AN ECONOMIC REPORT TO THE GOVERNOR OF THE STATE OF TENNESSEE

THE STATE'S
ECONOMIC
OUTLOOK
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AN ECONOMIC REPORT TO THE GOVERNOR OF THE STATE OF TENNESSEE

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PREFACE

This 2024 volume of An Economic Report to the Governor of the State of Tennessee is the forty-eighth in a series of annual reports compiled in response to requests by state government officials for assistance in achieving greater interdepartmental consistency in planning and budgeting efforts sensitive to the overall economic environment. Both short-term, or business cycle-sensitive forecasts, and longer-term, or trend forecasts, are provided in this report.

The quarterly state forecast through the first quarter of 2026 and annual forecast through 2033 represent the collective judgment of the staff of the University of Tennessee's Boyd Center for Business and Economic Research in conjunction with the Quarterly and Annual Tennessee Econometric Models. The national forecasts were prepared by S&P Global Market Intelligence. Tennessee forecasts, current as of December 2023, are based on an array of assumptions, particularly at the national level, which are described in Chapter One. Chapter Two details evaluations for major sectors of the Tennessee economy and presents the short-run and long-run outlook for the state economy, with an agriculture section provided by the University of Tennessee Institute of Agriculture. Finally, Chapter Three provides an assessment of business formation in Tennessee; new business applications rose rapidly at the onset of the pandemic, and strong growth continued through the end of 2021. This initial surge was driven by several factors, including the dramatic shift to online shopping, which made it easier for entrepreneurs to start direct-to-consumer businesses. In 2022, growth in new business applications finally started to moderate, but, the number of new business applications remained well above pre-pandemic levels. Tennessee has seen a massive influx of new residents through migration, which has been a major contributor to the strong growth in business formation as well as the robust economic growth seen in Tennessee over the last few years.

The primary purpose of this annual volume—published, distributed, and financed through the Tennessee Department of Finance and Administration, Tennessee Department of Economic and Community Development, the Tennessee Department of Revenue, and the Tennessee Department of Labor and Workforce Development—is to provide wide public dissemination of up-to-date economic analysis to planners and decision-makers in the public and private sectors.

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TABLE OF CONTENTS

CONTENTS

EXE	CUTIVE SUMMARY	VIII
CHA	APTER 1: THE U.S. ECONOMY	1
1.1.	The U.S. Economy: Year in Review	
	Introduction	
	Consumption and Inflation	
	Housing and Interest Rates	
	Employment and Wages	
	Investment and the Stock Market	12
	Government Expenditures and Major Policies	14
	International Trade	15
1.2.	The U.S. Forecast	17
	Consumption	18
	Investment	19
	Interest Rates and Inflation	19
	Labor Market	19
	Federal Budget	20
	International Trade	20
1.3.	Alternative Scenarios	21
CH	APTER 2: THE TENNESSEE ECONOMY	22
2.1.	Introduction	
2.2.	The Current Economic Environment	
	The Labor Market	
	Income, Earnings, and Taxable Sales	
	Population Trends	
	The Tennessee Housing Market	
	GDP Outlook	
2.3.	Tennessee Economic Outlook, continued	
	Labor Market Outlook	
	Income, Earnings, and Taxable Sales	
2.4.	Forecast at a Glance	
2.5.	Tennessee's Agricultural and Forest Industries and Rural Economy	51
	Introduction	
	Agriculture and Primary Forestry	51
	Food, Fiber, and Forestry Manufacturing in Tennessee	
	References	

CHA	APTER 3: BUSINESS FORMATION	63
3.1.	Introduction	63
3.1.	Trends in Business Formation in Tennessee	64
3.2.	Business Formation by County	66
3.3.	Business Formation Across the United States	69
3.4.	Business Formation by Industry	72
3.5.	Trends in Business Formation During the Initial Phase of the Pandemic	73
	Online retail/Direct-to-consumer model	73
	Stimulus checks	74
	Other pandemic-related business opportunities	74
3.6.	Recent Trends in Business Formation (Post-pandemic recovery)	75
3.7.	Wayfair and Business Formation	76
3.8.	Conclusion	78
APP	PENDIX A: FORECAST DATA	1
Quar	rterly Forecast Tables	2
Annu	ual Forecast Tables	18
APP	PENDIX B: HISTORICAL DATA	31
Quar	rterly History Tables	32
Δnnı	ial History Tables	48

FIGURES AND TABLES

CONTENTS

CHAPTER 1: THE U.S. ECONOMY	1
Figure 1.1: Overall U.S. Economic Growth Has Surpassed Pre-Pandemic Forecast	
and Continues to Outperform Other High-Income Countries (Q4 2019 = 100)	2
Figure 1.2: Consumption Growth is Strong and Goods Spending Remains Above Forecasts	3
Figure 1.3: Inflation in the U.S. is Lower than Global Peers, Despite Stronger Economic Growth	4
Figure 1.4: While Energy Inflation has Subsided, Housing Costs are Still Increasing	4
Figure 1.5: Housing Values and Rent Remain Well Above Pre-Pandemic Levels (Jan. 2020 = 100)	6
Figure 1.6: Interest Rates Have Increased to Pre-Great Recession Levels	7
Figure 1.7: A Relative Lack of Housing Supply and Surging Investor Interest are Two Likely Forces Behind Rising Housing Costs	8
Figure 1.8: Unemployment Remains Near 50-Year Lows	9
Figure 1.9: The Size of the Labor Force Remains Below Pre-Pandemic Forecasts,	
Driven by Lower-than-Expected Participation by Older Adults and Working-Age Women	10
Figure 1.10: Real Wage Growth Varies by Industry	11
Figure 1.11: The Ability of Earnings to Cover Estimated Mortgage Payments Varies by State	12
Figure 1.12: Investment Spending Increased, Led by Intellectual Property and Non-Residential Structure Spending	13
Figure 1.13: Stock Prices Rebounded Slightly During 2023	14
Figure 1.14: Government Consumption and Investment Have Increased, Due to Rising State and Local Spending in 2023.	15
Figure 1.15: Funds from the Bipartisan Infrastructure Law and Inflation Reduction Act Are Now Being Distributed to States	16
Figure 1.16: Net Exports Remained Nearly Constant Year-over-Year (in 2017 Dollars)	16
Figure 1.17: Consumer Sentiment Remains Low, Despite the Expectation of Rising Incomes	17
Figure 1.18: The Yield Curve Suggests Elevated Recession Risk	18
CHAPTER 2: THE TENNESSEE ECONOMY	22
Figure 2.1: Tennessee Nonfarm Employment is Well Above Pre-Pandemic Levels, but Job Growth is Starting to Slow	24
Figure 2.2: Job Growth has Slowed Across Most Broad Sectors in Tennessee	26
Figure 2.3: Job Openings in Tennessee Remain Elevated	26
Figure 2.4: Tennessee Does Not Have Enough Workers to Fill All of the Current Job Openings	27
Figure 2.5: The Unemployment Rate Remains Low	28
Figure 2.6: The Number of People Not in The National Labor Force Remains Elevated,	
Which is Pushing the Unemployment Rate Downwards	28
Figure 2.7: Labor Force Participation Has Yet to Recover from the Pandemic	29
Figure 2.8: Lower Labor Force Participation is Driven by Those Aged 55 Years and Older	29
Figure 2.9: Employment Growth by County, 2019Q1 to 2023Q1	30
Figure 2.10: Tennessee Workers Have Seen Strong Wage Gains Since 2021	31
Figure 2.11: Per Capita Income Levels Across the Southeast, 2023Q2	32
Figure 2.12: Per Capita Income Across Tennessee, 2022	33
Figure 2.13: Taxable Sales Categorized as Other Retail and Service Sales	
Have Remained Elevated Since the Expansion of Sales Tax Collections on Online Purchases	34
Table 2.1: Top-10 Origin States for New Tennessee Residents	35
Table 2.2: Top-10 Destination States for Tennessee Movers	35
Figure 2.14: Net Migration Continues to Increase in Tennessee	36

Figure 2.15: Migration into Tennessee by Age	36
Figure 2.16: Population Growth Across the U.S., 2021 to 2022	37
Figure 2.17: Tennessee County Population Changes, 2021 to 2022	38
Figure 2.18: Housing Starts in the U.S. Have Not Kept Pace with Population Growth	40
Figure 2.19: Active Listings of Homes for Sale in Tennessee Have Largely Trended Downward Since 2016,	
but Have Seen a Modest Uptick in Recent Months	40
Figure 2.20: The Construction of Smaller, More Affordable Homes Has Fallen Over the Last Decade,	
While New Construction of Larger Homes has Risen	41
Figure 2.21: The Federal Reserve has Increased the Federal Funds Rate,	
Which has Led to an Increase in the 30-Year Fixed Mortgage Rate	42
Figure 2.22: Home Values in Tennessee and the U.S. Have Been on the Rise	42
Figure 2.23: Listing Price of Homes Currently for Sale	44
Figure 2.24: The Number of Tennesseans Paying Higher Monthly Rent has Risen Over Time	43
Figure 2.25: Percentage of Tennesseans who are Cost Burdened by Housing by Income Group	45
Figure 2.26: Wages Across Tennessee Remain Below the National Average	46
Table 2.3: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted	47
Figure 2.27: Long-Run Real GDP Forecast, Tennessee and the U.S.	48
Figure 2.28: Long-Run Employment Forecast, Tennessee and the U.S.	49
Table 2.4: Tennessee Harvested Acres, Production, and Yield for Corn, Cotton, Soybeans, and Wheat, 2018-2023*	52
Table 2.5: Marketing Year Average Prices for Tennessee, 2017-2022*	52
Table 2.6: Tennessee Agricultural and Related Product Exports in FY 2022 and FY 2023: Total and by Major Product Category	56
Table 2.7: Tennessee Agricultural and Related Product Exports in FY 2022 and FY 2023	
by Top 10 Products and Partner Countries (Destinations)	57
Table 2.8: Indicators of Financial Well-Being of the Tennessee Farm Sector, 2017-2022	58
Table 2.9: Tennessee Food, Fiber, and Forestry Manufacturing, 2022	60
Table 2.10: Multiplier Effects for Economic Activity and Direct Total Value Added for	
Selected Agricultural Commodities in Tennessee, 2021	61
CHAPTER 3: BUSINESS FORMATION	63
Figure 3.1: Business Filings in Tennessee are a Strong Leading Indicator for Employment Growth	63
Figure 3.2: Annual Business Filings Have Risen Dramatically Since the Onset of the Pandemic	64
Figure 3.3: Quarterly Business Filings	65
Figure 3.4: Business Application Growth by County, Pre-Pandemic to Current Year	67
Figure 3.5: Growth in Business Applications has Moderated Over the Last Year	68
Figure 3.6: Business Filings Growth in Tennessee Compared to the U.S	70
Figure 3.7 Most Southeast States saw Stronger Business Formation Growth than the U.S. as a Whole, 2019-2022	70
Figure 3.8 Growth in Business Formation Across the Southeast Between 2022 and 2023	71
Figure 3.9: Growth in Business Applications by State, 2019-2022	71
Figure 3.10: U.S. Business Applications by Industry, 2019 to 2022	72
Figure 3.11: Tennessee Business Applications by Industry, 2021	73
Figure 3.12: Store versus Non-store Retailer Business Applications, 2013 to 2022	74
Figure 3.13: Online Sales as a Share of Total Retail Sales	75
Table 3.1 Economic Nexus Legislation and Thresholds	77

EXECUTIVE SUMMARY

THE U.S. ECONOMY

The United States economy experienced a surprisingly strong year in 2023, as economic growth surpassed even optimistic expectations. Inflation-adjusted gross domestic product (real GDP) grew by 2.2 percent, 2.1 percent, and 4.9 percent, respectively, in each quarter of 2023, leading to a 2.9 percent year-over-year increase as of September 2023. This strong growth rate has pushed the U.S. economy past even pre-pandemic forecasts. Overall, the U.S. recovery from the COVID-19 pandemic has substantially outpaced that of other high-income countries.

The primary driver of economic growth was consumption spending, which saw strong first and third quarters (up 3.7 and 3.9 percent, respectively) that pushed year-over-year growth to 2.4 percent as of the third quarter. Most of the \$367 billion increase in consumer spending was attributable to rising durable goods consumption (an increase of \$96 billion, a 4.9 percent year-over-year increase) and health care spending (an additional \$135 billion, a 5.4 percent year-over-year increase).

While business investment increased more slowly—contracting sharply in the first quarter before quickly recovering to achieve 1.8 percent year-over-year growth—it still substantially outperformed expectations. At the beginning of 2023, even the most hopeful forecasts expected investment to remain constant or contract slightly due to rising interest rates. However, investment stemming from the intellectual property and the manufacturing sector spurred this component of GDP into positive territory. One potential reason for the expanding investment spending relates to awards made through the Bipartisan Infrastructure Law (also known as the Infrastructure Investment and Jobs Act), the Inflation Reduction Act, and the CHIPS Act. Spending from these laws also stimulated state and local government spending growth, which added roughly one-quarter of the GDP growth observed in 2023.

Inflation, which dominated headlines during the previous year as it reached 40-year highs, subsided during the year, falling to 3.2 percent

as of October 2023. However, this still exceeds the Federal Reserve's target rate of 2 percent. Accordingly, the central bank continued to raise interest rates. As of October, the effective federal funds rate was 5.3 percent, up from 3.1 percent the same time a year ago.

The sector producing the most pressure on inflation rates during 2023 was housing. Housing costs rose 5.2 percent over the previous twelve months, reflecting a continued multi-year trend of surging home values and rental costs. Overall, single-family home values have grown by 42 percent from January 2020 through October 2023, while rental prices have increased 31 percent over the same period. Unfortunately, rising home values and increasing interest rates have made homebuying unattainable for many individuals, as wage growth has not kept pace. Immediately before the pandemic, the average expected mortgage payment was 24.6 percent of average monthly wages. However, this ratio has now climbed to 44.4 percent. Unfortunately, there does not seem to be immediate relief from elevated housing prices, as the number of households formed over the last five years still outstrips the current and expected housing supply.

Concerns regarding inflation and the housing market were the few dark spots for the economy during the year. In sharp contrast, the labor market remains strong, with an unemployment rate of just 3.9 percent during the year and only 3.2 percent for "prime-aged" workers (i.e., those aged 25-54). These levels remain near 50-year lows and are particularly notable as the economy also added 3.1 million individuals into the labor force during the year. Despite this impressive growth, there is still a labor market shortage compared to prepandemic forecasts, driven by workers aged 65 and older who have exited the labor market at higherthan-anticipated rates. Further, while employment markets were tight, wage growth was modest, only keeping up with the inflation rate. This means that, while workers may earn more, they can, on average, afford roughly the same amount of goods and services as they could in 2022.

THE U.S. ECONOMY, CONTINUED

Consistent with 2023's strong economic growth, the S&P 500, an index of the five hundred largest companies listed in U.S. stock exchanges, rose to 4,568 as of November 30. While this is still short of the all-time high of 4,800 reached in January 2022, it still represents a 12.0 percent increase relative to November 2022. Moreover, the stock market performance of U.S. companies continues to outperform their international peers. From January 2020 through October 2023, the S&P 500 increased by 29 percent, while a combined index of European markets has only grown by 6 percent over the same period.

Stock market performance is an intrinsically forward-looking measure, as investors buy shares of companies based on prospective profits rather than past performance. Accordingly, high market values are a promising indicator for the future. However, other forward-looking measures have not been so encouraging. For instance, while consumer sentiment rose dramatically from its all-time lows in 2022, it still remains near the levels seen during the Great Recession. This is somewhat at odds with households' expected increase in their income, which is hovering near pre-pandemic levels of optimism, suggesting that while Americans feel confident in their own prospects, they are skeptical about the health of the economy as a whole. Another forward-looking measure with pessimistic results comes from debt markets, where the effective interest rates on longterm bond yields moved below those for shortterm debt. This phenomenon—called a yieldcurve inversion—often precedes future economic slowdowns and even recessions.

Based on the mixed signals at the end of the year—strong existing economic fundamentals contrasting with concerning forward-looking indicators—expectations for 2024 are that the U.S. economy will continue to have positive growth but at a much slower rate than in 2023. Weak consumer spending, little growth in business investment, and rising imports will lead to sluggish growth of 0.9 percent and 0.1 percent of real gross domestic product in the first and second quarters. As slower growth also brings down inflation, the Federal Reserve will respond by reversing course and slightly cutting interest rates to 5.1 percentage points. Accordingly, the economy will accelerate somewhat in the second half of 2024 as business investment rebounds.

Overall, a modest increase in real GDP of 1.4 percent is projected for 2024. Given the slower economic growth, the inflation rate will fall to an average of 2.7 percent. As economic growth deceleratres, job growth will slow and the unemployment rate will rise to 4.3 percent. However, the U.S. is still expected to add 1.0 million non-farm jobs in 2024, with the largest growth coming from the healthcare sector. Job growth in capital-intensive industries, such as construction and manufacturing, is expected to remain flat, as negative pressure from elevated interest rates is offset by fiscal stimulus from the Bipartisan Infrastructure Law, Inflation Reduction Act, and CHIPS Act.

THE TENNESSEE ECONOMY

The Tennessee economy continued to see robust growth in 2022. Following an incredibly strong 2021, when inflation-adjusted gross domestic product (real GDP) advanced by 9.2 percent, the state economy expanded by an additional 4.8 percent in 2022. Strong growth continued into the first quarter of 2023, however, signs of a cooling economy are starting to emerge, as both consumer spending and job gains have slowed in recent months. Additional headwinds, such as the resumption of student loan payments and high interest rates, could hinder near-term economic growth as well. As a result, we are projecting that Tennessee real GDP growth will slow in the near term, but importantly, economic growth will remain positive.

THE TENNESSEE ECONOMY, CONTINUED

Expectations are that Tennessee real GDP will grow by 3.3 percent in 2023, and then decelerate to 1.8 percent in 2024, as consumer spending normalizes and the recovery continues to wind down. By comparison, U.S. real GDP will advance by 2.4 percent in 2023 and 1.4 percent in 2024. In general, Tennessee's economic outlook is more favorable than that of the nation's. The more positive state outlook is largely driven by stronger population gains in Tennessee. From 2021 to 2022, the state's population grew by 1.2 percent, which was much faster than the nation's 0.4 percent growth rate. Population growth is a key component of economic growth, as it creates a larger labor force, more consumption spending, and more economic activity in general.

A similar pattern is expected for the state labor market. Tennessee nonfarm jobs expanded by a very strong 4.6 percent rate in 2022, representing an addition of over 143 thousand workers. The state labor market continued to see robust growth in the first quarter of 2023, up 3.2 percent, but much more moderate growth of 1.0 in the second quarter and 0.9 percent in the third quarter. Nonfarm employment is projected to continue on this slower growth trajectory, and advance by 1.0 percent in 2024 and 1.1 percent in 2025, representing net increases of 33.8 thousand jobs and 37.7 thousand jobs respectively. By comparison, employment in the U.S. is projected to grow by a slightly slower 0.7 percent in 2024 and then see no growth in 2025. In addition to stronger population growth in Tennessee, the state's stronger employment projections are also driven, in part, by a more favorable outlook for the state's manufacturing sector. Tennessee continues to see manufacturing job growth, and we project that this will continue throughout the forecast horizon. By comparison, the U.S. outlook is calling for a contraction in manufacturing employment, which will put downward pressure on overall nonfarm employment growth for the nation.

Tennessee's unemployment rate, which measures the percentage of people who are not working but are actively looking for work, sits at an all-time low of 3.1 percent as of the third quarter of 2023. Expectations are that the unemployment

rate will slowly drift upward as job growth slows and the number of unemployed people rises. As a result, the state unemployment rate will increase to 3.5 percent in 2024 and 3.6 percent in 2025.

Nominal personal income will grow by a strong 6.3 percent in 2023, but then advance by a more moderate and historically normal rate of 4.7 percent in 2024. After adjusting for inflation, real personal income is projected to increase by 2.4 percent in 2023 and 2.7 percent in 2024. On a fiscal year basis, nominal personal income will increase by 5.6 percent in FY23/24 and 5.1 percent in FY24/25.

Over the long term, Tennessee real GDP will increase by 2.4 to 2.5 percent per year from 2026 through 2030, but will then slow to 2.2 to 2.3 percent from 2031 through 2033. Similarly, nonfarm employment will grow by 1.1 to 1.2 percent per year from 2026 to 2030, but then decelerate to 0.8 percent per year at the beginning of the new decade. The slower projected growth path at the end of the long-term forecast horizon is due to an aging population and a continued increase in retirements.

In addition to the economic forecast, the chapter also provides an analysis of the Tennessee housing market. Home prices in Tennessee and around the country have seen sharp increases over the last few years due to both an increase in demand and a persistently low supply of available homes.

There are a number of reasons for the supplyside challenges in the housing market, including but not limited to, a shortage of construction labor, zoning restrictions, and a shortage of available land, especially in some suburban and urban areas. In addition, rising building costs have become a major factor in more recent years. As a result, profit margins—especially for more moderately priced homes—have become increasingly tight and developers have been more inclined to build larger homes. Consequently, the construction of smaller, more affordable homes has declined while new construction of larger homes has risen. Finally, monetary policy by the Federal Reserve has become another important source for the low inventory of homes. In 2020 and 2021, many homeowners refinanced their

THE TENNESSEE ECONOMY, CONTINUED

home loans and lowered their monthly mortgage payments by taking advantage of record-low mortgage rates (around 3 percent for a 30-year fixed mortgage). However, the Federal Reserve has sharply raised interest rates to battle inflation since then. This has discouraged current homeowners from selling their homes because their current mortgage rate is well below the current market rates, which are now above 7 percent.

In addition to the reduced supply of housing, Tennessee's housing market has been greatly affected by increased demand, as more people moved to the state. The increased demand for housing and constrained supply have both put upward pressure on home prices. As a result, median home prices among active listings in Tennessee, which have historically been lower than the national average, overtook national prices in the fall of 2022. Furthermore, as of September 2023, Tennessee listing prices are more than \$20,000 higher than those in the U.S.; in Nashville, active listing prices are nearly \$150,000 higher than

the national average, and in Knoxville, they are roughly \$45,000 higher than the national average.

In addition to a low inventory of homes for sale, a supply shortage for renters exists as well. Consequently, rental prices have been on the rise, and the number of people paying more than \$1,500 per month in rent has risen dramatically since 2019 whereas the number of people paying less than \$1,000 per month has fallen.

Despite higher home and rent prices, wages in Tennessee remain below the national average. Earnings in Tennessee have certainly risen over time, but currently sit at \$29.75/hour, which is more than \$4/hour lower than the national average. Furthermore, even in Nashville and Knoxville where home prices are above the national average, hourly earnings are still lower than the national average. This discrepancy between home prices and earnings is putting the goal of home ownership out of reach for many Tennesseans, and those who are renting are becoming increasingly cost-burdened.

BUSINESS FORMATION

Business formation, as measured by the number of new business applications or initial filings is a good leading indicator for overall economic growth. That is, business filings have generally fallen prior to drops in employment during recessionary periods. Similarly, business filings typically grow and then employment follows shortly thereafter during recoveries and expansionary periods. For this reason, business formation can help provide key insights into how the overall economy is performing, and provides valuable information as to the overall business environment in a county, a state, and the nation as a whole.

Due to the surge in business applications over the past few years, this chapter largely focuses on the number and growth of business applications before, during, and after the COVID-19 pandemic. To that end, we discuss business formation in Tennessee over time and across industries, explore differences in business formation across Tennessee counties, and compare business formation in Tennessee to the nation and other states. We also provide a discussion of recent trends in business formation and the impact of recent sales tax legislation on business formation.

In both Tennessee and the U.S., new business applications have skyrocketed. From 2019 to 2022 business filings in Tennessee have grown by over 50 percent, and are up by 44 percent for the nation as a whole. Strong growth in business formation has largely been driven by an increase in retail trade businesses, particularly nonstore retailers. However, all industries have seen positive business formation growth since 2019.

Importantly, new business applications surged at the onset of the pandemic, and strong growth continued through the end of 2021. This initial surge was driven by a number of factors, including the dramatic shift to online shopping, which made it easier for entrepreneurs to start

BUSINESS FORMATION, CONTINUED

direct-to-consumer businesses. Starting a business without a brick-and-mortar location significantly reduces start-up costs by eliminating rent and utility payments. Furthermore, the non-store retail industry primarily consists of non-employer businesses which further reduces costs such as salaries and benefits for employees. In addition, a number of other pandemic-related business opportunities presented themselves in 2020 and 2021, including producing/selling masks, providing remote health services, tutoring, and other remote education-related services.

In 2022, growth in new business applications finally started to moderate, but, the number of new business applications remained well above pre-pandemic levels. As an example, business

applications within the professional and business services industry were much higher in 2022 relative to 2019, as the successful shift to remote work has likely provided greater opportunities for whitecollar entrepreneurs to start new businesses. In addition, consumer spending in both Tennessee and the U.S. has remained strong for longer than most have expected and has led to increased opportunities for new businesses. Finally, in Tennessee there has been a massive influx of new residents through migration. This has been a major contributor to the strong economic growth seen in Tennessee over the last few years, and more relevantly has also led to an increase in the number of workers in the state and an increase in the number of entrepreneurs.

CHAPTER 1: THE U.S. ECONOMY

In this Chapter —

1.1. The U.S. Economy: Year in Review

Introduction Consumption and Inflation Housing and Interest Rates Employment and Wages Investment and the Stock Market Government Spending and Major Policies International Trade

1.2. The U.S. Forecast

Consumption Investment Interest Rates and Inflation Labor Market Federal Budget International Trade

1.3. Alternative Scenarios

THE U.S. ECONOMY: YEAR IN REVIEW 1.1.

Introduction

Much like 2022, the tale of the U.S. economy in 2023 is a story of contrasts. On the one hand, the economy continues to outperform its prepandemic growth trajectory, and unemployment remains at near-record lows. On the other hand, inflation—while down from its 2022 peaks—still remains high, and the wage growth in many areas of the country has failed to keep pace, leading to a lower standard of living for consumers.

After adjusting for inflation, gross domestic product (real GDP) has grown by 2.2 percent, 2.1 percent, and 4.9 percent, respectively, in each quarter of 2023 so far. Overall, as of September 2023, the economy has grown in real terms by 2.9 percent year-over-year, surpassing the pace of economic growth set in the three years preceding the COVID-19 pandemic.

This growth was somewhat unexpected, as the consensus forecast heading into 2023 predicted

that the economy might enter a shallow recession. Instead, the United States economy continues to trend upward, even as growth in other highincome countries—such as those in the European Union—stagnates (as shown in **Figure 1.1**).

Despite the strong growth, the current year still presented several economic challenges. Inflation rates have receded from the 40-year highs reached in 2022 but still remain relatively high compared to recent history. Elevated prices are primarily driven by the housing market, where surging values have created serious affordability challenges. Additionally, while employment levels remain extremely high and the labor force continues to expand, wage growth has generally failed to keep pace with the rising cost of living, causing consumer confidence to remain low. This chapter discusses these overarching trends in greater detail as we evaluate the health of the overall economy in the past year and its prospects for 2024.

115 – 110 Pre-Pandemic U.S. U.S. Forecast 105 Real GDF 100 95 90 85 2016 2017 2018 2019 2020 2021 2022 2023 Sources: Bureau of Economic Analysis, Eurostat, S&P Global Market Intelligence December 2019 Forecast

Figure 1.1: Overall U.S. Economic Growth Has Surpassed Pre-Pandemic Forecast and Continues to Outperform Other High-Income Countries (Q4 2019 = 100)

Consumption and Inflation

The primary driver of overall economic growth during the year was attributable to increasing consumption, consistent with its status as the largest component of gross domestic product. As shown in **Figure 1.2**, consumer spending now exceeds the pre-pandemic forecasts by approximately \$150 billion in inflation-adjusted terms, growing by 2.4 percent year-over-year. This growth was driven by strong first and third quarters, which saw annualized increases of 3.7 and 3.9 percent, respectively.

Services, which comprise the majority of consumption spending, expanded by \$234 billion year-over-year in inflation-adjusted dollars, which comprised roughly two-thirds of overall consumption growth. This increase was driven by the resurgence of healthcare spending, which grew by 5.4 percent year-over-year (and \$135 billion overall), though the overall size of the sector remains below the amount forecasted prior to the pandemic.

While goods spending experienced a slight

contraction in 2022, it rebounded with strong real year-over-year growth of 2.6 percent as of the third quarter of 2023. This growth was punctuated by particularly strong first and third quarters, which saw annualized increases of 5.2 percent and 4.8 percent, respectively, leading to cumulative inflation-adjusted goods consumption that is over \$300 billion higher than the pre-pandemic forecast. The current year's progress was driven by durables, particularly vehicles and recreational goods, which comprised roughly 70 percent of all growth during the year. It is possible this spending stems from pent-up demand from prior years when supplychain issues led to shortages across several product categories and drove up prices.

Overall, inflation—which measures the change in prices for a select basket of goods—has decreased during the year, a welcome relief from the 40-year highs experienced in 2022. As of October 2023, the year-over-year inflation rate had fallen to 3.2 percent (with an annualized quarter-over-quarter growth rate of 2.6 percent). While this rate is slightly higher than the years leading up

20.000 Consumption Spending (Billions of 2017 Dollars) Dashed lines indicate pre-pandemic Overall forecasts for each category 15,000 Services 10,000 Goods 5,000 0 2016 2017 2018 2019 2020 2021 2022 2023

Figure 1.2: Consumption Growth is Strong and Goods Spending Remains Above Forecasts

Sources: Bureau of Economic Analysis, S&P Global Market Intelligence December 2019 Forecast.

to the COVID-19 pandemic, as well as the Federal Reserve's 2-percent target rate, it is in line with the 30-year period preceding the Great Recession, when inflation averaged 3.1 percent per year.

Furthermore, as shown in **Figure 1.3**, inflation within the United States is lower than in many high-income peer countries, such as the United Kingdom (U.K.), France, and Germany. This is a particularly striking fact, since the United States has experienced higher rates of economic growth than European countries as a whole, and higher growth is often associated with higher inflation rates.

Further investigation into the various categories of inflation provides insight into this decrease. Figure 1.4 shows that the slowdown in inflation was primarily driven by falling energy and vehicle prices, which decreased by 4.5 and 1.7 percent year-over-year, respectively. Food prices, while still rising, have done so at a much lower rate of just 3.3 percent, as compared to a year-overyear increase of over 10 percent during the same

period last year—and the food-specific inflation may continue to slow or even reverse as the effects of falling energy prices continue to work their way through the agricultural supply chain.

However, the element of inflation that has persisted—albeit at lower rates than in the previous year—is housing. Prices for housing services increased by 5.2 percent year over year and added 2.3 percentage points to the overall inflation rate (72 percent of the total). This is lower than the previous years' increase over the same period (7.1 percent), but housing affordability remains a serious problem.

Recent polls by Gallup indicate that only 21 percent of Americans feel that now is a good time to buy a house (down from 61 percent just prior to the pandemic), and 37 percent are worried about being able to pay rent, mortgage, or housing costs (up from 30 percent in 2019). Accordingly, in the next section, we examine the housing market more closely and discuss the factors behind the precipitous rise in prices that have occurred in the last several years.

¹ Source: "Housing," Gallup, (April 3-25 023). https://news.gallup.com/poll/162752/housing.aspx. Accessed November 28, 2023.

Figure 1.3: Inflation in the U.S. is Lower than Global Peers, Despite Stronger Economic Growth 12% 10% Year-over-Year Change in Price Index 8% U.K. 6% France 4% Germany U.S. 2% 0% -2% 2016 2017 2018 2019 2020 2021 2022 2023

Sources: Bureau of Labor Statistics, Organization for Economic Cooperation and Development.

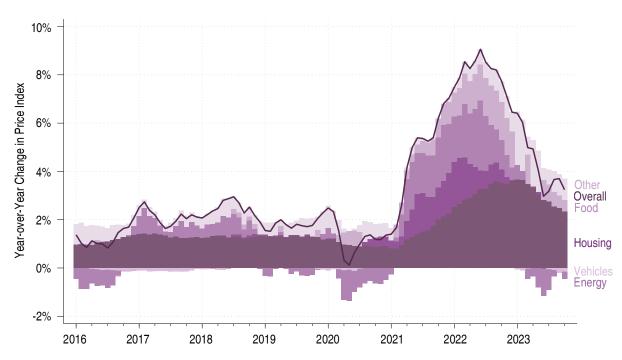


Figure 1.4: While Energy Inflation has Subsided, Housing Costs are Still Increasing

Source: Bureau of Labor Statistics.

Housing and Interest Rates

While the rate of housing price increases has slowed since last year, obtaining affordable housing in the post-pandemic economy remains a challenge for many Americans. Figure 1.5 provides further detail by displaying the rise of the Zillow Home Value Index (top panel) and the Zillow Observed Rent Index (bottom panel) for the last seven years, comparing national home values with those of select metropolitan areas in the Southern United States.2

According to the data, the average value for single-family homes in the United States has increased by 42.3 percent since 2020. Rental prices, while not experiencing the near-unprecedented growth of purchase prices, have still increased by 30.5 percent over the same period. The yearover-year increases (as of October 2023) for the Home Value and Observed Rental Indices were 1.8 percent and 3.2 percent, respectively.

An examination of home values by metropolitan area shows that there is substantial variation in housing values on a city-by-city basis. Of the selected Southern metropolitan areas, Knoxville, Tampa, and Miami have experienced the greatest growth since January 2020 (cumulative increases ranging from 58 to 68 percent). The slowest growing areas include New Orleans (8 percent), Huntington (23 percent), and Little Rock (30 percent).

In terms of year-over-year (rather than cumulative) housing value increases, Knoxville, Virginia Beach, and Miami were the markets with the fastest-growing home values (ranging from 5.4 percent to 8.8 percent increases as of October 2023). However, not all metropolitan areas experienced home value growth during the year. Of the twenty-seven selected metropolitan markets, eleven of them experienced decreases in housing value during the year, with New Orleans and Austin having the biggest falls of 8.6 percent and 10.1 percent, respectively.

A major factor in the slower rate of housing

price growth in the last year is the increase in mortgage rates, driven by the actions of the Federal Reserve (the Fed). As demonstrated by Figure 1.6, the Fed continued to increase the federal funds rate during 2023, reaching a top rate of 5.3 percent as of October. The rate increases appear to be slowing as inflation falls back to historical levels and interest rates hover around pre-Great Recession averages. These rising interest rates have directly impacted mortgage rates, which have risen nearly another percentage point during the year, to 7.6 percent as of October 2023, compared to 6.8 percent at the same time one year ago.

Even though rising interest rates have slowed overall housing growth, a question remains: what has caused such a dramatic rise in housing prices over such a brief period? The answer to this question is attributable to both demand- and supply-side factors. The top panel of Figure 1.7 illustrates this succinctly. From the beginning of the Great Recession in 2008 through most of 2018, the pace of housing unit creation (housing starts) kept up with the number of new households being formed. However, just prior to the start of the COVID-19 pandemic, a gap began to emerge: the number of households being formed (demand) began to outstrip the number of units being built (supply).

This relationship was sharply exacerbated in the wake of the pandemic, as a larger fraction of the workforce remained in "work-from-home" jobs that stimulated household formation growth. As shown in the figure, the housing supply has been unable to adjust to the increased demand.

Moreover, new household formation isn't the only source of increased demand within the market. The bottom panel of Figure 1.7 plots the housing gap—the difference between households formed and housing units created—against the share of new homes purchased by investors. As the figure demonstrates, investor purchases have been trending upward for several years but surged in early 2021 as a looming housing shortage became

² Metropolitan areas were included if they had over one million residents, were the largest city in their state, and/or were one of the three largest metropolitan areas in Tennessee.

175 Knoxville, TN Miami, FL Atlanta, GA 150 Nashville, TN Memphis, TN United States Single-Family Home Values Birmingham, AL Louisville, KY 125 New Orleans, LA 100 75 2016 2017 2018 2019 2020 2021 2022 2023 175 Rent for All Homes + Multi-Family Housing Knoxville, TN Miami, FL 150 Atlanta, GA Memphis, TN United States Nashville, TN 125 New Orleans, LA Houston, TX 100 75 2016 2017 2018 2019 2020 2021 2022 2023

Figure 1.5: Housing Values and Rent Remain Well Above Pre-Pandemic Levels (Jan. 2020 = 100)

Source: Zillow.

20 nflation (Percent Change Year-over-Year) 15 Effective Federal Funds Rate (Percent) 10 10 Inflation 5 5 0 Federal Funds -5 -5 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018 2020 2022

Figure 1.6: Interest Rates Have Increased to Pre-Great Recession Levels

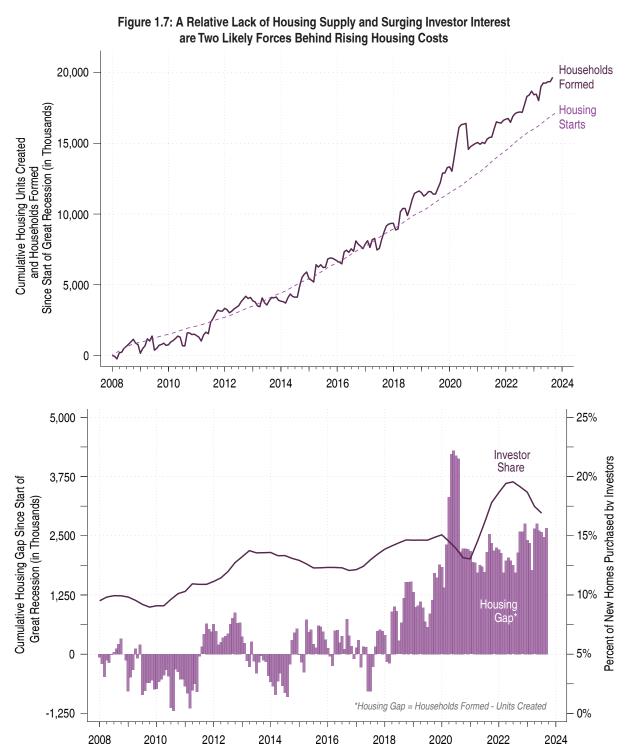
Sources: Bureau of Labor Statistics, Board of Governors of the Federal Reserve System

clear. While this trend is reversing, investor interest remains well above pre-pandemic levels.

Unfortunately, aside from the downward price pressure from higher interest rates, there seem to be few near-term solutions for elevated housing costs. The Census Bureau and Department of Housing and Urban Development estimate that 1.5 million residential building permits will be issued in 2023, which is higher than the five-year average preceding the pandemic (1.3 million/year) but well below the average of 1.8 million permits per annum in the period from 2000 through 2007 (before the Great Recession). Given that the rate of household formation has been roughly 1.8 to 1.9 million households per year since the advent of the COVID-19 pandemic, it seems that the current pace of housing development will not be enough to close the gap between demand and supply.

One reason that both completed and planned housing creation are unable to keep pace with demand relates to elevated costs of construction materials. Since January 2020, the cost of building materials has risen more than 40 percent, making it difficult for firms to buy affordable homebuilding supplies. These price increases have been driven by several factors, including increased demand, supply disruptions, adverse climate, and the domino effects of higher fuel prices. While several of these issues seem to have moved toward resolution in 2023, it is still not clear how soon the construction prices will respond, creating a margin for homebuilders to profitably complete additional homes.

While there are few short-run solutions to elevated housing prices, state and local authorities do have policy levers to increase the affordability of housing in their jurisdictions. It has been thoroughly documented that more restrictive zoning and land-use laws can substantially hinder new construction and drive housing prices to unaffordable levels. If policymakers wish to encourage affordable housing development, loosening onerous regulations is a potential avenue for price relief.



Sources: U.S. Census Bureau, U.S. Department of Housing and Urban Development, Redfin.

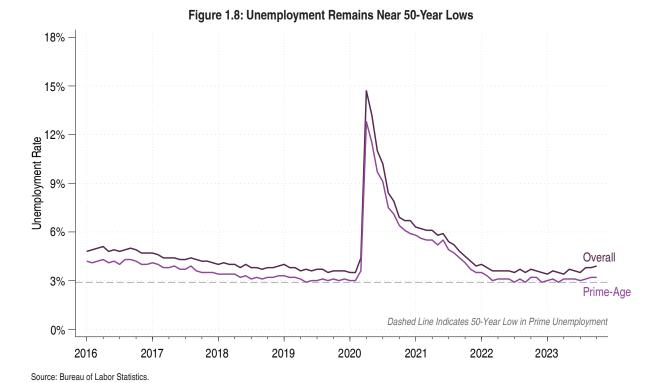
Employment and Wages

While rising prices present a persistent economic challenge, robust labor markets remain a consistent bright spot. The overall and primeage (25 to 54 years of age) unemployment rates were 3.9 percent and 3.2 percent, respectively, as of October 2023 (see Figure 1.8). For the second year in a row, these figures hover near the 50-year lows of 3.4 and 2.9 percent, respectively. These strong unemployment levels persist for workers of all education types, all of which are near the longrun lows within their respective categories. Overall, the economy added 2.9 million workers to nonfarm payrolls over the same time last year.

Low unemployment rates are a consequence of strong economic growth, but they could also be a byproduct of lower-than-expected labor force participation.3 As shown in the top panel of Figure 1.9, while there was robust growth in the labor force (an increase of 3.1 million relative to October 2022), there are still 1.2 million fewer individuals in the labor force than forecast prior to the pandemic.

The primary contributor to this shortfall of 1.2 million workers is lower labor force participation by individuals older than 65. As illustrated by the bottom panel of Figure 1.9, there are 1.7 million fewer older workers than expected. This is a striking shortfall, as adults aged 65 and older were only expected to comprise approximately 8 percent of the total workforce as of 2023.

There are two proximate causes for this shortfall. The first cause relates to the approximately 830,000 "excess" pandemic deaths among those aged 65 and older, roughly 300,000 of whom were aged 65 to 74 (and therefore more likely to participate in the labor force).⁴ Moreover, the labor force participation rate just prior to the pandemic was 20.2 percent and had been trending upward for several years—a trend that was expected to continue. However, the labor



3 The unemployment rate measures the percentage of people who are not working but are actively looking for work. The labor force participation rate measures the percentage of people who are working (employed) or not working but seeking work (unemployed).

Excess deaths are as the total mortality (from all-causes) above the 2015-2019 pre-pandemic trend.

Driven by Lower-than-Expected Participation by Older Adults and Working-Age Women 172 -Pre-Pandemic Forecast 168 Persons in Labor Force (in Millions) Labor Force 164 160 156 152 2017 2016 2018 2019 2020 2021 2022 2023 Total -1.2 Breakdown: Aged 65+ 0.3 Aged 25-64 Men Aged 25-64 Women -0.5 Aged 16-24 0.6 -1.8 -1.5 -1.2 -0.9 -0.3 0.0 0.3 -0.6 0.6 Difference Between Labor Force Levels and Prepandemic Forecast (in Millions)

Figure 1.9: The Size of the Labor Force Remains Below Pre-Pandemic Forecasts,

Sources: Bureau of Labor Statistics, S&P Global Market Intelligence December 2019 Forecast.

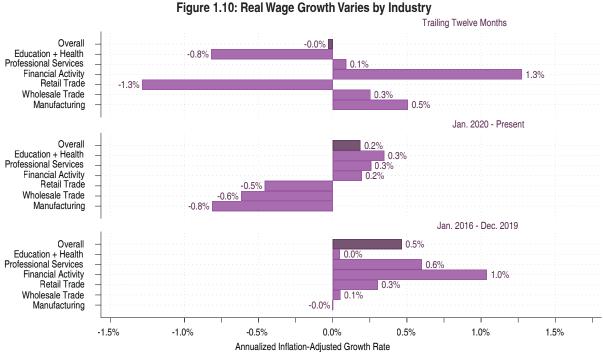
force participation rate for those aged 65 and older has instead fallen just below 19 percent and shows no sign of increasing. If older adults were participating in the labor force at similar rates to the fourth quarter of 2019, then the labor force participation gap would be approximately 800,000 jobs smaller.

In addition to the labor force shortfall of older adults, working-aged women have also not joined the labor force at rates expected prior to the pandemic, with approximately 500,000 fewer workers than forecast as of October 2023. The reason for this gap relates, in part, to increased caregiving burdens, such as childcare disruptions, which are disproportionately borne by women. However, 2023 saw substantial improvement in this area, as the shortfall decreased by 1.1 million over the same time last year.

Despite low unemployment and lower rates of inflation, for the second year in a row, wage growth has not ultimately translated into increased purchasing power for workers. As of October 2023, inflation-adjusted earnings (real earnings) have remained almost constant yearover-year. Practically speaking, this means that even though workers may be receiving increasingly large paychecks, the costs of the goods that they buy have increased at the same rate. As shown in Figure 1.10, earnings from employment have barely outpaced inflation since the beginning of 2020, with real wages growing at an average rate of 0.2 percent annually, less than half the growth rate of the four years prior.

While overall inflation-adjusted wages were flat during the year, workers in some industries outperformed others. Those working in financial services saw robust wage growth well above their pre-pandemic averages while manufacturing and wholesale trade employees saw real gains as well. This is a stark reversal from earlier post-pandemic years, which saw their wages fail to keep up with rising prices.

Given the rapid rise in housing prices—and the large variation of both earnings and home values across states—one way to evaluate the sufficiency of wages is to compare them to estimated mortgage payments. Figure 1.11 displays the results of such an analysis, where payments



Source: Bureau of Labor Statistics

AK (42%) VT (49%) WA (57%) MT (60%) ND (30%) MN (37%) WI (38%) MI (29%) NY (49%) MA (61%) RI (53% IL (31%) ID (60%) WY (44%) IN (31%) OH (28%) PA (33%) NJ (59%) CT (46%) SD (40%) IA (30%) NV (59%) CO (61%) NE (33%) MO (32%) KY (27%) WV (22%) VA (45%) MD (49%) DE (51%) NM (44%) TN (41%) NC (41%) SC (39%) CA (79%) UT (64%) KS (30%) AR (28%) Values display estimated monthly mortgage payments for a newly OK (27%) LA (27%) MS (27%) AL (29%) purchased home as a percent of monthly earnings. Darker colors indicate that HI (111%) TX (36%) housing costs are a higher share of earnings

Figure 1.11: The Ability of Earnings to Cover Estimated Mortgage Payments Varies by State

Source: Bureau of Labor Statistics, Zillow.

are calculated based on current housing prices and average 30-year mortgage rates (assuming a 15 percent down payment) and are then divided by monthly earnings. Nationwide, the average estimated mortgage payment is 44.4 percent of gross pay as of October 2023, as compared to 41.7 percent in October 2022 and 24.6 percent in January 2020 (based on housing prices and 30-year mortgage rates during those times). This is substantially higher than the Department of Housing and Urban Development's threshold for affordable housing, which states that families who pay more than 30 percent of their income for housing may have difficulty affording other necessities. Currently, the average worker in only twelve states is at or below this threshold, as compared to thirty-nine in January 2020.

Investment and the Stock Market

Despite its position as the second largest component of GDP, business investment made

only modest contributions to overall economic growth during the year. In response to higher interest rates, investment contracted sharply by 9.3 percent in the first quarter of 2023, led by a \$125 billion decrease in inventories on an annualized, inflation-adjusted basis. However, real investment rebounded in the second and third quarters, increasing at annualized rates of 5.1 percent and 8.2 percent, respectively. Overall, investment has increased by a modest 1.8 percent year-over-year.

As demonstrated by **Figure 1.12**, business investment growth was primarily driven by increases in non-residential structures and intellectual property investment, which grew by 13.1 percent and 3.8 percent on a year-over-year basis, contributing approximately one-fifth of overall economic growth during the year. The surge in non-residential structure spending was primarily due to the \$52 billion of manufacturing investment that has occurred over the last four quarters. This was by far the

Overall 125 Inventories Intellectual 100 Property 75 nvestment Spending Equipment 50 Nonresidential Structures 25 Residential 0 2016 2017 2018 2019 2020 2021 2022 2023

Figure 1.12: Investment Spending Increased, Led by Intellectual Property and Non-Residential Structure Spending (Q1 2016 = 100)

Source: Bureau of Economic Analysis.

largest single-year investment in manufacturing structures on record—potentially spurred on by investment incentives from the CHIPS Act passed in mid-2022—and it exceeded the previous record set in 1979 by over \$20 billion inflation-adjusted dollars.

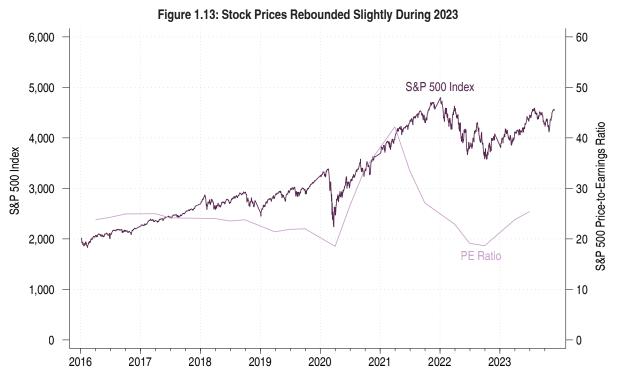
The growth in intellectual property and nonresidential structures was offset by contractions in equipment and, to a larger extent, residential structures. As discussed above, the decrease in residential structures is likely due to a combination of rising interest rates and inflated construction costs. Meanwhile, the decrease in equipment investment was primarily driven by falling information technology spending, which had been well above its historical trend, likely due to investments made to accommodate shifting work arrangements in the wake of the pandemic.

Overall business values, as reflected by stock prices, rebounded slightly during the year, with the S&P 500 Index settling at 4,568 as of November 30, still shy of the all-time high

of nearly 4,800 reached in 2022. As shown in **Figure 1.13**, the market values of the largest U.S. companies increased by 12.0 percent relative to the same time last year.

The market-wide price-to-earnings ratio (PE Ratio) of the S&P 500 remains at 25.4, just below the 30-year average of 25.8. Given that the price-to-earnings ratio relates a company's value to its underlying ability to generate profits, PE ratios equal to historical values may indicate that investors consider shares to be properly valued and/or are cautiously optimistic about the economy.

Overall, U.S. markets continue to outperform their European counterparts. During the period from January 2020 to October 2023, the S&P 500 grew by nearly 29 percent. In contrast, the combined stock market indices for 19 European countries have grown only 6 percent over the same period, while the United Kingdom's premier stock index, the FTSE 100, has lost 1 percent of its value.



Source: S&P Dow Jones Indices LLC.

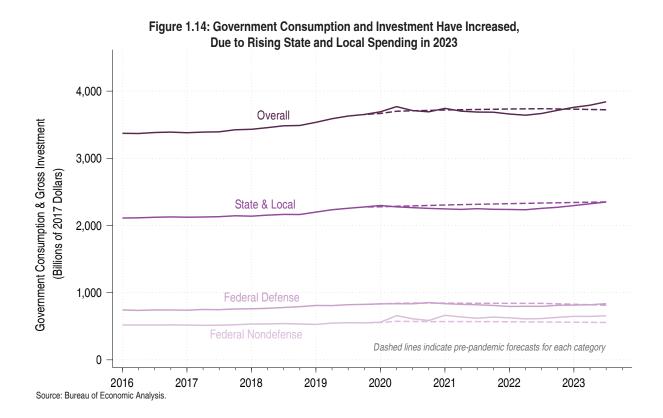
Government Expenditures and Major Policies

Increased government consumption and investment was a major contributor to 2023's overall rise in output, with \$174 billion of year-over-year, inflation-adjusted growth as of the third quarter of 2023 (a 4.7 percent yearover-year increase). Overall, the government's contribution to real GDP has slightly surpassed pre-pandemic expectations, as shown in Figure **1.14**. Most of the year's growth stems from increased spending on the state and local levels (a \$94 billion year-over-year increase), which is partially attributable to funds flowing from the Bipartisan Infrastructure Law (also known as the Infrastructure Investment and Jobs Act). While the BIL was passed two years ago, a large portion of the authorized funds were distributed in 2023, most of which went to states. The influx of federal funds is likely to stimulate additional funds on a local level as well.

In addition to government spending on consumption and investment, it is also useful

to consider government spending that doesn't contribute to gross domestic product. Examples of such expenditures include subsidies, transfer payments (such as social security), and interest payments. Total spending for these categories increased by just over \$121 billion from year to year on an inflation-adjusted basis, an increase of 3.9 percent. This is completely due to higher interest payments on the federal debt (an increase of \$163 billion). As of the third quarter of 2023, government debt comprises 94.4 percent of gross domestic product, as compared to 93.2 percent at the same time last year and 78.2 percent in the final quarter of 2019.

The current year was also notable as it was the first year that the Bipartisan Infrastructure Law (BIL), Inflation Reduction Act (IRA), and Creating Helpful Incentives to Produce Semiconductors and Science (CHIPS) Act started affecting the economy. As discussed in the Investments section above, the CHIPS Act likely spurred manufacturing businesses to greater investment. Moreover, the U.S.



Chamber of Commerce notes that \$166 billion of semiconductor-related investments have been announced since the Act's enactment.

Funds from the BIL and IRA are also being announced and awarded in large quantities. Thus far, the states receiving the largest amounts are California (\$13.5 billion), Texas (\$11.7 billion), Illinois (\$6.1 billion), Florida (\$6.0 billion), and Ohio (\$4.9 billion). However, on a per capita basis, the distribution of funds looks very different. Figure 1.15, shows the per-person amounts of funds announced and awarded under the two laws, and demonstrates that there has been widespread dispersion in how funds have been distributed. On a per capita basis, states in the Mountain West Region and Northern Great Plains have received some of the most sizable investments. While some of this seems to be related to population—that is, less populated states are receiving more funds per resident, on average—it is not completely so. For instance, despite having nearly the same combined 2020 population (just shy of 3 million residents), the

states of Vermont, Delaware, and Maine received \$527 per capita in awards, while the states of Wyoming, Alaska, and the Dakotas received \$2,470 in investments.

International Trade

International trade remained very steady during 2023, contributing only \$44 billion to real gross domestic product (less than 7 percent of overall economic growth during the year). As shown in **Figure 1.16**, this change was primarily driven by a decrease in imports (a fall of \$48 billion) rather than increased exporting activity, which remained nearly unchanged year-over-year.

The U.S. continues to be a net importer of goods, and the goods-specific trade deficit remained relatively unchanged during the year, as both goods imports and exports fell in nearequal measure. However, the country expanded its service-specific surplus, exporting \$19 billion more in services while reducing service imports by \$21 billion.

AK (\$3,578) ME (\$499) VT (\$753) NH (\$254) WA (\$401) MT (\$2,583) ND (\$1,796) MN (\$372) WI (\$344) MI (\$330) NY (\$236) MA (\$245) WY (\$4,268) SD (\$1,029) IN (\$345) OH (\$414) PA (\$358) NJ (\$292) CT (\$356) VA (\$283) MD (\$170) OR (\$353) NE (\$407) KY (\$639) WV (\$577) DE (\$420) NM (\$937) CA (\$342) UT (\$422) KS (\$296) NC (\$308) SC (\$291) Values display per-capita LA (\$660) MS (\$459) AL (\$369) GA (\$288) funds announced and awarded as part of the Bipartisan Infrastructure Law and Inflation Reduction Act TX (\$402) FL (\$280) Darker colors indicate higher per-capita funds received

Figure 1.15: Funds from the Bipartisan Infrastructure Law and Inflation Reduction Act
Are Now Being Distributed to States

Source: Invest.gov.

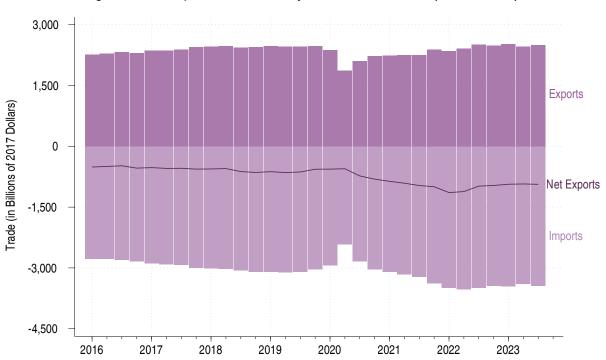


Figure 1.16: Net Exports Remained Nearly Constant Year-over-Year (in 2017 Dollars)

Source: Bureau of Economic Analysis.

1.2. THE U.S. FORECAST

As with the last two years, economic forecasters and policymakers are looking toward the future and wondering if the U.S. economy is headed toward a recession. And, as before, it is a question without an easy answer. Certain aspects of the economy, including headline economic growth, appear to be very strong. However, there are several forward-looking measures that point to a near-term economic slowdown, if not an outright recession.

One such measure is the University of Michigan's Consumer Sentiment Index, which is shown in Figure 1.17. Low periods of consumer confidence in this index often precede or coincide with recessions, and current levels of sentiment, despite their partial rebound from the all-time low reached in 2022, are still comparable to the Great Recession. While this may be a foreboding sign for an economy, this metric also sends somewhat mixed signals. The Consumer Sentiment Survey also asks individuals how they expect their income to change over the next year. Since 1992—the first year that this data is available—this expected increase has trended closely with overall consumer sentiment. However, this relationship has broken

down in recent years and is consistent with other polling sources that have found that Americans are pessimistic about the economy as a whole, even though they are optimistic about their own circumstances.

Given these trends, perhaps a more reliable forward-looking measure comes from financial markets. The difference in effective interest rates on 10-year treasury bonds and 3-year treasury bills also known as the yield curve—is one financial market measure forecasters look to when predicting recessions. This relationship is shown in Figure 1.18, where the top panel plots the yield curve over time. The bottom panel of the same figure shows the probability of entering a recession, as calculated by the Federal Reserve Bank of New York based solely on the yield curve rates.

As demonstrated by the figure, during 2023, the implied probability of recession within the next year reached levels not seen since the early 1980s. This was particularly salient because the yield curve "inverted" during the year, which means that the long-term (10-year) bond had a lower effective interest rate than the short-term

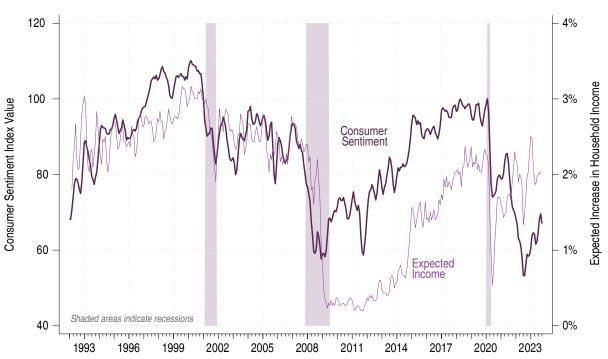


Figure 1.17: Consumer Sentiment Remains Low, Despite the Expectation of Rising Incomes

Source: University of Michigan Consumer Sentiment Index

1.2. THE U.S. FORECAST, CONTINUED

(3-year) bill. The inversion of the yield curve is considered to be a foreboding sign since long-term interest rates are typically higher to compensate investors for risk. If long-term interests fall below short-term rates, that indicates that investors are anticipating that the Federal Reserve will substantially cut interest rates in upcoming years, something that most frequently occurs during recessionary periods. However, even this leading indicator seems to be sending unclear signals, as the yield curve is trending upward toward the end of the year, causing the implied recession probability to fall once more.

Despite the leading indicators, the fact remains that the U.S. is finishing out 2023 with a number of strong economic fundamentals, notably a high rate of GDP growth and robust labor markets. Furthermore, the impacts of fiscal policy passed in 2021 and 2022 appear to be positively affecting the economy at the right time, spurring investment that might otherwise be discouraged by rising interest rates.

With these factors in mind, the national outlook calls for slowing economic growth, beginning in

the fourth quarter of 2023 and continuing through 2024. Waning federal post-pandemic support—such as the phase-out of additional pandemic-era SNAP and Medicaid benefits and student-loan forbearance—alongside disruptions caused by autoworker strikes and a potential government shutdown will lead to sluggish growth of 0.9 percent and 0.1 percent of real GDP in the first and second quarters of 2024, respectively. In the second half of the year, growth is predicted to accelerate, driven by recovering consumer spending and investment. As a result, U.S. real GDP is projected to increase modestly by 1.4 percent for 2024 as a whole.

Consumption

Personal consumption growth will remain positive through 2024, with a projected increase of 1.9 percent in inflation-adjusted (real) terms. Consumption spending growth will be positive across all broad categories, with goods driving roughly one-third of the increase, while services are anticipated to make up the remaining two-thirds.

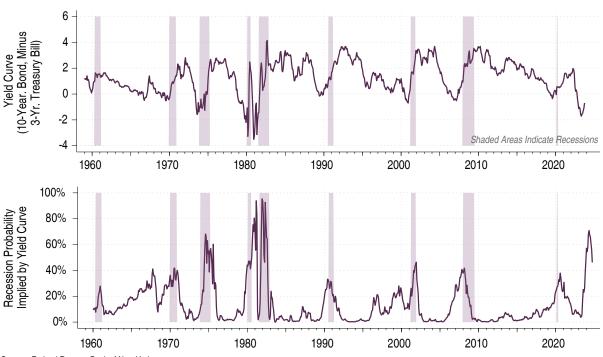


Figure 1.18: The Yield Curve Suggests Elevated Recession Risk

Source: Federal Reserve Bank of New York.

1.2. THE U.S. FORECAST, CONTINUED

The rise in goods spending is anticipated to be split evenly between durable goods (\$54 billion) and non-durable goods (\$51 billion). The growth in durables is headlined by a projected 6.6 percent increase in recreational goods spending, offset by an anticipated 3.1 percent decrease in motor vehicle spending. The most notable growth for non-durable goods is anticipated to stem from a 3.5 percent expansion in food services and accommodations. Service spending is expected to again be driven by healthcare, which has a forecasted rise of \$57 billion during the year, or 20 percent of all consumption growth.

Investment

While investment growth is anticipated to remain positive (with a growth rate of 0.5 percent), this is a result of mixed forces. Inventories are anticipated to shrink during the year as businesses react to slower growth in consumer spending, leading to a \$9 billion decrease in investment. A continued contraction in residential fixed structures of \$13 billion—a 1.8 percent decrease—is also projected to decrease investment growth.

These shrinking sectors are projected to be more than offset by growth in equipment and intellectual property investment, which will add a combined \$44 billion of investment spending during the year. Aside from intellectual property, the single largest growth area relates to investment in transportation (a \$17 billion increase, or 7.0 percent). Anticipated investment increases in this area can likely be traced back to the IRA, which provides companies incentives to invest in electric vehicles for their commercial fleets.

Interest Rates and Inflation

Interest rate increases slowed dramatically during 2023 and are projected to reach their peak in the first quarter of 2024, with a 5.6 percent effective rate. Given the anticipated weakness in economic growth discussed above, the Federal Reserve is then anticipated to cut rates slightly, ending the year at 5.1 percent. These interest rate changes will have a direct effect on mortgage

rates, which are expected to reach a maximum of roughly 7.7 percent before falling by more than a point by the fourth quarter of 2024.

Declining interest rates are not anticipated to have a short-run improvement on housing construction—housing starts are anticipated to fall to 1.33 million per year. Because interest rates are falling, supply is contracting, and because there is no sign of abatement in demand, housing prices are forecasted to increase at a rate of 6.1 percent.

The expected rate of inflation—as measured by the change in the Consumer Price Index (CPI) will average 2.7 percent during 2023. This decrease is attributable to falling energy and commodity prices and the slowing of food-related inflation as lower fuel costs work their way through the supply chain. Specifically, energy and commodities prices are projected to fall by 1.5 and 1.4 percent, respectively. Further, food price inflation is expected to average 2.0 percent, as compared to 3.3 percent during 2023. As noted above, housing costs, which were the biggest contributor to inflation in 2023, are expected to rise once more in 2024. Overall, nonenergy services (of which shelter costs are by far the largest component) are expected to increase by 4.6 percent year-over-year.

Labor Market

The unemployment rate is expected to rise above its near 50-year lows over the course of the year, consistent with an economic slowdown. Specifically, unemployment is expected to rise gradually and reach 4.5 percent by year-end, with a 4.3 percent rate for 2024 as a whole. For context, this is still slightly lower than the unemployment rate experienced in the economic growth period just prior to the Great Recession.

While unemployment rates are expected to increase, the labor force is still expected to grow in size, though at a much lower rate than the current year. Overall, the labor force is projected to add 1.5 million individuals, buoyed by increasing labor force participation rates (up 0.5 percentage points) for those aged 16 to 64. This growth is offset by an aging workforce, which is seeing more and more individuals enter retirement age. As a result, labor

1.2. THE U.S. FORECAST, CONTINUED

force participation among older adults (65 years and older) is projected to fall by an additional 0.3 percentage points.

In 2024, nonfarm employment is projected to grow by a very modest 0.7 percent, representing an increase of 1.0 million workers. Some industries are expected to see more favorable labor markets than others. Nearly all employment growth in 2024 is projected to come from just three sectors: health care (710,000 jobs), leisure and hospitality (200,000 jobs), and state/local governments (340,000 jobs). Meanwhile, retail trade is expected to contract by 340,000 jobs, likely in response to slowdowns in consumer spending.

While capital-intensive industries, such as construction and manufacturing, would normally be forced into contraction by high interest rates, employment in these industries is projected to remain unchanged year-over-year (a combined addition of roughly 10,000 jobs). This lack of decline may be attributable in part to investments made via the CHIPS Act, BIL, and IRA.

Federal Budget

As noted above, the amount of publicly held debt as a percentage of GDP was 94.4 percent as of the third quarter of 2023. This number is expected to increase substantially during 2024. Government expenditure on transfer payments such as Social Security and Medicare will continue to increase as an increasing fraction of the

population ages into eligibility for these programs. (The population of individuals aged 65 and older is expected to increase by 3.0 percent year-overyear, while the prime-working-aged population is expected to remain unchanged). Additionally, interest payments have increased slightly due to pandemic-era spending, and tax revenue is also expected to slow during the year, following lower rates of economic growth.

In total, the government is expected to run a \$370 billion deficit and publicly held debt as a percentage of GDP, which is expected to increase to 98.9 percent during the year. While substantial, this is still less than the ratio of publicly held debt to gross domestic product achieved during the early months of the COVID-19 pandemic.

International Trade

Net exports are expected to decline in 2024. Overall, exports are expected to increase at a rate of 3.2 percent as other world economies continue their recoveries (which have been comparatively slower than the U.S.). Services exports are expected to grow faster than exported goods, a continuation of the post-pandemic trend.

However, imports are expected to increase at a faster rate than exports, at a rate of 4.2 percent year-over-year. Import growth is likely attributable to the strength of the dollar versus other currencies and the continued unwinding of issues that have disrupted international supply chains.

ALTERNATIVE SCENARIOS 1.3.

The baseline forecast outlined above makes a number of assumptions about the stability of the U.S. economy and the global economy at large. If these assumptions turn out to be incorrect—for instance, if there is turmoil in the banking sector, causing a tightening of credit conditions, or if geopolitical conflicts between Russia and Ukraine and in the Middle East disrupt economic activity more than anticipated—then the baseline forecast could be inaccurate. Accordingly, this section details two additional scenarios—one pessimistic and one optimistic—based on assumptions about current geopolitical conflict, alongside other factors.

The **pessimistic scenario** is the more likely of the two, one in which S&P Global Market Intelligence places an estimated probability of 30 percent. In this scenario, the banking system responds to economic uncertainty and recessionary fears by severely restricting access to credit. In this case, consumer spending and investment that depends on credit will fall, leading to a slowdown in the two largest components of GDP. Additionally, the worsening of the Russia-Ukraine and Middle Eastern conflicts drive up energy prices, which in turn exacerbate inflation in other areas as higher input costs proliferate through the supply chain. Higher inflation will further dampen consumer spending, causing a weak (0.8 percent) expansion of consumption. As a consequence of tepid consumption growth and falling investment (down 0.9 percent) due to credit tightening, the economy would enter a recession in the first half of the year, with GDP contractions of 0.5 percent and 0.6 percent in the first two quarters, respectively. Positive economic growth would resume during the second half, and real GDP would grow by only 0.6 percent for the 2024 year as a whole. This would also lead to a slowdown in job growth, which would contract by 0.9 percent in 2024.

Despite the lack of economic growth, global disruptions would cause increases in inflation, leading to a 3.1 percent increase in prices during

the year, which is higher than the 2.7 percent increase that is projected under the baseline scenario. Under this scenario, the Federal Reserve would likely opt to cut rates to stimulate the economy, particularly since monetary policy's ability to address supply-side inflation from global factors is limited. Specifically, the effective Federal Funds Rate would reach 4.3 percent by the end of 2024, with continued cuts to less than 1 percent through 2026, when economic growth eventually converges to the baseline scenario.

There is, however, a chance that things could be much better. In the optimistic scenario, which S&P Global Market Intelligence assumes has a 15 percent chance of occurring, there is minimal disruption from geopolitical conflicts and little or no tightening of bank credit, leading to robust increases in consumption and investment. Moreover, in this scenario, investments from recent legislation (the BIL, IRA, and CHIPS Act) lead to better-than-expected economic growth. Specifically, inflation-adjusted gross domestic product will increase by 2.1 percent during the year, as compared to the 1.4 percent increase in the baseline scenario. This growth is driven by expansions of consumer spending (2.7 percent) and business investment (2.8 percent) but is slightly slowed by falling net exports (strong import growth). The strong economy leads to a 1.0 percent increase in nonfarm employment and keeps unemployment at 4.0 percent, which contrasts favorably with the 5.7 percent unemployment rate expected in the pessimistic scenario.

While economic growth is highest in this scenario, the projected inflation rate of 3.0 percent is actually still lower than the low-growth pessimistic scenario due to the lack of globally driven energy inflation. Given the positive results during the year, the S&P 500 is expected to increase by 7.0 percent in 2024, a rate of growth that exceeds the index's 25-year average growth rate and one that would put the index at an all-time high.

CHAPTER 2: THE TENNESSEE ECONOMY

In this Chapter —

2.1. Introduction

2.2. The Current Economic Environment

The Labor Market Income, Earnings, and Taxable Sales Population Trends The Tennessee Housing Market

2.3. Tennessee Economic Outlook

GDP Outlook Labor Market Outlook Income, Earnings, and Taxable Sales

2.4. Forecast at a Glance

2.5. Tennessee's Agricultural and Forest Industries and Rural Economy

Introduction Agriculture and Primary Forestry Food, Fiber, and Forestry Manufacturing in Tennessee

2.1. INTRODUCTION

The Tennessee economy, like the U.S. as a whole, has seen very strong economic growth over the last two and a half years. In Tennessee, inflation-adjusted gross domestic product (real GDP) rose by an incredibly strong 9.2 percent in 2021 and an above-trend rate of 4.8 percent in 2022. However, signs that the economic recovery is winding down have emerged, as both consumer spending and job gains have slowed in recent months. Additional headwinds, such as the resumption of student loan payments and high interest rates could hamper economic growth in the near term as well.

Importantly, real GDP growth is projected

to decelerate, but remain positive for both Tennessee and the U.S., however, economic growth in Tennessee will remain above the nation throughout the forecast horizon. Expectations are that Tennessee real GDP growth will decelerate to a still strong rate of 3.3 percent in 2023, and then slow to a slightly below trend rate 1.8 percent in 2024, as consumer spending normalizes and the recovery continues to wind down. By comparison, U.S. real GDP will advance by 2.4 percent in 2023 and 1.4 percent in 2024.

Nonfarm employment growth will also moderate in the near term. In 2022, Tennessee employment grew by 4.6 percent and the state

2.1. INTRODUCTION, CONTINUED

added 143.2 thousand workers to payrolls. Strong employment growth continued into the first quarter of 2023, as Tennessee payrolls rose by an annual rate of 3.2 percent over the previous quarter. However, employment gains have slowed dramatically ever since, increasing by an annual rate of 1.0 percent in the second quarter and 0.9 percent in the third quarter. As a result, state employment is projected to grow by 2.3 percent for the 2023 year as a whole (up 74.2 thousand workers for the year), which would match the projected 2.3 percent rate of growth for the national labor market. Then in 2024, state employment growth will slow to 1.0 percent, and only add 33.8 thousand workers to payrolls for the year, but will still outpace projected national employment growth of 0.7 percent. Tennessee's stronger employment projections are driven, in part, by a more favorable outlook for the state's manufacturing sector. Tennessee continues to see positive job growth in the manufacturing sector, and we project that this will continue throughout the forecast horizon. By comparison, the U.S. outlook is calling for a contraction in manufacturing employment, which will put downward pressure on overall nonfarm employment growth for the nation.

The state's unemployment rate currently sits at an all-time low of 3.1 percent as of the third quarter of 2023, and is six-tenths of a percentage point below the U.S. rate. However, as job growth slows the unemployment rate is projected to trend upwards in the near term, averaging 3.5 percent for the 2024 year as a whole, and 3.6 percent in 2025. Nonetheless, this is still below the nation's 4.3 percent unemployment rate projected for 2024 and 4.7 percent rate in 2025.

In 2022, nominal personal income in Tennessee grew at a much faster pace than in the U.S., expanding by 3.5 percent compared to 2.0 percent growth for the nation. State income growth accelerated even faster in the first quarter of 2023, increasing by a robust annual rate of 9.7 percent compared to the quarter prior. This was driven by strong growth in total wages and salaries, due to both wage gains and the strong rate of job growth seen in the first quarter

of 2023. In addition, a large cost of living adjustment to social security payments went into effect at the beginning of the year, which provided a boost to federal transfer payments (e.g. social security and unemployment insurance payments). Personal income slowed to a more stable growth rate of 4.2 percent in the second quarter of 2023, and is expected to grow by 6.3 percent for the year as a whole, which would outpace the national growth rate of 5.2 percent. Expectations are that Tennessee personal income will then grow by 5.1 percent in 2024, which is more in line with historic pre-pandemic trends, and is slightly faster than the projected U.S. growth rate of 4.9 percent.

In general, Tennessee's economic outlook is more favorable than that of the nation. The more positive state outlook is largely due to stronger population gains in Tennessee. Population growth is a key component to economic growth, as it leads to more workers, more consumption spending, and more economic activity in general. From 2021 to 2022, the state's population grew by 1.2 percent, which was much faster than the nation's 0.4 percent growth rate. Tennessee's strong rate of population growth was driven almost entirely by increased domestic migration (i.e. people moving to Tennessee from other U.S. states), as the state added more than 81,000 new domestic residents in 2022. This was the highest level of net domestic migration (i.e. in-migration minus outmigration) that the state has ever recorded in a single year, but Tennessee has also seen a steady increase in migration over the last decade.

Over the long term, real GDP in Tennessee is projected to advance by 2.4 to 2.5 percent per year from 2026 through 2030, but will then slow to 2.2 to 2.3 percent towards the end of the forecast horizon (2031 through 2033). Similarly, Tennessee employment will increase by 1.1 to 1.2 percent per year from 2026 to 2030, but will then slow to roughly 0.8 percent growth per year from 2030 to 2033. The projected slowdown in both real GDP and employment at the tail end of the forecast horizon is due to an aging population and a continued increase in retirements.

2.2. THE CURRENT ECONOMIC ENVIRONMENT

The Labor Market

Tennessee nonfarm employment grew by a very strong 4.6 percent rate in 2022, adding 143.2 thousand workers to payrolls, and outpacing national employment growth of 4.3 percent. The state labor market continued to see strong growth in the beginning of 2023, advancing by a robust 3.2 percent in the first quarter (compared to the quarter prior), representing an addition of 26.2 thousand more workers. However, the labor market has shown signs of cooling since then, growing by only 1.0 percent in the second quarter and 0.9 percent in the third quarter, representing much more modest additions of 8.0 thousand and 7.4 thousand workers in the second and third quarters respectively.

Despite slower job growth in recent quarters, **Figure 2.1** shows that payrolls in Tennessee are still well above pre-pandemic levels. In fact, Tennessee job levels fully recovered in December 2021, and as of October 2023, there are nearly 170,000 more workers in Tennessee than there were prior to the pandemic (February 2020). The labor market recovery has been strong and long-lasting. Even

in 2022, the state added nearly 11,000 workers to payrolls per month. By comparison, job gains averaged only 4,000 per month in 2019. However, as noted above, job gains have started to taper in 2023, and the state has added roughly 3,000 workers per month through the first 10 months of the year.

Encouragingly, employment has finally recovered in all sectors of the state economy as well. Employment in the government sector was the last to recover, and did not reach pre-pandemic levels until February 2023. However, government employment was temporarily inflated in 2019 and early 2020 due to the 2020 Census, so the prepandemic basis for comparison was likely inflated. Employment in leisure and hospitality and education and health services both saw steep job losses during the initial phase of the pandemic, and were also slower to recover. Employment in education and health services recovered in June 2022, and leisure and hospitality employment recovered in September 2022. By comparison, employment in trade, transportation, and utilities, which was buoyed by the proliferation of e-commerce, was the quickest to recover (September 2020), followed by mining,

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3,300
3,200
3,100
2,900
2,800
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2,600
4,01,606 M,14601 M,1608 M,1608 M,1608 M,1608 M,1606 M,1606

Figure 2.1: Tennessee Nonfarm Employment is Well Above Pre-Pandemic Levels, but Job Growth is Starting to Slow

Source: Bureau of Labor Statistics.

logging, and construction (November 2020), which was boosted by low interest rates in 2020. Jobs in professional and business services, many of which are well suited for remote work, recovered in the spring of 2021, and manufacturing employment rebounded at the end of 2021, as consumers shifted more of their spending to the purchase of goods rather than services.

As the recovery winds down, employment growth in Tennessee has slowed markedly for most sectors. Figure 2.2 reports year-overyear employment growth for total nonfarm employment and all broad subsectors. In October 2022, Tennessee nonfarm employment grew by a robust 4.3 percent compared to the year prior (October 2021), representing an increase of 135 thousand workers over the 12-month period. However, in October 2023, year-over-year growth slowed to only 1.2 percent for an addition of 40.1 thousand workers. The sectors that saw the faster recoveries during the pandemic, have, in general, seen slower growth over the last year. For example, manufacturing employment saw no growth in October 2023, employment in trade, transportation, and utilities advanced by a mere 0.1 percent, and professional and business services employment grew by 0.2 percent. By comparison, the service sectors that were slower to recover from the pandemic, such as education and health services, government, and leisure and hospitality, are seeing stronger employment gains now.

Nonetheless, the labor market remains very tight. That is, there are still more jobs than there are workers. Figure 2.3 reports the number of monthly job openings, hires, and separations in Tennessee, and shows that job openings were trending down over the last 17 months, but then saw a dramatic spike in September 2023. Importantly, Tennessee was one of the only states to see a significant increase in job openings in the month of September. It will, therefore, be interesting to see whether this was a one-month aberration in the data, or the beginning of a new trend for Tennessee. Nonetheless, job openings in Tennessee have been well above pre-pandemic levels for nearly three years. By

comparison, the number of hires and job separations are largely in line with the levels seen prior to the pandemic. As a result, many positions are going unfilled and the ratio of unemployed persons per job opening sits at a near-record low of 0.5.

Putting all of this together, Tennessee continues to face a shortage of workers. Figure 2.4 reports a monthly look at labor supply versus labor demand in Tennessee. Labor supply measures the number of people working or willing to work (e.g. the number of employed + unemployed people), while labor demand measures the total number of workers needed in the state (the number of employed + number of job openings). This figure shows that Tennessee has had a shortage of workers for nearly three years, and over the last 12 months this shortage, which is measured as the gap between labor supply and labor demand, has averaged roughly 135,000 workers. That is, even if every unemployed Tennessean found a job, there would still be 135,000 job openings in the state. At this point in the economic recovery, the labor shortage is now primarily driven by an increase in economic activity in the state, which has led to an increased demand for workers (as is evident by the elevated level of job openings). As a result, labor demand remains well above pre-pandemic levels, while labor supply is largely in line with 2019 levels. While there was certainly an increase in retirements during the pandemic, more people have moved to

Tennessee in recent years (as discussed in more detail in the *Population Trends* section of this chapter), which has aided in the recovery of labor supply.

Unemployment at both the state and national level remains incredibly low. In Tennessee, the unemployment rate shot up to 15.8 percent in the Spring of 2020 but fell rapidly following the initial phase of the pandemic, falling to 5.4 percent by January 2021, and below 4 percent by the fall of 2021. As of October 2023, the state's unemployment rate sits at a near-record low of 3.3 percent. (Figure 2.5) Low unemployment has been driven by people being able to find work relatively quickly, but also due to many people leaving the labor force altogether (i.e. not working and not actively looking for work).

¹ Unemployed is defined as someone who is not working but is actively looking for work.

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7. Turk Hardran and Lander and Carefulation In Hardran and Limites International Representation and Limites Internati

Figure 2.2: Job Growth has Slowed Across Most Broad Sectors in Tennessee

Source: Bureau of Labor Statistics.

Note: Year-Over-Year Job Growth. Oct 2022 represents growth from Oct 2021 to Oct 2022. Oct 2023 represents growth from Oct 2022 to Oct 2023

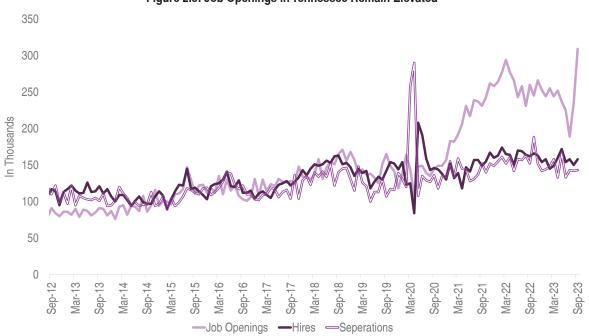
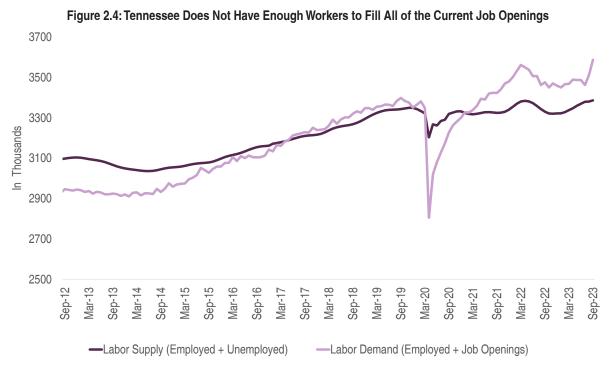


Figure 2.3: Job Openings in Tennessee Remain Elevated

Bureau of Labor Statistics Job Openings and Labor Turnover Survey

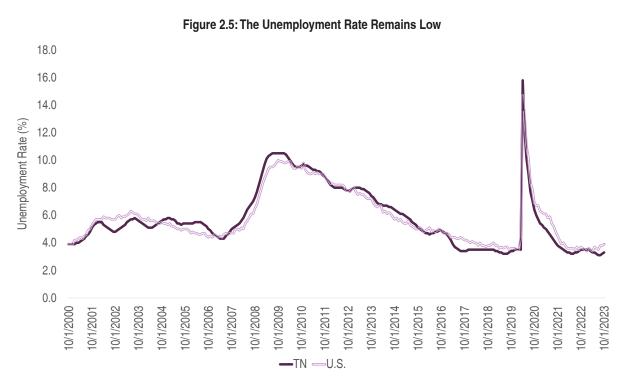


Source: Bureau of Labor Statistics Job Openings and Labor Turnover Survey

The unemployment rate measures the percentage of people not working but actively looking for work. Therefore, if more people stop looking for work, the unemployment rate would fall. This has certainly taken place over the last few years, as the pandemic led to an acceleration of retirements. As a result, Figure 2.6 shows that, at the U.S. level, there was a spike in the number of people out of the labor force, and that, more importantly, a higher number of people have remained out of the labor force ever since. Similarly, Figure 2.7, shows that labor force participation (the percentage of the population working or looking for work) in both the U.S. and Tennessee have still not recovered from the pandemic. This seems to contradict the data from Figure 2.4, which shows that labor supply has fully recovered. However, Figure 2.8 reports U.S. labor force participation by age, and can help to reconcile the differences. These data are only available at the national level, but they show that labor force participation among those in their prime working age (25 to 54 years of age) has fully recovered and now exceeds pre-pandemic levels, which is helping to boost the supply of labor. By comparison, labor force participation among those 55 years and older

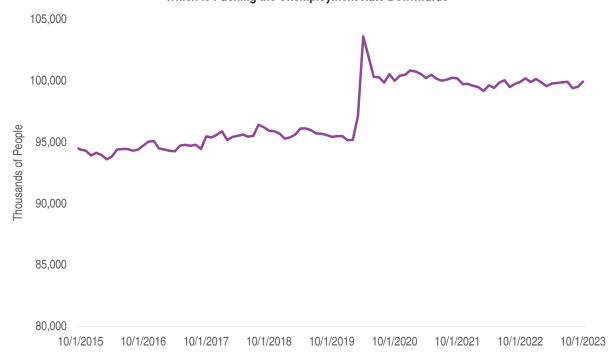
fell during the initial phase of the pandemic, and remains severely depressed, which is helping to keep the overall unemployment rate low.

Figure 2.9 displays job growth by county since the pandemic. These maps reveal two important patterns. First, the labor markets in the larger metropolitan areas have generally performed well. Davidson County has picked up the most jobs since 2019, adding 34,420 workers between 2019 and 2023, followed by Knox County with an increase of 15,735 workers. Similarly, Hamilton County has added 8,543 workers over this period. One exception, however, is Shelby County, where employment is still down by 8,986 since 2019. Second, the labor markets in Middle Tennessee, especially those surrounding Davidson County, have also seen strong job growth (e.g. Williamson, Wilson, and Rutherford). In contrast, there are still 18 counties with payrolls still below 2019 levels. The majority of these counties are rural and contain smaller populations (with the exception of Shelby County). For example, employment in Perry County is down by 10 percent, but this represents a loss of 187 jobs. More importantly, in McMinn County, job levels are still down by 1,342 or 7.1 percent.



Source: Bureau of Labor Statistics.

Figure 2.6: The Number of People Not in The National Labor Force Remains Elevated, Which is Pushing the Unemployment Rate Downwards



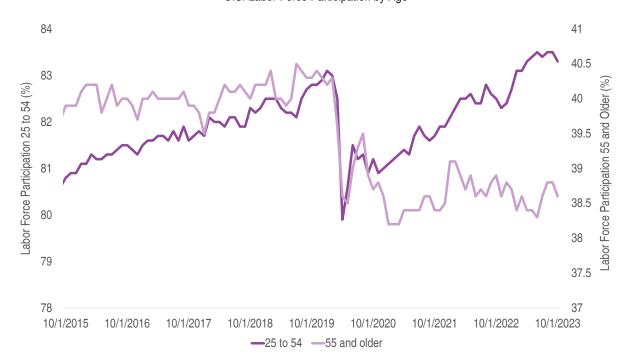
Source: Bureau of Labor Statistics.

Figure 2.7: Labor Force Participation Has Yet to Recover from the Pandemic



Source: Bureau of Labor Statistics.

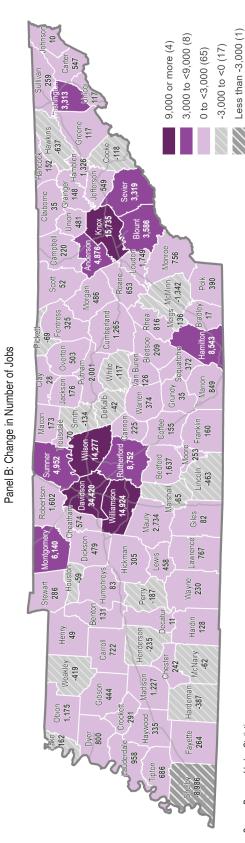
Figure 2.8: Lower Labor Force Participation is Driven by Those Aged 55 Years and Older U.S. Labor Force Participation by Age



Source: Bureau of Labor Statistics.

Less than -5% (6)

5% to <15% (39) 15% or more (7) 0% to <5% (31) -5% to <0% (12) Figure 2.9: Employment Growth by County, 2019Q1 to 2023Q1 Panel A: Percentage Change Giles 1% Fayette 3%



Income, Earnings, and Taxable Sales

Tennessee personal income saw very strong growth through the first half of 2023. Gains were particularly strong in the first quarter of 2023, as personal income accelerated by an annual rate of 9.7 percent over the previous quarter. Strong growth was driven by large gains in total wages and salaries, which is by far the largest component of personal income, and grew by 9.7 percent. Total wages and salaries are driven by both the wage rate and the number of jobs in Tennessee, both of which saw robust growth in the first quarter of 2023. In addition, rent, interest, and dividend payments rose by a very strong 10.8 percent due to rising rents, and high interest rates. Federal transfer payments (e.g. social security and unemployment insurance payments) expanded by a robust 8.4 percent due to an 8.7 percent increase in social security payments from a cost of living adjustment that went into effect in January 2023, and proprietors' income grew by a robust 11.2 percent due to strong retail sales spending in the first quarter of 2023. Even after adjusting for inflation,

real personal income rose by an annual rate of 5.3 percent in the first quarter of 2023. This was the strongest one-quarter growth rate since the last round of pandemic-related fiscal stimulus through the 2021 American Rescue Plan.

Personal income slowed to a more stable rate of 4.2 percent growth in the second quarter of 2023, as job growth slowed, leading to a more moderate 6.2 percent increase in wages and salaries. However, this still represents strong gains in wages and salaries. For perspective, **Figure 2.10** reports average hourly earnings and year-over-year growth in hourly earnings among all workers at privately-owned companies in Tennessee. From 2014 to 2019, average hourly earnings grew by an average of 3 percent per month. Wage gains have, of course, been much stronger since the pandemic, averaging 5.8 percent per month since 2021, as high inflation coupled with labor shortages have put upward pressure on earnings. As a result, average hourly earnings sat at \$24.64 at the end of 2019, but have risen to \$30.01 as of October 2023. Importantly, however, this is still 13.8 percent lower than the national average wage rate of

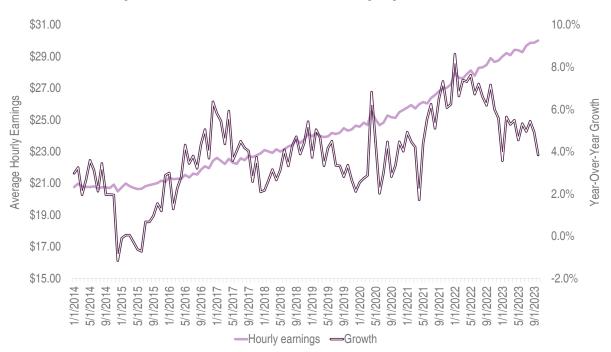


Figure 2.10: Tennessee Workers Have Seen Strong Wage Gains Since 2021

Source: Bureau of Labor Statistics.

\$34.17/hour. In addition, federal transfer payments (e.g. social security and unemployment insurance payments) rose by only 0.9 percent in the second quarter of 2023, as the cost of living adjustment to social security payments was already baked into the first quarter. After adjusting for inflation, real personal income grew by an annual rate of 1.7 percent in the second quarter of 2023.

As of the second quarter of 2023, per capita income in Tennessee sits at \$61,558, representing a 5.6 increase over the same quarter last year. Even after adjusting for inflation, per capita income has grown by 1.7 percent year-over-year. More importantly, today's per capita income levels are an astounding 25.6 percent higher than the prepandemic 2019Q2 level of \$49,010. Inflation, labor shortages, and an influx of new Tennesseans with higher education credentials have all contributed to this strong rate of earnings growth over the last four years. Nonetheless, Tennessee per capita income is still below the national average of \$68,259 in the second quarter of 2023. This, of course, is not unique to Tennessee. Figure 2.11 reports per capita income across all southeastern states in the second

quarter of 2023, and with the exception of Virginia, all states in the region have per capita income levels that are lower than the national average.

There is also a large degree of variation in income levels across the state. Figure 2.12 presents per capita income across all Tennessee counties for 2022. Williamson County continues to have the highest per capita income, at \$119,937, which is more than double the state average, and is 83 percent higher than the national average. In fact, in 2022, Williamson County had the 21st highest per capita income among all 3,143 counties in the nation. In a distant second among Tennessee counties, is Davidson, with a per capita income of \$85,551. There were only four Tennessee counties with per capita income levels above the 2022 national average of \$65,431 -Williamson, Davidson, Fayette, and Loudon. Including these counties, there were only four additional counties with per capita income above the 2022 state average of \$58,739 -Wilson, Knox, Sumner, and Hamilton. In contrast, per capita income was lowest in Lake County (\$30,404), followed by Hancock County (\$31,828), and there were 20 counties with per capita income below \$40,000.

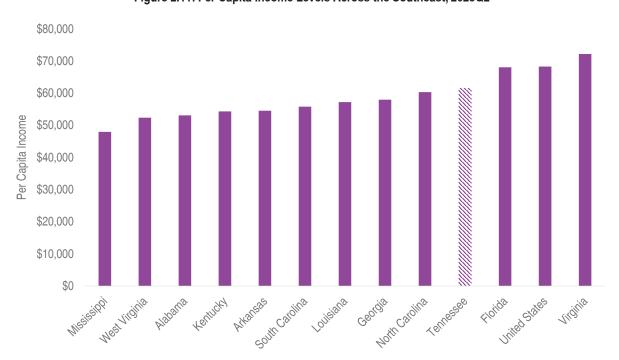


Figure 2.11: Per Capita Income Levels Across the Southeast, 2023Q2

Source: Bureau of Economic Analysis and Boyd CBER UT.

Figure 2.12: Per Capita Income Across Tennessee, 2022



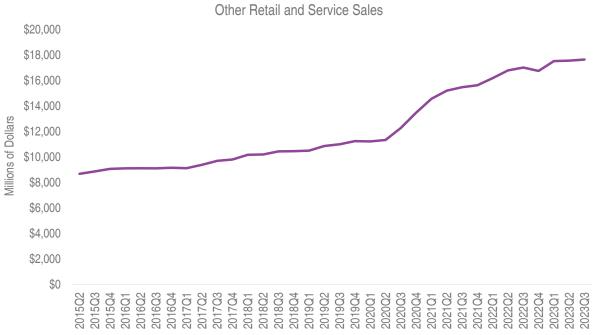


Nominal taxable sales in Tennessee continued to show strength in the first quarter of 2023, growing by an annual rate of 20.7 percent compared to the quarter prior and 7.2 percent compared to the same quarter last year. This represented a continuation of incredibly strong growth, as taxable sales advanced by 10.8 percent for the 2022 year as a whole and an even stronger 21.3 percent in 2021. This is certainly driven, to some extent, by higher prices, but even after adjusting for inflation, real taxable sales rose by an annual rate of 15.9 percent in the first quarter. Since then, nominal taxable sales growth has slowed markedly, as inflation has trended downward, and sales are perhaps starting to normalize. In the second and third quarters, year-over-year taxable sales growth came in at much more modest rates of 3.0 percent and 1.1 percent respectively. This is consistent with a second-quarter slowdown in tax revenues seen across the country.² However, part of the slowdown in the third quarter was due to a three-month sales tax holiday on food purchases.

As a result, taxable sales at food stores fell by 27.4 percent year-over-year in the third quarter.

Nonetheless, taxable sales in Tennessee remain well above pre-pandemic levels. In the third quarter, nominal taxable sales were \$50.3 billion, which was 40 percent higher than the \$35.8 billion in sales registered in the third quarter of 2019. There were a number of factors contributing to this strong rate of growth, but a major driving force was the expansion of sales tax collections on remote/online purchases. Starting in June 2019, retailers without a physical presence in Tennessee were required to collect and remit sales tax if sales into Tennessee during the previous 12-month period exceeded \$500,000. However, in the fall of 2020, this threshold was lowered to \$100,000. In combination with this lower threshold and the explosion of e-commerce during the pandemic, sales tax collections from remote sales took off in 2020. This can be seen in **Figure 2.13**, which presents quarterly taxable sales within the Other Retail and Service category.

Figure 2.13: Taxable Sales Categorized as Other Retail and Service Sales Have Remained Elevated Since the Expansion of Sales Tax Collections on Online Purchases



Source: Tennessee Department of Revenue and Boyd CBER UT.

² Lucy Dadayan. State Revenues Take a Hit in the Second Quarter of 202. State Tax and Economic Review, 2023 Quarter 2. https://www.urban.org/sites/default/files/2023-11/State%20Tax%20and%20Economic%20Review%20203%20Quarter%202.pdf

Population Trends

From 2021 to 2022, Tennessee's population expanded by 1.2 percent, representing an increase of nearly 83,000 people. This was the state's fastest rate of population change since 2007. It was also much faster than the nation's 0.4 percent population growth rate. Population growth is a strong contributor to overall economic growth, as it leads to more workers, more consumption spending, and more economic activity in general. Tennessee's strong rate of population growth was driven entirely by increased net migration. From 2021 to 2022, the state added 89,742 people through migration -of which, 81,646 were domestic migrants and 8,096 were international. This was the highest level of net domestic migration that the state has ever recorded in a single year. This massive increase in migration may be an outlier, but nonetheless, Tennessee has seen a steady increase in migration over the last decade (Figure 2.14). From 2010 to 2014, Tennessee added an average of 28,897 people per year through migration, but from 2015 to 2021 net migration nearly doubled to 48,526 people per year, and of course in 2022, the state added nearly 90,000 new residents.

Encouragingly, a breakdown of those moving to Tennessee by age (Figure 2.15) shows that the largest group of in-migrants is between the ages

> Table 2.1: Top-10 Origin States for **New Tennessee Residents**

State	Region	In-migration 2022
Florida	South	25,318
California	West	22,565
Georgia	South	14,770
Texas	South	12,862
Illinois	Mid-west	12,602
Mississippi	South	9,491
Virginia	South	9,450
Alabama	South	9,375
Kentucky	South	8,227
North Carolina	South	7,391

Source: U.S. Census Bureau

of 25 to 39 years old, which is the youngest cohort among those in the prime working age group (25 to 54 years old). Thus, these new residents will more likely be in the workforce, and will more likely remain there for the medium to long term.

Where are all of Tennessee's new residents coming from? **Table 2.1** reports the top-10 states with residents that moved to Tennessee in 2022. Florida was the largest contributor, as 25,318 Floridians moved to Tennessee in 2022, followed by California (22,565). Interestingly, however, 8 of the top-10 were from the South region. By comparison, Table 2.2 presents the top-10 states to which Tennesseans moved. Again, Tennesseans primarily moved to other states in the South region, with Florida gaining over 20,000 Tennesseans, and Georgia, Texas, Kentucky, Alabama, and Mississippi each getting over 10,000 Tennesseans. In addition, there were two Midwest states (Illinois and Ohio), and Colorado rounding out the top-10 with regard to Tennessee outmigration.

Tennessee's population now exceeds 7 million for the first time, and has become the 15th most populous state in the nation. Figure 2.16 shows population changes across all U.S. states from 2021 to 2022. Overall, 32 states and the District of Columbia saw population gains in 2022. The Census-defined South region—which covers a broad 16-state area from Texas to Florida to

Table 2.2: Top-10 Destination States for Tennessee Movers

State	Region	Outmigration 2022
Florida	South	20,651
Georgia	South	18,785
Texas	South	12,617
Kentucky	South	12,561
Alabama	South	11,634
Mississippi	South	11,406
North Carolina	South	9,049
Illinois	Mid-west	7,420
Ohio	Mid-west	6,283
Colorado	West	5,702

Source: U.S. Census Bureau.

Figure 2.14: Net Migration Continues to Increase in Tennessee

2017

2016

2018

2019

2021

2020

2022

50,000 40,000 30,000 20,000 10,000

2015

2013

2014

2012

Source: U.S. Census Bureau.

2010

2011

0

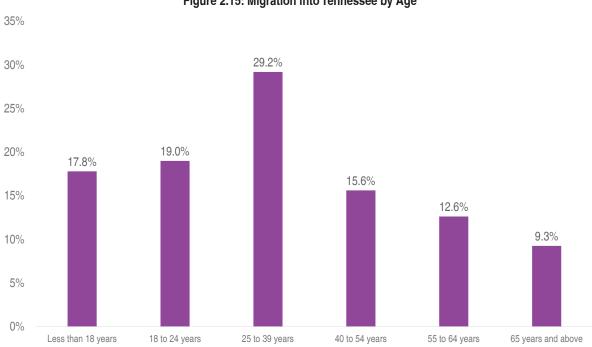
100,000

90,000

80,000

70,000

60,000



Source: U.S. Census Bureau.

Maryland—added 1.3 million new residents, led by Texas and Florida which both added more than 400,000 new residents. This was the only region of the country with positive net domestic migration in 2021 or 2022.

Turning to county-level data, Figure 2.17 reports population growth among all Tennessee counties between 2021 and 2022. Among the 95 Tennessee counties, 83 saw positive population growth, 16 of which saw gains of 2 percent or greater. The strongest rate of growth was seen in Wilson County, which expanded by 4.3 percent and added 6,545 new residents. However, Rutherford County added the most people over the last year (up 9,417), followed by Knox County (up 7,762). In general, counties in Middle Tennessee, especially Davidson, and those in close proximity to Davidson, saw strong population growth. The larger metro areas also saw strong population gains. As mentioned earlier, Knox County saw the second-largest

increase among all 95 counties, and the population in Hamilton County grew by 5,655. Importantly, many counties surrounding these two metro areas are also seeing strong rates of population growth. The cities of Knoxville and Chattanooga offer a number of amenities that attract new residents, however, increased cost of living in these areas could be pushing some prospective residents out to the surrounding counties. In contrast, Shelby County, saw its population fall by 6,981 (down 0.8 percent over the last year). From 2021 to 2022, both rural and urban counties added population. Importantly, population growth in all of Tennessee's rural counties combined, as defined by the Tennessee Department of Economic and Community Development, rose by 1.4 percent and outpaced combined urban county population growth of 1.1 percent. This was a much-needed reprieve from the population declines seen among Tennessee's rural counties over the last decade.

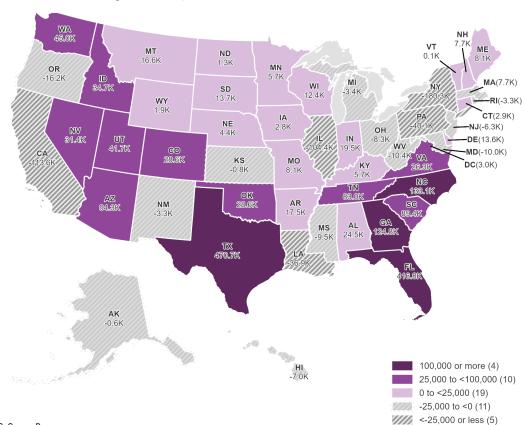


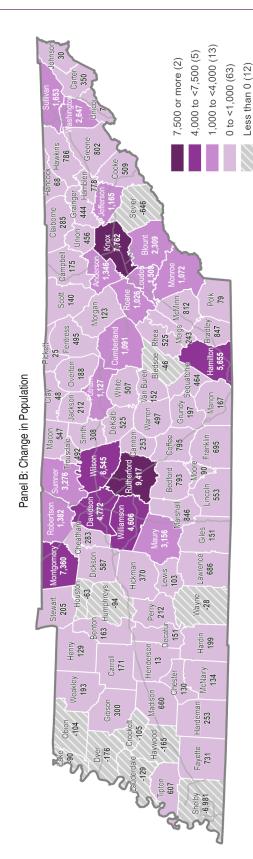
Figure 2.16: Population Growth Across the U.S., 2021 to 2022

Source: U.S. Census Bureau

Less than 0% (12)

2% to <3% (12) 1% to <2% (40) 0% to <1% (27) 3% or more (4) Panel A: Percentage Change %0

Figure 2.17: Tennessee County Population Changes, 2021 to 2022



a. Rural: +35,022 (+1.4%) in 2022

b. Urban: +47,966 (+1.1%) in 2022

Source: U.S. Census Bureau

The Tennessee Housing Market

Tennessee's housing market has seen sharp price increases over the last few years. This has been driven by both an increase in the demand for housing coupled with a persistently low supply of available homes.

On the supply side, the inventory of available homes has been low in both Tennessee and across the nation for some time, and this issue has only gotten worse in recent years. Even before the pandemic, the nation's housing supply did not keep up with population growth. This can be seen in Figure 2.18, which shows that the supply of new housing (housing starts) as a share of the U.S. population has been on a decline since the early 1970s. Furthermore, the supply of new houses saw a steep decline during the Great Recession, from which the housing market has still yet to recover. On a similar note, Figure 2.19 presents monthly housing inventory in Tennessee, as measured by the number of active housing listings. These data are only available from 2016 onwards, but present a persistent downward trend as well. In 2016 and 2017 the state averaged more than 31,000 active listings per month. Listings fell to roughly 26,000 per month in 2018 and 24,500 in 2019. Housing inventory then fell rapidly in the wake of the pandemic, falling below 10,000 per month in early 2021 and bottoming out at 6,456 active listings in early 2022. Active listings have recovered, to some extent since early 2022, but are still below 2019 levels, and significantly lower than those in 2016.

There are a number of reasons for the supplyside challenges in the housing market, including but not limited to, a shortage of construction labor, zoning restrictions, and a shortage of available land, especially in some suburban and urban areas. In addition, rising building costs have become a major factor in more recent years. As a result, profit margins, especially for more moderately priced homes have become increasingly tight, and developers have been more inclined to build larger homes. Figure 2.20 presents the number of newly constructed homes in the U.S. by size, and shows that homes below 1,400 square feet (Panel A), also considered entry-level or starter homes, have

declined markedly since the Great Recession and have never recovered. In 1999 there were 197,000 entry-level homes built in the U.S., and in 2006 there were 164,000. However, this number fell as low as 46,000 by 2013, in the wake of the Great Recession, and is currently sitting at 72,000 as of 2022. By comparison, the construction of homes above 1,400 square feet (Panel B), especially those in the 1,800 to 2,399 range or 2,400 to 2,999 square feet range, has been on an upward trend over the last decade.

In addition to the reduced supply of housing, Tennessee's housing market has been greatly affected by increased demand, as more people moved to Tennessee, as well as monetary policy by the Federal Reserve (the Fed). In particular, the Fed reduced the federal funds rate to near-zero percent at the onset of the pandemic in an effort to stimulate economic growth. The federal funds rate is the interest rate at which commercial banks can borrow from one another for short-term loans, and it is strongly related to other interest rates such as the 30-year fixed mortgage rate (see Figure 2.21). When the Fed reduced interest rates in early-2020, mortgage rates followed suit, falling below 3 percent by mid-2020 which led to a reduction in the average monthly price for a home loan. This in turn led to a surge in housing demand and an increase in home prices. Equally important, many homeowners took advantage of the historically low mortgage rates in 2020 and 2021 by refinancing their home loans and reducing their monthly mortgage payments. Since then, the Fed has aggressively increased interest rates to battle inflation. This has created a disincentive for current homeowners to sell their homes, even if they were initially intending to do so, because their current mortgage rate is well below the current market rates, which are now above 7 percent. This has become another important source for the low inventory of homes, and has also put upward pressure on home prices.

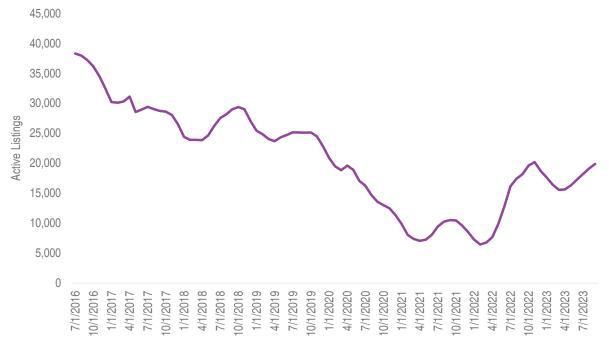
Figure 2.22 reports average home values, as measured by the Zillow Home Value Index, for both the U.S. and Tennessee. Home values started to rise quickly in early-2020 as interest rates fell. Importantly, since the onset of the pandemic, average home values in Tennessee have increased by roughly 50 percent, and have grown by 40 percent for the U.S. as

Figure 2.18: Housing Starts in the U.S. Have Not Kept Pace with Population Growth
Housing Starts as a Share of the U.S. Population



Sources: Bureau of Economic Analysis, U.S. Census Bureau, and U.S. Department of Housing and Urban Development.

Figure 2.19: Active Listings of Homes for Sale in Tennessee Have Largely Trended Downward Since 2016, but Have Seen a Modest Uptick in Recent Months



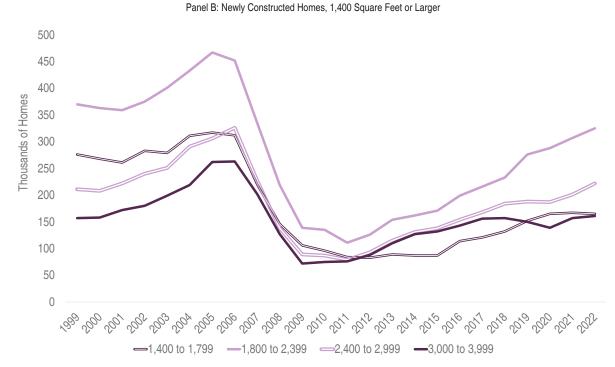
Source: Realtor.com.

Figure 2.20: The Construction of Smaller, More Affordable Homes Has Fallen Over the Last Decade, While New Construction of Larger Homes has Risen

Panel A: Newly Constructed Homes below 1,400 square feet

250 200 Thousands of Homes 150 100 50

Under 1,400



Source: U.S. Census Bureau.

Figure 2.21: The Federal Reserve has Increased the Federal Funds Rate, Which has Led to an Increase in the 30-Year Fixed Mortgage Rate 9.0 8.0 7.0 6.0 Interest Rate (%) 5.0 4.0 3.0 2.0 1.0 0.0 5/1/2016 9/1/2019 1/1/2018 9/1/2017 1/1/2020 1/1/2016 9/1/2016 1/1/2017 5/1/2018 9/1/2018 1/1/2019 5/1/2019 5/1/2020 9/1/2020 5/1/2021 1/1/2022 1/1/2021 9/1/2021 5/1/2022 5/1/2017

Sources: Federal Reserve Bank of New York and Freddie Mac.

\$400,000 \$350,000 \$300,000 \$250,000 \$200,000 \$150,000 \$100,000 \$50,000 \$0 5/1/2013 1/1/2010 7/1/2012 1/1/2015 11/1/2015 9/1/2016 5/1/2008 3/1/2009 7/1/2007 1/1/2010 9/1/2011

Figure 2.22: Home Values in Tennessee and the U.S. Have Been on the Rise

-30yr Fixed Mortage

—Fed Funds Rate

Source: Zillow.

a whole. For Tennessee, this was roughly equivalent to the increase in home values seen between 2011 and 2020. That is, Tennessee home values saw 10 years-worth of growth over the last 4 years. The data on home prices are even more pronounced if we look at median asking prices among active listings, as shown in Figure 2.23. Panel A presents median listing prices for Tennessee and the U.S. from 2016 through the present. For the majority of the data's history, home prices in Tennessee were significantly lower than those in the U.S. as a whole. However, this has changed in recent months as prices in Tennessee have consistently risen faster, and in November 2022, home prices in Tennessee overtook those in the nation. Furthermore, as of September 2023, Tennessee listing prices are \$20,442 higher than those in the U.S. as a whole.

To dig deeper, Figure 2.23 Panel B reports median active listing prices in the U.S. as well as the four major metro areas in Tennessee (Nashville, Knoxville, Chattanooga, and Memphis). Throughout the time series (both pre-pandemic

and post-pandemic), listing prices in Nashville have consistently been higher than the U.S. average, and those in Memphis have consistently been lower. However, the same is not true for Knoxville and Chattanooga, where home prices were below the national average prior to the pandemic, but in Chattanooga, home prices are now in line with the national average, and in Knoxville the median listing price is \$45,500 higher than the national average.

In addition to a low inventory of homes for sale, a supply shortage for renters exists as well. As a result, rental prices have been on the rise. Data from the U.S. Census Bureau show that median rental prices in Tennessee rose from \$904 in 2019 to \$1,096 in 2022, representing an astounding 21.2 percent increase over the three-year period.3 However, more recent data from rent.com put median rent at a much higher \$1,624 per month in Tennessee as of September 2023.⁴ As a result, the number of people paying more than \$1,500 per month in rent has risen dramatically since 2019 whereas the number of people paying less than \$1,000 per month has fallen (see Figure 2.24).



Figure 2.24: The Number of Tennesseans Paying Higher Monthly Rent has Risen Over Time

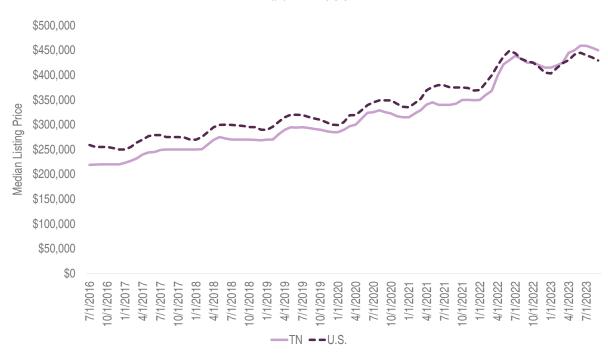
Source: U.S. Census Bureau, American Community Survey 1-Year Estimates.

³ U.S. Census data from the 2019 1-Year American Community Survey (ACS) and 2022 1-Year ACS.

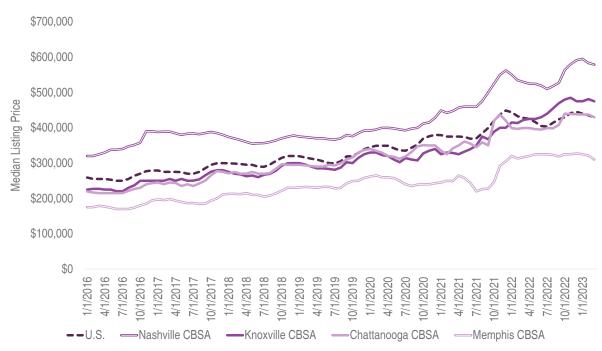
⁴ The Rent Report, October 2023. https://www.rent.com/research/average-rent-price-report/

Figure 2.23: Listing Price of Homes Currently for Sale





Panel B: TN Metro Areas vs U.S.



Source: Realtor.com.

The Department of Housing and Urban Development (HUD) considers a household to be "cost-burdened," if their housing costs are over 30 percent of their income. Figure 2.25 reports the percentage of Tennessee homeowners and Tennessee renters, who meet this cost-burden threshold by income group. Of course, those earning lower incomes are spending a higher proportion of their income on housing. Among those who earn \$20,000 or less, 73 percent of homeowners and 88 percent of renters are considered cost-burdened. However, as income increases, the percentage of homeowners considered cost-burdened falls dramatically, whereas the percentage of renters remains relatively high. Even among those who earn between \$50,000 and \$74,999 per year, 30 percent of renters remain costburdened versus only 19 percent of homeowners. Furthermore, regardless of income level, there is always a higher percentage of cost-burdened renters than there are homeowners.

Despite higher home and rent prices, wages in Tennessee remain below the national average. Figure 2.26 reports average hourly earnings for the U.S., Tennessee, and Tennessee's four major metro areas for September 2023. Earnings in Tennessee have certainly risen over time, but currently sit at \$29.75/hour, which is more than \$4/hour lower than the national average. Furthermore, even in the Nashville and Knoxville MSAs, where home prices are above the national average, hourly earnings are still lower than the national average. This discrepancy between home prices and earnings is putting the goal of home ownership out of reach for many Tennesseans, and those who are renting are becoming increasingly cost-burdened. It is also important to note that these wage data are only reported as averages, so by definition there are many people who earn above-average wages and many who earn belowaverage wages. Many of those in the latter category are younger workers who would benefit greatly from an increased supply of more moderately priced homes, such as those with smaller square footage.

■ Owner Occupied
■ Renter Occupied 88% 78% 73% 58% 42% 30% 30% 19% 8% \$20,000 to \$34,999 \$35,000 to \$49,999 \$50,000 to \$74,999 \$75,000 or more Less than \$20,000

Figure 2.25: Percentage of Tennesseans who are Cost Burdened by Housing by Income Group Tennessee Households with Housing Costs in Excess of 30 Percent of Income in 2022

Source: U.S. Census Bureau, 2022 American Community Survey 1-Year Estimates.

U.S. \$33.88 Knoxville MSA \$33.56 Nashville MSA \$33.18 \$29.75 Memphis MSA \$28.49 Chattanooga MSA \$27.92 \$-\$5 \$10 \$15 \$20 \$25 \$35 \$30 \$40

Figure 2.26: Wages Across Tennessee Remain Below the National Average

Source: Bureau of Labor Statistics, Current Employment Statistics. Total Private Average Hourly Earnings, September 2023. Note: Data are not seasonally adjusted.

2.3. TENNESSEE ECONOMIC OUTLOOK

The short-term outlook for Tennessee calls for a deceleration of economic growth in the near term as consumer spending normalizes and the economic recovery continues to wind down. As a result, we are calling for slower, but still positive, economic growth in 2024, followed by a return to trend growth in 2025 and 2026. **Table 2.3** presents a summary of the economic outlook for both Tennessee and the nation.

GDP Outlook

As the economic recovery loses steam, Tennessee real GDP growth will decelerate to a still strong rate of 3.3 percent in 2023 (compared to 9.2 percent in 2021 and 4.8 percent in 2022). State real GDP growth will then slow to a slightly below-trend rate of 1.8 percent in 2024. **Figure 2.27** presents real GDP growth projections for both the state and the nation. Real GDP growth is projected to

decelerate, but remain positive for both Tennessee and the U.S., however, economic growth in Tennessee will remain above the nation throughout the forecast horizon. The more positive Tennessee outlook is largely due to the influx of domestic migrants, which will continue to support consumer spending and economic activity going forward.

Over the long-term forecast horizon, real GDP growth will hover around 2.4 to 2.5 percent per year from 2026 through 2030, which is consistent with the state's pre-pandemic growth rate seen between 2010 and 2019. Real GDP growth will then slow to 2.2 to 2.3 percent at the tail end of the forecast horizon (2031 to 2033) due to changing demographics and a continued increase in retirements. Still, GDP growth in Tennessee will remain above U.S. growth throughout the long-term forecast horizon.

TENNESSEE ECONOMIC OUTLOOK, CONTINUED 2.3.

Table 2.3: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted

	Forecast Data										
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
TN GDP (Mil2012\$) SAAR	383014	389776	397682	407335	417287	427581	438462	449198	459561	469784	480321
Percentage change	3.29	1.77	2.03	2.43	2.44	2.47	2.54	2.45	2.31	2.22	2.24
US GDP (Bil2017\$) SAAR	22345.6	22655.5	22968.4	23358.1	23745.9	24131.6	24507.0	24899.4	25285.3	25703.9	26154.7
Percentage change	2.40	1.39	1.38	1.70	1.66	1.62	1.56	1.60	1.55	1.66	1.75
US GDP (Bil\$) SAAR	27350.4	28472.8	29514.5	30636.7	31790.8	33009.7	34276.5	35609.8	36994.6	38471.6	40046.9
Percentage change	6.24	4.10	3.66	3.80	3.77	3.83	3.84	3.89	3.89	3.99	4.09
TN PERSONAL INCOME (MIL2017\$) SAAR	362528	372348	382812	393450	403557	414302	426365	438309	449846	461130	473001
Percentage change	2.35	2.71	2.81	2.78	2.57	2.66	2.91	2.80	2.63	2.51	2.57
US PERSONAL INCOME (BIL2017\$) SAAR	19069	19518	20099	20574	21040	21493	21938	22400	22871	23368	23900
Percentage change	1.32	2.35	2.98	2.36	2.26	2.15	2.07	2.11	2.10	2.17	2.27
TN PERSONAL INCOME (MIL\$) SAAR	436709	458924	481787	504984	528332	553479	581115	609477	638202	667569	698644
Percentage change	6.25	5.09	4.98	4.81	4.62	4.76	4.99	4.88	4.71	4.60	4.65
US PERSONAL INCOME (BIL\$) SAAR	22977	24097	25319	26465	27606	28768	29958	31198	32486	33852	35305
Percentage change	5.20	4.87	5.07	4.53	4.31	4.21	4.13	4.14	4.13	4.21	4.29
TN NONFARM JOBS (THOUS)	3320.6	3354.4	3392.1	3431.3	3469.0	3509.9	3550.4	3592.3	3622.0	3652.4	3681.2
Percentage change	2.29	1.02	1.12	1.16	1.10	1.18	1.15	1.18	0.83	0.84	0.79
US NONFARM JOBS (MIL)	156.2	157.2	157.3	157.9	158.6	159.4	160.0	160.6	161.1	161.6	162.1
Percentage change	2.34	0.66	0.05	0.38	0.48	0.47	0.40	0.40	0.28	0.31	0.34
TN MFG JOBS (THOUS)	370.4	372.4	376.3	380.9	382.6	383.9	385.1	386.5	387.9	389.3	390.7
Percentage change	1.51	0.52	1.06	1.21	0.46	0.32	0.32	0.37	0.36	0.36	0.34
US MFG JOBS (MIL)	13.0	12.9	12.3	12.1	11.9	11.8	11.7	11.7	11.6	11.5	11.4
Percentage change	1.22	-0.84	-4.23	-1.99	-1.43	-1.21	-0.55	-0.23	-0.49	-0.66	-0.84
TN UNEMPLOYMENT RATE (%)	3.3	3.5	3.6	3.7	3.7	3.8	3.8	3.8	3.8	3.7	3.7
US UNEMPLOYMENT RATE (%)	3.6	4.3	4.7	4.6	4.5	4.4	4.3	4.3	4.3	4.3	4.3
CHAINED PRICE INDEX, GDP (2012=100.0)	122.4	125.7	128.5	131.2	133.9	136.8	139.9	143.0	146.3	149.7	153.1
Percentage change	3.74	2.67	2.25	2.07	2.07	2.17	2.25	2.25	2.30	2.30	2.30
US PERS CONSUMP DEFL (2012=100.0)	120.5	123.5	126.0	128.6	131.2	133.8	136.5	139.3	142.0	144.9	147.7
Percentage change	3.83	2.46	2.03	2.11	2.00	2.01	2.02	1.99	1.99	1.99	1.97
CONSUMER PRICE INDEX, ALL-URBAN (82-84=1.000)	3.047	3.128	3.190	3.270	3.342	3.416	3.490	3.565	3.643	3.723	3.804
Percentage change	4.14	2.66	1.98	2.50	2.21	2.20	2.18	2.16	2.18	2.19	2.16
BANK PRIME INTEREST RATE (%)	8.2	8.5	7.2	6.0	5.8	5.8	5.8	5.8	5.8	5.8	5.8
FEDERAL FUNDS RATE (% per annum)	5.039	5.383	4.050	2.869	2.630	2.632	2.632	2.630	2.630	2.632	2.633
30-YEAR FIXED MORTGAGE RATE (%)	6.9	7.0	5.7	5.1	5.0	4.9	4.9	4.8	4.8	4.8	4.8
TN TAXABLE SALES (MIL2017\$)	169473	168777	170950	175227	179960	185173	190375	196030	201399	207097	212850
Percentage change	0.17	-0.41	1.29	2.50	2.70	2.90	2.81	2.97	2.74	2.83	2.78
TN TAXABLE SALES (MIL\$)	204129	208010	215147	224900	235603	247379	259472	272583	285728	299811	314390
Percentage change	3.98	1.90	3.43	4.53	4.76	5.00	4.89	5.05	4.82	4.93	4.86
TN AVG ANNUAL WAGE, NONFARM (2017\$)	54177	55011	55939	57081	58127	59274	60532	61674	62909	64145	65443
Percentage change	0.81	1.54	1.69	2.04	1.83	1.97	2.12	1.89	2.00	1.96	2.02
TN AVG ANNUAL WAGE, NONFARM (\$)	65262	67800	70401	73262	76099	79185	82501	85758	89249	92861	96661

Sources: Boyd CBER UT, S&P Global Market Intelligence, Bureau of Labor Statistics, Bureau of Economic Analysis, TN Department of Revenue.

2.3. TENNESSEE ECONOMIC OUTLOOK, CONTINUED

Labor Market Outlook

Nonfarm employment growth is projected to moderate in the near term, and advance by 1.0 percent in 2024 and 1.1 percent in 2025. Representing net increases of 33.8 thousand jobs and 37.7 thousand jobs respectively. By comparison, employment in the U.S. is projected to grow by a slightly slower 0.7 percent in 2024 and then see no growth in 2025.

The state's labor market is projected to see stronger short-term growth, relative to the U.S., for a couple of reasons. First, the state has seen a very strong rate of in-migration in recent years, which will lead to more workers and greater economic activity. Second, Tennessee continues to see strong growth in the manufacturing sector, and we project that positive manufacturing employment growth will continue throughout the forecast horizon. By comparison, the national outlook is calling for a contraction in manufacturing employment, which will put downward pressure on overall nonfarm

employment growth for the U.S.

Figure 2.28 presents the long-term employment forecast for both the state and the nation. From 2026 to 2030 Tennessee employment will expand by around 1.1 to 1.2 percent per year, but growth is then projected to fall to around 0.8 percent per year from 2031 to 2033. This is much slower than the pre-pandemic annual average growth rate of roughly 2.0 percent per year from 2011 to 2019, and this slowdown is largely due to an aging population and a continued increase in retirements.

The state's unemployment rate, which currently rests at an all-time low of 3.1 percent as of the third quarter of 2023, will slowly inch upward as job growth slows and the number of unemployed people increases. The latter will occur for two reasons. First, as economic growth slows (but remains positive) the number of job openings will retreat towards more historically normal levels, and it will take longer for some job seekers to find work, leading to an increase in unemployment duration. Second, many of those



Figure 2.27: Long-Run Real GDP Forecast, Tennessee and the U.S.

Sources: Bureau of Economic Analysis, S&P Global Market Intelligence, Boyd CBER UT.

2.3. TENNESSEE ECONOMIC OUTLOOK, CONTINUED

who left the labor force during the pandemic have already re-entered the workforce, this trend will continue and more people will start looking for work again. As the unemployment rate increases, labor force participation will briefly tick upward as well. For the 2023 year as a whole, labor force participation will average 59.7 percent, but will then reach 60.0 percent in 2024 and 2025. However, the participation rate will then slowly trend downwards during the second half of the decade due to continued retirements and a smaller pool of younger workers. As a result, labor force participation will fall to 58.6 percent by 2033.

Income, Earnings, and Taxable Sales

Nominal personal income in Tennessee is projected to grow by a very strong 6.3 percent in 2023, and 5.1 percent in 2024. Wage growth continues to show strength through the first half of 2023, and total wages and salaries are expected to advance by 7.0 percent for the year as a whole, and then grow by a more moderate 4.7 percent in

2024. Personal income growth will also be driven by gains in rent, interest, and dividends income, due to high interest rates. Expectations are that the Fed will start to reduce interest rates in the second half of 2024, however, they will likely do so very slowly and the federal funds rate will remain above 5 percent until 2025. As a result, rent, interest, and dividend income in Tennessee will see strong gains over the next two years, expanding by 9.1 percent in 2023 and 7.0 percent in 2024. After adjusting for inflation, real personal income is projected to increase by 2.4 percent in 2023 and 2.7 percent in 2024. On a fiscal year basis, nominal personal income will increase by 5.6 percent in FY23/24 and 5.1 percent in FY24/25.

Over the long term (2023 to 2033), Tennessee personal income is projected to advance at a compound annual growth rate of 4.8 percent per year. This is faster than the 4.2 percent per year growth rate seen prior to the pandemic, and is also stronger than the nation's projected growth path of 4.4 percent per year. Long-term income

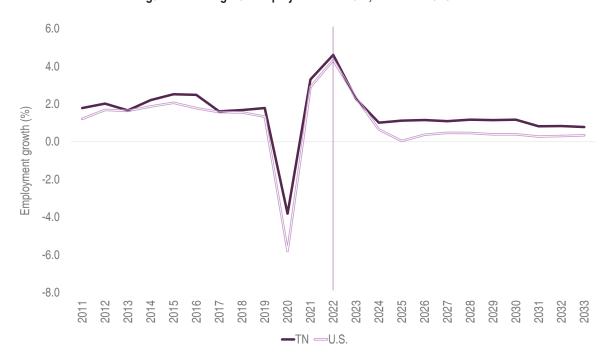


Figure 2.28: Long-Run Employment Forecast, Tennessee and the U.S.

Sources: Bureau of Labor Statistics, S&P Global Market Intelligence, Boyd CBER UT.

2.3. TENNESSEE ECONOMIC OUTLOOK, CONTINUED

growth will be propped up by sustained wage and salary gains, as the labor market remains relatively tight due to continued retirements. However, despite stronger income growth in Tennessee, per capita income in the state will remain below the national average through the long-term forecast horizon. By 2033, per capita income in Tennessee is projected to reach \$92,798 and remain far behind the national average of \$100,123. Importantly, after adjusting for inflation, these per capita income figures are equivalent to \$62,827 in Tennessee and \$67,778 in the United States.

Nominal taxable sales will increase by

4.0 percent in 2023, representing a dramatic slowdown from the 10.8 percent rate of growth registered in 2022. Taxable sales growth will decelerate further in 2024, growing by only 1.9 percent, as inflation continues to moderate but interest rates remain temporarily elevated. Lower inflation will limit growth on the dollar value of many goods (e.g. sales at food stores, and other retail), while high interest rates will hinder auto sales and other major purchases. Over the long term, however, taxable sales will revert to a more stable trend of 4.5 to 5.0 percent growth per year (from 2025 to 2033).

2.4. FORECAST AT A GLANCE

- Tennessee inflation-adjusted gross domestic product (real GDP) is projected to increase by 1.8 percent in 2024 and 2.0 percent in 2025.
 This is faster than U.S. projections of 1.4 percent growth in both 2024 and 2025.
- Nonfarm employment will increase by 2.3 percent in 2023, but job growth will then slow to 1.0 percent in 2024 and 1.1 percent in 2025. By comparison, employment in the U.S. is projected to grow by a slightly slower 0.7 percent in 2024 and then see no growth in 2025.
- Over the long term, Tennessee real GDP will increase by 2.4 to 2.5 percent per year from 2026 through 2030, but then slow to 2.2 to 2.3 percent growth from 2031 to 2033. Similarly, nonfarm employment will advance by 1.1 to 1.2 percent per year from 2026 through 2030,

- and then decelerate to roughly 0.8 percent per year from 2031 to 2033. Slower expected growth towards the end of the forecast horizon is due to an aging population and a continued increase in retirements.
- The state's unemployment rate, which sits at an all-time low of 3.1 percent as of the third quarter of 2023, will trend upwards to an annual average of 3.5 percent in 2024 and 3.6 percent in 2025. By comparison, the U.S. unemployment rate is projected to increase to 4.3 percent in 2024 and 4.7 percent in 2025.
- Nominal personal income will increase by 5.1
 percent in 2024 and 5.0 percent in 2025. After
 adjusting for inflation, real personal income
 will advance by 2.7 percent in 2024 and 2.8
 percent in 2025.

TENNESSEE'S AGRICULTURAL AND FOREST INDUSTRIES AND RURAL 2.5. **ECONOMY**

Introduction

Tennessee's agri-forestry industrial complex encompasses the supply chain from farm and forest to consumers of the end products, such as retail foods, clothing, paper, and furniture. The agri-forestry industrial complex includes crop and livestock farming, timber removal and sawmills, and the production of agricultural inputs, such as agricultural machinery, fertilizers, soil amendments, and herbicides. The complex also includes downstream manufacturers of food and fiber goods (i.e., food and beverage products, textiles and textile products, wood, paper, and furniture products) that demand commodities from farmers and first-stage forestry operations. This section of the report includes economic indicators for a) primary agriculture and forestry (farming and first-stage forestry); b) secondary agriculture and forestry (manufacturing and processing facilities); and c) well-being indicators for rural communities.⁵ In 2023, Tennessee's agriforestry industrial complex was significantly impacted by various phenomena, including agricultural land loss, decreasing demand in foreign markets, price declines for major commodities, adverse weather events, supply chain issues, and global events such as the Russian invasion of Ukraine.

Agriculture and Primary Forestry

Agricultural Land Use and Farm Size

In 2022, farming operations occupied 10.7 million acres in Tennessee, around 39.6 percent of the state's nearly 27.0 million acres of land area. Acreage-wise, just under 49 percent of the farmland in Tennessee is operated as cropland. Of Tennessee's 69,500 farming operations, the average farm size in 2022 was 154 acres. Tennessee ranks 8th in the U.S. in terms of the number of farming operations but 26th in terms of acres operated, reflecting farm sizes smaller than the U.S. average (446 acres) (USDA/ NASS, 2019; 2023a). Cash receipts from farming in

Tennessee for 2022 were \$5.2 billion (USDA/NASS. 2023a), with about 59.2 percent of this value coming from crops and 40.8 percent from animals and animal products (USDA/ERS, 2023a).

Tennessee's Crops Market Trends and Outlook

In terms of harvested acreage, Tennessee's four largest row crops are soybeans, corn, wheat, and cotton. Based on 2022 national cash receipts by commodity, Tennessee ranks 19th in corn production (\$678.3 million; 0.8 percent of U.S. total); 9th in cotton production (\$344.1 million; 3.9 percent of U.S. total); 16th in soybean production (\$1,098.8 million; 1.8 percent of U.S. total); and 19th in wheat production (\$186.8 million; 1.4 percent of U.S. total) (USDA/ ERS, 2023b). Harvested acreage, production, and yield from 2018 to 2023 for the four principal row crops are shown in Table 2.4. In 2023, harvested acreage for Tennessee row crops was estimated to be 1.57 million acres of soybeans, 900,000 acres of corn, 390,000 acres of wheat, and 260,000 acres of cotton. Soybean acreage was down 3 percent from 2022 and 1 percent above the previous five-year average; corn acreage was up 13 percent compared to 2022 and 8 percent above the five-year average; cotton acreage was down 20 percent compared to 2022 and 19 percent lower than the five-year average; and wheat acreage was up 16 percent compared to 2022 and 31 percent above the five-year average (USDA/NASS, 2023b). Relative prices prior to planting and weather conditions during the planting interval dictated crop acreage in Tennessee in 2023. State average yields for 2023 are projected above last year and the five-year average for corn, cotton, soybean, and wheat. Weather conditions in Tennessee were largely supportive for crop production with the majority of drought occurring at the end of the production season, which did not have dramatic yield implications. Input prices, such as fertilizer and fuel, have declined since 2022; however, input prices remain high compared to the five-year average. Additionally, high interest rates have increased the cost of capital and operating for Tennessee producers.

⁵ Defined as the primary industries typically associated with agriculture and forest operations, such as growing crops, the breeding and feeding of livestock, and the management and logging of trees. Also included in the industrial complex are input-supplying industries and value-added subsectors, which include food and beverage manufacturing, apparel and textiles, and forestry products manufacturing.

2.5. TENNESSEE'S AGRICULTURAL AND FOREST INDUSTRIES AND RURAL ECONOMY, CONTINUED

Table 2.4: Tennessee Harvested Acres, Production, and Yield for Corn, Cotton, Soybeans, and Wheat, 2018-2023*

	2018	2019	2020	2021	2022	2023*	5-Year Avg.	Change 5-Year Avg. to 2022	Change 2022 to 2023		
Corn											
Harvested Acres (million)	0.67	0.91	0.82	0.95	0.80	0.90	0.83	8%	13%		
Production (million bushels)	112.56	161.07	138.55	161.50	103.35	154.84	135.41	14%	50%		
Yield (bu/acre)	168	177	170	170	130	173	163	6%	33%		
				Co	tton						
Harvested Acres (million)	0.36	0.41	0.26	0.27	0.33	0.26	0.32	-19%	-20%		
Production (million bales)	0.77	0.96	0.61	0.58	0.71	0.58	0.73	-20%	-19%		
Yield (bu/acre)	1,041	1,138	1,066	1,036	1,053	1,071	1,067	0%	2%		
				Soyl	eans						
Harvested Acres (million)	1.67	1.37	1.62	1.52	1.62	1.57	1.56	1%	-3%		
Production (million bushels)	75.99	64.39	81.00	76.00	77.76	78.50	75.61	4%	1%		
Yield (bu/acre)	46	47	50	50	48	50	48	3%	4%		
				Wi	neat						
Harvested Acres (million)	0.29	0.22	0.23	0.33	0.34	0.39	0.30	31%	16%		
Production (million bushels)	18.53	14.41	13.57	23.43	24.46	31.20	20.93	49%	28%		
Yield (bu/acre)	65	67	59	71	73	80	69	16%	10%		

*Estimated data.

Source: USDA/NASS, 2023b.

Prices received by Tennessee producers are influenced by local, national, and global market forces. Prices have declined substantially since 2022. The primary drivers of price declines have been record corn and soybean production in Brazil, a resumption of wheat and corn exports from Russia and Ukraine, and weak export demand. Since September 1, cotton prices have declined from over 90 cents per pound to less than 75 cents due to weak export demand, global economic uncertainty, and a high USD compared to other exporting countries. Concerns over the global economy and inflation continue to influence commodity prices and the agricultural sector.

Currently, 2023 marketing year average corn

prices are 10 percent below the five-year average and 34 percent below 2022; soybean prices are 14 percent above the five-year average and 9 percent below 2022; wheat prices are 12 percent below the five-year average and 34 percent below 2022; and cotton prices are 13 percent above the five-year average and 2 percent below 2022 (**Table 2.5**). Current marketing year average prices for 2023 will be influenced by South American production, U.S. export demand, and 2024 planting intentions for corn, soybeans, wheat, and cotton in the Northern Hemisphere. The marketing year for corn and soybeans is from September 1 to August 31; wheat, June 1 to May 31; and cotton, August 1 to July 31.

Table 2.5: Marketing Year Average Prices for Tennessee, 2017-2022*

		•	J		,		
Commodity	2018	2019	2020	2021	2022	5-Year Average	2023*
Corn	\$3.76	\$3.78	\$4.70	\$5.67	\$6.65	\$4.91	\$4.41
Cotton	\$0.70	\$0.59	\$0.69	\$0.88	\$0.85	\$0.74	\$0.84
Soybean	\$8.75	\$8.96	\$10.80	\$12.80	\$13.80	\$11.02	\$12.60
Wheat	\$5.24	\$5.45	\$5.55	\$6.87	\$8.40	\$6.30	\$5.56

*Average daily cash price in Tennessee for the start of the 2023/24 marketing year to November 7, 2023, as reported by USDA/AMS 2023a, 2023e. The marketing year for corn and soybeans is from September 1 to August 31; wheat, June 1 to May 31; and cotton, August 1 to July 31. Source: USDA/NASS, 2023b.

TENNESSEE'S AGRICULTURAL AND FOREST INDUSTRIES AND RURAL 2.5. **ECONOMY, CONTINUED**

Farm Bill Programs for Row-Crop Producers

The current Farm Bill (the Agriculture Improvement Act of 2018) covers the crop years 2019-2023 and expired September 30, 2023. Negotiations for a new Farm Bill have stalled, and it is likely that an extension of the current Farm Bill for the 2024 crop year will occur. Data for the most recently available crop year (2021) indicated Tennessee producers received \$0.02 million in direct payments from ARC and \$0.1 million from PLC, down substantially compared to the previous year when Tennessee producers received \$30 million in PLC payments and \$0.6 million in ARC payments (USDA/FSA, 2023). For 2022, Tennessee had 0.998 million acres enrolled in PLC and 1.48 million acres enrolled in ARC-County (ARC-CO).

For the 2022 crop year, Tennessee producers purchased 23,895 federal crop insurance policies, covering 2.80 million acres and \$1.60 billion of liability. The federal government's portion of crop insurance premiums was \$100 million, and Tennessee producers paid \$45 million in premiums. (USDA/RMA, 2023). As of November 8, 2023, Tennessee producers had received \$149 million in indemnity payments for the 2022 crop year (USDA/RMA, 2023). For the 2023 crop year, Tennessee producers purchased 23,704 federal crop insurance policies, covering 2.80 million acres and \$1.63 billion of liability. The federal government's portion of crop insurance premiums was \$95 million, and Tennessee producers paid \$45 million in premiums. (USDA/RMA, 2023).

Row Crops Outlook

Looking towards 2024, prices are likely to trend lateral to down. Prices for the 2023/24 marketing year will depend on export sales, domestic weather and planting conditions, South American crop progress, global weather, inflation, input prices and availability, and global economic growth. Direct payments through Farm Bill and ad hoc programs are anticipated

to be substantially lower than the previous fiveyear average. Indemnity payments to Tennessee producers from crop insurance in 2022 helped stabilize farm income for producers adversely impacted by last year's drought. For the 2023 crop year, Tennessee producer profitability is expected to be lower than 2022, primarily due to lower commodity prices. Price, yield, and cost of production will continue to drive producer profitability in the row crop sector for 2024.

For the 2023/24 marketing year, Tennessee farm-gate prices are projected to be \$5.50-\$7.00 for wheat; \$4.00-\$5.50 for corn; \$11.50-\$13.50 for soybeans; and \$0.75-\$0.90 for cotton (USDA/AMS, 2023a). Volatility in commodity prices is likely to persist in 2024, largely due to global economic uncertainty and uncertainty in production.

Livestock, Poultry, and Dairy Industries: Market Trends and Outlook

Livestock, Poultry, and Dairy Industries

Animals and animal products accounted foAnimals and animal products accounted for 40.8 percent (\$2.10 billion) of Tennessee agricultural receipts in 2022. Based on 2022 cash receipts, broiler receipts were ranked second after soybeans, totaling \$972.6 million and representing 18.9 percent of cash receipts. Cattle and calves ranked as the third largest agricultural sector in Tennessee with cash receipts totaling \$687.0 million, which accounted for 13.3 percent of total agricultural cash receipts. Hogs (2.8 percent of cash receipts), dairy products and milk (2.5 percent), and chicken eggs (1.5 percent) rounded out the top five Tennessee rankings for animals and animal products based on cash receipts in 2022 (USDA/ERS, 2023b). Tennessee markets for animals and animal products are influenced by national and international market forces. Thus, changes in the national and international market impact local prices, production, and receipts.

Through the week ending October 27, 2022, year-to-date red meat (beef, veal, pork, lamb/

2.5. TENNESSEE'S AGRICULTURAL AND FOREST INDUSTRIES AND RURAL ECONOMY, CONTINUED

mutton) production was 2.6 percent lower than the previous year and was over 44.3 billion pounds (USDA/AMS, 2023b). Poultry (chicken, turkey, duck) production through the end of September was 1.6 percent higher than the same nine months in 2022 and totaled 51.9 billion pounds (USDA/NASS, 2023c). Milk production during the first nine months of 2023 was up 0.2 percent from the previous year to 171.0 billion pounds (USDA/NASS, 2023d).

U.S. beef exports from January through August 2023 decreased 12.3 percent compared to 2022 and totaled 1.94 billion pounds. Total beef export value over the first eight months of 2023 totaled \$6.69 billion, a decrease of 18.8 percent compared to 2022. Pork exports during the first eight months of 2023 were 10.6 percent higher than 2022 and totaled 4.22 billion pounds. Total pork export value totaled \$5.32 billion, which is an increase of 8.3 percent compared to 2022 (USMEF, 2023). On the dairy side, the total aggregate volume of U.S. dairy exports through August was 3.47 billion pounds, which is a decrease of 7.0 percent compared to 2022 (U.S. Dairy Export Council, 2023).

Calf (500-600 pound steer) and feeder cattle (700-800 pound steer) prices in Tennessee through the first nine months of 2023 increased 33.0 and 34.7 percent, respectively, compared to the same nine months in 2022 (USDA/AMS, 2023c). Prices have been supported by strong beef demand and a smaller cattle herd. Similarly, Tennessee milk prices for the Appalachian and Southeast Federal Milk Marketing Orders through the first nine months of 2023 decreased 19.5 percent and 18.7 percent, respectively, compared to the same nine months in 2022 (USDA/AMS, 2023d).

Tennessee ranked 16th nationally in terms of total inventory of cattle and calves as of January 1, 2023 (1.68 million head including 844,000 beef cows and 26,000 dairy cows), which is the same ranking as a year ago. Tennessee ranks 13th in total beef cow numbers, with Kentucky and Florida being the only states east of the Mississippi River with larger beef cow inventories

(USDA/NASS, 2023e). The state is ranked 2nd nationally in meat goat numbers at 85,000 head (USDA/NASS, 2023f).

Livestock, Poultry, and Dairy Outlook

Looking into 2024, the livestock, poultry, and dairy industries will be faced with challenges of high inflation and reduced discretionary spending by consumers. Cattle prices are expected to plateau in 2024 but remain strong relative to recent years. Reduced cattle inventory and thus lower beef production will support prices for cattle. Cattle producers will begin retaining heifers in 2024, if environmental conditions allow. Hog prices are expected to increase in 2024 compared to 2023, despite an expected increase in pork production. Red meat demand should support beef and pork prices, as demand has remained strong and total production will moderate. The poultry industry will continue to increase production as they have for several years. The poultry industry will attempt to take advantage of higher red meat prices the next few years. Milk and dairy product prices are expected to be steady to slightly higher in 2024 relative to 2023. Milk prices have softened this year, but lower production should support prices in the coming months.

Local Foods, Breweries, Distilleries, Wineries, and the Green Industry

As previously reported, the "local foods" movement, along with technical and financial assistance provided by the USDA, TDA, the University of Tennessee Institute for Agriculture, Tennessee State University, and others, has helped increase direct marketing by farmers. Farmers markets remain an important component of local food sales and based on the Pick Tennessee Products website (Tennessee Department of Agriculture, 2023a), the number of Tennessee farmers markets remained steady from 2022 to 2023, in line with national trends.

TENNESSEE'S AGRICULTURAL AND FOREST INDUSTRIES AND RURAL 2.5. **ECONOMY, CONTINUED**

Community supported agriculture (CSA) and food hubs are other important components of local foods markets. In a CSA, consumers (buying members) make advanced payment for a farm's products and in return receive a share of the production on a consistent basis throughout the growing season (Demuth, 1993). Farmers are assured of a return for their efforts before production, and consumers are assured of an adequate and timely supply of local products. Our analysis of data provided by TDA indicates that 103 CSAs (an increase from 67 in 2022 and 82 in 2021) and two food hubs currently operate in the state. While other new or nontraditional agricultural ventures grew for 2012 to 2017, due to a lack of data we cannot speak to more recent changes in the level of agritourism in Tennessee, although our sense is they have experienced substantial growth in recent years.

Cattle and other livestock producers continue to show interest in finishing and processing cattle for local and regional markets. Funding by the federal and state governments also continues to support such efforts. However, the number of smaller, federally inspected large animal meat processing facilities in Tennessee is 16, a decline from 22 last year, with at least one facility coming online. Still, linking to local and regional markets and access to federally inspected processing facilities remains a challenge for livestock producers interested in meeting the growing demand for locally sourced meat. Farmers continue to report long wait times for processing their animals, although these are probably easing. State funding through TDA is also supporting increased capacity (such as enlarged and improved cooler space) for a number of current facilities.

Analysis of the most recent data from the U.S. Bureau of Labor Statistics (2023) indicates that the Tennessee wine and grape industry continues to grow at a slow but steady pace with reported direct employment at 600 workers in the first quarter of 2023, an increase from the 475 jobs reported for 2021 and the 527 jobs in 2019. The state has over 70 bonded wineries, including

several cideries (where hard cider is produced) and meaderies (produced from honey). Tennessee wineries primarily rely on out-of-state sources for their grapes. Grape acres are mostly steady, although early warming (and budding) followed by late freezes is a continuing concern in East Tennessee.

The craft beer industry and the craft distillery industry in Tennessee both continue to grow. As of the first quarter of 2023, 119 breweries reported 1,916 workers with a first quarter payroll of \$14.5 million versus 26 breweries reporting 148 workers in 2014 and showing marked growth from 2022. The brewing industry is concentrated in urban centers. The few farmers producing hops face several challenges, although other local farmers have successfully grown inputs such as berries for brewers and barley on a limited basis. Likewise, the number of distilleries reporting employment increased from 19 in 2014 (909 jobs) to 59 (2,434 jobs) in the first quarter of 2023. A study by Hughes (2023) reported a total economic impact for the industry of \$3.135 billion. Although the lack of an in-state malting facility is a barrier, farmers are increasing production of corn and other grains as inputs for the Tennessee whiskey industry (Tharel, 2017).

As reported in previous years, the green industry (ornamental horticulture including nursery and greenhouse producers) remains an important component of Tennessee agriculture, especially in Middle Tennessee. While the number of hemp producers and acreage have plummeted due to the collapse of the CDB market, interest is growing in other uses for hemp, especially as fiber materials (in particular for composite automotive parts such as door panels) and construction materials.

U.S. and Tennessee Agricultural Trade Outlook

In fiscal year (FY) 2023 (October 2022 -September 2023), total U.S. agricultural and related exports, as reported by the USDA, were \$195.7 billion, down 9 percent when compared

2.5. TENNESSEE'S AGRICULTURAL AND FOREST INDUSTRIES AND RURAL **ECONOMY, CONTINUED**

to exports in FY 2022 (\$213.2 billion) (USDA/ FAS, 2023). This overall decrease was due to lower volumes as well as lower prices, decreasing the value of U.S. exports. The factors affecting exports at the national level have had an impact on Tennessee. In FY 2023, Tennessee's agricultural and related exports were \$3.0 billion, up \$337 million or 13 percent when compared to the previous fiscal year (\$2.7 billion). Except for consumer-oriented agriculture, Tennessee experienced decreases in all major categories in FY 2023. Consumer-oriented exports (\$1.7 billion), which includes distilled spirits, meat and dairy products, and processed food products, were up \$437 million or 34 percent; exports of bulk agricultural commodities (\$956 million), which includes cotton, tobacco, and soybeans, were down \$6 million or 1 percent; exports of intermediate products (\$177 million), such as soybean meal and oil and other feeds, were down \$52 million or 23 percent; and related-product exports (\$158 million), which are mostly forest products, were down \$41 million or 21 percent (Table 2.6).

Key exports for Tennessee in FY 2023 included distilled spirits (\$1.2 billion) and cotton (\$846 million), which increased by \$477 million and decreased by \$37 million, respectively. Note that the overall increase in exports this fiscal

year was due to exports of distilled spirits. Other major exports include baked goods, cereals and pasta (\$271 million) and poultry products (\$131 million). During this period, Tennessee was also a leading exporter of forest products (\$156 million), down \$42 million when compared to the previous fiscal year (USDA/FAS, 2023). Changes in FY 2023 exports could also be viewed from the perspective of countries that are major buyers of Tennessee products. In FY 2023, Tennessee exported agricultural and related products to more than 130 countries, with the top markets being the Netherlands, China, Canada, Mexico, and Vietnam. Noted increases in FY 2023 included a \$343 million (356 percent) increase in exports to the Netherlands, a \$43 million (117 percent) increase in exports to the U.A.E., and a \$31 million (35 percent) increase in exports to Mexico. The increase in exports to the Netherlands and U.A.E. was almost entirely due to distilled spirits (USDA/FAS, 2023) (**Table 2.7**).

USDA is forecasting agricultural exports (excluding forestry and related products) in FY 2024 at \$172 billion, down \$24 billion when compared to FY 2023. This expected decrease is primarily driven by lower exports of all major commodities and lower sales to major destination countries (USDA/ERS, 2023c).

Table 2.6: Tennessee Agricultural and Related Product Exports in FY 2022 and FY 2023: **Total and by Major Product Category**

•	•	0 ,		
Duadust Catagony	FY 2022	FY 2023	\$ Change	% Change
Product Category				
Agricultural and Related Products	\$2,681	\$3,018	\$337	12.6%
Consumer Oriented Agriculture	1,289	1,726	437	33.9%
Bulk Agriculture	963	956	-6	-0.7%
Intermediate Agriculture	229	177	-52	-22.9%
Other Agricultural Related Products	200	158	-41	-20.7%

Note: Fiscal Year (FY) is October to September.

Source: U.S. Department of Agriculture, Foreign Agricultural Service, Global Agricultural Trade System (2023).

2.5. TENNESSEE'S AGRICULTURAL AND FOREST INDUSTRIES AND RURAL **ECONOMY, CONTINUED**

Table 2.7: Tennessee Agricultural and Related Product Exports in FY 2022 and FY 2023 by Top 10 Products and Partner Countries (Destinations)

		FY 2022	FY 2023	\$ Change	% Change
Rank	Product Category		, \$ Mi	llion	
	Agricultural and Related Products	\$2,681	\$3,018	\$337	12.6%
1	Distilled Spirits	684	1,161	477	69.8%
2	Cotton	883	846	-37	-4.1%
3	Bakery Goods, Cereals, and Pasta	273	271	-2	-0.7%
4	Forest Products	198	156	-42	-21.2%
5	Poultry Products	149	131	-18	-12.1%
6	Tobacco	60	90	30	49.4%
7	Soup and Other Prepared Foods	73	59	-14	-19.3%
8	Dextrin, Peptones, and Proteins	78	52	-26	-33.0%
9	Sugars and Sweeteners	36	36	0	-0.4%
10	Chocolate and Cocoa Products	24	28	3	14.0%
	Darling (Darling)		\		
Donk	Poutney Country (Postination)	FY 2022	FY 2023	\$ Change	% Change
Rank	Partner Country (Destination)	FY 2022	FY 2023 \$ Mi		% Change
Rank	Partner Country (Destination) World	FY 2022 \$2,681			% Change 12.6%
Rank 1			\$ Mi	llion	
	World	\$2,681	\$ Mi \$3,018	llion \$337	12.6%
1	World Netherlands	\$2,681	\$ Mi \$3,018 440	\$337 343	12.6% 356.3%
1 2	World Netherlands China	\$2,681 96 365	\$ Mi \$3,018 440 370	\$337 343 5	12.6% 356.3% 1.3%
1 2 3	World Netherlands China Canada	\$2,681 96 365 340	\$ Mi \$3,018 440 370 324	\$337 343 5 -16	12.6% 356.3% 1.3% -4.6%
1 2 3 4	World Netherlands China Canada Mexico	\$2,681 96 365 340 89	\$ Mi \$3,018 440 370 324 121	\$337 343 5 -16 31	12.6% 356.3% 1.3% -4.6% 34.9%
1 2 3 4 5	World Netherlands China Canada Mexico Vietnam	\$2,681 96 365 340 89 95	\$ Mi \$3,018 440 370 324 121 119	\$337 343 5 -16 31 25	12.6% 356.3% 1.3% -4.6% 34.9% 25.9%
1 2 3 4 5 6	World Netherlands China Canada Mexico Vietnam United Kingdom	\$2,681 96 365 340 89 95	\$ Mi \$3,018 440 370 324 121 119	\$337 343 5 -16 31 25 29	12.6% 356.3% 1.3% -4.6% 34.9% 25.9%
1 2 3 4 5 6 7	World Netherlands China Canada Mexico Vietnam United Kingdom Pakistan	\$2,681 96 365 340 89 95 87	\$ Mi \$3,018 440 370 324 121 119 116 100	\$337 343 5 -16 31 25 29	12.6% 356.3% 1.3% -4.6% 34.9% 25.9% 32.9% -7.5%

Note: Fiscal Year (FY) is October to September.

Source: U.S. Department of Agriculture, Foreign Agricultural Service, Global Agricultural Trade System (2023).

Financial Indicators for Tennessee Farming Industries

Table 2.8 presents financial data from 2017-2022 for the Tennessee farming sector, which can be used to indicate the financial well-being of farms and farm operators in Tennessee. The value of farm production increased from \$4.3 billion in 2017 to \$6.0 billion in 2022. Net farm income was \$1.5 billion in 2022 (up from the low of \$306 million in 2018), averaging \$21,117 per operation. Net cash farm income on a per-acre basis was \$137/acre. The net farm income ratio (net farm income/value of production) during 2017 to 2022 ranged from 7 percent to 31 percent efficiency in converting production to net farm income, with an uptick from 19 percent in 2019 to 31 percent in 2021. The interest expense ratios for the farming sector, holding at 7 percent or less, reflect a low debt burden and interest payment level relative to production. Times interest earned is another measure of ability to cover debt payments, specifically interest payments. For all years, the values are greater than 1, implying sufficient cash to meet interest payments, and in 2022, the value was 5.42. The state's capital consumption ratio, or the percentage of production needed to cover the

2.5. TENNESSEE'S AGRICULTURAL AND FOREST INDUSTRIES AND RURAL ECONOMY, CONTINUED

Table 2.8: Indicators of Financial Well-Being of the Tennessee Farm Sector, 2017-2022

Indicators	2017	2018	2019	2020	2021	2022
Value of Production (mill \$)	\$4,310	\$4,193	\$4,234	\$4,145	\$5,096	\$6,008
Net Farm Income (mill \$)	\$461	\$306	\$825	\$608	\$1,582	\$1,468
Interest Expense ¹ (mill \$)	\$253	\$282	\$283	\$266	\$269	\$332
Market Value of Farmland, Buildings, & Equipment (mill \$)	\$41,856	\$42,728	\$43,092	\$44,280	\$45,582	\$50,290
Capital Consumption1 (mill \$)	\$686	\$588	\$548	\$552	\$489	\$473
Total Production Expenses1 (mill \$)	\$3,922	\$3,947	\$3,651	\$4,013	\$3,761	\$4,557
Net Farm Income Ratio	0.11	0.07	0.19	0.15	0.31	0.24
Capital Consumption Ratio	0.16	0.14	0.13	0.13	0.10	0.08
Operating Expense Ratio	0.69	0.73	0.67	0.77	0.59	0.62
Interest Expense Ratio	0.06	0.07	0.07	0.06	0.05	0.06
Times Interest Earned	2.82	2.08	3.92	3.29	6.88	5.42

¹Excludes operator dwellings. Source: USDA/ERS 2023a.

sector's capital consumption, was relatively low for the 2017 to 2022 period, ranging between 8 percent and 16 percent. In 2022, the state's farming sector had an operating expense ratio of 0.62, suggesting 62 percent of the value of production was used to cover operating expenses (USDA/ERS, 2023a). The 2022 estimated market value of land and buildings on farms was \$50.3 billion or around \$723,597 per farm in Tennessee (USDA/NASS, 2023a).

Rural Infrastructure

Transportation infrastructure is crucial to Tennessee farmers and ranchers as they depend on rural roads, highways, and bridges for their daily operations of getting inputs and delivering products. However, about 14 percent of the state's major roads are in poor or mediocre condition, and a total of 4 percent of the state's bridges are rated in poor or structurally deficient condition (TRIP 2023). It is estimated that additional repairs, accelerated vehicle depreciation, and increased fuel consumption and tire wear cost the state's drivers \$1.2 billion per year or \$227 per driver (TRIP 2023). The Infrastructure Investment and Jobs Act (IIJA) by the Biden Administration in 2021 will provide \$6.2 billion in state funds for Tennessee's highway and bridge investments in 2022-2026, including a 37 percent funding increase (TRIP 2023). The IIJA investment is expected to improve the safety, reliability, and condition of Tennessee's transportation system.

Tennessee received \$3.7 billion through the U.S. Treasury's Coronavirus State and Local Fiscal Recovery Fund under the American Rescue Plan Act to mitigate the negative economic impact of the COVID-19 pandemic and strengthen economic recovery (Tennessee Department of Finance and Administration, 2023). Out of the \$1.4 billion allocated, \$996 million was awarded as competitive grants as part of the Tennessee Water Infrastructure Investment Program. An additional \$200 million was awarded through a competitive grant program with three focus areas: regionalization, water reuse, and resource protection (Tennessee Department of Environment and Conservation, 2023). This investment addresses a critical need in Tennessee water infrastructure systems to protect and promote human health; improve compliance with water quality requirements; and improve technical, managerial, and financial capabilities of small, disadvantaged, and underserved water infrastructure systems. In addition, a total of \$500 million is allocated by the state's Financial Stimulus Accountability Group to improve

TENNESSEE'S AGRICULTURAL AND FOREST INDUSTRIES AND RURAL 2.5. **ECONOMY, CONTINUED**

broadband infrastructure access and adoption across communities. Tennessee also received \$813 million in federal Broadband, Equity, Access, and Deployment (BEAD) funds, dedicated to support buildout of high-speed internet infrastructure across Tennessee (Tennessee Department of Economic and Community Development, 2023).

Agricultural Land Loss in Tennessee

In 2020, The American Farmland Trust ranked Tennessee as the fourth most threatened state to have agricultural land to be converted to other uses. There is approximately 26.3 million acres of total space in Tennessee. From 1997-2017, there was 1.1 million acres (4.2 percent of total land in Tennessee) of farmland converted into other uses, mainly residential. The amount of farmland lost was equivalent to 55,601 acres/year, 152 acres/day, and 6.3 acres/hour. From 2017-2022, there was 432,941 acres (1.64 percent of total land in Tennessee) of farmland converted to other uses. From 2017-2022, the rate of farmland loss increased to 86,588 acres/year, 237 acres/ day, and 9.8 acres/hour. In the coming years, the conversion rate could maintain or increase again due to Blue Oval City development in Haywood County and surrounding counties. Additionally, a growing trend in Tennessee is expansion of the solar industry. Thus, the solar industry could increase the rate of farmland conversion in the next few years.

Primary Forestry in Tennessee

Roughly 51 percent of Tennessee is covered in forest that is primarily comprised of hardwoods (89 percent), making the state one of the top three hardwood lumber-producing states in the country. There are more than 120 tree species in Tennessee. The dominant forest type in the state is oak-hickory, accounting for an estimated 9.9 million acres (Tennessee Forestry Association, 2017). Of the 13.8 million acres in forest, 82.9 percent is privately owned, with

federal (10.0 percent) and state/local forests (7.1 percent) comprising the rest. The state has an estimated 8.5 billion live trees, with a volume of 33.6 billion cubic feet (USDA/FS, 2023).

In 2022, the state's 137 sawmill establishments employed 2,345 workers with a total payroll of \$101.6 million, while the state's 148 logging establishments employed 738 workers with a total payroll of \$30.8 million. From 2012 through 2022, average annual growth rates in employees, payroll, and establishments for sawmills (NAICS 321113) were -2.0 percent, 3.4 percent, and -2.9 percent, respectively. For logging (NAICS 1133), the average annual growth rates over the same period were -0.5 percent, 4.7 percent, and -0.9 percent, respectively, for employees, payroll, and establishments (U.S. Bureau of Labor Statistics, 2023).

Food, Fiber, and Forestry Manufacturing in Tennessee

Value of Shipments, Number of Establishments, and Employees

The state's 2,414 food and fiber processing and manufacturing facilities employed over 91,300 workers with a payroll of \$5.7 billion in 2022 (Table 2.9). By comparison, the state's overall manufacturing employment was 364,182 workers in 2022. Thus, food- and fiber-related manufacturing in Tennessee employed more than one in four manufacturing workers. The average growth in employees, payroll, and establishments for food manufacturing from 2012 to 2022 averaged 1.8 percent, 4.6 percent, and 5.8 percent, respectively. Comparing beverage and tobacco products manufacturing and the wood products group manufacturing (e.g., wood products, paper, and furniture) for that same time frame, beverage and tobacco products manufacturing had the largest increase in employees at 5.8 percent, with paper manufacturing having the least at -0.8 percent. For establishments, again beverage and tobacco products manufacturing had the largest increase at 13.4 percent, with wood products

2.5. TENNESSEE'S AGRICULTURAL AND FOREST INDUSTRIES AND RURAL ECONOMY, CONTINUED

Table 2.9: Tennessee Food, Fiber, and Forestry Manufacturing, 2022a,b

Manufacturing Industry (NAICS)	Employees	Average Change 2012-2022	Payroll	Average Change 2012-2022	Established	Average Change 2012-2022
	(number)	%	(mill \$)	%	(number)	%
Food (311)	39,425	1.8	\$2,457	4.6	597	5.8
Animal Slaughtering/Processing (3116)	12,494	1.4	\$671	6.8	85	0.9
Beverage & Tobacco Products (312)	9,123	5.8	\$496	5.8	294	13.4
Textile Mills (313)	3,057	-1.1	\$174	1.2	86	2.7
Textile Product Mills (314)	2,248	-1.0	\$109	2.8	150	0.0
Apparel (315)	3,409	-2.9	\$161	1.3	120	1.7
Leather & Allied Products (316)	340	-0.7	13	0.0	32	1.2
Wood Products (321)	13,996	2.4	\$816	8.1	524	0.6
Paper (322)	13,326	-0.8	\$1,072	0.5	212	2.1
Furniture & Related Products (337)	9,468	0.9	\$448	4.2	399	1.5
Total	91,338		\$5,746		2,414	

^a Values for animal slaughtering and processing are embedded in food manufacturing (311) values.

Source: U.S. Bureau of Labor Statistics. 2023.

manufacturing the least at 0.6 percent. For wages, wood products manufacturing had the largest increase at 8.1 percent, with paper manufacturing having the least at 0.5 percent. The average change in employment decreased for textile, apparel, and leather manufacturing. The largest average increase in establishments was for textile mills manufacturing at 2.7 percent. For payroll, the largest increase was for textile product mills manufacturing at 2.8 percent (U.S. Bureau of Labor Statistics, 2023).

Estimated Economic Impacts from Selected Agricultural Commodities

In 2021, the agri-forestry industrial complex directly and indirectly (i.e., including multiplier effects) contributed \$89.0 billion to the Tennessee economy. In terms of gross output, this value was 10.9 percent of the economic activity conducted

in the state. An estimated 366,154 individuals work in industries either part of or supported by the complex, or 8.9 percent of total employment in Tennessee. Agriculture generated \$65.6 billion in output or 8.0 percent of the economic activity in Tennessee and supported 281,794 jobs, with 92,889 (both full- and part-time) jobs in agricultural production. Forestry included the management and logging of trees; sawmills (primary forestry products), including pulp and paper mills; plus, forestry products manufacturing (secondary forestry products). Forestry accounted for 2.9 percent of the state's economy, supported 84,360 Tennessee jobs, and generated \$23.4 billion in output. (Menard, 2023). Based on IMPLAN 2021 data, Table 2.10 indicates the direct economic activity for selected agriculture and forest sectors, including the multiplier effects for these sectors, along with their employment and total value added.

^b Source data for value of shipments discontinued and will not resume until 2024.

2.5. TENNESSEE'S AGRICULTURAL AND FOREST INDUSTRIES AND RURAL **ECONOMY, CONTINUED**

Table 2.10: Multiplier Effects for Economic Activity and Direct Total Value Added for Selected Agricultural Commodities in Tennessee, 2021

	Direct	Multiplie	r Effects	Dir	ect
Sector	Economic Activity ^a (million \$)	Economic Activity ^a (million \$)	Economic Activity Multiplier	Employment ^b	Total Value Added ^c
Oilseed farming	\$967.4	\$1,365.7	1.41	5,398.0	\$523.2
Grain farming	\$1,047.5	\$1,973.3	1.88	10,696.4	\$54.0
Vegetable & melon farming	\$119.2	\$185.0	1.55	1,755.2	\$57.4
Greenhouse, nursery, & floriculture production	\$380.4	\$576.1	1.51	5,117.8	\$180.9
Tobacco farming	\$84.1	\$140.3	1.67	1,848.9	\$36.7
Cotton farming	\$273.2	\$418.4	1.53	3,210.2	\$107.2
All other crop farmingd	\$187.4	\$316.7	1.69	20,431.6	\$73.7
Beef cattle farming	\$591.3	\$866.2	1.46	14,568.3	\$173.8
Dairy cattle & milk production	\$98.0	\$166.6	1.70	437.6	\$18.0
Poultry & egg production	\$696.0	\$1,149.6	1.65	2,638.5	\$65.7
Animal production, except cattle, poultry, & eggs ^e	\$212.0	\$287.6	1.36	5,553.2	\$141.2
Forestry, forest products, & timber tract production	\$28.4	\$50.9	1.79	295.3	\$22.2
Commercial logging	\$291.1	\$527.8	1.81	2,825.1	\$185.0
Sawmills	\$879.5	\$1,622.1	1.84	2,435.5	\$280.4
Pulp mills	\$29.1	\$47.8	1.64	44.5	\$10.1
Paper mills	\$1,498.9	\$2,320.6	1.55	1,611.6	\$639.2
Paperboard mills	\$1,008.7	\$1,649.1	1.63	1,076.4	\$412.0

^a Total Industry Output – annual value of production by industry.

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^b Employment – estimated number of wage and salary employees (both full- and part-time), as well as self-employed.

c Total Value Added – income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and production and import taxes.

^d Primarily hay and seed farming.

e Primarily hogs, sheep and goats, aquaculture, equine, and apiculture. Source: IMPLAN 2021 data.

2.5. TENNESSEE'S AGRICULTURAL AND FOREST INDUSTRIES AND RURAL **ECONOMY, CONTINUED**

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CHAPTER 3: BUSINESS FORMATION

In this Chapter —

- 3.1. Introduction
- 3.2. Trends in Business Formation in Tennessee
- 3.3. Business Formation by County
- 3.4. Business Formation Across the **United States**
- 3.5. Business Formation by Industry

3.6. Trends in Business Formation During the Initial Phase of the **Pandemic**

> Online retail/Direct-to-consumer model Stimulus checks Other pandemic-related business opportunities

- 3.7. Recent Trends in Business Formation (Post-pandemic recovery)
- 3.8. Wayfair and Business Formation
- 3.9. Conclusion

3.1. INTRODUCTION

As a strong indicator of local economic growth, business formation can provide insight into Tennessee's economy and how it has grown over time. Business formation is commonly measured by the number of new business applications or initial filings. Figure 3.1 shows that growth in business

filings has historically been a good leading indicator for nonfarm employment in Tennessee. . During the Great Recession, business filings fell first and then employment followed suit. Similarly, during the pandemic and pandemic recovery, business filings grew and then employment followed shortly after.

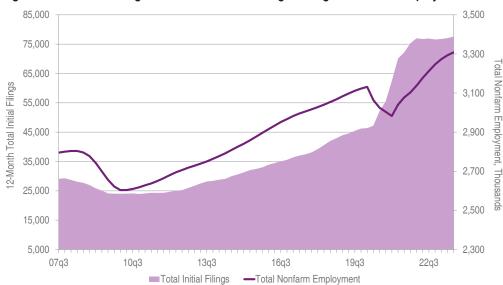


Figure 3.1: Business Filings in Tennessee are a Strong Leading Indicator for Employment Growth

Source: Tennessee Secretary of State.

3.1. INTRODUCTION, CONTINUED

Due to the surge in business applications over the past few years, this chapter largely focuses on the number and growth of business applications before, during, and after the COVID-19 pandemic. First, this chapter discusses business formation in Tennessee over time and across industries. Next, it explores differences in business formation across Tennessee counties. It then compares business formation in Tennessee to the nation and other states. Finally, there is a discussion of recent trends in business formation and the impact of sales tax legislation on business formation.

3.1. TRENDS IN BUSINESS FORMATION IN TENNESSEE

This section provides an overview of recent business formation trends in Tennessee. **Figure 3.2** shows annual business applications in Tennessee along with growth in business applications from one year to the next. The number of business applications rose each year between 2014 and 2021. Prior to the pandemic, growth in business applications hovered around 8 percent per year. However, in 2020 business applications shot up by an astounding 23.4 percent. Pandemic-related growth continued in 2021 with a 35.7 percent increase in applications. Business filings growth slowed dramatically in 2022, but the

total number of new business applications remains well above pre-pandemic levels.

Figure 3.3 provides a more detailed look at business formation in Tennessee since 2014. Due to the seasonality in business filings, the figure shows year-over-year filings growth for each quarter over time. The growth in business filings over time is clearly seen here with each quarter experiencing an increase in business filings from year to year. While growth has slowed since 2021, the number of business filings remains high with the most recent numbers more than double those in 2014.

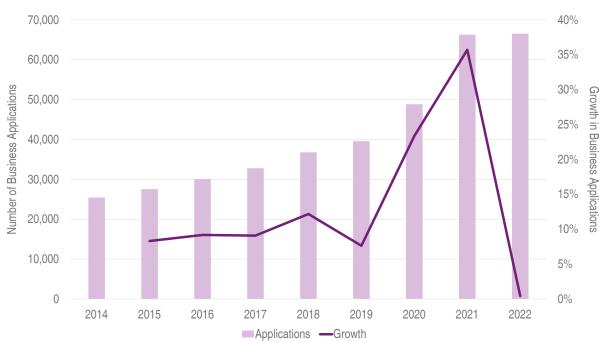


Figure 3.2: Annual Business Filings Have Risen Dramatically Since the Onset of the Pandemic

Source: Tennessee Secretary of State.

TRENDS IN BUSINESS FORMATION IN TENNESSEE, CONTINUED 3.1.



BUSINESS FORMATION BY COUNTY 3.2.

While Tennessee as a whole saw robust growth in business formation since the pandemic, there has been a fair bit of interstate variation. Figure 3.4 shows both the percentage change and the number of new business filings between Fiscal Year 2018-19 and Fiscal Year 2022-23. The majority of Tennessee counties experienced at least 50 percent growth in new business filings since the pandemic. Hancock County saw the largest rate of growth at 312.5 percent, but this reflects a small increase of only 25 new filings. The largest four counties (Davidson, Shelby, Knox, and Hamilton) experienced large gains in the number of new filings. Among these counties, Knox County saw the strongest rate of growth over this period with new filings growing by 111 percent, representing an increase of 3,135 new applications. However, Davidson County saw the largest increase in the number of new businesses, adding 4,887 over this period, followed by Shelby, where business filings increased by 4,869. In contrast, Pickett County experienced the smallest rate of growth at just 4 percent, representing an

increase of only one business application. Still, it is remarkable to see positive growth in new business filings across all 95 counties during this time period.

Following extremely strong growth over the last few years, new filing patterns have started to stabilize (Figure 3.5). As a result, most counties have seen either modest gains or outright declines over the last year. As examples, Davidson only recorded 191 new filings and Rutherford added 136 new filings. The one exception is Knox County, which continues to see robust gains, and added 1,104 new filings over the last year. By comparison, Shelby saw the steepest reduction in filings (down 1,413). Despite this decline, new filings in FY2023 in Shelby County were still nearly twice as high as they were prior to the pandemic (FY2019). Williamson and Hamilton also saw modest contractions. Lake County saw the largest growth over the past year at 111.1 percent, but this represented an addition of only 10 business filings. Lincoln County experienced the largest percentage decline of 23.2 percent with 43 fewer filings than last year.

Less than 100 (57)

500 to <1,000 (4)

Polk 56

Giles 74

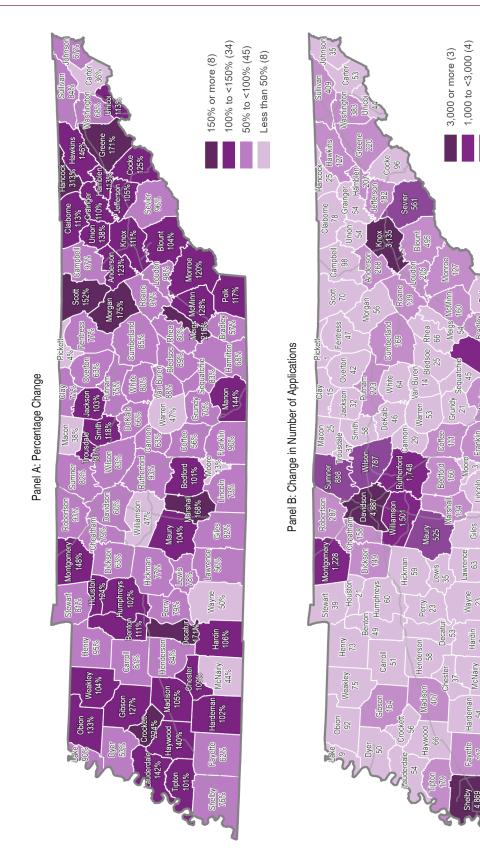
Wayne 23

100 to <500 (27)

3.2. **BUSINESS FORMATION BY COUNTY, CONTINUED**

Figure 3.4: Business Application Growth by County, Pre-Pandemic to Current Year

Business Filings FY2019 to FY2023

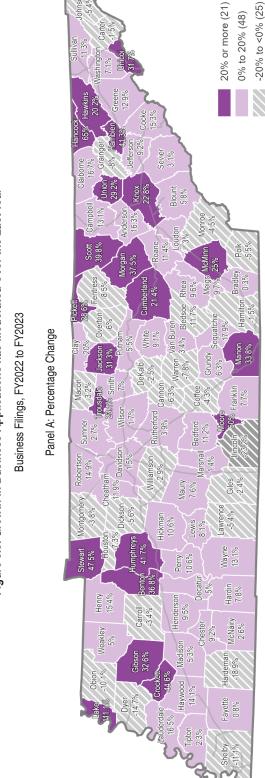


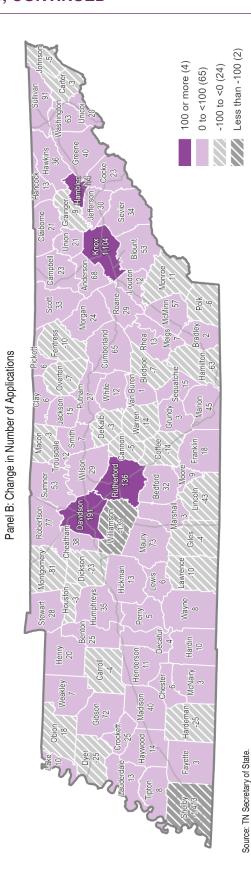
Source: TN Secretary of State.

3.2. **BUSINESS FORMATION BY COUNTY, CONTINUED**

Less than -20% (1)

Figure 3.5: Growth in Business Applications has Moderated Over the Last Year





BUSINESS FORMATION ACROSS THE UNITED STATES 3.3.

Was the recent surge in business formation unique to Tennessee? To answer this question, we turn to the U.S. Census's Business Formation Statistics dataset to compare new business filings in Tennessee to those throughout the United States. The Census data only include business applications for brand-new businesses. That is, they do not include franchises or the opening of additional stores whereas the Secretary of State data includes the opening of new stores and/ or franchises. For example, if a new Starbucks opens in Knoxville, a new business filing would be included in the Secretary of State number but not included in the Census data. For this reason, the Census data are not directly comparable to the more comprehensive data gathered by the Tennessee Secretary of State's office. However, the Secretary of State data are, of course, only available for Tennessee, while the Census provides publicly available data for all states, and provides industry-level breakdowns by industry as well.

Tennessee has followed the general trend of business formation in the United States since before the COVID-19 pandemic. One difference, however, is that Tennessee has experienced greater fluctuations in business applications, especially in 2020 (see Figure 3.6). In the second quarter of 2020, Tennessee saw growth of nearly 90 percent while the United States average was closer to 70 percent. In the following quarter, growth in Tennessee was just 23 percent while the national average was higher at 38 percent. National growth has only exceeded growth in Tennessee in four quarters since the beginning of 2019.

Figure 3.7 reports growth in business applications between 2019 and 2022 for all southeastern states. Tennessee experienced a 55.3 percent increase in applications during this period, which represents an additional 32,570 applications in 2022 compared to 2019. Kentucky, Virginia, and West Virginia saw slower growth than the national average of 44.1 percent, but all other states in the Southeast had stronger growth.

Mississippi saw the strongest growth in business applications, expanding by roughly 78 percent, which represents an additional 24,360 business applications between 2019 and 2022. South Carolina and Alabama also experienced strong growth during this period.

Similar to the experience in Tennessee, growth in new business applications has slowed throughout the southeast region and the U.S. as a whole over the past year, but remains at levels well above those seen prior to the pandemic. Figure 3.8 presents business filings growth across all southeastern states from the first half of 2022 to the first half of 2023. Tennessee experienced little growth compared to the rest of the Southeast and the United States with just a 2.1 percent increase in new business applications over the past year. The only state in the Southeast to see a decrease in business applications during this period was Mississippi. In contrast, Kentucky experienced the largest increase in applications at 15.8 percent, followed by West Virginia (10.6 percent), and Florida (9.3 percent), all of which saw larger growth than the U.S. average.

Figure 3.9 shows growth in business applications across all U.S. states between 2019 and 2022. States in the Southeast saw some of the strongest rates of new filings growth during this period, including Tennessee, which ranked seventh in the nation. However, among all 50 states, Wyoming registered the largest growth rate, at nearly 120 percent, representing an increase of 22,680 new applications. Since Wyoming has the smallest population among all states, this increase represented a smaller number of new business applications than most other states that also experienced rapid growth. For example, Florida had the largest number of new business applications of any state with more than 215,000 additional applications during this period, but only registered a growth rate of 55.0 percent. By comparison, Alaska experienced the smallest growth in business applications with just 270 additional applications, representing an increase of only 3.2 percent.

BUSINESS FORMATION ACROSS THE UNITED STATES, CONTINUED 3.3.

100% 80% 60% Year-Over-Year Growth 40% 20% 0% -20% -40% Tennessee —United States

Figure 3.6: Business Filings Growth in Tennessee Compared to the U.S.

Source: U.S. Census Bureau, Business Formation Statistics.



Figure 3.7 Most Southeast States saw Stronger Business Formation Growth than the U.S. as a Whole, 2019-2022

Source: U.S. Census Bureau, Business Formation Statistics.

3.3. **BUSINESS FORMATION ACROSS THE UNITED STATES, CONTINUED**

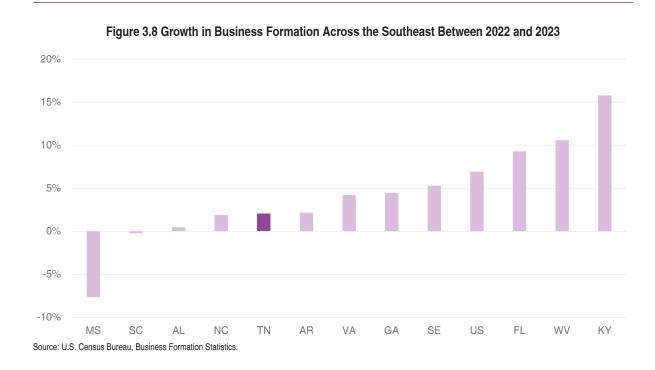
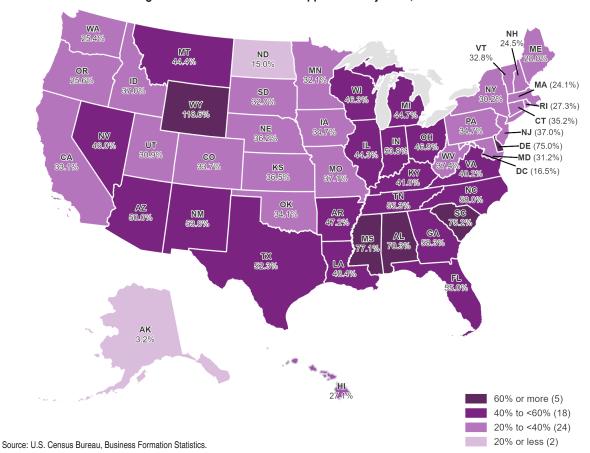


Figure 3.9: Growth in Business Applications by State, 2019-2022

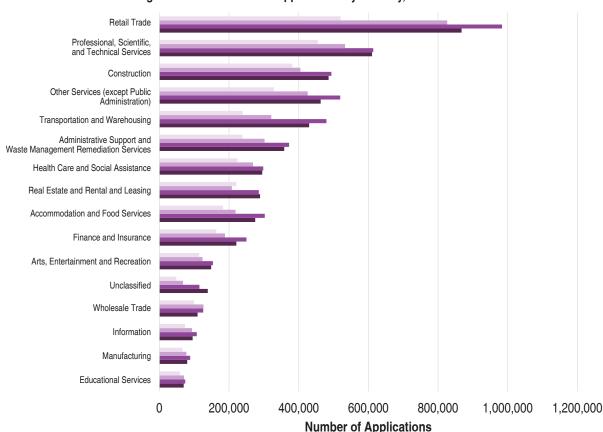


3.4. BUSINESS FORMATION BY INDUSTRY

Data on business applications by industry show which industries contributed the most to the substantial growth in new business formation seen since 2019. Figure 3.10 reports the number of new business applications filed in each year between 2019 and 2022 and for each industry. These data are first presented at the national level, as the national data are more up-to-date, and provide valuable insights into overall industry-level trends seen across the nation during this period. Overall, most of the growth in business filings during this period occurred between 2019 and 2021 with modest declines between 2021 and 2022. The retail trade industry saw the largest uptick in business filings, by a wide margin, adding over 300,000 business applications in 2020 alone, and an additional 157,000 applications in 2021. The transportation and warehousing industry similarly added about

158,000 applications in 2021. Growth in both of these industries is not surprising given the increase in e-commerce during and after the pandemic. Notably, the construction industry experienced little growth between 2019 and 2020 but added about 88,000 business applications in 2021.

Next, **Figure 3.11** presents the number of business applications by industry in Tennessee for 2021, which are the most recent state-level data available. Like the nation, Tennessee received the most business applications from the retail sector. However, the health care sector and the accommodations and food service sector were more prominent in Tennessee compared to the United States. Conversely, the manufacturing sector, which represents a large portion of Tennessee's GDP and employment did not account for a large share of business applications.

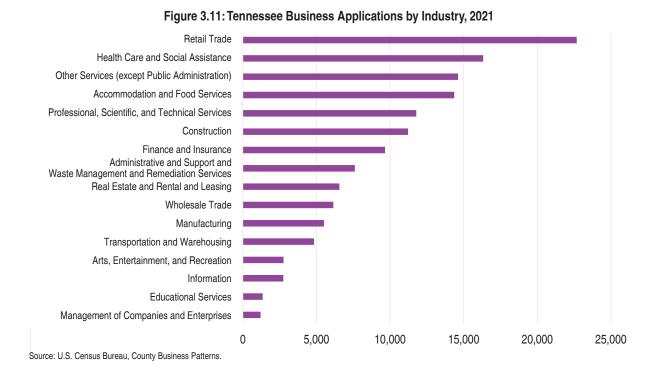


■ 2019 ■ 2020 ■ 2021 ■ 2022

Figure 3.10: U.S. Business Applications by Industry, 2019 to 2022

Source: U.S. Census Bureau, Business Formation Statistics.

3.4. **BUSINESS FORMATION BY INDUSTRY, CONTINUED**



TRENDS IN BUSINESS FORMATION DURING THE INITIAL PHASE OF 3.5. THE PANDEMIC

As seen in previous sections, business filings have increased dramatically over the past few years, especially during and after the COVID-19 pandemic. The increase in business formation has largely been driven by the retail sector, particularly nonstore retailers.

During the initial phase of the pandemic, there were a handful of relevant changes that likely contributed to the surge in business formation in the retail sector including the shift to online shopping, the dispersion of pandemic-relief stimulus checks, and other pandemic-related business opportunities, as discussed in more detail below.

Online retail/Direct-to-consumer model

The need to avoid in-person contact during the pandemic led to a significant increase in online shopping. E-commerce increased by 43 percent between 2019 and 2020.1 This shift to online sales

during and after the pandemic along with online marketplaces (e.g. Amazon, Etsy, eBay) made it easy for entrepreneurs to start direct-to-consumer businesses. Starting a business without a brickand-mortar location significantly reduces start-up costs by eliminating rent and utility payments. Costs associated with running a website are also eliminated when using online marketplaces. Furthermore, the non-store retail industry primarily consists of nonemployer businesses which further reduces costs such as salaries and benefits for employees.

Figure 3.12 shows that business applications for non-store retailers increased each year between 2013 and 2021, with substantial growth between 2019 and 2021. In contrast, there was a decline in the number of applications for brick-and-mortar businesses between 2013 and 2017 followed by a small increase between 2019 and 2021.

¹ Brewster, M. 2022. "Annual Retail Trade Survey Shows Impact of Online Shopping on Retail Sales During COVID-19 Pandemic." U.S. Census Bureau. https://www.census.gov/library/stories/2022/04/ecommerce-sales-surged-during-pandemic.html#:~:text=According%20to%20the%20most%20recent,to%20 %24815.4%20billion%20in%202020.

3.5. TRENDS IN BUSINESS FORMATION DURING THE INITIAL PHASE OF THE PANDEMIC, CONTINUED

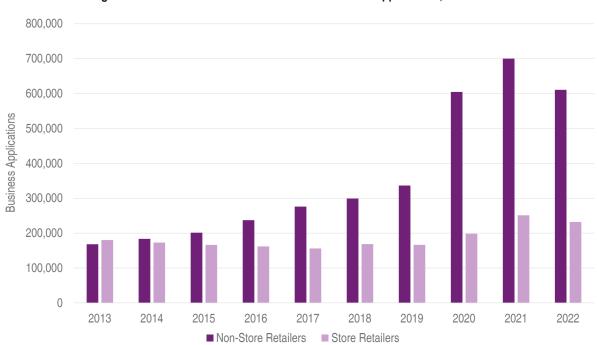


Figure 3.12: Store versus Non-store Retailer Business Applications, 2013 to 2022

Source: U.S. Census Bureau, Business Formation Statistics

Stimulus checks

Households who received stimulus checks spent about 40 percent of the check on goods and services, while about 30 percent went towards debt and another 30 percent went to savings.² The lowering of debt, and increased savings may have allowed households to take on additional debt or spend savings to finance a business.

Stimulus checks also boosted consumer demand and production was slow to adjust to this rising demand.³ Entrepreneurs may have exploited this demand-supply imbalance by starting new businesses.

Other pandemic-related business opportunities

Masks, cleaning products and services, health

services, tutoring and other remote educationrelated services were needed at a much higher rate than before the pandemic, presenting an opportunity for entrepreneurs.

The pandemic also created a greater need for digital services, particularly online communication services for businesses that were able to transition to a work-from-home format. This also spurred more demand for home office supplies.

Outside of work hours, individuals needed sources of entertainment that were possible inside the home. A major form of entertainment came in the form of video content, which led to an uptick in individuals identifying as content creators or influencers. There was also an increase in virtual classes and events, family games, and the number of subscription services.

² Coibion, O., Gorodnichenko, Y., and Weber, M. 2020. "How Did U.S. Consumers Use Their Stimulus Payments." NBER WP #27693. https://www.nber.org/papers/

³ de Soyres, F., Santacreu, A., and Young, H. 2022. "Demand-Supply imbalance during the Covid-19 pandemic: The role of fiscal policy." The Federal Reserve: International Finance Discussion Papers. https://www.federalreserve.gov/econres/ifdp/demand-supply-imbalance-during-the-covid-19-pandemic-the-role-of-fiscalpolicy.htm

RECENT TRENDS IN BUSINESS FORMATION (POST-PANDEMIC RECOVERY)

Although growth in business formations has slowed, the business boom has continued into the post-pandemic recovery period with higher levels of business applications and consumer spending than prior to the pandemic.

Every industry had more business applications in 2022 than in 2019 (see Figure 3.9). Among the 10 largest industries, construction and professional services are two of the industries that had a similar number of business applications in 2021 and 2022. Construction applications have remained high despite interest rate hikes beginning in 2022, but the future remains uncertain. The successful shift to remote work during the pandemic has likely contributed to the consistent level of business applications in the professional service industry.

Consumer spending has also remained strong for longer than most have expected and has led to increased opportunities for new businesses. In FY2022 (August 2021 to July 2022), sales tax revenues in Tennessee rose by an astounding 15.6 percent, representing an increase of over \$1.7 billion in sales tax revenues compared to the already elevated level of collections from the year prior. Strong sales continued into FY2023, as sales tax revenues grew by another 6.9 percent or \$891 million. By comparison, sales

tax revenue growth averaged around 4 to 5 percent growth prior to the pandemic (from FY2011 to FY2019), so this post-pandemic period represented a strong acceleration in taxable sales. Sales tax revenues have finally started to moderate this fiscal year, and as of October 2023, sales tax collections for FY2024 fiscal year-to-date (August 2023 to October 2023) are only up by 1.5 percent compared to the same time last year. But the dollar value of sales tax collections remains roughly \$1 billion higher than they were prior to the pandemic. This level of sales and economic activity provides a lot of support for the growing business community in Tennessee.

It is unclear as to whether this trend will continue. Interest rates remain high, which should hinder investment spending and could stunt overall economic growth. Inflation, while trending downwards, remains higher than the Fed's 2 percent target, and has put many consumers in difficult financial positions. Additionally, student loan repayments were paused in March of 2020 but began again this fall. All of these could become headwinds for overall economic growth in the near term. In contrast, e-commerce will likely continue to be a means of spending as it was increasing as a share of sales prior to the

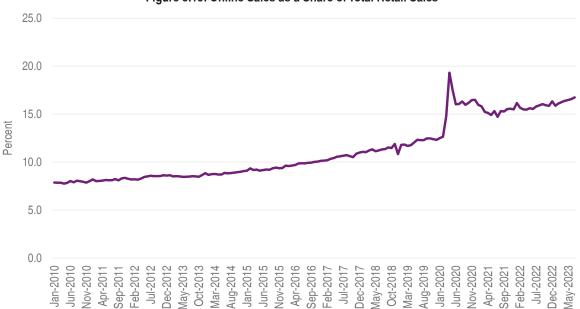


Figure 3.13: Online Sales as a Share of Total Retail Sales

Source: U.S. Census Bureau

RECENT TRENDS IN BUSINESS FORMATION 3.6. (POST-PANDEMIC RECOVERY), CONTINUED

pandemic. Figure 3.13 shows that e-commerce has remained elevated following the pandemicrelated spike in 2020. This, by itself, could support the continued growth of non-store retailers, which would help to prop up business formation in Tennessee and around the nation.

In addition, Tennessee has seen a massive uptick in in-migration since the pandemic. From 2010 to 2019 the state added an average of 36,000 people per year through positive migration patterns. Net migration (in-migration minus outmigration) then rose above 50,000 in 2020 and 2021 and then reached a historical high of nearly 90,000 in 2022. Migration patterns are discussed in more detail in Chapter 2 Section 2, but importantly, this has been a major contributor to the strong economic growth seen in Tennessee over the last few years, and more relevantly has also led to an increase in the number of workers in the state and an increase in the number of entrepreneurs.

3.7. WAYFAIR AND BUSINESS FORMATION

Another major change over the past few years is the introduction of Wayfair-related legislation leading to the collection of sales taxes on online purchases. Since the Supreme Court decision in *Quill v. North* Dakota (1992), online sellers have not been required to collect sales taxes on purchases in states where the seller did not have a physical presence (i.e. physical nexus). The decision in South Dakota v. Wayfair (2018) overturned this ruling and allowed states to enforce taxation based on economic presence or economic nexus in a buyer's state (i.e. how much are they selling in a given state) rather than physical presence.

By January of 2023, all states that levy a sales tax had enacted economic nexus legislation, most with threshold requirements. Table 3.1 shows the dates that economic nexus was passed and thresholds for each state. The sales threshold is a dollar amount that a company has to reach in sales before it is required to collect and remit the sales tax while the transactions threshold is the number of sales a company has to make before it is required to collect and remit the sales tax. These arbitrary threshold requirements are meant to exempt small businesses from remitting the sales tax.

Prior to economic nexus standards, firms would benefit from being physically located in a low or non-sales taxing state because buyers in sales taxing states would not have to pay the sales tax on online purchases from out-of-state vendors. Beem and

Bruce (2021) provide some of the first evidence of the relationship between sales tax obligation faced by firms and business formation.⁴ Using state-level data, they find that increasing the size of the sales tax base should increase the number of firms and establishments within a state. Although the authors use pre-Wayfair data, these findings are important for the post-Wayfair sales tax environment. By increasing the number of firms required to remit the sales tax, states have increased the size of their sales tax base, which should also lead to an increase in the number of firms within a state.

Bruce, Fox, and Shute (2023) explore whether economic nexus standards affected business formation using post-Wayfair data.⁵ They provide suggestive evidence that the number of business applications increased following the passage of economic nexus legislation in states with the highest sales tax rates. These findings are consistent with Beem and Bruce (2021) and suggest that economic nexus has played a role in the recent increase in business formation.

In summary, this literature suggests that states with higher sales tax rates, like Tennessee, have benefited from the Supreme Court decision in South Dakota v. Wayfair (2018), in that more businesses have likely opened in these states once online transactions became sales taxable.

⁴ Beem, R., & Bruce, D. (2021). Failure to launch: Measuring the impact of sales tax nexus standards on business activity. Journal of Public Economics, 201,

⁵ Bruce, D., Fox, W. F., & Shute, A. M. (2023). Wayfair: A Step Towards the Destination, But Sales Tax Competition Remains (No. w31074). National Bureau of Economic Research.

WAYFAIR AND BUSINESS FORMATION, CONTINUED 3.7.

Table 3.1 Economic Nexus Legislation and Thresholds

	<u> </u>		
State	Economic Nexus	Sales Threshold	Transactions Threshold
Alabama	10/1/2018	\$250,000	
Alaska	4/1/2020†	\$100,000	200
Arizona	10/1/2019	\$100,000	
Arkansas	7/1/2019	\$100,000	200
California	4/1/2019	\$500,000	
Colorado	6/1/2019††	\$100,000	
Connecticut	12/1/2018	\$100,000	200*
Florida	7/1/2021	\$100,000	
Georgia	1/1/2019	\$100,000	200
Hawaii	7/1/2018	\$100,000	200
Idaho	6/1/2019	\$100,000	
Illinois	10/1/2018	\$100,000	200
Indiana	10/1/2018	\$100,000	200
lowa	1/1/2019	\$100,000	200
Kansas	10/1/2019	\$100,000	
Kentucky	10/1/2018	\$100,000	200
Louisiana	7/1/2020	\$100,000	200
Maine	7/1/2018	\$100,000	
Maryland	10/1/2018	\$100,000	200
Massachusetts	10/1/2019	\$100,000	
Michigan	10/1/2018	\$100,000	200
Minnesota	10/1/2018	\$100,000	200
Mississippi	9/1/2018	\$250,000	
Missouri†	1/1/2023	\$100,000	
Nebraska	1/1/2019†††	\$100,000	200
Nevada	11/1/2018	\$100,000	200
New Jersey	11/1/2018	\$100,000	200
New Mexico	7/1/2019	\$100,000	
New York	6/21/2018	\$500,000	100*
North Carolina	11/1/2018	\$100,000†††††	200
North Dakota	10/1/2018	,,IIIII	
Ohio	8/1/2019	\$500,000	
Oklahoma	11/1/2019	\$100,000	
Pennsylvania	7/1/2019	\$100,000	
Rhode Island	7/1/2019††††	\$100,000	200
South Carolina	11/1/2018	\$100,000	
South Dakota	11/1/2018	\$100,000	200
Tennessee	10/1/2019	\$100,000	
Texas	10/1/2019	\$500,000	
Utah	1/1/2019	\$100,000	200
Vermont	7/1/2018	\$100,000	200
Virginia	7/1/2019	\$100,000	200
Washington	10/1/2018	\$100,000	200
West Virginia	1/1/2019	\$100,000	200
Wisconsin	10/1/2018	\$100,000	
Wyoming	2/1/2019	\$100,000	200
TTYOTHING	2/1/2019	ψ100,000	200

^{*}Must meet both thresholds (dollar and transactions).

[†]First municipality enforced through Alaska Remote Seller Sales Tax Commission. Effective date unique for each municipality. 54 out of 107 taxing jurisdictions have adopted remote sales tax rules.

^{††}Effective December 1, 2018 with grace period through May 31, 2019.

^{†††}Administrative announcement. Legislation enacted later.

^{††††}Mandatory registration. Register or comply began 8/17/2017.

^{††††}North Carolina removed its economic nexus threshold for marketplace facilitators July 1, 2020.

Sources: Sales Tax Institute (2022) and Afonso (2019).

CONCLUSION 3.8.

Since the onset of the COVID-19 pandemic, business formation has increased substantially both in Tennessee and across the United States. This growth has varied across counties, states, business types, and time. Within Tennessee, most counties experienced growth greater than 50 percent between 2019 and 2023 but growth ranged from 4 to 313 percent. In the same period, Tennessee saw greater growth than the United States average, ranking 7th in the nation. However, over the past year, Tennessee

has experienced little growth compared to the rest of the nation, and growth in most counties has slowed. The retail industry has contributed significantly to the growth in Tennessee business applications, with non-store retailer applications doubling between 2019 and 2021. Business formation continues to remain higher than prepandemic levels despite slower growth. However, there is uncertainty about whether this trend will continue as interest rates rise and inflation remains elevated.

In this Section —

Appendix A: Forecast Data

Quarterly Pages 2-17 (2023:4 to 2026:1) Annual Pages 18-30 (2023 to 2033)

QUARTERLY FORECAST TABLES

Table 1: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted	2
Table 2: Selected Per Capita U.S. and Tennessee Economic Indicators, Seasonally Adjusted	4
Table 3: Tennessee Personal Income Components, Seasonally Adjusted Annual Rates (millions of 2017 dollars)	5
Table 4: Tennessee Personal Income Components, Seasonally Adjusted Annual Rates (millions of current dollars)	6
Table 5: Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs)	7
Table 6: Tennessee Durable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs)	9
Table 7: Tennessee Nondurable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs) 1	0
Table 8: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (2017 dollars)1	1
Table 9: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (current dollars) 1	3
Table 10: Tennessee Civilian Labor Force and Unemployment Rate, Seasonally Adjusted	5
Table 11: Tennessee Taxable Sales, Seasonally Adjusted (millions of 2017 dollars)	6
Table 12: Tennessee Taxable Sales, Seasonally Adjusted (millions of current dollars)	7

ANNUAL FORECAST TABLES

Table 1: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted	18
Table 2: Selected Per Capita U.S. and Tennessee Economic Indicators	19
Table 3: Tennessee Personal Income Components (millions of 2017 dollars)	20
Table 4: Tennessee Personal Income Components (millions of current dollars)	21
Table 5: Tennessee Nonfarm Employment by Sector (thousands of jobs)	22
Table 6: Tennessee Durable Goods Manufacturing Employment (thousands of jobs)	23
Table 7: Tennessee Nondurable Goods Manufacturing Employment (thousands of jobs)	24
Table 8: Tennessee Average Annual Wage and Salary Rate by Sector (2017 dollars)	25
Table 9: Tennessee Average Annual Wage and Salary Rate by Sector (current dollars)	26

Table 1: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted

Table 1: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted	onomic In	dicators	s, Seasor	ıally Adj	usted		L								December 2023	r 2023
	HISTORY 2023:2 202	2023:3	2023:4	2024:1	2024:2	2024:3	2024:4 2025:	r Data 2025:1	2025:2	2025:3	2025:4	2026:1	2022	Annua 2023	2024	2025
US GDP (Bii2017\$) SAAR	22225.4 2249	2491.6	22553.2 ;	22604.0	22608.5	22669.1	22740.6 2	22826.7	22918.1 2	23016.0	23112.7 2	23210.6	21822.0 2	22345.6 2	22655.5 2	22968.4
	2.06 4	4.88	1.10	0.90	0.08	1.08	1.27	1.52	1.61	1.72	1.69	1.71	1.94	2.40	1.39	1.38
	2.38 2	2.93	2.56	2.22	1.72	0.79	0.83	0.99	1.37	1.53	1.64	1.68	1.94	2.40	1.39	1.38
US GDP (Bil\$) SAAR	. 27063.0 2	7623.5	27901.3	28127.8	28332.8	28587.9	28842.5 2	29099.9 2	29372.2 2	29654.6 2	3.78	30214.2	25744.1 2	27350.4 2	28472.8 2	29514.5
	. 3.77	8.55	4.08	3.29	2.95	3.65	3.61	3.62	3.80	3.90	3.78	3.84	9.11	6.24	4.10	3.66
	. 5.95	6.27	5.65	4.90	4.69	3.49	3.37	3.46	3.67	3.73	3.77	3.83	9.11	6.24	4.10	3.66
TN PERSONAL INCOME (MIL2017\$) SAAR 361231 % Chg Prev Qtr SAAR		363385 2.41 2.69	365759 2.64 3.00	368752 3.31 2.51	371234 2.72 2.77	373562 2.53 2.80	375844 2.47 2.76	378682 3.05 2.69	381567 3.08 2.78	384061 2.64 2.81	386939 3.03 2.95	389668 2.85 2.90	354211 -2.80 -2.80	362528 2.35 2.35	372348 3 2.71 2.71	382812 2.81 2.81
US PERSONAL INCOME (BIL2017\$) SAAR % Chg Prev Qtr SAAR % Chg Same Qtr Last Yr	19063	19091	19144	19343	19454	19570	19703	19899	20045	20166	20287	20419	18821	19069	19518	20099
	1.77	0.59	1.13	4.21	2.33	2.40	2.76	4.02	2.96	2.45	2.41	2.64	-4.22	1.32	2.35	2.98
	1.72	1.36	1.50	1.92	2.06	2.51	2.92	2.87	3.03	3.05	2.96	2.62	-4.22	1.32	2.35	2.98
TN PERSONAL INCOME (MIL\$) SAAR	433637	439309	444691	450355	456112	461840	467387	473097	478825	484754	490474	496471	411035 3.54	436709	458924 ²	481787
	4.20	5.34	4.99	5.19	5.21	5.12	4.89	4.98	4.93	5.05	4.80	4.98	3.54	6.25	5.09	4.98
	6.41	6.19	6.04	4.93	5.18	5.13	5.10	5.05	4.98	4.96	4.94	4.94	3.54	6.25	5.09	4.98
US PERSONAL INCOME (BIL\$) SAAR	22883	23083	23298	23652	23944	24248	24542	24878	25174	25470	25753	26061	21841	22977	24097	25319
	4.30	3.53	3.78	6.23	5.03	5.17	4.95	5.59	4.84	4.80	4.51	4.87	2.02	5.20	4.87	5.07
	5.65	4.83	4.60	4.45	4.64	5.05	5.34	5.18	5.14	5.04	4.93	4.75	2.02	5.20	4.87	5.07
TN NONFARM JOBS (THOUS)	3316.8	3324.2	3332.3	3340.8	3350.2	3358.9	3367.6	3377.5	3387.0	3396.8	3407.1	3417.0	3246.4	3320.6	3354.4	3392.1
	0.97	0.90	0.98	1.02	1.13	1.04	1.04	1.18	1.13	1.16	1.23	1.16	4.62	2.29	1.02	1.12
	2.51	1.81	1.51	0.97	1.01	1.04	1.06	1.10	1.10	1.13	1.17	1.17	4.62	2.29	1.02	1.12
US NONFARM JOBS (MIL)	155.9	156.5	157.1	157.2	157.2	157.2	157.2	157.2	157.2	157.3	157.4	157.6	152.6	156.2	157.2	157.3
	1.73	1.57	1.45	0.38	0.04	-0.11	-0.10	0.01	0.12	0.24	0.35	0.40	4.34	2.34	0.66	0.05
	2.54	2.08	1.82	1.28	0.86	0.44	0.05	-0.04	-0.02	0.07	0.18	0.27	4.34	2.34	0.66	0.05
TN MFG JOBS (THOUS)	371.4	370.5	371.6	372.0	372.1	372.3	373.0	374.4	375.7	377.0	378.3	379.3	364.9	370.4	372.4	376.3
	3.55	-0.97	1.25	0.40	0.07	0.27	0.74	1.44	1.40	1.40	1.38	1.09	4.42	1.51	0.52	1.06
	1.45	0.54	1.35	1.04	0.18	0.50	0.37	0.63	0.96	1.24	1.40	1.32	4.42	1.51	0.52	1.06
US MFG JOBS (MIL)	. 13.0	13.0	13.0	13.0	13.0	12.9	12.7	12.5	12.4	12.3	12.2	12.2	12.8	13.0	12.9	12.3
	0.02	0.08	-0.14	0.79	-1.37	-3.24	-5.68	-6.35	-3.10	-2.77	-2.28	-1.46	3.83	1.22	-0.84	4.23
	1.50	0.75	0.13	0.19	-0.16	-1.00	-2.40	-4.18	-4.60	-4.49	-3.64	-2.40	3.83	1.22	-0.84	4.23
TN UNEMPLOYMENT RATE (%)	. 3.2	3.1	3.2	3.4	3.4	3.5	3.6	3.6	3.6	3.6	3.6	3.7	3.4	3.3	3.5	3.6
US UNEMPLOYMENT RATE (%)	. 3.5	3.7	3.9	4.0	4.2	4.4	4.5	4.6	4.7	4.7	4.7	4.7	3.6	3.6	4.3	4.7
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Tennessee Econometric Model

December 2023 Table 1: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted

	:															
	History	ory					Forecast Data	Data	1	1				Annual		
•	2023:2	2023:3	2023:4	2024:1	2024:2	2024:3	2024:4	2025:1	2025:2	2025:3	2025:4	2026:1	2022	2023	2024	2025
CHAINED PRICE INDEX, GDP (2017=100.0)	121.8	122.8	123.7	124.4	125.3	126.1	126.8	127.5	128.2	128.8	129.5	130.2	118.0	122.4	125.7	128.5
% Chg Prev Qtr SAAR	1.74	3.52	2.85	2.36	2.87	2.55	2.31	2.06	2.15	2.14	2.06	2.10	7.05	3.74	2.67	2.25
% Chg Same Qtr Last Yr	3.47	3.25	3.00	2.62	2.90	2.66	2.52	2.45	2.27	2.17	2.10	2.11	7.05	3.74	2.67	2.25
US PERS CONSUMP DEFL (2017=100.0)	120.0	120.9	121.7	122.3	123.1	123.9	124.6	125.0	125.6	126.3	126.9	127.6	116.0	120.5	123.5	126.0
% Chg Prev Qtr SAAR	2.49 3.86	2.92 3.43	2.62 3.05	1.93 2.49	2.53	2.71	2.13	1.50	1.82 2.04	2.29 1.94	2.05	2.17	6.46 6.46	3.83 3.83	2.46	2.03
XECNI ECIMA MEMISINCO																
ALL-URBAN (82-84=1.000)	3.034	3.060	3.082	3.096	3.117	3.142	3.158	3.164	3.177	3.201	3.219	3.240	2.926	3.047	3.128	3.190
% Chg Prev Qtr SAAR	2.71	3.58	2.80	1.90	2.75	3.28	1.99	0.80	1.66	2.98	2.36	2.66	7.99	4 . 4 . 4 .	2.66	1.98
% ong same orr Last Yr	4.05	3.57	3.23	7.73	7.70	7.08	2.48	2.20		1.85	- 95. - 45.	7.4.1	66.7	4.T4	7.00	 26.
BANK PRIME INTEREST RATE (%)	8.2	8.4	8.5	8.7	8.7	8.4	8.2	7.8	7.3	7.0	6.7	6.3	4.9	8.2	8.5	7.2
FEDERAL FUNDS RATE (% per annum)	4.990	5.260	5.390	5.602	5.560	5.318	5.051	4.659	4.142	3.834	3.566	3.205	1.683	5.039	5.383	4.050
30-YEAR FIXED MORTGAGE RATE (%)	6.5	7.0	7.6	7.5	7.2	8.9	6.5	6.1	5.8	5.6	5.4	5.3	5.4	6.9	7.0	2.7
TN TAXABLE SALES (MIL2017\$)	42452 -6.01 -0.87	41608 -7.72 -2.29	42298 6.79 1.79	42192 -0.99 -2.14	42185 -0.07 -0.63	42165 -0.19 1.34	42235 0.66 -0.15	42394 1.52 0.48	42606 2.01 1.00	42815 1.98 1.54	43135 3.02 2.13	43378 2.27 2.32	169193 4.14 4.14	169473 0.17 0.17	168777 -0.41 -0.41	170950 1.29 1.29
TN TAXABLE SALES (MIL\$)	50961	50302	51426	51529	51830	52129	52522	52964	53466	54041	54677	55267	196322	204129		215147
% Chg Prev Qtr SAAR	-3.67	-5.08	9.24	0.81	2.36	2.33	3.05	3.41	3.84	4.37	4.79	4.35	10.83	3.98	1.90	3.43
TN AVG ANNUAL WAGE, NONFARM																
(2017\$)	54115	54312	54517	54753	54947	55099	55246	55506	55809	56050	56391	56671	53741	54177	55011	55939
% Ong Prev Qtr SAAR	1.42	1.04	1.91	1.84	1.54	1.45	1.34	1.38	1.57	1.73	2.07	2.10	-1.59	0.81	1.54	1.69
TN AVG ANNUAL WAGE, NONFARM (\$)	64961	02969	66281	69899	67510	68119	68702	69345	70034	70746	71480	72203	62357	65262	67800	70401
% Chg Prev Qtr SAAR	5.18 5.34	4.37 4.49	3.84 4.92	3.60 4.25	3.89	3.66	3.46 3.65	3.80	4.03 3.74	4.12 3.86	4.22 4.04	4.11	4.75 4.75	4.66 4.66	3.89	3.84 3.84 3.84

2.08 2.45 2.45 67346 December 2023 23896 37064 53511 59290 74687 2024 84425 1.96 57872 1.82 64609 4.32 4.32 71450 4.33 23762 52421 Annual 61935 3.19 0.80 5.44 38486 24036 2023 51416 56838 4.67 -0.591.57 2022 50620 -3.56 56385 -4.60 -4.60 58739 2.72 2.72 9.97 35431 2.14 2.12 39099 4.26 6629 3.67 38841 54234 30041 4.21 6037 1.57 2026:1 2025:4 2.32 4.06 2.43 4.08 3.97 1.88 38382 2.30 2025:3 3639 59450 1.92 37702 4.31 5086 4.50 3.64 2.93 59167 2.43 2.50 0.85 66992 2025:2 90.I 5961 2.05 4.23 74307 4.30 36008 2.32 1.95 58813 3.49 2.35 36308 4.23 4.29 73530 5.04 1.00 0.47 53075 4.64 0.80 2025:1 Forecast Data 2024:4 58311 2.23 2.40 1.73 2.01 35624 72631 2.31 4.41 Table 2: Selected Per Capita U.S. and Tennessee Economic Indicators, Seasonally Adjusted 2024:3 1.99 4.36 57990 52545 34962 71852 4.63 1.87 4.51 -0.91 52312 4.45 1043 1.62 2024:2 34065 1.97 1.51 34272 4.49 57722 4.41 1.81 Boyd Center for Business and Economic Research, University of Tennessee 1.68 2.56 5.69 0.07 83563 3.69 1.37 4.15 3.90 -0.57 2024:1 57464 4.42 0267 -2.87 52057 33577 32995 51729 1.88 2.23 56946 0.99 52893 4.22 5.24 39302 3.26 4.07 5982 6.00 7273 2023:4 3.57 0.62 1.03 4.01 4.55 5.39 -0.03 0.85 2.90 4.30 -3.02 -5.79 0.29 56858 62247 38748 -8.41 7.88 1.64 1.92 2023:3 32271 History 2023:2 1.86 1.25 5.11 -6.72 -1.63 -4.40 2.18 3.24 51280 0.91 56862 61558 3.42 5.60 3.77 6026 66296 1.54 1.67 68259 5.41 US PERSONAL INCOME (\$) SAAR...... % Chg Same Qtr Last Yr..... TN PERSONAL INCOME (2017\$) SAAR..... % Chg Prev Qtr SAAR...... TN TAXABLE SALES (2017\$)..... % Chg Same Qtr Last Yr..... % Chg Same Qtr Last Yr..... % Chg Prev Qtr SAAR...... TN TAXABLE SALES (\$)..... Chg Same Qtr Last Yr..... % Chg Same Qtr Last Yr..... % Chg Prev Qtr SAAR..... % Chg Prev Qtr SAAR..... US PERSONAL INCOME (2017\$) SAAR. TN PERSONAL INCOME (\$) SAAR. Chg Same Qtr Last Yr..... % Chg Same Qtr Last Yr..... % Chg Same Qtr Last Yr. US GDP (\$) SAAR..... % Chg Prev Qtr SAAR. US GDP (2012\$) SAAR..

Fennessee Econometric Model

	History	λ.					Forecast Data	Data							Annua	-	
. 1	2023:1 2023:2	2023:2	2023:3	2023:4	2024:1	2024:2	2024:3	2024:4	2025:1	2025:2	2025:3	2025:4	2026:1	2022	2023	2024	2025
TN PERSONAL INCOME	359737 3 5.31 1.26		363385 3 2.41 2.69	365759 3 2.64 3.00	368752 3 3.31 2.51	371234 3 2.72 2.77	373562 3 2.53 2.80	375844 3 2.47 2.76	378682 3 3.05 2.69	381567 3 3.08 2.78	384061 3 2.64 2.81	386939 3 3.03 2.95	389668 2.85 2.90	354211 (-2.80 -2.80	362528 3 2.35 2.35	372348 38 2.71 2.71	382812 2.81 2.81
WAGES AND SALARIES 178854 180438 % Chg Prev Qtr SAAR 5.32 3.59 % Chg Same Qtr Last Yr 2.18 3.94	178854 1 5.32 2.18	3.59 3.94	181488 1 2.35 2.85	2.13 3.34	183570 1 2.48 2.64	84596 1 2.25 2.30	185458 1 1.88 2.19	1.90 1.90 2.13	187733 1 3.04 2.27	189264 1 3.30 2.53	190608 1 2.87 2.78	3.65 3.22 3.22	193826 3.16 3.25	175415 2.93 2.93 2.93	180807 1 3.07 3.07	84990 18 2.31 2.31	89983 2.70 2.70
OTHER LABOR INCOME	35274	35409	35537	35680	35889	36063	36226	36365	36523	36673	36816	36997	37122	34850	35475	36136 ;	36752
	4.65	1.55	1.45	1.62	2.37	1.95	1.82	1.55	1.75	1.65	1.57	1.99	1.36	-1.61	1.79	1.86	1.71
	0.57	2.24	2.07	2.31	1.75	1.85	1.94	1.92	1.77	1.69	1.63	1.74	1.64	-1.61	1.79	1.86	1.71
PROPRIETORS INCOME	52652	52637	52689	52966	53446	53876	54300	54679	55088	55542	55897	56269	56629	51458	52736	54075 (3.00
	6.78	-0.12	0.40	2.12	3.68	3.26	3.18	2.82	3.03	3.34	2.58	2.69	2.58	1.34	2.48	2.54	3.00
	2.11	3.26	2.32	2.26	1.51	2.35	3.06	3.23	3.07	3.09	2.94	2.91	2.80	1.34	2.48	2.54	3.00
RENT, INTEREST, DIVIDENDS % Chg Prev Qtr SAAR	53881 6.38 6.50	54119 1.78 4.94	54692 4.31 4.87	55329 4.74 4.29	56076 5.51 4.07	56705 4.56 4.78	57310 4.34 4.79	57813 3.56 4.49	58216 2.81 3.82	58625 2.84 3.39	58918 2.01 2.81	59272 2.43 2.52	59557 1.94 2.30	51843 2.35 2.35	54505 5.14 5.14	56976 4 4.53 4.53	58758 3.13 3.13
TRANSFER PAYMENTS	70337	70062	70412	70792	71293	71565	71804	72161	72668	73050	73420	73753	74230	71161	70401	71706	73223
	4.04	-1.56	2.01	2.18	2.86	1.54	1.34	2.01	2.84	2.12	2.04	1.83	2.61	-17.54	-1.07	1.85	2.12
	-4.02	-2.74	1.05	1.65	1.36	2.15	1.98	1.93	1.93	2.08	2.25	2.21	2.15	-17.54	-1.07	1.85	2.12
LESS: PERS CONT FOR SOC INS % Chg Prev Qtr SAAR	29176	29336	29345	29376	29448	29505	29480	29458	29500	29546	29562	29646	29671	28484	29308	29473 ;	29563
	6.08	2.20	0.13	0.43	0.98	0.77	-0.34	-0.30	0.58	0.61	0.22	1.14	0.34	5.26	2.89	0.56	0.31
	3.28	3.96	2.19	2.18	0.93	0.58	0.46	0.28	0.18	0.14	0.28	0.64	0.58	5.26	2.89	0.56	0.31
RESIDENCE ADJUSTMENT	-2084	-2098	-2088	-2080	-2074	-2066	-2057	-2051	-2047	-2042	-2035	-2031	-2025	-2030	-2087	-2062	-2039
	4.64	2.79	-2.02	-1.40	-1.21	-1.48	-1.81	-1.21	-0.74	-0.83	-1.47	-0.71	-1.16	-3.76	2.83	-1.23	-1.11
	1.70	5.41	3.33	0.97	-0.48	-1.53	-1.47	-1.43	-1.31	-1.15	-1.06	-0.94	-1.04	-3.76	2.83	-1.23	-1.11
PER CAPITA PERSONAL INCOME (\$) % Chg Prev Qtr SAAR	51164	51280	51489	51729	52057	52312	52545	52771	53075	53385	53639	53947	54234	50620	51416	52421 (53511
	4.52	0.91	1.64	1.88	2.56	1.97	1.79	1.73	2.32	2.36	1.92	2.32	2.14	-3.56	1.57	1.96	2.08
	0.48	1.67	1.92	2.23	1.75	2.01	2.05	2.01	1.95	2.05	2.08	2.23	2.18	-3.56	1.57	1.96	2.08

Boyd Center for Business and Economic Research, University of Tennessee

December 2023
able 4: Tennessee Personal Income Components, Seasonally Adjusted Annual Rates (millions of current dollars)
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	History	orv					Forecast Data	t Data							Annual	a la	
	2023:1	2023:1 2023:2	2023:3	2023:4	2024:1	2024:2	2024:3	2024:4	2025:1	2025:2	2025:3	2025:4	2026:1	2022	2023	2024	2025
TN PERSONAL INCOME	429199 433637	433637	439309	444691	450355	456112 4	461840	467387 4	473097 4	478825 4	484754 4	490474 4	496471	411035 4	436709 4	458924 4	481787
	9.70 4.20	4.20	5.34	4.99	5.19	5.21	5.12	4.89	4.98	4.93	5.05	4.80	4.98	3.54	6.25	5.09	4.98
	6.36 6.41	6.41	6.19	6.04	4.93	5.18	5.13	5.10	5.05	4.98	4.96	4.94	4.94	3.54	6.25	5.09	4.98
WAGES AND SALARIES	213389 216605 9.70 6.17 7.32 7.96	216605 6.17 7.96	219407 5.27 6.36	221822 4.48 6.39	224193 4.34 5.06	226802 ; 4.74 4.71	229285 4.45 4.50	231718 <i>2</i> 4.31 4.46	234540 <i>2</i> 4.96 4.62	237506 2 5.16 4.72	240581 ; 5.28 4.93	243786 2 5.44 5.21	246951 5.30 5.29	203568 9.57 9.57	217806 6.99 6.99	228000 2 4.68 4.68	239103 4.87 4.87
OTHER LABOR INCOME	42085	42507	42962	43380	43832	44308	44787	45222	45630	46020	46468	46897	47297	40440	42733	44537	46254
	9.01	4.08	4.35	3.95	4.23	4.42	4.39	3.95	3.65	3.47	3.95	3.74	3.46	4.75	5.67	4.22	3.85
	5.63	6.19	5.55	5.33	4.15	4.24	4.25	4.25	4.10	3.86	3.75	3.70	3.65	4.75	5.67	4.22	3.85
PROPRIETORS INCOME	62819	63188	63698	64396	65274	66195	67132	67996	68823	69700	70552	71325	72150	59715	63525	66649	70100
	11.22	2.37	3.27	4.46	5.56	5.76	5.79	5.25	4.95	5.19	4.98	4.46	4.71	7.86	6.38	4.92	5.18
	7.25	7.26	5.81	5.27	3.91	4.76	5.39	5.59	5.44	5.30	5.09	4.90	4.83	7.86	6.38	4.92	5.18
RENT, INTEREST, DIVIDENDS % Chg Prev Qtr SAAR % Chg Same Qtr Last Yr	64284	64966	66119	67269	68485	69670	70853	71895	72730	73568	74365	75132	75881	60174	65660	70226	73949
	10.82	4.31	7.29	7.14	7.43	7.10	6.97	6.01	4.73	4.69	4.40	4.19	4.05	8.98	9.12	6.95	5.30
	11.86	8.99	8.45	7.36	6.53	7.24	7.16	6.88	6.20	5.60	4.96	4.50	4.33	8.98	9.12	6.95	5.30
TRANSFER PAYMENTS	83919	84105	85123	86069	87069	87927	88772	89737	90787	91670	92669	93487	94576	82551	84804	88376	92153
	8.37	0.89	4.93	4.52	4.73	4.00	3.90	4.42	4.76	3.95	4.43	3.58	4.74	-12.00	2.73	4.21	4.27
	0.81	1.02	4.50	4.64	3.75	4.54	4.29	4.26	4.27	4.26	4.39	4.18	4.17	-12.00	2.73	4.21	4.27
LESS: PERS CONT FOR SOC II % Chg Prev Qtr SAAR % Chg Same Qtr Last Yr	10.50	35216	35476	35716	35965	36251	36446	36632	36856	37077	37313	37578	37804	33057	35304	36324	37206
	10.50	4.74	2.99	2.73	2.82	3.22	2.17	2.06	2.46	2.42	2.57	2.88	2.42	12.06	6.80	2.89	2.43
	8.48	7.98	5.67	5.20	3.32	2.94	2.73	2.57	2.48	2.28	2.38	2.58	2.57	12.06	6.80	2.89	2.43
RESIDENCE ADJUSTMENT	-2486	-2519	-2524	-2529	-2533	-2539	-2543	-2550	-2557	-2563	-2568	-2575	-2581	-2356	-2514	-2541	-2566
% Chg Prev Qtr SAAR	9.00	5.35	0.78	0.86	0.59	0.91	0.67	1.13	1.11	0.95	0.84	1.00	0.89	2.43	6.74	1.06	0.98
% Chg Same Qtr Last Yr	6.82	9.48	6.86	3.94	1.88	0.78	0.76	0.82	0.95	0.96	1.01	0.97	0.92	2.43	6.74	1.06	0.98
PER CAPITA PERSONAL INCOME % Chg Prev Qtr SAAR % Chg Same Qtr Last Yr	61043	61558	62247	62893	63577	64272	64962	65624	66308	66992	67702	68382	69099	58739	61935	64609	67346
	8.87	3.42	4.55	4.22	4.42	4.45	4.36	4.14	4.23	4.19	4.31	4.08	4.26	2.72	5.44	4.32	4.24
	5.54	5.60	5.39	5.24	4.15	4.41	4.36	4.34	4.29	4.23	4.22	4.20	4.21	2.72	5.44	4.32	4.24
Boyd Center for Business and Economic Research,	conomi	c Reseal		ersity of	University of Tennessee	ees								Tenness	ee Econ	Tennessee Econometric Model	Model

Table 5: Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs)

	Histo) L					Forecast Data	Data						Ann	<u> </u>	
	2023:2	2023:3	2023:4	2024:1	2024:2	2024:3	2024:4	2025:1	2025:2	2025:3	2025:4	2026:1	2022	2023	2024	2025
TOTAL NONFARM	3316.8 0.97 2.51	3324.2 0.90 1.81	3332.3 0.98 1.51	3340.8 : 1.02 0.97	3350.2 3 1.13 1.01	3358.9 (1.04) 1.04	3367.6 1.04 1.06	3377.5 1.18 1.10	3387.0 1.13 1.10	3396.8 : 1.16 1.13	3407.1 1.23 1.17	3417.0 1.16 1.17	3246.4 4.62 4.62	3320.6 2.29 2.29	3354.4 3 1.02 1.02	1.12 1.12 1.12
NATURAL RESOURCES, MINING AND CONSTRUCTION	156.6 -2.10 4.59	157.8 3.28 3.18	157.9 0.23 1.38	158.6 1.83 0.79	159.3 1.75 1.77	160.1 1.89 1.42	160.7 1.50 1.74	161.4 1.69 1.71	161.9 1.46 1.63	162.5 1.36 1.50		163.4 0.98 1.27	151.5 7.66 7.66	157.4 3.91 3.91	159.7 1.43 1.43	162.2 1.57 1.57
MANUFACTURING	371.4	370.5	371.6	372.0	372.1	372.3	373.0	374.4	375.7	377.0	378.3	379.3	364.9	370.4	372.4	376.3
	3.55	-0.97	1.25	0.40	0.07	0.27	0.74	1.44	1.40	1.40	1.38	1.09	4.42	1.51	0.52	1.06
	1.45	0.54	1.35	1.04	0.18	0.50	0.37	0.63	0.96	1.24	1.40	1.32	4.42	1.51	0.52	1.06
DURABLE GOODS	238.1	237.4	238.5	238.8	239.0	239.3	240.0	241.3	242.6	243.9	245.2	246.1	232.5	237.2	239.2	243.3
	5.48	-1.21	1.89	0.50	0.39	0.44	1.18	2.22	2.20	2.21	2.05	1.58	4.97	2.03	0.86	1.67
	1.97	0.99	2.25	1.63	0.39	0.81	0.63	1.06	1.51	1.95	2.17	2.01	4.97	2.03	0.86	1.67
NONDURABLE GOODS	133.3	133.1	133.2	133.3	133.1	133.1	133.1	133.1	133.1	133.0	133.1	133.2	132.4	133.2	133.1	133.1
	0.21	-0.54	0.12	0.22	-0.50	-0.04	-0.04	0.03	-0.05	-0.07	0.16	0.21	3.46	0.59	-0.08	-0.04
	0.53	-0.26	-0.22	0.00	-0.18	-0.05	-0.09	-0.14	-0.02	-0.03	0.02	0.06	3.46	0.59	-0.08	-0.04
TRADE, TRANSPORTATION, UTILITIES % Chg Prev Qtr SAAR	681.2	682.3	682.5	684.0	685.5	686.8	687.9	688.6	689.2	689.8	690.6	691.4	678.0	683.1	686.1	689.5
	-2.98	0.61	0.11	0.92	0.89	0.73	0.64	0.39	0.36	0.36	0.48	0.46	4.22	0.74	0.43	0.51
	0.74	0.52	-0.16	-0.35	0.63	0.66	0.80	0.66	0.53	0.44	0.40	0.41	4.22	0.74	0.43	0.51
WHOLESALE TRADE	133.9	134.0	134.1	134.4	134.6	134.9	135.2	135.5	135.8	136.0	136.3	136.6	129.5	134.2	134.8	135.9
	-2.74	0.30	0.35	0.84	0.78	0.90	0.84	0.82	0.81	0.78	0.80	0.84	6.73	3.62	0.45	0.82
	3.85	2.60	1.42	-0.32	0.57	0.72	0.84	0.84	0.84	0.81	0.80	0.81	6.73	3.62	0.45	0.82
RETAIL TRADE	342.5	345.5	346.4	347.1	347.7	348.3	348.5	348.1	347.7	347.2	346.9	346.6	341.2	344.0	347.9	347.5
	1.22	3.63	0.97	0.81	0.70	0.69	0.24	-0.41	-0.50	-0.52	-0.38	-0.38	2.97	0.81	1.14	-0.11
	0.58	1.17	1.26	1.65	1.52	0.79	0.61	0.30	0.00	-0.30	-0.45	-0.45	2.97	0.81	1.14	-0.11
TRANSPORTATION & UTILITIES	204.9	202.8	202.0	202.6	203.2	203.6	204.2	204.9	205.7	206.5	207.4	208.3	207.4	205.0	203.4	206.2
	-9.65	-4.10	-1.49	1.17	1.28	0.68	1.21	1.47	1.53	1.59	1.73	1.61	4.78	-1.16	-0.76	1.35
	-0.92	-1.87	-3.47	-3.60	-0.81	0.40	1.08	1.16	1.22	1.45	1.58	1.61	4.78	-1.16	-0.76	1.35
INFORMATION	56.0	56.2	56.3	56.1	56.2	56.0	56.0	56.0	56.1	56.1	56.1	56.1	54.4	56.2	56.1	56.1
	-2.11	1.68	0.51	-1.12	0.35	-1.57	0.09	0.22	0.25	0.12	0.09	0.40	15.30	3.36	-0.24	-0.04
	3.77	1.75	0.72	-0.27	0.35	-0.46	-0.57	-0.23	-0.26	0.17	0.17	0.21	15.30	3.36	-0.24	-0.04
FINANCIAL ACTIVITIES	174.8 1.54 -0.06	175.4 1.46 -0.90	175.4 0.09 -0.32	175.7 0.59 0.92 (CONTII	176.1 0.82 0.74 NUED ON	176.3 0.66 0.54 N NEXT I	176.6 0.54 0.65 PAGE)	177.2 1.32 0.83	177.7 1.18 0.92	178.3 1.29 1.08	178.8 1.32 1.28	179.3 1.12 1.23	3.32 3.32 3.32	174.9 -0.19 -0.19	176.2 0.71 0.71	178.0 1.03 1.03

Table 5: Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs)

	2024 2025	177.5 487.0 1.18 1.97 1.18 1.97	479.2 487.3 2.31 1.69 2.31 1.69	364.4 369.2 1.20 1.33 1.20 1.33	132.4 134.0 2.00 1.20 2.00 1.20	450.4 452.4 0.50 0.45 0.50 0.45	56.8 57.1 2.23 0.59 2.23 0.59	393.6 395.3
Annual	2023	472.0 4 1.53 1.53	468.4 4 3.86 3.86	360.1 4.76 4.76	129.8 3.23 3.23	448.2 4 2.57 2.57	55.5 6.10 6.10	392.6
	2022	464.9 6.20 6.20	451.0 2.53 2.53	343.7 9.32 9.32	125.8 3.00 3.00	436.9 1.28 1.28	52.4 1.50 1.50	384.6
	2026:1	492.9 1.82 2.02	492.2 1.57 1.59	373.6 2.17 1.71	135.1 1.13 1.32	453.6 0.50 0.40	57.4 0.53 0.64	396.3
	2025:4	490.7 2.07 2.11	490.3 1.63 1.60	371.6 2.09 1.49	134.7 1.35 1.23	453.1 0.25 0.41	57.3 0.84 0.64	395.8
	2025:3	488.2 1.95 1.98	488.3 1.58 1.64	369.7 1.45 1.28	134.2 1.51 1.26	452.8 0.55 0.46	57.2 0.59 0.56	395.6
	2025:2	485.8 2.26 1.92	486.4 1.60 1.71	368.4 1.14 1.26	133.7 1.29 1.14	452.2 0.29 0.45	57.1 0.61 0.55	395.1
Forecast Data	2025:1	483.1 2.18 1.86	484.5 1.61 1.81	367.3 1.30 1.28	133.3 0.78 1.16	451.8 0.55 0.48	57.0 0.52 0.60	394.8
Foreca	2024:4	480.5 1.53	482.5 1.79 1.89	366.1 1.25 1.28	133.1 1.46 1.28	451.2 0.43 0.32	56.9 0.53 0.67	394.3
	2024:3	1.72	480.4 1.84 2.16	365.0 1.34 1.43	132.6	450.7 0.52 0.25	56.8 0.54 0.71	393.9
	2024:2	476.7 2.01 1.13	2.02 2.02 2.11	363.8 1.22 1.34	132.2 1.37 2.87	450.1 0.41 0.10	56.8 0.83 2.70	393.4
	2024:1	474.3 1.68 0.35	475.8 1.91 3.09	362.7 1.30 0.76	131.8	. 449.7 -0.08 1.35	56.6 0.79 4.96	393.0
	2023:4	472.3 0.59 1.02	473.6 2.87 3.51	361.5 1.85 2.36	131.4 2.19 3.26	449.8 0.14 2.40	56.5 0.70 6.60	393.2
tory	2023:3	471.6 0.25 0.75	470.2 1.63 3.61	359.9 1.01 3.96	130.7 6.81 3.54	449.6 -0.06 2.58	56.4 8.72 7.77	393.2
History	2023:2	471.3 -1.10	468.3 6.02 4.53	359.0 -1.11 5.46	128.5 -0.41 2.58	449.7 5.52 2.69	55.3 9.99 6.08	394.4
		PROFESSIONAL & BUSINESS SERVICES % Chg Prev Qtr SAAR	EDUCATION & HEALTH SERVICES	LEISURE & HOSPITALITY	OTHER SERVICES	GOVERNMENT	FEDERAL, CIVILIAN	STATE & LOCAL

Boyd Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 0. Telliessee Durable Goods Maintacid	ulacturi	dilla gii	Oyment	, Seaso	iali y Au	ı) naısn	Torrespon	no sr	(6)					בֿי בּ	iacilina acellina	2023
1 1		2023:3	2023:4	2024:1	2024:2	2024:3	2024:4	2025:1	2025:2	2025:3	2025:4	2026:1	2022	2023	2024	2025
TOTAL DURABLE GOODS	238.1	237.4	238.5	238.8	239.0	239.3	240.0	241.3	242.6	243.9	245.2	246.1	232.5	237.2	239.2	243.3
	5.48	-1.21	1.89	0.50	0.39	0.44	1.18	2.22	2.20	2.21	2.05	1.58	4.97	2.03	0.86	1.67
	1.97	0.99	2.25	1.63	0.39	0.81	0.63	1.06	1.51	1.95	2.17	2.01	4.97	2.03	0.86	1.67
WOOD PRODUCTS	14.1	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.1	14.0	14.0
	1.22	-2.56	0.57	-1.19	-0.85	-0.46	0.08	0.19	0.30	0.36	-0.37	0.17	6.04	0.16	-0.65	0.03
	-0.26	-0.94	-0.02	-0.50	-1.01	-0.48	-0.61	-0.26	0.03	0.23	0.12	0.11	6.04	0.16	-0.65	0.03
NONMETALLIC MINERALS	15.3	15.2	15.3	15.3	15.3	15.3	15.3	15.4	15.4	15.4	15.4	15.4	14.9	15.2	15.3	15.4
	3.41	-0.99	0.91	0.29	0.62	0.36	0.62	0.44	0.48	0.42	0.60	0.41	7.69	2.03	0.53	0.49
	2.51	0.41	1.02	0.89	0.20	0.54	0.47	0.51	0.48	0.49	0.48	0.48	7.69	2.03	0.53	0.49
PRIMARY METALS	11.1	11.0	11.0	11.0	11.0	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.0	11.1	11.1
	4.30	-1.64	0.25	0.62	0.51	0.49	0.29	0.60	0.69	0.40	0.66	0.47	0.83	-0.92	0.43	0.52
	-1.57	-1.50	0.59	0.86	-0.07	0.47	0.48	0.47	0.52	0.49	0.59	0.55	0.83	-0.92	0.43	0.52
FABRICATED METALS	42.0	41.7	41.9	41.9	41.9	42.0	42.0	42.0	42.0	42.1	42.1	42.1	41.5	41.8	41.9	42.1
	2.69	-3.06	1.93	0.37	0.15	0.45	0.19	0.21	0.28	0.26	0.44	0.22	5.22	0.70	0.32	0.27
	1.55	-0.92	-0.07	0.46	-0.17	0.72	0.29	0.25	0.28	0.23	0.30	0.30	5.22	0.70	0.32	0.27
MACHINERY	24.4	24.3	24.3	24.3	24.3	24.3	24.4	24.4	24.4	24.4	24.4	24.4	24.6	24.4	24.3	24.4
	-3.05	-2.00	0.17	0.25	0.05	0.12	0.19	0.08	0.17	0.13	0.12	0.13	2.50	-0.84	-0.32	0.13
	-1.21	-1.99	-0.99	-1.17	-0.39	0.15	0.15	0.11	0.14	0.14	0.13	0.14	2.50	-0.84	-0.32	0.13
COMPUTERS & ELECTRONICS	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.1	7.1	7.1	7.1	7.1	6.8	7.0	7.0	7.1
	1.80	0.52	1.94	0.82	0.78	0.69	0.77	0.75	0.95	0.91	0.49	0.90	5.85	2.55	1.03	0.79
	3.92	-0.51	0.38	1.27	1.01	1.06	0.76	0.75	0.79	0.84	0.77	0.81	5.85	2.55	1.03	0.79
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS	18.55	18.46	18.45	18.47	18.49	18.48	18.48	18.47	18.48	18.48	18.49	18.50	19.12	18.55	18.48	18.48
	-3.97	-1.93	-0.21	0.35	0.44	-0.23	0.10	-0.28	0.11	0.14	0.09	0.22	4.27	-2.95	-0.39	-0.01
	-4.65	-4.01	-2.55	-1.45	-0.34	0.09	0.16	0.01	-0.08	0.02	0.01	0.14	4.27	-2.95	-0.39	-0.01
TRANSPORTATION EQUIP	78.90	78.93	79.70	79.92	80.09	80.28	80.88	82.10	83.29	84.49	85.62	86.48	73.51	78.43	80.29	83.88
	15.08	0.19	3.94	1.09	0.87	0.93	3.04	6.17	5.94	5.87	5.49	4.04	6.57	6.69	2.38	4.47
	6.85	5.93	7.31	4.91	1.51	1.70	1.48	2.73	4.00	5.25	5.87	5.33	6.57	6.69	2.38	4.47
FURNITURE	9.41	9.35	9.37	9.38	9.37	9.37	9.36	9.38	9.39	9.40	9.40	9.41	9.55	9.37	9.37	9.39
	3.49	-2.54	0.92	0.17	-0.31	0.13	-0.35	0.65	0.40	0.67	-0.28	0.45	-0.95	-1.94	0.04	0.23
	-3.84	-1.76	1.80	0.49	-0.45	0.23	-0.09	0.03	0.21	0.34	0.36	0.31	-0.95	-1.94	0.04	0.23
MISCELLANEOUS DURABLES	17.39	17.39	17.42	17.43	17.44	17.45	17.47	17.49	17.50	17.52	17.54	17.54	17.28	17.36	17.45	17.51
	3.15	0.01	0.73	0.17	0.19	0.21	0.54	0.48	0.16	0.48	0.40	0.15	4.80	0.46	0.47	0.37
	0.35	0.00	0.91	1.01	0.28	0.32	0.28	0.35	0.35	0.41	0.38	0.30	4.80	0.46	0.47	0.37

Table 7: Tennessee Nondurable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs)

	History	Ž				Fore	Forecast Data	Ø						Annua	al	
	2023:2	2023:3	2023:4	2024:1	2024:2	2024:3	2024:4	2025:1	2025:2	2025:3	2025:4	2026:1	2022	2023	2024	2025
TOTAL NONDURABLE GOODS	133.3	133.1	133.2	133.3	133.1	133.1	133.1	133.1	133.1	133.0	133.1	133.2	132.4	133.2	133.1	133.1
	0.21	-0.54	0.12	0.22	-0.50	-0.04	-0.04	0.03	-0.05	-0.07	0.16	0.21	3.46	0.59	-0.08	-0.04
	0.53	-0.26	-0.22	0.00	-0.18	-0.05	-0.09	-0.14	-0.02	-0.03	0.02	0.06	3.46	0.59	-0.08	-0.04
FOOD	40.4	40.2	40.1	40.1	39.9	39.9	39.9	39.9	39.9	39.9	39.8	39.8	39.4	40.2	40.0	39.9
	1.69	-2.47	-0.83	0.14	-1.52	0.09	-0.37	-0.12	-0.39	-0.08	-0.39	0.16	4.85	2.01	-0.63	-0.29
	3.08	0.65	-0.74	-0.38	-1.17	-0.53	-0.42	-0.48	-0.20	-0.24	-0.25	-0.18	4.85	2.01	-0.63	-0.29
BEVERAGE & TOBACCO	9.4	9.4	9.3	9.3	9.3	9.2	9.2	9.1	9.1	9.1	9.1	9.1	9.1	9.4	9.2	9.1
	-3.29	-2.59	-0.94	-1.70	-1.63	-1.45	-1.96	-1.44	-1.12	-0.70	-0.90	-0.47	8.97	3.04	-1.74	-1.37
	2.11	1.46	0.72	-2.13	-1.72	-1.43	-1.69	-1.62	-1.49	-1.31	-1.04	-0.80	8.97	3.04	-1.74	-1.37
PAPER	13.4 -0.02 -0.79	13.5 1.84 -0.62	13.5 0.91 -0.47	13.5 0.47 0.80	13.4 -1.69 0.37	13.4 -1.43 -0.44	13.4 -1.16 -0.96	13.3 -1.00 -1.32	13.3 -0.72 -1.08	13.2 -1.40 -1.07	13.3 0.09 -0.76	13.2 -0.59 -0.66	13.5 8.03 8.03	13.4 -0.35 -0.35	13.4 -0.06 -0.06	13.3 -1.06 -1.06
PRINTING & RELATED SUPPORT	8.4	8.4	8.4	8.4	8.5	8.5	8.5	8.4	8.4	8.4	8.4	8.4	8.2	8.4	8.5	8.4
	6.26	0.64	0.07	0.15	0.25	0.12	-0.16	-0.22	-0.16	-0.17	0.23	0.22	2.39	2.39	0.56	-0.09
	2.42	1.56	3.10	1.75	0.28	0.15	0.09	0.00	-0.11	-0.18	-0.08	0.03	2.39	2.39	0.56	-0.09
CHEMICALS	27.0	26.8	26.9	26.9	26.9	26.9	27.0	27.0	27.1	27.1	27.1	27.2	26.7	26.9	26.9	27.1
	1.14	-2.54	0.86	0.30	0.54	0.27	0.83	0.84	0.46	0.29	0.71	0.59	2.14	0.51	0.17	0.60
	1.15	-0.51	-0.45	-0.07	-0.22	0.49	0.48	0.62	0.60	0.60	0.57	0.51	2.14	0.51	0.17	0.60
PLASTICS & RUBBER	25.0	25.2	25.2	25.3	25.3	25.4	25.4	25.5	25.5	25.5	25.6	25.6	25.4	25.1	25.4	25.5
	-0.04	2.67	0.93	0.88	0.61	0.73	0.88	0.55	0.62	0.57	1.00	0.56	4.83	-1.07	0.98	0.68
	-2.60	-1.48	0.11	1.11	1.27	0.79	0.77	0.69	0.69	0.65	0.68	0.69	4.83	-1.07	0.98	0.68
MISCELLANEOUS NONDURABLE GOODS % Chg Prev Qtr SAAR	9.7	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	10.1	9.8	9.8	9.8
	-8.57	2.71	-0.09	0.16	0.03	-0.25	0.07	0.03	0.24	-0.22	-0.22	0.13	-9.58	-2.95	-0.23	-0.01
	-4.26	-2.74	-1.52	-1.54	0.69	-0.04	0.00	-0.03	0.02	0.03	-0.04	-0.02	-9.58	-2.95	-0.23	-0.01

Tennessee Econometric Model

Table 8: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (2017 dollars)

					,												
	History	ory				Fore	Forecast Data	g							Annual	lar	
,	2023:1	2023:2	2023:3	2023:4	2024:1	2024:2	2024:3	2024:4	2025:1	2025:2	2025:3	2025:4	2026:1	2022	2023	2024	2025
TOTAL NONFARM	. 53764 54115	54115		54517	54753	54947	55099	55246	55506	55809	56050	56391	56671	53741	54177	55011	55939
	2.04	2.63	1.47	1.51	1.74	1.43	1.11	1.07	1.90	2.20	1.74	2.45	2.00	-1.59	0.81	1.54	1.69
% Chg Same Qtr Last Yr	1.10	1.42		1.91	1.84	1.54	1.45	1.34	1.38	1.57	1.73	2.07	2.10	-1.59	0.81	1.54	1.69
NATURAL RESOURCES, MINING	0	0	i d	1	000		0	1	9				0		9	0	0
AND CONSTRUCTION	. 63659 13.53	6 31	65284	12/50	3 86	3 17	242	9///9	230	08038	0.37	09541	09973 2 51	1 98	04820	180/9	08846
% Chg Same Qtr Last Yr	_	3.54	4.56	6.57	4.22	3.44	3.15	3.13	2.74	2.66	2.52	2.60	2.66	1.98	4.00	3.48	2.63
MANUFACTURING	. 60135	60426	00609	61241	61627	62074	62457	62820	63164	63564	63898	64318	64705	60513	60675	62244	63736
% Chg Prev Qtr SAAR		1.95	3.17	2.25	2.55	2.93	2.50	2.34	2.21	2.55	2.12	2.66	2.42	-0.91	0.27	2.59	2.40
% Chg Same Qtr Last Yr	2.57	1.43	0.44	1.87	2.48	2.73	2.56	2.58	2.49	2.40	2.31	2.39	2.44	-0.91	0.27	2.59	2.40
DURABLE GOODS	9	60773	61505	61835	62262	62755	63159	63229	63943	64362	64725	65152	65550	59703	61094	62934	64545
% Chg Prev Qtr SAAR	6.17	3.42	4.90 2.58	2.17	3.32	3.21	2.60	2.55	2.44 2.70	2.65	2.27	2.66	2.51	-0.25 -0.25	2.33	3.01	2.56
SOOO HIBABII ONON	4	50806	50822	60176	60490	60850	61105	61487	61753	62108	62381	62783	63143	61035	50028	61005	62256
% Chg Prev Qtr SAAR		-0.66	0.11	2.38	2.10	2.40	2.29	1.92	1.74	2.32	1.77	2.60	2.31	-1.96	-3.24	1.80	2.05
% Chg Same Qtr Last Yr		-2.12	-3.24	-2.03	0.97	1.74	2.29	2.18	2.09	2.07	1.94	2.11	2.25	-1.96	-3.24	1.80	2.05
TRADE, TRANSPORTATION, UTILITIES	υ.	50631	50671	50827	51020	51217	51401	51560	51745	51963	52161	52467	52695	50020	50625	51300	52084
% Cha Samo Otr I act Vr	8.48	2.08	0.32	1.24	1.53	1.55	4. 4 4. 4	1.25	<u>+</u>	1.70	1.53	2.37	1.75	-2.53	1.27	1.33	1.53
% Clig Salile Qu Last 11		CO.	00.1	2.30	67.1	0	- 4.	<u>.</u>	74.	04.	04.	07.1	40.	55.25	7.	55.1	SC:-
WHOLESALE TRADE	76201	77100	77210	77631	77933	78343	78686	79018	79412	79937	80379	81025 3.25	81589	77207	77036	78495	80188 2.16
% Chg Same Qtr Last Yr	_	0.91	0.62	1.36	2.27	1.61	1.91	1.79	1.90	2.03	2.15	2.54	2.74	-0.67	-0.22 -0.22	1.89	2.16
RETAIL TRADE	. 35349	35193	35048	34970	34935	34838	34744	34619	34563	34496	34462	34483	34423	34282	35140	34784	34501
% Chg Prev Qtr SAAR	18.88	-1.75	-1.64	-0.88	-0.40	1.1	-1.07	-1.43	-0.64	-0.78	-0.39	0.25	-0.70	4.90	2.50	-1.01	-0.81
% Chg Same Qtr Last Yr	. 1.58	2.52	2.63	3.30	-1.17	-1.01	-0.87	-1.00	-1.06	-0.98	-0.81	-0.39	-0.41	4.90	2.50	-1.01	-0.81
TRANSPORTATION & UTILITIES	2	59141	59761	60198	60588	61023	61457	61860	62204	62583	62889	63331	63701	58941	59328	61232	62752
% Chg Prev Qtr SAAR	5.08	6.55	4.26 1.48	2.96 4.70	2.61 4.08	2.90 3.18	2.87	2.65	2.24	2.46	1.97 2.33	2.84	2.36	-2.89 -2.89	0.66	3.21 3.21	2.48 2.48
INFORMATION	. 74602	73524		72553	72528	72403	72273	72184	72193	72224	72167	72228	72232	76189	73373	72347	72203
% Chg Prev Qtr SAAR	-11.20	-5.66	-3.80	-1.43	-0.14	-0.69	-0.71	-0.50	0.05	0.17	-0.32	0.33	0.03	-7.82	-3.70	-1.40	-0.20
% Chg Same Qtr Last Yr	4.87	-1.44		-5.59	-2.78	-1.52	-0.74	-0.51	-0.46	-0.25	-0.15	90.0	0.05	-7.82	-3.70	-1.40	-0.20
FINANCIAL ACTIVITIES	. 81055	81589	ω	81703	81931	82123	82338	82535	82788	83149	83451	83820	84111	80876	81464	82232	83302
% Chg Prev Qtr SAAR	-2.27	2.66	-0.40	0.97	1.12	0.94	1.05	0.96	1.23	1.75	1.46	1.78	1.40	-5.45	0.73	0.94	1.30
% Chg Same Qtr Last Yr	1.86	1.60	3.05	0.22	1.08	0.65	1.02	1.02	1.05	1.25	1.35	1.56	1.60	-5.45	0.73	0.94	1.30
				9	UNITNO	ED ON N	CONTINUED ON NEXT PAGE)	3E)									

Table 8: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (2017 dollars)

	History	ory				For	Forecast Data	g							Annua	lal	
- 1	2023:1 2023:2	2023:2	2023:3	2023:4	2024:1	2024:2	2024:3	2024:4	2025:1	2025:2	2025:3	2025:4	2026:1	2022	2023	2024	2025
PROFESSIONAL & BUSINESS SERVICES 64079	64079	65156	65548	65964	66574	62109	67476	67883	68368	00689	69346	70000	70642	63930	65187	67260	69154
% Chg Prev Qtr SAAR	2.21	6.90	2.43	2.56	3.75	3.25	2.20	2.44	2.89	3.15	2.62	3.82	3.72	-1.50	1.97	3.18	2.81
% Chg Same Qtr Last Yr	-1.15	2.79	2.77	3.51	3.89	3.00	2.94	2.91	2.69	2.67	2.77	3.12	3.33	-1.50	1.97	3.18	2.81
EDUCATION & HEALTH SERVICES	53215	53429	53644	53796	53787	53714	53648	53598	53798	54028	54144	54417	54588	53584	53521	53687	54097
% Chg Prev Qtr SAAR	3.74 1.62	1.62	1.61	1.14	-0.07	-0.54	-0.49	-0.37	1.50	1.72	0.86	2.03	1.26	-0.84	-0.12	0.31	92.0
% Chg Same Qtr Last Yr	-1.64	-0.26	-0.54	2.02	1.07	0.53	0.01	-0.37	0.02	0.59	0.92	1.53	1.47	-0.84	-0.12	0.31	92.0
LEISURE & HOSPITALITY	29277	29311	29305	29285	29520	29673	29755	29834	29974	30139	30309	30521	30662	29844	29294	29696	30236
% Chg Prev Qtr SAAR	-17.52	0.46	-0.09	-0.27	3.25	2.08	1.12	1.06	1.89	2.23	2.27	2.82	1.87	4.94	-1.84	1.37	1.82
% Chg Same Qtr Last Yr	2.72	-1.13	-3.94	-4.67	0.83	1.23	1.54	1.87	1.54	1.57	1.86	2.30	2.30	4.94	-1.84	1.37	1.82
OTHER SERVICES	47388	47664	47789	47935	47999	47972	47931	47865	47896	47957	47999	48036	48073	46664	47694	47942	47972
% Chg Prev Qtr SAAR	3.70 2.35	2.35	1.05	1.23	0.53	-0.22	-0.34	-0.54	0.26	0.51	0.35	0.31	0.30	-0.29	2.21	0.52	90.0
% Chg Same Qtr Last Yr	1.38	3.13	2.25	2.08	1.29	0.65	0.30	-0.15	-0.21	-0.03	0.14	0.36	0.37	-0.29	2.21	0.52	90.0
GOVERNMENT	48163	48203	48457	48596	48552	48433	48325	48200	48409	48656	48835	49044	49209	47352	48355	48378	48736
% Chg Prev Qtr SAAR	6.53	0.33	2.12	1.15	-0.36	-0.98	-0.89	-1.02	1.75	2.05	1.48	1.72	1.35	-2.14	2.12	0.05	0.74
% Chg Same Qtr Last Yr	0.98	3.02	1.99	2.51	0.81	0.48	-0.27	-0.81	-0.29	0.46	1.06	1.75	1.65	-2.14	2.12	0.05	0.74
FEDERAL, CIVILIAN	79253	79709	79889	80054	80263	80327	80476	80618	80973	81298	81517	81820	82132	78260	79726	80421	81402
% Chg Prev Qtr SAAR	3.24 2.32	2.32	06.0	0.83	1.05	0.32	0.75	0.71	1.77	1.62	1.08	1.49	1.54	-2.69	1.87	0.87	1.22
% Chg Same Qtr Last Yr	0.81	2.51	2.36	1.82	1.27	0.77	0.74	0.71	0.88	1.21	1.29	1.49	1.43	-2.69	1.87	0.87	1.22
STATE & LOCAL	43858 437	43789	43945	44073	43982	43830	43685	43521	43710	43940	44113	44300	44444	43144	43916	43755	44016
% Chg Prev Qtr SAAR	7.02	-0.63	1.44	1.17	-0.82	-1.37	-1.32	-1.49	1.74	2.13	1.58	1.71	1.30	-2.03	1.79	-0.37	09.0
% Chg Same Qtr Last Yr	0.88	2.77	1.33	2.21	0.28	0.10	-0.59	-1.25	-0.62	0.25	0.98	1.79	1.68	-2.03	1.79	-0.37	09.0

Tennessee Econometric Model

Annual	2024 2025	67800 70401 3.89 3.84 3.89 3.84	82679 86645 5.87 4.80 5.87 4.80	76717 80214 4.96 4.56 4.96 4.56	77567 81233 5.39 4.73 5.39 4.73	75189 78352 4.16 4.21 4.16 4.21		96745 100920 4.25 4.32 4.25 4.32	42869 43419 1.28 1.28 1.28 1.28	75469 78976 5.59 4.65 5.59 4.65	89163 90867 0.89 1.91 0.89 1.91	101349 104837 3.28 3.44
Anr	2 2023	7 65262 5 4.66 5 4.66	3 78094 3 7.98 3 7.98	3 73091 9 4.10 9 4.10	4 73598 1 6.24 1 6.24	5 0.46 5 0.46 5 0.46	5 60983 3 5.08 3 5.08	8 92799 2 3.59 2 3.59	5 42327 9 6.41 9 6.41	9 71471 5 4.52 5 4.52	5 88377 7 -0.03 7 -0.03	98130 5 4.57
	1 202;	62357 1 4.75 2 4.75	72320 3 8.50 9 8.50	5 70213 5 5.49 7 5.49	9		9 58035 3 3.73 3 3.73	1 89578 4 5.72 8 5.72	39776 3 1.19 7 1.19	1 68379 3 3.35 4 3.35	1 88400) -1.87 t -1.87	93840
	4 2026:1	0 72203 2 4.11 4 4.12	8 89151 0 4.63 8 4.69	8 82439 3 4.55 6 4.47		2 80449 7 4.43 8 4.28		~		7 81161 1 4.48 5 4.44	4 92031 6 2.10 9 2.04	8 107165 3 3.50
	:3 2025:4	16 71480 12 4.22 36 4.04	12 88148 77 4.70 57 4.58	50 81528 51 4.43 15 4.36	œ	36 79582 15 4.37 17 4.08	37 66506 31 4.13 30 3.72	_	37 43710 34 1.97 26 1.53	78 80277 36 4.61 17 4.35	38 91554 02 2.06 94 1.99	30 106248 34 3.53
	5:2 2025:3	34 70746 03 4.12 74 3.86	33 87142 66 4.77 85 4.67	9766 80650 4.39 4.51 4.59 4.45	67 81694 49 4.67 75 4.62		.08 65837 52 3.91 62 3.60	~			34 91088 97 2.02 88 1.94	43 10533C 58 3.84
	2025:1 2025:2	69345 7003 3.80 4.00 3.70 3.74	5158 86133 4.21 4.66 5.10 4.85	8913 7976(4.12 4.39 4.85 4.59	79885 80767 4.35 4.49 5.06 4.75	77149 77939 3.64 4.16 4.43 4.25	64646 65208 3.33 3.52 3.75 3.62	99212 100312 3.91 4.51 4.24 4.21	43181 43288 1.21 1.00 1.21 1.13	77713 78535 4.15 4.30 5.02 4.75	90193 90634 1.92 1.97 1.82 1.88	03429 104343 3.12 3.58
Data	2024:4 20	68702 69 3.46 3.65	34284 85 5.03 5.48	78120 78 4.76 4.92	79039 79 4.98 5.13	76463 77 4.33 4.51	64119 62 3.65 3.76	98265 99 4.11 4.11	43051 43 0.90 1.26	76927 77 5.08 5.11	89765 90 1.86 1.76	3.35 3.35
Forecast Data	2024:3 2	68119 (3.66 3.75	83256 5.51 5.49	5.08 4.88	78085 5.19 5.02		63547 (4.00 3.74	97280 4.33 4.22	42955 4 1.43 1.38	75980 5.47 5.17	89352 8 1.79 1.50	3.60
	2024:2	67510 3.89 3.92	82147 5.64 5.87	76266 5.43 5.14	77103 5.71 5.69	74763 4.89 4.13	62927 4.01 3.53	96255 4.60 4.00	42803 1.29 1.31	74975 5.40 5.61	88957 1.72 0.79	3.39
	4 2024:1	1 66869 4 3.60 2 4.25	4 81028 5 5.75 1 6.68	5 75265 0 4.42 7 4.90	76040 1 4.66 3 5.76	2 73876 3 3.96 5 3.36	5 62311 5 3.37 2 3.68	4 95179 4 3.41 5 4.69	7 42666 9 1.41 5 1.17	9 73996 2 4.48 9 6.54	3 1.68 1.08	5 100062
	:3 2023:4	30 66281 37 3.84 19 4.92	24 79904 12 5.00 13 9.7	24 74456 2 4.60 36 4.87	55 75180 90 4.51 8 7.23	21 73162 37 4.73 36 0.86	•		-	77 73189 24 5.32 35 7.79	88 88210 35 0.83 34 -2.81	37 99335 15 3.28
	:2 2023:3	31 65660 18 4.37 34 4.49	96 7892 ² 95 7.02 55 8.13	38 73624 49 6.12 35 3.86	55 74355 39 7.90 52 6.08	34 72321 31 2.97 36 0.06	30 61258 31 3.19 58 5.07	54 93342 41 3.45 81 4.06	47 42370 59 1.17 48 6.13	35 72247 20 7.24 30 4.95	31 88028 31 -1.05 37 0.54	42 98537 21 2.45
History	3:1 2023:2	4146 64961 6.29 5.18 3.88 5.34	75951 77596 18.26 8.95 6.49 7.55	71746 72538 4.29 4.49 2.33 5.35	71901 72955 10.60 5.99 4.15 7.52	71473 71794 -5.76 1.81 -0.73 1.66	60098 60780 13.00 4.61 3.66 5.58	90914 92554 2.06 7.41 1.19 4.81	42174 42247 23.83 0.69 6.69 6.48	9451 70995 9.46 9.20 0.80 4.60	19007 88261 -7.50 -3.31 -0.08 2.37	96706 97942 1.81 5.21
	2023:1	TOTAL NONFARM	1-	MANUFACTURING	DURABLE GOODS	NONDURABLE GOODS	TRADE, TRANSPORTATION, UTILITIES 600 % Chg Prev Qtr SAAR	WHOLESALE TRADE	## RETAIL TRADE	TRANSPORTATION & UTILITIES 69451 % Chg Prev Qtr SAAR 9.46 % Chg Same Qtr Last Yr 0.80	NFORMATION 89007 8 Chg Prev Qtr SAAR -7.50 9.008 9	FINANCIAL ACTIVITIES967 % Chg Prev Qtr SAAR

Table 9: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (current dollars)

	History	ý					Forecast Data	t Data							Annual	ual	
	2023:1 2023:2	023:2	2023:3	2023:4	2024:1	2024:2	2024:3	2024:4	2025:1	2025:2	2025:3	2025:4	2026:1	2022	2023	2024	2025
PROFESSIONAL & BUSINESS SERVICES 76452 78216	76452	78216	79244	80199	81307	82453	83421	84417	85414	86462	87527	88730	90004	74180	78527	82899	87033
% Chg Prev Qtr SAAR	6.47	9.56	5.36	4.91	5.64	5.76	4.78	4.86	4.81	5.00	5.02	5.61	2.87	4.86	5.86	5.57	4.99
% Chg Same Qtr Last Yr	3.83	92.9	6.28	6.56	6.35	5.42	5.27	5.26	5.05	4.86	4.92	5.11	5.37	4.86	5.86	5.57	4.99
EDUCATION & HEALTH SERVICES	. 63491 64	64139	64852	65405	06959	65995	66326	66653	67211	67800	68339	68977	69550	62173	64472	66166	68082
% Chg Prev Qtr SAAR	8.06	4.15	4.52	3.46	1.75	1.87	2.02	1.99	3.39	3.55	3.22	3.79	3.36	5.52	3.70	2.63	2.90
% Chg Same Qtr Last Yr	3.31	3.60	2.85	5.03	3.46	2.89	2.27	1.91	2.32	2.73	3.04	3.49	3.48	5.52	3.70	2.63	2.90
LEISURE & HOSPITALITY	. 34930	35186	35427	35605	36053	36457	36787	37100	37447	37821	38255	38687	39066	34646	35287	36599	38053
% Chg Prev Qtr SAAR	-14.08	2.96	2.77	2.02	5.13	4.56	3.67	3.45	3.79	4.06	4.67	4.59	3.98	11.67	1.85	3.72	3.97
% Chg Same Qtr Last Yr	7.89	2.69	-0.67	-1.86	3.21	3.61	3.84	4.20	3.87	3.74	3.99	4.28	4.32	11.67	1.85	3.72	3.97
OTHER SERVICES	56539	57218	57774	58280	58620	58940	59257	59524	59838	60181	60583	60890	61249	54152	57452	59085	60373
% Chg Prev Qtr SAAR	8.02	4.89	3.94	3.55	2.36	2.20	2.17	1.81	2.13	2.31	2.70	2.04	2.38	6.14	60.9	2.84	2.18
% Chg Same Qtr Last Yr	6.49	7.11	5.74	5.09	3.68	3.01	2.57	2.13	2.08	2.10	2.24	2.29	2.36	6.14	60.9	2.84	2.18
GOVERNMENT	. 57463	57865	58581	59083	59297	59506	59744	59940	60479	61058	61638	62166	62696	54948	58248	59622	61335
% Chg Prev Qtr SAAR	10.97	2.83	5.04	3.47	1.46	1.42	1.61	1.32	3.64	3.88	3.86	3.47	3.45	4.18	6.01	2.36	2.87
% Chg Same Qtr Last Yr	90.9	7.00	5.47	5.53	3.19	2.84	1.99	1.45	1.99	2.61	3.17	3.71	3.67	4.18	6.01	2.36	2.87
FEDERAL, CIVILIAN	. 94556 (92686	96580	97329	98025	98692	99494	00254	101161	102020	102889	103713	104644	90815	96038	99116	102446
% Chg Prev Qtr SAAR	7.54	4.87	3.79	3.14	2.89	2.75	3.29	3.09	3.67	3.44	3.45	3.24	3.64	3.61	5.75	3.21	3.36
% Chg Same Qtr Last Yr	. 5.89	6.47	5.86	4.82	3.67	3.14	3.02	3.00	3.20	3.37	3.41	3.45	3.44	3.61	5.75	3.21	3.36
STATE & LOCAL	52327	52566	53127	53584	53715	53852	54009	54122	54608	55140	55678	56154	56625	50064	52901	53924	55395
% Chg Prev Qtr SAAR	11.48	1.84	4.34	3.49	0.98	1.02	1.17	0.84	3.64	3.96	3.96	3.46	3.40	4.30	5.67	1.93	2.73
% Chg Same Qtr Last Yr	96.5	6.74	4.78	5.22	2.65	2.45	1.66	1.00	1.66	2.39	3.09	3.75	3.69	4.30	5.67	1.93	2.73

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Tennessee Econometric Model

0.75 0.75 0.09 0.09 0.90 124 5.24 5.24 3313 3.6 December 2023 2025 Tennessee Econometric Model 0.09 0.36 3288 1.00 7.38 3.5 1.00 2024 Annual 0.35 59.7 -0.61 2023 3256 0.47 -3.05 -3.05 3.3 0.47 -0.61 -0.42 3240 60.1 -0.42 3.4 2022 -24.31-24.310.09 2.60 0.09 -0.60 126 3324 0.67 2.42 0.05 3.7 2026:1 0.09 0.15 2025:4 3.6 3323 3.03 0.81 0.88 0.09 0.18 4.15 2025:3 0.97 3317 96.0 0.81 124 1.27 3.6 0.93 0.09 3432 0.88 0.91 0.82 0.72 124 2.39 6.16 0.07 3309 3.6 3425 1.05 0.81 0.09 0.24 0.94 0.57 -0.01 3.6 3302 2025:1 Forecast Data 2024:4 0.36 12.63 0.09 -0.08 3.6 3294 -0.01 0.81 0.52 8.94 Table 10: Tennessee Civilian Labor Force and Unemployment Rate, Seasonally Adjusted 2024:3 0.09 3409 0.80 3290 0.43 9.34 11.90 0.07 -0.04 0.61 2024:2 59.9 0.48 -0.35 3285 3.4 1.08 1.26 0.20 0.41 Boyd Center for Business and Economic Research, University of Tennessee 2024:1 -1.15 0.09 -0.03 3397 0.81 3283 0.10 24.19 0.09 2023:4 6.13 0.14 3283 2.40 -6.80 3.2 0.83 1.21 2023:3 0.09 3276 106 -9.30 -5.02 0.27 1.35 3.1 1.91 3.21 History 2023:2 59.7 -1.60 -0.75 3.60 -0.60 3250 -0.60 109 -20.143.2 4.54 2.71 EMPLOYED PERSONS (THOUS)..... PARTICIPATION RATE (PERCENT)..... UNEMPLOYMENT RATE (PERCENT)...... % Chg Same Qtr Last Yr..... % Chg Prev Qtr SAAR...... % Chg Prev Qtr SAAR...... % Chg Same Qtr Last Yr..... % Chg Prev Qtr SAAR...... % Chg Same Qtr Last Yr..... % Chg Same Qtr Last Yr..... % Chg Prev Qtr SAAR...... UNEMPLOYED PERSONS (THOUS). CIVILIAN LABOR FORCE (THOUS)....

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Table 11. Telliessee Takable Sales, Seasonally Aujusteu (Illinois)	History	ony		OI 2017 dollals)	Jonal S)		Forecast Data	Data						Ann	nual	2023
. '	2023:2 2023:3	2023:3	2023:4	2024:1	2024:2	2024:3	2024:4	2025:1	2025:2	2025:3	2025:4	2026:1	2022	2023	2024	2025
TOTAL TAXABLE SALES	42452	41608	42298	42192	42185	42165	42235	42394	42606	42815	43135	43378	169193	169473 °	168777 1	70950
	-6.01	-7.72	6.79	-0.99	-0.07	-0.19	0.66	1.52	2.01	1.98	3.02	2.27	4.14	0.17	-0.41	1.29
	-0.87	-2.29	1.79	-2.14	-0.63	1.34	-0.15	0.48	1.00	1.54	2.13	2.32	4.14	0.17	-0.41	1.29
AUTO DEALERS	3539	3692	3677	3663	3653	3650	3658	3675	3691	3704	3730	3749	14431	14553	14624	14800
	-11.06	18.42	-1.61	-1.58	-1.00	-0.34	0.86	1.83	1.82	1.42	2.80	2.04	-6.74	0.85	0.49	1.21
	-2.28	4.59	1.02	0.49	3.22	-1.13	-0.52	0.33	1.04	1.48	1.97	2.02	-6.74	0.85	0.49	1.21
PURCHASES FROM MANUFACTURERS % Chg Prev Qtr SAAR	2371	2398	2345	2291	2279	2268	2269	2274	2281	2289	2300	2307	8995	9513	9107	9144
	-4.48	4.62	-8.62	-8.84	-2.03	-1.95	0.11	0.93	1.22	1.46	1.82	1.22	13.91	5.75	-4.26	0.40
	-0.61	5.04	16.60	-4.48	-3.87	-5.42	-3.24	-0.74	0.07	0.93	1.36	1.43	13.91	5.75	-4.26	0.40
MISC DURABLE GOODS	7427	7493	7380	7354	7354	7364	7371	7393	7426	7454	7495	7521	30662	30055	29443	29768
	-15.92	3.61	-5.90	-1.42	0.05	0.50	0.38	1.22	1.80	1.49	2.21	1.40	6.12	-1.98	-2.04	1.11
	-5.46	-2.03	0.14	-5.19	-0.97	-1.72	-0.12	0.54	0.98	1.22	1.68	1.73	6.12	-1.98	-2.04	1.11
EATING AND DRINKING PLACES	4227	4274	4265	4256	4278	4295	4322	4347	4379	4408	4445	4486	16338	17063	17151	17579
	-6.39	4.51	-0.76	-0.85	2.02	1.63	2.54	2.36	2.91	2.74	3.35	3.80	5.87	4.43	0.52	2.50
	3.57	1.74	4.14	-0.95	1.21	0.50	1.33	2.14	2.36	2.64	2.84	3.20	5.87	4.43	0.52	2.50
FOOD STORES	3504	2535	3444	3446	3446	3441	3439	3445	3459	3475	3497	3514	14139	12959	13772	13876
	3.43	-72.63	240.91	0.24	-0.08	-0.57	-0.27	0.79	1.54	1.96	2.48	2.03	3.89	-8.35	6.27	0.76
	0.28	-29.77	-4.06	-0.82	-1.67	35.74	-0.17	-0.03	0.37	1.00	1.69	2.00	3.89	-8.35	6.27	0.76
LIQUOR STORES	308	314	315	316	317	317	318	319	320	321	323	324	1257	1244	1268	1283
	2.46	7.62	1.64	1.55	0.44	0.49	1.12	1.20	1.19	1.84	2.05	1.36	-1.79	-1.06	1.99	1.18
	-0.26	0.56	-1.56	3.29	2.78	1.03	0.90	0.81	1.00	1.34	1.57	1.61	-1.79	-1.06	1.99	1.18
HOTELS AND MOTELS	1510 -11.99 4.60	1428 -19.99 -3.43	1429 0.06 -1.30	1437 2.37 -7.85	1446 2.45 -4.28	1454 2.22 1.77	1460 1.65 2.17	1465 1.34 1.92	1471	1474 0.92 1.41	1484 2.62 1.65	1488 1.07 1.58	5766 23.62 23.62	5927 2.80 2.80	5796 -2.20 -2.20	5893 1.67 1.67
OTHER RETAIL AND SERVICE	14629	14599	14626	14644	14644	14623	14646	14714	14796	14891	15043	15153	57532	58542	58557	59444
	-1.63	-0.82	0.76	0.48	0.01	-0.59	0.63	1.87	2.26	2.60	4.15	2.95	3.00	1.76	0.02	1.51
	0.66	0.28	3.09	-0.30	0.11	0.17	0.13	0.48	1.04	1.83	2.71	2.98	3.00	1.76	0.02	1.51
MISC NONDURABLE GOODS	3084	3132	3077	3047	3034	3023	3026	3037	3059	3078	3102	3121	12361	12427	12130	12276
	-6.15	6.43	-6.85	-3.93	-1.64	-1.45	0.37	1.46	2.89	2.56	3.13	2.55	3.27	0.54	-2.39	1.20
	-2.10	2.45	0.99	-2.77	-1.62	-3.49	-1.67	-0.32	0.81	1.82	2.51	2.78	3.27	0.54	-2.39	1.20
TRANSPORTATION, COMMUNICATION % Chg Prev Qtr SAAR	1853	1743	1738	1738	1733	1730	1727	1726	1725	1719	1717	1715	7712	7191	6929	6887
	-0.83	-21.62	-1.09	-0.05	-1.08	-0.74	-0.71	-0.33	-0.26	-1.19	-0.51	-0.57	4.26	-6.76	-3.64	-0.61
	-5.04	-8.42	-5.70	-6.37	-6.43	-0.74	-0.65	-0.72	-0.51	-0.62	-0.57	-0.63	4.26	-6.76	-3.64	-0.61
PER CAPITA (\$)	6026	5896	5982	5956	5944	5931	5930	5942	5961	5980	6014	6037	24180	24036	23762	23896
	-6.72	-8.41	6.00	-1.72	-0.79	-0.91	-0.06	0.80	1.29	1.27	2.30	1.57	3.32	-0.59	-1.14	0.57
	-1.63	-3.02	1.03	-2.87	-1.36	0.60	-0.87	-0.24	0.28	0.82	1.41	1.61	3.32	-0.59	-1.14	0.57
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Table 12: Tennessee Taxable Sales, Seasonally Adjusted (millions of current dollars)

	History	ory					Forecas	t Data						Anr	ınal	
	2023:2	2023:3	2023:4	2024:1	2024:2	2024:3	2024:4	2025:1	2025:2	2025:3	2025:4	2026:1	2022	2023	2024	2025
TOTAL TAXABLE SALES	50961	50302	51426	51529	51830	52129	52522	52964	53466	54041	54677	55267	196322	204129	208010	215147
	-3.67	-5.08	9.24	0.81	2.36	2.33	3.05	3.41	3.84	4.37	4.79	4.39	10.83	3.98	1.90	3.43
	2.96	1.05	4.79	0.17	1.71	3.63	2.13	2.79	3.15	3.67	4.10	4.35	10.83	3.98	1.90	3.43
AUTO DEALERS	4249	4463	4471	4473	4489	4513	4549	4591	4632	4676	4728	4776	16745	17531	18024	18627
	-8.85	21.81	0.65	0.21	1.40	2.17	3.25	3.73	3.65	3.80	4.57	4.15	-0.66	4.69	2.81	3.35
	1.50	8.16	4.00	2.87	5.65	1.10	1.75	2.63	3.20	3.61	3.94	4.04	-0.66	4.69	2.81	3.35
PURCHASES FROM MANUFACTURERS % Chg Prev Qtr SAAR	2846	2899	2851	2798	2800	2804	2821	2841	2862	2889	2915	2939	10431	11458	11224	11508
	-2.11	7.62	-6.53	-7.18	0.35	0.52	2.48	2.81	3.04	3.84	3.57	3.32	21.16	9.84	-2.04	2.53
	3.24	8.62	20.04	-2.22	-1.62	-3.28	-1.03	1.53	2.21	3.04	3.31	3.44	21.16	9.84	-2.04	2.53
MISC DURABLE GOODS	8915 -13.83 -1.81	9058 6.58 1.31	8973 -3.74 3.09	8981 0.37 -2.95	9036 2.48 1.35	9104 3.04 0.50	9166 2.76 2.16	9237 3.11 2.85	9319 3.63 3.13	9408 3.87 3.34	3.97 3.64	9582 3.50 3.74	35571 12.91 12.91	36200 1.77 1.77	36287 0.24 0.24	37464 3.24 3.24
EATING AND DRINKING PLACES	5074	5167	5186	5198	5256	5310	5375	5431	5495	5564	5634	5716	18964	20553	21139	22124
	-4.06	7.50	1.51	0.95	4.50	4.19	4.97	4.27	4.76	5.15	5.13	5.95	12.69	8.38	2.85	4.66
	7.57	5.21	7.22	1.39	3.58	2.78	3.64	4.48	4.55	4.79	4.83	5.25	12.69	8.38	2.85	4.66
FOOD STORES	4207	3065	4188	4209	4234	4254	4276	4304	4340	4387	4432	4478	16411	15605	16973	17463
	6.00	-71.84	248.73	2.06	2.35	1.94	2.09	2.67	3.36	4.35	4.24	4.14	10.62	-4.91	8.77	2.89
	4.16	-27.37	-1.24	1.52	0.64	38.82	2.11	2.26	2.51	3.11	3.65	4.02	10.62	-4.91	8.77	2.89
LIQUOR STORES	370	379	383	386	389	392	395	398	401	406	409	413	1459	1498	1563	1615
	5.01	10.70	3.97	3.40	2.88	3.03	3.51	3.09	3.01	4.23	3.81	3.46	4.57	2.71	4.34	3.32
	3.60	3.99	1.35	5.73	5.19	3.32	3.20	3.13	3.16	3.46	3.53	3.63	4.57	2.71	4.34	3.32
HOTELS AND MOTELS	1813	1727	1737	1755	1776	1797	1815	1830	1846	1861	1881	1895	6692	7137	7144	7417
	-9.80	-17.71	2.35	4.23	4.94	4.80	4.06	3.23	3.54	3.28	4.39	3.16	31.37	6.65	0.09	3.82
	8.65	-0.14	1.61	-5.67	-2.03	4.07	4.51	4.26	3.91	3.53	3.61	3.59	31.37	6.65	0.09	3.82
OTHER RETAIL AND SERVICE	17561 0.82 4.55	17649 2.02 3.70	3.07 6.13	17884 2.31 2.05	17993 2.44 2.46	18078 1.92 2.43	3.01 2.42	18382 3.77 2.78	18567 4.09 3.19	18795 5.00 3.97	19068 5.94 4.70	19306 5.08 5.03	9.64 9.64 9.64	70517 5.63 5.63	72168 2.34 2.34	74813 3.66 3.66
MISC NONDURABLE GOODS	3702	3787	3742	3721	3728	3738	3763	3794	3838	3885	3932	3977	14342	14969	14950	15449
	-3.82	9.47	-4.71	-2.18	0.75	1.04	2.75	3.35	4.74	4.96	4.90	4.67	9.89	4.37	-0.13	3.34
	1.69	5.95	3.97	-0.47	0.69	-1.30	0.57	1.97	2.96	3.95	4.49	4.82	9.89	4.37	-0.13	3.34
TRANSPORTATION, COMMUNICATION % Chg Prev Qir SAAR	2224	2107	2114	2123	2130	2139	2148	2156	2164	2170	2177	2185	8945	8660	8540	8667
	1.63	-19.38	1.18	1.77	1.32	1.76	1.64	1.53	1.53	1.12	1.20	1.49	10.91	-3.19	-1.39	1.49
	-1.37	-5.29	-2.92	-4.16	4.23	1.51	1.62	1.56	1.61	1.45	1.34	1.33	10.91	-3.19	-1.39	1.49
PER CAPITA (\$)	7234	7127	7273	7274	7304	7332	7374	7423	7480	7547	7623	7692	28056	28951	29285	30074
	-4.40	-5.79	8.43	0.07	1.62	1.59	2.31	2.68	3.11	3.64	4.06	3.67	9.97	3.19	1.15	2.70
	2.18	0.29	4.01	-0.57	0.96	2.88	1.39	2.05	2.42	2.93	3.37	3.62	9.97	3.19	1.15	2.70
	-		F													

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Table 1: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted

					Fc	Forecast Data					
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
TN GDP (Mii2012\$) SAAR	383013.8	389775.9	397682	407335	417287.4	427580.9	438462.3	449197.6	459560.5	469783.8	480321.2
Percentage change	3.29	1.77	2.03	2.43	2.44	2.47	2.54	2.45	2.31	2.22	2.24
US GDP (Bil2017\$) SAAR	22345.6	22655.5	22968.4	23358.1	23745.9	24131.6	24507.0	24899.4	25285.3	25703.9	26154.7
Percentage change	2.40	1.39	1.38	1.70	1.66	1.62	1.56	1.60	1.55	1.66	1.75
US GDP (Bil\$) SAAR	27350.4	28472.8	29514.5	30636.7	31790.8	33009.7	34276.5	35609.8	36994.6	38471.6	40046.9
Percentage change	6.24	4.10	3.66	3.80	3.77	3.83	3.84	3.89	3.89	3.99	4.09
TN PERSONAL INCOME (MIL2017\$) SAAR	362528	372348	382812	393450	403557	414302	426365	438309	449846	461130	473001
Percentage change	2.35	2.71	2.81	2.78	2.57	2.66	2.91	2.80	2.63	2.51	2.57
US PERSONAL INCOME (BIL2017\$) SAAR	19069	19518	20099	20574	21040	21493	21938	22400	22871	23368	23900
Percentage change	1.32	7.35	2.98	2.30	7.70	2.15	7.07	7.1.7	2.10	71.7	77.7
TN PERSONAL INCOME (MIL\$) SAAR	436709 6.25	458924	481787	504984 4 81	528332 4 62	553479 4 76	581115	609477	638202	667569	698644 4 65
		0 1	: (- 1	1 0) (- 0	9 6	- (0 0	2 1
US PERSONAL INCOME (BIL\$) SAARPercentage change	22977 5.20	24097 4.87	25319 5.07	26465 4.53	27606 4.31	28768 4.21	29958 4.13	31198	32486 4.13	33852 4.21	35305 4.29
TN NONFARM JOBS (THOUS)	3320.6	3354.4	3392.1	3431.3	3469.0	3509.9	3550.4	3592.3	3622.0	3652.4	3681.2
Percentage change	2.29	1.02	1.12	1.16	1.10	1.18	1.15	1.18	0.83	0.84	0.79
US NONFARM JOBS (MIL)	156.2	157.2	157.3	157.9	158.6	159.4	160.0	160.6	161.1	161.6	162.1
Percentage change	2.34	99.0	0.05	0.38	0.48	0.47	0.40	0.40	0.28	0.31	0.34
TN MFG JOBS (THOUS)	370.4	372.4	376.3	380.9	382.6	383.9	385.1	386.5	387.9	389.3	390.7
Percentage change	1.51	0.52	1.06	1.21	0.46	0.32	0.32	0.37	0.36	0.36	0.34
US MFG JOBS (MIL)	13.0	12.9	12.3	12.1	11.9	11.8	11.7	11.7	11.6	11.5	11.4
Percentage change	1.22	-0.84	-4.23	-1.99	-1.43	-1.21	-0.55	-0.23	-0.49	-0.66	-0.84
TN UNEMPLOYMENT RATE (%)	3.3	3.5	3.6	3.7	3.7	3.8	3.8	3.8	3.8	3.7	3.7
US UNEMPLOYMENT RATE (%)	3.6	4.3	4.7	4.6	4.5	4.4	4.3	4.3	4.3	4.3	4.3
CHAINED PRICE INDEX, GDP (2012=100.0)	122.4	125.7	128.5	131.2	133.9	136.8	139.9	143.0	146.3	149.7	153.1
Percentage change	3.74	2.67	2.25	2.07	2.07	2.17	2.25	2.25	2.30	2.30	2.30
US PERS CONSUMP DEFL (2012=100.0)	120.5	123.5	126.0	128.6	131.2	133.8	136.5	139.3	142.0	144.9	147.7
Percentage change	3.83	2.46	2.03	2.11	2.00	2.01	2.02	1.99	1.99	1.99	1.97
CONSUMER PRICE INDEX, ALL-URBAN (82-84=1.000)	3.047	3.128	3.190	3.270	3.342	3.416	3.490	3.565	3.643	3.723	3.804
Percentage change	4.14	2.66	1.98	2.50	2.21	2.20	2.18	2.16	2.18	2.19	2.16
BANK PRIME INTEREST RATE (%)	8.2	8.5	7.2	0.9	5.8	5.8	5.8	5.8	5.8	5.8	5.8
FEDERAL FUNDS RATE (% per annum)	5.039	5.383	4.050	2.869	2.630	2.632	2.632	2.630	2.630	2.632	2.633
30-YEAR FIXED MORTGAGE RATE (%)	6.9	7.0	2.7	5.1	5.0	4.9	4.9	4.8	4.8	4.8	4.8
TN TAXABLE SALES (MIL2017\$)	169473	168777	170950	175227	179960	185173	190375	196030	201399	207097	212850
Percentage change	0.17	-0.41	1.29	2.50	2.70	2.90	2.81	2.97	2.74	2.83	2.78
TN TAXABLE SALES (MIL\$)	204129	208010	215147	224900	235603	247379	259472	272583	285728	299811	314390
Percentage change	3.98	1.90	3.43	4.53	4.76	2.00	4.89	5.05	4.82	4.93	4.86
TN AVG ANNUAL WAGE, NONFARM (2017\$)	54177	55011	55939	57081	58127	59274	60532	61674	62808	64145	65443
Percentage change	0.81	1.54	1.69	2.04	1.83	1.97	2.12	1.89	2.00	1.96	2.02
TN AVG ANNUAL WAGE, NONFARM (\$)	65262	67800	70401	73262	26097	79185	82501	85758	89249	92861	96661
Percentage change	4.66	3.89	3.84	4.06	3.87	4.06	4.19	3.95	4.07	4.05	4.09
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December 2023 Table 2: Selected Per Capita U.S. and Tennessee Economic Indicators

					Fo	Forecast Data					
1 1	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
TN GDP (2012\$) SAARPercentage change	54548.5 2.51	55104.7 1.02	55823.1 1.30	56784.1 1.72	57781.6 1.76	58819.7 1.80	59930.5 1.89	61013.4	62038.1	63036.9 1.61	64067.0 1.63
US GDP (2017\$) SAARPercentage change	66604	67177 0.86	67754 0.86	68550 1.17	69332 1.14	70103	70839 1.05	71619 1.10	72378 1.06	73230 1.18	74173 1.29
US GDP (\$) SAARPercentage change	81521 5.70	84425 3.56	87064 3.13	89910 3.27	92821 3.24	95894 3.31	99078 3.32	102425 3.38	105896 3.39	109606 3.50	113571 3.62
TN PERSONAL INCOME (2017\$) SAAR Percentage change	51416 1.57	52421 1.96	53511 2.08	54619 2.07	55647 1.88	56755 1.99	58034 2.25	59286 2.16	60473 2.00	61617 1.89	62827 1.96
US PERSONAL INCOME (2017\$) SAAR	56838 0.80	57872 1.82	59290 2.45	60380 1.84	61431 1.74	62437 1.64	63414 1.56	64430 1.60	65467 1.61	66576 1.69	67778 1.81
TN PERSONAL INCOME (\$) SAAR Percentage change	61935 5.44	64609 4.32	67346 4.24	70102 4.09	72852 3.92	75820 4.07	79096 4.32	82437 4.22	85793 4.07	89202 3.97	92798 4.03
US PERSONAL INCOME (\$) SAAR Percentage change	68486 4.67	71450 4.33	74687 4.53	77668 3.99	80601 3.78	83572 3.69	86594 3.62	89735 3.63	92989 3.63	96444 3.71	100123 3.82
TN TAXABLE SALES (2017\$)Prorentage change	24036 -0.59	23762 -1.14	23896 0.57	24325 1.79	24815 2.01	25367 2.22	25912 2.15	26515 2.33	27074	27673 2.21	28272 2.17
TN TAXABLE SALES (\$)	28951 3.19	29285 1.15	30074	31221 3.81	32487 4.06	33888 4.31	35317 4.22	36869	38410 4.18	40061	41759

Table 3: Tennessee Personal Income Components (millions of 2017 dollars)

					Ē	Forecast Data					
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
TN PERSONAL INCOMEPercentage change	362528 2.35	372348 2.71	382812 2.81	393450 2.78	403557 2.57	414302 2.66	426365 2.91	438309 2.80	449846 2.63	461130 2.51	473001 2.57
WAGES AND SALARIESPercentage change	180807 3.07	184990 2.31	189983 2.70	196037 3.19	201785 2.93	208152 3.16	214985 3.28	221588 3.07	227861 2.83	234259 2.81	240847 2.81
OTHER LABOR INCOMEPercentage change	35475 1.79	36136 1.86	36752 1.71	37353 1.63	38070 1.92	38924 2.24	39709 2.02	40579 2.19	41606 2.53	42560 2.29	43511 2.24
PROPRIETORS INCOMEProperties	52736 2.48	54075 2.54	55699 3.00	57116 2.54	58414 2.27	59615 2.06	60791 1.97	62136 2.21	63405 2.04	64533 1.78	65993 2.26
RENT, INTEREST, DIVIDENDS Percentage change	54505 5.14	56976 4.53	58758 3.13	59861 1.88	60767 1.51	61742 1.60	62969 1.99	63936 1.54	65209 1.99	66192 1.51	67393 1.81
TRANSFER PAYMENTSPercentage change	70401	71706 1.85	73223 2.12	74886 2.27	76573 2.25	78229 2.16	80405 2.78	82586 2.71	84320 2.10	86368 2.43	88266 2.20
LESS: PERS CONT FOR SOC INS	29308	29473 0.56	29563 0.31	29785 0.75	30056 0.91	30382 1.09	30543 0.53	30587 0.14	30641 0.18	30896 0.83	31148 0.82
RESIDENCE ADJUSTMENTPercentage change	-2087 2.83	-2062 -1.23	-2039	-2018 -1.03	-1996 -1.10	-1978 -0.89	-1950 -1.39	-1929 -1.06	-1915 -0.76	-1886 -1.51	-1862 -1.25
PER CAPITA PERSONAL INCOME (\$) Percentage change	51416 1.57	52421 1.96	53511 2.08	54619 2.07	55647 1.88	56755 1.99	58034 2.25	59286 2.16	60473	61617	62827 1.96

Tennessee Econometric Model

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Table 4: Tennessee Personal Income Components (millions of current dollars)

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Table 5: Tennessee Nonfarm Employment by Sector (thousands of jobs)

					For	Forecast Data					
1 1	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
TOTAL NONFARM	3320.6 2.29	3354.4 1.02	3392.1 1.12	3431.3 1.16	3469.0 1.10	3509.9 1.18	3550.4 1.15	3592.3 1.18	3622.0 0.83	3652.4 0.84	3681.2 0.79
NATURAL RESOURCES, MINING AND CONSTRUCTIONPercentage change	157.4 3.91	159.7 1.43	162.2 1.57	164.2 1.24	166.3	168.6 1.40	170.8 1.29	172.9 1.21	175.4 1.45	177.8	180.2 1.34
MANUFACTURINGPercentage change	370.4 1.51	372.4 0.52	376.3 1.06	380.9	382.6 0.46	383.9 0.32	385.1 0.32	386.5 0.37	387.9 0.36	389.3 0.36	390.7 0.34
DURABLE GOODSPursus	237.2 2.03	239.2 0.86	243.3 1.67	247.7 1.82	249.2 0.63	250.3 0.44	251.5 0.46	252.7 0.49	253.9 0.47	255.1 0.47	256.2 0.42
NONDURABLE GOODSPrecentage change	133.2 0.59	133.1	133.1 -0.04	133.2	133.4	133.5	133.6 0.05	133.8 0.16	134.0 0.16	134.2 0.14	134.5 0.19
TRADE, TRANSPORTATION, UTILITIES Percentage change	683.1 0.74	686.1 0.43	689.5 0.51	692.0 0.36	693.4 0.21	694.9	697.4 0.35	699.6 0.32	701.3 0.24	702.5 0.17	703.8 0.19
WHOLESALE TRADEProcentage change	134.2 3.62	134.8 0.45	135.9 0.82	137.0 0.79	138.0 0.76	139.1 0.79	140.3 0.89	141.4 0.79	142.4 0.67	143.2 0.55	143.9 0.49
RETAIL TRADEPercentage change	344.0 0.81	347.9 1.14	347.5 -0.11	345.9 -0.45	344.5 -0.42	342.9 -0.45	341.7 -0.35	340.4 -0.39	338.8 -0.48	337.2 -0.45	335.8 -0.43
TRANSPORTATION & UTILITIES	205.0 -1.16	203.4	206.2	209.1	210.9	212.9	215.3 1.12	217.8	220.2	222.1 0.87	224.1 0.93
INFORMATIONPercentage change	56.2 3.36	56.1 -0.24	56.1 -0.04	56.2 0.28	56.3 0.21	56.4 0.17	56.6 0.35	56.8 0.26	56.9 0.15	56.9 0.07	57.1 0.28
FINANCIAL ACTIVITIESPinandial	174.9 -0.19	176.2 0.71	178.0 1.03	180.2 1.23	182.4 1.24	184.7 1.26	186.9 1.21	189.0 1.13	191.1	193.1 1.08	195.2 1.06
PROFESSIONAL & BUSINESS SERVICES Percentage change	472.0 1.53	477.5 1.18	487.0 1.97	496.1 1.89	506.0	517.4 2.25	529.3 2.31	539.2 1.87	545.9 1.23	552.4 1.19	558.8 1.16
EDUCATION & HEALTH SERVICES	468.4 3.86	479.2 2.31	487.3 1.69	495.2 1.61	503.2 1.62	511.6 1.66	520.7 1.78	529.5 1.69	536.8 1.37	542.4 1.05	547.7 0.98
LEISURE & HOSPITALITYPercentage change	360.1 4.76	364.4 1.20	369.2 1.33	376.6 1.98	385.2 2.29	394.1 2.33	401.1 1.77	410.4 2.31	416.8 1.55	424.3 1.81	430.9 1.56
OTHER SERVICESPercentage change	129.8 3.23	132.4	134.0 1.20	136.0 1.49	138.1 1.57	140.3 1.58	142.4 1.51	144.8 1.63	146.6 1.25	148.3 1.18	149.9 1.06
GOVERNMENTPoverentage change	448.2 2.57	450.4 0.50	452.4 0.45	454.0 0.33	455.4 0.32	457.9 0.55	460.0 0.47	463.6 0.77	463.5 -0.02	465.4 0.42	467.0 0.34
FEDERAL, CIVILIANPEDERAL, CIVILIAN	55.5 6.10	56.8 2.23	57.1 0.59	57.5 0.67	57.9 0.65	58.4 0.83	59.1 1.32	61.7 4.38	59.3 -3.91	59.7 0.58	60.1 0.74
STATE & LOCALPercentage change	392.6 2.09	393.6 0.26	395.3 0.43	396.5 0.28	397.5 0.27	399.5 0.51	400.9 0.34	401.9 0.24	404.2 0.58	405.8 0.39	406.9

lable 6: Tennessee Durable Goods Manufacturing		Employment (thousands of Jobs)	nousands o	r Jops)						Decemi	December 2023
					Fore	Forecast Data					
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
TOTAL DURABLE GOODSPOTAL Percentage change	237.2 2.03	239.2 0.86	243.3 1.67	247.7 1.82	249.2 0.63	250.3 0.44	251.5 0.46	252.7 0.49	253.9 0.47	255.1 0.47	256.2 0.42
WOOD PRODUCTSProcentage change	14.1	14.0	14.0	14.0	14.0	14.1	14.1 0.24	14.1	14.2	14.2 0.24	14.2 0.15
NONMETALLIC MINERALSPercentage change	15.2 2.03	15.3 0.53	15.4 0.49	15.5 0.45	15.5 0.43	15.6 0.77	15.7 0.60	15.8 0.59	15.9 0.62	16.0 0.55	16.1 0.54
PRIMARY METALSPRIMARY METALS	11.0	11.1	11.1	11.2 0.51	11.2	11.3 0.56	11.4	11.4	11.5	11.6	11.6
FABRICATED METALSPABRICATED METALS	41.8	41.9 0.32	42.1 0.27	42.2 0.27	42.3 0.28	42.4 0.34	42.5 0.18	42.6 0.32	42.7 0.15	42.8 0.24	42.9 0.31
MACHINERYPercentage change	24.4 -0.84	24.3 -0.32	24.4 0.13	24.4	24.4	24.5	24.5 0.07	24.5 -0.13	24.4	24.4 -0.12	24.4 -0.16
COMPUTERS & ELECTRONICS Percentage change	7.0	7.0	7.1	7.1	7.2	7.2 0.53	7.3 0.50	7.3	7.3 0.43	7.4	7.4
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS	18.6 -2.95	18.5 -0.39	18.5	18.5 0.21	18.6 0.24	18.6 0.19	18.6 0.20	18.7 0.23	18.7 0.31	18.8 0.33	18.8
TRANSPORTATION EQUIPMENT Percentage change	78.4 6.69	80.3 2.38	83.9 4.47	87.9 4.79	89.0 1.26	89.6 0.69	90.3	91.0 0.76	91.7 0.81	92.5 0.79	93.2
FURNITUREPursus	9.4 -1.94	9.4	9.4	9.4	9.4 -0.23	9.4	9.4	9.4	9.5 0.31	9.4	9.4 -0.40
MISCELLANEOUS DURABLES	17.4 0.46	17.4	17.5 0.37	17.6 0.30	17.6 0.35	17.7	17.7	17.8 0.55	17.9 0.52	18.0	18.1

39.6 12.8 -0.16 134.5 8.6 -0.69 0.01 8.5 28.1 0.32 9.7 December 2023 27.1 0.60 39.5 12.8 -0.40 -0.22 28.0 0.55 26.9 0.74 9.7 2032 -0.65 8.5 8.7 -0.35 -0.16 39.6 8.8 12.9 -0.52 8.5 26.7 9.7 0.61 0.81 2031 26.5 0.03 -0.39 8.5 0.12 27.7 0.45 2030 8.8 -0.71 12.9 39.6 0.25 27.6 0.38 26.3 9.7 13.0 0.04 2029 -0.67 8.5 0.53 13.0 Forecast Data 8.5 27.5 0.49 26.2 0.91 9.7 2028 39.7 -0.84 8.5 9.7 13.0 27.4 0.00 26.0 2027 -0.61 1.0 27.2 0.52 9.8 2026 39.8 13.2 -0.78 8.5 25.7 0.71 Table 7: Tennessee Nondurable Goods Manufacturing Employment (thousands of jobs) 13.3 8.4 27.1 25.5 0.68 9.8 2025 39.9 -1.37 Boyd Center for Business and Economic Research, University of Tennessee 26.9 -0.06 0.56 25.4 2024 0.17 -0.35 2.39 26.9 0.51 25.1 -1.07 9.8 2023 133.2 13.4 8.4 2.01 PAPER..... Percentage change..... Percentage change..... MISCELLANEOUS NONDURABLE GOODS. Percentage change..... PRINTING & RELATED SUPPORT F00D. BEVERAGE & TOBACCO..... Percentage change...... TOTAL NONDURABLE GOODS. Percentage change...... Percentage change...... Percentage change...... Percentage change...... PLASTICS & RUBBER. CHEMICALS.....

Table 8: Tennessee Average Annual Wage and Salary Rate by Sector (2017 dollars)

					For	Forecast Data					
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
TOTAL NONFARM	54177 0.81	55011 1.54	55939 1.69	57081 2.04	58127 1.83	59274 1.97	60532 2.12	61674 1.89	62909	64145 1.96	65443 2.02
NATURAL RESOURCES, MINING AND CONSTRUCTIONPercentage change	64826	67081 3.48	68846 2.63	70546 2.47	72250 2.41	74209 2.71	76433 3.00	78656 2.91	80693 2.59	82969	84866 2.29
MANUFACTURING	60675	62244	63736	65297	66799	68216	69551	70864	72235	73736	75318
	0.27	2.59	2.40	2.45	2.30	2.12	1.96	1.89	1.93	2.08	2.14
DURABLE GOODSPercentage change	61094 2.33	62934 3.01	64545 2.56	66143 2.48	67584 2.18	69106 2.25	70499	71886 1.97	73360 2.05	74998 2.23	76704 2.28
NONDURABLE GOODSPercentage change	59928 -3.24	61005	62256 2.05	63724 2.36	65332 2.52	66548 1.86	67766 1.83	68933 1.72	70103 1.70	71339 1.76	72675 1.87
TRADE, TRANSPORTATION, UTILITIES Percentage change	50625	51300	52084	53063	53916	54580	55559	56392	57170	58151	59068
	1.21	1.33	1.53	1.88	1.61	1.23	1.80	1.50	1.38	1.72	1.58
WHOLESALE TRADEPercentage change	77036	78495	80188	82478	84627	86009	88199	90116	92017	94089	96119
	-0.22	1.89	2.16	2.85	2.61	1.63	2.55	2.17	2.11	2.25	2.16
RETAIL TRADEPercentage change	35140	34784	34501	34371	34045	33854	33581	33412	33043	32696	32398
	2.50	-1.01	-0.81	-0.38	-0.95	-0.56	-0.81	-0.50	-1.10	-1.05	-0.91
TRANSPORTATION & UTILITIES	59328	61232	62752	64256	65787	66926	68643	69866	71196	73050	74634
	0.66	3.21	2.48	2.40	2.38	1.73	2.57	1.78	1.90	2.60	2.17
INFORMATIONPercentage change	73373	72347	72203	72282	72347	72366	72421	72483	72534	72561	72584
	-3.70	-1.40	-0.20	0.11	0.09	0.03	0.08	0.09	0.07	0.04	0.03
FINANCIAL ACTIVITIESPercentage change	81464	82232	83302	84599	85937	87476	89137	90638	92203	93719	95548
	0.73	0.94	1.30	1.56	1.58	1.79	1.90	1.68	1.73	1.64	1.95
PROFESSIONAL & BUSINESS SERVICES Percentage change	65187	67260	69154	71438	73549	76229	78798	81074	84023	86748	89334
	1.97	3.18	2.81	3.30	2.96	3.64	3.37	2.89	3.64	3.24	2.98
EDUCATION & HEALTH SERVICES	53521 -0.12	53687 0.31	54097 0.76	54866 1.42	55610 1.36	56497 1.59	57409 1.61	58437 1.79	59458 1.75	60342	61449 1.83
LEISURE & HOSPITALITYPercentage change	29294	29696	30236	30902	31539	32363	33060	33947	34624	35285	36074
	-1.84	1.37	1.82	2.20	2.06	2.61	2.15	2.68	1.99	1.91	2.24
OTHER SERVICESPercentage change	47694	47942	47972	48064	48111	48266	48501	48590	48515	48794	48915
	2.21	0.52	0.06	0.19	0.10	0.32	0.49	0.18	-0.15	0.58	0.25
GOVERNMENTPercentage change	48355	48378	48736	49479	50055	50561	51369	51910	52528	53078	53917
	2.12	0.05	0.74	1.52	1.17	1.01	1.60	1.05	1.19	1.05	1.58
FEDERAL, CIVILIANPercentage change	79726	80421	81402	82537	83719	84530	85464	85521	86578	87136	88486
	1.87	0.87	1.22	1.39	1.43	0.97	1.11	0.07	1.24	0.64	1.55
STATE & LOCAL	43916	43755	44016	44684 1.52	45154 1.05	45599 0.99	46340 1.62	46748 0.88	47532 1.68	48072 1.13	48812 1.54

					For	Forecast Data					
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
TOTAL NONFARM	65262	67800	70401	73262	76099	79185	82501	85758	89249	92861	96661
	4.66	3.89	3.84	4.06	3.87	4.06	4.19	3.95	4.07	4.05	4.09
NATURAL RESOURCES, MINING AND CONSTRUCTIONPercentage change	78094	82679 5.87	86645 4.80	90544 4.50	94589	99138 4.81	104175 5.08	109373 4.99	114481	120113 4.92	125350 4.36
MANUFACTURINGPercentage change	73091	76717 4.96	80214 4.56	83807 4.48	87452 4.35	91131	94793	98537 3.95	102480	106746 4.16	111247 4.22
DURABLE GOODSPercentage change	73598 6.24	77567 5.39	81233 4.73	84893 4.51	88479	92319	96086	99958 4.03	104077 4.12	108573 4.32	113296 4.35
NONDURABLE GOODS	72188 0.46	75189 4.16	78352 4.21	81788 4.39	85532 4.58	88902 3.94	92360	95851 3.78	99455 3.76	103274 3.84	107343 3.94
TRADE, TRANSPORTATION, UTILITIES Percentage change	60983	63226	65549	68105	70585	72913	75723	78413	81106	84182	87245
	5.08	3.68	3.67	3.90	3.64	3.30	3.85	3.55	3.43	3.79	3.64
WHOLESALE TRADEPercentage change	92799	96745	100920	105859	110791	114901	120210	125307	130545	136210	141972
	3.59	4.25	4.32	4.89	4.66	3.71	4.62	4.24	4.18	4.34	4.23
RETAIL TRADEPercentage change	42327	42869	43419	44113	44569	45224	45767	46458	46876	47331	47852
	6.41	1.28	1.28	1.60	1.03	1.47	1.20	1.51	0.90	0.97	1.10
TRANSPORTATION & UTILITIES	71471	75469	78976	82471	86126	89408	93556	97149	101006	105753	110237
	4.52	5.59	4.65	4.43	4.43	3.81	4.64	3.84	3.97	4.70	4.24
INFORMATIONPercentage change	88377	89163	90867	92769	94712	96672	98702	100785	102901	105042	107205
	-0.03	0.89	1.91	2.09	2.09	2.07	2.10	2.11	2.10	2.08	2.06
FINANCIAL ACTIVITIESPercentage change	98130	101349	104837	108579	112506	116860	121488	126031	130808	135674	141128
	4.57	3.28	3.44	3.57	3.62	3.87	3.96	3.74	3.79	3.72	4.02
PROFESSIONAL & BUSINESS SERVICES Percentage change	78527	82899	87033	91690	96291	101838	107398	112736	119207	125584	131951
	5.86	5.57	4.99	5.35	5.02	5.76	5.46	4.97	5.74	5.35	5.07
EDUCATION & HEALTH SERVICES	64472	66166	68082	70418	72802	75474	78244	81256	84352	87355	90762
	3.70	2.63	2.90	3.43	3.39	3.67	3.67	3.85	3.81	3.56	3.90
LEISURE & HOSPITALITYPercentage change	35287 1.85	36599 3.72	38053 3.97	39661 4.23	41290	43235 4.71	45059 4.22	47204 4.76	49121 4.06	51081 3.99	53282 4.31
OTHER SERVICESPercentage change	57452	59085	60373	61687	62985	64477	66102	67563	68826	70636	72247
	6.09	2.84	2.18	2.18	2.10	2.37	2.52	2.21	1.87	2.63	2.28
GOVERNMENTPercentage change	58248	59622	61335	63503	65530	67545	70012	72180	74521	76839	79637
	6.01	2.36	2.87	3.53	3.19	3.07	3.65	3.10	3.24	3.11	3.64
FEDERAL, CIVILIANPercentage change	96038	99116	102446	105932	109602	112923	116480	118914	122826	126143	130696
	5.75	3.21	3.36	3.40	3.46	3.03	3.15	2.09	3.29	2.70	3.61
STATE & LOCALPercentage change	52901	53924	55395	57349	59113	60916	63158	65002	67433	69591	72096
	5.67	1.93	2.73	3.53	3.08	3.05	3.68	2.92	3.74	3.20	3.60
		:									

Boyd Center for Business and Economic Research, University of Tennessee

Table 10: Tennessee Civilian Labor Force and Unemployment Rate	e and Unem	ployment R	ate							December 2023	er 2023
					Fore	Forecast Data					
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
CIVILIAN LABOR FORCE (THOUS)	3365	3406	3437	3456	3471	3492	3508	3516	3522	3536	3548
Percentage change	0.35	1.21	0.90	0.55	0.45	0.61	0.46	0.21	0.18	0.38	0.35
EMPLOYED PERSONS (THOUS)	3256	3288	3313	3328	3341	3360	3376	3383	3390	3404	3417
Percentage change	0.47	1.00	0.75	0.46	0.39	0.58	0.45	0.23	0.19	0.41	0.38
UNEMPLOYED PERSONS (THOUS)	110	118	124	128	130	132	133	132	132	132	131
Percentage change	-3.05	7.38	5.24	2.97	1.95	1.45	0.68	-0.39	-0.06	-0.33	-0.51
PARTICIPATION RATE (PERCENT)	29.7	0.09	0.09	59.9	59.7	9.69	59.5	59.2	58.9	58.8	58.6
Percentage change	-0.61	0.36	0.09	-0.22	-0.30	-0.11	-0.25	-0.48	-0.48	-0.26	-0.29
UNEMPLOYMENT RATE (PERCENT)	3.3	3.5	3.6	3.7	3.7	3.8	3.8	3.8	3.8	3.7	3.7
Boyd Center for Business and Economic Research,	Research, L	Iniversity of Tennessee	f Tennesse	Φ					Tennessee Econometric Model	conometri	Model

Table 11: Tennessee Taxable Sales (millions of 2017 dollars)

					Fo	Forecast Data					
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
TOTAL TAXABLE SALES	169473 0.17	168777 -0.41	170950 1.29	175227 2.50	179960 2.70	185173 2.90	190375 2.81	196030 2.97	201399 2.74	207097 2.83	212850 2.78
AUTO DEALERSPercentage change	14553 0.85	14624 0.49	14800	15106 2.06	15421 2.09	15705 1.84	16068 2.31	16373 1.90	16627 1.55	16873 1.48	17174
PURCHASES FROM MANUFACTURERS Percentage change	9513 5.75	9107 -4.26	9144	9282 1.51	9451 1.82	9642 2.03	9761 1.23	9971 2.15	10073 1.02	10146	10287 1.39
MISC DURABLE GOODSPercentage change	30055 -1.98	29443 -2.04	29768	30298 1.78	30966 2.20	31657 2.23	32398 2.34	33019 1.92	33709 2.09	34366 1.95	35198 2.42
EATING AND DRINKING PLACES	17063 4.43	17151 0.52	17579 2.50	18153 3.27	18660 2.79	19272 3.28	19872 3.11	20464 2.98	21026 2.75	21674 3.08	22388 3.29
FOOD STORES	12959 -8.35	13772 6.27	13876 0.76	14157 2.03	14500 2.43	14872 2.56	15388 3.47	15760 2.42	16170 2.60	16605 2.69	17058 2.73
LIQUOR STORESPercentage change	1244	1268 1.99	1283	1307 1.83	1337 2.27	1363 1.96	1398 2.61	1431 2.32	1469 2.69	1509 2.72	1552 2.82
HOTELS AND MOTELSPercentage change	5927 2.80	5796 -2.20	5893 1.67	5994 1.72	6124 2.16	6211 1.43	6299	6387 1.40	6487 1.56	6598	6672
OTHER RETAIL AND SERVICE	58542 1.76	58557 0.02	59444 1.51	61476 3.42	63793 3.77	66461 4.18	68948 3.74	72102 4.57	75051 4.09	78212 4.21	81073 3.66
MISC NONDURABLE GOODSPercentage change	12427 0.54	12130 -2.39	12276 1.20	12601 2.65	12869 2.13	13161 2.27	13433 2.07	13738 2.27	14028 2.11	14385 2.55	14755 2.57
TRANSPORTATION, COMMUNICATION	7191 -6.76	6929	6887 -0.61	6853 -0.50	6839	6828	6809	6783 -0.38	6759 -0.36	6728 -0.46	6691 -0.54
PER CAPITA (\$)	24036 -0.59	23762	23896 0.57	24325 1.79	24815 2.01	25367 2.22	25912 2.15	26515 2.33	27074 2.11	27673 2.21	28272 2.17
Boyd Center for Business and Economic Research,		University of Tennessee	nnessee						Tennessee Econometric Model	Economet	ic Model

Table 12: Tennessee Taxable Sales (millions of current dollars)

TOTAL TAXABLE SALES 204129 208010 215147 224900 235663 247379 259472 272583 Percentage change 3.98 1.90 3.43 4.53 4.76 5.00 4.89 5.05 AUTO DEALERS 4.69 1.82 4.76 1.93 2.981 2.990 2.2767 Percentage change 4.69 2.81 1.23 4.09 4.13 3.92 4.89 5.00 Percentage change 4.69 2.81 1.24 1.124 1.150 1.191 1.237 1.286 4.991 4.38 2.96 4.98 5.90 2.787 4.986 P.90 2.787 4.986 P.90 2.787 4.986 P.90 2.787 4.986 4.91 3.98 4.91 4.986 4.91 3.98 2.98 4.06 4.25 4.41 3.98 2.74 3.89 2.74 3.98 2.74 3.98 2.74 3.98 2.74 4.98 4.91 4.91 4.91 4.	I	2023	2024	2025	2026	Fo 2027	Forecast Data 2028	2029	2030	2031	2032	2033
17531 18024 18627 19388 20189 20961 21900 4.69 2.81 3.35 4.09 4.13 3.92 4.38 11458 11224 11508 11913 12373 12881 13304 36200 36287 37464 3887 40540 42291 44156 1.77 0.24 3.24 3.80 44.25 4.416 3.28 20553 21139 22124 23299 24429 25746 4.416 20553 21139 22124 23299 24429 25746 4.416 4.91 8.77 2.89 4.05 4.48 4.66 5.50 4.91 8.77 2.89 4.05 4.48 4.66 5.50 2.71 4.34 7417 7694 8017 8298 8686 6.65 0.09 3.82 3.73 4.20 3.50 3.46 70517 72168 74813 7694	S	204129 3.98	208010	215147 3.43	224900 4.53	235603 4.76	247379 5.00	259472 4.89	272583 5.05	285728 4.82	299811 4.93	314390
14458 11224 11508 11913 12373 12881 13304 36200 36287 3.52 3.86 4.11 3.28 36200 36287 3.52 3.86 4.11 3.28 36200 36287 3.26 4.29 4.11 3.28 20553 21139 22124 23299 24429 5.39 4.41 20553 21139 22124 23299 24429 5.39 4.41 15605 16973 17463 18170 18984 19868 20973 1498 1563 1615 1677 1750 1820 5.56 271 2.89 4.05 4.48 4.66 5.56 271 7.44 7417 7694 8017 8298 8585 6.65 0.09 3.82 3.73 4.20 3.56 5.46 70517 72168 74813 7694 8251 6.31 5.84 6.65	ge-	17531 4.69	18024 2.81	18627 3.35	19388 4.09	20189	20981 3.92	21900 4.38	22767 3.96	23589 3.61	24426 3.55	25367 3.85
36200 36287 37464 38887 40540 42291 44156 1.77 0.24 3.24 3.80 4.25 4.32 4.41 20553 21139 22124 23299 24429 25746 27085 15605 16973 17463 18170 18984 19868 20973 1498 1563 1615 1677 1750 1820 1906 2.71 4.34 3.32 3.85 4.04 4.69 5.56 2.71 4.34 744 7694 8017 8298 8585 6.65 0.09 3.82 3.73 4.20 3.50 3.46 70517 72168 74813 78904 83519 8786 8786 6.65 0.09 3.82 3.73 4.20 3.50 3.46 5.63 2.34 4.68 4.18 4.36 4.13 4.37 0.13 3.34 4.68 4.18 4.18 <td>1 MANUFACTURERS ge</td> <td>11458 9.84</td> <td>11224 -2.04</td> <td>11508 2.53</td> <td>11913 3.52</td> <td>12373 3.86</td> <td>12881</td> <td>13304</td> <td>13865 4.22</td> <td>14291 3.07</td> <td>14688 2.78</td> <td>15195 3.45</td>	1 MANUFACTURERS ge	11458 9.84	11224 -2.04	11508 2.53	11913 3.52	12373 3.86	12881	13304	13865 4.22	14291 3.07	14688 2.78	15195 3.45
20553 21139 22124 23299 24429 25746 27085 8.38 2.86 4.66 5.31 4.85 5.39 5.20 15605 16973 17463 18170 18984 19868 20973 1498 1563 1615 1617 1750 1820 1906 2.71 4.34 3.32 3.85 4.04 4.69 5.66 7137 7144 7417 7694 8017 8298 8558 6.65 0.09 3.82 3.73 4.20 3.50 3.46 70517 72168 74813 78904 83519 88789 93975 1 5.63 2.34 3.66 5.47 5.85 6.31 5.84 5.63 14950 1549 16173 16848 17583 18309 4.37 2.34 3.66 8795 9121 9281 28951 2.38 30074 1.48 1.80 <td>JODSge</td> <td>36200</td> <td>36287 0.24</td> <td>37464 3.24</td> <td>38887 3.80</td> <td>40540 4.25</td> <td>42291 4.32</td> <td>44156 4.41</td> <td>45914 3.98</td> <td>47824 4.16</td> <td>49751 4.03</td> <td>51990 4.50</td>	JODSge	36200	36287 0.24	37464 3.24	38887 3.80	40540 4.25	42291 4.32	44156 4.41	45914 3.98	47824 4.16	49751 4.03	51990 4.50
15605 16973 17463 18170 18984 19868 20973 -4.91 8.77 2.89 4.05 4.48 4.66 5.56 1498 1563 1615 1677 1750 1820 1906 7137 7144 7417 7694 8017 8298 8585 6.65 0.09 3.82 3.73 4.20 3.50 3.46 70517 72168 74813 78904 83519 88789 93975 1 5.63 2.34 3.66 5.47 5.85 6.31 5.84 14969 14950 1549 16173 16848 17583 18309 4.37 0.013 3.34 4.68 4.18 4.36 4.13 8660 8540 8667 8795 8953 9121 9281 28951 2.2286 30074 3.249 4.36 4.31 4.22 3.19 4.66 4.31 4.36 <td>KING PLACESge-</td> <td>20553 8.38</td> <td>21139 2.85</td> <td>22124 4.66</td> <td>23299 5.31</td> <td>24429 4.85</td> <td>25746 5.39</td> <td>27085 5.20</td> <td>28455 5.06</td> <td>29830 4.83</td> <td>31378 5.19</td> <td>33069 5.39</td>	KING PLACESge-	20553 8.38	21139 2.85	22124 4.66	23299 5.31	24429 4.85	25746 5.39	27085 5.20	28455 5.06	29830 4.83	31378 5.19	33069 5.39
1498 1563 1615 1677 1750 1820 1906 2.71 4.34 3.32 3.85 4.32 4.04 4.69 7137 7144 7417 7694 8017 8298 8585 6.65 0.09 3.82 3.73 4.20 3.50 3.46 70517 72168 74813 78904 83519 88789 93975 11 14969 14950 15449 16173 16848 17583 18309 4.37 -0.13 3.34 4.68 4.18 4.36 4.13 8660 8540 8667 8795 8953 9121 9281 4.31 1.49 1.48 1.80 1.87 1.75 28951 22285 30074 3.21 4.36 4.31 4.22 3.19 4.06 3.81 4.66 4.31 4.22 4.33	ge-	15605 -4.91	16973 8.77	17463 2.89	18170 4.05	18984 4.48	19868 4.66	20973 5.56	21915 4.49	22940 4.68	24039 4.79	25196 4.81
7137 7144 7417 7694 8017 8298 8585 6.65 0.09 3.82 3.73 4.20 3.50 3.46 70517 72168 74813 78904 83519 88789 93975 11 14969 14950 15449 16173 16848 17583 18309 4.37 -0.13 3.34 4.68 4.18 4.36 4.13 8660 8540 8667 8795 8953 9121 9281 -3.19 -1.39 1.49 1.48 1.80 1.87 1.75 28951 29285 30074 31221 32487 33888 35317 3317 3.19 1.15 2.70 3.81 4.06 4.31 4.22		1498 2.71	1563 4.34	1615 3.32	1677 3.85	1750 4.32	1820 4.04	1906 4.69	1989 4.39	2084	2185 4.82	2292 4.91
70517 72168 74813 78904 83519 88789 93975 1 5.63 2.34 3.66 5.47 5.85 6.31 5.84 1 14969 14950 15449 16173 16848 17583 18309 4.37 -0.13 3.34 4.68 4.18 4.36 4.13 8660 8540 8667 8795 8953 9121 9281 -3.19 -1.39 1.48 1.80 1.87 1.75 28951 22285 30074 3121 32487 33888 35317 3.19 -1.15 2.70 3.81 4.06 4.31 4.22	ELSge	7137 6.65	7144 0.09	7417 3.82	7694 3.73	8017 4.20	8298 3.50	8585 3.46	8881 3.45	9203 3.62	9551 3.79	9855 3.18
14969 14950 15449 16173 16848 17583 18309 4.37 -0.13 3.34 4.68 4.18 4.36 4.13 8660 8540 8667 8795 8953 9121 9281 -3.19 -1.39 1.49 1.48 1.80 1.87 1.75 28951 29285 30074 31221 32487 33888 35317 3317 3.19 1.15 2.70 3.81 4.06 4.31 4.22) SERVICEge	70517 5.63	72168 2.34	74813 3.66	78904 5.47	83519 5.85	88789 6.31	93975 5.84	100261 6.69	106478 6.20	113228 6.34	119750 5.76
8660 8540 8667 8795 8953 9121 9281 -3.19 -1.39 1.49 1.48 1.80 1.87 1.75 28951 29285 30074 31221 32487 33888 35317 3312 3.19 1.15 2.70 3.81 4.06 4.31 4.22	E GOODSge	14969 4.37	14950 -0.13	15449 3.34	16173 4.68	16848 4.18	17583 4.36	18309 4.13	19103 4.34	19902 4.18	20825 4.64	21794 4.65
28951 29285 30074 31221 32487 33888 35317 3.19 1.15 2.70 3.81 4.06 4.31 4.22	, COMMUNICATION ge	8660 -3.19	8540 -1.39	8667 1.49	8795 1.48	8953 1.80	9121	9281 1.75	9432 1.63	9588 1.66	9739 1.57	9883
		28951 3.19	29285 1.15	30074	31221 3.81	32487 4.06	33888 4.31	35317 4.22	36869 4.40	38410 4.18	40061 4.30	41759 4.24

Table 13: Tennessee Gross Domestic Product by Sector (millions of 2012 dollars)

					Fc	orecast Data					
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
GROSS DOMESTIC PRODUCT	383,014	389,776	397,682	407,335	417,287	427,581	438,462	449,198	459,561	469,784	480,321
	3.29	1.77	2.03	2.43	2.44	2.47	2.54	2.45	2.31	2.22	2.24
NATURAL RESOURCES & MININGPercentage change	3,028 -1.62	3,009	3,000	2,998	2,995	2,988	2,985	2,983	2,992	2,996 0.13	3,001
CONSTRUCTION	10,386 3.78	10,665 2.69	10,888	11,114	11,350 2.13	11,609	11,861	12,148 2.42	12,392 2.01	12,661 2.17	12,926 2.09
MANUFACTURING	58,427 0.01	59,040 1.05	60,070	61,718 2.74	63,391 2.71	65,022 2.57	66,741 2.64	68,527 2.68	70,263 2.53	72,099 2.61	73,950 2.57
DURABLE GOODS	34,886	35,354	36,141	37,507	38,881	40,229	41,665	43,153	44,573	46,092	47,642
	0.68	1.34	2.23	3.78	3.66	3.47	3.57	3.57	3.29	3.41	3.36
NONDURABLE GOODSPricentage change	23,541	23,686	23,929	24,211	24,510	24,792	25,076	25,374	25,690	26,008	26,308
	-0.74	0.62	1.03	1.18	1.24	1.15	1.14	1.19	1.25	1.24	1.15
TRADE, TRANSPORTATION & UTILITIES	68,034	68,777	69,340	70,665	71,991	73,375	74,643	76,056	77,568	79,057	80,612
	4.54	1.09	0.82	1.91	1.88	1.92	1.73	1.89	1.99	1.92	1.97
WHOLESALE TRADEPercentage change	26,031	26,677	27,298	27,951	28,557	29,114	29,691	30,296	30,881	31,409	31,940
	3.76	2.48	2.33	2.39	2.17	1.95	1.98	2.04	1.93	1.71	1.69
RETAIL TRADEPercentage change	25,723	25,593	25,308	25,732	26,191	26,768	27,232	27,777	28,471	29,186	29,953
	6.40	-0.51	-1.12	1.68	1.79	2.20	1.73	2.00	2.50	2.51	2.63
TRANSPORTATION & UTILITIESPercentage change	16,279	16,507	16,733	16,983	17,243	17,493	17,720	17,982	18,216	18,462	18,719
	2.94	1.40	1.37	1.49	1.53	1.45	1.30	1.48	1.30	1.35	1.39
INFORMATION	19,441	19,937	20,515	21,114	21,591	22,198	22,852	23,501	24,176	24,717	25,326
	4.29	2.55	2.90	2.92	2.26	2.81	2.95	2.84	2.87	2.24	2.46
FINANCIAL ACTIVITIESPercentage change	62,235	62,851	63,749	64,891	66,104	67,340	68,687	69,862	71,105	72,264	73,543
	1.84	0.99	1.43	1.79	1.87	1.87	2.00	1.71	1.78	1.63	1.77
PROFESSIONAL & BUSINESS SERVICESPercentage change	52,684	54,393	56,542	58,727	61,057	63,644	66,379	68,933	71,135	73,380	75,673
	3.51	3.24	3.95	3.86	3.97	4.24	4.30	3.85	3.20	3.16	3.12
EDUCATION & HEALTH SERVICESPercentage change	41,296	42,568	43,926	45,262	46,723	48,046	49,703	51,329	52,848	54,317	55,789
	5.85	3.08	3.19	3.04	3.23	2.83	3.45	3.27	2.96	2.78	2.71
LEISURE & HOSPITALITYPercentage change	24,335	25,079	25,867	26,697	27,565	28,499	29,389	30,292	31,170	32,030	32,930
	6.82	3.06	3.14	3.21	3.25	3.39	3.12	3.07	2.90	2.76	2.81
OTHER SERVICES	8,078 0.31	8,161	8,241	8,337	8,431	8,515 0.99	8,600	8,685	8,767 0.94	8,836 0.79	8,900
GOVERNMENT	35,071	35,295	35,544	35,813	36,088	36,345	36,622	36,882	37,144	37,426	37,672
	3.99	0.64	0.71	0.76	0.77	0.71	0.76	0.71	0.71	0.76	0.66
FEDERALPercentage change	10,174 3.23	10,272 0.96	10,346 0.72	10,428	10,510 0.78	10,583 0.70	10,672 0.84	10,743	10,832 0.83	10,916 0.78	11,004
STATE & LOCAL	24,896	25,023	25,199	25,385	25,578	25,762	25,950	26,140	26,312	26,509	26,669
	4.14	0.51	0.70	0.74	0.76	0.72	0.73	0.73	0.66	0.75	0.60
Boyd Center for Business and Economic Research, Unive	University of Tennessee	nnessee						F	ennessee l	Econometric Mode	ic Model

In this Section—

Appendix B: Historical Data

Quarterly Pages 32-47 (2020:2 to 2023:3) Annual Pages 48-60 (2011 to 2022)

Quarterly History Tables

Table 1: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted	32
Table 2: Selected Per Capita U.S. and Tennessee Economic Indicators, Seasonally Adjusted	34
Table 3: Tennessee Personal Income Components, Seasonally Adjusted Annual Rates (millions of 2017 dollars)	35
Table 4: Tennessee Personal Income Components, Seasonally Adjusted Annual Rates (millions of current dollars)	36
Table 5: Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs)	37
Table 5: Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs)	38
Table 6: Tennessee Durable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs)	39
Table 7: Tennessee Nondurable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs)	40
Table 8: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (2017 dollars)	41
Table 9: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (current dollars)	43
Table 10: Tennessee Civilian Labor Force and Unemployment Rate, Seasonally Adjusted	45
Table 11: Tennessee Taxable Sales, Seasonally Adjusted (millions of 2017 dollars)	46
Table 12: Tennessee Taxable Sales, Seasonally Adjusted (millions of current dollars)	47

Annual History Tables

Table 1: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted	48
Table 2: Selected Per Capita U.S. and Tennessee Economic Indicators	49
Table 3: Tennessee Personal Income Components (millions of 2017 dollars)	50
Table 4: Tennessee Personal Income Components (millions of current dollars)	51
Table 5: Tennessee Nonfarm Employment by Sector (thousands of jobs)	52
Table 6: Tennessee Durable Goods Manufacturing Employment (thousands of jobs)	53
Table 7: Tennessee Nondurable Goods Manufacturing Employment (thousands of jobs)	54
Table 8: Tennessee Average Annual Wage and Salary Rate by Sector (2017 dollars)	55

Table 1: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted

				.			Historical Data	I Data								Annual	
	2020:2	2020:2 2020:3	2020:4	2021:1	2021:2	2021:3	2021:4	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2020	2021	2022
US GDP (Bil2017\$) SAAR	19034.8	20511.8	20724.1	20990.5	21309.5 2	21483.1 2	21847.6 2	21738.9 2	21708.2 2	21851.1	21990.0	22112.3 ;	22225.4 2	22491.6	20234.1 2	21407.7 2	21822.0
	-28.02	34.84	4.21	5.24	6.22	3.30	6.96	-1.98	-0.56	2.66	2.57	2.24	2.06	4.88	-2.21	5.80	1.94
	-7.53	-1.47	-1.08	1.57	11.95	4.74	5.42	3.57	1.87	1.71	0.65	1.72	2.38	2.93	-2.21	5.80	1.94
US GDP (Bil\$) SAAR 19913.1 21647.6 % Chg Prev Qtr SAAR	19913.1 -29.17 -6.88	21647.6 39.66 -0.21	22024.5 7.15 0.56	22600.2 ; 10.87 4.12	23292.4 2 12.83 16.97	23829.0 2 9.54 10.08	24654.6 2 14.60 11.94	25029.1 2 6.22 10.75	25544.3 2 8.49 9.67	25994.6 7.24 9.09	26408.4 6.52 7.11	26813.6 ; 6.28 7.13	27063.0 2 3.77 5.95	27623.5 8.55 6.27	21322.9 ; -0.92 -0.92	23594.0 2 10.65 10.65	25744.1 9.11 9.11
TN PERSONAL INCOME (MIL2017\$) SAAR. % Chg Prev Qtr SAAR. % Chg Same Qtr Last Yr	353693	344148	342275	389301	357781	355345	355163	355264	352606	353862	355113	359737	361231	363385	343717	364397	354211
	24.63	-10.37	-2.16	67.36	-28.66	-2.70	-0.20	0.11	-2.96	1.43	1.42	5.31	1.67	2.41	6.05	6.02	-2.80
	9.42	5.97	5.02	16.30	1.16	3.25	3.77	-8.74	-1.45	-0.42	-0.01	1.26	2.45	2.69	6.05	6.02	-2.80
US PERSONAL INCOME (BIL2017\$) SAAR% Chg Prev Qtr SAAR% Chg Same Qtr Last Yr	19414	18931	18715	20794	19450	19268	19086	18849	18740	18835	18861	18979	19063	19091	18760	19650	18821
	35.90	-9.58	-4.50	52.42	-23.46	-3.68	-3.72	-4.88	-2.28	2.03	0.55	2.54	1.77	0.59	5.79	4.74	-4.22
	9.82	6.62	4.79	15.65	0.18	1.78	1.99	-9.36	-3.65	-2.25	-1.18	0.69	1.72	1.36	5.79	4.74	-4.22
TN PERSONAL INCOME (MIL\$) SAAR % Chg Prev Qtr SAAR % Chg Same Qtr Last Yr	367707	360733	360563	414909	387147	389831	396057	403544	407532	413683	419381	429199	433637	439309	359634	396986	411035
	22.48	-7.37	-0.19	75.34	-24.20	2.80	6.54	7.78	4.01	6.18	5.62	9.70	4.20	5.34	7.19	10.39	3.54
	9.99	7.14	6.29	18.70	5.29	8.07	9.84	-2.74	5.27	6.12	5.89	6.36	6.41	6.19	7.19	10.39	3.54
US PERSONAL INCOME (BIL\$) SAAR% Chg Prev Qtr SAAR% Chg Same Qtr Last Yr	20183	19844	19715	22162	21046	21138	21284	21411	21660	22019	22274	22644	22883	23083	19629	21408	21841
	33.55	-6.56	-2.57	59.70	-18.67	1.76	2.79	2.40	4.74	6.80	4.72	6.81	4.30	3.53	6.93	9.06	2.02
	10.39	7.79	6.06	18.04	4.28	6.52	7.96	-3.39	2.92	4.17	4.65	5.76	5.65	4.83	6.93	9.06	2.02
TN NONFARM JOBS (THOUS)	2847.9	2976.1	3046.0	3062.0	3078.7	3124.9	3147.0	3202.0	3235.7	3265.2	3282.6	3308.8	3316.8	3324.2	3003.7	3103.1	3246.4
	-32.75	19.25	9.74	2.11	2.20	6.14	2.86	7.17	4.29	3.69	2.16	3.23	0.97	0.90	-3.81	3.31	4.62
	-8.72	-4.96	-2.72	-2.64	8.10	5.00	3.31	4.57	5.10	4.49	4.31	3.34	2.51	1.81	-3.81	3.31	4.62
US NONFARM JOBS (MIL)	133.7	140.5	142.6	143.6	145.2	147.2	149.2	150.8	152.0	153.3	154.3	155.2	155.9	156.5	142.2	146.3	152.6
	-39.83	22.09	5.89	2.97	4.40	5.68	5.47	4.61	3.21	3.43	2.50	2.53	1.73	1.57	-5.79	2.90	4.34
	-11.26	-6.99	-5.97	-5.40	8.57	4.73	4.62	5.04	4.74	4.18	3.43	2.92	2.54	2.08	-5.79	2.90	4.34
TN MFG JOBS (THOUS)	309.9	337.6	341.4	346.2	349.1	351.4	351.3	358.4	366.1	368.5	366.7	368.2	371.4	370.5	335.6	349.5	364.9
	-40.98	40.76	4.64	5.69	3.34	2.76	-0.21	8.34	8.92	2.68	-1.96	1.63	3.55	-0.97	-5.61	4.12	4.42
	-13.41	-5.50	-3.09	-2.10	12.62	4.10	2.87	3.51	4.88	4.86	4.40	2.74	1.45	0.54	-5.61	4.12	4.42
US MFG JOBS (MIL)	11.7	12.1	12.2	12.2	12.3	12.4	12.5	12.7	12.8	12.9	13.0	13.0	13.0	13.0	12.2	12.4	12.8
	-29.93	13.49	3.59	2.27	0.82	4.63	4.81	3.96	4.16	3.08	2.38	0.55	0.02	0.08	-5.08	1.56	3.83
	-8.89	-6.01	-4.96	-4.20	4.93	2.82	3.12	3.54	4.39	4.00	3.39	2.53	1.50	0.75	-5.08	1.56	3.83
TN UNEMPLOYMENT RATE (%)	12.6	7.9	0.9	5.3	4.8	4.2	3.7	3.4	3.3	3.3	3.5	3.5	3.2	3.1	7.5	4.5	3.4
US UNEMPLOYMENT RATE (%)	13.0	8.8	6.8	6.2	5.9	5.1	4.2	3.8	3.6	3.5	3.6	3.5	3.5	3.7	8.1	5.4	3.6
					(CONT	CONTINUED ON NEXT PAGE)	N NEXT	PAGE)									

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Table 1: Selected U.S. and Tennessee Economic Indic	onomic I	ndicators,	s, Seasc	Seasonally Adjusted	justed											December	r 2023
							Historical Data	ıl Data								Annual	
. 1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2020	2021	2022
CHAINED PRICE INDEX, GDP (2017=100.0). % Chg Prev Qtr SAAR. % Chg Same Qtr Last Yr.	104.7	105.6	106.3	107.7	109.3	111.0	112.9	115.2	117.7	119.0	120.1	121.3	121.8	122.8	105.4	110.2	118.0
	-1.44	3.61	2.82	5.38	6.08	6.08	7.03	8.49	9.05	4.41	3.87	3.88	1.74	3.52	1.34	4.57	7.05
	0.75	1.32	1.69	2.56	4.46	5.08	6.14	6.92	7.66	7.23	6.43	5.28	3.47	3.25	1.34	4.57	7.05
US PERS CONSUMP DEFL (2017=100.0) % Chg Prev Qtr SAAR	104.0	104.8	105.3	106.6	108.2	109.7	111.5	113.6	115.6	116.9	118.1	119.3	120.0	120.9	104.6	109.0	116.0
	-1.73	3.34	2.01	4.77	6.26	5.65	6.76	7.66	7.18	4.68	4.14	4.17	2.49	2.92	1.08	4.17	6.46
	0.52	1.10	1.21	2.07	4.08	4.66	5.86	6.58	6.81	6.56	5.90	5.03	3.86	3.43	1.08	4.17	6.46
CONSUMER PRICE INDEX. ALL-URBAN (82-84=1.000)	2.563	2.592	2.610	2.637	2.686	2.729	2.787	2.849	2.915	2.955	2.985	3.013	3.034	3.060	2.589	2.710	2.926
	-3.79	4.64	2.81	4.18	7.52	6.61	8.81	9.18	9.66	5.55	4.16	3.81	2.71	3.58	1.25	4.68	7.99
	0.43	1.23	1.22	1.91	4.78	5.26	6.77	8.02	8.56	8.28	7.11	5.77	4.05	3.57	1.25	4.68	7.99
BANK PRIME INTEREST RATE (%)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.9	5.4	8.9	7.7	8.2	8.4	3.5	3.3	4.9
FEDERAL FUNDS RATE (% per annum)	0.060	0.093	0.090	0.080	0.070	0.090	0.080	0.120	0.770	2.190	3.653	4.517	4.990	5.260	0.376	0.080	1.683
30-YEAR FIXED MORTGAGE RATE (%)	3.3	3.0	2.8	2.9	3.1	3.0	3.2	3.9	5.3	2.7	9.9	6.4	6.5	7.0	3.2	3.0	5.4
TN TAXABLE SALES (MIL2017\$)	33038	35685	37411	39564	40806	41068	41034	42233	42826	42581	41553	43115	42452	41608	139546	162472	169193
	-4.39	36.10	20.79	25.09	13.16	2.59	-0.33	12.21	5.74	-2.27	-9.32	15.91	-6.01	-7.72	1.90	16.43	4.14
	-2.55	3.36	6.75	18.41	23.51	15.08	9.69	6.75	4.95	3.69	1.26	2.09	-0.87	-2.29	1.90	16.43	4.14
TN TAXABLE SALES (MIL\$)	34347	37405	39410	42167	44155	45053	45759	47972	49497	49780	49073	51440	50961	50302	146048	21.28	196322
	-6.05	40.65	23.23	31.06	20.24	8.39	6.41	20.80	13.33	2.30	-5.56	20.74	-3.67	-5.08	3.02	21.28	10.83
	-2.05	4.50	8.04	20.87	28.56	20.45	16.11	13.77	12.10	10.49	7.24	7.23	2.96	1.05	3.02	21.28	10.83
TN AVG ANNUAL WAGE, NONFARM (2017\$)	53190	53451	54277	54262	54708	54708	54762	54362	53355	53751	53494	53764	54115	54312	53065	54610	53741
	15.22	1.98	6.33	-0.11	3.33	0.00	0.40	-2.89	-7.20	3.00	-1.90	2.04	2.63	1.47	5.40	2.91	-1.59
	5.99	6.38	7.42	5.69	2.85	2.35	0.89	0.18	-2.47	-1.75	-2.32	-1.10	1.42	1.04	5.40	2.91	-1.59
TN AVG ANNUAL WAGE, NONFARM (\$) % Chg Prev Qtr SAAR	55298	56027	57177	57831	59199	60017	61067	61750	61666	62837	63175	64146	64961	65660	55527	59529	62357
	13.23	5.38	8.47	4.65	9.80	5.65	7.19	4.55	-0.54	7.81	2.17	6.29	5.18	4.37	6.55	7.21	4.75
	6.54	7.55	8.72	7.88	7.05	7.12	6.80	6.78	4.17	4.70	3.45	3.88	5.34	4.49	6.55	7.21	4.75

Table 2: Selected Per Capita U.S. and Tennessee Economic Indicators, Seasonally Adjusted

							Historical Data	al Data								Annual	
	2020:2 2020:3	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2020	2021	2022
US GDP (2012\$) SAAR	57376	61784	62418	63217	64131	64583	65626	65259	65085	65410	65743	66043	66296	66987	60970	64390	65374
	-28.07	34.46	4.17	5.22	5.91	2.85	6.61	-2.22	-1.06	2.01	2.05	1.84	1.54	4.23	-2.60	5.61	1.53
	-7.92	-1.83	-1.34	1.47	11.77	4.53	5.14	3.23	1.49	1.28	0.18	1.20	1.86	2.41	-2.60	5.61	1.53
US GDP (\$) SAAR	60023	65205	66334	68065	70098	71635	74057	75136	76586	77813	78953	80085	80726	82271	64251	70966	77124
	-29.23	39.27	7.11	10.85	12.50	9.06	14.22	5.96	7.95	6.57	5.99	5.86	3.24	7.88	-1.32	10.45	8.68
	-7.28	-0.58	0.30	4.01	16.79	9.86	11.64	10.39	9.26	8.62	6.61	6.59	5.41	5.73	-1.32	10.45	8.68
TN PERSONAL INCOME (2017\$) SAAR % Chg Prev Qtr SAAR % Chg Same Qtr Last Yr	51414 49923	49923	49550	56243	51585	51131	51004	50918	50439	50521	50602	51164	51280	51489	49912	52491	50620
	23.60 -11.10	-11.10	-2.96	66.00	-29.23	-3.47	-0.99	-0.67	-3.71	0.65	0.65	4.52	0.91	1.64	5.16	5.17	-3.56
	8.50 5.08	5.08	4.15	15.34	0.33	2.42	2.93	-9.47	-2.22	-1.19	-0.79	0.48	1.67	1.92	5.16	5.17	-3.56
US PERSONAL INCOME (2017\$) SAAR % Chg Prev Qtr SAAR	58518	57023	56366	62626	58534	57925	57331	56583	56187	56381	56387	56686	56862	56858	56529	59102	56385
	35.80	-9.83	-4.53	52.39	-23.69	-4.09	-4.04	-5.12	-2.77	1.38	0.05	2.13	1.25	-0.03	5.37	4.55	4.60
	9.35	6.22	4.52	15.53	0.03	1.58	1.71	-9.65	-4.01	-2.67	-1.65	0.18	1.20	0.85	5.37	4.55	4.60
TN PERSONAL INCOME (\$) SAAR	53451	52329	52197	59943	55819	56094	56877	57838	58296	59061	59760	61043	61558	62247	52223	57183	58739
	21.46	-8.14	-1.00	73.92	-24.81	1.98	5.70	6.93	3.20	5.36	4.82	8.87	3.42	4.55	6.30	9.50	2.72
	9.06	6.24	5.41	17.73	4.43	7.19	8.96	-3.51	4.44	5.29	5.07	5.54	5.60	5.39	6.30	9.50	2.72
US PERSONAL INCOME (\$) SAAR	60837	59771	59377	66746	63338	63547	63933	64273	64939	65912	66592	67631	68259	68748	59147	64390	65431
	33.45	-6.82	-2.61	59.67	-18.91	1.32	2.45	2.15	4.21	6.13	4.20	6.39	3.77	2.90	6.51	8.86	1.62
	9.92	7.40	5.79	17.92	4.11	6.32	7.67	-3.70	2.53	3.72	4.16	5.22	5.11	4.30	6.51	8.86	1.62
TN TAXABLE SALES (2017\$)	4803	5177	5416	5716	5883	5909	5893	6053	6126	6079	5921	6132	6026	5896	20262	23401	24180
	-5.19	34.98	19.80	24.07	12.25	1.77	-1.12	11.33	4.91	-3.02	-10.01	15.04	-6.72	-8.41	1.04	15.49	3.32
	-3.37	2.50	5.86	17.44	22.51	14.16	8.81	5.90	4.12	2.88	0.48	1.31	-1.63	-3.02	1.04	15.49	3.32
TN TAXABLE SALES (\$)	4993	5426	5705	6092	6366	6483	6571	6876	7080	7107	6993	7316	7234	7127	21206	25512	28056
	-6.83	39.49	22.22	30.00	19.28	7.52	5.57	19.85	12.45	1.52	-6.28	19.83	-4.40	-5.79	2.15	20.31	9.97
	-2.87	3.63	7.15	19.87	27.51	19.48	15.18	12.87	11.22	9.63	6.41	6.41	2.18	0.29	2.15	20.31	9.97
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Table 3: Tennessee Personal Income Components, Seasonally Adjusted Annual Rates (millions of 2017 dollars)

	2022	354211 -2.80 -2.80	175415 2.93 2.93	34850 -1.61 -1.61	51458 1.34 1.34	51843 2.35 2.35	71161 -17.54 -17.54	28484 5.26 5.26	-2030 -3.76 -3.76	50620 -3.56 -3.56
Annual	2021	364397 6.02 6.02	6.30 6.30 6.30	35421 1.59 1.59	50779 8.09 8.09	50653 2.70 2.70	86299 7.25 7.25	27060 3.64 3.64	-2109 -0.08 -0.08	52491 5.17 5.17
	2020	343717 6.05 6.05	160308 1.35 1.35	34866 0.80 0.80	46978 4.78 4.78	49319 -0.05 -0.05	80464 24.38 24.38	26108 3.28 3.28	-2111 -6.18 -6.18	49912 5.16 5.16
	2023:2	361231 1.67 2.45	180438 3.59 3.94	35409 1.55 2.24	52637 -0.12 3.26	54119 1.78 4.94	70062 -1.56 -2.74	29336 2.20 3.96	-2098 2.79 5.41	51280 0.91 1.67
	2023:1	359737 5.31 1.26	178854 5.32 2.18	35274 4.65 0.57	52652 6.78 2.11	53881 6.38 6.50	70337 4.04 -4.02	29176 6.08 3.28	-2084 4.64 1.70	51164 4.52 0.48
	2022:4	355113 1.42 -0.01	176553 0.21 1.90	34875 0.68 -0.41	51796 2.35 -0.92	53053 7.10 4.18	69645 -0.19 -4.94	28749 0.44 4.75	-2060 8.18 -3.60	50602 0.65 -0.79
	2022:3	353862 1.43 -0.42	176459 6.75 2.65	34816 2.10 -1.46	51496 4.16 2.05	52151 4.56 2.58	69679 -12.45 -8.45	28717 7.26 5.73	-2020 6.08 -5.93	50521 0.65 -1.19
	2022:2	352606 -2.96 -1.45	173602 -3.26 2.49	34635 -4.91 -2.65	50973 -4.52 1.17	51573 7.98 1.62	72033 -6.67 -10.70	28219 -0.46 5.03	-1991 -10.91 -5.42	50439 -3.71 -2.22
	2022:1	355264 (0.11 -8.74	175045 4.19 4.75	35074 0.64 -1.92	51566 -5.33 3.14	50593 -2.59 0.99	73287 0.10 -36.36	28251 12.28 5.55	-2049 -15.53 0.06	50918 -0.67 -9.47
al Data	2021:4	355163 -0.20 3.77	173258 3.17 4.18	35017 -3.50 -2.04	52277 15.19 6.67	50925 0.69 1.93	73267 -14.14 4.29	27444 4.25 2.59	-2137 -1.89 -4.77	51004 -0.99 2.93
Historical Data	2021:3	355345 -2.70 3.25	171910 6.10 7.41	35331 -2.74 1.06	50461 0.60 2.46	50838 0.70 4.54	76113 -20.71 -4.26	27160 4.42 3.88	-2147 8.39 2.53	51131 -3.47 2.42
	2021:2	357781 -28.66 1.16	169383 5.57 11.10	35576 -2.05 5.76	50386 3.17 27.46	50749 5.31 3.84	80659 -75.93 -24.21	26868 1.54 6.42	-2105 11.58 6.03	51585 -29.23 0.33
	2021:1	389301 67.36 16.30	167104 1.94 2.89	35761 0.18 1.82	49994 8.29 -0.26	50097 1.08 0.58	115158 621.92 75.33	26766 0.21 1.82	-2048 -30.69 -3.42	56243 66.00 15.34
	2020:4	342275 (-2.16 5.02	166302 16.56 4.46	35745 9.30 2.99	49008 -1.95 7.78	49963 11.42 0.19	70254 -39.01 9.00	26752 9.59 4.70	-2244 31.83 0.29	49550 -2.96 4.15
	2020:3	344148 : -10.37 5.97	160050 21.44 1.10	34959 16.66 0.87	49251 140.95 8.87	48630 -1.97 -1.98	79499 -68.86 23.17	26146 15.01 3.23	-2094 23.98 -7.59	49923 -11.10 5.08
	2020:2		152463 -22.35 -3.22	33638 -15.87 -2.47	39530 -61.32 -10.99	48873 -7.32 -1.04	106422 589.24 64.17	25248 -14.90 0.40	-1985 -23.21 -11.46	51414 23.60 8.50
	2020:1 2020:2	334749 (11.29 3.81	162418 8.31 3.03	35123 4.87 1.80	50124 47.66 13.38	49811 -0.44 2.67	65681 106422 7.82 589.24 1.13 64.17	26287 12.03 4.78	-2120 -19.41 -5.92	48762 10.35 2.93
	. 1	TN PERSONAL INCOME334749 353693 % Chg Prev Qtr SAAR	WAGES AND SALARIES 162418 152463 % Chg Prev Qtr SAAR 8.31 -22.35 % Chg Same Qtr Last Yr 3.03 -3.23	OTHER LABOR INCOME	PROPRIETORS INCOME	RENT, INTEREST, DIVIDENDS	TRANSFER PAYMENTS	LESS: PERS CONT FOR SOC INS % Chg Prev Qtr SAAR	RESIDENCE ADJUSTMENT	PER CAPITA PERSONAL INCOME (\$) % Chg Prev Qtr SAAR

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Table 4: Tennessee Personal Income Components, Seasonally Adjusted Annual Rates (millions of current dollars)

	2022	411035 3.54 3.54	203568 9.57 9.57	40440 4.75 4.75	59715 7.86 7.86	60174 8.98 8.98	82551 -12.00 -12.00	33057 12.06 12.06	-2356 2.43 2.43	58739 2.72 2.72
Annual	2021	396986 4 10.39 10.39	185796 2º 10.75 10.75	38605 5.81 5.81	55365 12.60 12.60	55217 7.00 7.00	93804 11.49 11.49	29500 7.98 7.98	-2300 4.10 4.10	57183 9.50 9.50
	2020	359634 ; 7.19 7.19	167761 2.46 2.46	36486 1.90 1.90	49171 5.95 5.95	51606 1.03 1.03	84139 25.65 25.65	27321 4.41 4.41	-2209 -5.14 -5.14	52223 6.30 6.30
	2023:2	433637 4.20 6.41	216605 6.17 7.96	42507 4.08 6.19	63188 2.37 7.26	64966 4.31 8.99	84105 0.89 1.02	35216 4.74 7.98	-2519 5.35 9.48	61558 3.42 5.60
	2023:1	429199 9.70 6.36	213389 9.70 7.32	42085 9.01 5.63	62819 11.22 7.25	64284 10.82 11.86	83919 8.37 0.81	34810 10.50 8.48	-2486 9.00 6.82	61043 8.87 5.54
	2022:4	419381 . 5.62 5.89	208506 4.37 7.92	41186 4.85 5.47	61170 6.60 4.93	62655 11.54 10.33	82249 3.94 0.67	33952 4.60 10.94	-2433 12.66 2.09	59760 4.82 5.07
	2022:3	413683 6.18 6.12	206289 11.74 9.38	40701 6.88 5.01	60201 9.03 8.75	60967 9.45 9.32	81458 -8.35 -2.45	33572 12.27 12.67	-2362 11.04 0.25	59061 5.36 5.29
	2022:2	407532 4 4.01 5.27	3.69 9.47	40030 1.92 3.98	58913 2.34 8.05	59606 15.73 8.54	83253 0.03 -4.61	32614 6.69 12.18	-2301 -4.51 1.02	58296 3.20 4.44
	2022:1	403544 4 7.78 -2.74	198833 2 12.17 11.64	39840 8.35 4.53	58574 1.92 9.93	57468 4.87 7.63	83246 7.77 -32.17	32090 20.88 12.49	-2327 -9.06 6.64	57838 6.93 -3.51
Data	2021:4	396057 4 6.54 9.84	193207 10.15 10.29	39049 3.02 3.70	58296 22.98 12.92	56789 7.50 7.90	81704 -8.33 10.40	30604 11.30 8.60	-2383 4.75 0.81	568 <i>77</i> 5.70 8.96
Historical Data	2021:3	389831 2.80 8.07	188594 12.10 12.42	38759 2.76 5.77	55358 6.28 7.23	55772 6.39 9.41	83500 -16.23 0.20	29796 10.31 8.72	-2356 14.51 7.31	56094 1.98 7.19
	2021:2	387147 -24.20 5.29	183286 12.18 15.64	38496 4.08 10.08	54522 9.63 32.67	54915 11.90 8.08	87280 -74.43 -21.11	29074 7.90 10.76	-2277 18.57 10.36	55819 -24.81 4.43
	2021:1	414909 3 75.34 18.70	178096 6.81 5.02	38113 4.96 3.92	53283 13.46 1.81	53393 5.91 2.66	122733 656.37 78.96	28526 4.99 3.93	-2182 -27.38 -1.42	59943 73.92 17.73
	2020:4	360563 -0.19 6.29	175187 18.91 5.72	37655 11.50 4.24	51627 0.02 9.09	52632 13.66 1.41	74008 -37.78 10.32	28181 11.80 5.97	-2364 34.49 1.50	52197 -1.00 5.41
	2020:3	360733 -7.37 7.14	167763 25.49 2.21	36644 20.55 1.99	51624 148.99 10.07	50974 1.30 -0.90	83330 -67.82 24.53	27406 18.85 4.37	-2195 28.12 -6.57	52329 -8.14 6.24
	2020:2		158504 -23.69 -2.71	34971 -17.33 -1.96	41097 -61.98 -10.53	50809 -8.92 -0.53	110638 577.33 65.03	26248 -16.37 0.92	-2064 -24.53 -11.00	53451 21.46 9.06
	2020:1 2020:2	349532 367707 12.73 22.48 5.36 9.99	169590 158504 9.72 -23.69 4.57 -2.71	36674 6.23 3.32	52338 49.57 15.07	52010 0.85 4.21	68581 110638 9.22 577.33 2.64 65.03	27448 13.49 6.34	-2214 -18.37 -4.51	50915 11.78 4.47
	. 1	TN PERSONAL INCOME	WAGES AND SALARIES	OTHER LABOR INCOME	PROPRIETORS INCOME	RENT, INTEREST, DIVIDENDS	TRANSFER PAYMENTS	LESS: PERS CONT FOR SOC INS % Chg Prev Qtr SAAR % Chg Same Qtr Last Yr	RESIDENCE ADJUSTMENT	PER CAPITA PERSONAL INCOME (\$) % Chg Prev Qtr SAAR

Tennessee Econometric Model

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Table 5: Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs)

							Historical	al Data			Ì		Ì			Annual	
. •	2020:2 20	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2020	2021	2022
TOTAL NONFARM	2847.9	2976.1	3046.0	3062.0	3078.7	3124.9	3147.0	3202.0	3235.7	3265.2	3282.6	3308.8	3316.8	3324.2	3003.7	3103.1	3246.4
	-32.75	19.25	9.74	2.11	2.20	6.14	2.86	7.17	4.29	3.69	2.16	3.23	0.97	0.90	-3.81	3.31	4.62
	-8.72	-4.96	-2.72	-2.64	8.10	5.00	3.31	4.57	5.10	4.49	4.31	3.34	2.51	1.81	-3.81	3.31	4.62
NATURAL RESOURCES, MINING AND CONSTRUCTION	131.80	133.33	136.17	138.00	139.07	141.90	143.93	147.57	149.70	152.97	155.77	157.4	156.57	157.83	134.28	140.73	151.50
	-11.27	4.74	8.77	5.50	3.13	8.40	5.86	10.49	5.91	9.02	7.53	4.26	-2.10	3.28	-0.20	4.80	7.66
	-2.18	-1.19	0.34	1.62	5.51	6.42	5.70	6.93	7.65	7.80	8.22	6.66	4.59	3.18	-0.20	4.80	7.66
MANUFACTURING	309.9	337.6	341.4	346.2	349.1	351.4	351.3	358.4	366.1	368.5	366.7	368.2	371.4	370.5	335.6	349.5	364.9
	-40.98	40.76	4.64	5.69	3.34	2.76	-0.21	8.34	8.92	2.68	-1.96	1.63	3.55	-0.97	-5.61	4.12	4.42
	-13.41	-5.50	-3.09	-2.10	12.62	4.10	2.87	3.51	4.88	4.86	4.40	2.74	1.45	0.54	-5.61	4.12	4.42
DURABLE GOODS	190.4	213.4	215.6	219.0	221.2	223.0	222.7	228.2	233.5	235.0	233.2	234.9	238.1	237.4	211.2	221.5	232.5
	-49.03	57.65	4.31	6.40	4.02	3.36	-0.49	10.18	9.59	2.69	-3.03	2.95	5.48	-1.21	-7.23	4.87	4.97
	-17.12	-6.81	-3.75	-2.82	16.15	4.52	3.29	4.20	5.56	5.39	4.71	2.95	1.97	0.99	-7.23	4.87	4.97
NONDURABLE GOODS	119.5	124.2	125.8	127.2	127.9	128.4	128.5	130.2	132.6	133.5	133.5	133.3	133.3	133.1	124.5	128.0	132.4
	-24.55	16.70	5.21	4.47	2.18	1.74	0.26	5.22	7.76	2.65	-0.06	-0.65	0.21	-0.54	-2.74	2.86	3.46
	-6.75	-3.14	-1.93	-0.82	7.00	3.39	2.15	2.34	3.70	3.94	3.85	2.37	0.53	-0.26	-2.74	2.86	3.46
TRADE, TRANSPORTATION, UTILITIES % Chg Prev Qtr SAAR	602.5	626.2	646.4	646.1	641.8	652.6	661.8	673.7	676.2	678.7	683.5	686.4	681.2	682.3	628.4	650.6	678.0
	-20.68	16.74	13.54	-0.23	-2.60	6.88	5.76	7.39	1.49	1.51	2.86	1.69	-2.98	0.61	-1.05	3.53	4.22
	-5.04	-1.57	1.47	1.20	6.53	4.21	2.38	4.28	5.35	4.00	3.28	1.89	0.74	0.52	-1.05	3.53	4.22
WHOLESALE TRADE	117.0	117.2	118.4	119.6	119.4	122.3	124.0	126.3	128.9	130.6	132.2	134.8	133.9	134.0	118.8	121.3	129.5
	-16.87	0.46	4.16	4.23	-0.78	10.32	5.56	7.63	8.49	5.27	5.10	8.10	-2.74	0.30	-2.47	2.14	6.73
	-3.78	-3.91	-3.19	-2.42	1.99	4.41	4.76	5.60	7.99	6.73	6.61	6.73	3.85	2.60	-2.47	2.14	6.73
RETAIL TRADE	307.2	322.7	333.7	331.2	327.6	331.1	335.4	340.6	340.5	341.5	342.1	341.4	342.5	345.5	323.8	331.3	341.2
	-26.43	21.81	14.26	-2.89	-4.32	4.38	5.25	6.39	-0.16	1.22	0.63	-0.74	1.22	3.63	-2.57	2.32	2.97
	-7.45	-2.90	0.70	-0.14	6.64	2.60	0.52	2.84	3.94	3.14	1.99	0.23	0.58	1.17	-2.57	2.32	2.97
TRANSPORTATION & UTILITIES	178.2	186.3	194.4	195.2	194.9	199.1	202.4	206.8	206.8	206.6	209.3	210.2	204.9	202.8	185.8	197.9	207.4
	-12.21	19.46	18.47	1.73	-0.75	9.05	6.73	8.91	0.06	-0.32	5.20	1.73	-9.65	-4.10	2.69	6.53	4.78
	-1.47	2.44	5.96	6.03	9.33	6.87	4.12	5.91	6.12	3.77	3.39	1.64	-0.92	-1.87	2.69	6.53	4.78
INFORMATION	41.8	42.4	43.3	44.4	45.9	48.6	49.8	52.4	54.0	55.3	55.9	56.3	56.0	56.2	43.3	47.2	54.4
	-30.19	5.20	8.77	10.90	13.88	25.71	10.85	22.25	12.51	9.99	4.66	2.89	-2.11	1.68	-5.15	8.91	15.30
	-8.53	-7.83	-6.28	-2.99	9.64	14.63	15.18	18.02	17.66	13.80	12.17	7.44	3.77	1.75	-5.15	8.91	15.30
FINANCIAL ACTIVITIES	166.0 -14.50 -3.26	166.9 2.19 -2.95	167.8 2.01 -2.46	168.2 1.04 -2.59	168.8 1.43 1.67	3.04 1.88 JED ON	3.25 2.19 NEXT PA	173.2 4.11 2.95 (GE)	3.99 3.59	4.97 4.08	176.0 -2.24 2.66	174.1 -4.25 0.54	174.8 1.54 -0.06	175.4 1.46 -0.90	168.4 -1.91 -1.91	169.6 0.76 0.76	175.3 3.32 3.32

Table 5: Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs)

							Historical Data	l Data								Annual	
	2020:2 2020:3	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2020	2021	2022
PROFESSIONAL & BUSINESS SERVICES 393.1		411.1	427.3	434.0	431.3	440.6	444.9	460.4	463.3	468.1	467.6	472.6	471.3	471.6	416.3	437.7	464.9
% Chg Prev Qtr SAAR	-32.53	19.57	16.72	6.42	-2.41	8.87	3.99	14.68	2.51	4.24	-0.48	4.41	-1.10	0.25	-2.68	5.14	6.20
% Chg Same Qtr Last Yr	-7.81	-4.33	-0.40	0.05	9.73	7.18	4.13	6.10	7.41	6.25	5.09	2.65	1.73	0.75	-2.68	5.14	6.20
EDUCATION & HEALTH SERVICES	420.8	431.2	436.7	437.5	438.8	441.7	441.5	444.6	448.0	453.9	457.5	461.5	468.3	470.2	434.4	439.9	451.0
% Chg Prev Qtr SAAR	-22.85	10.26	5.20	0.77	1.16	2.70	-0.18	2.84	3.09	5.31	3.24	3.57	6.02	1.63	-2.48	1.26	2.53
% Chg Same Qtr Last Yr	-5.46	-3.26	-2.36	-2.55	4.28	2.44	1.11	1.62	2.10	2.75	3.62	3.80	4.53	3.61	-2.48	1.26	2.53
LEISURE & HOSPITALITY	244.5	282.2	296.9	299.4	308.5	323.0	326.7	335.1	340.4	346.2	353.2	360.0	359.0	359.9	293.3	314.4	343.7
% Chg Prev Qtr SAAR	-76.03	77.28	22.52	3.50	12.72	20.07	4.75	10.64	6.44	6.99	8.38	7.89	-1.11	1.01	-15.61	7.21	9.32
% Chg Same Qtr Last Yr	-29.43	-19.04	-15.14	-14.32	26.17	14.46	10.06	11.91	10.32	7.18	8.10	7.42	5.46	3.96	-15.61	7.21	9.32
OTHER SERVICES	109.5	115.5	118.8	120.4	121.7	122.9	123.4	124.3	125.3	126.2	127.2	128.7	128.5	130.7	117.0	122.1	125.8
% Chg Prev Qtr SAAR	-39.64	23.49	12.18	5.26	4.62	3.78	1.75	2.84	3.37	2.90	3.32	4.58	-0.41	6.81	-3.94	4.33	3.00
% Chg Same Qtr Last Yr	-9.90	-5.51	-3.57	-3.14	11.14	6.41	3.84	3.24	2.93	2.71	3.11	3.54	2.58	3.54	-3.94	4.33	3.00
GOVERNMENT	427.9	429.7	431.3	427.8	433.6	432.1	432.1	432.3	437.9	438.3	439.2	443.7	449.7	449.6	432.8	431.4	436.9
% Chg Prev Qtr SAAR	-12.35	1.72	1.50	-3.21	5.57	-1.38	0.00	0.19	5.25	0.37	0.85	4.10	5.52	-0.06	-1.11	-0.31	1.28
% Chg Same Qtr Last Yr	-1.84	-2.13	-1.69	-3.26	1.35	0.57	0.19	1.06	0.98	1.43	1.64	2.62	2.69	2.58	-1.11	-0.31	1.28
FEDERAL, CIVILIAN	50.8	54.7	51.9	51.3	51.5	51.7	51.8	51.9	52.1	52.4	53.0	54.0	55.3	56.4	52.0	51.6	52.4
% Chg Prev Qtr SAAR	2.67	34.78	-18.96	4.30	1.04	1.83	1.04	0.77	1.29	2.06	5.19	7.23	66.6	8.72	3.76	-0.71	1.50
% Chg Same Qtr Last Yr	1.60	7.96	3.59	1.78	1.38	-5.48	-0.13	1.17	1.23	1.29	2.32	3.92	80.9	7.77	3.76	-0.71	1.50
STATE & LOCAL	377.1	375.0	379.4	376.5	382.2	380.4	380.3	380.4	385.8	385.9	386.2	389.7	394.4	393.2	380.8	379.8	384.6
% Chg Prev Qtr SAAR14.15	-14.15	-2.21	4.78	-3.06	6.20	-1.80	-0.14	0.11	5.80	0.14	0.28	3.67	4.91	-1.24	-1.74	-0.26	1.25
% Chg Same Qtr Last Yr	-2.29	-3.44	-2.38	-3.91	1.34	1.45	0.24	1.04	0.95	1.45	1.55	2.44	2.23	1.87	-1.74	-0.26	1.25

Tennessee Econometric Model

Boyd Center for Business and Economic Research, University of Tennessee

Table 6: Tennessee Durable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs)

							Historical Data	al Data								Annual	
	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2020	2021	2022
TOTAL DURABLE GOODS	190.4	213.4	215.6	219.0	221.2	223.0	222.7	228.2	233.5	235.0	233.2	234.9	238.1	237.4	211.2	221.5	232.5
	-49.03	57.65	4.31	6.40	4.02	3.36	-0.49	10.18	9.59	2.69	-3.03	2.95	5.48	-1.21	-7.23	4.87	4.97
	-17.12	-6.81	-3.75	-2.82	16.15	4.52	3.29	4.20	5.56	5.39	4.71	2.95	1.97	0.99	-7.23	4.87	4.97
WOOD PRODUCTS	12.5	12.5	12.9	13.0	13.1	13.4	13.5	13.8	14.2	14.2	14.0	14.1	14.1	14.0	12.7	13.2	14.0
	-13.50	0.08	13.72	1.33	3.42	9.69	3.51	9.11	10.39	0.16	-3.08	0.72	1.22	-2.56	-0.12	3.92	6.04
	-0.77	-3.07	-1.22	-0.06	4.50	6.93	4.44	6.39	8.14	5.71	3.98	1.93	-0.26	-0.94	-0.12	3.92	6.04
NONMETALLIC MINERALS	13.1	13.6	13.5	13.7	13.7	13.9	14.1	14.5	14.9	15.2	15.1	15.2	15.3	15.2	13.6	13.9	14.9
	-27.64	14.12	-1.26	5.85	-0.31	4.61	6.86	12.20	10.79	7.56	-1.52	0.81	3.41	-0.99	-5.20	1.71	7.69
	-9.14	-5.53	-6.02	-3.62	4.42	2.18	4.21	5.74	8.57	9.33	7.12	4.29	2.51	0.41	-5.20	1.71	7.69
PRIMARY METALS	9.6	10.5	10.7	11.0	11.1	11.1	11.0	11.1	11.2	11.2	11.0	10.9	11.1	11.0	10.5	11.0	11.1
	-49.28	43.99	9.98	9.47	4.45	-0.28	-4.37	4.36	6.08	-1.91	-7.81	-0.48	4.30	-1.64	-7.43	4.79	0.83
	-16.22	-8.48	-4.99	-3.17	16.00	5.82	2.19	0.98	1.37	0.95	0.03	-1.15	-1.57	-1.50	-7.43	4.79	0.83
FABRICATED METALS	35.8	36.3	37.6	38.4	39.3	39.9	40.2	40.8	41.3	42.0	41.9	41.7	42.0	41.7	36.9	39.5	41.5
	-19.82	5.72	14.48	9.07	9.39	6.60	3.07	5.67	5.70	6.98	-1.51	-1.71	2.69	-3.06	-2.92	6.91	5.22
	-6.11	-4.72	-0.92	1.43	9.62	9.84	7.00	6.16	5.25	5.35	4.16	2.29	1.55	-0.92	-2.92	6.91	5.22
MACHINERY	22.3	23.0	23.4	23.7	23.9	24.1	24.5	24.4	24.7	24.8	24.6	24.6	24.4	24.3	23.4	24.0	24.6
	-34.03	13.03	6.47	5.44	3.89	2.41	6.67	-0.57	5.29	1.16	-3.82	0.97	-3.05	-2.00	-11.17	2.82	2.50
	-16.62	-12.96	-6.59	-4.35	7.15	4.54	4.59	3.07	3.41	3.09	0.46	0.85	-1.21	-1.99	-11.17	2.82	2.50
COMPUTERS & ELECTRONICS	5.9	6.0	6.3	6.4	6.5	6.4	6.3	6.5	6.7	7.0	7.0	6.9	7.0	7.0	6.1	6.4	6.8
	-4.41	6.74	15.99	9.62	5.77	-6.00	-4.12	9.85	13.44	19.65	-1.64	-2.67	1.80	0.52	3.86	5.77	5.85
	2.18	3.42	3.94	6.72	9.46	6.03	1.11	1.16	2.95	9.35	10.05	6.77	3.92	-0.51	3.86	5.77	5.85
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS	S 16.6 -17.98 -5.35	16.9 7.11 -3.30	17.5 15.37 0.85	18.0 9.78 2.71	18.3 7.77 9.96	18.5 4.80 9.36	18.6 0.98 5.78	18.8 6.06 4.87	19.5 13.91 6.34	19.2 -4.52 3.89	18.9 -6.09 2.02	18.7 -4.02 -0.50	18.6 -3.97 -4.65	18.5 -1.93 -4.01	17.2 -2.42 -2.42	18.3 6.90 6.90	19.1 4.27 4.27
TRANSPORTATION EQUIPMENT	51.0	69.1	68.1	69.1	69.2	69.4	68.2	71.4	73.8	74.5	74.3	76.2	78.9	78.9	65.5	69.0	73.5
	-77.18	235.43	-5.27	5.74	0.63	1.05	-6.51	20.09	14.21	3.73	-1.31	10.65	15.08	0.19	-12.76	5.28	6.57
	-33.47	-8.90	-5.91	-6.42	35.60	0.46	0.13	3.37	6.69	7.39	8.86	6.65	6.85	5.93	-12.76	5.28	6.57
FURNITURE	7.7	9.4	9.4	9.6	9.7	9.8	9.6	9.7	9.8	9.5	9.2	9.3	9.4	9.4	9.1	9.6	9.6
	-62.20	129.17	-0.92	7.35	4.29	3.73	-6.17	4.14	3.85	-10.53	-12.48	5.51	3.49	-2.54	-6.47	6.49	-0.95
	-21.05	-3.44	-2.77	-2.03	26.27	3.57	2.17	1.40	1.29	-2.39	-4.07	-3.76	-3.84	-1.76	-6.47	6.49	-0.95
MISCELLANEOUS DURABLES	15.8	16.0	16.1	16.2	16.4	16.6	16.8	17.2	17.3	17.4	17.3	17.3	17.4	17.4	16.2	16.5	17.3
	-27.24	5.64	3.48	1.71	5.29	5.49	3.44	9.71	4.10	1.43	-2.84	-0.22	3.15	0.01	-2.30	1.58	4.80
	-4.63	-4.53	-3.92	-5.16	4.02	3.98	3.97	5.96	5.66	4.63	3.00	0.59	0.35	0.00	-2.30	1.58	4.80
Boyd Center for Business and Economic Research	c Resea	rch, Uni	versity o	ı, University of Tennessee	essee								•	Tenness	Fennessee Econometric Mode	ometric	Model

Table 7: Tennessee Nondurable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs)

							Historical Data	al Data								Annual	
	2020:2 2	020:3	2020:4	2021:1	2021:2	2021:3	2021:4	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2020	2021	2022
TOTAL NONDURABLE GOODS	119.5	124.2	125.8	127.2	127.9	128.4	128.5	130.2	132.6	133.5	133.5	133.3	133.3	133.1	124.5	128.0	132.4
	-24.55	16.70	5.21	4.47	2.18	1.74	0.26	5.22	7.76	2.65	-0.06	-0.65	0.21	-0.54	-2.74	2.86	3.46
	-6.75	-3.14	-1.93	-0.82	7.00	3.39	2.15	2.34	3.70	3.94	3.85	2.37	0.53	-0.26	-2.74	2.86	3.46
FOOD	35.7	36.0	36.8	37.4	37.5	37.8	37.7	38.2	39.2	39.9	40.4	40.2	40.4	40.2	36.2	37.6	39.4
	-6.20	3.39	8.64	6.99	1.35	2.58	-0.44	5.56	10.47	7.30	4.85	-1.31	1.69	-2.47	0.83	3.87	4.85
	-0.48	-0.04	1.42	3.04	5.05	4.85	2.58	2.24	4.46	5.65	7.02	5.24	3.08	0.65	0.83	3.87	4.85
BEVERAGE & TOBACCO	6.9	7.4	7.7	8.0	8.3	8.5	8.7	8.8	9.2	9.2	9.3	9.5	9.4	9.4	7.5	8.4	9.1
	-39.14	33.54	14.72	19.33	12.18	13.03	7.14	5.22	21.68	-0.09	2.03	10.26	-3.29	-2.59	0.08	12.25	8.97
	-6.42	-1.63	-0.55	2.70	19.67	14.79	12.84	9.34	11.59	8.20	6.88	8.14	2.11	1.46	0.08	12.25	8.97
PAPER	12.3	12.4	12.4	12.2	12.4	12.4	12.9	13.3	13.5	13.5	13.5	13.4	13.4	13.5	12.5	12.5	13.5
	-12.08	3.06	-0.14	-7.25	7.29	1.42	13.99	15.19	5.31	1.16	0.31	4.51	-0.02	1.84	-0.66	-0.01	8.03
	-1.25	-2.71	-1.97	-4.29	0.60	0.19	3.56	9.33	8.82	8.75	5.33	0.51	-0.79	-0.62	-0.66	-0.01	8.03
PRINTING & RELATED SUPPORT	7.9	7.8	7.9	7.9	8.0	8.1	8.1	8.1	8.2	8.3	8.2	8.3	8.4	8.4	8.2	8.0	8.2
	-40.44	-4.27	5.55	0.57	3.40	4.21	-1.33	2.32	6.54	4.09	-5.78	5.60	6.26	0.64	-9.76	-1.72	2.39
	-12.26	-13.98	-13.11	-11.80	1.25	3.42	1.69	2.13	2.89	2.87	1.68	2.49	2.42	1.56	-9.76	-1.72	2.39
CHEMICALS	25.1	25.6	25.8	26.2	26.2	26.2	26.2	26.4	26.7	26.9	27.0	26.9	27.0	26.8	25.6	26.2	26.7
	-12.33	7.16	4.56	4.99	0.10	0.52	0.36	2.71	4.15	4.09	0.65	-1.23	1.14	-2.54	-1.76	2.22	2.14
	-4.03	-1.97	-0.88	0.77	4.17	2.52	1.47	0.92	1.92	2.82	2.89	1.89	1.15	-0.51	-1.76	2.22	2.14
PLASTICS & RUBBER	20.4	23.7	23.7	24.0	24.1	24.3	24.3	25.1	25.7	25.5	25.2	25.0	25.0	25.2	23.1	24.2	25.4
	-53.62	82.34	0.97	4.73	2.03	3.25	-0.31	13.04	9.87	-1.93	-5.31	-3.04	-0.04	2.67	-7.15	4.64	4.83
	-18.99	4.79	-3.39	-2.75	18.43	2.74	2.41	4.38	6.33	4.97	3.63	-0.27	-2.60	-1.48	-7.15	4.64	4.83
MISCELLANEOUS NONDURABLE GOODS 11.2 % Chg Prev Qtr SAAR	11.2	11.3	11.4	11.5	11.4	11.1	10.7	10.3	10.1	10.0	9.9	9.9	9.7	9.8	11.4	11.2	10.1
	-18.29	5.05	4.63	1.28	-2.82	-10.09	-14.09	-14.87	4.63	-3.55	-4.97	0.27	-8.57	2.71	-5.01	-2.25	-9.58
	-7.59	-4.80	-3.68	-2.34	1.98	-1.91	-6.63	-10.59	-11.01	-9.43	-7.12	-3.24	-4.26	-2.74	-5.01	-2.25	-9.58
Boyd Center for Business and Economic Research,	esearch,		University of Tennessee	enness	99								1	esseuue	Tennessee Econometric Model	metric I	Nodel

December 2023 Table 8: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (2017 dollars)

							Historical	I Data							4	Annual	
-	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4	2022:1	2022:2	2022:3 2	2022:4 2	2023:1	2023:2	2020	2021	2022
TOTAL NONFARM	51339 6.56 1.82	53190 15.22 5.99	53451 1.98 6.38	54277 6.33 7.42	54262 -0.11 5.69	54708 3.33 2.85	54708 0.00 2.35	54762 0.40 0.89	54362 -2.89 0.18	53355 -7.20 -2.47	53751 8 3.00 -1.75	53494 (-1.90 -2.32	53764 2.04 -1.10	54115 2.63 1.42	53065 5.40 5.40	54610 2.91 2.91	53741 -1.59 -1.59
NATURAL RESOURCES, MINING AND CONSTRUCTION	58805 10.96 -0.84	59838 7.21 2.49	61776 13.60 6.47	62433 4.32 8.96	60189 -13.62 2.35	60233 0.29 0.66	61136 6.13 -1.04	62924 12.22 0.79	62787 -0.87 4.32	62427 -2.27 3.64	62436 (0.06 2.13	31671 (-4.81 -1.99	53659 13.53 1.39	64640 6.31 3.54	60713 (4.23 4.23	61120 0.67 0.67	52330 1.98 1.98
MANUFACTURING	60933 6.43 0.85	60803 -0.85 2.51	61559 5.07 4.83	63340 12.08 5.58	61759 -9.62 1.36	61260 -3.19 0.75	60441 -5.24 -1.82	60805 2.43 -4.00	61724 6.18 -0.06	59575 -13.22 -2.75	60636 (7.32 0.32	3.38 -3.38 -1.13	30135 0.12 -2.57	60426 1.95 1.43	61659 (3.43 3.43	61066 -0.96 -0.96	50513 -0.91 -0.91
DURABLE GOODS	60699 9.34 1.91	58597 -13.15 0.37	60033 10.17 4.50	62608 18.29 5.47	60991 -9.93 0.48	60531 -2.98 3.30	58841 -10.71 -1.99	59040 1.36 -5.70	60776 12.29 -0.35	58706 -12.94 -3.02	59960 8 8.82 1.90	59369 (-3.89 0.56	30264 6.17 -0.84	60773 3.42 3.52		59851 -1.05 -1.05	59703 -0.25 -0.25
NONDURABLE GOODS	61342 1.65 -1.00	64319 20.87 5.47	64182 -0.85 5.20	64595 2.60 5.73	63080 -9.06 2.83	62520 -3.51 -2.80	63219 4.55 -1.50	63864 4.14 -1.13	63385 -2.97 0.48	61104 -13.63 -2.26	•	~,	59906 -9.53 -5.49	59806 -0.66 -2.12	63609 3.83 3.83	63171 -0.69 -0.69	31935 -1.96 -1.96
TRADE, TRANSPORTATION, UTILITIES % Chg Prev Qtr SAAR	46812 7.39 0.08	49188 21.91 5.70	48697 -3.94 6.28	49797 9.35 8.29	50173 3.05 7.18	51393 10.08 4.48	51966 4.54 6.71	51738 -1.75 3.90	51040 -5.29 1.73	49811 -9.29 -3.08	49872 ⁴ 0.49 4.03	~,	50372 8.48 -1.31	50631 2.08 1.65	48623 5.07 5.07 5.07	51318 5.54 5.54	50020 -2.53 -2.53
WHOLESALE TRADE	73115 18.94 0.74	74231 6.25 2.85	74738 2.76 4.13	75693 5.21 8.11	76567 4.70 4.72	77716 6.14 4.69	78081 1.89 4.47	78539 2.37 3.76	79098 2.88 3.31	76408 -12.93 -1.68	•	76591 - -0.73 -2.48	76201 -2.02 -3.66	77100 4.81 0.91	74444 3.92 3.92	4.41 4.41	77207 -0.67 -0.67
RETAIL TRADE	31745 7.24 -0.35	34347 37.04 8.68	34077 -3.11 9.47	34267 2.25 9.85	34619 4.17 9.05	36404 22.28 5.99	36416 0.13 6.86	36756 3.78 7.26	34800 -19.64 0.52	34328 -5.32 -5.70		33853 (-3.42 -7.90	35349 18.88 1.58	35193 -1.75 2.52	33609 6.88 6.88	36049 7.26 7.26	34282 -4.90 -4.90
TRANSPORTATION & UTILITIES	56445 -1.66 -1.32	58325 14.00 2.88	57643 -4.59 4.29	60685 22.84 7.06	60393 -1.91 6.99	60466 0.49 3.67	61781 8.99 7.18	60145 -10.18 -0.89	3.44 0.44	58726 -12.13 -2.88		57494 (-9.13 -4.41	58211 5.08 -4.03	59141 6.55 0.71	58274 (3.21 3.21	60696 4.16 4.16	58941 -2.89 -2.89
INFORMATION	70510 -16.91 0.23	75914 34.37 8.10	78412 13.83 7.04	84112 32.40 13.89	80924 -14.32 14.77	85681 25.67 12.87	83252 -10.87 6.17	80757 -11.46 -3.99	78418 -11.09 -3.10	74597 -18.11 -12.94	74892 7 1.59 -10.04	76849 10.87 -4.84	74602 .11.20 -4.87	73524 -5.66 -1.44	77237 7.39 7.39	32654 7.01 7.01	76189 -7.82 -7.82
FINANCIAL ACTIVITIES	77428 18.88 4.80	80278 15.55 10.08	79976 -1.49 10.35	84060 22.04 13.36	86004 9.58 11.08	∞ ,	86719 0.95 8.43	82924 -16.39 -1.35	82589 -1.61 -3.97	80302 -10.62 -7.18	79091 8 -5.90 -8.80	31521 8 12.87 -1.69	31055 -2.27 -1.86	81589 2.66 1.60	80436 9.65 9.65	85540 6.35 6.35	30876 -5.45 -5.45
				00	CONTINUE		ON NEXT PAG	Ę)									

Table 8: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (2017 dollars)

						_	Historical Data	l Data								Annual	
	2020:1 2020:2	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3 2021:4		2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2020	2021	2022
PROFESSIONAL & BUSINESS SERVICES 59572 % Chg Prev Qtr SAAR	59572	63485	62298	64642	64976	65818	63699	65125	64825	63387	63779	63729	64079	65156	62499	64905 (63930
	-2.77	28.98	-7.28	15.93	2.08	5.29	-12.27	9.26	-1.83	-8.58	2.50	-0.31	2.21	6.90	4.42	3.85	-1.50
	0.63	6.66	2.62	7.75	9.07	3.67	2.25	0.75	-0.23	-3.69	0.13	-2.14	-1.15	2.79	4.42	3.85	-1.50
EDUCATION & HEALTH SERVICES	51599	52161	54972	54202	54062	53589	54012	54491	54103	53566	53936	52729	53215	53429	53234	54039 (53584
	12.29	4.43	23.36	-5.49	-1.03	-3.46	3.19	3.60	-2.82	-3.91	2.79	-8.66	3.74	1.62	5.98	1.51	-0.84
	2.40	4.07	9.34	8.13	4.77	2.74	-1.75	0.53	0.07	-0.04	-0.14	-3.23	-1.64	-0.26	5.98	1.51	-0.84
LEISURE & HOSPITALITY	26790	24038	25883	25114	26253	27997	29520	29989	28502	29645	30507	30721	29277	29311	25456	28440 :	29844
	5.42	-35.19	34.43	-11.36	19.42	29.33	23.60	6.51	-18.41	17.03	12.16	2.83	-17.52	0.46	-2.58	11.72	4.94
	3.57	-7.44	-1.38	-5.01	-2.00	16.47	14.05	19.41	8.57	5.89	3.34	2.44	2.72	-1.13	-2.58	11.72	4.94
OTHER SERVICES	47429	48290	47200	48063	46424	46008	47776	46992	46742	46219	46736	46960	47388	47664	47745	46800 ,	46664
	14.69	7.46	-8.72	7.52	-12.96	-3.54	16.28	-6.40	-2.11	-4.41	4.55	1.93	3.70	2.35	7.30	-1.98	-0.29
	6.74	9.82	7.88	4.87	-2.12	-4.73	1.22	-2.23	0.69	0.46	-2.18	-0.07	1.38	3.13	7.30	-1.98	-0.29
GOVERNMENT	47899	47999	48455	48259	48356	48442	48607	48149	47697	46792	47512	47407	48163	48203	48153	48388 4	47352
	4.16	0.84	3.86	-1.61	0.80	0.72	1.37	-3.72	-3.70	-7.38	6.30	-0.88	6.53	0.33	3.14	0.49	-2.14
	3.76	3.61	3.42	1.78	0.95	0.92	0.31	-0.23	-1.36	-3.41	-2.25	-1.54	0.98	3.02	3.14	0.49	-2.14
FEDERAL, CIVILIAN	79410	80554	78356	80944	81302	80594	80271	79529	78613	77760	78044	78624	79253	79709	79816	80424	78260
	0.70	5.89	-10.48	13.88	1.78	-3.43	-1.60	-3.65	-4.53	-4.27	1.47	3.00	3.24	2.32	0.84	0.76	-2.69
	-0.36	1.75	-0.15	2.11	2.38	0.05	2.44	-1.75	-3.31	-3.52	-2.77	-1.14	0.81	2.51	0.84	0.76	-2.69
STATE & LOCAL	43842	43616	44094	43788	43863	44112	44304	43872	43477	42609	43369	43121	43858	43789	43835	44038 4	43144
	5.04	-2.05	4.45	-2.75	0.69	2.29	1.75	-3.84	-3.55	-7.74	7.33	-2.28	7.02	-0.63	3.15	0.46	-2.03
	4.70	3.66	3.20	1.11	0.05	1.14	0.48	0.19	-0.88	-3.41	-2.11	-1.71	0.88	2.77	3.15	0.46	-2.03

Table 9: Tennessee Average Annual Wage and Sal	and Sala	lary Rate	by Sector,	tor, Sea	sonally	Adjust	ed (curr	Seasonally Adjusted (current dollars)	ars)						De	December	2023
							Historical Data	ıl Data								Annual	
. •	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2020	2021	2022
TOTAL NONFARM	53606	55298	56027	57177	57831	59199	60017	61067	61750	61666	62837	63175	64146	64961	55527	59529	62357
	7.94	13.23	5.38	8.47	4.65	9.80	5.65	7.19	4.55	-0.54	7.81	2.17	6.29	5.18	6.55	7.21	4.75
	3.35	6.54	7.55	8.72	7.88	7.05	7.12	6.80	6.78	4.17	4.70	3.45	3.88	5.34	6.55	7.21	4.75
NATURAL RESOURCES, MINING AND CONSTRUCTION	61402 12.39 0.64	62209 5.36 3.03	64753 17.39 7.65	65769 6.42 10.29	64148 -9.49 4.47	65177 6.57 4.77	67069 12.13 3.58	70169 19.81 6.69	71320 6.72 11.18	72151 4.75 10.70		72833 -0.86 3.80	75951 18.26 6.49	77596 8.95 7.55	63533 5.37 5.37	66641 4.89 4.89	72323 8.53 8.53
MANUFACTURING	63623	63212	64526	66724	65821	66288	66307	67806	70112	68855	70887	70997	71746	72538	64522	66555	70213
	7.81	-2.56	8.58	14.34	-5.31	2.87	0.11	9.36	14.31	-6.98	12.34	0.63	4.29	4.49	4.56	3.15	5.49
	2.36	3.05	5.98	6.86	3.45	4.87	2.76	1.62	6.52	3.87	6.91	4.71	2.33	5.35	4.56	3.15	5.49
DURABLE GOODS	63380	60918	62926	65953	65003	65500	64551	65838	69035	67851	70096	70113	71901	72955	63294	65223	69274
	10.76	-14.65	13.85	20.67	-5.64	3.09	-5.67	8.21	20.89	-6.69	13.91	0.10	10.60	5.99	4.19	3.05	6.21
	3.43	0.89	5.66	6.75	2.56	7.52	2.58	-0.17	6.20	3.59	8.59	6.49	4.15	7.52	4.19	3.05	6.21
NONDURABLE GOODS	64051	66867	67274	68046	67229	67651	69355	71217	71999	70622	9.71	72542	71473	71794	66560	68863	71860
	2.97	18.78	2.46	4.67	-4.72	2.53	10.46	11.18	4.46	-7.43	9.71	1.47	-5.76	1.81	4.96	3.46	4.35
	0.48	6.02	6.36	7.02	4.96	1.17	3.09	4.66	7.09	4.39	4.21	1.86	-0.73	1.66	4.96	3.46	4.35
TRADE, TRANSPORTATION, UTILITIES % Chg Prev Qtr SAAR	48879	51137	51043	52458	53473	55611	57010	57695	57977	57570	58303	58289	60098	60780	50879	55947	58035
	8.78	19.80	-0.73	11.55	7.97	16.98	10.45	4.90	1.97	-2.78	5.19	-0.09	13.00	4.61	6.21	9.96	3.73
	1.58	6.25	7.45	9.60	9.40	8.75	11.69	9.98	8.42	3.52	2.27	1.03	3.66	5.58	6.21	9.96	3.73
WHOLESALE TRADE	76344	77172	78339	79737	81603	84095	85659	87582	89848	88310	89704	3.38	90914	92554	77898	84735	89578
	20.48	4.41	6.19	7.33	9.69	12.78	7.65	9.29	10.75	-6.67	6.47	3.28	2.06	7.41	5.06	8.78	5.72
	2.24	3.38	5.28	9.43	6.89	8.97	9.34	9.84	10.10	5.01	4.72	3.28	1.19	4.81	5.06	8.78	5.72
RETAIL TRADE	33147	35708	35719	36098	36896	39392	39951	40988	39530	39675	39922	39980	42174	42247	35168	39307	39776
	8.63	34.68	0.13	4.31	9.15	29.93	5.79	10.80	-13.49	1.48	2.51	0.58	23.83	0.69	8.04	11.77	1.19
	1.14	9.25	10.68	11.18	11.31	10.32	11.85	13.55	7.14	0.72	-0.07	-2.46	6.69	6.48	8.04	11.77	1.19
TRANSPORTATION & UTILITIES	58938	60636	60421	63927	64365	65429	67777	67070	68899	67874	68842	67899	69451	70995	60980	66161	68379
	-0.38	12.03	-1.41	25.31	2.77	6.78	15.14	-4.10	11.36	-5.82	5.83	-5.37	9.46	9.20	4.34	8.49	3.35
	0.16	3.41	5.44	8.36	9.21	7.91	12.17	4.92	7.04	3.74	1.57	1.24	0.80	4.60	4.34	8.49	3.35
INFORMATION	73624	78922	82191	88606	86247	92714	91332	90056	89075	86217	87552	90758	89007	88261	80836	90087	88400
	-15.83	32.05	17.63	35.07	-10.23	33.54	-5.83	-5.47	-4.29	-12.23	6.34	15.47	-7.50	-3.31	8.57	11.44	-1.87
	1.73	8.66	8.22	15.27	17.15	17.48	11.12	1.64	3.28	-7.01	-4.14	0.78	-0.08	2.37	8.57	11.44	-1.87
FINANCIAL ACTIVITIES	80848 20.43 6.37	83459 13.56 10.65	83830 1.79 11.57	88551 24.50 14.74	91661 14.81 13.38	93615 8.80 12.17	95136 6.66 13.49	92472 -10.74 4.43	93813 5.92 2.35	92811 -4.20 -0.86	92462 -1.50 -2.81	96275 17.55 4.11	3.08	97942 5.21 5.53	84172 10.85 10.85	93221 10.75 10.75	93840 0.66 0.66
				0)	(CONTINUED ON NEXT PAGE)	NO O	EXT PAG	Œ)									

Table 9: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (current dollars)

						_	Historical Data	l Data							4	Annual	
	2020:1	2020:2	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4	2022:1	2022:2	2022:3	2022:4 2	2023:1	2023:2	2020	2021	2022
PROFESSIONAL & BUSINESS SERVICES 62203 % Chg Prev Qtr SAAR	62203	66001	65300	68096	69250	71221	69881	72624	73635	73260	74560	75263	76452	78216	65400	8.17	74180
	-1.51	26.75	-4.18	18.26	6.95	11.88	-7.32	16.65	5.68	-2.02	7.29	3.82	6.47	9.56	5.55	8.17	4.86
	2.13	7.21	3.75	9.06	11.33	7.91	7.02	6.65	6.33	2.86	6.70	3.63	3.83	6.76	5.55	8.17	4.86
EDUCATION & HEALTH SERVICES	53878	54228	57621	57098	57619	57988	59254	60765	61455	61910	63054	62272	63491	64139	55706 4	58906 (52173
	13.75	2.62	27.48	-3.58	3.70	2.59	9.02	10.60	4.62	3.00	7.60	-4.87	8.06	4.15	7.14	5.74	5.55
	3.93	4.61	10.54	9.44	6.94	6.93	2.83	6.42	6.66	6.76	6.41	2.48	3.31	3.60	7.14	5.74	5.55
LEISURE & HOSPITALITY	27973	24990	27130	26456	27980	30295	32385	33442	32376	34263	35665	36281	34930	35186	26637	31026 3	34646
	6.78	-36.31	38.91	-9.57	25.12	37.43	30.59	13.71	-12.16	25.44	17.40	7.09	-14.08	2.96	-1.52	16.47	11.67
	5.12	-6.96	-0.29	-3.86	0.02	21.23	19.37	26.41	15.71	13.10	10.13	8.49	7.89	2.69	-1.52	16.47	11.67
OTHER SERVICES	49523	50203	49475	50631	49477	49784	52412	52403	53095	53418	54637	55459	56539	57218	49958	51019 5	54152
	16.18	5.60	-5.68	9.68	-8.81	2.50	22.85	-0.07	5.39	2.46	9.44	6.16	8.02	4.89	8.46	2.12	6.14
	8.34	10.40	9.07	6.14	-0.09	-0.83	5.94	3.50	7.31	7.30	4.24	5.83	6.49	7.11	8.46	2.12	6.14
GOVERNMENT	50014	49901	50790	50837	51537	52418	53324	53693	54179	54080	55544	55987	57463	57865	50386 4	52743 (4.68	54948
	5.51	-0.90	7.32	0.37	5.62	7.02	7.09	2.79	3.68	-0.73	11.28	3.23	10.97	2.83	4.25	4.68	4.18
	5.32	4.15	4.56	3.02	3.04	5.04	4.99	5.62	5.13	3.17	4.16	4.27	6.06	7.00	4.25	4.68	4.18
FEDERAL, CIVILIAN	82917 2.01 1.14	83746 4.06 2.28	82132 -7.49 0.95	85268 16.17 3.35	86650 6.64 4.50	87210 2.61 4.14	3.96 7.22	88686 2.87 4.01	89296 2.78 3.05	89873 2.61 3.05	91238 6.21 3.61	92853 7.27 4.70	94556 7.54 5.89	95686 4.87 6.47	83516 8 1.93 1.93	87652 9 4.95 4.95	90815 3.61 3.61
STATE & LOCAL	45778	45344	46218	46127	46749	47733	48603	48923	49385	49247	50701	50925	52327	52566	45867	48002 8	50064
	6.40	-3.74	7.94	-0.79	5.50	8.69	7.50	2.66	3.83	-1.12	12.35	1.78	11.48	1.84	4.26	4.65	4.30
	6.27	4.20	4.34	2.34	2.12	5.27	5.16	6.06	5.64	3.17	4.32	4.09	5.96	6.74	4.26	4.65	4.30

Table 10: Tennessee Civilian Labor Force and Unemployment Rate, Seasonally Adjusted

						_	Historical Data	Data							•	Annual	
	2020:2	2020:2 2020:3	2020:4 2021:1	2021:1	2021:2	2021:3	2021:4	2022:1	2022:2 2022:3	2022:3	2022:4 2023:1		2023:2	2023:3	2020	2021	2022
CIVILIAN LABOR FORCE (THOUS)			3330	3320	3324	3326	3332	3369	3380	3344	3321	3329	3359	3382	3301	3326	3353
% Chg Prev Qtr SAAR	-10.22	6.80	3.91	-1.16	0.4	0.29	0.67	4.47	1.29	-4.12	-2.70	0.98	3.60	2.78	-1.02	0.74	0.83
% Chg Same Qtr Last Yr	-2.75	-1.30	-0.55	-0.38	2.45	0.86	0.06	1.46	1.67	0.53	-0.32	-1.16	-0.60	1.14	-1.02	0.74	0.83
EMPLOYED PERSONS (THOUS)	2834		3130	3145	3164	3187	3209	3254	3270	3232	3206	3214	3250	3276	3054	3176	3240
% Chg Prev Qtr SAAR	-39.74	31.88	12.79	1.98	2.35	2.98	2.86	5.66	1.95	-4.51	-3.26	1.08	4.54	3.21	-5.26	3.99	2.02
% Chg Same Qtr Last Yr	-12.17	-6.08	-3.23	-2.22	11.63	4.93	2.54	3.46	3.35	1.42	-0.12	-1.22	-0.60	1.35	-5.26	3.99	2.02
UNEMPLOYED PERSONS (THOUS)	410	261	200	175	160	140	123	115	110	112	116	115	109	106	247	149	113
% Chg Prev Qtr SAAR 15337.20 -83.59	15337.20	-83.59	-65.48	-41.44	-29.48	42.71	-40.45	-23.21	-16.22	8.15	14.49	-1.85	-20.14	-9.30	121.64	-39.49	.24.31
% Chg Same Qtr Last Yr		275.31 141.43	74.98	50.43	-60.89	-46.54	-38.73	-34.44	-31.55	-19.77	-5.53	0.45	-0.75	-5.02	121.64	-39.49	-24.31
PARTICIPATION RATE (PERCENT)	9.69		8.09	60.5	60.4	60.3	60.2	2.09	2.09	59.8	59.3	59.3	59.7	0.09	60.5	60.4	60.1
% Chg Prev Qtr SAAR	-11.00	5.82	2.76	-1.97	-0.50	-1.02	-0.74	3.23	0.05	-5.47	-3.55	0.11	2.71	1.91	-2.05	-0.28	-0.42
% Chg Same Qtr Last Yr	-3.80	-2.32	-1.53	-1.31	1.48	-0.20	-1.06	0.23	0.37	-0.78	-1.49	-2.25	-1.60	0.27	-2.05	-0.28	-0.42
UNEMPLOYMENT RATE (PERCENT)	12.6	7.9	0.9	5.3	4.8	4.2	3.7	3.4	3.3	3.3	3.5	3.5	3.2	3.1	7.5	4.5	3.4
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Table 11: Tennessee Taxable Sales, Seasonally Adjusted (millions of 2017 dollars)

•							Historical Data	I Data						ĺ		Annual	
•	2020:2 2020:3	2020:3	2020:4	2021:1	2021:2	2021:3	2021:4	2022:1	2022:2	2022:3	2022:4	2023:1	2023:2	2023:3	2020	2021	2022
TOTAL TAXABLE SALES	33038	35685	37411	39564	40806	41068	41034	42233	42826	42581	41553	43115	42452	41608	139546	162472	4.14
	-4.39	36.10	20.79	25.09	13.16	2.59	-0.33	12.21	5.74	-2.27	-9.32	15.91	-6.01	-7.72	1.90	16.43	4.14
	-2.55	3.36	6.75	18.41	23.51	15.08	9.69	6.75	4.95	3.69	1.26	2.09	-0.87	-2.29	1.90	16.43	4.14
AUTO DEALERS	3302	3538	3633	3963	4077	3754	3679	3639	3622	3530	3640	3645	3539	3692	13622	15473	14431
	21.07	31.72	11.17	41.59	12.04	-28.12	-7.71	-4.30	-1.89	-9.77	13.05	0.50	-11.06	18.42	1.15	13.59	-6.74
	0.19	2.83	5.23	25.87	23.45	6.11	1.28	-8.16	-11.16	-5.97	-1.07	0.15	-2.28	4.59	1.15	13.59	-6.74
PURCHASES FROM MANUFACTURERS % Chg Prev Qtr SAAR	1516	1691	1918	1867	2019	2091	1920	2315	2386	2283	2011	2399	2371	2398	6744	7897	8995
	-23.09	54.79	65.49	-10.27	36.87	15.01	-28.97	111.68	12.68	-16.12	-39.82	102.42	-4.48	4.62	8.14	17.09	13.91
	-1.97	8.98	18.15	15.31	33.18	23.65	0.08	24.03	18.15	9.18	4.75	3.59	-0.61	5.04	8.14	17.09	13.91
MISC DURABLE GOODS	6147 6427	6427	6739	7007	7196	7318	7374	7789	7856	7648	7370	7756	7427	7493	25060	28894	30662
	30.91 19.53	19.53	20.91	16.82	11.27	6.92	3.13	24.48	3.47	-10.16	-13.79	22.68	-15.92	3.61	7.89	15.30	6.12
	8.83 10.41	10.41	9.96	21.93	17.08	13.86	9.42	11.17	9.16	4.52	-0.06	-0.43	-5.46	-2.03	7.89	15.30	6.12
EATING AND DRINKING PLACES	2756	3309	3348	3638	3949	3864	3981	3961	4081	4200	4096	4297	4227	4274	12632	15432	16338
	-46.24	107.83	4.73	39.45	38.88	-8.37	12.70	-2.00	12.69	12.21	-9.61	21.16	-6.39	4.51	-13.38	22.17	5.87
	-24.29	-10.97	-7.03	13.02	43.29	16.76	18.92	8.88	3.34	8.71	2.88	8.48	3.57	1.74	-13.38	22.17	5.87
FOOD STORES	3544	3512	3447	3403	3374	3357	3475	3445	3495	3609	3590	3475	3504	2535	13924	13609	14139
	15.11	-3.60	-7.12	-5.01	-3.40	-1.95	14.71	-3.42	5.93	13.80	-2.09	-12.24	3.43	-72.63	9.09	-2.26	3.89
	12.06	9.54	5.49	-0.53	-4.79	-4.39	0.79	1.21	3.57	7.50	3.33	0.88	0.28	-29.77	9.09	-2.26	3.89
LIQUOR STORES	318	320	316	322	321	317	321	316	309	312	320	306	308	314	1235	1280	1257
	60.98	3.55	-5.64	7.79	-1.27	-4.91	5.39	-6.39	-8.09	4.16	10.67	-16.21	2.46	7.62	21.18	3.59	-1.79
	28.41	23.96	20.94	14.11	0.98	-1.15	1.62	-1.90	-3.64	-1.42	-0.20	-2.93	-0.26	0.56	21.18	3.59	-1.79
HOTELS AND MOTELS	410	703	747	905	1173	1291	1295	1395	1444	1479	1447	1559	1510	1428	2809	4664	5766
	-96.51	766.68	27.16	115.78	181.66	46.76	1.22	34.75	14.73	10.14	-8.30	34.69	-11.99	-19.99	-38.28	66.05	23.62
	-64.52	-39.06	-30.93	-4.53	186.08	83.51	73.34	54.09	23.10	14.58	11.79	11.77	4.60	-3.43	-38.28	66.05	23.62
OTHER RETAIL AND SERVICE	10909	11715	12794	13676	14056	14109	14015	14253	14533	14558	14188	14689	14629	14599	46169	55856	57532
	5.98	32.98	42.26	30.56	11.61	1.51	-2.65	6.97	8.11	0.69	-9.80	14.89	-1.63	-0.82	9.53	20.98	3.00
	3.77	10.34	18.34	27.20	28.85	20.44	9.54	4.22	3.39	3.18	1.24	3.06	0.66	0.28	9.53	20.98	3.00
MISC NONDURABLE GOODS	2224	2625	2659	2847	3020	3064	3038	3106	3150	3057	3047	3133	3084	3132	9893	11969	12361
	-24.43	94.05	5.30	31.51	26.53	5.93	-3.31	9.28	5.77	-11.26	-1.32	11.79	-6.15	6.43	-5.16	20.99	3.27
	-14.43	-0.25	1.04	19.38	35.79	16.72	14.26	9.09	4.31	-0.21	0.30	0.87	-2.10	2.45	-5.16	20.99	3.27
TRANSPORTATION, COMMUNICATION % Chg Prev Qtr SAAR	1913 4.77 -8.73	1845 -13.44 -13.32	1810 -7.38 -17.23	1936 31.09 2.44	1620 -50.97 -15.27	1904 90.43 3.19	1937 7.18 7.02	2014 16.95 4.01	1951 -11.96 20.40	1903 -9.40 -0.01	1844 -12.00 -4.82	1857 2.85 -7.82	1853 -0.83 -5.04	1743 -21.62 -8.42	7457 -12.42 -12.42	7397 -0.81	7712 4.26 4.26
PER CAPITA (\$)	4803	5177	5416	5716	5883	5909	5893	6053	6126	6079	5921	6132	6026	5896	20262	23401	24180
	-5.19	34.98	19.80	24.07	12.25	1.77	-1.12	11.33	4.91	-3.02	-10.01	15.04	-6.72	-8.41	1.04	15.49	3.32
	-3.37	2.50	5.86	17.44	22.51	14.16	8.81	5.90	4.12	2.88	0.48	1.31	-1.63	-3.02	1.04	15.49	3.32
Boyd Center for Business and Economic Research, Ul	search,	Univer	sity of	niversity of Tennessee	99									enness	Tennessee Econometric Mode	ometric	Model

Table 12: Tennessee Taxable Sales, Seasonally Adjusted (millions of current dollars)

		c.				1 0.100	Historical Data	l Data	c c c c	0.00	1.000	7.000	0.00	C	7	Annual	000
	2020:2 2020:3	2020:3	2020:4	2021:1	7.1707	2021:3 4	2021:4 4		7.777	.022.3	. 022:4	.023.1	.023.2 2	2023:3	7070	1202	7077
TOTAL TAXABLE SALES	34347 -6.05 -2.05	37405 40.65 4.50	39410 23.23 8.04	42167 31.06 20.87	44155 20.24 28.56	45053 8.39 20.45	45759 6.41 16.11	47972 . 20.80 13.77	49497 13.33 12.10			51440 20.74 7.23	50961 -3.67 2.96	50302 -5.08 1.05	3.02 3.02 3.02	77134 1 21.28 21.28	96322 10.83 10.83
AUTO DEALERS	3433 18.98 0.71	3708 36.11 3.97	3827 13.41 6.51	4223 48.34 28.48	4412 19.05 28.49	4118 -24.06 11.05	4103 -1.47 7.22	4134 3.02 -2.12	4186 5.15 -5.11			4348 4.69 5.19		4463 21.81 8.16	14256 2.26 2.26	16857 18.24 18.24	16745 -0.66 -0.66
PURCHASES FROM MANUFACTURERS % Chg Prev Qtr SAAR % Chg Same Qtr Last Yr	1576 -24.42 -1.46	1773 59.96 10.19	2021 68.82 19.59	1990 -5.99 17.70	2185 45.43 38.62	2294 21.51 29.41	2141 -24.17 1 5.94	2630 127.89 32.19	2757 20.78 · 26.19	2669 -12.20 -16.35	•	2862 10.86 8.80		2899 7.62 8.62	7060 9.35 9.35	8609 21.95 21.95	10431 21.16 21.16
MISC DURABLE GOODS	6390 28.65 9.40	6737 23.52 11.63	7100 23.35 11.29	7467 22.40 24.45	7787 18.24 21.86	8028 12.96 19.16	8223 10.10 15.83	8848 34.01 18.48				9253 27.79 4.59		9058 6.58 1.31	26227 9.07 9.07	31505 20.13 20.13	35571 12.91 12.91
EATING AND DRINKING PLACES	2865 -47.17 -23.90	3469 114.76 -9.98	3527 6.84 -5.90	3877 46.10 15.36	4273 47.58 49.14	4239 -3.20 22.20	4439 20.32 25.89	4499 5.51 16.05			4837 -5.86 8.95	5127 26.21 13.95		5167 7.50 5.21	13221 -12.41 -12.41	16829 27.28 27.28	18964 12.69 12.69
FOOD STORES	3684 13.13 12.65	3681 -0.38 10.75	3632 -5.25 6.77	3627 -0.48 1.53	3651 2.65 -0.91	3683 3.59 0.07	3875 22.47 6.70	3913 3.98 7.87	4039 13.54 10.63			4146 -8.59 5.96		3065 -71.84 -27.37	14569 10.26 10.26	14836 1.83 1.83	16411 10.62 10.62
LIQUOR STORES	330 58.19 29.08	336 7.01 25.33	333 -3.74 22.41	343 12.93 16.47	347 4.90 5.11	347 0.46 3.46	358 12.52 7.58	358 0.78 4.56			•	365 12.72 1.96		379 10.70 3.99	1293 22.50 22.50	1395 7.90 7.90	1459 4.57 4.57
HOTELS AND MOTELS	426 -96.57 -64.34	737 795.61 -38.39	787 29.72 -30.09	965 126.08 -2.56	1269 199.29 197.76	1416 55.05 92.07	1444 8.06 83.49	1585 45.07 64.23	1669 22.98 31.49			1860 40.30 17.40	•	1727 -17.71 -0.14	2941 -37.57 -37.57	5094 73.23 73.23	6692 31.37 31.37
OTHER RETAIL AND SERVICE	11341 4.15 4.31	12279 37.42 11.56	13477 45.12 19.77	14575 36.79 29.83	15210 18.60 34.11	15478 7.24 26.05	15628 3.93 15.96	16189 15.16 11.08	16797 15.87 10.43			17525 19.67 8.25		17649 2.02 3.70	48324 10.74 10.74	60892 26.01 26.01	36761 9.64 9.64
MISC NONDURABLE GOODS	2312 -25.73 -13.99	2751 100.53 0.85	2801 7.42 2.27	3035 37.79 21.85	3268 34.45 41.34	3361 11.91 22.16	3388 3.22 20.95	3528 17.65 16.27	3641 13.36 11.41	3574 -7.11 6.34	3599 2.77 6.22	3738 16.45 5.95	3702 -3.82 1.69	3787 9.47 5.95	10355 -4.10 -4.10	13052 26.04 26.04	14342 9.89 9.89
TRANSPORTATION, COMMUNICATION % Chg Prev Qtr SAAR	1988 2.96 -8.25	1934 -10.55 -12.36	1906 -5.51 -16.23	2064 37.34 4.56	1753 -47.90 -11.81	2088 101.18 8.00	2160 14.42 13.29	2288 25.90 10.85		2225 -5.17 6.56	2177 -8.35 0.80	2215 7.13 -3.18	•	2107 -19.38 -5.29	7802 -11.49 -11.49	3.37 3.37 3.37	8945 10.91 10.91
PER CAPITA (\$)	4993 -6.83 -2.87	5426 39.49 3.63	5705 22.22 7.15	6092 30.00 19.87	6366 19.28 27.51	6483 7.52 19.48	6571 5.57 15.18	6876 19.85 12.87	7080 12.45 11.22	7107 1.52 9.63	6993 -6.28 6.41	7316 19.83 6.41	7234 -4.40 2.18	7127 -5.79 0.29	21206 2.15 2.15	25512 20.31 20.31	28056 9.97 9.97
Boyd Center for Business and Economic Research, U	search		niversity of Tennessee	ennes	ee								۳	esseuue	Tennessee Econometric Mode	metric N	lodel

Table 1: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted

•						Historica	I Data					
,	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
TN GDP (Mil2012\$) SAAR	276890.5	286341.3	289839.4	294391.6	304984.7	310351.9	319201.8	323899.4	331696.3	323979.2	353753.4	370806
Percentage change	3.10	3.41	1.22	1.57	3.60	1.76	2.85	1.47	2.41	-2.33	9.19	4.82
US GDP (BII2017\$) SAAR	17052.4	17442.8	17812.2	18261.7	18799.6	19141.7	19612.1	20193.9	20692.1	20234.1	21407.7	21822.0
Percentage change	1.56	2.29	2.12	2.52	2.95	1.82	2.46	2.97	2.47	-2.21	2.80	1.94
US GDP (Bil\$) SAAR	15599.7	16254.0	16880.7	17608.1	18295.0	18804.9	19612.1	20656.5	21521.4	21322.9	23594.0	25744.1
Percentage change	3.66	4.19	3.86	4.31	3.90	2.79	4.29	5.33	4.19	-0.92	10.65	9.11
TN PERSONAL INCOME (MIL2017\$) SAAR	260145	267190	265675	271674	285050	291527	299298	309820	324105	343717	364397	354211
Percentage change	3.45	2.71	-0.57	2.26	4.92	2.27	2.67	3.52	4.61	6.05	6.02	-2.80
US PERSONAL INCOME (BIL2017\$) SAAR	14341	14722	14688	15222	15903	16165	16662	17176	17733	18760	19650	18821
Percentage change	3.38	2.65	-0.23	3.63	4.48	1.64	3.08	3.08	3.24	5.79	4.74	4.22
TN PERSONAL INCOME (MIL\$) SAAR	241432	252592	254465	263856 3.69	277356	3.31	299308 4.46	316177 5.64	335497 6.11	359634	396986	411035 3.54
				7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	1 1 4 7 4			1 1 1 1			24.50	
US PERSONAL INCOME (BIL\$) SAAR. Percentage change	6.00	4.57	14069	5.08	15474	15888	4.88	17528 5.19	4.72	19029	9.06	2.02
TN NONFARM JOBS (THOUS)	2664.5	2718.5	2764.0	2825.2	2896.5	2968.8	3016.8	3067.6	3122.6	3003.7	3103.1	3246.4
Percentage change	1.79	2.03	1.67	2.21	2.52	2.49	1.62	1.69	1.79	-3.81	3.31	4.62
US NONFARM JOBS (MIL)	131.9	134.2	136.4	138.9	141.8	144.3	146.6	148.9	150.9	142.2	146.3	152.6
Percentage change	1.22	1.69	1.64	1.88	2.07	1.79	1.58	1.56	1.34	-5.79	2.90	4.34
TN MFG JOBS (THOUS)	302.6	311.5	316.6	323.1	331.2	342.0	346.7	350.9	355.6	335.6	349.5	364.9
Percentage change	1.86	2.94	1.62	70.7	7.50	3.26	1.39	1.21	1.33	-5.61	4.12	4.42
US MFG JOBS (MIL)	11.7	11.9	12.0	12.2	12.3	12.4	12.4	12.7	12.8	12.2	12.4	12.8
Percentage change	1.72	1.70	0.77	1.38	1.23	0.15	0.70	2.00	1.01	-2.08	1.56	3.83
TN UNEMPLOYMENT RATE (%)	9.1	8.0	7.7	9.9	5.6	4.8	3.7	3.5	3.3	7.5	4.5	3.4
US UNEMPLOYMENT RATE (%)	8.9	8.1	7.4	6.2	5.3	4.9	4.4	3.9	3.7	8.1	5.4	3.6
CHAINED PRICE INDEX, GDP (2017=100.0)	91.5	93.2	94.8	96.4	97.3	98.2	100.0	102.3	104.0	105.4	110.2	118.0
Percentage change	2.06	1.87	1.73	1.74	0.87	96.0	1.82	2.29	1.68	1.34	4.57	7.05
US PERS CONSUMP DEFL (2017=100.0)	92.8	94.5	92.8	97.1	97.3	98.3	100.0	102.0	103.5	104.6	109.0	116.0
Percentage change	2.53	1.86	1.32	1.40	0.18	1.01	1.75	2.05	1.44	1.08	4.17	6.46
CONSUMER PRICE INDEX, ALL-URBAN (82-84=1.000)	2.249	2.296	2.330	2.367	2.370	2.400	2.451	2.511	2.557	2.589	2.710	2.926
Parelinge claring community bank being bate 1/8/1	<u>†</u> °	70.7	i .	20.	0.1	7 6	5 - 4	1 0	- u	2. 4		66.7
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FEDERAL FUNDS RATE (% per annum)	0.102	0.140	0.108	0.089	0.133	0.395	1.002	1.832	2.158	0.376	0.080	1.683
30-YEAR FIXED MORTGAGE RATE (%)	4.6	3.7	4.1	4.3	4.0	3.8	4.1	4.6	4.1	3.2	3.0	5.4
TN TAXABLE SALES (MIL2017\$)	100885	103688	105682	109616	116621	121552	125263	131070	136946	139546	162472	169193
Percentage change	3.31	2.78	1.92	3.72	6.39	4.23	3.05	4.64	4.48	1.90	16.43	4.14
TN TAXABLE SALES (MIL\$)	93632	98017	101224	106464	113480	119467	125274	133758	141767	146048	177134	196322
Percentage change	5.93	4.68	3.27	5.18	6.59	5.28	4.86	6.77	5.99	3.02	21.28	10.83
TN AVG ANNUAL WAGE, NONFARM (2017\$)	46277	47046	46507	46995	48479	48632	49146	49773	50346	53065	54610	53741
Percentage change	-0.45	1.66	-1.15	1.05	3.16	0.31	1.06	1.27	1.15	5.40	2.91	-1.59
TN AVG ANNUAL WAGE, NONFARM (\$)	42945	44476	44544	45642	47170	47798	49148	50792	52115	55527	59529	62357
Percentage change	2.06	3.56	0.15	2.47	3.35	1.33	2.82	3.35	2.60	6.55	7.21	4.75
	University of Tennesse	Tennesse	Ф						ř	nnessee E	Tennessee Econometric Mode	ic Model

December 2023 Table 2: Selected Per Capita U.S. and Tennessee Economic Indicators

2021 2022	50953.6 54008.5	64390 65374	77124	52491 50620	59102 56385	57183 58739	64390 65431	23401 24180	25512 28056
	8.31 6.00	5.61 1.53	10.45 8.68	5.17 -3.56	4.55 -4.60	9.50 2.72	8.86 1.62	15.49 3.32	20.31 9.97
2020	47043.3 509 -3.13	60970 6 -2.60	64251 7 -1.32	49912 5 5.16	56529 5 5.37	52223 5 6.30	59147 6 6.51	20262 2	21206 2 2.15
2019	48562.3 1.63	62599	65108 3.62	47462 3.71	53647 2.68	49130 5.20	55533 4.15	20054 3.58	20760 5.08
2018	47785.6	61429	62836	45763	52248	46701	53320	19360	19757
	0.52	2.34	4.69	2.58	2.46	4.68	4.56	3.69	5.81
2017	47537.4 1.88	60022	60022 3.58	44612 1.69	50994 2.37	44613 3.47	50996 4.16	18671 2.07	18672 3.86
2016	46660.5	58988 1.05	57950 2.01	43871 1.44	49814 0.87	43119 2.47	48960 1.90	18292 3.38	17978 4.42
2015	46242.4	58377	56811	43249	49383	42082	48050	17694	17217
	2.80	2.17	3.11	4.13	3.68	4.32	3.87	5.58	5.78
2014	44982.3	57140	55095	41535	47628	40339	46258	16758	16276
	0.83	1.74	3.51	1.52	2.84	2.94	4.28	2.97	4.41
2013	44611.7	56165	53228	40915	46315	39188	44361	16275	15589
	0.58	1.37	3.10	-1.21	-0.95	0.09	0.35	1.26	2.60
2012	44354.4	55404	51628	41416	46762	39153	44208	16073	15194
	2.52	1.55	3.44	1.85	1.91	3.75	3.81	1.92	3.81
2011	43262.1	54561	49913	40664	45886	37738	42585	15769	14635
	2.38	0.81	2.89	2.77	2.61	5.37	5.21	2.63	5.23
	TN GDP (2012\$) SAARProcentage change	US GDP (2017\$) SAARPercentage change	US GDP (\$) SAARPercentage change	TN PERSONAL INCOME (2017\$) SAAR Percentage change	US PERSONAL INCOME (2017\$) SAAR Percentage change	TN PERSONAL INCOME (\$) SAAR Percentage change	US PERSONAL INCOME (\$) SAAR	TN TAXABLE SALES (2017\$) Percentage change	TN TAXABLE SALES (\$)Procentage change

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Table 3: Tennessee Personal Income Components (millions of 2017 dollars)

						Historical Data	Data					
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
TN PERSONAL INCOMEPERSONAL INCOME	260145 3.45	267190 2.71	265675 -0.57	271674 2.26	285050 4.92	291527 2.27	299298 2.67	309820 3.52	324105 4.61	343717 6.05	364397 6.02	354211 -2.80
WAGES AND SALARIESPercentage change	124293 1.21	128872 3.68	129494 0.48	133708 3.25	141308 5.68	145336 2.85	149232 2.68	153649 2.96	158173 2.94	160308 1.35	170414 6.30	175415 2.93
OTHER LABOR INCOMEPercentage change	28390 1.96	30443 7.23	30811	30319 -1.60	31099 2.57	31561 1.48	32564 3.18	33869 4.01	34589 2.13	34866	35421 1.59	34850 -1.61
PROPRIETORS INCOMEProperties	34596 10.23	33909 -1.99	35201 3.81	36583 3.93	38094 4.13	39023 2.44	39763 1.89	41118 3.41	44833 9.04	46978 4.78	50779 8.09	51458 1.34
RENT, INTEREST, DIVIDENDS Percentage change	36289 5.38	38415 5.86	36412 -5.22	37828 3.89	39679 4.89	40899	43169 5.55	45807 6.11	49346 7.73	49319	50653 2.70	51843 2.35
TRANSFER PAYMENTSPercentage change	55374 -0.57	54888	55783 1.63	55684 -0.18	58472 5.01	59165 1.19	60035 1.47	61667 2.72	64692 4.91	80464 24.38	86299 7.25	71161 -17.54
LESS: PERS CONT FOR SOC INS Percentage change	17976 -9.56	18199 1.24	20728 13.90	21210	22244 4.87	22834 2.65	23713 3.85	24354 2.70	25279 3.80	26108 3.28	27060 3.64	28484 5.26
RESIDENCE ADJUSTMENT Percentage change	-823 -0.76	-1139 38.45	-1297 13.88	-1238 -4.54	-1359 9.77	-1624 19.50	-1752 7.90	-1936 10.49	-2250 16.21	-2111 -6.18	-2109 -0.08	-2030 -3.76
PER CAPITA PERSONAL INCOME (\$) Percentage change	40664 2.77	41416	40915 -1.21	41535 1.52	43249 4.13	43871 1.44	44612 1.69	45763 2.58	47462 3.71	49912 5.16	52491 5.17	50620 -3.56

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Table 4: Tennessee Personal Income Components (millions of current dollars)

Percentage change	241432 6.07 115350 3.77 26349 4.55 32112 13.03 33681 8.05	252592 4.62 121832 5.62 28780 9.23 32055 -0.18 36318 7.83	254465 0.74 124031 1.80 29510 2.54 33715 5.18 34875 -3.97	2014 263856 3.69 129860 4.70 29446 -0.22 35530 5.38 36741 5.38	277356 277356 5.12 137496 5.88 30260 2.77 37065 4.32 38608 5.08	286532 3.31 142850 3.89 3.1021 2.51 2.51 3.8355 3.48 4.12	299308 4.46 149238 4.47 32566 4.98 39763 3.67 43172 7.40	316177 316177 5.64 156800 5.07 34564 6.14 41961 5.53 46751 8.29	2019 335497 6.11 163732 4.42 35805 3.59 46411 10.60 51082 9.26	359634 7.19 167761 2.46 36486 1.90 49171 5.95 5.1606 1.03	2021 396986 10.39 185796 10.75 38605 5.81 55365 12.60 55217 7.00	2022 411035 3.54 203568 9.57 40440 4.75 59715 7.86 60174 8.98
LESS: PERS CONT FOR SOC INS Percentage change	1.94 1.94 1.04 1.27 1.77 37738 5.37	0.98 17204 3.13 -1077 41.03 39153 3.75	2.97 19854 15.40 -1242 15.35 39188 0.09	20600 1.22 20600 3.76 -1202 -3.21 40339 2.94	5.20 2.1644 5.07 -1322 9.98 4.2082 4.32	2.21 2.24 2.2443 3.69 -1596 20.71 43119	3.24 23714 5.66 -1753 9.78 44613	4.82 24853 4.81 -1976 12.75 46701 4.68	6.41 26168 5.29 -2329 17.87 49130 5.20	25.65 27321 4.41 -2209 -5.14 52223 6.30	29500 7.98 -2300 4.10 57183	-12.00 33057 12.06 -2356 2.43 58739

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Table 5: Tennessee Nonfarm Employment by Sector (thousands of jobs)

						Historical	l Data					
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
TOTAL NONFARMPotal NonFarm	2664.5 1.79	2718.5 2.03	2764.0 1.67	2825.2 2.21	2896.5 2.52	2968.8	3016.8 1.62	3067.6 1.69	3122.6 1.79	3003.7 -3.81	3103.1 3.31	3246.4 4.62
NATURAL RESOURCES, MINING AND CONSTRUCTIONPercentage change	108.9 3.45	109.2	108.2 -0.91	111.2	117.5 5.64	119.4	124.6 4.36	129.2 3.67	134.6 4.17	134.3 -0.20	140.7	151.5 7.66
MANUFACTURINGPercentage change	302.6 1.86	311.5 2.94	316.6 1.62	323.1 2.07	331.2 2.50	342.0 3.26	346.7 1.39	350.9 1.21	355.6 1.33	335.6 -5.61	349.5 4.12	364.9 4.42
DURABLE GOODSPursus	184.1 4.19	194.3 5.54	199.3 2.58	205.6 3.15	211.4 2.79	219.6	222.2	224.2 0.91	227.6	211.2 -7.23	221.5 4.87	232.5 4.97
NONDURABLE GOODSPercentage change	118.5 -1.56	117.2	117.2	117.5 0.23	119.8	122.4	124.6	126.7 1.75	128.0 0.96	124.5 -2.74	128.0 2.86	132.4 3.46
TRADE, TRANSPORTATION, UTILITIES Percentage change	559.1 1.46	570.3 2.00	576.4 1.07	584.5 1.41	597.0 2.14	612.2 2.55	616.5 0.70	623.5	635.1 1.85	628.4	650.6 3.53	678.0 4.22
WHOLESALE TRADEPercentage change	116.5	119.3 2.43	119.5 0.20	119.1 -0.41	118.4 -0.55	117.8	119.3 1.29	120.4 0.92	121.8	118.8	121.3 2.14	129.5 6.73
RETAIL TRADEPercentage change	306.8	310.1 1.06	312.3 0.73	317.7 1.73	322.9 1.61	331.3	333.0 0.51	333.2 0.05	332.4 -0.24	323.8 -2.57	331.3 2.32	341.2 2.97
TRANSPORTATION & UTILITIES	135.8 3.78	140.9 3.76	144.5 2.55	147.7 2.24	155.8 5.43	163.1 4.73	164.2 0.67	170.0 3.50	180.9	185.8 2.69	197.9 6.53	207.4 4.78
INFORMATIONPercentage change	44.1	43.6	44.5	44.2	44.8 1.26	45.7 1.95	46.2 1.24	45.3 -1.97	45.7 0.77	43.3	47.2 8.91	54.4 15.30
FINANCIAL ACTIVITIESPinAndian Percentage change	139.2 -0.42	139.8 0.43	141.6 1.24	146.9 3.75	150.9 2.72	156.1 3.48	162.7 4.22	168.4 3.52	171.6 1.91	168.4 -1.91	169.6 0.76	175.3 3.32
PROFESSIONAL & BUSINESS SERVICES Percentage change	325.8 6.24	341.8 4.91	357.5 4.59	379.1 6.02	396.2 4.52	407.0 2.73	410.8 0.94	418.1 1.79	427.8 2.30	416.3	437.7 5.14	464.9 6.20
EDUCATION & HEALTH SERVICES	389.1	399.0 2.54	404.6 1.41	409.3 1.16	418.2 2.16	427.8 2.32	435.1 1.70	440.1 1.14	445.5 1.22	434.4	439.9 1.26	451.0 2.53
LEISURE & HOSPITALITYPercentage change	267.9	277.2 3.47	286.3 3.30	296.7 3.63	308.1 3.84	319.8	329.3 2.97	338.0 2.64	347.5 2.82	293.3 -15.61	314.4 7.21	343.7 9.32
OTHER SERVICESPercentage change	102.1 0.85	104.3 2.16	105.6 1.28	106.1 0.44	107.8	110.9	114.5 3.24	118.3 3.32	121.8 3.02	117.0	122.1 4.33	125.8 3.00
GOVERNMENTPercentage change	425.6	421.9	422.8 0.21	424.1 0.32	424.9 0.18	427.9 0.72	430.4 0.57	435.9 1.27	437.6 0.41	432.8	431.4	436.9 1.28
FEDERAL, CIVILIANPercentage change	50.5 -3.45	50.1	49.5 -1.35	48.4	49.1 1.45	49.2 0.29	49.1	49.1	50.1 1.99	52.0 3.76	51.6 -0.71	52.4 1.50
STATE & LOCAL	375.1 -0.83	371.7 -0.89	373.3 0.42	375.7 0.65	375.8 0.02	378.7 0.77	381.3	386.8	387.6 0.21	380.8	379.8 -0.26	384.6

Table 6: Tennessee Durable Goods Manufacturing Employment (thousands of jobs)

						Historical Data	Data					
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
TOTAL DURABLE GOODSPercentage change	184.1 4.19	194.3 5.54	199.3 2.58	205.6 3.15	211.4 2.79	219.6 3.90	222.2 1.18	224.2 0.91	227.6 1.53	211.2 -7.23	221.5 4.87	232.5 4.97
WOOD PRODUCTSPercentage change	10.8	11.0	10.9	11.2 3.20	11.6 3.18	12.1	12.6 3.36	12.5 -0.13	12.8	12.7	13.2 3.92	14.0 6.04
NONMETALLIC MINERALSPercentage change	11.8	12.5 5.95	12.2 -2.52	12.0	12.7 5.59	13.3 4.97	13.7	14.2 3.96	14.4 1.18	13.6 -5.20	13.9	14.9
PRIMARY METALSPercentage change	9.3	9.8 4.92	10.1 3.15	10.2 0.98	10.5 2.69	10.6	10.7 0.78	11.0	11.4	10.5	11.0	11.1
FABRICATED METALSPercentage change	33.8	34.6 2.58	34.1 -1.62	34.6 1.57	35.3 2.02	35.7 1.27	35.6 -0.47	36.6 2.98	38.0 3.77	36.9 -2.92	39.5 6.91	41.5 5.22
MACHINERYPercentage change	25.2 1.46	25.6 1.68	25.4 -0.74	25.5 0.41	25.3 -0.62	25.5 0.60	25.3 -0.61	25.9 2.14	26.3 1.69	23.4	24.0	24.6
COMPUTERS & ELECTRONICS Percentage change	5.6	5.6 0.73	5.2 -7.38	5.1	5.0	4.8 -3.19	4.9 1.91	5.2 6.99	5.8 11.46	6.1	6.4	6.8 5.85
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTSPercentage change	17.7 4.45	17.9	18.6 3.80	19.4	19.8	19.9 0.46	19.3	18.7	17.6 -5.80	17.2 -2.42	18.3	19.1
TRANSPORTATION EQUIPMENT Percentage change	45.8 13.18	53.6 17.03	59.6 11.02	63.8 7.13	66.8 4.72	72.5 8.57	74.5 2.72	74.0	75.1 1.43	65.5 -12.76	69.0 5.28	73.5 6.57
FURNITUREPercentage change	8.9 -7.73	8.7 -2.92	8.8	9.0	9.1 0.56	9.4	9.5	9.6	9.7	9.1	9.6	9.6
MISCELLANEOUS DURABLES	15.2 1.72	14.9 -2.08	14.6 -2.30	14.8	15.3 3.60	15.6 1.74	16.2 3.57	16.4	16.6 1.48	16.2 -2.30	16.5 1.58	17.3

Table 7: Tennessee Nondurable Goods Manufacturing Employment (thousands of jobs)

						Historical Data	Data					
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
TOTAL NONDURABLE GOODS	118.5	117.2	117.2	117.5	119.8	122.4	124.6	126.7	128.0	124.5	128.0	132.4
Percentage change	-1.56	-1.10	0.01	0.23	1.99	2.13	1.76	1.75	96.0	-2.74	2.86	3.46
FOOD	33.2	33.1	32.5	32.8	33.4	34.4	35.4	35.7	35.9	36.2	37.6	39.4
Percentage change	1.54	-0.21	-1.85	0.95	1.75	3.00	3.05	0.75	0.65	0.83	3.87	4.85
BEVERAGE & TOBACCO	2.0	5.2	5.3	5.5	5.9	9.9	6.9	7.2	7.5	7.5	8.4	9.1
Percentage change	0.16	3.51	2.58	3.45	7.70	10.83	5.58	4.24	3.33	0.08	12.25	8.97
PAPER	12.9	12.2	12.1	12.0	12.0	12.0	11.9	12.1	12.6	12.5	12.5	13.5
Percentage change	-2.92	-4.99	-1.08	-0.84	0.28	-0.77	-0.15	1.54	3.63	-0.66	-0.01	8.03
PRINTING & RELATED SUPPORT	10.0	9.7	9.7	9.5	9.3	9.3	9.0	9.0	9.0	8.2	8.0	8.2
Percentage change	-12.80	-3.58	00.00	-1.13	-2.90	-0.11	-2.53	-0.10	0.28	-9.76	-1.72	2.39
CHEMICALS	24.7	24.6	24.9	25.4	25.7	25.4	25.2	25.8	26.1	25.6	26.2	26.7
Percentage change	-1.49	-0.64	1.59	1.94	1.24	-1.17	-0.86	2.35	0.97	-1.76	2.22	2.14
PLASTICS & RUBBER	20.4	20.0	20.2	20.8	21.9	23.2	24.3	24.8	24.9	23.1	24.2	25.4
Percentage change	2.68	-2.29	0.99	3.06	5.49	5.61	5.10	2.06	0.30	-7.15	4.64	4.83
MISCELLANEOUS NONDURABLE GOODS	12.3	12.5	12.6	11.5	11.6	11.7	11.7	12.0	12.0	11.4	11.2	10.1
Percentage change	-5.34	1.82	0.28	-8.87	1.16	0.72	0.28	2.97	-0.33	-5.01	-2.25	-9.58

Tennessee Econometric Model

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		,		,		Historical Data	Data					
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
TOTAL NONFARM	46277	47046	46507	46995	48479	48632	49146	49773	50346	53065	54610	53741
	-0.45	1.66	-1.15	1.05	3.16	0.31	1.06	1.27	1.15	5.40	2.91	-1.59
NATURAL RESOURCES, MINING AND CONSTRUCTIONPercentage change	50636 -0.25	51331 1.37	51021	52609	55545 5.58	56470	57733 2.24	57090	58251 2.03	60713	61120 0.67	62330 1.98
MANUFACTURINGPercentage change	57205 -1.00	58277 1.87	57428 -1.46	58305 1.53	59133 1.42	59386 0.43	59799 0.70	59747 -0.09	59612 -0.23	61659 3.43	61066	60513 -0.91
DURABLE GOODSPercentage change	55499	57318	55341	56625	57534	58122	58583	58824	58687	60484	59851	59703
	-1.39	3.28	-3.45	2.32	1.60	1.02	0.79	0.41	-0.23	3.06	-1.05	-0.25
NONDURABLE GOODSPercentage change	59851	59873	60975	61242	61953	61657	61968	61379	61261	63609	63171	61935
	-0.25	0.04	1.84	0.44	1.16	-0.48	0.50	-0.95	-0.19	3.83	-0.69	-1.96
TRADE, TRANSPORTATION, UTILITIES Percentage change	43503 0.59	43862 0.82	43348	44011 1.53	45270 2.86	45525 0.56	45819 0.64	46136 0.69	46279 0.31	48623 5.07	51318 5.54	50020 -2.53
WHOLESALE TRADEPercentage change	65101 0.53	66643 2.37	66049	68725 4.05	71005 3.32	72920 2.70	72333 -0.81	70840 -2.06	71636 1.12	74444 3.92	77726 4.41	77207 -0.67
RETAIL TRADEPercentage change	30395	30239	29557	29952	30821	30937	31224	31691	31446	33609	36049	34282
	0.40	-0.51	-2.26	1.33	2.90	0.38	0.93	1.50	-0.77	6.88	7.26	-4.90
TRANSPORTATION & UTILITIES	54603	54551	54375	54340	55657	55378	56151	56954	56461	58274	60696	58941
	0.07	-0.10	-0.32	-0.06	2.42	-0.50	1.39	1.43	-0.86	3.21	4.16	-2.89
INFORMATIONPercentage change	60275	61289	60167	62339	62784	64511	67361	71646	71920	77237	82654	76189
	3.42	1.68	-1.83	3.61	0.71	2.75	4.42	6.36	0.38	7.39	7.01	-7.82
FINANCIAL ACTIVITIESPercentage change	66292	69707 5.15	67515 -3.14	68422 1.34	69524 1.61	69909 0.55	69176 -1.05	71754 3.73	73359 2.24	80436 9.65	85540 6.35	80876 -5.45
PROFESSIONAL & BUSINESS SERVICES Percentage change	51204	54010	53653	52510	55513	55398	56013	57731	59856	62499	64905	63930
	-1.88	5.48	-0.66	-2.13	5.72	-0.21	1.11	3.07	3.68	4.42	3.85	-1.50
EDUCATION & HEALTH SERVICES	47501	47441	47126	47368	49322	49068	49604	49783	50229	53234	54039	53584
	-1.64	-0.13	-0.66	0.51	4.13	-0.51	1.09	0.36	0.90	5.98	1.51	-0.84
LEISURE & HOSPITALITYPercentage change	22367	22641	22215	22927	24321	24596	25336	26086	26130	25456	28440	29844
	-0.68	1.23	-1.88	3.21	6.08	1.13	3.01	2.96	0.17	-2.58	11.72	4.94
OTHER SERVICES	41533 0.31	41976 1.07	41652 -0.77	43296 3.95	44453 2.67	44266 -0.42	44225 -0.09	44488	44497 0.02	47745 7.30	46800 -1.98	46664
GOVERNMENTPercentage change	44336	44236	44043	44471	44900	45058	45825	46160	46689	48153	48388	47352
	0.28	-0.23	-0.44	0.97	0.96	0.35	1.70	0.73	1.15	3.14	0.49	-2.14
FEDERAL, CIVILIAN	77267	76218	74978	80936	79936	79228	79359	80585	79152	79816	80424	78260
	3.14	-1.36	-1.63	7.95	-1.24	-0.89	0.17	1.55	-1.78	0.84	0.76	-2.69
STATE & LOCAL	39899	39922	39944	39774	40322	40615	41512	41790	42496	43835	44038	43144
Percentage change	-0.21	0.06	0.06	-0.43	1.38	0.73	2.21	0.67	1.69	3.15	0.46	

December 2023

Table 8: Tennessee Average Annual Wage and Salary Rate by Sector (2017 dollars)

						Historical Data	Data					
. 1	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
TOTAL NONFARM	42945	44476	44544	45642	47170	47798	49148	50792	52115	55527	59529	62357
	2.06	3.56	0.15	2.47	3.35	1.33	2.82	3.35	2.60	6.55	7.21	4.75
NATURAL RESOURCES, MINING AND CONSTRUCTION Percentage change	46987 2.27	48523 3.27	48868	51095 4.56	54047 5.78	55506 2.70	57737 4.02	58258 0.90	60294	63533 5.37	66641	72323 8.53
MANUFACTURING	53084	55091	55004	56626	57537	58369	59802	60968	61706	64522	66555	70213
	1.49	3.78	-0.16	2.95	1.61	1.45	2.45	1.95	1.21	4.56	3.15	5.49
DURABLE GOODS	51501 1.10	54183 5.21	53006	54996 3.76	55982 1.79	57124 2.04	58584 2.56	60027 2.46	60748 1.20	63294 4.19	65223 3.05	69274 6.21
NONDURABLE GOODSPercentage change	55539	56602	58401	59476	60279	60603	61971	62633	63412	66560	68863	71860
	2.25	1.91	3.18	1.84	1.35	0.54	2.26	1.07	1.24	4.96	3.46	4.35
TRADE, TRANSPORTATION, UTILITIES Percentage change	40372	41465	41518	42745	44048	44745	45820	47081	47903	50879	55947	58035
	3.13	2.71	0.13	2.95	3.05	1.58	2.40	2.75	1.75	6.21	9.96	3.73
WHOLESALE TRADEPercentage change	60414	63006 4.29	63261 0.41	66748 5.51	69088 3.51	71673 3.74	72333 0.92	72286	74149 2.58	77898 5.06	84735 8.78	89578 5.72
RETAIL TRADEPercentage change	28208 2.94	28585 1.34	28309 -0.96	29090 2.76	29989 3.09	30406	31225 2.69	32341 3.57	32550 0.65	35168 8.04	39307 11.77	39776 1.19
TRANSPORTATION & UTILITIES	50670	51569	52081	52776	54155	54429	56152	58120	58443	60980	66161	68379
	2.59	1.77	0.99	1.33	2.61	0.51	3.17	3.50	0.56	4.34	8.49	3.35
INFORMATIONPercentage change	55940 6.04	57943 3.58	57627 -0.55	60543 5.06	61086 0.90	63409 3.80	67361 6.23	73109 8.53	74453 1.84	80836 8.57	90087	88400 -1.87
FINANCIAL ACTIVITIES	61519	65899	64662	66449	67647	68707	69179	73229	75936	84172	93221	93840
	2.28	7.12	-1.88	2.76	1.80	1.57	0.69	5.85	3.70	10.85	10.75	0.66
PROFESSIONAL & BUSINESS SERVICES Percentage change	47517	51063	51388	50999	54014	54448	56013	58914	61960	65400	70744	74180
	0.60	7.46	0.64	-0.76	5.91	0.80	2.88	5.18	5.17	5.55	8.17	4.86
EDUCATION & HEALTH SERVICES	44083	44848	45137	46004	47991	48227	49604	50803	51993	55706	58906	62173
	0.85	1.73	0.64	1.92	4.32	0.49	2.85	2.42	2.34	7.14	5.74	5.55
LEISURE & HOSPITALITYPercentage change	20757	21403	21278	22267	23666	24175	25336	26622	27049	26637	31026	34646
	1.83	3.11	-0.59	4.65	6.28	2.15	4.80	5.08	1.60	-1.52	16.47	11.67
OTHER SERVICESPercentage change	38541	39681	39896	42050	43252	43505	44225	45400	46062	49958	51019	54152
	2.84	2.96	0.54	5.40	2.86	0.58	1.66	2.66	1.46	8.46	2.12	6.14
GOVERNMENTPercentage change	41145	41818	42184	43191	43687	44286	45827	47105	48331	50386	52743	54948
	2.81	1.64	0.87	2.39	1.15	1.37	3.48	2.79	2.60	4.25	4.68	4.18
FEDERAL, CIVILIANPercentage change	71702 5.73	72050 0.49	71817 -0.32	78606 9.45	77777 -1.05	77868 0.12	79361 1.92	82235 3.62	81932 -0.37	83516 1.93	87652 4.95	90815 3.61
STATE & LOCALPercentage change	37028	37740	38258	38628	39233	39919	41514	42646	43991	45867	48002	50064
	2.32	1.92	1.37	0.97	1.56	1.75	3.99	2.73	3.15	4.26	4.65	4.30

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Table 10: Tennessee Civilian Labor Force and Unemployment Rate

						Historical Data	Data					
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
CIVILIAN LABOR FORCE (THOUS)	3117	3096	3079	3044	3074	3137	3196	3258	3335	3301	3326	3353
Percentage change	92.0	-0.66	-0.55	-1.16	1.01	2.03	1.90	1.92	2.39	-1.02	0.74	0.83
EMPLOYED PERSONS (THOUS)	2833	2850	2841	2842	2903	2987	3077	3144	3224	3054	3176	3240
Percentage change	1.55	0.59	-0.28	0.03	2.15	2.89	2.99	2.19	2.54	-5.26	3.99	2.02
UNEMPLOYED PERSONS (THOUS)	284	247	238	201	171	149	120	114	111	247	149	113
Percentage change	-6.48	-13.10	-3.60	-15.41	-15.02	-12.68	-19.91	-5.05	-1.83	121.64	-39.49	-24.31
PARTICIPATION RATE (PERCENT)	62.7	61.7	8.09	59.6	9.69	60.2	60.5	61.0	61.8	60.5	60.4	60.1
Percentage change	-0.21	-1.59	-1.42	-2.04	0.04	96.0	0.53	0.81	1.35	-2.05	-0.28	-0.42
UNEMPLOYMENT RATE (PERCENT)	9.1	8.0	7.7	9.9	5.6	4.8	3.7	3.5	3.3	7.5	4.5	3.4
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Table 11: Tennessee Taxable Sales (millions of 2017 dollars)

						Historical Data	Data					
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
TOTAL TAXABLE SALES	100885 3.31	103688 2.78	105682 1.92	109616 3.72	116621 6.39	121552 4.23	125263 3.05	131070 4.64	136946 4.48	139546 1.90	162472 16.43	169193 4.14
AUTO DEALERSPercentage change	9082	9811 8.03	10259 4.57	10870 5.95	12115 11.46	12828 5.89	12873 0.35	13079	13466 2.96	13622 1.15	15473 13.59	14431 -6.74
PURCHASES FROM MANUFACTURERS Percentage change	4320 6.96	4275 -1.03	4354 1.84	4592 5.47	5011 9.12	5295 5.68	5480 3.48	5821 6.24	6236 7.13	6744 8.14	7897 17.09	8995 13.91
MISC DURABLE GOODS	16789 4.85	17320 3.16	17545 1.30	18062 2.95	19130 5.91	20485	21361 4.28	22201 3.93	23227 4.62	25060 7.89	28894 15.30	30662 6.12
EATING AND DRINKING PLACES	10243 2.37	10787 5.31	11041 2.36	11527 4.40	12363 7.25	12829 3.77	12911 0.64	13404 3.82	14582 8.79	12632 -13.38	15432 22.17	16338 5.87
FOOD STORES	9930	10250 3.22	10701 4.40	11013 2.92	11411 3.61	11715 2.66	12121 3.47	12537 3.44	12764 1.81	13924 9.09	13609 -2.26	14139 3.89
LIQUOR STORESPercentage change	784	839 6.95	873 4.10	920 5.39	998	992	908	953 4.98	1019 6.93	1235 21.18	1280 3.59	1257 -1.79
HOTELS AND MOTELSPercentage change	2513 10.04	2632 4.73	2650 0.70	2966 11.90	3311 11.64	3662 10.61	3605 -1.57	3753 4.11	4551 21.27	2809	4664 66.05	5766 23.62
OTHER RETAIL AND SERVICEPercentage change	30983 2.67	31924 3.04	32505 1.82	33859 4.17	35883 5.98	37169 3.59	38038 2.34	40469 6.39	42152 4.16	46169 9.53	55856 20.98	57532 3.00
MISC NONDURABLE GOODSPercentage change	8606 1.89	8910 3.53	9076 1.86	9315 2.64	9729 4.44	10076 3.57	9875 -1.99	10207 3.37	10431 2.20	9893 -5.16	11969 20.99	12361 3.27
TRANSPORTATION, COMMUNICATION Percentage change	7635 -0.15	6940 -9.11	6678 -3.77	6493 -2.77	6671 2.74	6500 -2.56	8092 24.49	8645 6.83	8515 -1.50	7457 -12.42	7397 -0.81	7712 4.26
PER CAPITA (\$)	15769 2.63	16073 1.92	16275 1.26	16758 2.97	17694 5.58	18292 3.38	18671 2.07	19360 3.69	20054 3.58	20262 1.04	23401 15.49	24180 3.32

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Table 12: Tennessee Taxable Sales (millions of current dollars)

						Historical Data	Data					
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
TOTAL TAXABLE SALESPotentage change	93632	98017	101224	106464	113480	119467	125274	133758	141767	146048	177134	196322
	5.93	4.68	3.27	5.18	6.59	5.28	4.86	6.77	5.99	3.02	21.28	10.83
AUTO DEALERSProrentage change	8430	9275	9827	10557	11789	12609	12873	13347	13940	14256	16857	16745
	9.89	10.03	5.95	7.43	11.67	6.95	2.10	3.68	4.45	2.26	18.24	-0.66
PURCHASES FROM MANUFACTURERS Percentage change	4009 9.67	4042	4170	4460 6.95	4876 9.32	5205 6.75	5480 5.28	5941 8.42	6456 8.67	7060 9.35	8609 21.95	10431 21.16
MISC DURABLE GOODS	15583	16372	16804	17543	18616	20134	21363	22657	24046	26227	31505	35571
	7.51	5.06	2.64	4.39	6.12	8.16	6.11	6.06	6.13	9.07	20.13	12.91
EATING AND DRINKING PLACES	9507	10197	10576	11196	12030	12609	12910	13679	15095	13221	16829	18964
	4.97	7.26	3.71	5.86	7.45	4.81	2.39	5.96	10.35	-12.41	27.28	12.69
FOOD STORESPood STORES	9216	9690	10249	10696	11103	11514	12122	12793	13213	14569	14836	16411
	3.73	5.14	5.78	4.36	3.80	3.71	5.28	5.54	3.28	10.26	1.83	10.62
LIQUOR STORESProcentage change	728 6.31	793 8.93	836 5.47	894	971 8.66	975 0.36	908	973 7.14	1055 8.46	1293 22.50	1395 7.90	1459 4.57
HOTELS AND MOTELSPercentage change	2333	2488	2539	2881	3222	3600	3605	3831	4711	2941	5094	6692
	12.85	6.66	2.03	13.47	11.85	11.72	0.15	6.26	22.97	-37.57	73.23	31.37
OTHER RETAIL AND SERVICEPercentage change	28756	30178	31134	32885	34916	36531	38041	41299	43637	48324	60892	66761
	5.27	4.95	3.17	5.62	6.18	4.62	4.13	8.56	5.66	10.74	26.01	9.64
MISC NONDURABLE GOODSProcentage change	7987 4.47	8423 5.45	8693 3.21	9047	9467 4.63	9902 4.60	9875 -0.28	10416 5.48	10798 3.67	10355 -4.10	13052 26.04	14342 9.89
TRANSPORTATION, COMMUNICATION Percentage change	7085 2.37	6560 -7.41	6396 -2.50	6306 -1.40	6491 2.93	6388 -1.58	8095 26.71	8822	8815	7802 -11.49	8065 3.37	8945 10.91
PER CAPITA (\$)	14635	15194	15589	16276	17217	17978	18672	19757	20760	21206	25512	28056
	5.23	3.81	2.60	4.41	5.78	4.42	3.86	5.81	5.08	2.15	20.31	9.97

Table 13: Tennessee Gross Domestic Product by Sector (millions of 2012 dollars)

						Historical Data	l Data					
ı	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
GROSS DOMESTIC PRODUCT	276,891	286,341	289,839	294,392	304,985	310,352	319,202	323,899	331,696	323,979	353,753 9.19	370,806 4.82
NATURAL RESOURCES & MINING	2,610	2,119	2,804	2,517	2,856	2,825	2,862	2,914	2,974	2,807	3,394	3,077
Percentage change	-3.48	-18.82	32.35	-10.24	13.47	-1.07	1.30	1.83	2.05	-5.61	20.90	-9.32
CONSTRUCTION	8,913	9,636 8.11	9,068	8,788	8,863	9,017	9,297 3.10	9,622 3.49	10,040 4.34	9,924	10,436 5.15	10,008
MANUFACTURING	41,333	43,618	45,570	45,727	46,973	48,013	51,842	49,853	50,958	49,319	55,367	58,422
DURABLE GOODS.	22.301	24.188	24.956	25.419	26.745	27.794	29.149	28.018	28,359	27.196	31.500	34.649
Percentage change	11.74	8.46	3.18	1.85	5.22	3.92	4.88	-3.88	1.22	4.10	15.83	10.00
NONDURABLE GOODSProceeds	19,032 -3.59	19,430 2.09	20,614 6.10	20,308	20,228	20,219 -0.05	22,694 12.24	21,835 -3.78	22,599 3.50	22,123 -2.11	23,867 7.88	23,716 -0.63
TRADE, TRANSPORTATION & UTILITIES	53,576 1.67	55,084 2.82	55,189 0.19	56,018 1.50	57,660 2.93	59,220 2.71	59,757 0.91	61,223 2.45	62,669 2.36	62,749 0.13	66,039 5.24	65,078 -1.45
WHOLESALE TRADEPercentage change	19,533	20,728 6.11	20,846	21,492	22,012	22,072	21,752	21,889	22,238	22,540	24,266	25,088 3.39
RETAIL TRADE	19,662	19,901	19,904	20,103	20,865	21,976	22,582	23,689	24,566	24,171	25,262	24,176
TRANSPORTATION & UTILITIES	14,380	14,456 0.53	14,440	14,423	14,782	15,172 2.64	15,423	15,644	15,865 1.41	16,038	16,511	15,814
INFORMATION Percentage change	10,207	9,718 -4.79	9,002	8,815 -2.08	9,954 12.92	10,598 6.47	11,370 7.28	12,287 8.07	12,359 0.59	12,586 1.83	14,937 18.68	18,641 24.80
FINANCIAL ACTIVITIES	45,521 4.06	47,289 3.88	47,759 0.99	49,185 2.99	50,568 2.81	51,891 2.61	52,890 1.93	53,387 0.94	55,037 3.09	55,281 0.44	59,097 6.90	61,109 3.40
PROFESSIONAL & BUSINESS SERVICES	28,364 3.62	30,534 7.65	31,821 4.22	32,801 3.08	34,329 4.66	34,692 1.06	36,288 4.60	39,165 7.93	41,528 6.03	41,434	46,665 12.63	50,896 9.07
EDUCATION & HEALTH SERVICESPercentage change	32,472 3.86	32,938 1.43	33,575 1.93	34,273 2.08	36,675 7.01	36,649 -0.07	36,218 -1.18	35,706 -1.41	36,160 1.27	35,660 -1.38	37,781 5.95	39,014 3.26
LEISURE & HOSPITALITY Percentage change	13,168 4.06	13,604 3.31	13,745 1.03	14,761 7.39	15,770 6.83	15,891 0.77	16,731 5.29	17,586 5.11	18,401 4.64	13,632 -25.92	18,871 38.43	22,781 20.72
OTHER SERVICES	7,085	7,277 2.71	7,098	7,188	7,179 -0.12	7,192 0.18	7,316	7,609	7,709	7,316 -5.10	7,699 5.24	8,053 4.61
GOVERNMENTPercentage change	33,642 3.03	34,525 2.63	34,208 -0.92	34,319 0.32	34,157 -0.47	34,364 0.61	34,631 0.77	34,548 -0.24	33,862 -1.99	33,272 -1.74	33,469 0.59	33,726 0.86
FEDERAL	9,068	8,982 -0.94	9,198 2.40	9,881	10,038 1.59	10,191 1.52	10,273 0.80	10,148	9,845	9,545 -3.04	9,724 1.87	9,856 1.35
STATE & LOCAL Percentage change	24,574 4.66	25,543 3.94	25,010	24,438	24,119	24,174 0.23	24,358 0.76	24,400	24,017	23,727	23,745	23,907
nomic Research, Uni	versity of Tennessee	nnessee							Ĕ	ennessee	ennessee Econometric Mode	c Model