B_5(RaceB) +B_6(RaceH)+ B_7(directexp)+B_8(Masters)+B_9(JD)+B_{10}(PHDCPAMD)+ B_{11}(LagExp)+B_{12}(PerchgInc)

EXPCHANGE= B_0 + B_1 (Social)+ B_2 (Post_Reces)+B_3(Staff)+B_4 (Gender)+B_5(RaceB) +B_6(RaceH)+ B_7(directexp)+B_8(Masters)+B_9(JD)+B_{10}(PHDCPAMD)+ B_{11}(LagExp)+B_{12}(PerchgInc)

DIFFBUDEXPCHANGE= B_0 + B_1 (Social)+ B_2 (Post_Reces)+B_3(Staff)+B_4 (Gender)+B_5(RaceB) +B_6(RaceH)+ B_7(directexp)+B_8(Masters)+B_9(JD)+B_{10}(PHDCPAMD)+ B_{11}(LagExp)+B_{12}(PerchgInc)+ $B_{13\text{-}42}$ (Iddepart)+ B_{43} (lagbud) + B_{44} (Perching)

Regression Results and Analysis

The regression for all the following three models used dollar amounts instead of the proportional change because the regression models for proportional change was not a good fit. The models contain lag of budget dependent variable in the model. In addition, the models control for size of the departments and size of the staff.

A. Budget Change Model

The budget change model is for the period 2006-2017. The results are shown of the first regression model in Table 5.8.

Table 5.8 Dependent Variable $BUDGETCHANGE_1$, Change in Appointed Director Budgets Between 2006-2017

MODEL SUMMARY				
Model		**R^2**	**Adjusted R-Square**	**Std. Error of the Estimate**
Budget Change		.4406	.3436	3513.1

ANOVA (Analysis of Variance)					
Source	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig**
Regression	2.6347e+09	47	56057523.1	4.54	.0000
Residual	3.3447e+09	271	12342218.5		
Total	5.797E9	319	18803285.5		

Coefficients				
Model Budget Change	**Coefficients**	**Std. Err.**	**t**	**Sig.**
Social	7089.473	2199.035	3.22	.001
Post_Recession	-883.5875	991.0808	-0.89	0.373
Staff	-99.35572	35.85045	-2.77	0.006
Gender	2570.847	932.7094	2.76	0.006
RaceB	-3547.068	963.7145	-3.68	0.000
RaceH	6101.708	1798.971	3.39	0.001
Directexp	18.36765	57.8461	.32	.751
Masters	396.3497	1631.441	0.24	0.808
JD	-1824.222	3048.683	-0.60	0.550
PHDCPAMD	4155.212	2023.897	2.05	0.041
LagBudg	.8732026	.1165445	7.49	0.000
PercchInc	372.6069	168.962	2.21	0.028

See Appendix G for the completed data output of this model

The results of the regression explain the variation of the proportion of budget change in department budgets during the periods from 2006 – 2017. The computed R^2 shows that there is 44% variation of change in this model. The purpose of this model is to determine if there is a relationship between budget allocations for the twenty-nine Appointed Directors departments.

The variable Social in Table 5.8 is a dummy variable that equals one for departments that are social service departments and zero otherwise. The estimated coefficient suggests that social service departments had budget changes $7,089,000 greater than non-social service departments, ceteris paribus, during the period of study. This is significant at the p=0001 level. This rejects the null hypothesis that social service and non-social service departments experienced the same change in budgets over the eleven-year period. The change in social service departments' budgets exceeded the change in non-social service departments by approximately $7,000,000.

Post_Recession, the second variable is also a dummy variable. Post_Recession equal one for years after 2008 and equals zero for years from 2006 through 2008. This coefficient is not statistically significant and indicates that the change in departmental budgets did not differ from before and after recession. The negative sign does indicate that the changes were smaller after the recession than before. This is the sign we expect but it is not statistically significant.

The size of the department, as measured by the number of staff members of the department decreased the size of the change of the department's budget. While statistically

significant, it is not substantively sizable. Gender, zero for men and one for women, indicates that women managers procure larger changes in budgets than men managers. The impact of race of the manager is mixed between Blacks and Hispanics. Black managers get smaller budget changes than white managers but Hispanic manager procure larger budget changes than their white counterparts. The education level of managers, comparing all advanced higher education levels to a bachelor's degree, are significant only for the manager who has PHDCPAMD rather than a bachelor's degree. Managers with PHDCPAMD procure budget changes larger than the counterparts who have bachelors.

The coefficient lag budget results show that the expenditure change for non-social service budgets in relationship to social service budget is relatively small. Also, the results demonstrate that the practice followed that used previous year budgets to establish benchmark is effective. This coefficient was statistically significant at p value level of .05.

B. Expense Change Model

In Table 5.9, the results of the regression explain the variation of the proportion of expense change in departments expenditures during the periods from 2006 – 2017. The computed R^2 shows that there is 31% variation of change in this model. The purpose of this model is to determine if there is a relationship between budget expenditures for the twenty-nine Appointed Directors departments.

Table 5.9 Dependent Variable $EXPENSECHANGE_1$, Change in Appointed Director Budgets Between 2006-2017

MODEL SUMMARY				
Model		**R^2**	**Adjusted R-Square**	**Std. Error of the Estimate**
Expense Change		.3069	.1866	2519.6

ANOVA (Analysis of Variance)					
MODEL	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig**
Regression	761626080	47	16204810.2	2.55	.0000
Residual	1.7204e+09	271	6348438.64		
Total	2.4821e+09	318	78051197.96		

Coefficients				
Model **Expense Change**	**Coefficients**	**Std. Err.**	**t**	**Sig.**
Social	-1007.331	1560.029	-0.65	0.519
Post_Recession	-1226.128	713.2314	-1.72	0.087
Staff	11.41871	25.04421	0.46	0.649
Gender	1785.759	663.5328	2.69	0.008
RaceB	-2227.909	690.3839	-3.23	0.001
RaceH	6526.465	1239.78	5.26	0.000
Directexp	4.156053	41.501	0.10	0.920
Masters	4845.068	1185.083	4.09	0.000
JD	-9350.363	2065.38	-4.53	0.000
PHDCPAMD	-1788.644	1465.565	-1.22	0.223
LagBudg	-.5162113	.0977547	-5.288	0.000
PercchInc	185.5508	121.2807	1.53	0.127

See Appendix G for the completed data output of this model

The variable Social in Table 5.9 is a dummy variable that equals one for departments that are social service departments and zero otherwise. This coefficient is not statistically significant and indicates that the change in social service departments and non-social service expenditures did not differ from. The negative sign does indicate that the social service department had less expenditure change than non-social service departments over the eleven-year study period.

Again, the variable Post_Recession is the second dummy variable in the expense model. Post_Recession equal one for years after 2008 and equals zero for years from 2006 through 2008. This coefficient is statistically significant at the p= .08 level. This rejects the null hypothesis signifies at the social service and non-social service departments experienced the same change in expenditures during the research period 2006-2017.

The output of this model for the coefficients Gender, RaceB, RaceH, and education level of the managers, PHDCPAMD is no different than Table 5.8. All coefficients are statistically significant.

C. Variance of Budget/Expense Change Model

The results of the regression explain the variation of the difference of budge and expense changes in departments during the periods from 2006 – 2017. The R^2 shows that there is 64% variation of change in this model. The purpose of this model is to determine if there is a relationship between budget allocations and expenditures each year by the twenty-nine departments.

Table 5.10 Dependent Variable BUDGET/EXPENSE CHANGE DIFFERENCE$_1$, Change in Appointed Director Budgets Between 2006-2017

MODEL SUMMARY				
Model		**R^2**	**Adjusted R-Square**	**Std. Error of the Estimate**
BudgetExpVar		.6359	.5727	2780.2

ANOVA (Analysis of Variance)					
MODEL	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig**
Regression	3.6580e+09	47	77830414.8	10.07	.0000
Residual	2.0947e+09	271	7729461.97		
Total	5.7527e+09	318	18090294.6		

Coefficients				
Model **BChange/ExpeChg**	**Coefficients**	**Std. Err.**	**t**	**Sig.**
Social	961.8418	1671.043	.58	.565
Post_Recession	-49.07669	784.9184	-.06	.950
Staff	-24.28863	27.92136	-0.87	.385
Gender	2350.571	730.8679	3.22	.001
RaceB	-1999.371	761.2854	-2.63	.009
RaceH	4535.674	1401.734	3.24	.001
Directexp	8.510014	45.78306	.19	.853
Masters	1071.744	1237.56	.57	.387
JD	-6009.251	2239.992	-2.68	.008
PHDCPAMD	430.0078	1559.293	.28	.783
LagBudg	.7642905	.0832455	9.18	.0000
PercchInc	182.7399	133.8295	1.37	.173

See Appendix G for the completed data output of this model

Also, in Table 5.10 the variable Social is a dummy variable that equals one for departments that are social service departments and zero otherwise. The results show that there were $961,000 greater variance between budget allocation and expenditures for social service departments in than non-social service departments. This coefficient is not statistically significant.

Post_Recession is also a dummy variable in this model. Post_Recession equals one for year after 2008 and equals zero for years from 2006 through 2008. This coefficient is not

statistically significant and indicates that the variance between budget allocations and expenditures slightly did not differ from before and after recession. The negative sign signifies that the changes were smaller after the recession than before.

The output of this model for the coefficients Gender, RaceB, and RaceH, is no different than Table 5.8 or Table 5.9. All coefficients are statistically significant. The impact of the education level of the manager, comparing all advanced higher education levels to Bachelor's degree and PHDCPAMD, are significant only for the manager who has a JD degree rather than a Bachelor's or PHDCPAMD. Managers with JD implies greater variance between the difference of budget allocation and expenditures.

5.5 Summary

This chapter provided the data output summary for the three statistical models of this research. The primary goal of the study was to determine if the Great Recession caused a shift in the county funding priorities regarding the provision of social services. The research examined the changes that occurred in Dallas County's budget allocation and actual expenditures as a result of the Great Recession.

The results from the paired t-test indicated that the overall mean average for the entire study period for non-human services departments on average experienced $199,000 increase their

approved budgets, while the human services departments on average experienced an increase of $502,000 in their budgets during the same period. This can be attributed to the periods from 2015 – 2017 where the data demonstrate (Table 5.2) the difference in the budget appropriations between non-social services departments budget in comparison to social service programs was consistently less during this period.

There were many interesting findings within the regression analysis that has implications for future studies on county government organizations and the budgeting process as well as understanding the relationship between social planning and budgeting. The coefficient lag budget results show that the budget change for non-social service budgets in relationship to social service budget is relatively small during this period. The results demonstrate that the previous year budgets establish the baseline for the current year's budgets, which is the actual practice of the Budget Office. The findings indicated that lag budget variable was significant for all three of the regression models at p- value level of .05.

CHAPTER SIX

CONCLUSION AND FUTURE RESEARCH

6.1 Conclusion

Smart (1993) asserts that the relationship between planning and budgeting is complicated because of the external factors affecting the process that is outside the controls of the institution to prioritize and administer a balanced budget, i.e., like the 2008 recession. This research focused on the budget process at the bureaucratic level within the context of principal-agent theory while exploring how planning, i.e., social planning is integrated within the budget process by examining the proportional change of budget allocations and expenditures of department divisions with social service programs and those without social service programs. Primarily, the research was intended to demonstrate the connection between social planning and budgeting by applying the principal-agent theory during an economic crisis in the second largest urban county in Texas.

The purpose of this research was to examine the relationships throughout the budget process between the Budget Office and various Appointed Department Directors to determine how a Budget Office prepares and recommends budgets annually during an economic downturn. Within the county entity and explore how those decisions affect those departments with social programs. This research set out to answer the question how Dallas County responded to the

Great Depression of 2008. The study explored relationships of three general areas: planning, budgeting, and county governments (application of principal agent theory). Additionally, this study provided detailed analysis regarding a sizeable urban county government balancing budget process when setting a tax rate to adopt a balanced budget during fiscal stress.

As mentioned in the introduction of this research a key purpose of this study was to determine if social planning was a priority of this county during the aftermath of the recession. Within in the context of the data collected statistically departments with social service were not impacted negatively during the recession. The budget change model demonstrated that the estimated coefficient suggested that social service departments had budget changes $7,089,000 greater (positive) than non-social service departments, ceteris paribus, during the period of study. There was significance at the p=.0001 level.

6.3 Future Research

It was not the scope of this study to contact the county directly to get more in-depth information on the budget process through the study period. Also, the type of responses used by Dallas County was not a part of this study period. It would be very useful to conduct a survey using an appropriate questionnaire tool to gather additional information as well explore the budget strategies used by the county during the fiscal stress.

Due to my position of working in the county and in the Budget Office during the period

of the study a questionnaire may not have yielded the most reliable responses. Therefore, the use of secondary provided reliable and valid results. The lessons learned from this study will provide insight into the structural and management challenges that confront county governments.

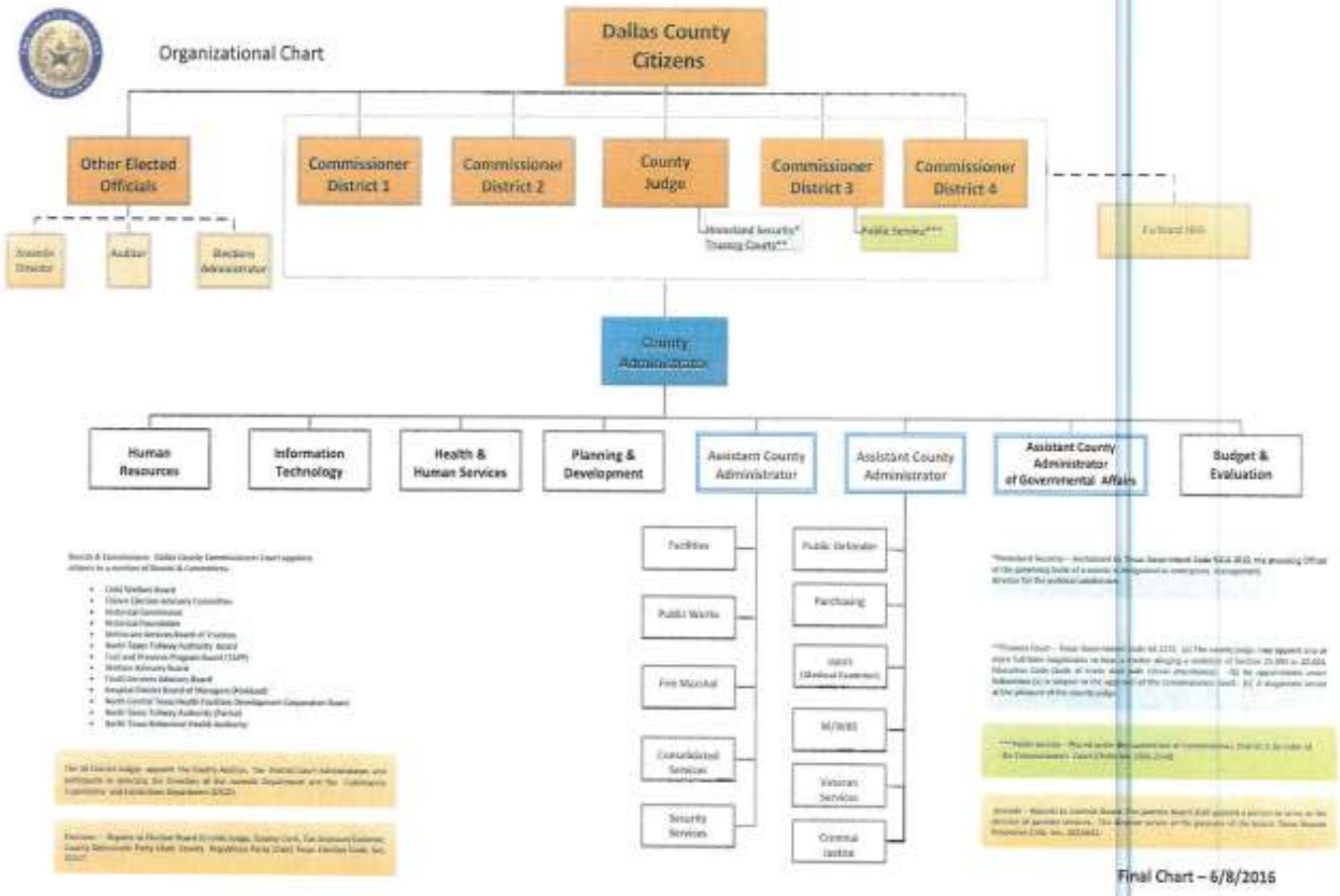
The research did not focus on the types of budget strategies but instead, focused on the percent changes in the budgets with social implications. Social budgeting is an emerging area of study. Social budgeting takes into cosideration various inputs, i.e., diversity communities, locastion, and social realities. This research scratched the service of the link between budgeting, planning, and community.

Budget decisions result in policy. All policies have unintended consequences. These policies may take the form of laws, regulations, incentives, media campaigns, programs or services, information - a wide range of possibilities (Gore, 2004). There are so many opportunities to explore regarding county government. Further research endeavors include the following:

- Explore the evolving role of county managers in the budget process. Also, pursue the roles of managers within the politics/administration dichotomy.
- Explore the budget strategies used by the county during fiscal stress
- Explore Elected Officials in the budget involvement process in comparison to Appointed Directors.
- Develop a new model of principal/agent theory from a theoretical perspective for county government.
- Resource allocation and competing needs in setting local policy and how those policies impact the community.
- Develop the emerging strategies of social budgeting throughout the budget process.
- Explore the impact of unfunded and funded mandates imposed by state government on county entities, i.e., revenue caps for property taxes.

Appendix A

Appointed Directors Organization Chart



Final Chart – 6/8/2016

Appendix B

Dallas County Departments (Appointed Directors)

Department	Annual Budget FY2017	Total Staff	Social Service Function
*Commissioners Court Administration	1,808	12	Manages – North Texas Behavioral Health Contract
County Auditor	8,038	97	None
Office of Budget and Administration	562	5	Yes – Manages the Community Health Contracts
**Community Health Contracts	5,622	0	Managed by the Office of Budget and Evaluation
Planning & Development	358	15	Manages Community Development Block Grants – Parks and Open Space – Household Hazardous Waste
Purchasing	1,302	15	None
IT -Data Services	38,753	102	None
Human Resource/Civil Service	5,505	24	None
Assistant Commissioners Court Administration - Operational Services	16,819	151	None
Domestic Relation Office	2,898	36	None
District Court Administration	195	2	None
Texas AgriLife	315	7	Yes- provide informal education to citizens of Dallas County in subjects related to agriculture, natural resources, horticulture, family and consumer science, community development, and youth development
Elections	4,405	44	Civic – Elections -presentation in Community on voter registration -
Public Works	5,807	69	Yes -Roads
Public Defender	13,403	115	None
Veterans Services	371	5	Yes- assist county residents and family members who served in the Armed Forces of the United States in accessing entitlements provided to veterans and administered by the Department of Veterans Affairs
Criminal Justice – Jail Diversion	1,980	24	Yes
Institute of Forensic Sciences	15,027	123	None

Department	Annual Budget FY2017	Total Staff	Social Service Function
Office of Security Management	4,197	51	Yes – responsible for protecting lives environment and property of citizens of Dallas County through emergencies
Health and Human Services	15,644	157	Yes – Public Health
**Child Protective Services	2,864	0	Contract – managed by OBE
**Mental Health	8,471	0	Contract – managed by OBE
Unincorporated Services	380	2	Yes – facilitate and monitor activities through the administration of applicable regulations and services within unincorporated areas of Dallas County
Fire Marshal	1,072	5	Yes – investigates causes of fires, inspect buildings for fire safety, educate citizens in fire prevention and coordinate emergency management planning
Small Business Enterprises (SBE)	250	4	Community Outreach to increase – diversity in the procurement process
Juvenile	53,272	733	Provide a variety of services to juvenile offenders and their families
Jury/Grand Jury	2,497	8	None
Public Service Program	1,367	25	Yes- makes community service available as a court-ordered sanction

*Budget includes two – Appointed Directors - Assistant County Administrators that do not have direct supervision over a budget.

** OBE manages a contract for these services – functions are a part of the annual budget process funding decisions. Departmental Budget represents spending in $1,000. Staffing and funding do not include grant funding.

Appendix C

Dallas County Tax Rate

Year	Property Tax Rate	Effective Rate	Effective Maintenance & Operations Tax Rate	Rollback Tax Rate	Debt Rate
2007	.213900/100	.200828/100	.254000/100	.223446/100	.022118/100
2008	.228100/100	.228100/100	.209030/100	.246823/100	.022938/100
2009	.228100/100	.242211/100	.213062/100	.264065/100	.015871/100
2010	.243100/100	.236996/100	.232306/100	.275794/100	.019839/100
2011	.243100/100	.250748/100	.22930/100	.275794/100	.013800/100
2012	.243100/100	.242984/100	.22800/100	.263829/100	.015100/100
2013	.243100/100	.242984/100	.229079/100	.263829/100	.016424/100
2014	.243100/100	.236226/100	.214240/100	.258993/100	.019850/100
2015	.243100/100	.231328/100	.213597/100	.249683/100	.017500/100
2016	.243100/100	.226385/100	.211884/100	.249665/100	.020110/100
2017	.243100/100	.231671/100	.212127/100	.247157/100	.017100/100

Data Source – Dallas County Office of Budget and Evaluation – 2007-2017 – Notice of Public Hearing and Effective Tax Rate Worksheets

Appendix D

Dallas County Definition

Definition of Terms

Principal-Agent Theory: The principal-agent theory is the relationships within the organization between those providing services and those providing the resources to fund the services.

Budget Process: The budget process begins in January with the development of the Budget Manual through September with the setting of the tax rate.

Baseline Budget: The baseline budget contains revenue estimates developed by the County Auditor and provided to the Budget Office in June.

County Auditor: The 39 District Judges appoint the County Auditor and the District.

County Government: Counties are one of America's oldest forms of government, dating back to 1634 when the first county governments (shires) were established in Virginia. The organization and structure of today's 3,069 county governments are chartered under state constitutions or laws and are tailored to fit the needs and characteristics of states and local areas (NACO, 2014).

Dallas County: Dallas County is the second most populous county in Texas after Harris County that has been established over 169 years. Dallas County faces its own set of challenges that are unique within the 26-member cities. The County seat is Dallas, a third largest

populous city in Texas and the ninth largest city in the United States. Dallas County has limitations on revenue funding mechanisms that are mandated by state legislation.

Appointed Directors: There are twenty-nine Appointed Directors that reported directly to County Administrator and are responsible for providing a service i.e., Administration, Financial, Information Technology, Public Defender, Facilities, Criminal Justice, Planning, Purchasing, Health and Human Services, Juvenile, Elections, Veteran Services, Public Works, Budget Office and County Auditor. For this research twenty-nine appointed directors that directly manage a budget was used for this study.

Department: A Dallas County department is a major division carrying out an operational function.

Elected Officials: The elected officials at Dallas County are elected at large and responsible for managing departments. Elected officials include County and District Clerks, Tax Assessor-Collector, Sheriff, District Attorney, Treasurer, and five Constables. All trial court judges (District Judges, County Court Judges, and Justices of the Peace) are elected at large as well.

Dallas County Appraisal District: Dallas Central Appraisal District (DCAD) is responsible for appraising property for ad valorem property tax assessment on behalf of the 61 local governing bodies in Dallas County. The appraisal district is a political subdivision of the State of Texas. Our duties include establishing and maintaining accurate property values for all real and business personal property. The Texas Property Tax Code is the primary source of law and guidance for the Texas property tax system. (DCAD web page)

Parkland Hospital: The Dallas County Hospital District operates the 714-bed Parkland Hospital, nine –community-based comprehensive health centers called Community Oriented Primary Care (COPC) Clinics, and other specialty health facilities. Dallas County Commissioners Court sets the Dallas County Hospital District tax rate annually.

Property Tax Rate: The property tax is the largest single source of revenue for the County, comprising approximately 57% of all revenues. The amount received by the County is the product of a tax rate established by the Commissioners Court and the tax base provided for all jurisdictions within the County by the Dallas Central Appraisal District. Because the tax base (i.e., the taxable value of all real estate and business inventory in the County, less certain exemptions) rises and falls as a result of economic factors, State law requires that each public body calculates and discloses the tax rate change that compensates for the base change in a way that the only additional operating revenue available to the government is as a result of new construction which results in the "effective rate". Increases above the effective rate - and not the prior year rate - are deemed to be the "true" tax increase.

Property Tax Rate Calculation: property tax amount= (rate) x (taxable value of your property)/100

Effective Tax Rate: The effective tax rate is the total tax rate needed to raise the same amount of property tax revenue for Dallas County from the same properties in both the current tax year e.g., (2013 tax year) and the following tax year (2014 tax year).

Rollback Tax Rate: The rollback tax rate is the highest tax rate that Dallas County may adopt before voters are entitled to petition for an election to limit the rate that may be approved to the rollback rate. Also, the rollback tax rate is referred to as the maximum tax rate.

General Fund: The main operating fund for Dallas County.

Fiscal Year: -Sec 70-51 Defines Fiscal Year -Allocating The county budgets resources on a fiscal year which begins October 1 and ends on the following September 30. (Admin. Policy Manual, § J (3.00)) State law references Fiscal year, V.T.C.A., Local Government Code § 112.010.

Judicial Administration: Dallas County provides facilities and support services for the operation of District Courts, County Courts, and Justice of the Peace Courts. Funding is primarily from the General Fund.

Management Services: The Management Services function of the County comprises both Elected Official and Appointed Directors. The primary function is providing services to Dallas County citizens. The largest department is the Tax Office.

Law Enforcement: The Law Enforcement services are led by the Sheriff (elected official) who is responsible for the four County jails and various related activities including a central kitchen, laundry, Bond Desk, and print shop.

Health and Social Services: This function has broad responsibilities for public health, social services, mental health services, and acute care for indigents, which is disposed through a combination of intergovernmental arrangements and County staff in the Health and Human Services Department.

Community Services: Dallas County provides a variety of services in the County. Departments that fall under this function include the Elections Department, Veterans Services, and Texas AgriLife.

Commissioners Court: The Commissioners Court of Dallas County serves as the governing body of Dallas County. The Commissioners Court sets the tax rate for Dallas County and the Hospital District. The Court serves as both the legislative and executive branch of government, with budget authority over most of the county departments including those headed by an elected official.

Commissioners: The Commissioners consist of four members each elected from their districts. Each Commissioner supervises a Road and Bridge District.

County Judge: The County Judge is elected at large. The highest-ranking office of the County.

Special Inventory Tax Fund (VIT): The County receives from the State 5% commission on sales taxes for new vehicles sold in the County except rental cars-computed using the total sales taxes from the prior calendar year. It is credited to the Road and Bridge Fund 105 and General Fund 120 revenue

Social program: Social programs are those departments that have funding specifically for programs that have a direct impact to benefit the community.

APPENDIX E

Model Descriptions

MODEL 1 – This model estimates the impact of the Great Recession on Dallas County approved budgets from FY2006-FY2017 controlling for factors expected to affect budgets.

- The dependent variable in this model is the change in the approved department budget, DELDEPTBUD
- Independent variables - Pre-and post- recession (varies from 0 to 1 for each of the two periods), 0 represent the years that precede and coincide with the recession (2006-2007) 1 represent the years after the recession. the (2008-2017).
- Independent variables – departments with social services function versus departments without social service function.
- Control variables -

MODEL 1: During the Great Recession, the proportional change annually budgeted allocations to department with social service programs to department divisions without social service programs.		
Dependent Variable	**Independent Variables**	**Why Is this variable included?**
Hypothesis 1a	Pre- and Post-Recession	This variable demonstrates the change between pre and post-recession years of budgets during the years 2006-2017
Hypothesis 1b	Social – Non-Social Program	This variable differentiates between those departments with social programs versus non-social programs during the study period. This one is included to demonstrate the changes in the approved budgets of the two types of departments.
	Control Variables	
Proportional Change -Approved Budget from 2006-2017	Department Directors Gender Male/Female	Gender of the department head may influence the proportional change in the approved budget – Specifically -differences in male and female and their behavior in relationship to making preparing and decision making tend to be a difference, i.e., males tend to make more risk while female are more risk averse.
	Departmental Director Characteristics Race , Educational Level and Previous County Experience	All of the background characteristics of the department heads focus is on the life experience and exposure of the individuals. The exposure and experience of an individual may influence decision-making when it comes to budgeting decisions and spending.
	Size of Department – based on department size	Using these variables allows me to differentiate changes between larger and smaller departments budget allocation during the research period.
	Economic Predictors	

	Unemployment Rate – Avg.	Social costs to local government when unemployment persist over time can place significant costs on local government
	Unemployment by Education Attainment - categories	Looking at the rate based on education attainment provide data how prolonged inflation can impact the local government economy as well as the individuals mental state – negative impact on local businesses – and increase need for public assistance
	Poverty Rate	Looking at the poverty rate provides an overall understanding of the need in Dallas County. This variable helps in exploring if there is a change over the research period of the poverty rate – this variable helps in demonstrating the social costs to the county when there is an increase/decrease in the poverty rate, which means there is a need for social service assistance from local government – when the changes occur.
	Certified Revenue	The certified revenue is the projected revenue the entity collects during the research period. This number is the maximum amount developing a budget for the Budget Office. Checks and balance in county government. Auditor certifies revenue the Budget Office develops the projected budget. Hoping to see if the certified revenue affected social service appropriations and those social service program actual expenditures during the research period.
	Population	Population growth over the research period is important because the population can have positive or negative impact to the economy. Limited resources put pressure on the existing economy. Research period looks at prior year and years during the recession. Hoping to see if there is a correlation with an increase/decrease in the approve budgets and actual expenditures.

MODEL 2 – This model estimates the impact of the Great Recession on Dallas County actual expenditures from FY2006-FY2017 controlling for factors expected to affect expenditures.

- The dependent variable in this model is the change in the actual expenditures of the department's budget, DELDEPTACTUALEXPENDITURES
- Independent variables - Pre-and post- recession (varies from 0 to 1 for each of the two periods), 0 represent the year that precedes the recession (2006-2007) 1 represent the (2008-2017).
- Independent variables – departments with social services function versus departments without social service function

MODEL 2: During the Great Recession, the proportional change in actual annual expenditures of department divisions with social service programs to departments without social service programs.		
Dependent Variable	**Independent Variables**	**Why Is this variable included?**
1a	Pre- and Post-Recession	This variable demonstrates the change between pre and post-recession years of annual expenditures during the years 2006-2017
1b	Social – Non-Social Program	This variable differentiates between those departments with social programs versus non-social programs during the study period. This one is included to demonstrate the changes in the approved budgets of the two types of departments.
	CONTROL VARIABLES	
Proportional Change –Actual Expenditures from 2006-2017	Department Directors Gender Male/Female	Gender of the department head may influence the proportional change in the actual expenditures – Specifically -differences in male and female and their behavior in relationship to decision making tend to be a difference, i.e., males tend to make more risk while female are more risk averse.
	Departmental Director Characteristics Race ,Educational Level , and Previous County Experience	All of the background characteristics – focus on the life experience and exposure of the individual and how it may influence decision- making when it comes to social services expenditures
	Size of Department - based on staff size	Using these variables allows me to differentiate changes between larger and smaller departments during the research period. Hoping to see whether there was a greater proportional change with smaller departments in comparison to larger departments actual expenditures
	Social – Non-Social Program	This variable differentiates between those departments with social programs versus non-social programs during the study period. This one is included to demonstrate the changes in the annual expenditures of the two types of departments. During the research period hoping to see if there were proportional changes year to year in the expenditures. Especially where their

		significant changes from 2006 – 2007 and those years immediately following recession 2009-2010
	Economic Predictors	
	Unemployment Rate – Avg.	Social costs to local government when unemployment persist over time can place significant costs on local government. During research period was there an increase of actual expenditures for those departments providing social services.
	Unemployment by Education Attainment - categories	Actual expenditures provide general data for the programs that saw an increase or decrease in the need for program services. Looking at the rate based on education attainment provide data how prolonged inflation can impact the local government economy as well as the individuals mental state – negative impact on local businesses – and increase need for public assistance
	Poverty Rate	Looking at the poverty rate provides an overall understanding of the need in Dallas County. This variable helps in exploring if there is a change over the research period of the poverty rate – this variable demonstrates the social costs to the county when there is an increase/decrease in the poverty rate, which means there is a need for social service assistance from local government – when the changes occur.
	Certified Revenue	The certified revenue is the projected revenue the entity collects during the research period. This number is the maximum amount developing a budget for the Budget Office. Checks and balance in county government. Auditor certifies revenue the Budget Office develops the projected budget. Hoping to see if the certified revenue affected social service appropriations and those social service program actual expenditures during the research period.
	Population	Population growth over the research period is important because the population can have positive or negative impact to the economy. Limited resources put pressure on the existing economy. Research period looks at prior year and years during the recession. Hoping to see if there is a correlation with an increase/decrease in the approve budgets and actual expenditures.

Model 3 - This model estimates the impact of the Great Recession on Dallas County on the variance between approved budget and actual expenditures from FY2006-FY2017 controlling for factors expected to affect budgets and expenditures.

MODEL 3: During the Great Recession, there was a variance between the approved budget and actual annual expenditures of department divisions with social service programs to department divisions without social service programs as their primary function.		
Dependent Variable	**Independent Variables**	**Why Is this variable included?**
1a	Pre- and Post-Recession	This variable demonstrates the change between pre and post-recession years of annual expenditures during the years 2006-2017
1b	Social – Non-Social Program	This variable differentiates between those departments with social programs versus non-social programs during the study period. This one is included to demonstrate the changes in the approved budgets of the two types of departments.
	CONTROL VARIABLES	
Variance between Approved Budget – Actual Expenditures from 2006-2017	Department Directors Gender Male/Female	Gender of the department head may influence the proportional change in the actual expenditures – Specifically -differences in male and female and their behavior in relationship to decision making tend to be a difference, i.e., males tend to make more risk while female are more risk averse.
	Departmental Director Characteristics • Race • Educational Level • Previous County Experience	All of the background characteristics – focus on the life experience and exposure of the individual and how it may influence decision- making when it comes to social services expenditures
	Size of Department - based on staff size	Using these variables allows me to differentiate changes between larger and smaller departments during the research period. Hoping to see whether there was a greater proportional change with smaller departments in comparison to larger departments actual expenditures
	Social – Non-Social Program	This variable differentiates between those departments with social programs versus non-social programs during the study period. This one is included to demonstrate the changes in the annual expenditures of the two types of departments. During the research period hoping to see if there were proportional changes year to year in the expenditures. Especially where their significant changes from 2006 – 2007 and those years immediately following recession 2009-2010

	Economic Predictors	
	Unemployment Rate – Avg.	Social costs to local government when unemployment persist over time can place significant costs on local government. During research period was there an increase of actual expenditures for those departments providing social services.
	Unemployment by Education Attainment - categories	Actual expenditures provide general data for the programs that saw an increase or decrease in the need for program services. Looking at the rate based on education attainment provide data how prolonged inflation can impact the local government economy as well as the individuals mental state – negative impact on local businesses – and increase need for public assistance
	Poverty Rate	Looking at the poverty rate provides an overall understanding of the need in Dallas County. This variable helps to explore if there is a change over the research period of the poverty rate – this variable demonstrates the social costs to the county when there is an increase/decrease in the poverty rate, which means there is a need for social service assistance from local government – when the changes occur.
	Certified Revenue	The certified revenue is the projected revenue the entity collects during the research period. This number is the maximum amount developing a budget for the Budget Office. Checks and balance in county government. Auditor certifies revenue the Budget Office develops the projected budget. Hoping to see if the certified revenue affected social service appropriations and those social service program actual expenditures during the research period.
	Population	Population growth over the research period is important because the population can have positive or negative impact to the economy. Limited resources put pressure on the existing economy. Research period looks at prior year and years during the recession. Hoping to see if there is a correlation with an increase/decrease in the approve budgets and actual expenditures.

APPENDIX F

PAIRED T-TEST - STASTICAL ANALYSIS DATA OUTPUT

MODEL 1 – BUDGET CHANGE

MODEL 2 – EXPENDITURE CHANGE

MODEL 3 – DIFFERENCE BETWEEN BUDGET/EXPENSE CHANGE

MODEL 1a – BUDGET CHANGE

Comparison of Budget change between Social dept. and non-social depart, by year.

-> Year = 2007

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	**11**	**673.5502**	**347.1697**	**1151.432**	**-99.99219**	**1447.092**
1	**18**	**-183.9536**	**273.015**	**1158.305**	**-759.965**	**392.0578**
combined	**29**	**141.3064**	**224.9432**	**1211.356**	**-319.4688**	**602.0817**
diff		**857.5038**	**442.3189**		**-50.05971**	**1765.067**

diff = mean(**0**) - mean(**1**) t = **1.9387**

Ho: diff = 0 degrees of freedom = **27**

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = **0.9685** Pr(|T| > |t|) = **0.0631** Pr(T > t) = **0.0315**

-> Year = 2008

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	334.3552	253.9048	842.1069	-231.3799	900.0903
1	18	138.1902	210.9041	894.7904	-306.7786	583.159
combined	29	212.5976	160.6836	865.3079	-116.5479	541.7431
diff		196.165	335.1165		-491.4372	883.7672

diff = mean(0) - mean(1) t = 0.5854
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.7184 Pr(|T| > |t|) = 0.5632 Pr(T > t) = 0.2816

-> Year = 2009

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	441.3982	339.4197	1125.728	-314.876	1197.672
1	18	430.5922	329.1107	1396.299	-263.7707	1124.955
combined	29	434.6911	237.5404	1279.194	-51.88847	921.2706
diff		10.80599	498.5357		-1012.105	1033.717

diff = mean(0) - mean(1) t = 0.0217
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.5086 Pr(|T| > |t|) = 0.9829 Pr(T > t) = 0.4914

-> Year = 2010

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	-459.4705	739.8703	2453.872	-2108.004	1189.063
1	18	-877.419	421.1114	1786.624	-1765.886	11.04846
combined	29	-718.8868	377.4297	2032.521	-1492.017	54.24297
diff		417.9485	788.0397		-1198.975	2034.872

diff = mean(0) - mean(1) t = 0.5304
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.6999 Pr(|T| > |t|) = 0.6002 Pr(T > t) = 0.3001

-> Year = 2011

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	199.4668	342.4696	1135.843	-563.6031	962.5367
1	18	-417.2285	165.6335	702.7236	-766.6847	-67.77226
combined	29	-183.3096	171.5367	923.7534	-534.6866	168.0674
diff		616.6953	339.889		-80.69928	1314.09

diff = mean(0) - mean(1) t = 1.8144
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9596 Pr(|T| > |t|) = 0.0807 Pr(T > t) = 0.0404

-> Year = 2012

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	863.9823	670.244	2222.948	-629.4144	2357.379
1	18	-57.32419	157.1406	666.6911	-388.8619	274.2135
combined	29	292.1369	278.0261	1497.216	-277.3737	861.6475
diff		921.3065	555.9193		-219.3457	2061.959

diff = mean(0) - mean(1) t = 1.6573
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9455 Pr(|T| > |t|) = 0.1090 Pr(T > t) = 0.0545

-> Year = 2013

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	-543.7692	428.7327	1421.945	-1499.045	411.5067
1	18	195.3043	224.9233	954.2689	-279.2424	669.8511
combined	29	-85.0339	220.3597	1186.673	-536.4202	366.3524
diff		-739.0735	440.0667		-1642.016	163.8688

diff = mean(0) - mean(1) t = -1.6795
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.0523 Pr(|T| > |t|) = 0.1046 Pr(T > t) = 0.9477

-> Year = 2014

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	-606.297	1367.023	4533.904	-3652.215	2439.621
1	18	78.17425	116.2748	493.3123	-167.1442	323.4927
combined	29	-181.4528	512.0454	2757.449	-1230.33	867.4246
diff		-684.4713	1066.556		-2872.863	1503.921

diff = mean(0) - mean(1) t = -0.6418
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.2632 Pr(|T| > |t|) = 0.5264 Pr(T > t) = 0.7368

-> Year = 2015

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	-21.29948	405.1542	1343.745	-924.0394	881.4404
1	18	653.4606	293.3027	1244.378	34.64591	1272.275
combined	29	397.5171	241.8352	1302.322	-97.85977	892.894
diff		-674.7601	490.6605		-1681.512	331.9922

diff = mean(0) - mean(1) t = -1.3752
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.0902 Pr(|T| > |t|) = 0.1804 Pr(T > t) = 0.9098

-> Year = 2016

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
0	11	659.9862	469.1312	1555.932	-385.3032	1705.276
1	18	1538.924	1333.691	5658.37	-1274.917	4352.765
combined	29	1205.534	840.6069	4526.807	-516.3714	2927.439
diff		-878.9376	1756.103		-4482.164	2724.289

diff = mean(0) - mean(1) t = -0.5005
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.3104 Pr(|T| > |t|) = 0.6208 Pr(T > t) = 0.6896

-> Year = 2017

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
0	11	655.1841	578.2133	1917.716	-633.1553	1943.523
1	18	4023.773	3807.839	16155.29	-4010.065	12057.61
combined	29	2746.033	2367.457	12749.15	-2103.484	7595.549
diff		-3368.589	4926.248		-13476.42	6739.237

diff = mean(0) - mean(1) t = -0.6838
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.2500 Pr(|T| > |t|) = 0.4999 Pr(T > t) = 0.7500

MODEL 1b – BUDGET CHANGE PERCENT CHANGE

Comparison of mean difference between Adjusted Budget and Adjusted Expense across human service departments and non-human service departments.

-> Year = 2006

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
0	11	-539.8596	926.9988	3074.507	-2605.342	1525.623
1	18	18.41548	188.6396	800.3298	-379.5792	416.4102
combined	29	-193.344	363.9258	1959.8	-938.8122	552.1242
diff		-558.2751	756.1981		-2109.865	993.3152

diff = mean(0) - mean(1) t = -0.7383

Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.2334 Pr(|T| > |t|) = 0.4667 Pr(T > t) = 0.7666

-> Year = 2007

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	**11**	**-748.7624**	**910.3748**	**3019.372**	**-2777.204**	**1279.679**
1	**18**	**190.811**	**270.2984**	**1146.779**	**-379.4688**	**761.0908**
combined	**29**	**-165.5789**	**383.7047**	**2066.313**	**-951.5623**	**620.4045**
diff		**-939.5735**	**784.7405**		**-2549.728**	**670.581**

diff = mean(**0**) - mean(**1**) t = **-1.1973**

Ho: diff = 0 degrees of freedom = **27**

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = **0.1208** Pr(|T| > |t|) = **0.2416** Pr(T > t) = **0.8792**

-> Year = 2008

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	-860.706	1181.756	3919.442	-3493.823	1772.411
1	18	227.194	601.9478	2553.848	-1042.805	1497.193
combined	29	-185.4577	579.3844	3120.081	-1372.273	1001.357
diff		-1087.9	1197.828		-3545.641	1369.841

diff = mean(0) - mean(1) t = -0.9082
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.1859 Pr(|T| > |t|) = 0.3718 Pr(T > t) = 0.8141

-> Year = 2009

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	-181.7773	622.0775	2063.198	-1567.852	1204.298
1	18	762.749	580.4869	2462.797	-461.9713	1987.469
combined	29	404.4804	432.3299	2328.168	-481.1073	1290.068
diff		-944.5263	888.962		-2768.526	879.4731

diff = mean(0) - mean(1) t = -1.0625
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.1487 Pr(|T| > |t|) = 0.2974 Pr(T > t) = 0.8513

-> Year = 2010

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	546.006	534.6328	1773.176	-645.23	1737.242
1	18	347.7216	537.9337	2282.259	-787.2193	1482.662
combined	29	422.9329	384.8389	2072.421	-365.3739	1211.24
diff		198.2845	806.7822		-1457.096	1853.665

diff = mean(0) - mean(1) t = 0.2458
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.5961 Pr(|T| > |t|) = 0.8077 Pr(T > t) = 0.4039

-> Year = 2011

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	882.2607	666.8863	2211.812	-603.6546	2368.176
1	18	472.3849	535.9583	2273.879	-658.3883	1603.158
combined	29	627.8551	412.2016	2219.774	-216.5016	1472.212
diff		409.8758	861.5081		-1357.793	2177.544

diff = mean(0) - mean(1) t = 0.4758
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.6810 Pr(|T| > |t|) = 0.6381 Pr(T > t) = 0.3190

-> Year = 2012

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	**11**	**1364.054**	**926.5679**	**3073.078**	**-700.4682**	**3428.576**
1	**18**	**262.8148**	**219.4961**	**931.2433**	**-200.2816**	**725.9112**
combined	**29**	**680.5261**	**380.3368**	**2048.176**	**-98.55847**	**1459.611**
diff		**1101.239**	**769.5866**		**-477.8224**	**2680.3**

diff = mean(**0**) - mean(**1**) t = **1.4309**
Ho: diff = 0 degrees of freedom = **27**

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = **0.9180** Pr(|T| > |t|) = **0.1639** Pr(T > t) = **0.0820**

-> Year = 2013

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	**11**	**863.9658**	**490.7864**	**1627.754**	**-229.5744**	**1957.506**
1	**18**	**472.3792**	**389.0489**	**1650.595**	**-348.4423**	**1293.201**
combined	**29**	**620.9121**	**301.594**	**1624.133**	**3.124774**	**1238.699**
diff		**391.5866**	**628.4709**		**-897.9292**	**1681.102**

diff = mean(**0**) - mean(**1**) t = **0.6231**
Ho: diff = 0 degrees of freedom = **27**

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = **0.7308** Pr(|T| > |t|) = **0.5385** Pr(T > t) = **0.2692**

-> Year = 2014

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	-702.7185	2086.374	6919.718	-5351.448	3946.012
1	18	-98.19044	212.7645	902.6834	-547.0843	350.7034
combined	29	-327.4942	780.9086	4205.322	-1927.113	1272.125
diff		-604.528	1634.804		-3958.869	2749.813

diff = mean(0) - mean(1) t = -0.3698
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.3572 Pr(|T| > |t|) = 0.7144 Pr(T > t) = 0.6428

-> Year = 2015

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	-47.57319	735.2355	2438.5	-1685.78	1590.633
1	18	621.0233	330.8736	1403.778	-77.05895	1319.106
combined	29	367.4177	343.8678	1851.785	-336.9634	1071.799
diff		-668.5965	710.1324		-2125.668	788.4749

diff = mean(0) - mean(1) t = -0.9415
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.1774 Pr(|T| > |t|) = 0.3548 Pr(T > t) = 0.8226

-> Year = 2016

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	235.8275	842.0423	2792.739	-1640.36	2112.015
1	18	1700.417	1579.528	6701.371	-1632.096	5032.93
combined	29	1144.883	1026.785	5529.407	-958.3909	3248.157
diff		-1464.589	2136.462		-5848.247	2919.068

diff = mean(0) - mean(1) t = -0.6855
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.2494 Pr(|T| > |t|) = 0.4989 Pr(T > t) = 0.7506

-> Year = 2017

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	772.7273	561.5698	1862.516	-478.5281	2023.983
1	18	3521.722	3158.046	13398.45	-3141.171	10184.62
combined	29	2479	1965.873	10586.55	-1547.908	6505.908
diff		-2748.995	4091.834		-11144.74	5646.755

diff = mean(0) - mean(1) t = -0.6718
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.2537 Pr(|T| > |t|) = 0.5074 Pr(T > t) = 0.7463

MODEL 2a- EXPENSE CHANGE

Comparison of mean expenditure change between human service departments and non-human service departments.

```
-> Year = 2007

Two-sample t test with equal variances
```

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	882.453	355.3485	1178.558	90.6872	1674.219
1	18	-356.3491	522.2702	2215.805	-1458.243	745.5446
combined	29	113.5413	364.4184	1962.453	-632.936	860.0186
diff		1238.802	726.7195		-252.303	2729.907

```
    diff = mean(0) - mean(1)                                      t =   1.7046
Ho: diff = 0                     degrees of freedom =       27

    Ha: diff < 0                 Ha: diff != 0                 Ha: diff > 0
 Pr(T < t) = 0.9501         Pr(|T| > |t|) = 0.0997          Pr(T > t) = 0.0499
```

-> Year = 2008

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
0	11	446.2987	256.7485	851.5384	-125.7726	1018.37
1	18	101.8072	285.0748	1209.47	-499.648	703.2624
combined	29	232.4764	201.3787	1084.457	-180.0291	644.9819
diff		344.4915	417.413		-511.9693	1200.952

diff = mean(0) - mean(1) t = 0.8253
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.7918 Pr(|T| > |t|) = 0.4164 Pr(T > t) = 0.2082

-> Year = 2009

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
0	11	-237.5305	257.3072	853.3914	-810.8466	335.7856
1	18	-104.9627	235.696	999.9734	-602.2378	392.3123
combined	29	-155.2471	173.3538	933.5388	-510.3462	199.8521
diff		-132.5678	362.9322		-877.2432	612.1077

diff = mean(0) - mean(1) t = -0.3653
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.3589 Pr(|T| > |t|) = 0.7178 Pr(T > t) = 0.6411

-> Year = 2010

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	-1187.254	1132.431	3755.85	-3710.468	1335.961
1	18	-462.3916	234.7985	996.1659	-957.7732	32.99002
combined	29	-737.3393	446.0022	2401.795	-1650.933	176.2547
diff		-724.8622	925.5978		-2624.032	1174.308

diff = mean(0) - mean(1) t = -0.7831
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.2202 Pr(|T| > |t|) = 0.4404 Pr(T > t) = 0.7798

-> Year = 2011

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	-136.7879	246.8455	818.6939	-686.7939	413.2181
1	18	-541.8918	227.6804	965.9661	-1022.255	-61.5282
combined	29	-388.2317	170.7907	919.7361	-738.0806	-38.38283
diff		405.1039	349.8674		-312.7647	1122.973

diff = mean(0) - mean(1) t = 1.1579
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.8715 Pr(|T| > |t|) = 0.2571 Pr(T > t) = 0.1285

-> Year = 2012

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	382.1894	587.8457	1949.664	-927.6125	1691.991
1	18	152.246	231.6353	982.7455	-336.4619	640.9538
combined	29	239.4659	259.7633	1398.868	-292.6351	771.5668
diff		229.9434	543.3815		-884.9833	1344.87

diff = mean(0) - mean(1) t = 0.4232
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.6622 Pr(|T| > |t|) = 0.6755 Pr(T > t) = 0.3378

-> Year = 2013

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	-43.68126	385.9487	1280.047	-903.6286	816.2661
1	18	-14.26009	245.7802	1042.757	-532.8109	504.2907
combined	29	-25.41984	207.2454	1116.051	-449.9428	399.1031
diff		-29.42117	434.9212		-921.8058	862.9635

diff = mean(0) - mean(1) t = -0.0676
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.4733 Pr(|T| > |t|) = 0.9466 Pr(T > t) = 0.5267

-> Year = 2014

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	960.3872	697.4849	2313.296	-593.7059	2514.48
1	18	648.7439	319.0408	1353.575	-24.37323	1321.861
combined	29	766.9535	324.1573	1745.64	102.9474	1430.96
diff		311.6433	677.6792		-1078.839	1702.126

diff = mean(0) - mean(1) t = 0.4599
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.6754 Pr(|T| > |t|) = 0.6493 Pr(T > t) = 0.3246

-> Year = 2015

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	-676.4447	1198.27	3974.212	-3346.356	1993.467
1	18	-65.75313	388.2666	1647.276	-884.9241	753.4178
combined	29	-297.3948	504.438	2716.482	-1330.689	735.8997
diff		-610.6916	1052.15		-2769.525	1548.142

diff = mean(0) - mean(1) t = -0.5804
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.2832 Pr(|T| > |t|) = 0.5664 Pr(T > t) = 0.7168

-> Year = 2016

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	**11**	**376.5856**	**203.0482**	**673.4345**	**-75.83391**	**829.0051**
1	**18**	**459.5304**	**271.886**	**1153.515**	**-114.0991**	**1033.16**
combined	**29**	**428.0685**	**183.0309**	**985.6516**	**53.14674**	**802.9903**
diff		**-82.94478**	**383.8059**		**-870.4495**	**704.5599**

diff = mean(**0**) - mean(**1**) t = **-0.2161**

Ho: diff = 0 degrees of freedom = **27**

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = **0.4153** Pr(|T| > |t|) = **0.8305** Pr(T > t) = **0.5847**

MODEL 2B- EXPENSE CHANGE

Comparison of mean percent change in Expenditures between department types.

-> Year = 2007

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	10	25.69706	14.85947	46.98978	-7.917402	59.31153
1	17	8.972317	4.704515	19.39721	-1.000808	18.94544
combined	27	15.16667	6.276348	32.61286	2.265449	28.06789
diff		16.72475	12.82547		-9.689814	43.13931

diff = mean(0) - mean(1) t = 1.3040

Ho: diff = 0 degrees of freedom = 25

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.8979 Pr(|T| > |t|) = 0.2041 Pr(T > t) = 0.1021

-> Year = 2008

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	28.89689	26.59233	88.19679	-30.35452	88.1483
1	17	.8741842	4.016443	16.56022	-7.640295	9.388663
combined	28	11.8831	10.75331	56.90118	-10.18087	33.94708
diff		28.0227	21.75406		-16.69341	72.73881

diff = mean(0) - mean(1) t = 1.2882
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.8955 Pr(|T| > |t|) = 0.2090 Pr(T > t) = 0.1045

-> Year = 2009

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	3.267483	2.874922	9.535037	-3.138242	9.673208
1	17	4.220191	2.758953	11.37545	-1.628527	10.06891
combined	28	3.845913	1.987276	10.51568	-.2316413	7.923467
diff		-.9527086	4.142375		-9.467481	7.562064

diff = mean(0) - mean(1) t = -0.2300
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.4099 Pr(|T| > |t|) = 0.8199 Pr(T > t) = 0.5901

-> Year = 2010

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	-2.399058	5.080244	16.84926	-13.71855	8.920431
1	17	3.725805	9.255028	38.15946	-15.89398	23.34559
combined	28	1.319609	5.908006	31.26223	-10.80262	13.44184
diff		-6.124864	12.26879		-31.34373	19.094

diff = mean(0) - mean(1) t = -0.4992
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.3109 Pr(|T| > |t|) = 0.6218 Pr(T > t) = 0.6891

-> Year = 2011

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	-4.486275	3.559287	11.80482	-12.41686	3.444311
1	17	-5.217499	1.954579	8.058936	-9.361022	-1.073976
combined	28	-4.930232	1.795148	9.499029	-8.613571	-1.246893
diff		.731224	3.742951		-6.962521	8.424969

diff = mean(0) - mean(1) t = 0.1954
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.5767 Pr(|T| > |t|) = 0.8466 Pr(T > t) = 0.4233

-> Year = 2012

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	.9102587	4.270261	14.16286	-8.604477	10.42499
1	17	-2.734351	3.080106	12.6996	-9.263884	3.795181
combined	28	-1.30254	2.486752	13.15866	-6.404934	3.799854
diff		3.64461	5.13931		-6.919392	14.20861

diff = mean(0) - mean(1) t = 0.7092
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.7577 Pr(|T| > |t|) = 0.4845 Pr(T > t) = 0.2423

-> Year = 2013

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	7.82176	5.56664	18.46246	-4.581488	20.22501
1	17	8.866611	4.226011	17.42429	-.0921323	17.82535
combined	28	8.456134	3.308161	17.50514	1.668349	15.24392
diff		-1.044851	6.899658		-15.2273	13.1376

diff = mean(0) - mean(1) t = -0.1514
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.4404 Pr(|T| > |t|) = 0.8808 Pr(T > t) = 0.5596

-> Year = 2014

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	5.131078	3.125019	10.36452	-1.831898	12.09405
1	17	9.014525	2.680189	11.0507	3.332779	14.69627
combined	28	7.488885	2.034374	10.7649	3.314695	11.66308
diff		-3.883447	4.175977		-12.46729	4.700396

diff = mean(0) - mean(1) t = -0.9299
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.1805 Pr(|T| > |t|) = 0.3610 Pr(T > t) = 0.8195

-> Year = 2015

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	6.575793	5.264222	17.45945	-5.153625	18.30521
1	17	1.713537	3.131914	12.91321	-4.925824	8.352897
combined	28	3.623709	2.787499	14.75006	-2.095766	9.343183
diff		4.862256	5.737604		-6.931558	16.65607

diff = mean(0) - mean(1) t = 0.8474
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.7978 Pr(|T| > |t|) = 0.4045 Pr(T > t) = 0.2022

-> Year = 2016

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	7.295634	3.198275	10.60748	.1694322	14.42184
1	17	11.49483	4.357977	17.9684	2.256329	20.73333
combined	28	9.845144	2.911564	15.40655	3.871109	15.81918
diff		-4.199194	6.019098		-16.57163	8.173239

diff = mean(0) - mean(1) t = -0.6976
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.2458 Pr(|T| > |t|) = 0.4916 Pr(T > t) = 0.7542

-> Year = 2017

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	1.244662	4.609198	15.28698	-9.025272	11.51459
1	18	6.579305	6.617133	28.07412	-7.381624	20.54023
combined	29	4.55582	4.429229	23.85213	-4.517044	13.62868
diff		-5.334644	9.239017		-24.29154	13.62225

diff = mean(0) - mean(1) t = -0.5774
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.2842 Pr(|T| > |t|) = 0.5685 Pr(T > t) = 0.7158

-> Year = 2017

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	**11**	**118.2843**	**850.8635**	**2821.995**	**-1777.558**	**2014.126**
1	**18**	**2202.468**	**2223.626**	**9434.045**	**-2488.972**	**6893.908**
combined	**29**	**1411.916**	**1413.48**	**7611.821**	**-1483.466**	**4307.297**
diff		**-2084.184**	**2939.312**		**-8115.153**	**3946.786**

diff = mean(**0**) - mean(**1**) t = **-0.7091**

Ho: diff = 0 degrees of freedom = **27**

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = **0.2422** Pr(|T| > |t|) = **0.4844** Pr(T > t) = **0.7578**

MODEL 3a – DIFFERENCE BETWEEN BUDGET/EXPENSE CHANGE

Comparison of mean percent difference between Adjusted Budget and Adjusted Expense across human service departments and non-human service departments.

-> Year = 2006

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	10	7.975589	7.861112	24.85902	-9.807482	25.75866
1	17	5.480254	3.411805	14.06723	-1.752449	12.71296
combined	27	6.404452	3.533949	18.36294	-.859684	13.66859
diff		2.495335	7.446343		-12.84069	17.83137

diff = mean(0) - mean(1) t = 0.3351

Ho: diff = 0 degrees of freedom = 25

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0

Pr(T < t) = 0.6298 Pr(|T| > |t|) = 0.7403 Pr(T > t) = 0.3702

-> Year = 2007

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	-4.125059	10.8976	36.14324	-28.40642	20.1563
1	17	1.317791	3.633906	14.98298	-6.385746	9.021327
combined	28	-.8204716	4.721478	24.98371	-10.50814	8.867201
diff		-5.442849	9.793684		-25.57405	14.68836

diff = mean(0) - mean(1) t = -0.5558
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.2916 Pr(|T| > |t|) = 0.5831 Pr(T > t) = 0.7084

-> Year = 2008

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	3.782365	7.657501	25.39706	-13.27961	20.84434
1	17	5.428143	3.53394	14.57081	-2.063475	12.91976
combined	28	4.781587	3.612356	19.11479	-2.630354	12.19353
diff		-1.645777	7.53051		-17.12496	13.83341

diff = mean(0) - mean(1) t = -0.2185
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.4144 Pr(|T| > |t|) = 0.8287 Pr(T > t) = 0.5856

-> Year = 2009

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	6.234059	5.410721	17.94533	-5.821779	18.2899
1	17	7.026341	3.828565	15.78558	-1.089854	15.14254
combined	28	6.715087	3.088529	16.34296	.3779491	13.05222
diff		-.792282	6.442551		-14.03513	12.45057

diff = mean(0) - mean(1) t = -0.1230
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.4515 Pr(|T| > |t|) = 0.9031 Pr(T > t) = 0.5485

-> Year = 2010

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	4.240295	5.928737	19.6634	-8.969755	17.45034
1	17	-2.585399	3.430411	14.14395	-9.857545	4.686748
combined	28	.0961237	3.12408	16.53108	-6.313959	6.506207
diff		6.825693	6.379677		-6.28792	19.93931

diff = mean(0) - mean(1) t = 1.0699
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.8528 Pr(|T| > |t|) = 0.2945 Pr(T > t) = 0.1472

-> Year = 2011

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	10.92741	4.253593	14.10757	1.449816	20.40501
1	17	1.055286	2.514892	10.36916	-4.276046	6.386619
combined	28	4.933621	2.401894	12.70963	.0053422	9.8619
diff		9.872125	4.622646		.3701405	19.37411

diff = mean(0) - mean(1) t = 2.1356
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9789 Pr(|T| > |t|) = 0.0423 Pr(T > t) = 0.0211

-> Year = 2012

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	10.15415	5.451558	18.08077	-1.992676	22.30098
1	17	3.681838	2.009199	8.28414	-.5774735	7.94115
combined	28	6.224533	2.479265	13.11904	1.137502	11.31156
diff		6.472314	5.01501		-3.836187	16.78082

diff = mean(0) - mean(1) t = 1.2906
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.8959 Pr(|T| > |t|) = 0.2082 Pr(T > t) = 0.1041

-> Year = 2013

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	4.300261	6.17387	20.47641	-9.455979	18.0565
1	17	3.727603	2.77257	11.4316	-2.149982	9.605188
combined	28	3.952576	2.883525	15.25818	-1.963929	9.869081
diff		.5726582	6.015622		-11.79263	12.93795

diff = mean(0) - mean(1) t = 0.0952
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.5376 Pr(|T| > |t|) = 0.9249 Pr(T > t) = 0.4624

-> Year = 2014

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	-3.180492	15.9326	52.84247	-38.68055	32.31956
1	17	-2.970304	4.689532	19.33544	-12.91167	6.97106
combined	28	-3.052878	6.696886	35.43659	-16.79375	10.688
diff		-.210188	13.97344		-28.93302	28.51264

diff = mean(0) - mean(1) t = -0.0150
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.4941 Pr(|T| > |t|) = 0.9881 Pr(T > t) = 0.5059

-> Year = 2015

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	**11**	**1.453115**	**6.813421**	**22.59756**	**-13.72813**	**16.63436**
1	**17**	**2.358926**	**2.246557**	**9.262793**	**-2.403563**	**7.121414**
combined	**28**	**2.003071**	**2.928777**	**15.49763**	**-4.006282**	**8.012425**
diff		**-.905811**	**6.108508**		**-13.46203**	**11.65041**

diff = mean(**0**) - mean(**1**) t = **-0.1483**
Ho: diff = 0 degrees of freedom = **26**

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = **0.4416** Pr(|T| > |t|) = **0.8833** Pr(T > t) = **0.5584**

-> Year = 2016

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	**11**	**2.391271**	**7.538366**	**25.00193**	**-14.40525**	**19.1878**
1	**18**	**1.353507**	**3.566708**	**15.13226**	**-6.17159**	**8.878604**
combined	**29**	**1.747141**	**3.53572**	**19.04044**	**-5.495453**	**8.989736**
diff		**1.037764**	**7.417936**		**-14.18258**	**16.25811**

diff = mean(**0**) - mean(**1**) t = **0.1399**
Ho: diff = 0 degrees of freedom = **27**

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = **0.5551** Pr(|T| > |t|) = **0.8898** Pr(T > t) = **0.4449**

-> Year = 2017

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	6.062092	4.993018	16.55997	-5.063044	17.18723
1	18	7.409781	3.056151	12.96615	.9618654	13.8577
combined	29	6.898589	2.629125	14.15827	1.513071	12.28411
diff		-1.347689	5.511799		-12.65697	9.961589

diff = mean(0) - mean(1) t = -0.2445
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.4043 Pr(|T| > |t|) = 0.8087 Pr(T > t) = 0.5957

MODEL 3b - Comparison of mean percent difference between Adjusted Budget and Adjusted Expense across human service departments and non-human service departments.

-> Year = 2006

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	10	7.975589	7.861112	24.85902	-9.807482	25.75866
1	17	5.480254	3.411805	14.06723	-1.752449	12.71296
combined	27	6.404452	3.533949	18.36294	-.859684	13.66859
diff		2.495335	7.446343		-12.84069	17.83137

diff = mean(0) - mean(1) t = 0.3351
Ho: diff = 0 degrees of freedom = 25

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.6298 Pr(|T| > |t|) = 0.7403 Pr(T > t) = 0.3702

-> Year = 2007

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	-4.125059	10.8976	36.14324	-28.40642	20.1563
1	17	1.317791	3.633906	14.98298	-6.385746	9.021327
combined	28	-.8204716	4.721478	24.98371	-10.50814	8.867201
diff		-5.442849	9.793684		-25.57405	14.68836

diff = mean(0) - mean(1) t = -0.5558
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.2916 Pr(|T| > |t|) = 0.5831 Pr(T > t) = 0.7084

-> Year = 2008

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	3.782365	7.657501	25.39706	-13.27961	20.84434
1	17	5.428143	3.53394	14.57081	-2.063475	12.91976
combined	28	4.781587	3.612356	19.11479	-2.630354	12.19353
diff		-1.645777	7.53051		-17.12496	13.83341

diff = mean(0) - mean(1) t = -0.2185
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.4144 Pr(|T| > |t|) = 0.8287 Pr(T > t) = 0.5856

-> Year = 2009

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	6.234059	5.410721	17.94533	-5.821779	18.2899
1	17	7.026341	3.828565	15.78558	-1.089854	15.14254
combined	28	6.715087	3.088529	16.34296	.3779491	13.05222
diff		-.792282	6.442551		-14.03513	12.45057

diff = mean(0) - mean(1) t = -0.1230
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.4515 Pr(|T| > |t|) = 0.9031 Pr(T > t) = 0.5485

-> Year = 2010

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	4.240295	5.928737	19.6634	-8.969755	17.45034
1	17	-2.585399	3.430411	14.14395	-9.857545	4.686748
combined	28	.0961237	3.12408	16.53108	-6.313959	6.506207
diff		6.825693	6.379677		-6.28792	19.93931

diff = mean(0) - mean(1) t = 1.0699
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.8528 Pr(|T| > |t|) = 0.2945 Pr(T > t) = 0.1472

-> Year = 2011

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	10.92741	4.253593	14.10757	1.449816	20.40501
1	17	1.055286	2.514892	10.36916	-4.276046	6.386619
combined	28	4.933621	2.401894	12.70963	.0053422	9.8619
diff		9.872125	4.622646		.3701405	19.37411

diff = mean(0) - mean(1) t = 2.1356
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.9789 Pr(|T| > |t|) = 0.0423 Pr(T > t) = 0.0211

-> Year = 2012

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	10.15415	5.451558	18.08077	-1.992676	22.30098
1	17	3.681838	2.009199	8.28414	-.5774735	7.94115
combined	28	6.224533	2.479265	13.11904	1.137502	11.31156
diff		6.472314	5.01501		-3.836187	16.78082

diff = mean(0) - mean(1) t = 1.2906
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.8959 Pr(|T| > |t|) = 0.2082 Pr(T > t) = 0.1041

-> Year = 2013

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	4.300261	6.17387	20.47641	-9.455979	18.0565
1	17	3.727603	2.77257	11.4316	-2.149982	9.605188
combined	28	3.952576	2.883525	15.25818	-1.963929	9.869081
diff		.5726582	6.015622		-11.79263	12.93795

diff = mean(0) - mean(1) t = 0.0952
Ho: diff = 0 degrees of freedom = 26

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.5376 Pr(|T| > |t|) = 0.9249 Pr(T > t) = 0.4624

-> Year = 2014

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	**11**	**-3.180492**	**15.9326**	**52.84247**	**-38.68055**	**32.31956**
1	**17**	**-2.970304**	**4.689532**	**19.33544**	**-12.91167**	**6.97106**
combined	**28**	**-3.052878**	**6.696886**	**35.43659**	**-16.79375**	**10.688**
diff		**-.210188**	**13.97344**		**-28.93302**	**28.51264**

diff = mean(**0**) - mean(**1**) t = **-0.0150**
Ho: diff = 0 degrees of freedom = **26**

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = **0.4941** Pr(|T| > |t|) = **0.9881** Pr(T > t) = **0.5059**

-> Year = 2015

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	**11**	**1.453115**	**6.813421**	**22.59756**	**-13.72813**	**16.63436**
1	**17**	**2.358926**	**2.246557**	**9.262793**	**-2.403563**	**7.121414**
combined	**28**	**2.003071**	**2.928777**	**15.49763**	**-4.006282**	**8.012425**
diff		**-.905811**	**6.108508**		**-13.46203**	**11.65041**

diff = mean(**0**) - mean(**1**) t = **-0.1483**
Ho: diff = 0 degrees of freedom = **26**

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = **0.4416** Pr(|T| > |t|) = **0.8833** Pr(T > t) = **0.5584**

-> Year = 2016

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	2.391271	7.538366	25.00193	-14.40525	19.1878
1	18	1.353507	3.566708	15.13226	-6.17159	8.878604
combined	29	1.747141	3.53572	19.04044	-5.495453	8.989736
diff		1.037764	7.417936		-14.18258	16.25811

diff = mean(0) - mean(1) t = 0.1399
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.5551 Pr(|T| > |t|) = 0.8898 Pr(T > t) = 0.4449

-> Year = 2017

Two-sample t test with equal variances

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf.	Interval]
0	11	6.062092	4.993018	16.55997	-5.063044	17.18723
1	18	7.409781	3.056151	12.96615	.9618654	13.8577
combined	29	6.898589	2.629125	14.15827	1.513071	12.28411
diff		-1.347689	5.511799		-12.65697	9.961589

diff = mean(0) - mean(1) t = -0.2445
Ho: diff = 0 degrees of freedom = 27

Ha: diff < 0 Ha: diff != 0 Ha: diff > 0
Pr(T < t) = 0.4043 Pr(|T| > |t|) = 0.8087 Pr(T > t) = 0.5957

APPENDIX G

STASTICAL ANALYSIS DATA OUTPUT REGRESSION ANALYSIS

```
. xi: regress ChgBudg Social Post_Reces LagBudg Staff Gender RaceB RaceH directexp Masters JD PHDCPAMD PercchInc i.deptnum i.Year
i.deptnum         _Ideptnum_1020-8101 (naturally coded; _Ideptnum_1020 omitted)
i.Year            _IYear_2006-2017    (naturally coded; _IYear_2006 omitted)
note: _Ideptnum_1040 omitted because of collinearity
note: _IYear_2008 omitted because of collinearity
note: _IYear_2011 omitted because of collinearity
note: _IYear_2016 omitted because of collinearity
```

Source	SS	df	MS		
Model	2.6347e+09	47	56057523.1	Number of obs =	319
Residual	3.3447e+09	271	12342218.5	F(47, 271) =	4.54
				Prob > F =	0.0000
				R-squared =	0.4406
				Adj R-squared =	0.3436
Total	5.9794e+09	318	18803285.5	Root MSE =	3513.1

ChgBudg	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Social	7089.473	2199.035	3.22	0.001	2760.109	11418.84
Post_Reces	-883.5875	991.0808	-0.89	0.373	-2834.784	1067.609
LagBudg	.8732026	.1165445	7.49	0.000	.6437549	1.10265
Staff	-99.35572	35.85045	-2.77	0.006	-169.9365	-28.77491
Gender	2570.847	932.7094	2.76	0.006	734.5694	4407.124
RaceB	-3547.068	963.7145	-3.68	0.000	-5444.387	-1649.748
RaceH	6101.708	1798.971	3.39	0.001	2559.973	9643.443
directexp	18.36765	57.8461	0.32	0.751	-95.51723	132.2525
Masters	396.3497	1631.441	0.24	0.808	-2815.561	3608.26
JD	-1824.222	3048.683	-0.60	0.550	-7826.337	4177.892
PHDCPAMD	4155.212	2023.897	2.05	0.041	170.6525	8139.771
PercchInc	372.6069	168.962	2.21	0.028	39.96192	705.2518
_Ideptnum_1022	254.2634	7291.65	0.03	0.972	-14101.22	14609.74
_Ideptnum_1040	0	(omitted)				
_Ideptnum_1060	-3076.124	1702.295	-1.81	0.072	-6427.528	275.2808
_Ideptnum_1070	2634.14	2981.528	0.88	0.378	-3235.762	8504.042
_Ideptnum_1080	1402.907	2552.576	0.55	0.583	-3622.494	6428.308
_Ideptnum_1082	-71801.69	10885.05	-6.60	0.000	-93231.69	-50371.69
_Ideptnum_1090	-2209.243	3771.069	-0.59	0.558	-9633.558	5215.073
_Ideptnum_1210	-3714.695	2767.866	-1.34	0.181	-9163.949	1734.56
_Ideptnum_2010	-694.4898	2573.185	-0.27	0.787	-5760.463	4371.484
_Ideptnum_2050	-1941.671	2211.871	-0.88	0.381	-6296.305	2412.964
_Ideptnum_2060	-1571.519	2181.049	-0.72	0.472	-5865.473	2722.434
_Ideptnum_2070	-306.0642	1650.723	-0.19	0.853	-3555.935	2943.807
_Ideptnum_3312	-5626.453	4832.097	-1.16	0.245	-15139.67	3886.768
_Ideptnum_3330	-1665.379	2268.953	-0.73	0.464	-6132.395	2801.637
_Ideptnum_3340	6694.94	2922.202	2.29	0.023	941.8372	12448.04
_Ideptnum_3341	-2783.922	2211.442	-1.26	0.209	-7137.713	1569.869
_Ideptnum_3342	-6718.541	2350.561	-2.86	0.005	-11346.22	-2090.859
_Ideptnum_3343	-2701.927	1904.59	-1.42	0.157	-6451.601	1047.748
_Ideptnum_4014	4995.274	2169.158	2.30	0.022	724.7299	9265.818
_Ideptnum_4040	9068.659	5568.605	1.63	0.105	-1894.566	20031.88
_Ideptnum_4051	3579.407	3744.879	0.96	0.340	-3793.347	10952.16
_Ideptnum_4056	2917.151	2587.47	1.13	0.261	-2176.947	8011.25
_Ideptnum_4060	4078.099	2548.547	1.60	0.111	-939.3688	9095.566
_Ideptnum_5110	21629.63	23448.11	0.92	0.357	-24533.97	67793.24
_Ideptnum_5210	3805.902	5002.599	0.76	0.447	-6042.995	13654.8
_Ideptnum_5310	-7965.04	1821.736	-4.37	0.000	-11551.59	-4378.485
_Ideptnum_5330	-5631.575	1754.273	-3.21	0.001	-9085.31	-2177.84
_Ideptnum_8101	-3090.165	1753.21	-1.76	0.079	-6541.809	361.4783
_IYear_2007	-1471.962	1145.619	-1.28	0.200	-3727.406	783.4812
_IYear_2008	0	(omitted)				
_IYear_2009	819.2287	929.0936	0.88	0.379	-1009.93	2648.388
_IYear_2010	-1717.105	838.9385	-2.05	0.042	-3368.771	-65.43987
_IYear_2011	0	(omitted)				
_IYear_2012	680.6143	910.7302	0.75	0.456	-1112.391	2473.62
_IYear_2013	-256.2825	819.665	-0.31	0.755	-1870.003	1357.438
_IYear_2014	-1536.368	888.7099	-1.73	0.085	-3286.021	213.2848
_IYear_2015	-594.4532	895.0538	-0.66	0.507	-2356.596	1167.69
_IYear_2016	0	(omitted)				
_IYear_2017	869.9801	848.6849	1.03	0.306	-800.8737	2540.834
_cons	-3817.308	2705.599	-1.41	0.159	-9143.973	1509.356

Next page contains regression model of Expense change from year to year as the dependent variable.

```
. xi: regress ChgExp Social Post_Reces LagExp Staff Gender RaceB RaceH directexp Masters JD PHDCPAMD PercchInc i.deptnum i.Year
i.deptnum         _Ideptnum_1020-8101 (naturally coded; _Ideptnum_1020 omitted)
i.Year            _IYear_2006-2017    (naturally coded; _IYear_2006 omitted)
note: _Ideptnum_1040 omitted because of collinearity
note: _IYear_2008 omitted because of collinearity
note: _IYear_2011 omitted because of collinearity
note: _IYear_2016 omitted because of collinearity
```

Source	SS	df	MS		
Model	761626080	47	16204810.2	Number of obs =	319
Residual	1.7204e+09	271	6348438.64	F(47, 271) =	2.55
				Prob > F =	0.0000
				R-squared =	0.3069
				Adj R-squared =	0.1866
Total	2.4821e+09	318	7805197.96	Root MSE =	2519.6

ChgExp	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Social	-1007.331	1560.029	-0.65	0.519	-4078.647	2063.985
Post_Reces	-1226.128	713.2314	-1.72	0.087	-2630.307	178.0511
LagExp	-.5162113	.0977547	-5.28	0.000	-.7086665	-.3237561
Staff	11.41871	25.04421	0.46	0.649	-37.88724	60.72466
Gender	1785.759	663.5328	2.69	0.008	479.4243	3092.093
RaceB	-2227.909	690.3839	-3.23	0.001	-3587.107	-868.7118
RaceH	6526.465	1239.78	5.26	0.000	4085.64	8967.29
directexp	4.156053	41.501	0.10	0.920	-77.5493	85.8614
Masters	4845.068	1185.083	4.09	0.000	2511.929	7178.207
JD	-9350.363	2065.38	-4.53	0.000	-13416.59	-5284.134
PHDCPAMD	-1788.644	1465.565	-1.22	0.223	-4673.984	1096.696
PercchInc	185.5508	121.2807	1.53	0.127	-53.22136	424.323
_Ideptnum_1022	11884.02	5737.517	2.07	0.039	588.2479	23179.79
_Ideptnum_1040	0	(omitted)				
_Ideptnum_1060	-2239.412	1221.783	-1.83	0.068	-4644.804	165.9803
_Ideptnum_1070	-55.6197	2136.961	-0.03	0.979	-4262.776	4151.536
_Ideptnum_1080	-1772.436	1793.567	-0.99	0.324	-5303.532	1758.661
_Ideptnum_1082	47694.99	8370.77	5.70	0.000	31214.99	64175
_Ideptnum_1090	9457.402	2807.278	3.37	0.001	3930.556	14984.25
_Ideptnum_1210	5100.002	2056.978	2.48	0.014	1050.313	9149.69
_Ideptnum_2010	111.095	1867.908	0.06	0.953	-3566.361	3788.551
_Ideptnum_2050	2507.191	1590.186	1.58	0.116	-623.4974	5637.879
_Ideptnum_2060	2886.563	1569.074	1.84	0.067	-202.5614	5975.688
_Ideptnum_2070	1038.099	1190.247	0.87	0.384	-1305.207	3381.405
_Ideptnum_3312	9583.709	3723.639	2.57	0.011	2252.771	16914.65
_Ideptnum_3330	2692.781	1639.916	1.64	0.102	-535.8146	5921.377
_Ideptnum_3340	2959.455	2086.683	1.42	0.157	-1148.715	7067.625
_Ideptnum_3341	2282.691	1589.355	1.44	0.152	-846.3618	5411.743
_Ideptnum_3342	-1334.491	1708.558	-0.78	0.435	-4698.226	2029.244
_Ideptnum_3343	-2362.027	1371.307	-1.72	0.086	-5061.797	337.7426
_Ideptnum_4014	-2397.673	1520.153	-1.58	0.116	-5390.484	595.1377
_Ideptnum_4040	15946.21	4086.103	3.90	0.000	7901.672	23990.75
_Ideptnum_4051	8990.154	2641.941	3.40	0.001	3788.816	14191.49
_Ideptnum_4056	-4358.537	1786.631	-2.44	0.015	-7875.977	-841.0963
_Ideptnum_4060	2954.435	1825.792	1.62	0.107	-640.1047	6548.975
_Ideptnum_5110	16009.28	17190.2	0.93	0.353	-17834.03	49852.58
_Ideptnum_5210	4830.383	3702.63	1.30	0.193	-2459.193	12119.96
_Ideptnum_5310	557.3763	1322.035	0.42	0.674	-2045.389	3160.142
_Ideptnum_5330	-958.7459	1257.765	-0.76	0.447	-3434.979	1517.487
_Ideptnum_8101	-2403.163	1259.988	-1.91	0.058	-4883.772	77.44707
_IYear_2007	-1039.636	822.6877	-1.26	0.207	-2659.308	580.0354
_IYear_2008	0	(omitted)				
_IYear_2009	918.2706	670.1886	1.37	0.172	-401.1674	2237.709
_IYear_2010	-209.7056	600.6595	-0.35	0.727	-1392.258	972.8465
_IYear_2011	0	(omitted)				
_IYear_2012	477.7805	654.156	0.73	0.466	-810.0933	1765.654
_IYear_2013	116.7457	588.158	0.20	0.843	-1041.194	1274.685
_IYear_2014	395.4112	637.5563	0.62	0.536	-859.7818	1650.604
_IYear_2015	-523.3318	642.2983	-0.81	0.416	-1787.861	741.197
_IYear_2016	0	(omitted)				
_IYear_2017	1370.942	604.6748	2.27	0.024	180.4845	2561.399
_cons	-642.2267	1940.046	-0.33	0.741	-4461.704	3177.251

Next page contains regression model of budget/expense difference from year to year as the dependent variable.

```
. xi: regress BudgExpVar Social Post_Reces lagbdgexp Staff Gender RaceB RaceH directexp Masters JD PHDCPAMD PercchInc i.deptnum i.Ye
> ar
i.deptnum         _Ideptnum_1020-8101 (naturally coded; _Ideptnum_1020 omitted)
i.Year            _IYear_2006-2017    (naturally coded; _IYear_2006 omitted)
note: _Ideptnum_1040 omitted because of collinearity
note: _IYear_2008 omitted because of collinearity
note: _IYear_2011 omitted because of collinearity
note: _IYear_2016 omitted because of collinearity
```

Source	SS	df	MS		
Model	3.6580e+09	47	77830414.8	Number of obs =	319
Residual	2.0947e+09	271	7729461.97	F(47, 271) =	10.07
				Prob > F =	0.0000
				R-squared =	0.6359
				Adj R-squared =	0.5727
Total	5.7527e+09	318	18090294.6	Root MSE =	2780.2

BudgExpVar	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
Social	961.8418	1671.043	0.58	0.565	-2328.034	4251.718
Post_Reces	-49.07669	784.9184	-0.06	0.950	-1594.39	1496.236
lagbdgexp	.7642905	.0832455	9.18	0.000	.6004004	.9281807
Staff	-24.28863	27.92136	-0.87	0.385	-79.25899	30.68173
Gender	2350.571	730.8679	3.22	0.001	911.6698	3789.471
RaceB	-1999.371	761.2854	-2.63	0.009	-3498.157	-500.5858
RaceH	4535.674	1401.734	3.24	0.001	1776	7295.347
directexp	8.510014	45.78306	0.19	0.853	-81.62568	98.64571
Masters	1071.744	1237.586	0.87	0.387	-1364.76	3508.249
JD	-6009.251	2239.992	-2.68	0.008	-10419.25	-1599.253
PHDCPAMD	430.0078	1559.293	0.28	0.783	-2639.861	3499.877
PercchInc	182.7399	133.8295	1.37	0.173	-80.7378	446.2176
_Ideptnum_1022	3855.741	5907.042	0.65	0.514	-7773.785	15485.27
_Ideptnum_1040	0	(omitted)				
_Ideptnum_1060	-1876.082	1345.434	-1.39	0.164	-4524.913	772.7493
_Ideptnum_1070	-235.5809	2393.322	-0.10	0.922	-4947.449	4476.287
_Ideptnum_1080	-2696.829	1986.565	-1.36	0.176	-6607.892	1214.234
_Ideptnum_1082	5683.818	1795.855	3.16	0.002	2148.218	9219.419
_Ideptnum_1090	4225.222	2800.586	1.51	0.133	-1288.45	9738.893
_Ideptnum_1210	-174.1548	2125.738	-0.08	0.935	-4359.215	4010.906
_Ideptnum_2010	-558.5091	2056.727	-0.27	0.786	-4607.704	3490.685
_Ideptnum_2050	-620.1086	1731.487	-0.36	0.721	-4028.985	2788.768
_Ideptnum_2060	-1110.375	1711.659	-0.65	0.517	-4480.214	2259.464
_Ideptnum_2070	717.7278	1300.055	0.55	0.581	-1841.764	3277.22
_Ideptnum_3312	1371.39	3726.712	0.37	0.713	-5965.597	8708.378
_Ideptnum_3330	-524.1491	1778.874	-0.29	0.768	-4026.318	2978.019
_Ideptnum_3340	1207.401	2313.673	0.52	0.602	-3347.657	5762.458
_Ideptnum_3341	-1116.501	1729.812	-0.65	0.519	-4522.08	2289.078
_Ideptnum_3342	-3686.58	1867.166	-1.97	0.049	-7362.574	-10.58495
_Ideptnum_3343	-1840.489	1505.156	-1.22	0.222	-4803.775	1122.797
_Ideptnum_4014	-597.5669	1628.834	-0.37	0.714	-3804.344	2609.21
_Ideptnum_4040	8473.764	4299.607	1.97	0.050	8.885092	16938.64
_Ideptnum_4051	3700.52	2901.538	1.28	0.203	-2011.902	9412.942
_Ideptnum_4056	-2626.721	1938.12	-1.36	0.176	-6442.407	1188.965
_Ideptnum_4060	-52.85907	2018.878	-0.03	0.979	-4027.538	3921.82
_Ideptnum_5110	15066.64	18812.01	0.80	0.424	-21969.61	52102.9
_Ideptnum_5210	3763.11	4005.056	0.94	0.348	-4121.869	11648.09
_Ideptnum_5310	-2127.003	1376.849	-1.54	0.124	-4837.683	583.6774
_Ideptnum_5330	-2074.49	1377.023	-1.51	0.133	-4785.514	636.5329
_Ideptnum_8101	-1952.703	1385.308	-1.41	0.160	-4680.038	774.6319
_IYear_2007	-712.2292	906.8623	-0.79	0.433	-2497.62	1073.162
_IYear_2008	0	(omitted)				
_IYear_2009	584.038	735.0452	0.79	0.428	-863.087	2031.163
_IYear_2010	-425.8598	659.8107	-0.65	0.519	-1724.866	873.1467
_IYear_2011	0	(omitted)				
_IYear_2012	-67.23094	720.8791	-0.09	0.926	-1486.466	1352.004
_IYear_2013	-283.2792	649.2349	-0.44	0.663	-1561.464	994.9062
_IYear_2014	-1727.421	704.2238	-2.45	0.015	-3113.866	-340.9761
_IYear_2015	-294.7249	709.682	-0.42	0.678	-1691.916	1102.466
_IYear_2016	0	(omitted)				
_IYear_2017	876.6686	665.2981	1.32	0.189	-433.1412	2186.479
_cons	-13.27098	2130.336	-0.01	0.995	-4207.383	4180.841

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