BETTER JOBS MISSISSIPPI:
Tax Structure for Growth

ABOUT THE AUTHORS

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RUSS LATINO

Russ Latino is President of Empower Mississippi. Prior to joining Empower in 2020, Latino ran economic and health care initiatives for Stand Together and Americans for Prosperity, nationally. He was the founding State Director of Americans for Prosperity-Mississippi and is a business and constitutional law litigator. Latino's research and writing has been featured in outlets such as the Wall Street Journal, USA Today, and National Review.

EXECUTIVE SUMMARY

At **Empower Mississippi** we are focused on helping all Mississippians rise to reach their full potential by removing barriers to opportunity. We believe that a vital part of this mission is ensuring that people have access to meaningful work, with income that allows them to take care of themselves and their families. Tax policy has a profound impact on the economic environment.

REPORT CONTENTS

The report that follows contains: (1) an overview of the principles of sound taxation; (2) a comparative analysis of Mississippi's economy and tax burden with states that do not have an income tax; (3) dynamic economic and regressivity modeling; and (4) an overview of policy considerations for lawmakers.

Both the comparative analysis and the dynamic modeling indicate significant potential benefits for Mississippi's people through the elimination of the income tax.

COMPARATIVE ANALYSIS

Mississippi currently has:

- The **Lowest** Median Household Income and the **2nd Lowest** Labor Force Participation Rate in the Country
- Largely Stagnant Real GDP & Population Growth Over the Last Decade
- The **17th Highest** State Tax Burden as a Percentage of Its Economy
- State Tax Collections that Have Grown by nearly **33 Percent** Over the Last Decade

By comparison, states without an income tax have:

- Median Household Incomes that Are **56.4 Percent** Higher than Mississippi's
- Real GDP Growth that Is a Full Order of Magnitude **(10x)** Mississippi's & Population Growth that Is **6,500% Greater**
- Tax burdens that Are Approximately **Half** of the Burden in Mississippi as a Percentage of their Economies
- Revenue Growth that is **56.2 Percent** Higher than Mississippi's Over the Last Decade

States without income taxes not only outperform Mississippi, but outpace national averages on median household incomes, real GDP growth, and population growth.

DYNAMIC ANALYSIS

Comparative analysis establishes that states can more than thrive without income taxes, both when measured by the economic success and wellbeing of a state's people and when measured by the fiscal health of a state. However, this form of comparative analysis does have limitations. Recognizing those limitations, Empower commissioned Jorge Barro, Ph.D., at the Baker

Institute at Rice University to conduct three separate analyses intended to model and/or examine the impact of income tax elimination in Mississippi:

- A dynamic economic model to determine the economic impact of eliminating the income tax under two separate scenarios, one in which no upward adjustments are made to consumption taxes to account for lost income tax revenue and one in which upward adjustments to consumption taxes are made to account for lost income tax revenue.
- An analysis of the progressivity of Mississippi's tax structure under current conditions and in the event of a shift away from income taxes and toward consumption taxes.
- An empirical examination of the impact of income tax policy on population growth.

The dynamic analysis performed by Dr. Barro concludes that the elimination of the income tax would yield more income-generating activity and lead to an improvement in broader economic activity and citizen wellbeing, including material increases in labor hours, incomes, GDP, consumption, and home values projected. Even under a model where lost income tax revenue is accounted for with upward adjustment of consumption taxes, the dynamic analysis projects a **2.23 percent** increase to Mississippi's GDP and a **2.35 percent** increase in Mississippi's consumption.

Dr. Barro's analysis of the progressivity of a shift away from income taxes toward consumption taxes, found that the **top 40 percent** of income earners in Mississippi pay **70 percent** of all consumption taxes and that a longer view of consumption taxes reveals that they are less regressive than often imagined.

Dr. Barro's empirical analysis further shows that states with lower top marginal tax rates not only attract more people, but tend to attract higher income earners. If income tax elimination can generate a migration induced GDP growth rate increase of 0.5 percentage points annually, that would represent a significant increase in the size of Mississippi's economy over time.

RECOMMENDATIONS

While Mississippi could benefit from the elimination of its income tax, the "how" matters:

- Assuming even conservative population, income and consumption growth rates resulting from income tax elimination, consumption taxes would not need to increase dramatically to make up for lost income tax revenue.
- Triggers carry benefits and disadvantages. If implemented, failure to meet a trigger should halt both the reduction in income taxes, as well as any upward adjustment in consumption taxes.
- Mississippi should implement a reasonable restraint on the growth in government spending, limited by population growth plus inflation, to avoid fiscal traps as it reduces the income tax burden.

PRINCIPLES OF SOUND TAXATION

There is a wide range of tax structures across the country. While there is no "perfect" structure, there are markers of good tax policy and bad tax policy. As policymakers evaluate existing tax structures and consider reforms, below are four principles of sound taxation policy.

LIGHT BURDEN

Taxes should be kept as low as possible to fund the beneficial roles of government, while permitting both individuals and businesses to keep and maintain as much of their earnings as possible. Low tax rates permit individuals to take care of themselves and their families and to engage in commerce and charity within their communities. Low tax rates encourage businesses to start, invest capital, and employ more people at higher wages.

Excessive tax rates, and corresponding excessive government spending, discourage productivity and investment and crowd out private sector growth.

PREDICTABLE

Predictability is a hallmark of a good task structure and requires that a tax code be both simple and transparent. It should not take teams of lawyers and accountants for an individual to understand what they owe in taxes, nor should hidden taxes and fees be built into our daily lives. People should be able to easily ascertain what they will owe in taxes and how their tax dollars are used to advance core functions of government. This understanding allows people to hold government accountable and further creates the kind of certainty that allows people to invest in themselves, their communities, and their businesses.

BROAD-BASED

Tax structures should be designed to collect from a broad base of taxpayers. It is fundamentally fair for people who benefit from core government services to contribute to paying for those services. It also creates stability in state revenue streams to not be overly reliant on one segment of the population to fund government. Lastly, broad-based tax structures create an incentive for individuals and businesses to hold government accountable. For these reasons, tax codes should not be designed to favor one group of people at the expense of another group of people.

BEHAVIOR NEUTRAL

The purpose of collecting taxes is to afford the beneficial roles of government, not to control the activity of individuals or businesses within the economy. Business or industry-specific incentives and exemptions discourage free enterprise and encourage rent seeking behavior that distorts markets, disadvantages competitors, and ultimately reduces innovation and productivity in an economy. On the flipside, punitive taxes on disfavored industries plays an equally distortive role.

REVENUE IN MISSISSIPPI

In this section, we will examine Mississippi's existing tax structure, its overall tax burden and primary revenue streams, and growth in revenue. Throughout this report, we will rely on a series of data from 2010 until 2019 to show progression over a decade. 2019 is used as the final year of the period because for several relevant measures, 2020 data is not yet available. Where 2020 data is available and relevant, the report will make mention of it.

TAX CODE

Mississippi's tax code is relatively complex with approximately one hundred and seventy **(170)**[i] taxes, fees, and levies administered by the Mississippi Department of Revenue. Many of these taxes, fees, and levies are hidden from consumers. As an example, Mississippians pay 18.4 cents in state fuel taxes per gallon of gasoline they put in their vehicles and another 18.4 cents in federal fuel taxes, but these taxes are not reflected on receipts or otherwise advertised. Mississippi's tax code also is riddled with tax incentives and exemptions that have accumulated over the decades. Some of these carveouts are targeted to individual companies, while others favor whole industries and their customers.

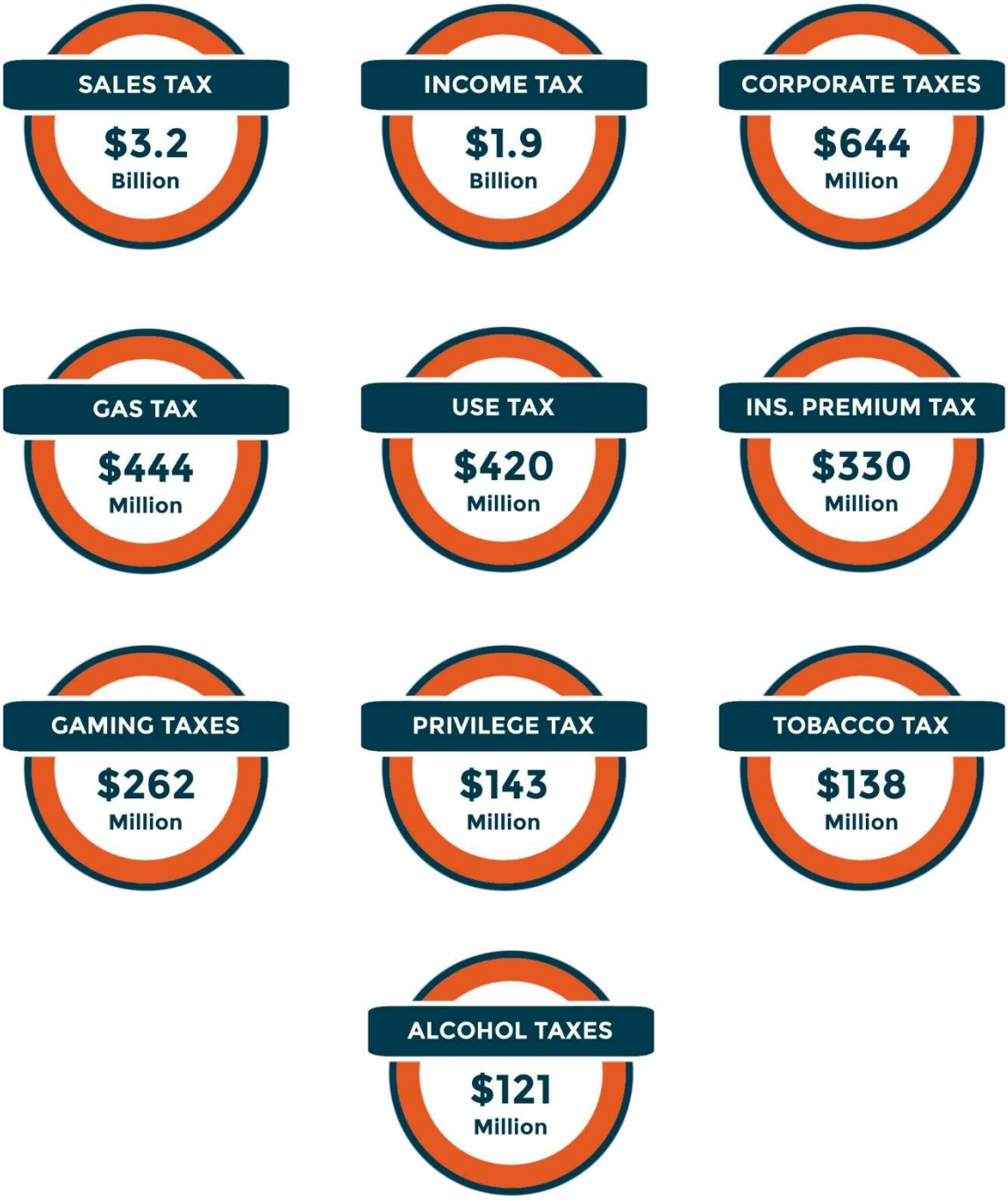
TAX BURDEN

The U.S. Census Bureau conducts an **"Annual Survey of State Government Tax Collections (STC)"** that provides a summary of taxes collected by states for up to 25 tax categories. The data cover the 50 state governments only and do not include local government tax collections. The data may vary slightly from state records due to classification differences but present a uniform method for comparing states' tax burdens.

In 2019, the state of Mississippi collected **$8.289 billion**[ii] in tax revenue according to the STC, which represented the **seventeenth (17th)** highest tax burden as a percentage of the state's economy, as measured by gross domestic product.

TEN LARGEST REVENUE STREAMS

Below are the ten largest revenue streams for Mississippi state government as reflected in the Department of Revenue's **FY 2019 Annual Report**.[iii]



REVENUE GROWTH

Over the last decade, Mississippi has experienced revenue growth of nearly 33 percent based on the U.S. Census Bureau's "Annual Survey of State Government Tax Collections (STC)," **rising** from approximately $6.2 billion in state collection in 2010 to $8.3 billion in 2019.[iv]

NOTABLES

There is a common misperception that Mississippi's sales tax only generates $2.1 billion per year. The misperception is a byproduct of only considering that portion of sales tax revenue which ends up in the Legislature's general fund, while the remainder goes to special funds and local diversions. The problem with the misperception is that it frequently leads to faulty calculation of how much sales tax revenue is generated by every percentage point of sales tax.

In FY 2019, Mississippi collected over $3.26 billion in sales tax on $51.3 billion in gross reported sales, for an effective sales tax rate of 6.35 percent.[v] This means that every percentage point of sales tax in FY 2019 generated slightly over $513 million in revenue.

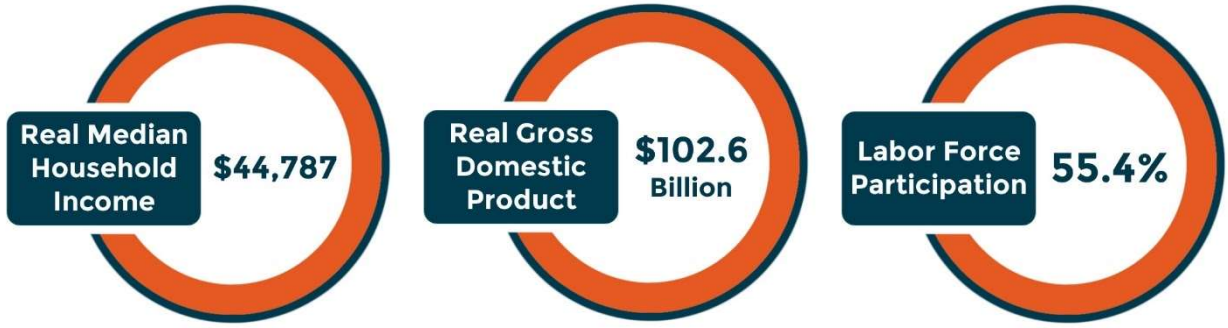
The downward deviation from the widely recognized sales tax rate of 7 percent is a result of exemptions and reduced rates associated with the sale of certain products and services that have accumulated over the decades.

The Department of Revenue's **FY 2020 Annual Report** was recently released and reflects an increase to $3.33 billion in gross sales tax collection on $52.46 billion in gross sales reported, for a nearly identical effective rate of 6.35 percent.[vi]

A sales tax is a form of a consumption tax. Use taxes and excise taxes are similarly consumption taxes based on the purchase and use of products and services in the economy. Notably, Mississippi's largest consumption taxes, including the sales tax, its use tax, and excise taxes on alcoholic beverages and tobacco, all either increased or remained steady during FY 2020–a fiscal year that included the first half of the COVID-19 pandemic.[vii]

By contrast, income taxes are taxes on productivity, or contributions to the economy. The collection of individual income and corporate taxes declined in FY 2020. The divergence demonstrates one of the features of consumption taxes. Specifically, they tend to behave with more predictability and stability than other forms of taxation.

MISSISSIPPI'S ECONOMY



Across a number of key measurements, Mississippi's economy has been largely stagnant and underperforming since the financial crisis that unfolded at the turn of the last decade.

MEDIAN HOUSEHOLD INCOME

Mississippi has the **lowest** median household income in the country.[viii] Median household income divides the population in half, with half of the households in state earning more than the median and half earning less than the median. It is often used as a measurement of the economic wellbeing of households since it is not as easily skewed as averages are by extreme poverty or extreme wealth, and it reflects the fact that in modern society people pool resources in family units to survive.

There are two median household income measurements that are used. The first is a measurement of current dollar median household income. This measurement does not attempt to adjust for inflation experienced in the economy.

The second is a measurement of *real* median household income, which does adjust for inflation. In "current dollars," Mississippi's median household income has **increased** from $38,160 in 2010 to $44,787 in 2019, a 17.4 percent bump. In inflation adjusted dollars, however, real median household income in Mississippi **decreased** from $44,842 to $44,787, a 0.12 percent decline. This means the median Mississippi family had slightly less buying power in 2019 than it did in 2010.

GROSS DOMESTIC PRODUCT

Gross domestic product ("GDP") is the cumulative total of all goods and services produced in a set time period. There are multiple ways to calculate GDP based on productivity, income, and expenditure. GDP effectively represents the size of a country or state's economy, including both the private and public sectors.

The U.S. Bureau of Economic Analysis ("BEA") keeps track of states' GDP using both current dollars and "real" inflation adjusted dollars. In "current dollars," Mississippi's gross domestic product **increased** from $95.27 billion in 2010 to $115.97 billion in 2019, for nominal growth of 21.7 percent.[ix] In inflation adjusted dollars (using 2012 chained dollars), real gross domestic product in Mississippi **increased** from $100.04 billion in 2010 to $102.65 billion in 2019, a bump of roughly 2.61 percent.[x]

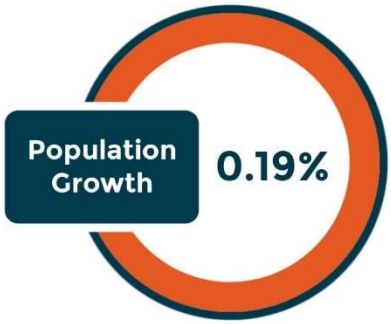
LABOR FORCE PARTICIPATION

Many people are aware of the unemployment rate measured by the Bureau of Labor Statistics. Unfortunately, these rates do not tell the whole story because they exclude from consideration people not actively pursuing work.

Labor force participation rates, by contrast, measure the percentage of people sixteen years or older in the civilian population that are working, or actively pursuing employment. It excludes from its calculation individuals serving in the military, those who are incarcerated, and those in institutions such as nursing homes. It is a useful measurement to understand how many people are contributing to the economy. At **55.4 percent**, Mississippi's labor force participation rate was the second lowest in the country in December 2020, in front of only West Virginia.

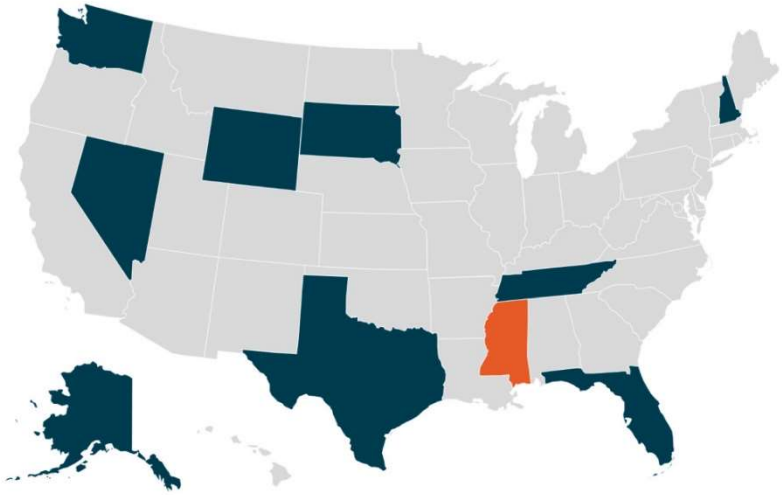
This means that only West Virginia has a smaller percentage of people pulling the economic wagon than Mississippi.

POPULATION GROWTH



In 2010, Mississippi's population was approximately 2,970,615. By 2019, Mississippi's population had remained flat at 2,978,227, a growth of just 0.19%. Data on 2020 was recently released and shows a slight decline to 2.966 million. (Source: **U.S. Census Bureau Data**[xi]).

REVENUE IN INCOME TAX FREE STATES



There are nine states that operate without an income tax: (1) Alaska; (2) Florida; (3) Nevada; (4) New Hampshire; (5) South Dakota; (6) Tennessee; (7) Texas; (8) Washington; and (9) Wyoming. In this section we will briefly explore their tax systems, their tax burden relative to the size of their economies, and their tax revenue growth over the last decade, with comparisons to Mississippi.

TAX CODE

Among the states that operate without an income tax there are considerable differences in tax structures, with some states having structures that more closely comport with the principles of sound taxation and others having structures that significantly violate those principles.

Notable examples of states that operate without an income tax, but with a sound approach to revenue collection, include Texas, Florida, and Tennessee. These states rely on multiple stable streams of revenue collection, including sales and use taxes and property taxes.

Notable examples of states that operate without an income tax, but with riskier structures, include Alaska and Wyoming that depend largely on oil and gas taxes to fund government. Alaska reliance on revenues from this single industry is particularly aggressive, with neither an income nor sales tax. Its tax policy violates at least three of the sound principles for taxation. It is not broad-based. Citizens are largely absolved of responsibility to fund their government. It is not behavior neutral. It focuses all its energy on one group of producers. And with wild swings in a volatile industry, it is not predictable.

TAX BURDEN

One of the primary concerns raised in response to the idea of eliminating Mississippi's income tax is how the state would be able to pay for government. The below chart demonstrates that the nine states without income taxes maintain the ability to collect significant revenue, while maintaining lower tax burdens as a percentage of their economies. The second column represents the amount of state taxes collected in billions, using the U.S. Census Bureau's Annual Survey of State Government Tax Collections (STC). The third column represents what percentage of the state's overall economy the tax collection represents.[xii]

STATE	TAXES	% OF GDP
1. AK	$1.78 bn	3.34%
2. FL	$44.79 bn	4.65%
3. NV	$9.74 bn	6.34%
4. NH	$2.97 bn	3.84%
5. SD	$1.94 bn	4.08%
6. TN	$14.83 bn	4.51%
7. TX	$63.33 bn	3.59%
8. WA	$27.99 bn	5.10%
9. WY	$2.11 bn	5.38%
AVERAGE	18.83 bn	4.26%
MS	8.29 bn	8.07%

The nine-income tax free states average a tax burden of 4.26 percent of their overall economies, nearly half of Mississippi's tax burden.

REVENUE GROWTH

Despite having much lower tax burdens, seven of the nine-income tax free states have experienced revenue growth that far outpaces tax collections in Mississippi. The chart below is based on real GDP growth.[xiii]

STATE	REVENUE GROWTH
1. AK	-60.62%
2. FL	46.96%
3. NV	66.97%
4. NH	30.7%
5. SD	46.86%
6. TN	41.02%
7. TX	60.26%
8. WA	72.8%
9. WY	-2.2%
AVERAGE	50.35%
MS	32.22%

As mentioned above, Alaska and Wyoming rely heavily on taxes collected from the oil industry. As that industry has experienced volatility, neither state's revenue streams have been diversified enough to shoulder the impact.

By contrast, the remaining income tax free states have all experienced tremendous revenue growth. Even including Alaska and Wyoming in the calculation, revenue in states without an income tax grew at a rate 56 percent above the revenue growth rate experienced in Mississippi.

ECONOMIES IN INCOME TAX FREE STATES

How is it possible that states with an average tax burden that is nearly half that of Mississippi have experienced revenue growth to state coffers that far exceeds Mississippi's experience?

The answer, to put it plainly, is both economic and population growth that far exceeds Mississippi's.

MEDIAN HOUSEHOLD INCOME

As discussed above, median household income is essentially the midpoint in the household income spectrum. The below chart compares the nine-income tax free states with Mississippi, using statistics for real median household income (adjusted for inflation) from 2019. The percentage of growth is a measure of the same statistic from 2010-2019.[xiv]

STATE	REAL MHI	GROWTH
1. AK	$78,394	19.82%
2. FL	$58,368	12.72%
3. NV	$70,906	17.85%
4. NH	$86,900	10.98%
5. SD	$64,255	20.57%
6. TN	$56,627	24.87%
7. TX	$67,444	21.43%
8. WA	$82,454	24.94%
9. WY	$65,134	4.48%
Average	$70,054	17.15%
MS	$44,787	-0.12%

Obviously, with Mississippi in last place for median household income, all nine-income tax free states outperform, with the average median household income in those states coming in 56 percent above Mississippi's number. The growth rate in real median household income over the last decade is also orders of magnitude above Mississippi's negative rate.

GROSS DOMESTIC PRODUCT

The below chart compares the real gross domestic product (adjusted for inflation) of the nine-income tax free states with Mississippi. The second column is taken from 2019. The third column's percentage of growth is a measure of the same statistic between 2010-2019.[xv]

STATE	REAL GDP	GROWTH
1. AK	$53.25 bn	-1.78%
2. FL	$963.25 bn	25.64%
3. NV	$153.73 bn	19.28%
4. NH	$77.24 bn	16.22%
5. SD	$47.56 bn	17.82%
6. TN	$328.41 bn	23.24%
7. TX	$1,764.36 bn	35.53%
8. WA	$548.69 bn	43.82%
9. WY	$39.21	-1.58%
Average	$441.74 bn	30.51%
MS	$102.66 bn	2.61%

A review of the real gross domestic product comparison between the nine-income tax free states and Mississippi reveals that four of those states have economies that are much smaller than Mississippi's, and five have economies that are much larger than Mississippi's.

These economies have grown at a rate that far exceeds Mississippi's real GDP growth, a full order of magnitude greater. Notably, Alaska and Wyoming are again outliers.

LABOR FORCE PARTICIPATION

The below chart reflects the labor force participation rates in each of the nine-income tax free states as compared with Mississippi's labor force participation rate as of December 2020.[xvi]

STATE	LABOR FORCE PARTICIPATION RATE
1. AK	65.1%
2. FL	57%
3. NV	62.2%
4. NH	64.3%
5. SD	68%
6. TN	61.2%
7. TX	62.9%
8. WA	65.3%
9. WY	65.2%
AVERAGE	63%
MS	55.4%

To put into perspective the gap between Mississippi and these states, every percentage point represents nearly 23,000 Mississippi workers, such that if Mississippi were to raise its labor force participation rate in line with the average of these states it would mean approximately 170,000 new Mississippi workers would come off the sideline.

POPULATION GROWTH

The next chart reflects population growth in each of the nine-income tax free states as compared with Mississippi's population growth for the period of 2010-2019, with income tax free states, again, experiencing orders of magnitude in growth over and above Mississippi.[xvii]

STATE	POPULATION GROWTH
1. AK	2.47%
2. FL	13.97%
3. NV	13.98%
4. NH	3.26%
5. SD	3.49%
6. TN	7.46%
7. TX	14.87%
8. WA	12.93%
9. WY	2.53%
AVERAGE	12.98%
MS	0.19%

NOTABLES

In making the above comparisons, we do not intend to imply that correlation equals causation. While tax structure can and does have a real impact on the economic performance of a state and the wellbeing of its people, there are a great multitude of other factors that combine to dictate outcomes.

Even amongst the states without income taxes there are big differences. Alaska and Wyoming have been highlighted throughout as outliers, in part because of their over-reliance on a single industry as a source of revenue. But there is more to it. Both of those states are also sparsely populated and rural. Florida performs well but has lower median household incomes than many of the other no income tax states, and a lower labor force participation rate. Is this a sign that Florida's tax policy does not work? Likely not. Instead, it is likely a sign that Florida is a place where a lot of retirees on fixed incomes move because of the beautiful climate and favorable tax structures.

The point of making these comparisons, both on revenue and economic performance, is to demonstrate that states can maintain sufficient revenue to fund the core functions of government and excel at providing a good life to their citizens without income taxes.

But it bears recognizing and responding to the natural critique of these comparisons: if Mississippi is in last place, of course these other states perform better, right?

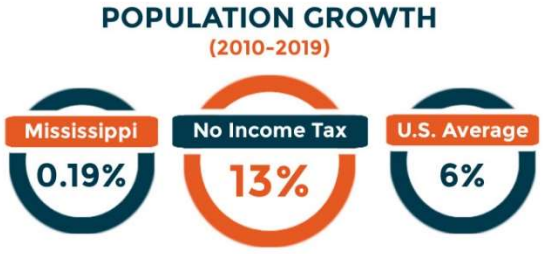
On this point, there is value in noting why operating without an income tax could be a net positive for states.

First, income taxes are a disincentive for productivity. They serve as a penalty for working, which is how most people create value for themselves, their families, and their communities.

Second, people have a property right in the fruits of their labor, and when that property right is respected, there is incentive for people to use their property wisely. That same incentive does not exist when government is spending resources because government is disconnected from the labor that is required to earn those resources.

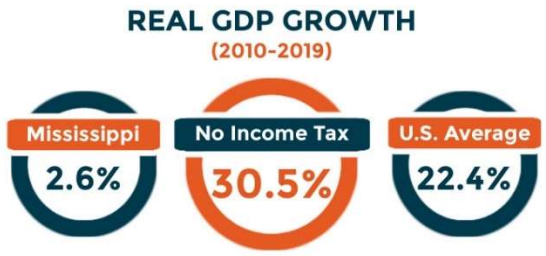
Third, the more disposable income people have, the more they consume and the more they save. Both have a net positive effect in growing the economy and creating jobs. This kind of environment draws both people and capital.

Consider this, states without an income tax not only beat Mississippi when it comes to population growth, but more than double the national average.



That kind of population growth is matched by strong economic growth in non-income tax states.

GDP growth in these states from 2010-2019 not only dramatically outpaced Mississippi, but was 36 percent above the U.S. average for GDP growth.



Lastly, while less dramatic, the nine-income tax free states have median household incomes that not only beat Mississippi, but beat the national average.

DYNAMIC MODELING

Note: *The following quantitative analysis of potential tax reform in Mississippi was completed in February of 2021 by Jorge Barro, Ph.D., economist at the Baker Institute at Rice University. Dr. Barro maintained academic independence in his research. Only formatting has been adjusted for consistency with the remainder of Empower Mississippi's "Better Jobs: Tax Structure for Growth" Report.*

INTRODUCTION

This report studies the Mississippi tax system and evaluates the implications of structural tax reform related to the elimination of the income tax and expansion of consumption taxes.[xviii] The report presents the results of models and simulations that determine the progressivity of the Mississippi tax system and evaluate the distributional and behavioral implications of the tax reform. These results are intended to inform policymakers and citizens of the anticipated effects of the reforms using the tools of modern macroeconomic modeling.

In evaluating alternative tax structures, policymakers often seek answers to several questions that can be separated into two broad categories–those questions pertaining to economic growth and those questions pertaining to fairness of the tax system. While this report provides some guidance in each respect, there is no reliable singular economic measurement tool that can make this determination accurately. As a result, conclusions reached in this report combine methodologies that employ different policy tools to provide more comprehensive insight into policy outcomes. In particular, the report presents the results of three analyses that, when combined, give policymakers a better sense of the economic effects of structural tax reform.

The first part of the report presents the outcome of a dynamic macroeconomic model designed to measure the behavioral and distributional implications of structural tax reform at the state level. Tax reforms at the state and local level often propose modifications to three types of taxes–income, consumption, and property taxes. Basic dynamic models can capture the effects of consumption and income tax policy by simulating changes in households' consumption, labor supply, and savings. To address the needs of state and local policymakers, however, the model used for this analysis adds features of housing demand, income variability (for distributional analysis), and the specific features of a state's tax structure.[xix]

The process of choosing parameters of the model is known as *calibration*, and the parameters themselves fall into two categories–behavioral parameters and policy parameters. Behavioral parameters (for example, those guiding demand for housing vs. non-housing consumption) are taken from the empirical economics literature and

modified so that model statistics match data corresponding to the underlying population—in this case, residents of Mississippi. The remaining parameters are policy parameters (for example, income tax rates and brackets), and they are chosen by policymakers. The policy parameters can be changed to simulate the effects of implementing alternative policies.

The dynamic model can deliver several important results by making some necessary assumptions. One of these assumptions is that consumption taxes are applied evenly and uniformly to all non-housing consumption. This assumption fails to capture the granular approach to implementing consumption taxes like we see in the real world. To fill this void, the second part of the study simulates the implementation of consumption taxes by combining Mississippi's consumption taxes with expenditure and income data. This approach allows policymakers to understand how progressive or regressive current consumption taxes are, and how that level of progressivity might change under alternative policies. These results, together with the results of the dynamic model, paint a clearer picture of the overall progressivity of the Mississippi tax system.

Another limitation of the dynamic model is its inability to accurately infer population flows resulting from having a more or less competitive tax system. This projection is critical for understanding how quickly and effectively a state can grow its economy—or cause it harm. To supplement the findings of the dynamic model, the third part of the study reviews the data with respect to the relationship between income taxes and population flows. This provides policymakers with some sense of how tax reform could generate residual growth from net migration.

Together, the results of the dynamic model, the consumption tax progressivity estimation, and the population flow analysis combine to give policymakers a thorough assessment of the impact of tax reform. It should be noted, however, that many of the implications of tax reform remain dependent on the decisions of the federal government. For example, the state and local tax deduction provides a tax incentive for those living in high-tax jurisdictions. If federal policymakers expand that tax break, then it would likely influence the effectiveness of state tax reforms.

The estimates produced herein reflect the available methodological rigor consistent with leading academic standards. The work presented hopes to achieve three goals—insight, intuition, and accuracy. Insight reveals the features of the tax system that may have previously been unmeasured. Intuition reveals mechanisms through which economic policy affects the economy and its participants. Accuracy strives to generate estimates that minimize the difference between projected values and those that are realized. In doing so, policymakers can have confidence that they are making decisions based on the best available information.

PART 1: DYNAMIC ANALYSIS

This part of the report presents the results of the dynamic model, analyzing a shift away from income taxation in Mississippi and towards consumption taxation. Confidence in the model's outcomes comes from rigorously calibrating the model. This calibration process involves choosing model parameters such that: 1) behavioral responses are consistent with the academic literature, 2) simulated data matches Mississippi survey data, and 3) policy parameters are consistent with Mississippi's economic policy. In this case, the survey data comes from the 2019 American Community Survey (ACS) and the 2019 Current Population Survey. A summary of the calibration is presented in the appendix.

In interpreting the results, it should be noted that these estimates reflect the long-term impact of the tax reforms. Generally, economies accelerate towards these limiting outcomes very quickly after implementing the reform and approach them more gradually over time.

Two policies involving elimination of the income tax were evaluated. The first policy ("Policy 1") eliminates the income tax without increasing consumption tax rates, while the second policy ("Policy 2") offsets the reduction in income tax revenue with an increase in consumption tax revenue. The results of the policies are presented in Table 1.

Estimates corresponding to Policy 1 provide a useful measure of the proposed policy, but it also indicates the extent to which income taxation generally affects the Mississippi economy.

Uncompensated elimination of the income tax has a positive economic effect, increasing the incentives to work and save, which ultimately result in heightened labor hours and average income. These values increase 1.07% and 1.63%, respectively, while Mississippi gross domestic product (GDP) rises by 3.55%.[xx] Additional disposable income caused by the tax reduction and corresponding economic responses generates an increase in consumption of 5.13% and an increase in demand for housing, reflected in the

Variable	Policy 1	Policy 2
Labor Hours	1.07%	0.40%
Average Income	1.63%	0.67%
GDP	3.55%	2.23%
Consumption	5.13%	2.35%
Average Home Value	4.04%	5.34%
Home Ownership Rate (ppt. change)	-0.28	-0.53
Average Social Welfare	2.30%	1.12%
Income Tax Revenue	-100.00%	-100.00%
Consumption Tax Revenue	5.13%	61.17%
Property Tax Revenue	4.04%	5.34%

4.04% increase in average home value. Since buying and selling homes incurs significant costs, the modest decline of 0.28 percentage points in the home ownership rate results from households building up more capital early in life to reach a higher down payment on a larger house.

Eliminating the income tax clearly reduces all income tax revenue, as shown in Table 1. Although the policy is not offset by an increase in consumption taxation, it does generate a rise in consumption resulting from increased disposable income and the corresponding economic effects of the tax cut, leading to a proportionate 5.13% rise in consumption tax revenue. An analogous argument explains why property values and property taxes increase by 4.04%.

Since Policy 2 offsets the decline in income tax revenue with an increase in consumption taxation, the general economic benefits are smaller than the uncompensated income tax elimination. A shift from income taxation towards consumption taxation improves the incentives to earn income, causing a 0.40% increase in work hours and a 0.67% increase in average income. GDP also increases by 2.23%. The increase in consumption taxation causes demand to shift away from non-housing consumption and towards housing consumption. This causes a rise in home values and property tax revenue of 5.34%, exceeding the magnitude of the change in Policy 1, which did not distort the margin between non-housing and housing consumption.

Each case presents outcomes where total labor hours increase without differentiating between an increase in hours of current workers and an increase in the number of workers. While tax rates certainly influence the labor incentives of existing workers, tax policy is also thought to affect the decision whether to work or not. The Congressional Budget Office reviewed the empirical literature and found that for every 1 percentage point increase in after tax income, the labor force participation rate rises around 0.1%. Assuming an average effective tax rate of 3% in Mississippi, elimination of the income tax would raise the labor force participation rate approximately 0.3%.[xxi]

Offsetting the decline in income tax revenue requires an estimated 61.17% increase in consumption tax revenue. Achieving this increase requires either an increase in tax rates, an expansion of the tax base, or some combination of the two. To match the tax revenue generated in the baseline model with real world data, 66% of all consumption was assumed to be taxable. Figure 1 shows the combinations of tax base expansions or tax rate increases that can generate the requisite increase in tax revenue. Holding the tax base constant, the rate could increase to 10.8%, or holding the tax rate constant, the tax base could expand to include all consumption. However, all tax rate and tax base combinations corresponding to Policy 2 in Figure 1 would achieve the same level of tax revenue.

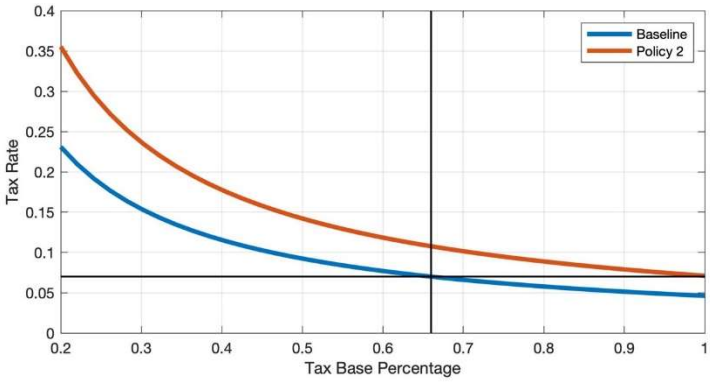


Figure 1: Consumption tax and base tradeoff under current policy and Policy 2.

The final variable of interest in Table 1 is the change in average social welfare. This is a standard measure of wellbeing generated by economic models and a generally accepted arbiter of good policy. It weighs everybody in the population equally and accounts for the fact that a small increase in consumption for a low-consumption household is more valuable than the same increase for a high-consumption household. Table 1 shows that the social welfare value of income tax elimination is roughly 2.30%, reflecting the standard social cost of taxation. It also shows that a shift towards consumption taxation and away from income taxation can improve social welfare by 1.12% while generating the same level of state government revenue.

Another important aspect of tax policy evaluation is the extent to which the tax burden is shifted around the population. A common way of evaluating this tax burden is by relating it to the income distribution. The extent to which the tax burden falls on higher-income households is a measure of the tax progressivity. Figure 2 shows an estimate of the current tax progressivity by indicating the share of the total tax burden paid by income quintile.

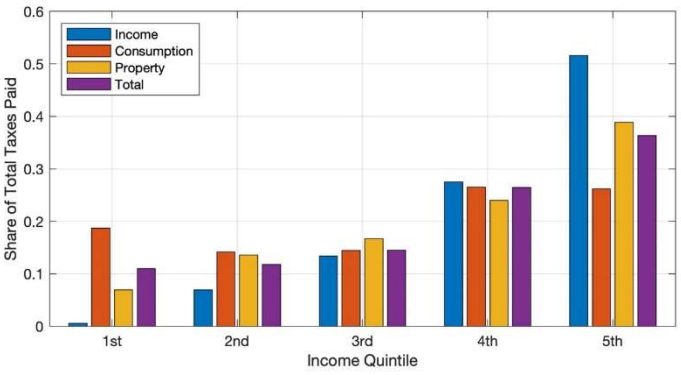


Figure 2: Total tax shares by income quintile under current policy.

By levying a progressive income tax, the total income tax burden by income quintile rises sharply, as shown in Figure 2. Further, because housing ownership and housing consumption rise with income, the property tax also displays progressivity, albeit less than income taxation. While income and housing consumption can vary significantly over lifetimes, non-housing consumption has less variability and tends to remain flatter across income groups. Consequently, consumption taxation, under the assumptions of the model, tends to be less progressive. A number of factors related to life-cycle behavior explain the observed pattern in the consumption tax burden, including high relative consumption early in life and late in life (i.e., retirement) when income is lower.

Since much of the progressivity of the total tax shares resulted from the progressivity of income taxation, a shift towards consumption taxation

reduces the overall progressivity of the tax system. Figure 3 shows how the tax burden would be redistributed under Policy 2 (shift away from income taxation and towards consumption taxation). Under the dynamic model's assumptions, the tax burden would be shared more evenly across income quintile groups.

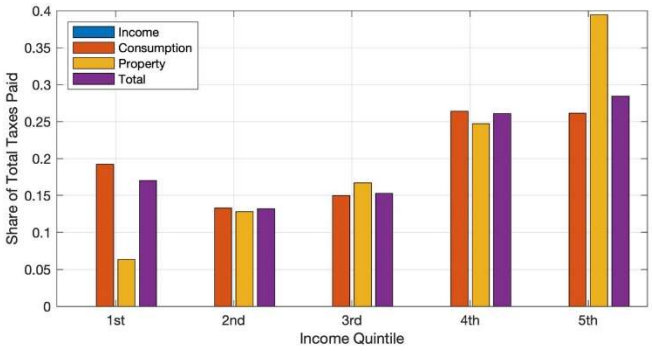


Figure 3: Total tax shares by quintile under Policy 2.

Since the dynamic model's simulated income and housing distributions (and the intersection of those two) generated a close match to the survey data, income and property tax progressivity shown under current policy likely provides a reliable estimate of the real values. Implementation of consumption taxation in the model, however, required simplifying assumptions that consumption taxes were a flat share of non-housing consumption and that the consumption tax base did not change across income or age groups. The next section of this report takes a closer look at Mississippi's consumption tax base with considerable granularity to infer the true progressivity of the State's consumption taxation. Such analysis, although disjoint from the results of the dynamic model, will provide a better sense of the distributional consequences of shifting away from income taxation and towards consumption taxation.

PART 2: PROGRESSIVITY

Standard economic theory of consumption explains how consumption tends to exceed income early in life. Then, as income rises, households save a larger share of income, causing consumption to fall as a share of income. Finally, late in life, income tends to fall again, while consumption remains stable. Because of this life-cycle trend, consumption taxes levied uniformly onto all consumption items would be inherently regressive, based on the strict definition of regressivity.[xxii] This basic concept is often the basis for dismissing consumption taxation as regressive. Proper evaluation of consumption taxation, however, requires two additional considerations.

First, progressivity (or regressivity) of consumption taxation might be better understood from a life-cycle perspective, rather than annual data. Second, policymakers can, and often do, modify consumption taxes to make them more progressive. This would mean that the burden of consumption taxes would be shifted onto higher-income households. To this end, this section of the report evaluates the progressivity of Mississippi sales and use taxes by evaluating the specific implementation of the taxes and accounting for variation in consumption patterns by income and age to generate annual and lifetime consumption tax estimates.[xxiii]

Measuring the progressivity of Mississippi consumption taxes on an annual basis requires three basic items. The first two items are consumption tax rates and items in the corresponding tax bases—to a large extent characterized by tax exemptions—which are provided by the State of Mississippi Department of Revenue.[xxiv] The third item is data capturing consumption and income patterns to understand how the implemented consumption tax affects the underlying population.

Simulating the annual consumption taxes starts with Mississippi income data from the 2019 ACS. Each observation in the data set provides income and age of the corresponding Mississippi household. This data is then used to choose a random observation from the 2019 Consumer Expenditure Survey (CEX) that closely matches that income and age. This provides consumption data for that household. Then, Mississippi sales and use taxes are applied to the consumption bundle of that household to arrive at their estimated annual consumption taxes.

Because the ACS does not track households over time (i.e., the data is *cross-sectional*), lifetime income patterns cannot be inferred from that data. Instead, the 2017 Panel Study of Income Dynamics (PSID), which follows households over time, provides income links across years, allowing for the simulation of lifetime income. Using this *longitudinal* PSID income data, rather than the cross-sectional ACS data, allows for estimation of lifetime consumption taxes corresponding to the Mississippi sales and use taxes.

This estimation accounts for various unique features of the Mississippi tax code. For example, Mississippi allows for groceries consumed at home to be exempt if the groceries are purchased with food stamps. Fortunately, the CEX includes food stamp income data, which can be netted from any grocery purchases in the construction of the tax base. Several other features, such as household utilities exemptions and differential tax rates on vehicles, are accounted for to the extent possible. It should be noted that, although the CEX provides some of the best consumption data available, it only accounts for an estimated 60-70% of all consumption. To that extent, tax estimates can be scaled up accordingly to compensate.

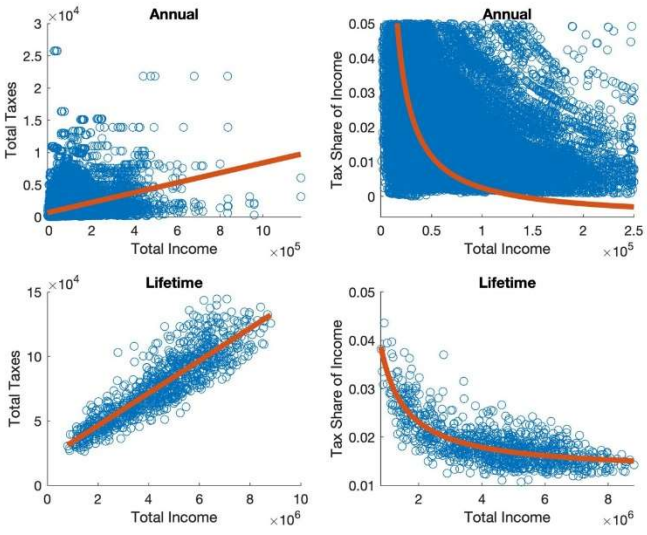


Figure 4: Consumption taxation and income—annual and lifetime.

The estimated relationship between Mississippi consumption taxation and income is shown in Figure 4. The top two graphs show the relationship between income and taxes on an annual basis, while the bottom two graphs show these

relationships on a lifetime basis. The two graphs on the left show the relationship between total income and total consumption taxes, and each indicates a strong positive relationship. That is, higher income households pay more in consumption taxes. These results suggest that consumption taxes are indeed more progressive from a lifetime perspective, relative to an annual perspective. Estimates suggest that for every additional dollar of *annual* income, households pay about $0.008 in consumption taxes. By contrast, for every additional dollar of *lifetime* income, households pay roughly $0.013 in taxes. This confirms the increased progressivity over longer time spans. The two graphs on the right show the estimated relationship between income and consumption taxes as a share of income. Again, by the strict definition, these consumption taxes are regressive, since the share of income paid in taxes declines with income. Dismissing these taxes as regressive, however, would necessarily overlook the large share of the taxes paid by higher-income households.

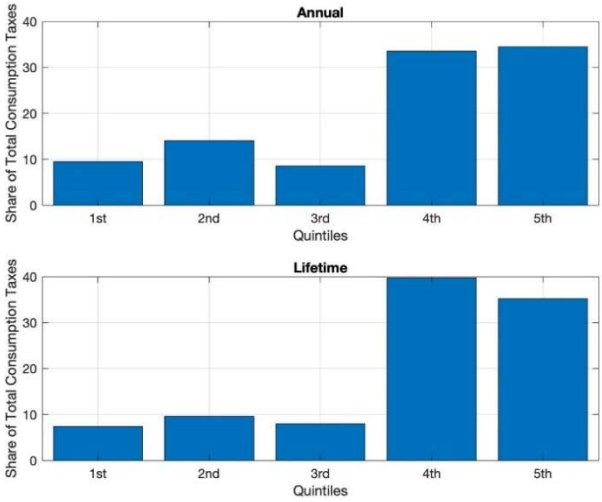


Figure 5: Consumption tax shares by income quintile– annual and lifetime.

Figure 5 shows the share of total consumption taxes paid by the respective income quintile. The graphs indicate that higher-income households incur a large share of the tax burden. On an annual basis, the top 40% of income-earners—that is, the top two quintiles—pay roughly 70% of all consumption taxes, while the bottom 60% of households pay about 30%. This graph can be compared to the results presented in Figure 2. The results presented in Figure 2 show what the tax shares would look like if consumption taxes were applied uniformly to all non-housing consumption expenditures. More importantly, Figure 2 reflects the underlying assumptions that many people make when expressing concerns over the regressivity of consumption taxes. Figure 5 indicates that consumption taxes in practice are more progressive than simple intuition would suggest. This reflects certain efforts that policymakers in the State of Mississippi have taken to generate progressivity out of the existing tax base. Finally, the results presented serve as a baseline for the comparison of alternative consumption tax proposals. Modifications to the consumption tax base or rates likely shift the burden of the tax across income groups, allowing policymakers to make consumption taxes more or less progressive.

PART 3: MIGRATION

Another limitation of the dynamic model is its inability to infer the population flows resulting from

tax reform. When households and businesses seek employment and opportunity, they take several factors into consideration, including safety, quality of education, amenities, and the tax burden. Understanding the extent to which tax structures can influence population flows is critical for estimating the impact of tax reform on economic growth. To that extent, this part of the analysis provides preliminary estimates of the relationship between population flows and tax structures.

To understand how tax reform could generate economic growth from external factors, top marginal individual income tax rates in 2020 are compared with mobility data from the Internal Revenue Service (IRS).[xxv] The IRS data provides aggregate information on the number of returns, number of exemptions, and adjusted gross income (AGI) inflowing, outflowing, and remaining in residence across years. The most recent data released corresponds to mobility between 2017 and 2018.

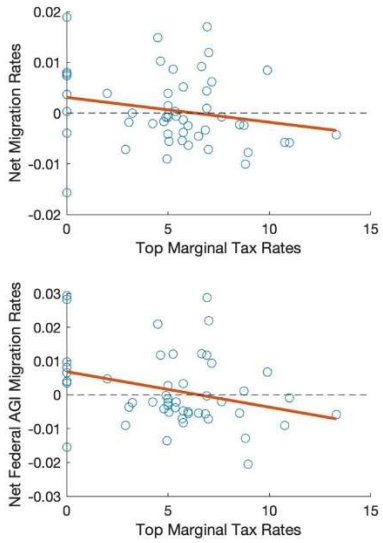


Figure 6: Top marginal tax rates and net state inflows.

Figure 6 shows the relationship between the top statutory marginal income tax rate in each state (and Washington D.C.) and migration flows.[xxvi] These values are presented as rates, relative to the non-migrating population. Outflows are subtracted from inflows to get net migration rates. The top graph shows the number of tax returns as a share of the non-migrating tax returns. The graph indicates a clear negative relationship between the top tax rate and net population inflows. Another important indicator of economic growth generated by tax reform is the migrant households' earnings potential. To that extent, the bottom graph shows the relationship between AGI (as a share of non-migrant total AGI) and top marginal tax rates. These results show an even stronger relationship, indicating that lower top marginal income tax rates not only attract residents, but many of the households with high earnings potential.

The inferred relationship between tax rates and migration flows provides an estimate regarding the consequence of eliminating the Mississippi income tax. Specifically, regression results from the top graph suggest that a 5 percentage point reduction in the top marginal income tax rate is associated with a 0.24% increase in the number of tax returns filed in Mississippi—a proxy for population flow. Moreover, the regression results from the bottom graph suggests that a 5 percentage point reduction in the top marginal tax rate is associated with a 0.52 percentage point increase in the growth rate of AGI—a proxy for earnings potential.

On one hand, the results of Figure 6 should be taken with some caution. People make moving decisions based on several factors, including education, crime levels, and amenities. Moreover, the tax rates themselves could, to some extent, reflect the appeal of the state, allowing governments to levy higher taxes more inconsequentially. Also, the tax rates presented in the figure may not reflect the top effective marginal tax rates because of deductions—particularly federal tax deductions on state income taxes. On the other hand, Figure 6 may actually understate the extent to which households account for taxes in their decisions to relocate. The 2017 federal tax reform, commonly known as the Tax Cuts and Jobs Act (TCJA), significantly changed the extent to which high taxing states impose a real tax burden on its residents. In particular, the TCJA significantly expanded the standard deduction and capped the state and local tax deduction at $10,000. This raised the effective state taxes by reducing the federal subsidization of state tax levies. The effect of this reform increases with the magnitude of the tax levy in the particular state, increasing the incentives of households and businesses to relocate to lower taxing jurisdictions. Because the data in Figure 6 reflects the year immediately following the passage of the TCJA, the impact of the reform on interstate mobility may not have been fully realized.[xxvii]

CONCLUSION

The results presented in this report reflect a combination of approaches used to quantify the effects of Mississippi tax reform along several dimensions, including the distributional and efficiency consequences of the reform. The results showed that a shift away from income taxation and towards consumption taxation generally improve the efficiency of the tax system and can generate indirect effects, such as improved home values and the associated increases in property tax revenue.

Progressive income taxation naturally provides progressivity in the tax system. Although some progressivity would be lost by eliminating the income tax, a shift towards consumption taxation would preserve a level of progressivity in the tax system. Moreover, using exemptions and differential consumption tax rates, progressivity could also be added to the existing consumption taxes. Finally, the benefits of lower income taxes could draw resources from beyond Mississippi's borders. The analysis found that states with lower top marginal income tax rates tend to attract more residents and, in particular, higher earners.

APPENDIX: CALIBRATION

Any simulation seeks to replicate certain features of the real world to evaluate alternative scenarios. Dynamic macroeconomic models simulate economies to infer their properties and evaluate alternative policy scenarios. In doing so, economists begin with a quantitative theoretical model with a set of parameters that are varied so that simulated data from the model matches estimates from survey data. This process is known as *calibration*, and proper calibration builds

confidence in the model's results. The baseline model presented herein is an updated version of Barro (2019).[xxviii]

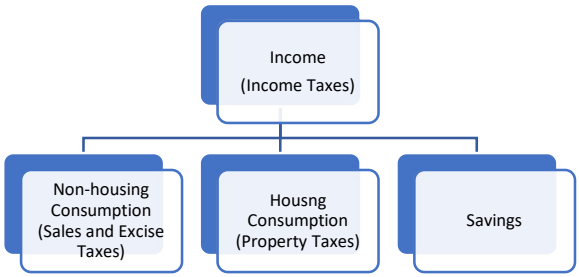


Figure 7: Economic behavior and taxation.

Income is generally either consumed or saved, and consumption happens in the form of housing and non-housing consumption, a concept summarized with corresponding taxes in Figure 7. As a result, the most important statistics to match for the purpose of state and local tax policy are those relating to the income and housing distribution. Estimates related to housing are provided in Table 2, while the income distribution is provided in Table 3. Finally, the relationship between income and housing is also important for evaluating tax policy. To this end, Figure 8 shows the home ownership rate by income quintile.

Variable	Data	Model
Home Ownership Rate	66.4%	64.7%
Average House Price	$161,000	$177,000
Median House Price	$125,000	$118,000
Average Property Tax	$902	$929

Table 2: Mississippi housing statistics: model vs. data.

10	$12,300	$14,282
20	$22,000	$26,401
30	$32,000	$38,671
40	$42,600	$41,611
50	$54,000	$54,100
60	$67,000	$70,732
70	$81,740	$89,457
80	$101,100	$94,768
90	$140,000	$130,270

Table 3: Mississippi income distribution: model vs. data.'

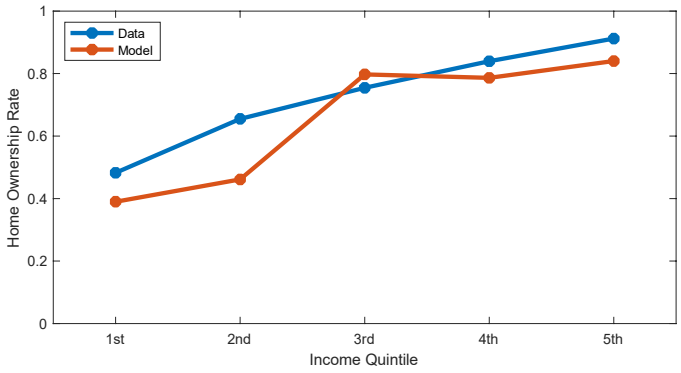


Figure 8: Home ownership rate by income quintile: model vs. data.

POLICY CONSIDERATIONS

Both comparative analysis and dynamic economic modeling indicate real benefit to Mississippi's economy and its people in eliminating the income tax. But there are also risks if the policy is approached haphazardly. Here are some thoughts on how lawmakers might proceed to exact the most benefit out of the elimination of the income tax.

MISSISSIPPI'S PATH

The most viable path to eliminating the income tax is a shift toward consumption taxes. Taxing income is a tax on productivity, or what people add to the economy. Income taxes require a complex web of regulation, come with high administrative cost, and are more easily evaded. By contrast, taxing consumption is a tax on what people take out of the economy, which in many ways, is preferable to taxes that create a drag on productivity.

Consumption taxes, which include both sales taxes and use taxes, are the most broad-based, tend to be simple, both in form and administration, and are not as susceptible to avoidance.

So, what would a shift to consumption taxes look like in Mississippi? Remember that in FY 2019, Mississippi collected $1.9 billion in individual income taxes after tax refunds and rebates were issued. In that same year, Mississippi had $51.32 billion in reported gross sales. From these sales, the state collected a total of $3.26 billion in sales tax, for an effective rate of 6.35 percent.

If Mississippi had collected 7 percent on the gross sales reported, sales tax revenue would increase to $3.59 billion. If Mississippi had collected 8 percent on the gross sales reported, sales tax revenue would increase to $4.11 billion. And if Mississippi had collected 9 percent on the gross sales reported, sales tax revenue would increase to $4.62 billion—a number nearly $1.5 billion above current collections.

In FY 2010, the state reported $43 billion in gross sales and collected a total of $2.65 billion. In the ten years following, gross sales reported increased by nearly 20 percent and sales tax revenue increased by 23 percent.

If gross sales increase by a similar 20 percent over the next decade, Mississippi would report a number of $61.58 billion. At the current effective sales tax rate that would generate revenue of $3.91 billion. Increasing the effective rate to 7 percent would generate $4.31 billion in revenue. Increasing the effective rate to 8 percent would generate $4.93 billion in revenue. Increasing the effective rate to 9 percent would generate $5.54 billion.

Under "Scenario 2" in the dynamic economic model, which includes offsetting income tax elimination with expansion of consumption taxes, an increase in consumption above current levels by 2.35 percent is projected. If gross sales reported increased by 3.0 percent annually over the next decade, they would increase to $68.97 billion. At the current effective sales tax rate, that would generate $4.38 billion in revenue. Increasing the effective rate to 7 percent would generate $4.83

billion in revenue. Increasing the effective rate to 8 percent would generate $5.52 billion. Increasing the effective rate to 9 percent would generate $6.21 billion.

These scenarios occur before you ever consider other sources of revenue to the state. In FY 2010, the state collected approximately $1.65 billion in use taxes, excise taxes and an assortment of fees, all occurring outside of income tax, corporate income and franchise tax, and sales tax. By FY 2019, the state collected $1.96 billion from this broad assortment of taxes and fees, a roughly 19 percent increase. Assuming a similar increase over the next decade, the state can expect to collect roughly $2.35 billion.

It is not hard to see how the "gap" of gradually eliminated income taxes gets made up without drastic changes to our code, whether solely through adjustments to sales tax or adjustments to both sales tax and other consumption taxes.

But even the dynamic model calculations could be conservative, as they cannot account for increases in migration that could result from the elimination of income taxes. While every state is unique, data discussed in the comparative analysis demonstrates that states without income taxes have dramatically outperformed the national average, with population increases more than double that experienced across the country over the last decade. Even modest appreciations about our current stagnant population trajectory could amplify the positive economic effects of eliminating the income tax.

Note on Data Sources: All figures cited above were pulled from the FY 2010 Annual Department of Revenue **Report** and the FY 2019 Annual Department of Revenue **Report**.

PHASE OUT

Lawmakers contemplating the elimination of the income tax should consider a phase out to be completed in eight to ten years, with the four percent bracket occurring immediately and the five percent bracket occurring in subsequent years. Any offsets considered by lawmakers, whether through sales tax or a mixture of sales and use taxes, should occur on a commensurate schedule, so as to avoid frontloading offsets before the value of income tax elimination is realized. If, as an example, the state decided to eliminate the four percent bracket in year 1 and then eliminate the five percent bracket in years 2-10, and the determination is made that the state wants to reach an 8 percent effective sales tax rate within the next decade, the effective rate for sales tax would need to increase by 0.17 percent per annum.

ABOUT TRIGGERS

Triggers have become popular in discussions of tax reform as a mean to ensure revenue streams do not dip too quickly as new policies are enacted. There are advantages and disadvantages to triggers, depending on design. For instance, triggers can be set so aggressively as to prevent policies from taking effect, or can slow the implementation of policies to the point that the benefits associated with it become less perceptible to the public.

If lawmakers choose to implement triggers, they should be designed with reasonable revenue guideposts in mind (*e.g.* not exorbitant revenue increases in order to trigger the next incremental reduction in the income tax rate). They should also be designed so that an unmet trigger not only halts the reduction in the income tax rate, but also any upward adjustment of consumption taxes. If not designed with both reasonable revenue levels in mind, and to halt both reduction in income taxes and upward consumption tax adjustments, the policy could become a net tax increase under the false pretense of eliminating the income tax.

LIMIT SPENDING GROWTH

Finally, any policy to eliminate the income tax must be accompanied by fiscal responsibility. This is not a call for draconian cuts, but for reasonable limits on spending growth. Executed correctly, Mississippi's revenue will increase over the course of the phase in, and even more so, once the policy is fully implemented.

State spending growth should be limited to population plus inflation, which accounts both for added burden, if population increases, along with natural increases in the prices of labor, goods, and services.

Opponents of structural tax changes often point to Kansas as a cautionary tale. Kansas is a cautionary tale, but not for the reasons believed. In 2012, the state began implementing aggressive income tax cuts. Between 2012 and the 2017 repeal of Kansas's tax cuts, the state enjoyed record-high private sector employment, with a job-growth ranking that improved ten spots after cutting taxes. The state also broke the record for new business start-ups in 2012, 2013, 2014, and again, in 2016.

Kansas is an important reminder of two things. First, the size of the government's coffers and the wellbeing of a state's people are not the same thing. Second, revenue is but one side of the fiscal coin. Spending is the other. The year the state implemented cuts, it increased state spending by $432 million. Tax revenue continued to climb in the years that followed the cuts, just not as quickly as legislators could spend.

SOURCES & ENDNOTES

[i] Mississippi Department of Revenue, FY 2020 Annual Report, unnumbered page appearing after cover page and before table of contents.

[ii] U.S. Census Bureau, State Government Tax Collections, Total Taxes in Mississippi [MSTOTLTAX], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/MSTOTLTAX, February 7, 2021.

[iii] Mississippi Department of Revenue, FY 2019 Annual Report, pg. 18-21.

[iv] U.S. Census Bureau, State Government Tax Collections, Total Taxes in Mississippi [MSTOTLTAX], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/MSTOTLTAX, February 9, 2021.

[v] Mississippi Department of Revenue, FY 2019 Annual Report, pg. 36.

[vi] Mississippi Department of Revenue, FY 2020 Annual Report, Pg. 36.

[vii] *Cf.* Mississippi Department of Revenue, FY 2019 Annual Report, pg. 18-21, with Mississippi Department of Revenue, FY 2020 Annual Report, pg. 18-21.

[viii] U.S. Census Bureau, 2019 Median Household Income in the United States Visualization, https://www.census.gov/library/visualizations/interactive/2019-median-household-income.html

[ix] U.S. Bureau of Economic Analysis, Total Gross Domestic Product for Mississippi [MSNGSP], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/MSNGSP, February 9, 2021.

[x] U.S. Bureau of Economic Analysis, Real Total Gross Domestic Product for Mississippi [MSRGSP], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/MSRGSP, February 9, 2021.

[xi] U.S. Census Bureau, Resident Population in Mississippi [MSPOP], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/MSPOP, February 11, 2021.

[xii] This chart includes data retrieved from FRED, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org, between December of 2020 and February of 2021. The tax collection data came from the U.S. Census Bureau's Annual Survey of State Government Tax Collections for each of the nine states without an income tax. A second data set compiled by the Bureau of Economic Analysis, reflecting the Gross Domestic Product of each state, was also retrieved in that same time period from FRED for purposes of calculating the tax burden for each state relative to the size of their economies.

[xiii] This chart includes data retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org, between December of 2020 and February of 2021. The tax collection growth data was produced by the U.S. Census Bureau's Annual Survey of State Government Tax Collections.

[xiv] This chart includes data retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org, between December of 2020 and February of 2021. The real median household income data used was produced by the U.S. Census Bureau.

[xv] This chart includes data retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org, between December of 2020 and February of 2021. The real gross domestic product data used was produced by the U.S. Bureau of Economic Analysis.

[xvi] This chart includes data retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org, between December of 2020 and February of 2021. The labor force participation rate data was produced by the U.S. Bureau of Labor Statistics.

[xvii] This chart includes data retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org, between December of 2020 and February of 2021. The population growth data was produced by the U.S. Census Bureau.

[xviii] Throughout this report, the term "consumption taxes" refers generally to sales, use, and excise (but not property) taxes.

[xix] For example, the model for Mississippi includes the deductibility of federal itemized deductions, net of state income taxes.

[xx] In national income accounting and in standard country-level macroeconomic models, changes in GDP equal changes in income. Since capital income in this model contains only non-housing income, whereas the capital stock used in the GDP

calculation (consistent with formal calculations of GDP) does contain housing, these values diverge.

[xxi] McClelland, Robert, and Shannon Mok. "A review of recent research on labor supply elasticities." *Congressional Budget Office Congressional Budget Office* (2012).

[xxii] In this case, progressivity (and regressivity) is defined as the change in taxes paid as a share of total income.

[xxiii] Barro, Jorge, and Clint Hamilton. "Measuring lifetime sales tax progressivity: A simulation-based approach." (2018).

[xxiv] https://www.dor.ms.gov/Business/Pages/Sales-Use-Tax-landing.aspx

[xxv] Tax rates are provided by the Tax Foundation. IRS data is available through their SOI tax statistics website.

[xxvi] This includes migration flows to and from foreign countries.

[xxvii] The provision limiting the state and local tax deduction is set to expire in 2025.

[xxviii] Barro, Jorge A. "Distributional Impacts of State and Local Tax Policy in a Heterogeneous-agent Model." *Public Finance Review* 47, no. 6 (2019): 971-1001.