Factors Affecting State Budgetary Imbalances

Elizabeth Madjlessi*
Honors Thesis Advisor: Professor Michael Boskin
Stanford University Economics Department
June 2, 2004

Abstract

In order to assess contemporaneous trends in U.S. state budget practices, we apply OLS regression methods to panel data from 1997-2003. We consider four dependent variables: the annual balance of general fund expenditures and revenues, the amount of expenditures financed through bonds and per capita measures of each. We use eight categories of independent variables: annual, demographic, political, legal, spending, revenue, capital, and funding in our regression as well. This paper reaffirms previous findings that there are strong intertemporal interactions occurring in this process as states are more likely to withstand annual fluctuations when traditional spending categories compose a major fixed proportion of the general fund. We also confirm findings that indicate state-level legal budget institutions have varying impacts on short-run debt creation. However, we leave open the possibility that the effects of certain laws may be realized over time.

Keywords: Deficit, Federalism

* I would like to thank Professor Boskin for his support throughout this process. I especially appreciate his incredibly helpful suggestions and generous donation of his time. Having not benefited from his lectures, I never would have been able to accomplish this task. Please address correspondence to eym@stanford.edu.
Chapter One: Introduction

State citizens tend to become concerned when they see the nightly news covering the closing of public libraries and historical education centers or the reduction of hours at the local museum or zoo. People tend to become outraged when such cutbacks sometimes occur at schools, resulting in children having fewer field trips and sports programs. Unfortunately, these visible actions tend to have a very low impact on adjusting the budget, but they tend to make people the most aware of fiscal imbalances. In and of itself the budget is an abstract concept. Citizens are capable of being aware of the services their state provides for them and the taxes the state exacts from them, but fully absorbing the effects of bond financing or the state’s compounding deficits may evade them. Nonetheless, it is important to determine what factors impact a state’s fiscal solvency over times of prosperity and hardship.

During the 1990s many states enjoyed windfalls in state revenues due to a booming economy. Some states increased spending and embarked on projects as if there were no end in sight. By 2000 many states began to feel the pinch of a down-turning economy. As revenues fell and spending constraints continued to create greater and greater obligations the states have been engaging in various techniques to curb their habits. Beyond the more superficial budget-curbing tactics mentioned above, the states have an arsenal of higher-impact methods to keep themselves afloat, including making across-the-board cuts, reducing funding for lower priority programs and canceling capital projects. This paper considers a period of time that spans the end of an unprecedented economic boom and its subsequent bust, which gives us an opportunity to contrast the
performance of state debt over market fluctuations to appraise the various methods the
states are employing.

America’s 50 states are in many ways separate sovereign entities that attempt to
increase the quality of life within their borders through their own political and economic
decisions. In examining an issue like deficit policy, which clearly has important
ramifications at a federal level, it is convenient to have fifty different laboratories of
democracy with different laws, strategies and political tactics. Recent state budget crises
have been highlighted in the news and are a clear cause for concern among American
citizens. Therefore, it is worthwhile to investigate exactly what is going on in state
budgeting practices, to observe the different aspects of this process as they vary across
the nation to try to determine what some states are doing to stay afloat when others are
struggling behind. To explain the variation in debt, we consider eight categories of
independent variables: annual, demographic, political, legal, spending, revenue, capital,
and funding variables.

This inquiry explores the validity of certain claims made about the long-term
budgeting process to see the effects of the different factors on an annual basis. We first
discuss the general theories on debt creation before delving into the findings of Holtz-
Eakin, Newey and Rosen (1989) and James Poterba (1994) on the correlation between
long-term intertemporal analyses and budgeting outcomes. We then define and discuss
our dependent variables and submit our regressions. There are four dependent variables
we consider: the annual balance of general fund expenditures and revenues, the amount
of expenditures financed through bonds and per capita measures of each. Ultimately, we
compare our findings with the aforementioned theories and find increased support for the
importance of long-term stability in the budgeting process. Overall, it is best for state
governments to emphasize forward-looking budget practices and attempt to smooth out
expenditure and revenue streams over time to minimize the impact of the business cycle.
Chapter Two: Economic Theory

There are several theories that make claims about the validity of debt financing and the creation of deficits over time. Such arguments proceed by examining the effects of the debt in an intergenerational context, taking into account aggregate consumption and savings decisions. Three traditional approaches to the topic of deficit financing that focus on the effects on flow variables are Neoclassical, Keynesian and Ricardian views. These theories attempt to describe the planning and compensating behavior of individual’s who are faced with budget deficits and the subsequent generations who may contend with these situations as well. There are also a number of contested theories that argue over the burden in terms of public debt. The theories of Buchanan (1964), Bowen Davis and Kopf (1962) and Modigliani (1961) provide evidence for potential future burdens that result from debt financing, while Mishan attempts to refute these arguments and the existence of any burden at all from these policies. Ultimately, there are some key points that appear from all of these arguments that reveal the potential for a systematic economic approach to this issue, which could weigh future and current interests fairly.

In addition to examining such theories, we will also look at more recent work that focuses on the state budgeting process. These papers examine the patterns of spending and expenditure decisions of the states and may also consider political factors that impact the process. Specifically, we will discuss the findings of James Poterba (1994) regarding the efficacy of state budgetary institutions and politics to give some context to the regressions we will be examining later in the paper. We also explore the findings of Holtz-Eakin, Newey and Rosen (1989) on the intertemporal linkages between spending decisions and past performance.
The difference between Neoclassical, Keynesian and Ricardian theories

The Neoclassical perspective considers individuals to be farsighted in planning their consumption, considering their entire life cycle in their decisions. Budget deficits, therefore, will raise total lifetime consumption by shifting taxes to subsequent generations. Assuming that economic resources are fully employed, this increase in consumption results in decreased saving, which causes interest rates to rise, bringing capital markets into balance. Therefore, this view asserts that deficits have the tendency to “crowd out” private capital accumulation.

The Keynesian view assumes that a substantial proportion of the population is shortsighted or liquidity constrained. People are therefore likely to have a very high propensity to consume from their current disposable income. Under these conditions, temporary tax reductions have an immediate and significant impact on aggregate demand. In the case where the economy’s resources are underemployed in the first place, the national income will rise with the so-called Keynesian multiplier effect, generating second round effects. As a result, since deficits stimulate both consumption and national income, Keynesians do not believe that deficits necessarily adversely affect saving and capital decisions. So the Keynesian economists see the potential for well-timed deficits to benefit society overall. Of course, the Keynesian view of fiscal policy involves countercyclical measures, so once the economy picks up they would call for raising taxes and paying off the expenditures, therefore most debts would be paid for by the same generation who creates it, as the business cycle fluctuates in a relatively short time frame.

Meanwhile, the Ricardian perspective considers society to be comprised of generations who decide, of their own volition, to transfer their resources to other
generations. The implication is that consumption is affected by the sum of the resources of a taxpayer and all of his or her descendents. So because deficits are a shift of tax payments onto future generations, assuming that the present discounted values of taxes and expenditures match, the total sum of dynastic resources will be unaffected and deficit policy is a matter of indifference. However, this view is highly problematic because it does not cohere with our intuitions about consumption decisions and human behavior.

Three classic objections raised against Ricardian equivalence are myopia, borrowing constraints and future generations. The Ricardian view of fiscal policy assumes that people are rational in their saving and consumption decisions. So rational, in fact, that they realize in advance that when the government borrows to pay for current spending in the future they will have to pay for it in future taxes. But people may not realize the way taxes will fluctuate over their lifetime and make their consumption choices in a more short-sighted way, thus saving too little for years of increased taxes ahead. The Ricardian view also ignores the effect of fiscal policy on borrowing constraints. Ricardians are only concerned with lifetime consumption and guaranteeing that this value is unchanged regardless of fiscal policy. However, debt-financed tax cuts increase people’s current consumption, which is evidence that the Ricardian view disregards critical economic concepts because current income can be more important than lifetime income for people who face borrowing constraints. Essentially, it allows people to take out a loan from the government when they have reached their cap from banks and other financial institutions, thereby increasing their opportunities for consumption. The most relevant criticism against Ricardianism in the context of this paper is the importance of future generations. One person’s lifetime income may be impacted positively if they
benefit from government spending, but die before having to pay for it. In this way, the current generation benefits from having a tax cut, while the future loses by having to pay for the tax cut and thus there is a transfer of wealth from the future to the past. Barro argues against this critique on the grounds that it makes more sense to consider people’s consumption using families as the base unit instead of individuals because people make bequests, which indicates that beyond their lifespan they care about future generations.

Bernheim and Bagwell (1988) question some of the more basic Ricardian assumptions on the basis of their research on consumer behavior. While Barro defends Ricardianism on the grounds of looking at spending based on the family unit, Bernheim’s research indicates that the “dynastic model” does not represent reality. Instead of looking at one representative distinct family over time, they consider society to be comprised of a variety of individuals with interconnected family ties. Each family tie can overlap with another family, thus creating many linkages. Ultimately, they find that such a situation would create “a host of neutrality results, including the irrelevance of all public redistributions, distortionary taxes and prices.” Since they realize that such a situation is not an accurate depiction of the world, they conclude that Barro’s justifications of Ricardian equivalence are insufficient.

While Neoclassicism and Keynesianism are compatible theories in the sense that Keynesian economists focus on the short-run characteristics of the deficit while Neoclassicists consider the long-term impact of fiscal policy, Neoclassical scholars question the degree to which deficits affect the aggregate demand and the likelihood of fiscal policy decisions to be positive for the economy overall when there is a great likelihood that in the long-term such action can cause harm to society. Therefore
Neoclassicists argue that policy makers should be concerned with stimulating the permanent components of deficits to encourage savings. These theories each take different stances on the issue of consumer behavior and the long-term effects of deficit spending that would result based on their different views, so further research on consumer behavior would probably be the best method for distinguishing among them. But the most compelling arguments that take the interest of long-run future into account come from Neoclassicists.

**The Public Debt Burden**

Buchanan’s analysis of the effects of debt examines the terms “cost” and “burden” because he recognizes that these words are meaningless unless there is an identified timing for the debt effects and a specified group of people who are affected. People who buy “debt instruments” (government securities) do not suffer as they voluntarily purchase them. This group forfeits their purchasing power to the government in exchange for future returns, allowing the government to spend more money. For the purposes of his investigation he ignores whether bond-owners were going to spend this money on consumption or investment.

He makes the observation that the essence of a fiscal policy decision to incur public debt is that it, “allows the objective cost of currently financed expenditure projects to be postponed in time. For the taxpayer, public debt delays the necessity of transferring command over resource services to the treasury” (487). In issuing public debt, there is a free exchange of money from the purchaser to the government. The government, in turn, is making a promise to pay back the interest, principal (or both) of this loan to the bondholder in the future. Buchanan explicitly distinguishes this behavior from money
creation and tax financing where there is no such exchange, claiming that public debt and its effects should be considered separately from other such mechanisms.

Buchanan’s view of debt financing is that while it may be standard to assume that during the period of construction the project is being paid for within the economy because of the opportunity cost of the labor and materials being used in the project, he asserts that this finite view of time ignores the impact on individuals. Within society, people will have to pay taxes to finance the principle and interest of the bonds over time and so there is a burden on future generations because they are paying for this expenditure.

Bowen, Davis and Kopf build on Buchanan’s initial assertions. They make the assumption that if “the real burden [is defined] as the total consumption given up by the country at the time the borrowed funds are spent, then indeed the real burden must be borne by the generation alive at the time of the spending.” Therefore, their task is to redefine the term to encompass a concept that describes a shifting burden that is forced upon future generations. The following are the assumptions of their example:

1. We have a full-employment economy.
2. The first generation of 21 year-olds is alive at the time of the government’s loan expenditure.
3. The second generation is defined as the group of 21 year-olds when the first generation is 65 years old.
4. We ignore the use to which the government’s expenditure is put, and also the interest payments on the debt.
In the first scenario, generation I buys the bonds, reducing their current consumption, but sells them all to generation II, thereby recouping their original lifetime consumption. So the first generation does not suffer a burden. If the bonds are not retired during the lifetime of generation II, then their lifetime consumption is also unchanged because they can sell to generation III, etc. and therefore in this example the perpetual passing down of the bond makes no one worse off.

Under a second scenario, the results are not as pleasing. If the government retires the bonds during the lifetime of the second generation, then their circumstance is rather unfortunate. The government would have to raise taxes to pay for the bonds, so the money the second-generation bondholders receive is the same money that was just taxed away from them. Ultimately, the money spent on the bonds is never recouped and their lifetime consumption is decreased by the value of the bonds. On the other hand, if generation II inherits the bonds, then generation I actually bears the cost because they never receive compensation.

Their conclusion is that the initial money the government raises is a loan for the first generation’s consumption and eventually the generation alive at the time that the bond is retired will have its consumption reduced. As a corollary, interest payments cause an additional burden. Bondholders regard their interest payments as compensation for the inability to spend their money for a period of time and thus are no worse off. However, all the other taxpayers pay money that services the debt, which makes each successive generation burdened.

In his analysis of the impact of the public debt impact, Modigliani takes a different approach. In examining this issue, he decides to look at stock variables instead
of the normal flow variables other theories consider. Modigliani defines the national debt as including all claims held against the national government domestically or internationally, whether or not it is interest-bearing (to include bank-held debt) as well as any claims held by the government against the private sector and foreigners, which means that the public debt can possibly be positive, depending on the balance of these components. He makes the following four points:

1. When government purchases goods and services an increase in the (real) either internal or external national debt will benefit some group of people (or all) present at the time of the increase.

2. This increase will generally place a “gross burden” on those living beyond that time period because the stock of private capital is reduced. When this is coupled with positive marginal productivity of capital it causes a reduced flow of goods and services.

3. The opposite effect holds true as well, such that a decrease in public debt causes a burden to current generations and a benefit for the future.

4. The gross burden depends on the actual expenditure that the government is making. If the government goes into debt to spend money on productive capital formation from which future generations will benefit then there is not necessarily a gross burden. Thus when the government spends on public goods, the issue becomes less questionable.

Mishan argues against the theories of Buchanan, Bowen, Davis and Kopf and Modigliani. He does not acknowledge a burden on future generations because he considers the inevitability that the spending is going towards productive assets. If this
were the case, some sort of good or service may be paid to the public and there would be
no need to raise taxes. Another possibility is that the good may be redistributed to
society and cause a net increase in social welfare as a public good, and thus the initial
expenditure pays for itself in utility and justifies the action. His primary criticism is that
these theories are misrepresenting their objections. Mishan explains, “It is not really debt
creation per se that is responsible for withholding potential lucre from future generations
but simply government loan expenditure that does not issue in sufficiently productive
assets” (540).

In his response to Bowen, Davis and Kopf specifically, Mishan states that it is
possible for the government never to retire the debt and continue to roll it over
indefinitely, so no generation would actually bear the burden. He continues his argument
by reiterating that if there is an interest payment looming overhead it does not necessarily
indicate any burden if the government project yields sufficient income to compensate for
its costs.

In contesting Modigliani’s account, Mishan takes issue with his assumptions
about government behavior. He writes:

If the government resorts to deficit expenditure in order to lift the economy out of a
slump, a burden, in the shape of reduced aggregate real income, is still passed on to
future generations, For as it happens, people prize these bits of government paper as
though they were the real thing, and accordingly they continue gradually to reduce their
rate of saving over time (just as they would have done if full employment had been
maintained without any government deficit), notwithstanding that, in fact, the amount of
real capital formation is smaller than the value of their accumulated holdings of securities
by the amount of the growth in the public debt. True, if the government stood aloof and
allowed the depression to run its course, real income would fall and, it would seem, some
real saving would be lost. But, sooner or later, the economy does recover—with no
illusory assets to induce complacency – and people make special efforts to catch up on
their savings programs. If, as is assumed by Modigliani, these saving programs are
designed to be completed in their lifetimes, they will eventually not only make good the
amount of real private capital formation foregone over the depression period, but end up
with a larger real stock of productive assets – larger by that amount of private securities
which displaces the value of government bonds that they would have held if full
employment had been, instead, maintained by deficit finance. Thus, although the
government’s refusal to administer the Keynesian medicine makes life pretty beastly for
the existing generation, future generations will revel in the joys of a richer inheritance.

Mishan’s approach is to think about the issue in terms of opportunity cost. If the
opportunity cost of an increase in total consumption today is a decrease in potential future
consumption then it must also be true that an increase in aggregate consumption by the
future generations is “no less a reduction of potential aggregate consumption during the
present.” In this way, he considers the burden to go both ways. If the future is burdened
when the current generation decides to consume rather than invest then the opposite
decision burdens the present generation too. Debating where generations fall in this
tradeoff does not constitute enough of an economic hardship that merits the term
“burden” in Mishan’s estimation.

Recent State-Level Research

Poterba explores the effects of various forms of state budgetary institutions on the
state deficits that occurred in the late 1980s. There are similarities in the period of time
he examines to the period of time in question in this paper. In the late 1990s the states
were undergoing fiscal stress that much like the 1980s reflected the fact that revenues
were falling short of expectations, but states still held obligations to provide for services
and programs. Noting that many states have created rules to govern the ability of the
governor and state legislature to create budgetary imbalances, Poterba focuses on the
political institutions states have created to prohibit the long-term use of deficit financing.
Through regression analysis he finds that states that have the most restrictive policies like
“no-deficit carryover” rules and tax and expenditure limitations, tend to adjust more
quickly to unexpected deficits. He also notes that political variables are important
because divided government tends to slow down deficit adjustment, relative to states that
had the governorship and legislature controlled by the same party. His final finding is
that in gubernatorial election years it appears as though political agents are acting
strategically: they are less likely to raise taxes or cut spending.

Holtz-Eakin, Newey and Rosen research another time-related aspect to the state
budgeting process. They consider the period from 1972-1980 and analyze the fiscal data
from municipal governments to conclude that past revenues help predict current
expenditures. Holtz-Eakin et al. note that state and local governments are not concerned
with countercyclical policy so they concentrate on individual local governments’ revenue
expenditure relationship without worrying about stabilization issues or aggregation
problems affecting their results. These assumptions similarly carry over into our
investigation as well. They also are able to make the conclusion that intertemporal
linkages among expenditures, taxes and grants predict the ultimate spending and revenue-
raising decisions of municipal bodies. They contend that this finding gives reason for
concern about regressions that only look at factors that impact spending and revenue
decisions in a given year. While the scope of this paper is to examine various factors that
may fluctuate each year in relation to the spending and revenue balances of the state, it is
not completely clear that such an investigation is without merit. In fact, the
aforementioned findings shed light on the shortcomings of using a political process to
make economic decisions. As they stated, there is a lag of one to two years that
accurately reflects the relationship between fiscal policy decisions. Unfortunately,
making economic decisions for the year 2000 in 1998 should lead to fiscal problems for
the states. It is actually unsurprising that when spending decisions are made in a given
year with data from the past year for a year in the future that there is a lag in the impact of fiscal policies. As we shall see in this paper, while many variables are annually correlated to bond expenditures and general fund deficits, it may be difficult for the states to adjust to annual fluctuations in the national economy given the structure of the budgeting process.
Chapter Three: Econometric Approach

In order to describe the fiscal situation of the states I examine the effects of different types of variables on two measures that are highly related to the state’s economic viability: the general fund net balance and the annual expenditures made through bond financing. These two variables allow for two opportunities to calibrate the effects of different policies, laws, spending patterns and political variables. However, we also note that it is important to look at the per capita impact of these variables. Merely looking at the total budget deficit or amount of bond expenditures neglects the important relationship between the proportion of debt to the number of people in a state. The regressions in this paper also look at the impact of eight classes of independent variables on these two dependent variables to gain insight into the functions of the state budgetary process.

Two Different Dependent Variables

Annual Bond Expenditures – BONDSEXP

The amount of money a state expends in the form of bonds gives us insight into one measure of debt financing. By using bonds to pay for their current expenditures states potentially transfer some of their expenditures today onto future state inhabitants. In order to have a measure of how much money the state is spending over the amount of money they are taking in, it is potentially useful to see what effect different variables have on the amount of bond expenditures the state makes. Using bonds to pay for current spending involves spending money the government has not raised from tax revenues or other state fees, per se. Instead, this fund source impacts the state’s credit rating and
future fiscal position. Over the last seven years, most bond expenditures have not gone to elementary and secondary education, higher education, Medicaid, public assistance or corrections. Instead, the highest category of spending is most often the “all other” category of spending, followed by transportation expenditures. Since the bond expenditure value is positive, an independent variable with a positive coefficient is increasing the amount spent through bonds, while a negative coefficient is indicative of a decreasing effect on the bond total. The bond expenditure values were entered in millions of dollars.

*Annual General Fund Deficit – DEFICIT*

The General fund deficit is the other dependent variables considered in this paper. This variable is calculated by subtracting the amount the state takes into its general fund from the amount the state expends through the general fund. In this way, the positive values for deficits mimic the way the bond expenditure variable is used above, and therefore the independent variables will seem to affect the two in the same way. So a positive coefficient on independent variables regressed on the general fund deficit will be interpreted as increasing the deficit, while negative coefficients on independent variables will be interpreted as decreasing the deficit. The annual general fund balance was calculated in millions of dollars as well.

*Per Capita Annual Bond Expenditures – PCBONDSEXP*

*Per Capita Annual General Fund Deficit – PCDEFICIT*

These variables respectively measure the annual bond expenditures and annual general fund deficit divided by the total resident population of a state as reported annually by the U.S. Census Bureau. While individuals are able to migrate from state to state
depending on their preferences, it is somewhat misleading to calculate the amount of
bonds a state sells without considering how many people can potentially pay for this debt.
Similarly with the general fund deficit we benefit from a per capita estimate because it
would be deceptive to withhold the relative number of people this debt is being spread
over. Essentially these two variables account for the fact that we would expect more
populous states to have larger debts than less populated one and would like to control for
such factors.

**Seven Classes of Independent Variables**

**Annual**

There was a dummy variable for every year analyzed. In addition, we added
variables that could potentially account for large-scale economic trends, including the
annual unemployment rate per state and the average amount of per capita income per
state.

1997 – YEAR97
1998 – YEAR98
1999 – YEAR99
2000 – YEAR00
2001 – YEAR01
2002 – YEAR02

In 2002 a variety of factors came to a head, causing states to reevaluate their
budgeting practices to survive their present circumstances. The effects of September
11th, 2001 resulted in a sense of uncertainty and increased vigilance among local
communities. New Homeland Security requirements created another obligation for the
states as they began to move into a new era of national defense provision. Training, reorganization and administrative duties increased costs for the states. Coupled with increasing stock market decline, the weak economy meant major problems for some of the states. Revenue numbers were hit hard as tax dollars dropped off, while more people were in need of temporary assistance. Health care costs were also on the rise, making Medicaid a greater burden for the states to provide. At the same time, states began to make strides to weather the storm. Among their options were the standard budget adjustment tools. Twenty-six states made across-the-board cuts, 26 states tapped rainy day funds, 15 states laid off employee, 5 states offered early retirement and 13 states reorganized programs. Some states engaged in more radical adjustment tools: delaying expenditures, reducing travel, imposing hiring freezes and increasing taxes.

Oftentimes it is difficult to enact some of the aforementioned policies mid-year, but there are other options to prepare for the future. Some states made drastic budget cuts for short-term savings; 37 states cut more than $12.6 billion from fiscal 2002 budgets. This is the highest number of states and the largest dollar amount to have made cuts in any year in the history of the United States. Usually, traditional programs are exempt from these types of cuts. For example, education funding does not suffer from reductions, but there is so much political pressure against tax increases and the states have exhausted many other strategies, leaving them no other viable option.

2003 – YEAR03

Annual Average Unemployment Rate – UNEMPLOYMENT

Using annual state-level data from the Bureau of Labor Statistics, we decided to control for the amount of unemployment in a given state. This rate represents the number
of unemployed persons in the state as a percentage of the total labor force. A rising unemployment rate is one possible indication of economic hardship occurring in a state, so we hope to capture the effects of such a trend through this measure.

*Average Per Capita Income – PERCAPITAY*

The average per capita income measure comes from the U.S. Census Bureau’s records, which look at the amount of income individuals within a state are acquiring. This variable is another measure of economic fluctuations as people may make less money during a recession or more money during a boom.

*Demographics*ix

Each state has a unique blend of characteristics that shapes its political and economic climate. In order to control for such variables we include some demographic variables to capture other trends occurring in the data. We have included, the population of the state and the annual rate of growth in the population of the state. Another variable we have added is a dummy variable for rural and non-rural states. We then account for the percentage of the population that is over the age of 18, over the age of 60 and over the age of 65 to see if there are any significant impacts between the aging of a state’s population and its fiscal circumstance.

*Total Population – POPULATION*

The total population value comes from the annual data from the U.S. Census Bureau on the number of residents within a particular state. This value is added to some regressions when the dependent variable is not calculated per capita to control for the potential effects of larger and smaller populations on debt-acquisition.

*Annual Population Growth – POPGROWTH*
Using the data on the size of a given state in a given year, we calculate the rate of growth of the population to see whether faster growing states have a meaningful relationship to debt relative to the slower growth states. It is possible that as states are beginning to thrive more they need to make greater investments for future growth and therefore have greater debt burdens.

Rural – RURAL

Another factor we consider is whether a state is rural or not. By using data from the U.S. Census Bureau we consider the percentage of the population in each state that is classified as rural and determine whether it is significant or not. The cutoff percentage ultimately was determined to be 30 percent, which made 29 states non-rural. California is the least rural state, with only 5.5 percent while Vermont is the most rural at 61.8 percent. We include this variable to see if there are any meaningful trends between the economic orientation of a state and its amount of debt.

Percentage of Population over 18 Years of Age – PER18

Percentage of Population over 60 Years of Age – PER60

Percentage of Population over 65 Years of Age – PER65

These variables are also from data reported to the U.S. Census Bureau relating the aging characteristics of a state to its potential level of debt. We may have certain attitudes toward debt based on the amount of burden it will leave to the younger generations, so accounting for this demographic variable will allow us to observe such patterns.

Composition of Expenditures

Elementary and secondary education – ELEMANDSEC
Elementary and secondary education is the largest functional category of state spending, amounting to $232.5 billion in fiscal 2002. Despite budgetary problems, this category of spending remains largely exempt from cuts. In general, states use these funds to maintain basic educational services, train teachers, reduce classroom size, train people in technology and ensure accountability, while still providing enough funds for school construction, renovation and repairs.

In 2002 the No Child Left Behind Act created new requirements and funds to aid the states in providing quality education to America’s children. Among the initiatives included are requirements for states to provide public school choice for students in failing schools, integrate scientifically-based reading research into comprehensive reading instruction for young children, set a baseline standard from 2001-2002 data and monitor annual progress from this point forward, issue annual report cards on school performance and statewide test results by 2002-2003 and assure that all classes are taught by qualified teachers.

Courts also continue to play a role in setting funding policies for education. Since 1971, most states have been subject to lawsuits seeking to reform their funding systems for education. These cases are litigated on the basis of state rather than federal constitutional language and generally seek greater equity in funding among school districts or a guaranteed level of “adequate” funding for education. Eighteen state supreme courts have found the finance systems unconstitutional and many states are still actively involved in litigation. Even in states where litigation has not occurred or not succeeded, the prospect of lawsuits has prompted revisions of state funding policy. In
addition to challenges focusing on school operating budgets, in at least 37 states school
corruption and renovation are the focus of legal challenges.

States fund almost 50 percent of total school costs, while local governments
contribute approximately 43 percent and the federal government contributes the
remaining 7 percent. A number of states have moved toward increasing their share of
funding for elementary and secondary education by substituting state funds for local
funds, often in order to reduce the reliance on local property taxes. Funds are distributed
to schools as both general funds on a per-pupil basis and as categorical grants to support
specific programs or needs. The federal share is a source of supplemental funding for
poor school districts and also helps pay the cost of educating handicapped children.

Higher education -- HIGHERPER

Higher education expenditures reflect the amount the state spends on the state
university system, community colleges and vocational education institutions. This
category is often highly susceptible to budget cuts since, although it is functional, it is
also discretionary. Because tuition can always be increased even if funding is decreased,
this category of state spending is often the first one to be cut. According to The College
Board, average tuition and fees have increased 14.1 percent during the current economic
downturn. Meanwhile, the state has been spending money on construction, renovation
and capital projects for higher education. The states have the capacity to make such
improvements because of low interest rates and debt financing.

There is a growing trend by state policymakers and the public to ensure greater
quality, productivity and effectiveness among postsecondary institutions. To hold
colleges and universities accountable for the public funds they receive, many states now
have programs that in part fund public campuses based on performance criteria. In some states, public institutions are required to report on outcome and other measures. These methods are often added to the traditional considerations of current costs, student enrollments and inflationary increases. The increased use of these methods by states demonstrates a growing belief that performance and accountability should play a role in allocating state resources to public education.

Meanwhile, community colleges are catering to an increasing number of students at a low cost. Community colleges broaden access to higher education, provide training for displaced workers, teach job skills for individuals receiving public assistance, and are important players in community economic development efforts. Additionally, community colleges are the frontline providers of job and language training to new immigrants and the leading trainers of current workers seeking enhanced skills to better compete in a knowledge-based economy. The national average public community college tuition are relatively lower and more flexible in terms of scheduling than traditional four-institutions, increasing their appeal to a broader group of people.

Public institutions of higher learning have also expanded their offerings in distance learning. Using internet technology and interactive video, these schools are providing alternative opportunities to individuals with time and place constraints, such as working parents, students with disabilities and workers seeking additional training for advancement. The trend to increase distance learning at public institutions raises several fiscal questions for the states. Some view distance learning as a cost savings approach to providing secondary education, but the costs in developing, implementing and delivering
the courses can also be substantial. Many institutions do not receive appropriations for these projects, but reallocate funds within their existing budgets instead.

Cash Assistance for Public Welfare – ASSISTANCEPER

Starting in 1997, the federal government began transitioning from Aid to Families with Dependent Children (AFDC) to Temporary Assistance for Needy Families (TANF) after the passage of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 replaced the 60-year-old program. According to the U.S. Department of Health and Human Services figures, the average monthly number of TANF recipients fell from 12.8 million prior to the enactment of TANF to 5.0 million at the end of fiscal 2002, a decrease of 59 percent. Under AFDC the declining number of caseloads would have resulted in automatic declines in federal and state spending, but although caseloads and cash assistance expenditures have declined, the amount of federal TANF funding remains constant. The 1996 chartering Act stipulated that the annual TANF block grant allocations would be based on 1994 funding levels so a total of $16.5 billion was authorized annually for TANF through 2002. In order for states to receive their full TANF block grant they must meet a maintenance of effort requirement and therefore do not have proportionate savings from the declining caseload. The maintenance of effort requirement mandates that states must continue to spend funds at a level equal to at least 80 percent of state spending for AFDC-related programs in 1994. Therefore, this abundance of financial resources has resulted in states expending federal TANF funds on a variety of services and benefits. Legislated criteria of TANF include work requirements, childcare funding, child support enforcement and transferability between its funds and the Social Services Block Grant. States have begun to provide assistance to
programs that address childcare services, training and education, transportation needs, transitional rental assistance, substance abuse, job readiness and job retention training and domestic violence. As cash assistance has declined, these supportive services have gained greater importance in the program.

**Medicaid – MEDICAIDPER**

Medicaid is a means-tested entitlement program financed by the states and the federal government that provides medical care for about 47 million low-income individuals. Growth in Medicaid expenditures, coupled with a downturn in state revenue collections, continues to place severe strain on state budgets. States must provide Medicaid coverage to certain population groups: members of families with children and pregnant women, and persons who are aged, blind or disabled. They may also opt to provide care to other groups at their discretion. Of all Medicaid beneficiaries, approximately one-quarter are elderly and disabled and three-quarters are children and non-disabled adults, while the costs of Medicaid services are approximately three-quarters for the elderly and the disabled and one-quarter for children and non-disabled adults.

Certain basic medical services must be provided while additional services may be covered if the state chooses. The basic services include inpatient hospital care, nursing homes, state facilities for the developmentally disabled, home health care, physician services, and outpatient hospital care and prescription drugs. According to the Kaiser Commission on Medicaid and the Uninsured report, spending on outpatient prescription drugs, which increased an average of 18 percent annually over the last three years. Enrollment, which also rises in recessions, is another contributing factor to increasing
costs. The Department of Health and Human Services also cites nursing home, community-based long-term care costs and payments to health plans as other sources of rising costs.

Every state has either implemented changes or is considering changes as a result of these fiscal strains. Governors and legislators are recommending several different types of cost containment actions to combat this problem. Pharmacy reduction is one of the methods currently employed. States are requiring prior authorization of additional classes of pharmaceuticals, developing preferred drug lists, instituting co-payments, reducing reimbursements to pharmacies by increasing the discounts from average wholesale price, reducing dispensing fees paid to pharmacists, limiting the number of prescriptions, developing a maximum allowable cost price system, seeking additional rebates for drugs and promoting the use of generics. States are also freezing or reducing reimbursements to providers, which include payments to hospitals, home health services, nursing homes, mental health services, medical transportation, managed care organizations, ambulatory surgical centers, durable medical equipment suppliers and payments for uncompensated care. By reducing medical coverage for certain adults, non-custodial parents and dental, chiropractic, optometry and podiatry services the states manage to save more money. About half of the states have plans to generate revenues to compensate Medicaid expenditures. Most of these measures involve placing fees or taxes on health care providers, however, some states are reallocating tobacco settlement funds, increasing a hospital tax, increasing cigarette taxes, adding a quality assurance fee for nursing facilities, using the Medicare upper payment limit, taxing nursing home providers and increasing casino revenue taxes.
The federal government has been providing additional assistance as well in the form of The Jobs and Growth Reconciliation Act, enacted in May 2003, which includes state fiscal relief by providing a temporary increase in the federal Medicaid matching rate to help out in 2003 and 2004.

**Corrections – CORRECTIONS**

State corrections’ spending reflects the costs to build and operate prison systems and may include spending on juvenile justice programs and alternatives to incarceration such as probation and parole, depending on the state. The level of state spending for corrections has remained relatively constant over the years. The growth rate, however, is declining, which can be attributed to slow economic growth that pressures states to reduce program budgets. But because state prison populations have continued to grow state prisons are under a great deal of strain and have incentives to operate over capacity.

While the crime rate for violent crime (murders, rapes, aggravated assaults and robberies) and property crime (burglaries, thefts, motor vehicle thefts and arson) has been decreasing, incarceration rates are growing. Therefore, it makes more sense to partly attribute the increase in prison population to tough mandatory sentencing laws for nonviolent drug offenders and the “three strikes” laws that can put repeat offenders behind bars for life. As pressures mount, some states have instituted innovations, such as diverting drug offenders to treatment programs.

**Transportation – TRANSPORTATION**

State transportation expenditures include the costs of maintaining and creating roads and freeways as well as the costs associated with tending to other public transportation needs. Because of budget shortfalls, capital projects for transportation
needs are systematically being scaled back or put on hold to free up resources for states to supplement current operations. The Transportation Equity Act for the 21st Century (TEA-21) was enacted in 1998. This legislation authorized $215 billion for highway, transit and motor carrier programs until 2003. The funding guaranteed $165 billion to highway programs, $2.2 billion to highway safety and $650 million for motor carrier safety. Prior to this act, transportation funds were appropriated annually as part of the federal discretionary budget.

All other expenditures – OTHERPER

Most state spending falls into the six functional areas, but a considerable amount of state spending occurs in categories that differ from the aforementioned ones. Such spending may include institutional and community care for mentally ill and developmentally disabled persons, hospitals, natural resources, air transportation, water transportation and terminals, public health programs, employer contributions to pensions and health benefits, economic development, environmental projects, state police, parks and recreation, housing, and general aid to local government.

Another constituent of this category is a new program that is part of the Balanced Budget Act of 1997. The enactment of the State Children’s Health Insurance Program (SCHIP) has increased health coverage for previously uninsured children. SCHIP is targeted to children whose families have income too high to qualify for Medicaid but too low to afford private insurance. States receive a federal match for their SCHIP programs ranging from 56 percent to 85 percent within a capped allotment.
Revenues

Revenue in state general funds—the main source for state expenditures – is often a direct reflection of the economic environment the state experiences. As the economy is doing better, the state raises more revenues from taxes and other consumer behavior. There are three main sources of general fund revenue: sales and compensating use taxes, personal income taxes and corporate income taxes. In total, these revenues sum to over 75 percent of general fund revenues. Gaming taxes, where applicable provide a small percentage funds, while other taxes and fees make up the difference.

Depending on the state, these other taxes may include cigarette and tobacco taxes, alcoholic beverage taxes, insurance premiums, severance taxes, licenses and fees for permits, inheritances taxes and charges for state-provided services. States use a variety of taxes and fees to finance programs, not all of which are reflected in the general fund. These include some gaming taxes, lottery proceeds, and motor vehicle taxes fees, which often are earmarked for special purposes or specific funds, such as education or roads. During the late 1990s and into 2000 the states benefited from a booming stock market, and as capital gains surged, state personal income tax collections in particular swelled. To combat this problem, states raised taxes and fees by $8 billion in fiscal 2003- mostly in cigarette and tobacco taxes and sales taxes, after having cut them for the last eight years. Nonetheless, some states manage without personal income taxes and some do without sales taxes.

Sales Tax – SALESTAX

Personal Income Tax – PERSONALTAAX

Corporate Income Tax – CORPORATE TAX
Gaming Tax – GAMINGTAX

Other Tax – OTHERTAX

Funds Expended by Source

The majority of state expenditures are paid for out of the state’s general fund, but altogether federal funds, other state funds and bonds cover the budget outlays.

General fund expenditures – GENERALEXP

The predominant fund for financing state operations includes revenues that are received from broad-based state taxes. Elementary and secondary education expenditures constitute the largest share of the general fund.

Federal fund expenditures -- FEDERALEXP

Federal funds are funds received directly from the federal government. Medicaid accounts for the largest portion of state spending from this source. Expansions to the Medicaid program, increasing caseloads, and the increased use of provider taxes and voluntary contributions to secure matching federal funds all help to explain these increases.

Other State Funds -- STATEEXP

Other state funds include expenditures made from revenue sources that are restricted by law for particular governmental functions or activities. For example, Medicaid may have other state funds contributing to its expenditures in the form of provider taxes, fees, donations, assessments and local funds. After the “all other” category, transportation makes up the greatest share of expenditure from other state funds.

Bond Expenditures -- BONDSEXEXP
Bonds are expenditures from the sale of bonds and generally are used for capital projects.

**Capital Expenditures’ Source**

Capital expenditures are expenditures made for new construction, major repairs and improvements, land purchases and the acquisition of major equipment and existing structures. These figures represent capital spending on higher education, corrections, transportation, environmental projects, housing in addition to other more specific forms. Because of the specific nature of capital spending, such as long construction timetables and unforeseen or delayed project costs, increases in state spending on capital projects are generally followed by a significant decrease. The biggest state capital expenditure category is transportation.

*Capital expenditures from General funds* – GENERALCAP

*Capital expenditures from Federal funds* -- FEDERALCAP

Capital expenditures from all other funds -- OTHERCAP

Capital expenditures from Bond funds – BONDSCAP

**Politics**

*Governor’s Party* – GOVDEM

One of the variables considered on an annual basis if the party of the state governor. This value was simply looked up and coded as it applied over the period in question.

*“Red” or “Blue” State* – RED

Since there is only one presidential election that occurs in this time period, one of the variables considered is whether the state is a “Red” state, a state whole electoral votes
went to President Bush or a “Blue” state, whose electoral votes did not go to President Bush.

Laws

The states have very diverse mechanisms aimed at creating fiscal responsibility. Governors are given significant discretion to ensure a balanced budget and relative to the federal government, states have stricter limitations on the way they spend and raise money. Governors in 45 states must submit a balanced budget, while the legislature in 41 states must pass a balanced budget. States also have to monitor their debt financing in order to avoid jeopardizing their bond rating. These variables measure the balance of power between the governor and the legislature by coding relative authority in the budgeting process. We also include variables that capture state balanced budget requirements. The extent of a governor’s authority over budget issues varies among the states.

_Gubernatorial Budget Authority and Responsibility_

These variables consider the authority governors possess in comparison to those of the legislature. The governor may do the following without consent of the legislature: reorganize departments (in 23 states), spend unanticipated federal funds (in 31 states) and reduce the budget (in 36 states).

LAW1 – Giving Agencies Funding Level Request Targets
LAW2 – Publish Agency Requests Executive Budget
LAW3 – Reorganize Departments without Legislative Approval
LAW4 – Spend Unanticipated Federal Funds without Legislative Approval
LAW5 – Restrictions on Budget Reductions
Gubernatorial Veto Authority

A key budgetary tool available to some governors is the line item veto. Forty-two states have the line item veto. This is a provision that allows a governor to veto components of the legislative budget on a line-by-line basis. Forty states have provisions that allow the governor to reject particular items in a piece of legislation such a sentence, paragraph or part of a sentence, known as “item veto.” Of the 41 with appropriation item veto authority, 14 allow for a veto of selected words, with 3 allowing the veto to change the meaning of the words.

LAW6 – No Veto Power
LAW7 – Line Item Veto
LAW8 – Item Veto Appropriations
LAW9 – Item Veto of Selected Words
LAW10 – Item Veto to Change Meaning of Words

Balanced Budget Requirements

Governors are often limited in how much they can spend. Most state governments are precluded from deficit spending. As a result, advocates for a federal balanced budget often make comparisons to the states. Balanced budget advocates argue that with a balanced budget amendment, the federal government would function with the same fiscal discipline as state governments. Although state balanced budget provisions do have consequences and force budget writers to think in balanced budget terms, the provisions do not preclude a state from running small, short-term deficits. Most states have some type of balanced budget provision; however, the degree to which the provisions require actual revenues to equal expenditures in a given fiscal period varies.
Some balanced budget provisions simply require the governor to present a balanced budget, while 40 states require the legislature to pass a balanced budget and 34 states require the governor to sign a balanced budget.

LAW 11 – Governor must submit Balanced Budget
LAW 12 – Legislature Must Pass Balanced Budget
LAW 13 – Governor Must Sign Balanced Budget
LAW 14 – May Carry Over Deficit
Chapter Four: Regression Analysis

The following four tables depict the results of the regressions on both bond values and general fund deficits by their total values and per capita, respectively.

**Regressions on Bond Values**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>P-Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>YEAR97</td>
<td>-6669.600</td>
<td>3169.909</td>
<td>0.036</td>
</tr>
<tr>
<td>YEAR98</td>
<td>-6697.033</td>
<td>3154.480</td>
<td>0.035</td>
</tr>
<tr>
<td>YEAR99</td>
<td>-6697.949</td>
<td>3142.252</td>
<td>0.034</td>
</tr>
<tr>
<td>YEAR00</td>
<td>-6726.117</td>
<td>3125.169</td>
<td>0.032</td>
</tr>
<tr>
<td>YEAR01</td>
<td>-6643.547</td>
<td>3109.835</td>
<td>0.034</td>
</tr>
<tr>
<td>YEAR02</td>
<td>-6619.445</td>
<td>3101.485</td>
<td>0.034</td>
</tr>
<tr>
<td>YEAR03</td>
<td>-6431.708</td>
<td>3094.960</td>
<td>0.039</td>
</tr>
<tr>
<td>ELEMANDSEC PER</td>
<td>0.560</td>
<td>3.133</td>
<td>0.858</td>
</tr>
<tr>
<td>HIGHER PER</td>
<td>-8.864</td>
<td>7.082</td>
<td>0.212</td>
</tr>
<tr>
<td>ASSISTANCE PER</td>
<td>-120.349</td>
<td>38.002</td>
<td>0.002</td>
</tr>
<tr>
<td>MEDICAID PER</td>
<td>-21.647</td>
<td>9.200</td>
<td>0.019</td>
</tr>
<tr>
<td>CORRECTION PER</td>
<td>-10.722</td>
<td>51.148</td>
<td>0.834</td>
</tr>
<tr>
<td>TRANSPORTATION PER</td>
<td>-1.116</td>
<td>6.517</td>
<td>0.864</td>
</tr>
<tr>
<td>SALESTAX</td>
<td>0.063</td>
<td>0.051</td>
<td>0.218</td>
</tr>
<tr>
<td>PERSONAL TAX</td>
<td>-0.024</td>
<td>0.036</td>
<td>0.505</td>
</tr>
<tr>
<td>CORPORATION TAX</td>
<td>0.197</td>
<td>0.092</td>
<td>0.033</td>
</tr>
<tr>
<td>GAMING TAX</td>
<td>0.041</td>
<td>0.346</td>
<td>0.905</td>
</tr>
<tr>
<td>OTHER TAX</td>
<td>-0.026</td>
<td>0.039</td>
<td>0.513</td>
</tr>
<tr>
<td>GENERALEXP</td>
<td>0.054</td>
<td>0.032</td>
<td>0.092</td>
</tr>
<tr>
<td>FEDERALEXP</td>
<td>0.159</td>
<td>0.024</td>
<td>0.000</td>
</tr>
<tr>
<td>STATE EXP</td>
<td>-0.000</td>
<td>0.017</td>
<td>0.979</td>
</tr>
<tr>
<td>GENERAL CAP</td>
<td>0.051</td>
<td>0.237</td>
<td>0.830</td>
</tr>
<tr>
<td>FEDERAL CAP</td>
<td>-0.600</td>
<td>0.143</td>
<td>0.000</td>
</tr>
<tr>
<td>OTHER CAP</td>
<td>0.042</td>
<td>0.064</td>
<td>0.509</td>
</tr>
<tr>
<td>BONDSCAP</td>
<td>1.276</td>
<td>0.144</td>
<td>0.000</td>
</tr>
<tr>
<td>GOVDEM</td>
<td>65.601</td>
<td>81.693</td>
<td>0.423</td>
</tr>
<tr>
<td>RED</td>
<td>-136.262</td>
<td>119.151</td>
<td>0.254</td>
</tr>
<tr>
<td>LAW1</td>
<td>-505.418</td>
<td>122.371</td>
<td>0.000</td>
</tr>
<tr>
<td>LAW2</td>
<td>-273.837</td>
<td>101.242</td>
<td>0.007</td>
</tr>
<tr>
<td>LAW3</td>
<td>-211.512</td>
<td>83.013</td>
<td>0.011</td>
</tr>
<tr>
<td>LAW4</td>
<td>37.312</td>
<td>101.947</td>
<td>0.715</td>
</tr>
<tr>
<td>LAW5</td>
<td>-124.142</td>
<td>92.252</td>
<td>0.180</td>
</tr>
<tr>
<td>LAW6</td>
<td>-14.705</td>
<td>122.606</td>
<td>0.905</td>
</tr>
<tr>
<td>LAW7</td>
<td>-702.450</td>
<td>355.838</td>
<td>0.049</td>
</tr>
<tr>
<td>Variable</td>
<td>Coefficient</td>
<td>Standard Error</td>
<td>P-Value</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
<td>----------------</td>
<td>---------</td>
</tr>
<tr>
<td>YEAR97</td>
<td>-0.00042</td>
<td>0.00021</td>
<td>0.05000</td>
</tr>
<tr>
<td>YEAR98</td>
<td>-0.00042</td>
<td>0.00021</td>
<td>0.04800</td>
</tr>
<tr>
<td>YEAR99</td>
<td>-0.00041</td>
<td>0.00021</td>
<td>0.05200</td>
</tr>
<tr>
<td>YEAR00</td>
<td>-0.00040</td>
<td>0.00021</td>
<td>0.05700</td>
</tr>
<tr>
<td>YEAR01</td>
<td>-0.00040</td>
<td>0.00021</td>
<td>0.05700</td>
</tr>
<tr>
<td>YEAR02</td>
<td>-0.00039</td>
<td>0.00021</td>
<td>0.06200</td>
</tr>
<tr>
<td>YEAR03</td>
<td>-0.00038</td>
<td>0.00021</td>
<td>0.06900</td>
</tr>
<tr>
<td>ELEMANDSECPER</td>
<td>+0.00000</td>
<td>0.00000</td>
<td>0.74700</td>
</tr>
<tr>
<td>HIGHERPER</td>
<td>-0.00000</td>
<td>0.00000</td>
<td>0.15200</td>
</tr>
<tr>
<td>ASSISTANCEPER</td>
<td>-0.00000</td>
<td>0.00000</td>
<td>0.32700</td>
</tr>
<tr>
<td>MEDICAIDPER</td>
<td>-0.00000</td>
<td>0.00000</td>
<td>0.04100</td>
</tr>
<tr>
<td>CORRECTIONPER</td>
<td>-0.00001</td>
<td>0.00000</td>
<td>0.10000</td>
</tr>
<tr>
<td>TRANSPORTATIONPER</td>
<td>-0.00000</td>
<td>0.00000</td>
<td>0.41200</td>
</tr>
<tr>
<td>SALESTAX</td>
<td>0.04384</td>
<td>0.01615</td>
<td>0.00700</td>
</tr>
<tr>
<td>PERSONALTAX</td>
<td>0.04374</td>
<td>0.01476</td>
<td>0.00300</td>
</tr>
<tr>
<td>CORPORATETAX</td>
<td>0.06595</td>
<td>0.03761</td>
<td>0.08100</td>
</tr>
<tr>
<td>GAMINGTAX</td>
<td>0.06852</td>
<td>0.08022</td>
<td>0.39400</td>
</tr>
<tr>
<td>OTHERTAX</td>
<td>0.01029</td>
<td>0.01278</td>
<td>0.42200</td>
</tr>
<tr>
<td>GENERALEXP</td>
<td>-0.00884</td>
<td>0.01291</td>
<td>0.49400</td>
</tr>
<tr>
<td>FEDERALEXP</td>
<td>-0.02692</td>
<td>0.01281</td>
<td>0.03700</td>
</tr>
<tr>
<td>STATEEXP</td>
<td>-0.02267</td>
<td>0.00738</td>
<td>0.00200</td>
</tr>
<tr>
<td>GENERALCAP</td>
<td>0.03715</td>
<td>0.09347</td>
<td>0.69100</td>
</tr>
<tr>
<td>FEDERALCAP</td>
<td>0.02224</td>
<td>0.02257</td>
<td>0.32500</td>
</tr>
<tr>
<td>OTHERCAP</td>
<td>0.00362</td>
<td>0.02672</td>
<td>0.89200</td>
</tr>
<tr>
<td>BONDSCAP</td>
<td>0.83238</td>
<td>0.03757</td>
<td>0.00000</td>
</tr>
<tr>
<td>GOVDEM</td>
<td>+0.00000</td>
<td>0.00001</td>
<td>0.84200</td>
</tr>
<tr>
<td>RED</td>
<td>-0.00001</td>
<td>0.00001</td>
<td>0.28600</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>LAW1</td>
<td>-0.00002</td>
<td>0.00001</td>
<td>0.04500</td>
</tr>
<tr>
<td>LAW2</td>
<td>-0.00002</td>
<td>0.00001</td>
<td>0.01700</td>
</tr>
<tr>
<td>LAW3</td>
<td>-0.00002</td>
<td>0.00001</td>
<td>0.00500</td>
</tr>
<tr>
<td>LAW4</td>
<td>0.00000</td>
<td>0.00001</td>
<td>0.66900</td>
</tr>
<tr>
<td>LAW5</td>
<td>-0.00002</td>
<td>0.00001</td>
<td>0.00300</td>
</tr>
<tr>
<td>LAW6</td>
<td>0.00000</td>
<td>0.00001</td>
<td>0.72700</td>
</tr>
<tr>
<td>LAW7</td>
<td>0.00000</td>
<td>0.00002</td>
<td>0.94600</td>
</tr>
<tr>
<td>LAW8</td>
<td>0.00001</td>
<td>0.00002</td>
<td>0.45100</td>
</tr>
<tr>
<td>LAW9</td>
<td>-0.00001</td>
<td>0.00001</td>
<td>0.46400</td>
</tr>
<tr>
<td>LAW10</td>
<td>0.00000</td>
<td>0.00001</td>
<td>0.67200</td>
</tr>
<tr>
<td>LAW11</td>
<td>-0.00001</td>
<td>0.00002</td>
<td>0.58000</td>
</tr>
<tr>
<td>LAW12</td>
<td>0.00000</td>
<td>0.00001</td>
<td>0.77000</td>
</tr>
<tr>
<td>LAW13</td>
<td>-0.00001</td>
<td>0.00001</td>
<td>0.35000</td>
</tr>
<tr>
<td>LAW14</td>
<td>0.00001</td>
<td>0.00001</td>
<td>0.13700</td>
</tr>
<tr>
<td>PERCAPITAY</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.15300</td>
</tr>
<tr>
<td>POPGROWTH</td>
<td>-0.00035</td>
<td>0.00046</td>
<td>0.45100</td>
</tr>
<tr>
<td>RURAL</td>
<td>0.00000</td>
<td>0.00001</td>
<td>0.75700</td>
</tr>
<tr>
<td>PER18</td>
<td>0.00001</td>
<td>0.00000</td>
<td>0.02700</td>
</tr>
<tr>
<td>PER60</td>
<td>0.00000</td>
<td>0.00002</td>
<td>0.92900</td>
</tr>
<tr>
<td>PER65</td>
<td>-0.00001</td>
<td>0.00002</td>
<td>0.69400</td>
</tr>
<tr>
<td>UNEMPLOYMENT</td>
<td>0.00000</td>
<td>0.00000</td>
<td>0.14100</td>
</tr>
</tbody>
</table>

Items in bold have p-values < .10

## Regressions on General Fund Deficit/Surplus

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Coefficient</td>
<td>Standard Error</td>
<td>P-Values</td>
</tr>
<tr>
<td>YEAR97</td>
<td>8230.284</td>
<td>6044.483</td>
<td>0.174</td>
</tr>
<tr>
<td>YEAR98</td>
<td>8157.616</td>
<td>6016.101</td>
<td>0.176</td>
</tr>
<tr>
<td>YEAR99</td>
<td>7760.101</td>
<td>5994.952</td>
<td>0.197</td>
</tr>
<tr>
<td>YEAR00</td>
<td>7887.288</td>
<td>5962.503</td>
<td>0.187</td>
</tr>
<tr>
<td>YEAR01</td>
<td>7573.137</td>
<td>5933.826</td>
<td>0.203</td>
</tr>
<tr>
<td>YEAR02</td>
<td>7868.312</td>
<td>5916.293</td>
<td>0.185</td>
</tr>
<tr>
<td>YEAR03</td>
<td>7706.139</td>
<td>5902.018</td>
<td>0.193</td>
</tr>
<tr>
<td>ELEMANDSECPER</td>
<td>-7.764</td>
<td>5.927</td>
<td>0.191</td>
</tr>
<tr>
<td>HIGHERPER</td>
<td>6.066</td>
<td>13.475</td>
<td>0.653</td>
</tr>
<tr>
<td>ASSISTANCEPER</td>
<td>40.278</td>
<td>73.400</td>
<td>0.584</td>
</tr>
<tr>
<td>MEDICAIDPER</td>
<td>-23.033</td>
<td>17.581</td>
<td>0.191</td>
</tr>
<tr>
<td>CORRECTIONPER</td>
<td>155.599</td>
<td>96.627</td>
<td>0.108</td>
</tr>
<tr>
<td>TRANSPORTATIONPER</td>
<td>-26.235</td>
<td>12.267</td>
<td>0.033</td>
</tr>
<tr>
<td>SALESTAX</td>
<td>-0.035</td>
<td>0.078</td>
<td>0.651</td>
</tr>
<tr>
<td>PERSONALTAX</td>
<td>-0.154</td>
<td>0.044</td>
<td>0.001</td>
</tr>
<tr>
<td>CORPORATETAX</td>
<td>-0.851</td>
<td>0.175</td>
<td>0.000</td>
</tr>
<tr>
<td>GAMINGTAX</td>
<td>-3.362</td>
<td>0.641</td>
<td>0.000</td>
</tr>
<tr>
<td>OTHERTAX</td>
<td>-0.313</td>
<td>0.061</td>
<td>0.000</td>
</tr>
<tr>
<td>GENERALEXP</td>
<td>0.096</td>
<td>0.048</td>
<td>0.049</td>
</tr>
</tbody>
</table>

DEFICIT – R-squared of .55
<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>P-Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>YEAR97</td>
<td>0.002003</td>
<td>0.00099</td>
<td>0.043</td>
</tr>
<tr>
<td>YEAR98</td>
<td>0.002022</td>
<td>0.00098</td>
<td>0.040</td>
</tr>
<tr>
<td>YEAR99</td>
<td>0.002022</td>
<td>0.00098</td>
<td>0.040</td>
</tr>
<tr>
<td>YEAR00</td>
<td>0.002066</td>
<td>0.00097</td>
<td>0.035</td>
</tr>
<tr>
<td>YEAR01</td>
<td>0.002109</td>
<td>0.00097</td>
<td>0.030</td>
</tr>
<tr>
<td>YEAR02</td>
<td>0.002206</td>
<td>0.00097</td>
<td>0.023</td>
</tr>
<tr>
<td>YEAR03</td>
<td>0.002211</td>
<td>0.00096</td>
<td>0.022</td>
</tr>
<tr>
<td>ELEMANDSECPER</td>
<td>-0.000003</td>
<td>0.00000</td>
<td>0.010</td>
</tr>
<tr>
<td>HIGHERPER</td>
<td>-0.000001</td>
<td>0.00000</td>
<td>0.799</td>
</tr>
<tr>
<td>ASSISTANCEPER</td>
<td>0.000005</td>
<td>0.00001</td>
<td>0.607</td>
</tr>
<tr>
<td>MEDICAIDPER</td>
<td>-0.000015</td>
<td>0.00000</td>
<td>0.000</td>
</tr>
<tr>
<td>CORRECTIONPER</td>
<td>0.000004</td>
<td>0.00001</td>
<td>0.806</td>
</tr>
</tbody>
</table>

Items in bold have p-values < .10
<table>
<thead>
<tr>
<th>Category</th>
<th>Coefficient 1</th>
<th>Coefficient 2</th>
<th>Coefficient 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANSPORTATIONPER</td>
<td>-0.000006</td>
<td>0.000000</td>
<td>0.002</td>
</tr>
<tr>
<td>SALESTAX</td>
<td>-0.287889</td>
<td>0.06333</td>
<td>0.000</td>
</tr>
<tr>
<td>PERSONALTAX</td>
<td>-0.262784</td>
<td>0.05417</td>
<td>0.000</td>
</tr>
<tr>
<td>CORPORATETAX</td>
<td>-0.521190</td>
<td>0.17451</td>
<td>0.003</td>
</tr>
<tr>
<td>GAMINGTAX</td>
<td>-1.018917</td>
<td>0.37572</td>
<td>0.007</td>
</tr>
<tr>
<td>OTHERTAX</td>
<td>-0.338921</td>
<td>0.04458</td>
<td>0.000</td>
</tr>
<tr>
<td>GENERALEXP</td>
<td>-0.095207</td>
<td>0.06013</td>
<td>0.114</td>
</tr>
<tr>
<td>FEDERALEXP</td>
<td>-0.230413</td>
<td>0.03225</td>
<td>0.000</td>
</tr>
<tr>
<td>STATEEXP</td>
<td>-0.193366</td>
<td>0.28232</td>
<td>0.494</td>
</tr>
<tr>
<td>GENERALCAP</td>
<td>1.419226</td>
<td>0.42883</td>
<td>0.001</td>
</tr>
<tr>
<td>FEDERALCAP</td>
<td>-0.103978</td>
<td>0.10557</td>
<td>0.326</td>
</tr>
<tr>
<td>OTHERCAP</td>
<td>-0.117399</td>
<td>0.12476</td>
<td>0.348</td>
</tr>
<tr>
<td>BONDSCAP</td>
<td>1.148578</td>
<td>0.28526</td>
<td>0.000</td>
</tr>
<tr>
<td>GOVDEM</td>
<td>0.000060</td>
<td>0.00003</td>
<td>0.020</td>
</tr>
<tr>
<td>RED</td>
<td>-0.000174</td>
<td>0.00004</td>
<td>0.000</td>
</tr>
<tr>
<td>LAW1</td>
<td>0.000100</td>
<td>0.00004</td>
<td>0.011</td>
</tr>
<tr>
<td>LAW2</td>
<td>0.000044</td>
<td>0.00003</td>
<td>0.195</td>
</tr>
<tr>
<td>LAW3</td>
<td>-0.000008</td>
<td>0.00003</td>
<td>0.763</td>
</tr>
<tr>
<td>LAW4</td>
<td>-0.000115</td>
<td>0.00003</td>
<td>0.000</td>
</tr>
<tr>
<td>LAW5</td>
<td>-0.000067</td>
<td>0.00003</td>
<td>0.035</td>
</tr>
<tr>
<td>LAW6</td>
<td>0.000044</td>
<td>0.00004</td>
<td>0.255</td>
</tr>
<tr>
<td>LAW7</td>
<td>0.000270</td>
<td>0.00011</td>
<td>0.012</td>
</tr>
<tr>
<td>LAW8</td>
<td>-0.000025</td>
<td>0.00008</td>
<td>0.744</td>
</tr>
<tr>
<td>LAW9</td>
<td>0.000097</td>
<td>0.00006</td>
<td>0.080</td>
</tr>
<tr>
<td>LAW10</td>
<td>0.000038</td>
<td>0.00003</td>
<td>0.245</td>
</tr>
<tr>
<td>LAW11</td>
<td>-0.000289</td>
<td>0.00007</td>
<td>0.000</td>
</tr>
<tr>
<td>LAW12</td>
<td>-0.000015</td>
<td>0.00004</td>
<td>0.724</td>
</tr>
<tr>
<td>LAW13</td>
<td>0.000024</td>
<td>0.00004</td>
<td>0.562</td>
</tr>
<tr>
<td>LAW14</td>
<td>0.000023</td>
<td>0.00004</td>
<td>0.550</td>
</tr>
<tr>
<td>PERCAPITAY</td>
<td>0.000000</td>
<td>0.00000</td>
<td>0.030</td>
</tr>
<tr>
<td>POPGROWTH</td>
<td>-0.006414</td>
<td>0.00211</td>
<td>0.003</td>
</tr>
<tr>
<td>RURAL</td>
<td>0.000036</td>
<td>0.00003</td>
<td>0.282</td>
</tr>
<tr>
<td>PER18</td>
<td>-0.000029</td>
<td>0.00002</td>
<td>0.110</td>
</tr>
<tr>
<td>PER60</td>
<td>0.000232</td>
<td>0.00008</td>
<td>0.005</td>
</tr>
<tr>
<td>PER65</td>
<td>-0.000237</td>
<td>0.00009</td>
<td>0.007</td>
</tr>
<tr>
<td>UNEMPLOYMENT</td>
<td>-0.000065</td>
<td>0.00001</td>
<td>0.682</td>
</tr>
</tbody>
</table>

Items in bold have p-values < .10

**Analysis of Each Independent Variable**

**Composition of Expenditures**

All of the variables within this category except for elementary and secondary education, which had no significant values, revealed a negative correlation with bond.
expenditures. As a result it seems as though an increase in the percentage of functional spending categories decreases the amount spent out of bond sales. This correlation may be attributable to the fact that the majority of bond expenditures finance other categories of spending and not the ones expressly listed here.

When it comes to general fund deficits there is a negative correlation with the percentage spent on elementary and secondary education, Medicaid and transportation. However, there is a positive correlation with cash assistance for welfare and corrections spending. Higher education showed an unclear correlation to the general fund balance.

*Elementary and secondary education* – ELEMANDSEC

This category of spending displays a positive correlation with bond expenditures and a negative one with having a general fund deficit. Although the only significant value arises in the per capita measure of the state deficit, the relationship between bond expenditures may be because there is a correspondence between the importance of educational expenditures that require bond expenditures and more strained financial times. Thus, when the economy takes a downturn educational spending tends to be protected and may take up a larger share of bond expenditures, but relative to other types of spending like assistance, for example, the importance of educational spending may decrease when the general fund deficit increases. So it may be a pattern that deficits tend to occur when the more structured aspects of the budget take up a smaller percentage of the overall budget.

*Higher education* -- HIGHERPER

The coefficient values for higher education expenditures had an insignificant impact on our dependent variables, and in the case it had an inconsistent one on our two
deficit variables as well. However, it did have a consistent negative impact on bond values. This situation indicates that for a percentage increase in higher education spending there is a corresponding decrease in the amount of bond expenditures by a magnitude in the $10 millions. This finding is somewhat unexpected because state spending on higher education tends to involve many capital projects, which would theoretically be more likely to be financed through bonds. This situation may reflect the discretionary nature of this spending category. It is possible that when states are spending on higher education, their economy is more robust and they therefore do not have to spend as much money using bonds.

Cash Assistance for Public Welfare – ASSISTANCEPER

While the percentage of the state budget spent on providing cash assistance for public welfare does not appear to have a significant effect on general fund deficits, it does have a significant negative impact on the amount of money spent from bond sales. This result is logical because a percentage increase in welfare spending translates into state-sponsored consumption. Since there is a higher percentage of money being spent on this type of assistance, there may be more money being spent on encouraging state productivity and less being spent on long-term projects that would require bond expenditures. Another possibility is that there may be more people in need of assistance during slumping economic times, which corresponds to a decrease in the amount the states would spend on capital projects that may require bonds. As TANF has shifted some of the requirements and services that the states provide from pure cash assistance towards creating programs that address the ability of people to be more productive self-sustaining workers, increasing the budgetary share for this category may be promoting
the state’s economy and increasing its tax revenues, which could require less bond spending.

Although the relationship is not significant, there is a positive correlation between assistance payments and the general fund deficit, which confirms our intuition that there is a correlation between a slumping economy and a state’s deficit value.

*Medicaid – MEDICAIDPER*

Medicaid spending as a proportion of the budget is shown to have a decreasing effect on both the amount spent on bonds and the amount of general fund deficit the state incurs. For every increasing percentage of Medicaid spending, bond expenditures decrease by about $22 million. This situation may reflect the fact that an increase in Medicaid expenditures causes a decrease in other types of expenditures and shifts the budget towards less discretionary state projects, decreasing the amount spent out of bonds. An increase in the percentage of Medicaid spending may have this effect because as the economy does poorly, the amount of spending that occurs may be whittled down to the bare essentials, which would then include a higher share of Medicaid, leaving less room for other projects.

It is somewhat surprising that an increasing percentage of Medicaid decreases the general fund deficit because we would anticipate a greater deficit as spending on Medicaid increases to offset the more people who would need Medicaid’s services. However, it is possible that as the economy slumps Medicaid’s share of spending increases and the state concentrates on balancing funds that are more easily anticipated, like the general fund.

*Corrections – CORRECTIONSPER*
Overall, as the percentage of spending on state corrections increases, there is a negative effect on the amount of expenditure made in bonds and a positive effect on the amount of general fund deficit the state accrues. The impact of corrections spending is to decrease the amount of bond expenditure by about $11 million; on per capita bond expenditures it decreases it by about $10 per person. A higher percentage of corrections spending may push out other types of spending that would typically correspond to bond expenditures. Another possible interpretation is that as the economy does well and spending increases on corrections then there is less of a need to spend out of bonds because of increased revenues that the state takes in.

As spending on corrections increases by one percent there is a $156 million increase in the general fund deficit. This situation may reflect the increasing responsibility the state takes in its spending when the economy is doing more poorly. Another possible interpretation is that there is a lag in corrections spending if many of their projects involve capital improvements, such that a project begins in good economic times, but as the economy does more poorly the state is forced to finish projects, despite the decrease in funds.

Transportation – TRANSPORTATIONPER

As state transportation spending increases, there is a negative impact on bond expenditures on general fund deficits. The more spending there is on transportation, the less room there may be for the other types of spending that primarily correspond to bonds or other types of spending that would create a deficit.
Revenues

Overall, all of the different types of taxes states use to raise money are negatively correlated with general fund deficits. These numbers correspond to our intuitions about the relationship between the business cycle and economic hardships among the states because the more money people make, the more money the state taxes away. In the bond expenditures category personal taxes and other taxes had conflicting values, but sales tax, corporate tax and gaming tax all shared a positive correlation with bond expenditures. This situation may reflect the possibility that these types of taxes tend to stay relatively constant over periods of economic difficulty, while personal taxes and other taxes have more fluctuations.

Funds Expended by Source

An increase in expenditures out of the general fund has an unclear relationship to our dependent variables. However, expenditures from other state funds tend to have a negative correlation with bond expenditures and an unclear one with general fund deficits. This result may be explained by the correlation among these different budget sources. As the general fund and federal sources are being used more heavily, it is likely that there is less spending in the other category. One of the tactics states use to deal with budgetary problems is to shift funds from their earmarked locations to a more immediate needs, which tend to be in the general fund. Therefore, bond expenditures, which already tend to be used for this “other” category, may also increase to make up for the budgetary shift. It is unsurprising that there is an inverse relationship between bond expenditures and other state expenditures because other state fund expenditures tend to cover some of the same categories that bond spending covers as well. Therefore, there could be a
crowding out effect between these two variables since they are substitutes for one another.

Meanwhile, an increase in spending from federal sources tends to be correlated with a decrease in the state’s general fund deficit. These results can probably be attributed to the relationship among these variables, which would indicate that the more federal funds there are, the less likely it is that the state will have to go into deficit.

**Capital Expenditures’ Source**

When capital expenditures are being paid for out of the state’s general fund or from a state’s bond sales, it tends to correlate positively with the state’s general fund deficit and bond expenditure value. However, when these expenditures are made out of other sources of state funds or federal funds it tends to be negatively correlated with state deficits. This situation may be attributable to the way that the state handles its budgetary crises. As mentioned above, when the state is facing economic hardship, it has a tendency to cease capital projects, but also to shift money from other state funds to the more functional categories of state spending. As a result, it is possible that when the state is spending on capital from its other funds, it is doing better economically than in other times, when it has to pool its resources and cut spending. Capital spending from federal funds has a negative relationship with deficits, as does spending from other state funds. Most likely this situation stems from the tendency of capital spending to be suspended when the state does not have enough resources.

**Politics**

Overall, it appears that Republicans tend to have better fiscal policy outcomes than Democrats based on our regression. If a non-Democrat is in the governor’s office or
if a state voted for George W. Bush in the last presidential election it tends to decrease bond expenditures and state deficits.

Governor’s Party – GOVDEM

If a state has a Democrat governor it is likely to have higher bond expenditures, and higher general fund deficits. A Democratic governor has $65.6 million higher bond expenditures and a $449 million higher general deficit than a non-Democrat. In our per capita regressions these effects turn out to be a very slight positive increase in bond expenditures and a $60 increase in general fund deficit per person. Democrats typically espouse a doctrine of higher spending on state-sponsored programs, which may be harder to curb in periods of economic downturns. Although they may also be more willing to raise taxes than Republicans, it is difficult to raise public support for such a program and thus Democratic states may become overextended in terms of general fund spending. Democrats may support more state-sponsored capital projects, which would also explain the higher bond expenditures, if we assume this value is not purely the result of greater debt creation.

“Red” or “Blue” State – RED

If a state voted for Bush in the 2000 election, it corresponds to both a decrease in the state’s general fund deficit and its bond expenditures. This value was only significant for the per capita deficit impact, which resulted in a $174 decrease in deficit per person. Such states may offer fewer government services than their counterpart states, as discussed above, which may account for the differences in the trends of the dependent variables.
Laws

Gubernatorial Budget Authority and Responsibility

These variables consider the authority governor’s possess in comparison to those of the legislature. In the governor may do the following without consent of the legislature: reorganize departments (in 23 states), spend unanticipated federal funds (in 31 states) and reduce the budget (in 36 states).

LAW1 – Give Agencies Funding Level Request Targets

LAW2 – Publish Agency Requests Executive Budget

LAW9 – Item Veto of Selected Words

The three laws written above all correspond to similar effects on our dependent variables. They all have a significant positive impact on general fund deficits, but they also correspond to a decrease in the amount spent using bonds. When the government has the ability to give agencies funding level request targets it results in a $529 million increase in general fund deficit ($100 per capita) and a $505 million decrease in bond expenditures ($20 per capita). When agency requests are published in the Executive Budget, it decreases bond expenditures by $274 million ($20 per capita) and increases the federal deficit by $99 million ($44 per capita). Such practices may correspond to states that tend to have agencies that underestimate their needs, which would result in general fund deficits. Overall, however, the state may be accounting for more aspects of the budgeting process, which would result in less of a need to sell bonds.

Giving the governor the ability to item veto selected words is a practice held by a diverse mix of states. Arkansas, California, Georgia, Illinois, Massachusetts, Missouri, New Jersey, Ohio, Pennsylvania, West Virginia, Wisconsin and Wyoming all have this
stipulation. This variable may capture the ability of the governor to decrease large-scale capital projects that would contribute to bond expenditures. This power gives the governor a significant amount of leeway in passing legislation, so it may not be the specific legislation that keeps the amount of bond expenditures in check, but the veto’s symbolic indication of the governor’s power in state politics. On the other hand, there is a per capita increase in deficit of $97, which is statistically significant. This situation may be because an increase in power can off-set the balance and compromise reached in the legislature, thus creating general fund deficits in the overall budget.

LAW3 – Reorganize Departments without Legislative Approval

LAW5 – Restrictions on Budget Reductions

The two laws above correspond to decreases in both bond expenditures and state deficits. When the governor has the ability to reorganize agency departments without legislative approval there is a negative impact on both bond expenditures and general fund deficits. This variable may indicate the importance of executive control and power over the budgeting process. By giving his power to the governor without confining him or her to the regulation of the legislature, the governor may be able to keep the budget in balance more easily. When this policy is enacted a state’s bond expenditures decreases by $212 million ($20 per capita) and has a general fund deficit that is $187 million lower than a state that does not have this stipulation ($67 per capita).

However, when there are restrictions on the methods the state governor can use to change the budget the legislature creates there is a decrease in general fund deficits and bond expenditures as well. Having this policy decreases the amount spent using bonds by about $124 million (($20 per capita) and decreases the general fund deficit by about
$102 million ($67 per capita). One scenario that may explain this situation is the possibility that a more rigid budget structure may ensure that budget decisions are not changed dramatically, so there is deliberation in the budgeting process, which would keep careless changes from occurring that would create imbalances. By reaching a compromise and working together the governor and the legislature may create a budget everyone can approve.

LAW4 – Spend Unanticipated Federal Funds without Legislative Approval

By allowing the governor to spend unanticipated federal funds without legislative approval, the state may have higher bond expenditures and lower general fund deficits. It is unclear why this variable would impact the two dependent variables in opposite directions, but it is possible that the governor may commit the state to programs using federal funds that may create obligations, which require future funding. It is also possible that federal fund expenditures may require some state monies as well in some sort of matching scheme, which could put the state in a position of having to sell bonds. In general, having this policy increases state bond expenditures by about $37 million.

Meanwhile having this policy decreases state general fund deficits by approximately $439 million. Again, this may be an indication of the benefits of greater executive control over the budgeting process, but it may also indicate that federal funds take the burden off of the states, like an unexpected windfall. The governor may be more likely to pay off debts or losses than to create more programs that would require continuous funding. In this way, we would expect to see the general fund deficit decrease as the governor may put money into the traditional expenditure allocations, instead of making more complicated choices.
The effect of the line item veto and the item veto of appropriations is unclear when it comes to bond values and the general fund deficit. In per capita regressions the effect is positive, but when it is aggregated it looks negative for the line item veto. On the other hand, the per capita effect on bond expenditures is positive, while the other three dependent variables decrease when a state has this law. The line item veto gives the governor the ability to reject certain aspects of a piece of legislation without rejecting the piece of legislation in its entirety. Therefore, the more discretionary funding that comprises the majority of bond funds may be able to be struck down. It may also be true that states that give the executive more power tend to have a better-organized budgeting system that allows the state to keep its fiscal circumstances in better balance. States that do not allow the line item veto include Indiana, Nevada, New Hampshire, North Carolina, Rhode Island and Vermont.

Giving the governor the ability to change the meaning of words while vetoing has a positive effect on both bond expenditures and deficit creation. This situation seems intuitively troubling. The additional veto should keep fiscal decisions in check and not contribute to imbalances. Illinois, New Jersey and Wyoming are the only states that allow this provision. It may be that when the governor is given this power it creates a situation where the intent of the legislation is perverted and results in bad consequences.
When the governor must submit a balanced budget there is a significant negative impact on the state per capita general fund deficit, however there was not a significant impact on bond expenditures. Forty-four states have this requirement, excluding Idaho, Indiana, Texas, Vermont, Virginia and West Virginia. On average having this requirement decreases the per capita general fund deficit by approximately $289. This situation may indicate that when the planning process begins in a balanced position, it is more likely to stay that way throughout the legislative process. While the governor is in a position to consolidate the different aspects of the state budget altogether, this situation may be the optimal for responsible budgeting practices.

LAW 12 – Legislature Must Pass Balanced Budget

When the legislature must pass a balanced budget, there is no significant impact on the amount of general fund deficit or bond expenditures. However, the impact seems to be fairly uniformly negative. 40 states have this requirement, excluding California, Hawaii, Indiana, Missouri, New Hampshire, New York, Pennsylvania, Vermont, Virginia and Washington. This result appear to be consistent with our intuitions because if the legislature plans its spending decisions appropriately, it will not be put in the position of creating excessive debt and as much bond expenditure.

LAW 13 – Governor Must Sign Balanced Budget

Having a statutory or constitutional mandate that the governor must sign a balanced budget significantly impacts both the amount the state spends using bonds and the amount of deficit the state incurs, positively correlating with the aggregate bond expenditure and general fund deficits in the states. While this statute increases the
amount of bond expenditures by an average of $346 million, it increases the amount of
general fund deficit by about $526 million. While 33 states have this requirement,
including notoriously indebted states like California, it appears that the resulting balances
are not as consistent with the planned outcome as the legislators would have liked. In
fact, the consistently positive correlation is rather disconcerting, but probably reflects the
time it takes to readjust budget instruments to keep the different components in balance
with each other.

**Annual Economic Change**

*Income Per Capita – PERCAPITAY*

Per Capita Income has a significant negative relationship with aggregated bond
expenditures and a positive relationship with aggregated state deficits and per capita
deficits as well. This situation conforms to our expectations for bond expenditures
because this particular measure is highly correlated to the economy. People tend to make
more money during positive economic periods of growth and thus tax revenues would be
higher from income taxes and sales taxes because people have more money to spend. As
a result, there would be less of a need to finance projects through bond expenditures.
However, in relation to state deficits, it seems as though there must be other more
important factors impacting this measure than merely the state of the economy. If the
state tends to go more into debt as per capita income increases, this may be an indication
that the states are spending beyond their means in good economic times.

*Average Annual Unemployment Rate – UNEMPLOYMENT*

The unemployment rate is another variable highly correlated to the economy.
This variable only has one significant relationship: with the dependent variable aggregate
bond expenditure. It has an unclear insignificant relationship with general fund deficit, however. As unemployment increases, the amount of bond expenditures decreases by about $86.5 million. A potential explanation for this situation is that our measure for percent of the general fund spent on assistance has accounted for a large degree in the variation due to this type of factor. When people are unemployed, it creates a greater strain on cash assistance programs, which had a positive correlation with both bond expenditures and general fund deficits. Holding this value constant, the state may be trying to decrease its long-term fiscal obligations by decreasing capital spending and thus bond expenditures may be negatively correlated with unemployment.

**Demographics**

*Total State Residential Population per Year – POPULATION*

The state’s total population is negatively correlated to the aggregate bond expenditure, but positively correlated to the aggregate deficit. It is possible that when there is a larger population, tax revenues are higher and thus less of the financing must be paid for through bond financing. On the other hand, we expect larger states to have larger deficits because they have greater obligations than smaller states and are likely to have greater difficulty when they cannot fulfill their obligations. We find that because of this relationship, it has been worthwhile to consider the impacts of these dependent variables on a per capita basis.

*Annual Growth Rate of Population – POPGROWTH*

Population growth helps to capture the difference between states that are growing more quickly than others. This variable is only significant for general fund deficits, but has a consistently negative correlation with all of our dependent variables. We find that
the higher the annual rate of population growth, the lower the amount of bond expenditures and the lower the general fund deficit. This result is somewhat counterintuitive because we may expect states that are growing quickly to need to invest more in their state services and programs. They may also need to create more infrastructural improvements and take on more capital projects. Instead, a possible explanation may be that the state is attracting more people from other states and therefore is gaining higher tax revenues that could offset any increasing costs, which would explain the lower bond expenditures and deficit creation.

*Over 30 percent of the State Population is Classified as Rural – RURAL*

Classifying a state as rural based on the composition of its population results in statistically insignificant relationships with our dependent variables. However, it has a consistently negative correlation with bond expenditures and a positive one with general fund expenditures. One possible explanation is that rural states are less likely to embark on capital projects that would necessitate bond financing. On the other hand, these states may have a greater need for general fund expenditures in areas like education and medical assistance, which would create greater deficits. Though this relationship is interesting, since it does not reach a high enough level of significance, we cannot make any grandiose claims based on this data.

*Percentage of the Residential Population Over the Age of 18 – PER18*

*Percentage of the Residential Population Over the Age of 60 – PER60*

*Percentage of the Residential Population Over the Age of 65 – PER65*

Since an important aspect of the ethics of debt-financing it concerned with the demographic burden shift of such behavior, we consider the different financing
techniques that states use relative to the composition of their population. We find that the
greater the percentage of the population over the age of 18, the higher the bond
expenditures, but the lower the general fund deficit. These values are consistently
significant. For aggregate bond expenditures, it increases the amount financed by $193
million ($10 per person). It decreases the general fund deficit by $183 million ($29 per
person, although this term is not statistically significant).

These values are highly interesting because it indicates that populations that are
more concentrated among older generations are much more likely to shift the burden onto
younger generations through bond-financing, while decreasing the amount of current
deficit they are creating today. This relationship may indicate the self-interested
motivations of adults who do not adequately take the interests of the future into account
in their financing decisions. This burden shifting is somewhat troublesome because these
populations have proportionally fewer young people, so if the trends continue, there will
be the potential for an unfair burden among the states for younger generations.

On the other hand, as the percentage of the population over 60 and over 65
increases there are two different effects on debt-creation. For per capita bond
expenditures, general fund deficits and per capita general fund deficits there is a positive
correlation with the percentage of the population over 60 and a negative correlation with
a proportional increase in the population over 65. The aggregate bond expenditure has
the opposite relationship. Since these two factors are moving in opposite directions, they
appear to cancel each other out.
Chapter Five: Conclusion

Part of the challenge of a project like this one is to make comparisons across the states. What makes this project interesting is the fact that within one country there are so many different methods and conditions placed on states’ ability to affect the economic climate for their inhabitants. But this degree of free reign also creates challenges for anyone attempting to make comparisons across them. These states have very different classification systems, accounting practices, budget cycles and laws that govern the budget process. Although there are federal policies that impact them greatly and certain economic conditions that occur across the board, each state has its own unique context that must be carefully considered before taking any of these observations to the federal level.

Overall, we conclude that our findings reinforce those of earlier researchers in this field. The two most important areas to address are the correlation between contemporary factors and current debt balances and the correlation between legal rules and institutions to current debt balances. Starting from the works of Holtz-Eakin, Newey and Rosen and Poterba we can clearly deduce the way this paper relates to their research.

Holtz-Eakin, Newey and Rosen conclude that the most valid way to predict the behavior of the state’s revenue and expenditure decisions is to use lagged data because there is an intertemporal interaction between taxes, grants and expenditures. In this paper we see that state governments seem to minimize their debt creation when they are able to focus on their core competencies – the areas of the budget that tend to be relatively major and stable over time. Thus, we find a negative correlation between the percentages of many of the fundamental components to the general budget like Medicaid, education,
transportation and corrections, which indicates that the greater the percentage of the “other” category or of assistance spending, the more likely the state is to run a deficit.

We also find positive correlations with many of the capital expenditure variables, which lend more legitimacy to our theory that predictability is a key factor in creating budget stability. Capital projects are inherently risky and vulnerable to unexpected costs over time. The more money the states spend on such ventures, the less likely they are to be able to control for different degrees of returns and outcomes on their investment.

Surprisingly, straight economic variables like per capita income and unemployment did not have consistent impacts on our dependent variables and thus do not directly account for the variation as much as we would have expected. Instead, it seems that the impact of such factors are likely to be spread out over tax revenues and welfare payments. Overall, to ensure budget stability it is essential that the state be able to account for the allocation of money and will minimize its debt creation by devoting its budgetary activity towards fundamental government services.

An interesting finding also emerges relative to the conclusions Poterba makes regarding the budgetary institutions the states have instated to create fiscal stability. Our annually aggregated findings seem to indicate that despite the efforts of the states to create stringent laws that curb wasteful spending and mandate fiscal responsibility, exogenous factors have a way of thwarting these efforts. Although state governors tend to have a great deal of power and freedom in authorizing and approving the budget, these safeguards do not guarantee a positive outcome on an annual basis. While many of the budget-making rules do not have automatic consequences or punishments, there is an incentive problem when politicians tend to be constrained by their desire for reelection
and the danger of increasing taxes or cutting back on state-sponsored programs.

Nonetheless, this paper reflects the ability of economic fluctuations and unexpected occurrences to create serious problems for the states in the short-run, even when they have regulations to curb such events. However, we can still acknowledge that in the long-run states that have such budget regulations will be able to get back on track faster than other states, depending on how they have prioritized this activity and how well structured their budget-making process is.

Ultimately, though periods of financial hardship create greater demands on the state, oftentimes the proposed efforts to curb budget spending seem like logical things the state should constantly strive to accomplish. We see, however, that certain types of regulations that distribute power over the budget-making process and a clear focus on the objectives of the state government help to guide the state through periods of uncertainty and ensure a quicker rebound.
References


