THE IMPACT OF PERSONAL INCOME TAX ON STATE GOVERNMENT REVENUES

Capstone in Public Financial Management

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Executive Summary

There are competing theories on the impact of tax policy on the economy. Many policymakers believe that cutting income taxes stimulates the economy, while others believe that tax cuts adversely affect the economy. Income taxes face the most opposition from governors and legislators, despite generating huge amounts of revenue. However, whether policymakers decide on cutting or raising personal income taxes, this can significantly affect state government revenues—either negatively or positively, most especially states whose primary source of revenue is personal income tax.

Recently, Tennessee and Kentucky passed major tax reforms in 2017 and 2018 respectively, with broadly different policy goals. Tennessee’s Hall income tax¹ was phased out and Kentucky’s personal income tax was lowered, while reforming policies towards income tax deductions, credits, and exemptions. Theory suggests that some of these policies could have a significant effect on revenue and taxpayers. This claim is examined using a case study approach for both states to determine the effect these reforms had on the state revenues and taxpayers in Kentucky and Tennessee. This study examines the impact of personal income tax on state government revenues and analyzes the impact of tax cuts by comparing the economies of two states: Kentucky and Tennessee. They are geographically within the same region. Kentucky is a state in the Upland South region of the United states, bordered by Tennessee to the south, and thus share the same demographics and other social economic characteristics.

The literature review focuses on studies on personal income tax, government revenue, and economic growth. The paper also reviews the theoretical framework to include supply-side theory and benefit theory. In addition, the paper reviews empirical studies relevant to the subject.

¹ Hall income tax is a tax imposed only on individuals and other entities receiving interest from bonds and notes and dividends from stock.
The research design details the goals and methodology of the analysis utilizing secondary data from the Kentucky Office of the State Budget Director, Kentucky Department of Revenue, Tennessee Department of Revenue, US Bureau of Labor Statistics, and the US Census Bureau for the data analysis.

The study finds that tax cuts have significant influence on government revenue, but strong gains in sales and gross receipts were offset by declines in income and property taxes. The study also finds that tax cuts shift the tax burden onto low-and-middle income families. Additionally, Kentucky’s revenue system—though in need of revenue to keep up with the economy—has a more balanced and reliable mix of revenue sources compared to Tennessee’s revenue system.

The findings also showed that the economy of Tennessee fairs better than Kentucky’s in terms of population and employment. In conclusion, personal income tax cuts impact government revenues, but further research is needed to understand more reasons for the results shown.

**Introduction**

There are competing theories on the impact of tax policy on the economy. Many policymakers believe that cutting income taxes stimulates the economy, while others believe that tax cuts adversely affect the economy. Policymakers are interested in strengthening economic growth and creating jobs. To this end, they have seen taxes as a very effective tool in generating revenue to achieve their aim. Countries of the world, either developed or developing, base economic development on taxation, and, as such, it has become a major source of revenue generation for funding government services. This explains why different countries have different tax policies that enable them to explore various types of taxation and impose them on their
citizens for the purpose of strengthening revenue generation to consolidate their economy. Similarly, in the quest for stimulating economic growth, state governments utilize their tax base to generate revenue in providing public services to the taxpayers and residents.

State governments generate revenues from taxes such as the personal income tax, corporate income tax, sales tax, excise tax, and property tax for funding public programs. Tax fairness, which is a measure of a taxpayer’s ability to pay, can be determined to be either progressive, regressive, or proportional. Taxes such as sales, excise, and property taxes are regressive and require middle- to low-income earners to pay a much greater share of their income in taxes. Personal income and corporate taxes are progressive and require low- to middle-income earners to pay a fair share of their income in taxes. Almost every state relies on some combination of regressive, proportional, and progressive taxes. In adding these taxes together, the overall progressivity or regressivity of a tax system is determined by (1) the degree of progressivity or regressivity of each tax within the system and (2) how heavily a state relies on each tax.²

Personal income taxes are the largest source of tax revenue in the United States, accounting for one-third (37 percent) of state tax collections in the fiscal year 2017 (FY 2017).³ Personal income tax is levied on wages, salaries, dividends, interest, and other income an individual earns throughout the year. It is progressive and requires taxpayers to pay a fair share of their income in taxes to support government services. In 1950, the personal income tax accounted for only 9.3 percent of total state tax revenue. By 1970, the figure had risen to 19

percent. By 2013, the tax constituted 36.5 percent of total state tax revenue, raising $309.5 billion and edging out sales tax as the largest source of tax revenues for state governments.\(^4\)

A significant source of income differs from state to state. While some states impose a tax on personal income, some other states do not have a personal income tax, and even other states have a local income tax in addition to the state-level income tax. Forty-one states and the District of Columbia levy a broad-based individual income tax. New Hampshire taxes only interest and dividends, and Tennessee taxes only bond interest and stock dividends (Tennessee is phasing its tax out and will completely eliminate it in 2021). Alaska, Florida, Nevada, South Dakota, Texas, Washington, and Wyoming do not have a state individual income tax.\(^5\) States that impose a personal income tax spend most of the income tax generated on education, health, and social service programs. States rely mostly on their income tax for investment and economic development. However, in states that levy a personal income tax, there is a decided political bias against personal income taxes, with the most opposition coming from governors and state legislators, despite income taxes producing tremendous amounts of revenue and enjoying relatively widespread public support.\(^6\)

While some states believe that personal income tax cuts are not a good strategy for economic growth,\(^7\) policymakers of several other states believe that raising personal income tax

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rates on the highest incomes is a good approach to strengthen their economies.\textsuperscript{8} Conversely, states that do not impose any tax levies on personal income make up for lost potential revenue in other ways. Such states ask residents and visitors to pay more sales tax on groceries, clothes, and other goods, as is the case in Nevada.\textsuperscript{9}

Furthermore, in states with no personal income taxes, sales taxes, one of the major sources of revenue for such states, are regressive. They are levied at a flat rate and unavoidably take a larger share of income from low- and middle-income families than they take from high-income earners. Ironically, depending on how bad state revenues might be during fiscal distress, states without a personal income tax are quick to debate reinstating or adding new source of revenue. More importantly, Alaska is debating on reinstating a personal income tax as a new source of revenue due to a decline in oil revenue. A progressive personal income tax is said to be valuable in the wake of the 2017 federal tax overhaul, which cut income taxes steeply for high-income earners. The state’s lawmakers hope to recapture some of the $340 million federal tax cut windfall that they estimate the state’s top 5 percent of earners will receive.\textsuperscript{10}

Having streams of revenue helps states fund major public services, balance budgets, and stabilize “rainy day” fund reserves, needed to meet unforeseen circumstances. During this unprecedented time, COVID-19 has had a negative fiscal impact on state revenues. The impact, however, may be different and depend on each state’s revenue structure. For instance, energy-producing states and those dependent upon tourism have experienced great impact, and states


with economies more reliant upon services have been hit harder. However, built-up rainy-day funds will be helpful as COVID-19 takes its toll on the economy.

In light of the foregoing, the impact of raising personal income tax rates is evident in the increasing substantial revenues generated to support investments in education, health, and infrastructure, thus boosting the economy. Tax cuts, on the other hand, significantly decrease revenues, thereby harming economic growth, and causing budget deficits, that lead to spending cuts. States have experienced what can be called the “politics of antitaxation,” which has limited state governments’ ability to raise revenue precisely when the demand for services and education spending has increased.

The question then becomes what is the impact of tax cuts on state government revenue? Have states without personal income taxes outperformed states with income taxes? Has such tax reform been fair to taxpayers? In other words, how can the impact of a progressive, fair, stable, and equitable personal income tax be assessed in generating revenue after tax cuts?

This paper focuses on personal income taxes and analyzes the impact of tax cuts by comparing the economies of two states: Kentucky and Tennessee. Hence, this study will contribute to the existing academic literature on the impact of personal income taxes on states’ government revenues.

**Literature Review**

The personal income tax is a tax levied on wages, salaries, dividends, interest, and other income an individual earns throughout the year. Personal income taxes are a source of revenue

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for state governments that impose income tax; it allows citizens to contribute their fair share towards government services based on their ability to pay. It explains why high-income earners pay a larger dollar amount, but not necessarily a larger percentage share, of their income in tax than low-income earners. In addition, several features of the tax have contributed to its growing importance in state budgets: acceptance by the citizens, consistent growth, and ease of administration. However, many states have undermined the impact of their income taxes in several ways. For example, the effect of antitax politics on state personal income taxes is one of the major tax policy issues facing state governments. One issue being debated is whether tax cuts are an effective strategy for improving the state’s economic growth and job opportunities. Such debates have had an impact on state tax policy and revenues.

Kentucky Tax Reform

In 2018, the Kentucky legislature passed HB 366, a tax reform package that changed Kentucky tax code. The tax reform was projected to raise $395.8 million in revenue for the state and increase Kentucky’s ranking on the State Business Tax Climate Index from 33rd to 18th nationally. The plan replaced the previous six-bracket individual income tax, with the highest rate being 6.0 percent, with a 5 percent single-rate individual income tax. Broadening income tax base by removing deductions and repealing the personal exemption credit ($10 per filer, $20 per dependent). The current three-bracket corporate income tax, with its top rate of 6.0 percent, was replaced with a 5 percent flat rate. The sales tax base was expanded to include select services, phase out the inventory use tax credit, and raise the cigarette tax from 60 cents to $1.10 per

Although, the plan provided a broader tax base while lowering rates, it was not without opposition. The new flat rate of 5 percent for everyone caused small companies and citizens with below-average incomes to face tax hikes, while higher earners received tax cuts.

**Tennessee Tax Reform**

Tennessee enacted its tax reform during their 2016 and 2017 legislative sessions. In 2016, Tennessee lawmakers passed a bill that was signed into law by then Governor Bill Haslam to reduce the Hall income tax rate on investment interest and dividends to 5 percent. Then in 2017, the legislature passed another bill to phase out the Hall tax by reducing the rate to 4 percent in 2017, 3 percent in 2018, 2 percent in 2019, and 1 percent in 2020 before fully eliminating the tax beginning January 1, 2021. Hall income tax was a Tennessee state tax on interest and dividend income from investments. It was the only tax on personal income; therefore, as of January 1, 2021, the Hall income tax no longer exists, and the state does not levy a personal income tax of any form on individuals.  

The tax reform was projected to improve the state’s rank on the *State Business Tax Climate Index* from 11th nationally and place the state among the most competitive tax systems in the country. Although this tax reform has been viewed as further simplifying Tennessee’s tax code and making it more neutral and pro-growth, the repeal of the Hall tax income would

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significantly reduce the revenues available to fund state and local public services and tilt
Tennessee’s highly regressive tax system even more heavily in favor of the wealthy.\textsuperscript{16}

\textit{Government Revenue}

Government revenue is the amount of money received by a government from taxes
(internal sources) and other revenues (external sources) to fund their expenditures. Tax revenue
includes income, sales, property, and corporate taxes while nontax revenue includes federal
grants, fines, and user fees, and dividends. In 2017, state governments collected $2.0 trillion of
general revenues. Taxes provided 48 percent of state general revenues, including 18 percent from
individual income taxes.\textsuperscript{17} The determining factors influencing the increase or decrease in
revenues from taxes collected by the government are economic (inflation, gross domestic
product (GDP), interest rates), political (tax policy), and social and demographic factors
(personal income, population). While increased revenue generated from income taxes can help
provide a budget surplus, stabilize reserve funds, and fund public services, reduced revenue can
lead to funding cuts to public services. Although income taxes fluctuate with changes in
economic activity, just as COVID-19 has recently adversely affected economic conditions and
negatively impacted state income taxes, income taxes are still a relatively stable source of
revenue compared to other types of taxes.

\textsuperscript{16} Institute on Taxation and Economic Policy, “Tennessee Hall Tax Repeal Would Overwhelmingly Benefit
the Wealthy, Raise Tennesseans’ Federal Tax Bills by $85 Million,” February 2016,

\textsuperscript{17} Urban Institute, “State and Local Government Revenues,” in \textit{State and Local Finance Initiative}, 2007,
https://www.urban.org/policy-centers/cross-center-initiatives/state-and-local-finance-initiative/state-and-local-
backgrounders/state-and-local-revenues.
**Economic Growth**

Economic growth is an increase in the production of goods and services over time. Economic growth can be measured as the percent rate of increase in real gross product (GDP) per capita income. It has been described as a growth in potential GDP determined by growth in the potential labor force and growth in potential labor productivity, which, in turn, grows through native population growth and immigration.¹⁸ Policymakers of some states that have attributed tax cuts to economic growth and job creation have not seen growth; rather, they have had slower job growth and have seen a decline in the share of national employment.¹⁹ Tax cuts do not grow the economy, but well-conceived tax, regulatory, and public investment policies can complement labor force growth and private investment in expanding potential GDP.²⁰ While income tax revenue has the potential for economic growth, state capacity to stimulate economic growth should not be limited to taxes. State governments should invest in human capital, infrastructure, and a public-sector investment that could contribute to long-run economic growth.

**Theoretical Framework**

Economists and political theorists have put forward theories to serve as a policy for stable economic growth. For the purpose of this study, supply-side theory and benefit theory—theoretical model on which the study is built, will be reviewed.

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¹⁹ Leachman and Mazerov, “State Personal Income Tax.”

²⁰ Stone, “Economic Growth.”
Supply-Side Economic Theory

Supply-side theory indicates that increased production drives economic growth; consequently, it advocates tax cuts and deregulation to grow the economy. The economic concept holds that increased production leads to economic growth based on three ideas: tax policy, regulatory policy, and monetary policy. The Laffer curve has formed the basis for a supply-side economy—a relationship between tax rates and government revenue.\(^{21}\) According to Laffer, lowering tax rates causes higher population growth and higher economic growth, but the Institute on Taxation and Economic Policy (ITEP) argues that tax cuts do not always translate to increased growth.\(^{22}\)

Benefit Theory

Benefit theory indicates that whoever benefits the most from the government should pay the most taxes. The principle would be effective if the government could determine how much individuals should pay for services enjoyed, but there are also limits to its application. The arguments against the benefit theory include the following: (1) payment of tax is mandatory and compulsory, but benefit theory is contrary to the principle of general tax policy; (2) benefits enjoyed by a particular individual every year from public services such as education, health care, and public safety cannot be estimated; therefore, requiring payment on the benefits derived is not easily measured or justifiable; and (3) practical application of this theory means it will place a burden on the poor since they will have to pay more because they benefit more from the public


services received from the state. Benefit theory is contrary to the principles of justice, equity, and fairness.\textsuperscript{23} According to the National Conference of State Legislatures, the principles of high-quality state tax revenue system requires sound policies to treat individuals fairly, equitably, and justifiably.\textsuperscript{24} Overall, taxes are viewed as a compulsory transfer of resources from the private sector to government that generally does not entitle the taxed person or entity to a \textit{quid pro quo} in return.\textsuperscript{25}

\textit{Empirical Studies}

Several studies have been conducted on the impact of personal income tax cuts on state government revenues. The following information reviews the empirical studies relevant to the subject.

Brunori examines and analyzes the critical tax policy issues facing state governments. He states that income taxes face the most opposition from governors and state legislators, despite generating huge amounts of revenue. Their opposition is grounded in the belief that (1) people’s wages should not be taxed, (2) income taxes deter economic growth, and (3) income taxes place their states at a competitive disadvantage. The study found that constant political pressure faced by the personal income tax in recent times is due to recent changes—tax cuts— that have made state personal income taxes less progressive resulting in a significant impact on revenue.\textsuperscript{26}

\begin{itemize}
\item\textsuperscript{23} Institute on Taxation and Economic Policy, \textit{Guide}, 6
\item\textsuperscript{25} L. E. Burman and J. Slemrod, \textit{Taxes in America}, 1\textsuperscript{st} ed. (New York, NY: Oxford University, 2013).
\item\textsuperscript{26} Brunori, \textit{State Tax Policy}.
\end{itemize}
Brunori states that successful opposition to a personal income tax likely persists because states without income taxes have other significant sources of income. For instance, Nevada and Florida rely heavily on revenue raised from tourism to support their public services. In Alaska, South Dakota, Texas, Washington, and Wyoming, various severance taxes from natural resources (e.g., timber, petroleum, and minerals) account for large percentages of tax revenue.27

Brunori observes,

More recently, declining oil prices have led to a significant drop in severance tax revenue for states that produce oil and natural gas. From 2014 to 2015, the average price of crude oil dropped from $93 to $49 per barrel. For Alaska, whose budget heavily depends on revenue from its crude oil production, this meant that severance tax revenue declined by $2.2 billion dollars, or 85 percent. Other states, like North Dakota and Oklahoma, saw less sharp declines but still face budgetary shortfalls as a result.28

This information describes the situation of Alaska, North Dakota, and Oklahoma.

Additionally, states without a personal income tax tend to pay more sales tax on goods. For instance, Tennessee had the highest combined sales tax rate in the country in 2019.29 As a result of its heavy reliance on sales taxes and lack of a broad-based income tax, Tennessee has the seventh most regressive revenue system in the country.30

Leachman and Mazerov have shown five states—Kansas, Maine, North Carolina, Ohio, and Wisconsin—that cut personal income taxes by large amounts in recent years in hopes of boosting their economies. However, they have not experienced economic growth, but, in turn, they have seen slower growth in the private sector gross domestic product (GDP). They have


also shown slower private-sector job growth than the United States as a whole since their tax cuts took effect.\textsuperscript{31}

Tharpe researched a way to fund key investments through state income taxes. The study shows states that adopt a policy to raise personal income tax can generate substantial revenue for public investments that boost a state’s productivity in the long run, without harming short-term economic growth. Further, the author reports that in six of eight states, including the District of Columbia, that enacted millionaires’ taxes since 2000, private-sector economic growth met or exceeded that of neighboring states. Seven of the eight states had per capita growth in personal income at least as strong as nearby states, and five of the eight states added jobs at least as quickly as their neighbors. Only one state that raised its income tax rates, Connecticut, experienced markedly weaker growth than its neighbors, likely for reasons other than state tax levels.\textsuperscript{32}

The American Legislative Exchange Council (ALEC) reports that nine states—Alaska, Florida, Nevada, South Dakota, Texas, Washington, and Wyoming—without a personal income tax, including New Hampshire, have consistently outperformed on GDP growth, employment growth, and in-state migration compared to the states with the highest taxes on personal income.\textsuperscript{33} Mazerov, a senior fellow at the Center on Budget and Policy priorities, has been skeptical about ALEC’s findings. According to Mazerov, there is no compelling evidence that states without income taxes are outperforming states that have them or even have relatively high

\textsuperscript{31} Leachman and Mazerov, “State Personal Income Tax.”

\textsuperscript{32} Tharpe, “Raising State Income Tax Rates.”

rates. Rather, states that have personal income taxes will help preserve and enhance investment in education, health care, roads, bridges, and other infrastructures, thereby boosting inclusive economic growth and the well-being of their residents.

Institute on Taxation and Economic policy (ITEP) indicates that income taxes are sometimes more volatile over the short run than sales taxes, but this is not always the case. In the long run, virtually any income tax, whether flat or graduated, will outperform sales taxes in keeping pace with the cost of funding public investments. In other words, the personal income tax is the most reliable source of revenue to fund public services. In contrast, Lavine argues that an income tax is a staple of a mature and balanced tax system. He states that, inevitably, to operate a modern and well-run state, sales taxes just are not as elastic as income tax. In recession, non-income tax states get hit sooner than other state economies, and they stay down longer. An income tax helps offset regressivity and performs better over the long run than a sales tax.

Mertens and Ravn estimate the dynamic effects of changes in taxes in the United States and apply them to quarterly post-World War II data in the United States. Their analysis, distinguishing between personal and corporate income taxes, shows that changes in taxes have important consequences for the economy. The authors of this study find cuts in average personal income taxes lead to a reduction in tax revenues but raise employment, consumption, and investment. Corporate tax cuts, however, boost investment, have no significant impact on

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revenues because of its elastic response to the tax base, do not affect or even lower private consumption, and have no immediate effect on employment.\textsuperscript{37} Specifically, the study finds that a 1-percentage-point cut in the average personal income tax rate raises GDP per capita by 1.4 percent in the first quarter and by 1.8 percent after three quarters.

Davis and Buffie compared the economic performance of nine states without broad-based personal income taxes to their mirror opposites. The nine states had levied the highest top marginal personal income tax rates throughout the last decade. The study’s broad finding shows that states with the highest top tax rates are experiencing more favorable economic conditions than the states without income taxes. States without personal income taxes levy higher overall taxes on the poor, due largely to their reliance on regressive sales and excise taxes to fund public service. The findings do not suggest that higher state income tax rates are causing faster growth but refute the claims that income tax cuts will lead to economic growth.\textsuperscript{38}

William and Samwick assessed the effects of income tax changes on economic growth. Their study concludes that tax cuts not financed by immediate spending cuts will have little positive impact on growth. The study also states that the net effect of tax cuts on growth is theoretically uncertain and depends on both the structure of the tax cuts and the timing and structure of financing.\textsuperscript{39}


Economists at the University of Kentucky’s Center on Business and Economic Research examined the impact of various factors on Kentucky’s and its neighboring states’ economic growth. The study found individual and corporate income taxes, as a share of the economy, do not have a statistically significant impact on states’ economic growth. The authors conclude that the individual and corporate income tax factors studied depend in significant part on the investments made with state tax revenue.⁴⁰

Laffer and Moore argued that states without personal income taxes have consistently outperformed states with the highest income tax rates, which had experienced low population growth and slower job growth.⁴¹ However, the claim by Laffer and Moore has been critiqued by ITEP. ITEP states that Laffer and Moore rely on cherry-picked metrics of economic growth that are closely related to population trends. Laffer and Moore incorrectly asserted that tax policy is the major cause behind migration trends that fueled economic growth. In contrast, ITEP argues that states that levy personal income taxes have seen more economic growth per capita, higher median income, and similar unemployment rates to states without income taxes.⁴² More fundamentally, states without income taxes decide not to levy them because of unusual economic advantages at their disposal that allows the states to raise revenue in other ways.

Mazerov states that the reason the reduction in state income taxes is unlikely to speed economic growth is that people infrequently move between states and rarely make decisions about where to live based on state income taxes. People move for better job opportunities or less


⁴¹ Laffer and Moore, Taxes.

expensive housing reasons. Therefore, the study shows that state taxes have little to no effect on interstate migration. Furthermore, study findings show income tax cuts are not targeted to business owners. They are not even a cost-effective subsidy for businesses.

Across the studies presented, there is consistent evidence that cutting or eliminating income taxes will not stimulate economic growth. Further, the reduction in income taxes has not worked particularly well in the past for states that adopted such tax reform. Nevertheless, this study examines the significant impact personal income taxes is having on revenues of two states: Kentucky and Tennessee. Moreover, Tennessee recently eliminated its personal income tax on investment interest and dividends (Hall tax) on January 1, 2021. This study will look into the effect such a tax policy decision is having on the revenue of the state. For instance, changed tax policy might increase revenue risk (possible loss of revenues resulting from a decline in the revenue base) due to volatility of a revenue source.

**Research Design**

The study seeks to analyze and examine the possible impact of personal income tax cuts on state government revenues by exploring three main questions:

1. What is the impact of tax cuts on the revenue of Kentucky?
2. Has tax cut reform been fair to taxpayers?
3. Has the economy in a state without a personal income tax (Tennessee) performed better than a state with an income tax (Kentucky)?

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43 Mazerov, “States Taxes.”

The study uses a qualitative research design with a case study method. A case study method is an in-depth examination of an event, area, or organization that enables the researcher to answer how and why questions.\textsuperscript{45} It is an empirical inquiry that investigates a contemporary phenomenon within its real-life context when the boundaries between phenomenon and context are not clearly evident and in which multiple sources are used.\textsuperscript{46} The data analysis uses descriptive analysis. A descriptive analysis helps describe, interpret, and summarize data in a meaningful way.

\textit{Data Collection}

The study utilizes secondary data sources to collect yearly tax revenue information from the Kentucky Department of Revenue, the Kentucky Office of the State Budget Director, and the Tennessee Department of Revenue. Tax distribution data was gathered from the Institute on Taxation and Economic Policy. In addition, population, unemployment rate, and household income data were pulled from the US Bureau of Economic Analysis, the US Census Bureau, and the US Bureau of Labor Statistics. Data collected from the Kentucky Department of Revenue is limited to General Fund revenue. General Fund revenue is Kentucky’s primary pool of tax generated revenue within the state.

\textbf{Revenue Data}

Data collected from the Kentucky Department of Revenue reports (KY Annual report, 2016–2020) provides information on the total revenue and total income from tax revenue for the period and is used to examine the annual revenue growth rate. Data on total state expenditure,


\textsuperscript{46} Yin, 1984, as cited in Brown and Hale, \textit{Applied Research Methods}, 159.
per capita income, as well as the total amount allocated for public programs, such as education and health, among others, were collected from the Kentucky Office of the State Budget Director. Adequate funding of public services that are vital to a state’s economic success is important. Hence there is a need to assess the impact of tax cuts on the financial health of the state.

**Tax Distribution**

Data on income group tax distribution was collected from the Institute on Taxation and Economic Policy (ITEP). This data offers detailed information on the distribution of Kentucky’s and Tennessee’s tax systems. For this research, tax distribution data from ITEP was used to analyze the effect of income tax cuts on low-income and high-income taxpayers for fairness.

**Economies of States**

Data on the unemployment rate between 2015 and 2019 was collected from the US Bureau of Labor Statistics. Population data from 2010 to 2019 and household income data between 2005 and 2019 were collected from the US Census Bureau. These data provide a comparison of growth rates in both Kentucky and Tennessee over the years studied to determine whether the economy of a state without an income tax performs better than a state with an income tax.

**Significance of Study**

Additionally, the study is significant for three reasons. First, since the impact of a personal income tax is evident in the substantial revenues generated for investments in education, health, and infrastructure, the need to investigate the impact on revenues is crucial. Second, income tax revenues have the potential to grow the economy, but state capacity to stimulate economic growth should not be limited solely to taxes. Third, the study is significant because of
its policy implications on both tax fairness and overall tax revenues. The above three areas are addressed in the study. Further, this study is not subject to the University of Kentucky’s Institutional Review Approval board review and approval process due to the nature of the research being conducted.

**Data Analysis**

*Revenue*

The first purpose of this study is to explore the impacts of income tax cuts on the revenue of Kentucky using revenue reports from fiscal years (FY) 2016–2020. General revenues, such as taxes of all kinds and transfers between government and business-type activities, often make up the bulk of a government’s revenues. In 2019, Kentucky’s second largest revenue by fund source at $11.4, or 32 percent, comes from taxes collected by the General Fund of the state. Individual income and sales taxes were the two largest sources of state tax revenue and combined comprised three-fourths of General Fund revenue. Of the total revenue, individual income tax represents 40 percent, sales and use tax represent 34 percent, and corporate income tax represents 5 percent.47 The state’s individual income tax revenue decreased by $58.9 million from the previous year due to the tax changes that reduced the six-bracket individual income tax, with a top rate of 6.0 percent, to a 5 percent single rate structure. Sales and use tax increased by $331.9 million, from the prior year, as a result of the sales tax base expansion to include select services. Other sources of revenue for the state are property taxes, cigarettes taxes, coal severance taxes,

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the lottery, limited liability entity tax (LLET), and others. Figure 1 shows the General Fund revenue sources in 2019.

Figure 1: General Fund Revenue Sources, 2019 (Data from Kentucky Department of Revenue)

Examining Kentucky’s fiscal performance between FY 2016 and 2017, the total revenue increased by approximately $139 million—from $10.3 billion in 2016 to $10.5 in 2017—a 1.3 percent increase. In 2018, total revenue increased by $360 million, or 3.4 percent, from $10.5 billion in 2017 to $10.8 billion in 2018. Between FY 2018 and 2019, total revenue in Kentucky increased by approximately $554 million—from $10.8 billion in 2018 to $11.4 billion in 2019. This change represents a 5.1 percent increase. In the course of tax reform, the state’s general fund revenue exceeded estimates by $194.5 million, or 1.7 percent, from $11.2 to $11.4 billion. Although, general fund collections declined 2.6 percent, strong gains in sales and gross receipts were offset by a decline in the income and property taxes. Between FY 2019 and 2020, total revenue increased slightly by $174 million, or 1.5 percent, from $11.4 billion in 2019 to $11.6 billion in 2020. Figure below provides the trend of revenue growth rate pre- and post-tax reform.
General Fund Appropriation

Since the General Fund is Kentucky’s main source of revenue, General Fund appropriations are a good place to assess the significant contribution of tax reform to funding public services. Between fiscal year 2016-2018, Kentucky invested $22.4 billion on vital public services; between 2018-2020, state-funded public services increased by $1 billion—from $22.4 billion to $23.4 billion. This represents a 4.4% increase. Between 2016-2018, spending on P-12 education and post-secondary education comprised just over half, or 55%, of General Fund expenditures, Medicaid expenditures represent 17%, criminal justice expenditures represent 11%, human services expenditures represent 7%, and other expenditures represent 10%. Between 2018-2020, spending on P-12 education and post-secondary education again comprised just over half, or 53%, of General Fund expenditures. This represents a 1% decrease from 2016-2018; Medicaid expenditures represent 17% (remaining unchanged), criminal justice expenditures
represent 12%, human services expenditures represent 7%, and other expenditures represent 11%. Overall, Kentucky is investing less in public services between 2018 and 2020. Figure 2 below, shows how the General Fund was appropriated from 2018-2020.

**Figure 2: General Fund Appropriation, 2018-2020 (Data from Kentucky Office of the State Budget Director)**

**Tax Distribution**

The effect of income tax cuts on low-to middle-income families and high-income families was examined for fairness. As Figure 3 shows, the top 5 percent of families in Kentucky pay only 6.7 percent income tax in state and local taxes. Middle-income families, 60 percent of the population, pay 11 percent, and the poorest 20 percent of the population pay 9.5 percent. The top 5 percent of Tennessee families pay only 2.8 percent. Middle-income families, 60 percent of the population, pay 8.4 percent, and the poorest 20 percent of the population pay 10.5 percent.

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Tennessee’s low-income group pays more percentagewise in taxes compared to Kentucky’s low-income group due to Tennessee’s heavy reliance on sales taxes and lack of a broad-based income tax.

![Figure 3: Share of Family Income (Data from Institute on Taxation and Economic Policy)](image)

**Economic Growth**

This section presents the analysis of the demographic and economic environment in which the governments of Kentucky and Tennessee operate. Also, it provides information that can be compared over time and across governments in determining whether the economy of a state without an income tax performs better than a state with an income tax. The following factors were analyzed: population, household income, employment, and revenue system.

**Population**

Population is an important socioeconomic factor to be considered when examining a state’s economic performance. Increase in population brings about increase in revenues and development. According to Kentucky and Tennessee statistics, the population estimate for 2019
was 4,467,673 and 6,829,174, respectively. Between 2018 and 2019, the population of Kentucky grew from 4,461,153 to 4,467,673, a 1.46 percent decrease while Tennessee’s population grew from 6,771,631 to 6,829,174, an 8.50 percent increase. Over the past ten years, Kentucky’s population increased approximately 3.0 percent, and Tennessee’s population increased by 7.6 percent. As a state becomes more economically developed, the well-being of its citizens improves in numerous ways, include health, education, security, and self-sufficiency. A large population has the potential to be a great economic development driver. The more people a government has, the more work is done; the more work is done, the more value (in terms of money) is created. Population, per se, is of no concern in a state with abundant resources and money. Figure 4 shows the population growth in Kentucky and Tennessee from 2010 to 2019.

![Figure 4: Population Growth (U.S. Census Bureau, 2010-2019)](image)

**Household Income**

One key measure of household income is the real median level, meaning half the households have income above that level and half are below, adjusted for inflation. According to
the census, households in Kentucky had a median income of $52,295 in 2019, an increase of $342 or 2.7 percent from $51,158 in 2018, which is below the median U.S. household income of $65,712 in 2019. By comparison, the households in Tennessee had a median household income of $56,071 in 2019, an increase of 5.2 percent from $53,324 in 2018, that is also below the median U.S. household income of $65,712. Higher household incomes could be a good indicator of a government’s economy.\(^{49}\) Kentucky’s and Tennessee’s per capita income are estimated to be $43,770 and $52,049, respectively. Housing is the biggest factor in the cost of living. Cost of living indices are based on a U.S. average of 100. Having a cost of living index below 100 means Kentucky and Tennessee are less expensive states than the U.S. average. Kentucky’s and Tennessee’s costs of living indices are 83.6 and 87.6, respectively. Therefore, it cost less to live in Kentucky and Tennessee than it does on average in other parts of the United States. However, Tennessee’s cost of living is slightly more expensive than that of Kentucky. Figure 5 shows how the median household in Kentucky and Tennessee compare to that of the average household in the United States.

Figure 5: Median Household Income: Kentucky, Tennessee, and U.S. (U.S. Census Bureau, 2019)

Figure below provides the trend of median household income of both states.

Source: U.S. Census Bureau, 2010-2019
Employment

The number of employed Kentuckians for 2019 was 1,983,577. This figure was up 14,966 from the 1,968,611 employed in 2018. The year 2019 saw a 0.4 percent increase in job creation despite a tightening labor market in certain fields. Nonfarm employment increased by 8,600 to 1,938,700 jobs. However, in 2019, Kentucky’s unemployment rate of 4.3 percent was well above the national unemployment rate of 3.7 percent. A downward trend in Kentucky unemployment has been observed since 2010. From 2010 to 2019, 124,027 fewer individuals were unemployed than ten years ago. The unemployment rate reached a low of 4.3 percent in 2019 from a high of 5.4 percent in 2015.

Tennessee’s nonfarm employment increased 1.9 percent from 2018 to 2019, adding 58,800 jobs. In 2019, Tennessee’s unemployment rate of 3.5 percent was well below the national unemployment rate of 3.7 percent. Tennessee’s unemployment rate dropped to 3.5 percent from 5.9 percent from 2015 to 2019, a decrease of 3.1 percent.

This analysis shows that Kentucky’s unemployment rate was higher than Tennessee’s in all years reviewed except in 2015. In 2019, Tennessee’s unemployment rate reached a low of 3.5 percent, while the national unemployment rate fell to 3.7 percent. During 2019, Kentucky’s unemployment rate was 4.3 percent. Except in 2015, Tennessee’s unemployment rate was lower compared to national unemployment rates, reflecting the positive economic strength of the state. Figure 6 shows the comparison of Kentucky’s and Tennessee’s and the United States’ unemployment rates.\(^{50}\)

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Revenue Source

Tennessee’s primary source of revenue is sales tax. Sales taxes influence decisions the state makes about taxation and investments, since it comprises 60 percent of Tennessee’s General Fund revenues. Tennessee’s lack of a broad-based income tax means that it relies more heavily on other revenue sources. Corporate income taxes contribute 16 percent to the state’s General Fund revenue. This is twice three times Kentucky’s 5 percent amount in corporate income taxes received in 2019. In fact, Tennessee’s business taxes are higher than Kentucky’s.

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Tennessee’s business taxes rank 3\textsuperscript{rd} in the nation per capita as compared to Kentucky’s is 32\textsuperscript{nd} ranking. Further, Tennessee’s 6.5 percent top corporate income tax rate is higher than Kentucky’s 5 percent rate.\textsuperscript{52} Conversely, Kentucky’s revenue system, though certainly in need of reforms that help revenue better track the economy, has a more balanced and reliable mix of revenue sources. As mentioned earlier, Kentucky’s main sources of General Fund revenue are the individual income tax, comprising 40 percent, and sales and use taxes comprising 34 percent, respectively, of total revenues.\textsuperscript{53}

\textbf{Findings}

This study was intended to examine the impact of personal income tax on state government revenue. In order to examine the impact, three main questions were explored: the impact of income tax cuts on Kentucky’s revenue, the tax burden on taxpayers and the fairness to taxpayers, and the economic impact on the two states based on their respective imposition of income taxes—Kentucky as an “income tax state” and Tennessee as a “no income tax state.”

- Tax cuts have a significant impact on revenue in Kentucky. This finding is in support of Brunori’s findings that tax cuts have made personal income taxes less progressive with a corresponding significant adverse impact on revenue generation. Although strong gains in sales and gross receipts were offset by declines in the income and property taxes, General Fund revenue is not generating enough to fund vital public services such as education, health, and other public services.


This analysis found that tax cuts affect tax distribution in both Kentucky and Tennessee. In Tennessee, compared to wealthy families, low-and middle-income families pay more in sales taxes because they have to spend a larger share of their income to meet their basic needs. In addition, Tennessee’s revenue system is regressive as a result of its heavy reliance on sales taxes and lack of a broad-based income tax. Similarly, Kentucky’s sales tax changes have caused a tax cut for the wealthiest and a tax hike on the low- and middle-income families. Thus, low- and middle-income families pay more of their fair share than do wealthy families. On the other hand, Kentucky’s tax system is less regressive but gradually shifting its reliance from income taxes to sales taxes. Further, Tennessee’s low-income group pays more of their fair share in taxes compared to Kentucky’s low-income group due to the heavy reliance on sales taxes and lack of a broad-based income tax.

Factors that influence economic growth include but are not limited to population, household income, and employment. This study shows that Tennessee performs better considering population and employment factors. Tennessee is growing faster than Kentucky, an indicator that people do not migrate based on tax burden alone; something else must have attracted people to Tennessee despite its tax regressivity. Mostly, migration happens for job, family, and other quality of life factors—not taxes. Overall, both Kentucky’s and Tennessee’s population growth effect are positive.

The median household income of both Kentucky and Tennessee fairs better than the US average household. Over the past decades, half of the households in Tennessee have income above the median income level and half are below the median income compared to the households in Kentucky, adjusted for inflation. In other words, there is significant
gains in median household income in Tennessee than Kentucky in the last ten years. While the median annual income of both states is low compared to the nation as a whole, the cost of living index of both states is below the US average index of 100. However, the cost of living in Tennessee is slightly higher than Kentucky’s with 0.04 percent change.

- This analysis found employment growth better for Tennessee than Kentucky. Kentucky’s unemployment rate was well above the national unemployment rate and higher than Tennessee’s unemployment rate. Tennessee’s unemployment rate is very low compared to national unemployment rates, reflecting its positive economic position.

The impact of the pandemic could have been thought is responsible for the low fiscal and economic performance of Kentucky post tax reform, compared to Tennessee but the study found the trend of their performances in the last ten years showed contrary opinion. Overall, Kentucky’s revenue system, though in need of revenue to keep up with public services, has a more balanced and reliable mix of revenue sources compared to Tennessee’s revenue system.

**Limitations**

This analysis has limitations that must be mentioned. First, it must be noted that the data analysis is limited to General Fund revenues and expenditures, the General Fund provides Kentucky and Tennessee’s primary pool of revenue (mostly taxes) generated within the state. Secondly, the findings of this analysis are limited in their external validity and cannot be generalized to other income and no-income tax states. This is due to differences in tax structure of other states.

**Recommendations**

As a result of this study, the following recommendations are made:
• Kentucky should consider generating additional revenue by investing more in education. This will increase the education and skills level of the employees, increase the number people in high-paying jobs, which generates greater tax revenues. To this effect, generating more revenue would encourage state policymakers to avoid or reduce budget cuts and invest more in education, improve infrastructure, and strengthen “rainy day” funds to meet unforeseen circumstances.

• Kentucky should review tax breaks. Reviewing tax breaks—income tax deductions, exemptions and credits—for the wealthy would help ensure wealthy families as well as low- and middle-income families pay their fair share in taxes. Consequently, will give the state more revenue to invest in public services. As a result, personal income tax rates will maintain its progressivity within the tax system.

• Tennessee should consider shifting some of its reliance from sales taxes to income taxes. This will allow the tax system to be less regressive and ensure that wealthier taxpayers pay their fair share while providing lower tax rates for middle-income families. Tennessee should be discussing possibly revising its revenue policy changes to help shift some of its reliance from volatile taxes to less volatile taxes. Alternative sources sourcing of additional revenue would help generate more resources for decision makers to invest in public services.

• Kentucky should adopt the Institute on Taxation and Economic Policy (ITEP) model for evaluating tax incidence analysis. Tax incidence analysis makes it possible to accurately judge the fairness of tax reform proposals. The ITEP model is capable of estimating the impact both on tax fairness and overall tax revenues. Further, the model is useful in analyzing virtually any change considered being made to the major
tax sources relied upon by state governments. This will help the state make better tax policy decisions.

**Conclusion**

Whether policymakers decide on cutting or raising personal income taxes, this can significantly affect state government revenues—either negatively or positively, most especially states whose primary source of revenue is personal income tax. Kentucky’s major tax reforms, although, provided a broader tax base while lowering rates, it was not without opposition. The study found that personal income tax cuts had significant impact on Kentucky’s revenues. Strong gains in sales and gross receipts were offset by declines in the income and property taxes; consequently, Kentucky is not generating substantial revenue for investment on vital public services. Tax cuts added more tax breaks for the wealthiest people, and low- and middle-income families pay a greater share of their incomes. Claims that tax cuts will improve the state’s economic performance have not worked well in the past and are not working now. Kentucky, a state with an income tax, has lagged behind the economic performance of Tennessee, a state without an income tax. Further, Kentucky lags behind Tennessee in population and employment. There are significant gains in median household income in Tennessee than Kentucky in the last ten years. Additionally, Kentucky’s revenue system—though in need of revenue to keep up with the economy—has a more balanced and reliable mix of revenue sources compared to Tennessee’s revenue system. The impact of tax cuts has effects on state government revenues. Raising state income tax provides a way of ensuring that high-income families pay their fair share as well as low-middle-income families. Therefore, progressive personal income taxes should not be made regressive through tax cuts that may subject low- and middle-income earners to paying higher tax rates that may put the funding of public services at risk.


