

**AN ECONOMIC REPORT
TO THE GOVERNOR
OF THE STATE OF **TENNESSEE****

**THE STATE'S
ECONOMIC
OUTLOOK
JANUARY**

2016

AN ECONOMIC REPORT TO THE GOVERNOR OF THE STATE OF **TENNESSEE**

Matthew N. Murray, Associate Director and Project Director
Center for Business and Economic Research

PREPARED BY THE

Center for Business and Economic Research
Haslam College of Business
The University of Tennessee
Knoxville, Tennessee

IN COOPERATION WITH THE

Appalachian Regional Commission
Tennessee Department of Finance and Administration
Tennessee Department of Economic and Community Development
Tennessee Department of Revenue
and
Tennessee Department of Labor and Workforce Development

THE STATE'S
ECONOMIC
OUTLOOK
JANUARY **2016**

CONTRIBUTORS

An Economic Report to the Governor of the State of Tennessee

AUTHORS

UT Center for Business and Economic Research

Matthew N. Murray, *Associate Director and Project Director*

William F. Fox, *Director*

Celeste K. Carruthers, *Assistant Professor of Economics*

Lawrence M. Kessler, *Research Assistant Professor*

Vickie C. Cunningham, *Research Associate*

Mary Elizabeth Glenn, *Graduate Research Assistant*

The Agri-Industry Modeling and Analysis Group

Kimberly Jensen, *Professor of Agricultural Economics*

Jamey Menard, *Research Leader*

Burton English, *Professor of Agricultural Economics*

Department of Agricultural and Resource Economics, The University of Tennessee Institute of Agriculture

Andrew Griffith, *Assistant Professor of Agricultural Economics*

Aaron Smith, *Assistant Professor of Agricultural Economics*

Edward Yu, *Associate Professor of Agricultural Economics*

PROJECT SUPPORT STAFF

UT Center for Business and Economic Research

Betty A. Drinnen, *Administrative Specialist*

Carrie B. McCamey, *Communications Coordinator*

The preparation of this report was financed in part by the following agencies: the Tennessee Department of Finance and Administration, the Tennessee Department of Economic and Community Development, the Tennessee Department of Revenue, the Tennessee Department of Labor and Workforce Development, and the Appalachian Regional Commission.

This material is the result of tax-supported research and as such is not copyrightable. It may be freely reprinted with the customary crediting of the source.

UT Publication Authorization Number R01-1493-295-002-16.

PREFACE

This 2016 volume of *An Economic Report to the Governor of the State of Tennessee* is the fortieth 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 2018 and annual forecast through 2025 represent the collective judgment of the staff of the University of Tennessee's Center for Business and Economic Research in conjunction with the Quarterly and Annual Tennessee Econometric Models. The national forecasts were prepared by IHS Global Insight, Inc. Tennessee forecasts, current as of January 2016, 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, with an agriculture section provided by The Agri-Industry Modeling and Analysis Group at the University of Tennessee Institute of Agriculture. Chapter Three discusses Tennessee's role in the international economy and presents the long-run outlook and forecast for the state. Chapter Four presents the background, early results, and challenges of Tennessee's Drive to 55 program.

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, the Tennessee Department of Labor and Workforce Development, and the Appalachian Regional Commission—is to provide wide public dissemination of the most-current possible economic analysis to planners and decision-makers in the public and private sectors.



Matthew N. Murray
Associate Director and Project Director
Center for Business and Economic Research

CONTENTS

EXECUTIVE SUMMARY	viii
CHAPTER 1: THE U.S. ECONOMY	1
1.1 Introduction.....	1
1.2. The U.S. Economy: Year in Review.....	2
<i>Components of GDP</i>	2
1.3. The U.S. Forecast.....	10
1.4. Alternative Scenarios	17
1.5. Forecast Summary and Conclusions	17
1.6. References	18
CHAPTER 2: THE TENNESSEE ECONOMY: SHORT-TERM OUTLOOK	19
2.1. Introduction	19
2.2. The Current Economic Environment	20
<i>The Labor Market</i>	20
<i>Income and Taxable Sales</i>	23
2.3. Fiscal Update	26
<i>Federal Government</i>	26
<i>State Finances Across the Nation</i>	26
<i>The Southeastern States and Tennessee</i>	27
2.4. Short-Term Outlook	28
2.4. Tennessee Forecast at a Glance.....	33
2.5. Tennessee's Agricultural and Forest Industries and Rural Economy	33
<i>Introduction</i>	33
<i>a. Agriculture and Primary Forestry</i>	33
<i>b. Food, Fiber, and Forestry Manufacturing in Tennessee</i>	38
<i>c. Rural Economies and Well-Being</i>	40
<i>d. Governor's Rural Challenge</i>	41
<i>Summary</i>	42
<i>References Used</i>	42
CHAPTER 3: THE TENNESSEE ECONOMY: LONG-TERM OUTLOOK.....	45
3.1. Introduction.....	45
3.2. Employment Outlook	46
3.3. Unemployment	49
3.4. Population.....	52
3.5. Personal Income and Taxable Sales	53

3.6. State Gross Domestic Product.....	54
CHAPTER 4: TENNESSEE'S DRIVE TO 55: BACKGROUND, EARLY RESULTS, AND CHALLENGES LYING AHEAD	57
4.1. Introduction and Key Points.....	57
4.2. The Landscape of College Progression in Tennessee	58
4.3. Will "Free Community College" Make a Difference in Tennessee? Early Indicators.....	64
4.4. Challenges and Opportunities.....	65
<i>Changing the Culture of College Aspirations.....</i>	<i>65</i>
<i>Undermatching</i>	<i>66</i>
<i>Readiness and Research</i>	<i>67</i>
<i>The Other 45 Percent</i>	<i>68</i>
4.5. Acknowledgements	68
4.6. References	69
APPENDIX A: FORECAST DATA.....	1
Quarterly History Tables	2
Annual History Tables	26
APPENDIX B: HISTORICAL DATA	43
Quarterly Forecast Tables.....	44
Annual Forecast Tables	67

FIGURES AND TABLES

CHAPTER 1: THE U.S. ECONOMY	1
Figure 1.1: Inflation-Adjusted GDP Continued to Grow in 2015	3
Figure 1.2: The Housing Sector Continues to Rebound, but Starts and Sales Remain Below Pre-Recession Levels.....	5
Figure 1.3: Consumer Energy Prices Drop in 2015.....	8
Figure 1.4: Unemployment Continues Dropping, but the Participation Rate Also Remains Low.....	9
Figure 1.5: The Federal Funds Rate Is Expected to Rise, Which Will Push Mortgage Rates Up.....	12
Figure 1.6: The Trade Deficit Is Expected to Continue as Import Growth Outpaces Export Growth	15
Figure 1.7: The Price of Crude Oil Will Begin Rebounding Mid-2016.....	15
CHAPTER 2: THE TENNESSEE ECONOMY: SHORT-TERM OUTLOOK	19
Figure 2.1: Over Eighty Percent of Tennessee Counties Experienced Job Growth in the Second Quarter Of 2015	21
Figure 2.2: The Labor Force Participation Rate Remains Low in Tennessee and in the Nation.....	22
Figure 2.3: Tennessee's Monthly Unemployment Rate Is Near the Middle of the Pack Among Southeast States (December 2015)	22
Figure 2.4: Eighty-Seven Percent of Tennessee Counties are Reporting Unemployment Rates Above the National Average	23
Figure 2.5: Tennessee's Per Capita Personal Income (in Current Dollars) is Slightly Below the Southeast Average, 2015Q3	24
Figure 2.6: Per Capita Personal Income Is Lower Than the National Average in Most Tennessee Counties	24
Figure 2.7: Building Permits Are Still Well Below the Pre-Recession Peaks of 2005	25
Figure 2.8: The Federal Deficit Will Increase Slightly in 2016.....	26
Figure 2.9: Tennessee Has Fourth Highest Growth Rate in Total Tax Revenues Among Southeastern States, Fiscal Year 2015 (July 2014–June 2015).....	27
Table 2.1: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted.....	29
Figure 2.10: Despite Recent Growth, U.S. and Tennessee Manufacturing Employment Are Well Below Pre-Recession Levels From 2008	30
Figure 2.11: U.S. and Tennessee Manufacturing Output See Positive Growth	30
Figure 2.12: Tennessee's Unemployment Rate Is Projected to Stay Above the National Rate Through 2018	31
Figure 2.13: Per Capita Personal Income in Tennessee Has Fallen Relative to the National Average.....	32
Table 2.2: Tennessee Cash Farm Receipts and Share of Commodity Exports, 2010-2014	34
Table 2.3: Indicators of the Tennessee Farm Sector's Financial Well-Being, 2010-2014.....	37
Table 2.4: Tennessee Food, Fiber, and Forestry Manufacturing, 2013	39
Figure 2.14: Agri-forestry Products Manufacturing Value of Shipments, 2009–2013	39
Table 2.5: Household Income, Education Level, and Unemployment and Poverty Rates in Rural and Urban Areas of Tennessee	40
Table 2.6: Scorecard Indicators of Positive Progress for Tennessee Agriculture	41

CHAPTER 3: THE TENNESSEE ECONOMY: LONG-TERM OUTLOOK.....	45
Table 3.1: Tennessee Nonfarm Employment by Broad Sector (Thousands of Jobs).....	47
Table 3.2: Tennessee Manufacturing Employment by Sector (Thousands of Jobs).....	47
Figure 3.1: Nonfarm Employment Continues to Grow While Manufacturing Employment Reverts to Trend Contraction Over the Long-Term Forecast Horizon.....	48
Figure 3.2: Total Covered Employment Growth	48
Figure 3.3: In the Long-Run, Tennessee's Unemployment Rate Will Trend Downwards but Remain Above the National Rate for Most of the Forecast Horizon.....	49
Figure 3.4: Educational Attainment Levels in Tennessee Are Below the National Average	50
Figure 3.5: Unemployment Rates in 2015 Are Comparable to their 2005 Counterparts in Most Tennessee Counties	51
Figure 3.6: Tennessee Population Growth	53
Table 3.3: Tennessee Inflation-Adjusted Gross Domestic Product by Sector	55
CHAPTER 4: TENNESSEE'S DRIVE TO 55: BACKGROUND, EARLY RESULTS, AND CHALLENGES LYING AHEAD	57
Table 4.1: Timely Student Progression Among 2007 and 2008 9th Graders.....	60
Table 4.2: High School Progression, Graduation, and College Enrollment Means by Cohort	61
Table 4.3: High School Graduates Who Do Not Go on to College: Workforce Participation, Earnings, and Industry by Cohort.....	61
Figure 4.1: College or Workforce Destinations the Year After High School Graduation, by Region.....	62
Figure 4.2: Seamless College Enrollment Rates by County of First High School	63
Table 4.4: High School Dropouts: Workforce Participation, Earnings, and Industry Five Years After 9th Grade, by Cohort.....	63
APPENDIX A: FORECAST DATA.....	1
Quarterly History Tables	2
Annual History Tables	26
APPENDIX B: HISTORICAL DATA	43
Quarterly Forecast Tables.....	44
Annual Forecast Tables	67

EXECUTIVE SUMMARY

The U.S. Economy

Early estimates indicate that U.S. gross domestic product (GDP) grew 2.4 percent in 2015 compared to 2.4 percent in 2014 and 1.5 percent in 2013. The last year started off slowly, with GDP growing by a meager 0.6 percent (on a seasonally-adjusted basis) in the first quarter of 2015 but rebounding in the subsequent quarters. This makes 2015 the sixth year of recovery since the recession. The continued U.S. recovery is an outlier in a global economy where many countries are experiencing economic slowdown or outright recession. The U.S. economy is predicted to sustain its stable growth through 2016 and 2017 and continue to be a global leader in growth.

The most important milestone of 2014 was that it marked the first year that nonfarm payroll jobs finally reached their pre-recession level. In 2015, significantly more jobs were created and the unemployment rate dropped further. Total nonfarm payrolls increased by 2.9 million for a total of 141.9 million jobs. Unemployment continued to fall reaching 5.0 percent by the fourth quarter, the lowest since the first quarter of 2008. These positive labor market indicators, along with falling food and gas prices, led to increases in consumers' inflation-adjusted disposable income. The same labor market factors led to consumption growing by a strong 3.1 percent, the highest growth rate since 2006. Nonresidential and residential investment also showed substantial gains and increased by 3.4 and 8.6 percent, respectively. This is a good sign for the housing sector, which experienced double-digit growth in 2012 and 2013 but only grew by 1.8 percent in 2014. Inflation was flat in 2015, and overall prices rose by only 0.2 percent.

In less positive news, the government deficit was \$438.9 billion, small when compared to the deficits run during the Great Recession, but 2015 marks the fourth year in a row that total U.S. federal debt was larger than U.S. GDP. The trade deficit widened in 2015, as exports grew minimally due

to the global slowdown and an appreciating U.S. dollar, and imports grew faster due to increased domestic consumption. And despite the strength in many elements of the labor market, the low labor force participation rate and weak earnings growth remain causes of concern.

Despite the global slowdown, the Fed was confident enough in the recovery to raise interest rates in December 2015. The Federal Funds rate rose from zero percent to 0.25 percent. Several subsequent 0.25 percentage point increases are expected in 2016. Other interest rates are also expected to rise. Despite these rising interest rates, rates remain low by historical standards and both residential and nonresidential investment are predicted to continue to grow. Recovering energy prices are expected to contribute to a slight rise in inflation in 2016. The Consumer Price Index (CPI) is expected to reach 1.2 percent.

There are always reasons to be cautious about the next year, but so far the recovery has not been derailed and the U.S. economy has shown considerable resilience. The economy continued to grow last year and is expected to do so in 2016 and 2017 as well. GDP is expected to increase by 2.7 percent, and the unemployment rate is predicted to fall to 4.9 percent. The year is expected to have solid gains each quarter, with GDP increases of 3.0 percent, 3.0 percent, 3.3 percent, and 3.3 percent in the first, second, third, and fourth quarters respectively. Strong domestic demand will continue to be the major driver of these GDP increases. Expectations are that 2017 and 2018 will both register solid economic growth, 2.9 and 2.6 percent in 2017 and 2018, respectively.

There are reasons to be concerned that the global slowdown could impact the U.S. economy, but overall U.S. economic indicators were positive throughout 2015. There are ample reasons to expect this recovery to continue and for there to be sustained and substantial growth in 2016 as well.

The Tennessee Economy

The Short-Term Economic Outlook

The Tennessee economy continued to expand in 2015. Inflation-adjusted gross domestic product (GDP) grew by 2.4 percent for the year, matching GDP growth for the U.S., and nonfarm employment increased by 1.9 percent, representing an addition of 54,600 new jobs. Job growth in Tennessee was slightly slower than national job gains of 2.1 percent for 2015. The state unemployment rate fell from 6.6 percent in 2014 to 5.9 percent in 2015, but still rests above the national rate.

Nominal personal income in Tennessee grew by 4.7 percent in 2015, outpacing the national growth rate of 4.5 percent. Nominal taxable sales continued to grow rapidly, increasing by 6.2 percent in 2015. This followed a 4.9 percent gain in 2014.

Tennessee is projected to see slightly slower growth in 2016 and 2017. Inflation-adjusted GDP will rise by 2.3 percent in 2016 and 2.2 percent in 2017. Nonfarm employment should see 1.7 percent growth in 2016 and 1.3 percent growth in 2017. Leisure and hospitality, professional and business services, and natural resources, mining, and construction will experience the largest job gains in both 2016 and 2017. Manufacturing employment will continue to increase but at a slow rate of 0.7 percent in 2016 and 2017. Manufacturing employment growth will occur in the durable goods sector, expanding by 1.5 percent in 2016 and 2017. These gains will offset the losses in the nondurable goods manufacturing sector, where employment is projected to shrink by 0.7 percent in 2016 and 0.8 percent in 2017.

The state unemployment rate will fall to 5.5 percent in 2016 and 5.4 percent in 2017. This would be the first time since 2007 that Tennessee's unemployment rate fell below 6 percent. The number of unemployed people in Tennessee is projected to fall by 6.2 percent in 2016 and an additional 1.7 percent in 2017. However, Tennessee's unemployment rate will remain above its national counterpart throughout the short-term forecast window.

Nominal personal income will grow by 4.8 percent in 2016 and 4.7 percent in 2017. All components of personal income in Tennessee will enjoy healthy growth over the next two years. In 2016 wage and salary income will increase by the largest amount, expanding by 5.1 percent, followed by 4.3 percent growth in 2017. Proprietors' income will increase by 5.0 percent in 2016 and 4.8 percent in 2017, while rent, interest, and dividend income will grow by 4.4 percent in 2016 and 5.2 percent in 2017. Transfer payments are also projected to increase by 3.7 percent in 2016 and 4.1 percent in 2017. On a fiscal year basis, nominal personal income is projected to rise by 4.9 percent in FY 2016 and 3.3 percent in FY 2017. Per capita personal income will increase by 3.7 percent this year and 3.6 percent in 2017. By 2017, per capita income in Tennessee will equal \$44,695. However, this will equate to only 86.9 percent of the national average. Nominal taxable sales are projected to rise by 4.7 percent this year and 3.5 percent in 2017. On a fiscal year basis, nominal taxable sales will increase by 6.5 percent in FY 2016 and 3.3 percent in FY 2017.

Long-Term Economic Outlook

Tennessee's long-term outlook is based on a trend forecast which focuses on factors of production such as population and labor force growth as well as productivity. The forecast presented in the body of this report extends out to 2025 and also takes a retrospective look at economic growth between 2005 and the present. One of the underlying assumptions of the trend forecast is that no recessions will occur within the next ten years, but a recession at some point during the long-term forecast horizon is possible if not likely.

From 2005 to 2015, nonfarm employment in Tennessee expanded by only 0.5 percent (compound annual growth rate, CAGR). This was slightly slower than the 0.6 percent (CAGR) growth registered for the nation as a whole. Employment growth during this period was slowed due to the Great Recession, and stronger employment gains are expected over the next

ten years. In Tennessee, nonfarm employment is projected to increase by 1.1 percent (CAGR) between 2015 and 2025. By comparison, national employment will expand by a slightly slower 1.0 percent compound annual growth rate. Tennessee's manufacturing sector and other services sector will see a very slight contraction in employment over the next ten years, while all other sectors are projected to grow. Employment growth will be strongest in the professional and business services sector, followed by education and health services and natural resources, mining, and construction. Within the manufacturing sector, durable goods employment is projected to grow by 0.4 percent (CAGR) between 2015 and 2025 while nondurable goods employment will fall by 1.0 percent (CAGR).

Tennessee's unemployment rate has rested above the national rate for the last ten years, and a similar pattern is projected throughout most of the long-term forecast horizon out to 2025. However, both the state and national unemployment rates will trend downwards over the next ten years. Tennessee's unemployment rate, which was 5.9 percent in 2015, will fall to 5.1 percent by 2025, while the national unemployment rate is projected to fall from 5.3 percent in 2015 to 5.0 percent in 2025. Despite the state's declining unemployment rate, Tennessee labor force participation rate continues to fall. In 2005, Tennessee's labor force participation rate was 62.0 percent and only slightly below the national participation rate of 64.5 percent. In 2015, the state's labor force participation rate fell to 57.7 percent and is projected to fall even further to 55.1 percent by 2025. The national labor force participation rate has fallen as well and will rest slightly above 60 percent in 2025.

Between 2015 and 2025, nominal personal income is projected to grow by 4.5 percent (CAGR) in Tennessee, outpacing the 3.8 percent

compound annual growth rate that was registered between 2005 and 2015. Per capita income in Tennessee was only 86.8 percent of the national average in 2015. From 2015 to 2025, per capita income growth in the state is expected to grow by 3.5 percent, but lag behind national per capita income growth of 4.0 percent. As a result, state per capita income will drop to 82.5 percent of the national average by 2025. State initiatives such as the Tennessee Promise, which offers two years of tuition-free community college or technical college to all Tennessee high school graduates, and the Drive to 55, with its goal of increasing the percentage of Tennesseans with a college degree or certificate to 55 percent of the Tennessee population by 2025, aim to increase the education status of the state. If the hoped-for gains are realized, this will support a stronger growth trajectory for the state economy. This could support stronger income growth and a narrowing of the gap between the incomes of Tennesseans and other Americans.

Nominal taxable sales in Tennessee are expected to grow by 3.8 percent (CAGR) between 2015 and 2025. This is much stronger than the 2.5 percent compound annual growth rate that took place over the last ten years. Between 2005 and 2015, inflation-adjusted state GDP grew by a sluggish 1.1 percent (CAGR) in Tennessee, which was slightly slower than the 1.4 percent compound annual growth rate that inflation-adjusted GDP registered for the nation. Of course, this time period encapsulates the Great Recession which suppressed output growth in the late 2000's. Looking ahead ten years, inflation-adjusted state GDP growth will accelerate to 2.2 percent (CAGR) between 2015 and 2025. This is slightly slower than the 2.4 percent compound annual growth rate projected for national GDP.

Tennessee's Drive to 55: Background, Early Results, and Challenges Lying Ahead

Tennessee's "Drive to 55" is an effort initiated in 2013 to have 55 percent of working-age Tennesseans hold a higher education credential by 2025. Tennessee Promise is one of the major prongs of this effort. Promise provides last dollar grants – covering tuition and required fees – for any high school graduate in the state who goes straight to a two-year higher education program. The program and its privately funded predecessors motivated similar proposals from several states, the White House, and presidential candidates.

This chapter begins by situating Tennessee Promise in the recent history of student progression from high school to college. Among students who started 9th grade in 2008 or 2009, 54 – 55 percent of high school graduates went straight to college. For those who did not, typical earnings were well under the federal poverty line for a one-person household. Dropouts fared even worse.

The second section reviews what we know about the impact of Tennessee Promise so far, as well as findings from a study by two CBER faculty on the impact of Knox Achieves – an earlier, very similar program limited to Knox County – on college enrollment. In the first year of Tennessee

Promise, first-year college student enrollment rose 10 percent across two-year and four-year public systems. This echoes our estimated impact of Knox Achieves, whose participants were substantially more likely to enroll in college than similar students in ineligible counties.

Last, we review some of the challenges and opportunities facing Tennessee Promise and the Drive to 55. Tennessee Promise has proven to be effective at changing the conversation about going to college, but this conversation need not start in twelfth grade. Free tuition will convince some would-be university freshmen to start at a community college ("undermatching"), and their ultimate success will test the state's system of transfer pathways. Overmatching is potentially a bigger challenge: most two-year college students require remedial education and fewer than three in ten obtain a degree within six years. More high-quality research is needed to identify what programs or practices are pivotal in helping students through college. Research is also needed to identify factors of success for "the other 45 percent" without a college credential.

CHAPTER 1: THE U.S. ECONOMY

In this chapter—

- 1.1. Introduction**
- 1.2. The U.S. Economy: Year in Review
Components of GDP**
- 1.3. The U.S. Forecast**
- 1.4. Alternative Scenarios**
- 1.5. Forecast Summary and Conclusions**
- 1.6. References**

1.1 Introduction

In 2015, the U.S. recovery from the Great Recession continued for its sixth year while many parts of the world continued reeling from the Great Recession or experienced setbacks related to China and its slowdown. U.S. gross domestic product (GDP) grew by a healthy 2.4 percent in 2015. For comparison, Canada, Japan, and China grew by 1.0 percent, 0.5 percent, and 6.8 percent, respectively. The U.S. was in many dimensions a global economic leader in 2015.

The labor market continued a slow but steady recovery: 2014 was the first year that nonfarm payroll reached its pre-recession level, and in 2015 an additional 2.9 million jobs were created. Only one major sector is predicted to have lost jobs in 2015: natural resources and mining, which lost 66 thousand jobs due to falling energy and commodity prices and a subsequent reduction in drilling activity. In addition, the unemployment rate continued its drop to 5.3 percent for the year and 5.0 percent for the fourth quarter, and inflation-

adjusted disposable income rose by 3.6 percent for the year. Moreover, the housing market recovered from the slow growth of 2014 and spending on residential investment grew by 8.6 percent in 2015. There were some weak spots in the nation's housing sector, but generally the momentum was in a positive direction. Additionally, the economy experienced almost no inflation due to falling food and energy prices. All of this positive news culminated in the Federal Reserve signaling its confidence in the economy by raising the discount rate from 0.75 percent to 1.0 percent and the Federal Funds rate from the zero bound to 0.25 percent. These were the first increases in many years, driving home the Fed's faith in the resiliency of the economy and their belief that the U.S. economy is stable enough to withstand rising interest rates and any modest, unforeseen shocks.

The biggest drags and sources of caution were a combination of plummeting commodity and energy prices, an appreciating U.S. dollar, and the

1.1. Introduction, continued

global slowdown (especially in China). Falling energy and commodity prices led to a contraction in the natural resources and mining sector and sharp curtailment of drilling activity. (Falling energy prices had a silver lining in the form of significantly lower gasoline prices which freed up purchasing power for other uses.) An appreciating dollar and the global slowdown contributed to a widening U.S. trade deficit. While none of these factors were enough to derail U.S. economic growth, their impact is expected to continue into the next year.

A continuation of growth is expected in 2016. U.S. inflation-adjusted GDP is expected to grow by 2.7 percent, the economy is expected to create 2.4 million jobs, inflation-adjusted disposable income is expected to rise by 3.1 percent, and the global slowdown is expected to continue. Energy and commodity prices are expected to reach bottom in 2016 and affected economies are expected to begin stabilizing. The primary risk is a sharper slowdown in China and the global economy.

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

The last year was another stable year for the U.S. expansion. The year started off slow but gained momentum: GDP grew by 0.6 percent on a seasonally-adjusted basis in the first quarter. Afterwards, however, GDP grew by 3.9 percent and 2.0 percent in the second and third quarters; fourth quarter GDP grew at a disappointing 1.2 percent rate. This relatively strong growth for the year as a whole can be attributed to a slowly strengthening housing market, a solid labor market and employment outlook, and robust consumption spending (particularly of durable goods, including automobiles). The Federal Reserve's December interest rate hike provided evidence of its confidence in the economy.

A continuation of the stable growth seen in 2015 is expected for 2016. Both the labor and housing markets are expected to show sustained improvement and inflation is expected to remain benign. This favorable forecast comes with some caution. The global economy is not faring as well as the U.S. economy: much of the globe is experiencing a slowdown in growth, particularly in China, its trading partners, and other developing nations. This situation is expected to continue in 2016. The global slowdown and an appreciating U.S. dollar, in conjunction with strong domestic consumption, are likely to lead to a widening trade deficit. However, these threats are not viewed as significant enough to unsettle the U.S. economy's current trajectory.

Components of GDP

GDP is composed of personal consumption expenditures, investment, government purchases, and the balance of international trade (exports minus imports).

Consumption

Personal consumption expenditures are by far the largest component of U.S. GDP, accounting for 68.6 percent of spending in 2015. Consumption grew by 3.1 percent in 2015 compared to 2.7 percent in 2014 and 1.7 percent in 2013. This healthy consumer spending was a major driver of the economy. Increases in consumer spending accounted for 2.1 percentage points of the 2.4 percent growth in GDP in 2015. The strongest consumption growth was recorded in the second quarter, up 3.6 percent compared to 1.8 percent growth in the preceding quarter. The factors that typically help explain consumer spending include disposable income growth, consumer confidence, and the state of the labor market. Inflation-adjusted disposable income increased by 3.6 percent in 2015 compared to growing 2.7 percent in 2014 and falling 1.4 percent in 2013. Some of this disposable income growth was due to falling energy prices, particularly gasoline prices, freeing up income to be spent elsewhere. The unemployment rate and consumer sentiment index also moved in favorable directions. The unemployment rate fell to 5.3 percent for the year,

1.2. The U.S. Economy: Year in Review, continued

the lowest the unemployment rate has been since 2007. The consumer sentiment index rose to 92.9, up from 84.1 in 2014. On top of these favorable indicators, inflation-adjusted household net worth grew by 3.2 percent compared to 4.8 percent and 12.7 percent in 2014 and 2013, respectively.

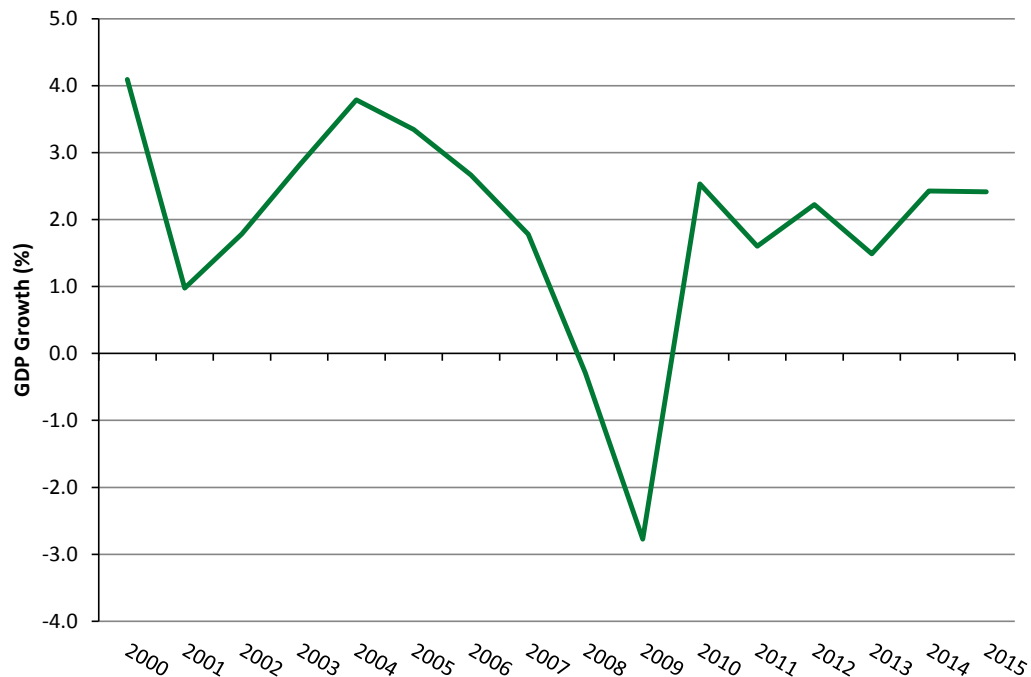
Personal consumption has three components: services, nondurable goods, and durable goods. Spending on services is the least volatile of the three components and accounted for 65.5 percent of total consumption spending last year. Services spending grew by 2.7 percent in 2015, the most growth the category has experienced since 2006. Healthcare, transportation, and food services all saw substantial growth of 4.7 percent, 5.1 percent, and 4.5 percent, respectively.

Nondurable goods are the second largest category of consumption with a share of 21.7 percent. Nondurable goods include food, beverages, clothing, medical products, gas, and other similar short-lived products. Spending on

nondurable goods increased by 2.8 percent in 2015 compared to 2.1 percent in 2014 and 1.9 percent in 2013. The categories that account for the largest portions of nondurable goods spending are food and beverages (33.2 percent of total nondurable good consumption), clothing and footwear (14.8 percent), and pharmaceutical and medical products (16.1 percent). Pharmaceutical and medical products experienced strong growth with spending ticking up 4.6 percent. Clothing and footwear also grew 3.5 percent, but food and beverages spending flattened and increased by only 0.2 percent. Worth noting is that spending on tobacco products increased by 3.5 percent, the first time the category has grown since 2006.

Personal spending on durable goods includes motor vehicles, furnishings, recreational goods, computers, and other household equipment. Spending on durable goods is by far the most volatile category of consumption. Spending growth on durables in the recovery has outpaced

Figure 1.1: Inflation-Adjusted GDP Continued to Grow in 2015



Source: Bureau of Economic Analysis and IHS Global Insight, Inc.

1.2. The U.S. Economy: Year in Review, continued

spending on nondurables and services, and this trend continued in 2015. Spending on durable goods typically sinks during recessions and increases more than any other category during periods of recovery or expansion to satisfy consumers' pent-up demand. In 2015, durable goods made up 13.1 percent of total consumption spending, and spending on durable goods increased by 6.1 percent. This continues a pattern of strong growth in durable goods spending since the recession: spending on durable goods increased by 5.9 percent, 5.8 percent, and 7.4 percent in 2014, 2013, and 2012, respectively. Spending on computers and peripheral equipment increased by 15.6 percent in 2015, up from 8.1 percent in 2014 and 12.7 percent in 2013.

Strong growth in vehicle purchases was one of the main drivers of durable goods consumption. Purchases of both used and new motor vehicles increased significantly for the year. Net used vehicle sales grew by 5.5 percent and new vehicles sales grew by 3.8 percent. This year marks a peak in both number of new vehicles sold and inflation-adjusted spending on new vehicles: 17.4 million vehicles were sold and \$254.2 million was spent in inflation-adjusted dollars. However, new vehicle sales growth belies a sharp division between the growth of new auto sales and light truck sales. New auto sales shrank by 8.0 percent, while new light truck sales rose 10.2 percent. Sales of domestic cars remained steady at 5.6 million units sold in both 2015 and 2014, while sales of foreign cars fell 6.4 percent from 2.1 million units in 2014 to 2.0 million units in 2015. Sales of domestic light trucks rose 9.3 percent in 2015 to 8.1 million units sold, and sales of foreign light trucks rose 29.7 percent to 1.8 million units sold.

Investment

Investment made up 17.5 percent of U.S. inflation-adjusted GDP and contributed 0.8 percentage points towards the total 2.4 percent GDP growth in 2015. Investment includes three subcomponents: nonresidential fixed investment, residential fixed investment (new housing), and the change in business inventories. All three categories contributed positively to GDP in 2015. (Note that

investment, as included in GDP, does not include financial instruments like stocks and bonds.)

Nonresidential fixed investment, the largest component of investment spending, made up 77.8 percent of investment spending in 2015. It includes equipment purchases by firms, acquisition of non-tangible products such as software and licenses, and spending on structures. Nonresidential fixed investment spending grew by 3.4 percent in 2015 compared to 6.2 percent in 2014 and 3.0 percent in 2013. Spending on mining and petroleum structures fell by 34.7 percent, and spending on power and communication fell by 12.1 percent. On the other hand, manufacturing structures capacity increased dramatically with a 49.9 percent gain. This was the fourth year in a row to see an expansion in manufacturing structures.

The second largest sub-component of investment spending is residential fixed investment, which accounted for 18.5 percent of investment spending in 2015. Residential fixed investment contributed 0.3 percentage points towards the 2.4 percent GDP growth in 2015. Residential fixed investment grew by 8.6 percent in 2015, a strong showing after growing only 1.8 percent in 2014. This makes 2015 the fifth consecutive year of growth in the housing market. Despite this consistent growth, residential investment remains substantially below its pre-recession peak. In 2015, inflation-adjusted residential investment increased to \$528.4 billion in inflation-adjusted dollars, still only 65.5 percent of the level recorded in 2006. Housing is still trying to recover from the wrenching 24.0 percent, 21.2 percent and 2.5 percent setbacks recorded in 2008, 2009 and 2010.

The number of housing starts grew by 10.9 percent to reach 1.1 million units in 2015 compared to 1.0 million units in 2014 and 928 thousand units in 2013. Nevertheless, 1.1 million housing starts is still significantly below the 1.8 million housing starts recorded in 2006. Sales of new homes increased by 12.7 percent in 2015 and reached 496 thousand units, the highest number since 2007. Sales of existing houses grew by 5.9 percent.

1.2. The U.S. Economy: Year in Review, continued

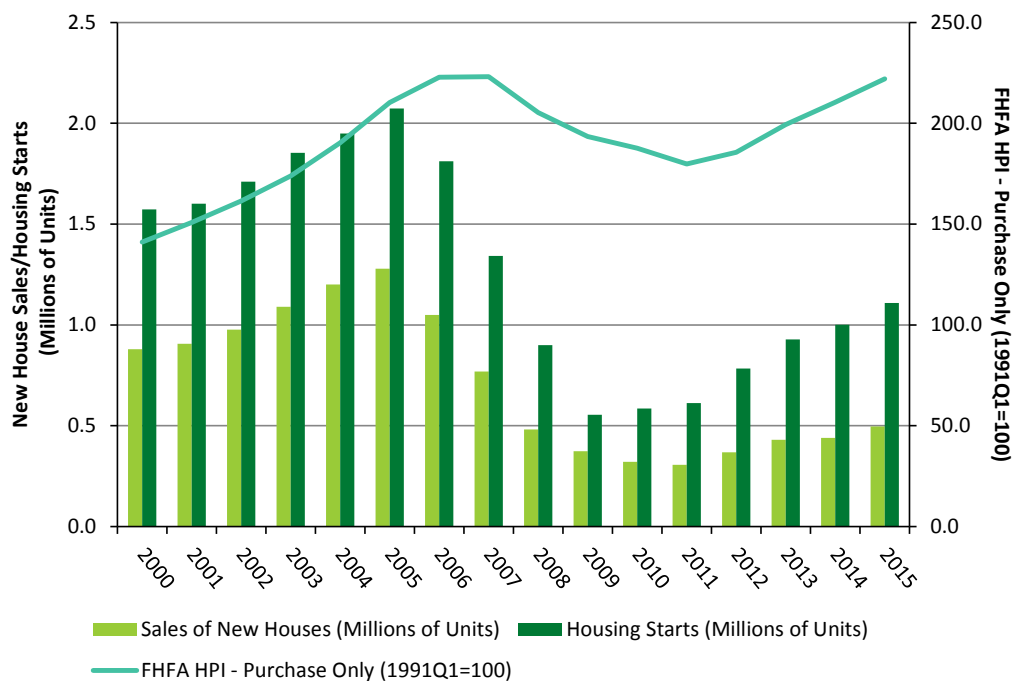
House prices have kept their upward trend since 2012. Average and median prices of existing houses increased for the fourth consecutive year to reach \$264 thousand and \$220 thousand, respectively. The Federal Housing Finance Agency (FHFA) Housing Price Purchase-Only Index also increased for the fourth consecutive year. The housing market continued recovering in the spring and summer, despite stagnating home sales.

As is the case for investment in general, interest rates are one of the key determinants of growth in the housing sector. Interest rates remained low throughout 2015, though many expected interest rate hikes to begin mid-year. The Fed did not raise interest rates until December 2015 because of the global slowdown and a weak Chinese economy. In December, the Federal Reserve announced that it would increase the discount rate from 0.75 percent to 1.0 percent and the Federal Funds rate from zero to 0.25 percent. The Federal Funds increase is expected to be the first of many small

rate increases that will move the economy back to more typical interest rate levels in the years ahead. Because interest rates continued to be low in 2015, the 30-Year Fixed Mortgage Rate remained lower than its historical average, actually dropping from 4.2 percent in 2014 to 3.9 percent in 2015. The average before the recession was above 6.0 percent. The Federal Funds rate and 3-Month Treasury Bill rate both remained close to zero throughout 2015. Meanwhile, the 10-Year Treasury note yield fell from an average of 2.5 percent in 2014 to 2.1 percent in 2015.

Changes in business inventory, the highly-cyclical component of investment, contributed positively to GDP in the first two quarters of 2015 but came in negative in both the third and fourth quarters. The overall effect for GDP was slightly positive: changes in inventory accounted for 0.1 percentage points of the 2.4 percent growth in GDP. Typically, the change in inventories accounts for less than 3 percent of total investment (it

Figure 1.2: The Housing Sector Continues to Rebound, but Starts and Sales Remain Below Pre-Recession Levels



Source: U.S. Census Bureau, FHFA, and IHS Global Insight, Inc.

1.2. The U.S. Economy: Year in Review, continued

accounted for 3.1 percent in 2015), yet it can have a strong contribution to overall GDP growth in some quarters due to its cyclical nature. Inventory investment increased by 4.1 percent in 2015 compared to growing 3.1 percent in 2014. Both farm and nonfarm inventory investment increased steadily but not dramatically: farm investment grew by 3.2 percent and nonfarm investment grew by 4.2 percent.

Government Purchases

Government purchases, including federal as well as state and local spending, made up 17.5 percent of GDP in 2015. Federal purchases fell for the fifth consecutive year, down to \$1.1 trillion in inflation-adjusted dollars. Federal purchases fell 0.4 percent compared to falling 2.4 and 5.7 percent in 2014 and 2013, respectively. Defense spending continued to fall but more slowly than in previous years: defense spending fell by 1.4 percent in 2015 compared to falling by 3.8 percent in 2014 and 6.7 percent in 2013. Federal nondefense spending grew by 1.2 percent compared to falling by 0.1 percent in 2014 and 4.0 percent in 2013. State

and local purchases grew for the second year in a row and increased to \$1.7 trillion in 2015, down from \$1.8 trillion in 2010 in inflation-adjusted dollars. State and local spending grew by 1.5 percent compared to growing 0.6 percent in 2014 and shrinking 1.0 percent in 2013. This growth in state and local spending was spurred on by spending on investment: spending on construction increased by 5.6 percent (the first year of growth since 2006) and spending on software increased by 5.6 percent as well. State and local governments are still recovering from the trough of the Great Recession.

The federal government's deficit remains high at \$483.9 billion (nominal dollars) but is small compared to the deficits run during the recession. Sequestration has helped rein in spending. Stronger income taxes and social insurance contributions counterbalanced lower corporate taxes. The total federal debt rose to \$18.5 trillion nominal dollars, which makes 2015 the fourth year that federal debt was larger than 100 percent of GDP.

Worldwide Recovery from the Great Recession

Most recessions come and go without leaving a legacy in their aftermath. This was certainly not the case for the Great Recession where recovery has been prolonged and has varied significantly across the globe. For example, Korea's unemployment rate in 2013 was 3.1 percent, 0.3 percentage points lower than its level in 2006. On the other hand, Spain's unemployment rate more than tripled during that time period to 26.3 percent in 2013 from 8.6 percent in 2006. GDP growth has been equally divergent: in 2006, Spain's GDP growth was 4.2 percent and South Korea's was 5.2 percent. In 2013, Spain's GDP shrank by 1.7 percent from the previous year, while South Korea's grew 2.9 percent. What factors account for this uneven recovery? There are country-specific and region-specific factors at play, but there are also broad trends.

Overall, developing nations did much better than developed nations at recovering from the recession. This may be because many developing nations are net exporters. China, with its insular markets, was not impacted by the Great Recession as much as many other large economies. Therefore, nations that exported to China were not impacted as severely by the Great Recession. In fact, Africa and Asia (excluding Japan and China and the Asian Tigers of Hong Kong, Singapore, South Korea, and Taiwan) had GDP growth of over 50 percent from 2009 to 2014. The Asian Tigers plus Japan and China, the Middle East, Latin America, and Oceania all recorded GDP growth of over 40 percent from 2009 to 2014 (Arias & Wen, 2015). Unfortunately, this is also why many developing nations have experienced severe setbacks to growth as China's growth slows. As a consequence, while developed nations' contribution to global growth fell in the years following the Great Recession (2010 – 2014), it is predicted to have risen in 2015.

continued on page 7

1.2. The U.S. Economy: Year in Review, continued

continued from page 6

Another important factor is whether a country used effective fiscal or monetary stimulus to respond to the recession. China used aggressive fiscal stimulus and used its state-owned enterprises to hoist up demand (Wen & Wu, 2014). European nations responded to the crisis with monetary policy and to varying degrees pursued fiscal austerity. Now, once we are at a vantage point to see the impact of those decisions, it appears that aggressive Keynesian government policy (i.e. deficit financed government spending) helped China weather the Great Recession, whereas the mixed fiscal and monetary policy actions of the U.S. were less effective, and the monetary actions of Europe were even less effective than that of the U.S. (Arais & Wen, 2015).

Finally, the Great Recession began as a crisis in the financial sector. The more a nation's financial market was integrated with global financial markets, the more exposed they were to the immediate financial crisis. Countries with insular and comparatively small financial markets may have been protected from the full ramifications of the financial crisis (Arais & Wen, 2015). The wilting financial markets had consequences for both the U.S. and European economies that may have made recovery more difficult.

Europe, and especially a number of members of the European Union, had a particularly challenging time recovering from the Great Recession. In 2013, European GDP was the same as it was in 2012. Europe was so hard-hit because the recession launched a debt crisis, including a sovereign debt crisis for nation states. Five nations in the European Union (EU) required bailouts after the recession: Greece, Ireland, Portugal, Spain, and Cyprus. European nations trade heavily with each other, and membership in the European Union intensifies this interrelatedness. As Europe was attempting to recover from the recession, many of the EU member nations experienced crises that then impacted other nations. Further, the EU suffered from each of the factors listed above: (1) it is made primarily of developed nations, so it could not weather the Great Recession and its fallout through exports to China and other developing nations, (2) countries practiced monetary stimulus and in some cases even austerity measures in response to the recession, and (3) its financial markets are globally connected.

Trade

In 2015, the U.S. recorded a trade deficit of \$525.4 billion (or 2.9 percent of GDP). Exports amounted to \$2.3 trillion, while imports amounted to \$2.9 trillion. Typically, purchases of foreign goods and services by U.S. consumers (imports) exceed sales of goods and services produced in the U.S. and sold to other countries (exports). After the recession, there was a three-year period from 2010 to 2012 when exports grew faster than imports. However, in 2015, import growth vastly outpaced export growth. Part of the explanation for this imbalance is the strength of the U.S. dollar. As the dollar strengthens, U.S. exports become more expensive and imports to the U.S. become less expensive. Imports increased in 2015 by 5.0 percent compared to rising by 3.8 and 1.1 percent in 2014 and 2013, respectively. Meanwhile, exports increased by just 1.0 percent compared to growing by 3.4 percent in 2014 and 2.8 percent in 2013. Imports of both goods and services grew

solidly: imports of services grew by 5.7 percent and imports of goods grew by 4.9 percent. On the other hand, exports of goods fell by 0.3 percent, even as exports of services rose by 3.9 percent. Exports of vehicles and parts fell by 4.8 percent, the first time vehicle exports have fallen since 2009.

Inflation and Prices

The most popular measure of the aggregate level of prices in the economy is the Consumer Price Index or the CPI. As measured by the CPI, overall prices rose by only 0.1 percent in 2015 compared to 1.6 percent in 2014 and 1.5 percent in 2013.

Low energy prices and low import prices (from a strong U.S. dollar) drove overall price indices downward. If energy and food are excluded, overall prices in 2015 still only rose by 1.8 percent. This rate is still below the Fed's target range for inflation. Food prices rose by 1.9 percent, while

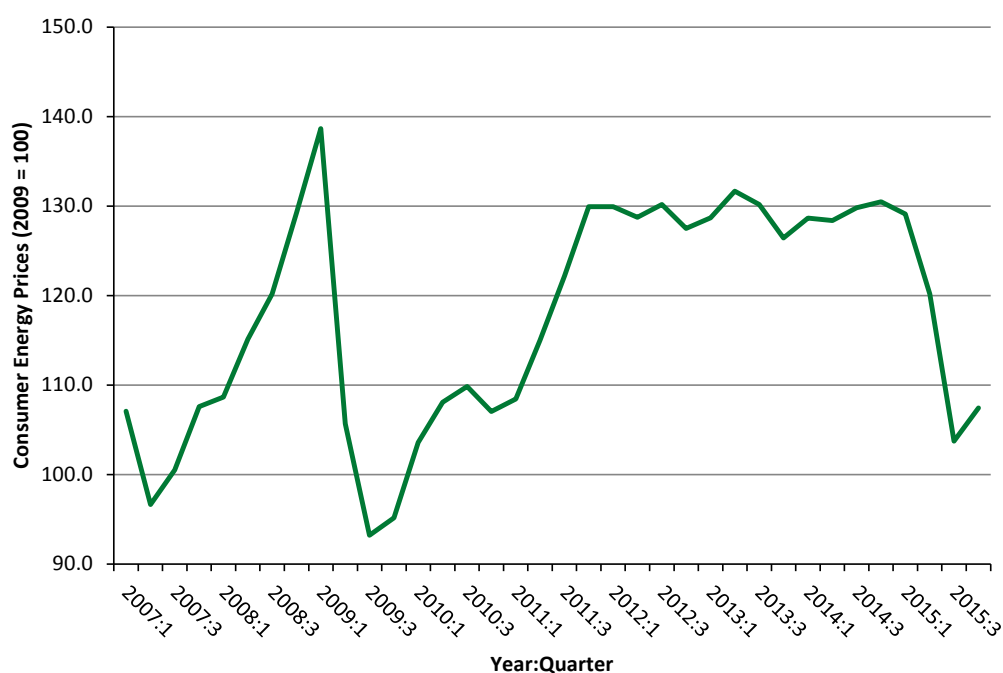
1.2. The U.S. Economy: Year in Review, continued

energy prices fell by a staggering 16.7 percent, a much bigger drop than those recorded in 2014 and 2013. Producer prices (finished goods) fell by 3.4 percent in 2015, the first time the category has experienced a price decline since 2009. This decrease was mainly caused by falling energy prices (which impact both producers and consumers) and a huge reduction in crude material prices. Crude material prices fell by 24.2 percent in 2015, mostly driven by declines in the prices of fuels and power. Gas fuels, crude petroleum, and refined petroleum product prices fell by 45.5 percent, 50.8 percent, and 37.8 percent, respectively.

The Federal Reserve is charged with maintaining both price stability and full employment. These goals can often be at odds: price stability requires some minimal level of inflation and some yield of interest on savings. Conversely, the Fed can stimulate demand (and thus hope to increase employment) by keeping interest rates low. This is what the Fed did in response to the Great Recession. The Federal Reserve

kept the Federal Funds rate low (below 0.25 percent) for twenty-eight consecutive quarters by the end of 2015. Finally, in December 2015, the Fed raised the Federal Funds rate from zero to 0.25 percent. The Fed is predicted to slowly increase the Federal Funds rate until it returns to more normal levels. Expect the Federal Funds rate to exceed 1.0 percent by the end of 2016. As noted above, these anticipated increases are viewed by many economists as a signal of the Fed's belief in the strength of the recovery as well as a necessary step to normalize rates. The Fed had maintained that interest rates would stay low until the unemployment rate was below 6.5 percent and labor market indicators improved. The unemployment rate in 2015 remained below that threshold and continued dropping from 5.7 percent in the fourth quarter of 2014 to 5.0 percent in the fourth quarter of 2015. The Fed previously announced that they would begin raising interest rates in mid-2015, but this did not happen until December 2015 because of the current

Figure 1.3: Consumer Energy Prices Drop in 2015



Source: Bureau of Economic Analysis and IHS Global Insight, Inc.

1.2. The U.S. Economy: Year in Review, continued

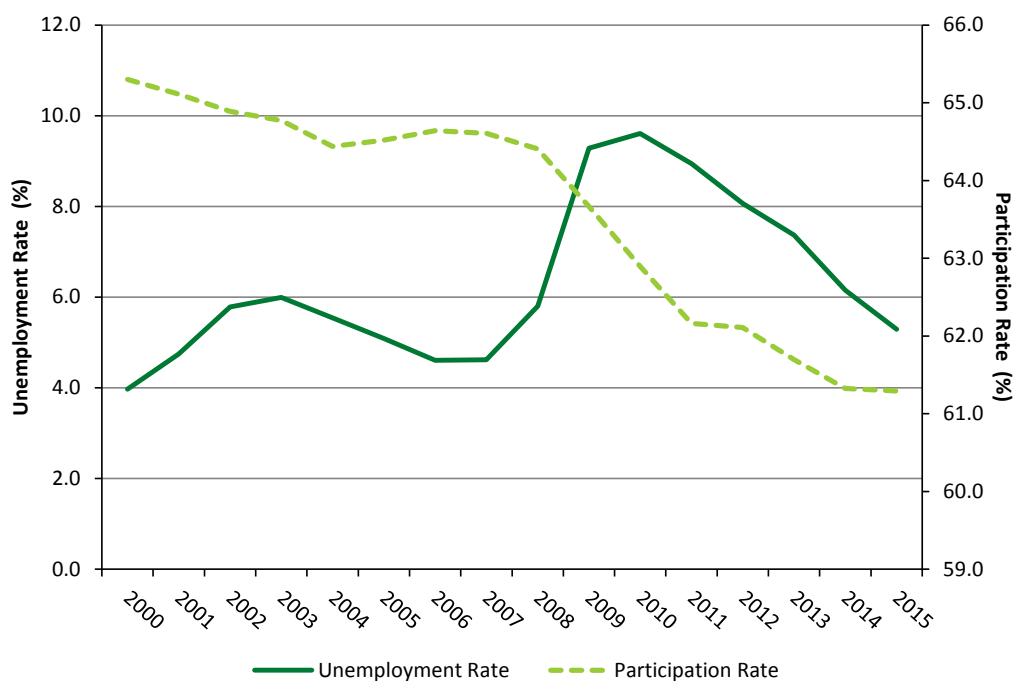
global slowdown. The December hike was the first time the Fed has raised rates since 2006. There is some worry that rising interest rates will bolster an already strong dollar and lead to an even larger trade deficit in 2016. However, stronger global growth and rising interest rates in other countries will help temper these possible impacts.

Although inflation is not an imminent concern for the U.S. economy, there are some signs that slightly higher prices are on the horizon. Wages are finally showing some signs of increasing, and the falling unemployment rate means additional tightening in the labor market. Moreover, energy prices have likely bottomed out and, as they recover, will add to inflationary pressures. There have been ongoing concerns since the end of the recession that deflation rather than inflation was a greater risk to the economy. Continued economic growth is reducing the likelihood of deflation. There is an excess of global capacity in the manufacturing and this is where ongoing downward price pressures are expected.

The Labor Market

The national unemployment rate continued falling for the fifth year, down to 5.3 percent for 2015 compared to 6.2 percent in 2014 and 7.4 percent in 2013. The unemployment rate's descent has been slow but consistent. However, the labor force participation rate is well below relatively recent historical levels and is an ongoing cause for concern. The labor force participation rate held at 61.3 percent for 2015, the same as in 2014. For comparison, the labor force participation rate in 1996 was 65.0 percent. The labor force participation rate for those under 60 has fallen (down to 71.2 percent from 75.6 percent in 1996), while the participation rate for those 60 and over has risen (up to 18.3 percent from 11.5 percent in 1996). Some portion of the falling participation rate may be explained by (1) fewer people between the ages of 16-24 working because they are in school and (2) discouraged workers. A discouraged unemployed worker is one who stops looking for work and thus is technically no longer considered unemployed.

Figure 1.4: Unemployment Continues Dropping, but the Participation Rate Also Remains Low



Source: Bureau of Labor Statistics and IHS Global Insight, Inc.

1.2. The U.S. Economy: Year in Review, continued

Discouraged workers imply that the relatively low participation rate in 2015 is part of the reason the unemployment rate is falling (since the unemployment rate only counts people without jobs who are actively seeking work). Many economists believed that once the recession was over, discouraged workers would re-enter the labor force, and the participation rate would bounce back up. Unfortunately, this has not happened. Janet Yellen, the Chair of the Fed's Board of Governors, estimates that there are currently two million discouraged workers who are not employed in the current labor market but would be employed in a labor market with higher wages and less slack (Yellen, 2015).

An additional concern is productivity, which has recently stagnated and increased by only 0.7 percent in both 2015 and 2014. Productivity increased significantly in the recession and its immediate aftermath: it rose by 3.2 percent in 2009 and 3.3 percent in 2010. Further, although 2008 experienced low productivity growth, productivity growth has traditionally been high in the modern U.S. economy. Since 1996, no year before the Great Recession had productivity growth of less than 1.6 percent.

More encouragingly, the economy continued creating jobs in 2015, a positive indicator since the economy just reached its pre-recession level of jobs in 2014. The economy added 2.9 million nonfarm payroll jobs in 2015, a 2.1 percent increase. The total number of nonfarm payroll jobs reached 141.9 million, making 2015 the second year that post-recession nonfarm payroll jobs surpassed their pre-recession level. Most of the job gains came from the private sector, which added 2.8 million jobs. The public sector added 91 thousand jobs; 84 thousand of these jobs were added at the state and local level.

Of the major sectors, professional and business services added the most jobs: 653 thousand jobs in 2015. However, both education and health services and trade, transportation, and utilities added large numbers of jobs, 584 thousand and 537 thousand, respectively. Notably, the construction sector continued to grow, adding 249 thousand jobs. The sector that did the poorest was natural resources and mining, the only sector to shed jobs, which lost 59 thousand jobs for a decline in employment of 6.6 percent.

1.3. The U.S. Forecast

Even amidst uncertainty about the global economy, the U.S. is expected to continue on its trajectory of steady growth in 2016 and 2017. Inflation-adjusted GDP is expected to grow by a robust 2.7 percent in 2016, following 2.4 percent growth recorded in 2015. The fourth quarter of 2015 recorded annualized GDP growth of only 1.2 percent due to unexpectedly slow consumer spending. This followed strong GDP growth in the second and third quarters of 3.9 and 2.0 percent, respectively; growth in these quarters was driven by growing consumer spending. Calendar year 2016 is expected to have solid growth each quarter: 3.0 percent in the first and second quarters and 3.3 percent in the third and fourth.

The factors contributing to this growth in the next year are primarily strong consumer spending,

continuing growth in residential investment, and a healthy pace of job creation. U.S. consumer spending is expected to rise by 3.0 percent, housing starts are expected to reach 1.3 million, and the economy is predicted to create 2.4 million jobs. The U.S. economy's cornerstone of domestic demand will help shield it from many impacts of the global slowdown, but manufacturing as well as natural resources and mining will be impacted. Manufacturing is expected to continue to suffer from fallen global demand and an appreciating U.S. dollar. Low global commodity and energy prices will continue to depress growth in the natural resources sector. These same low prices will be a boon to consumers.

Both U.S. fiscal and monetary policy are oriented for a year of robust growth. The Fed is expected to

1.3. The U.S. Forecast, continued

continue increasing interest rates in 2016 following an increase at the end of 2015. U.S. federal purchases are predicted to rise for the first time since 2010 building on a bipartisan budget accord that was reached before the year's end. The will help stabilize political influence on the economy through 2016.

Consumption

Consumer spending was strong throughout most of 2015, and that pattern is expected to continue into 2016 with an annual growth rate of 2.7 percent. This positive consumer spending depends on continued growth in inflation-adjusted income, automobile sales, and real estate, as well as continuing low inflation rates.

Inflation-adjusted disposable income is expected to grow by 3.1 percent in 2016 compared to 3.6 percent in 2015. Inflation-adjusted household net worth is expected to grow by 3.4 percent in 2016 compared to 3.2 percent in 2015. Consumption growth in 2016 is expected to be relatively stable and grow 3.0 percent, 3.2 percent, 3.4 percent, and 3.4 percent for the first, second, third, and fourth quarters, respectively.

Spending on durable goods should remain strong in 2016 as a result of the recovering economy and job market. Durable goods spending is expected to increase by 6.3 percent compared to increasing by 6.1 percent in 2015. Durable goods spending is expected to continue to outpace both services spending (expected to increase by 2.5 percent) and nondurable goods spending (expected to increase by 3.1 percent). While spending on new light trucks is expected to grow by only 4.0 percent compared to 10.2 percent in 2015, spending on recreational goods and vehicles is predicted to stay strong and increase by 11.2 percent.

The Labor Market

Employment growth is expected to remain solid and steady. The unemployment rate is expected to drop through 2016: it was 5.0 percent in the fourth quarter of 2015 and is expected to fall to 4.9 by the fourth quarter of 2016. Based on headline statistics like the overall unemployment rate, the

labor market is getting close to full employment. Other measures—like counts of discouraged workers and the low labor force participation rate—suggest that significant underlying weaknesses remain in the labor market.

The expected 1.7 percent rate of job creation is slower than the recorded rate for 2015 or 2014, which saw increases of 2.1 and 1.9 percent, respectively. Nevertheless, the economy is expected to add 2.4 million more jobs in 2016. The first quarter is expected to be particularly robust with 663 thousand jobs added. The sectors expected to experience the strongest growth are the education and health services sector as well as professional and business services, which are expected to add 600 thousand and 634 thousand jobs, respectively. Only one major sector is expected to cut payrolls: natural resources and mining, the same sector that shed jobs in 2015. Due to plummeting petroleum and natural gas prices, the natural resources and mining sector is expected to cut 93 thousand jobs.

Productivity, which has slumped in recent years, is expected to grow by 1.5 percent in 2016. There is some evidence that productivity has slowed, including the disconnect between very strong rates of job growth and the more modest but still respectable rate of GDP growth. The lack of a rebound in productivity would translate into slower growth for the year.

A major concern in recent years has been the decline in the labor force participation rate, i.e., the share of the adult population employed or unemployed and actively pursuing a job. From 2008 to 2011, the labor force actually shrank by 703 thousand workers. Labor force expansion has not reached 1.0 percent for any year since the recession, but in 2016 it is expected to reach 1.5 percent. This is close to the 1.7 percent rate of job creation expected in 2016.

Investment and Interest Rates

The housing sector is expected to continue its recovery, despite rising interest rates which increase monthly mortgage payments. Pent-up demand, low housing prices, and a healthy labor market will carry the housing market forward. Residential

1.3. The U.S. Forecast, continued

fixed investment is expected to grow by 9.5 percent in 2016, marking its sixth year of growth. The first quarter is expected to be particularly strong, with an annualized growth rate of 11.2 percent. Housing starts are expected to increase to 1.3 million units compared to 1.1 million in 2015, notably still below the pre-recession level of 1.8 million in 2006. Sales of existing homes are expected to increase to 5.3 million units, 81.4 percent of their 2006 level.

Housing prices are predicted to continue rising, with a 3.4 percent increase in average existing home prices expected in 2016. The average price of new homes is expected to rise much faster and increase by 7.1 percent, following a significantly smaller increase of 3.2 percent in 2015. The FHFA Purchase-Only Index is projected to rise by 4.8 percent in 2016, following increases of 5.6 percent and 5.5 percent in 2015 and 2014, respectively.

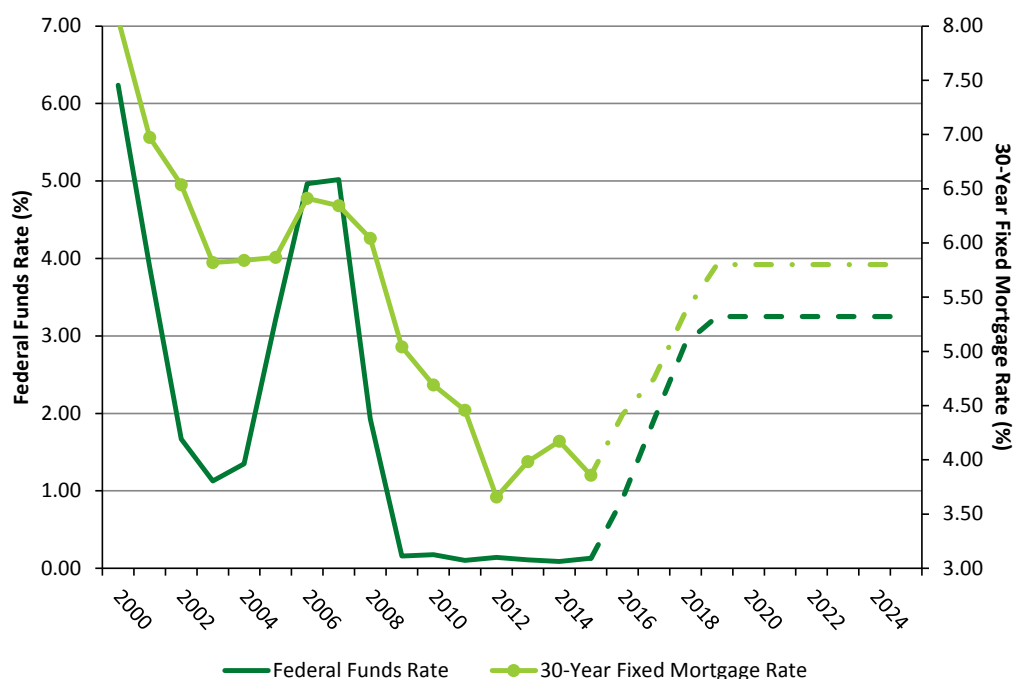
The Fed finally began raising interest rates at the end of 2015. It is expected that the Federal Funds rate will reach 1.3 percent by the fourth quarter of

2016. The 3-Month Treasury Bill rate is expected to increase to 1.2 percent by the fourth quarter of 2016, and the 30-Year Fixed Mortgage rate is expected to increase to 4.6 percent. Some fear that rising interest rates could slow the housing market's recovery, but the overall consensus is that the housing market has strengthened enough to withstand rising interest rates. The Fed's interest rate hikes are already incorporated into market considerations.

Nonresidential fixed investment is expected to grow by 5.0 percent in 2016 compared to 3.4 percent in 2015. Equipment investment is expected to account for most of the growth in nonresidential fixed investment, advancing 6.6 percent. Growing equipment investment is dependent on rising oil prices, the global economy gaining momentum, and exchange rates stabilizing. Structures investment is expected to grow by only 2.6 percent.

Business inventory spending is not expected to grow as quickly as it did in 2015; the anticipated gain in 2016 is only 1.5 percent. The first sign of

Figure 1.5: The Federal Funds Rate Is Expected to Rise, Which Will Push Mortgage Rates Up



Source: Federal Reserve Bank, Freddie Mac, and IHS Global Insight, Inc.

1.3. The U.S. Forecast, continued

a quickening global economy will be increased changes in inventory, rather than changes in the trade deficit.

Federal Budget

Because of a bipartisan budget agreement, the federal budget is expected to experience its first increase since 2010 and grow by 3.6 percent to \$1.2 trillion. The deficit is projected to rise to \$500.5 billion compared to \$438.9 billion in 2015. Any

deficit will add to the overall U.S. debt, which is predicted to hit \$19.4 trillion in 2016. This would make 2016 the sixth year that U.S. federal debt has exceeded U.S. GDP.

The Congressional budget deal includes an increase in defense and nondefense spending, as well as cuts to Medicare and Social Security benefits. Defense spending is projected to rise by 3.1 percent and nondefense spending by 4.4 percent. At the state and local level, spending is expected to grow by 1.5 percent.

China's Slowdown

The economic situation in China is a major concern for the current global economy. The resolution of China's economic slowdown or its continuance will impact worldwide growth in the coming year. China now has the largest economy in the world, with a purchasing power parity GDP of \$17.2 trillion in 2014 (compared to \$16.6 trillion for the U.S.), even though China's GDP per capita was only \$8 thousand in 2014 (compared to \$55 thousand for the U.S.). It is unsurprising then that China's slowdown and shift away from manufacturing and toward services should be felt throughout the world. On January 4, 2016, Chinese markets reopened for the year and subsequently shut down after a seven percent drop in the stock market. A repeat of this event happened on January 7. Clearly, the Chinese market will continue to contract in early 2016. What is causing this slowdown and how will it impact the U.S.?

From 2002 to 2011, China enjoyed GDP growth of at least 9 percent per year including peaks of 14 percent. However, in 2012 growth fell to 7.7 percent and growth is expected to have fallen to 6.5 percent in 2015. A primary cause of this slowing growth is China's aging population. China ascended to prominence in the global marketplace because of its large supply of labor and subsequently low manufacturing costs. Once the generation born under the One Child Policy matured, that labor supply became constrained. Now, with a more slowly growing labor force, wages are rising and a low-cost manufacturing model for China is no longer viable (Kessler & Murray, 2015).

The Chinese government is aware of this and the economy is intentionally being shifted away from manufacturing to services. This shift is viewed by many as necessary to China's economic development and is crucial to it transitioning to an economy fostered by domestic consumption and not by investment. The transition to a more consumption-dominant economy is already playing out: the International Monetary Fund estimates that in 2014 consumption contributed 0.1 percentage point more to China's GDP than investment did (International Monetary Fund, 2015). Regardless of how necessary this transition may be, it remains a time of slowed growth and new vulnerabilities within the economy.

The necessity of a lessening dependence on investment was made clear by the contraction of China's real estate sector. China's real estate bubble deflated and prices fell by 6 percent. The popping of the real estate bubble contributes to China's economic slowdown on its own, but that is not where its impact on the slowdown stopped. China's local governments had a large stake in real estate: they had been selling off local lands or leveraging them. Falling real estate prices also forced local governments to stop overleveraging and begin investing less, further contributing to the economic slowdown (Kessler & Murray, 2015).

In addition to all of this, China devalued its currency twice in the past year: once in summer 2015 and again in early 2016. China is attempting to boost its faltering economy by depreciating its currency, like many other nations in the aftermath of the Great Recession. However, this has only increased market fragility, since investors now fear that the currency will be

continued on page 14

1.3. The U.S. Forecast, continued

continued from page 13

devalued further. The Chinese government is now faced with a slowdown with multiple causes. On a global stage, China's slowdown is rippling through the world economy. The shift away from manufacturing has lowered demand for commodities and has exacerbated the drop in commodity prices worldwide. Further, the falling value of the yuan makes Chinese imports more expensive. Trading partners that China imports commodities from – Brazil, Canada, and Russia – are feeling the direct impact, contributing to recessions in these countries.

It remains to be seen how China will affect the global economy in 2016 and 2017. On the positive side, the U.S. economy has limited direct exposure to China in terms of trade. In addition, falling commodity prices have translated into lower costs of production for producers and importantly lower gasoline prices for consumers. The downside risk depends on the degree to which China's slowdown spreads through emerging markets and commodity-exporting nations. Some economies, like Japan, do have considerable direct exposure to the Chinese slowdown. The best bet at this time is a further slowdown in China, coupled with ongoing market instability, but sufficient global strength to ward off recession.

International Trade

The global economy is expected to continue to move at a sluggish pace, with recessions or slowdowns in many countries. Few of these nations are significant trading partners with the U.S., but the comparably robust U.S. recovery and U.S. dollar (which is expected to continue appreciating until mid-2016) mean that imports are expected to rise much faster than exports. In addition, the Chinese yuan was devalued again in early 2016, continuing its impact of driving down the cost of Chinese goods for exporters and driving up the cost for goods imported into China, including commodities and raw materials.

Inflation-adjusted exports of goods and services are projected to grow by 2.3 percent in 2016 compared to 1.0 percent in 2015. Exports of capital goods excluding automobiles are expected to continue shrinking by 1.6 percent compared to a decrease of 2.8 percent in 2015. Imports are expected to record much faster growth than exports, 4.9 percent in 2016 compared to 5.0 percent in 2015. Imports of petroleum products

are expected to be particularly strong in the wake of low prices: petroleum product imports are expected to grow by 11.1 percent in 2016 compared to 2.1 percent in 2015.

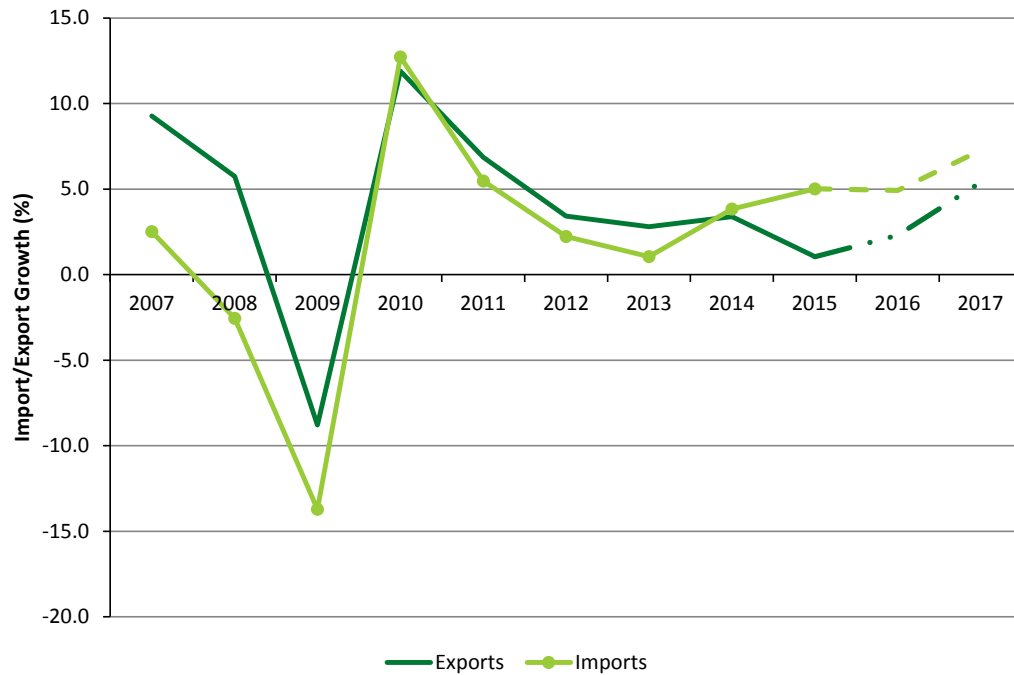
Inflation and Prices

Inflation is expected to remain low in 2016 with consumer prices expected to increase by only 1.2 percent. This increase is higher than the low inflation of 0.1 percent experienced in 2015, but lower than in any other year since 2009. Consumer energy prices are expected to continue falling and decrease by 7.6 percent in 2016. Oil prices are expected to continue falling into the first quarter of 2016 to \$38.48 per barrel but then bounce back and reach \$55.52 per barrel in inflation-adjusted terms.

By 2017, inflation is expected to reach 2.6 percent, hitting the Fed's target range for the first time since 2012. Consumer energy prices are also expected to rise by 8.6 percent, ending a four-year period of price declines.

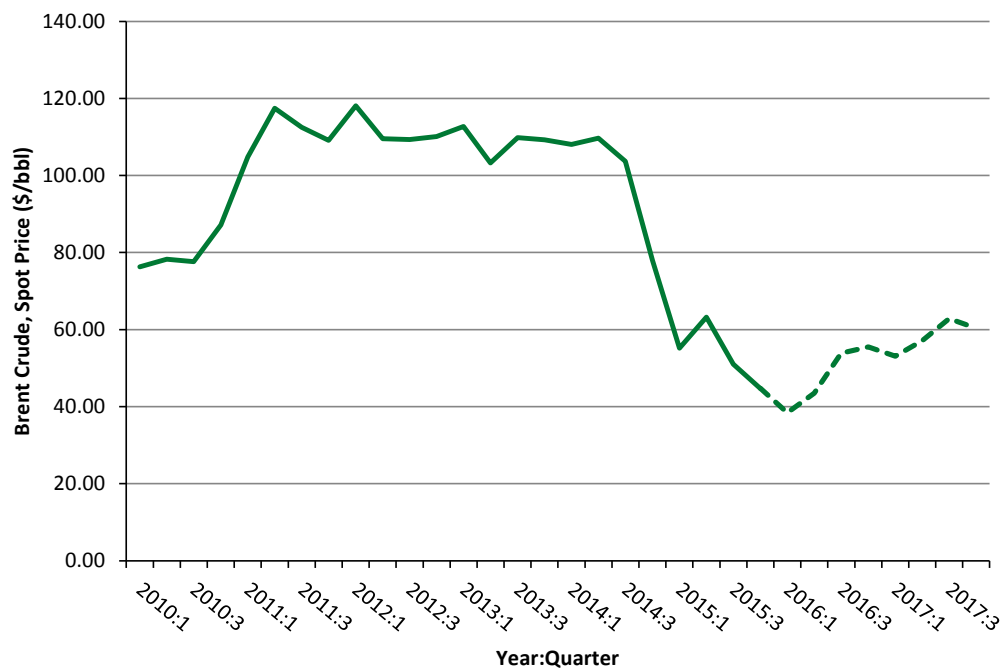
1.3. The U.S. Forecast, continued

Figure 1.6: The Trade Deficit Is Expected to Continue as Import Growth Outpaces Export Growth



Source: Bureau of Economic Analysis and IHS Global Insight, Inc.

Figure 1.7: The Price of Crude Oil Will Begin Rebounding Mid-2016



Source: Commodity Research Bureau and IHS Global Insight, Inc.

1.3. The U.S. Forecast, continued

Inflation Expectations

In the past year, the U.S. economy experienced very low rates of inflation. The Consumer Price Index (CPI), the most familiar measure of inflation, only rose by 0.1 percent in 2015. Core-CPI, which excludes energy and food prices (two sectors known to have price volatility), rose by 1.8 percent, still below the Fed's benchmark of 2.0 percent inflation. Falling gasoline and commodity prices, low rates of wage increase, and a strong dollar are all contributing to these low inflation rates. How inflation behaves in the next year is dependent on all of these factors, and none of them have a clear-cut path.

Gasoline prices are expected to continue falling in early 2016 but begin recovering mid-year. By 2017, gasoline prices are expected to be \$58 per barrel compared to \$54 per barrel in 2015. This rebound is contingent on increased oil demand (spurred on by low prices) outpacing supply. If this happens, prices will begin to increase so that the market can return to equilibrium. The ongoing global slowdown raises some question about the vitality of demand in the near term and whether prices will in fact tick back up. As this report goes to press, there is an increased likelihood of still lower gasoline prices.

The path for commodity prices is also tricky since much of their fall has been caused by the global slowdown. As nations' economies slow, they demand fewer commodities. Lower demand then drives prices downward. This situation is aggravated because supply had risen during recent years to match increased demand as China's economy expanded at a booming pace each year. With a slowing Chinese economy, the commodities market faced a higher supply than usual and lower demand than anticipated, which led to commodity prices spiraling down to levels not seen since the Great Recession. The resolution or continuance of the global slowdown will determine how commodity prices behave in 2016 and beyond. The global slowdown is predicted to continue through 2016; likewise, commodity prices are predicted to remain depressed through 2016 as well. Low commodity and gasoline prices drive overall prices downward because they are such an important element of the costs of production.

Additionally, as other economies slow and the U.S. economy expands, the U.S. dollar appreciates relative to other currencies. As the dollar strengthens, U.S. exports become more expensive and U.S. imports become less expensive. To exacerbate this state of affairs, many nations that are experiencing slowed growth are responding by devaluing their currency. This drives the U.S. dollar's value up further in relative terms and makes imports from those nations even cheaper. These cheaper import prices also depress inflation. And, like low commodity prices, cheaper imports are expected to continue into 2016 as the global slowdown lingers.

Finally, low levels of wage growth have put downward pressure on inflation by helping avert a wage-cost spiral. This low wage growth is tied to a labor market with slack and the low levels of productivity growth seen since the end of the Great Recession. In 2016, productivity is expected to increase by 1.5 percent compared to 0.7 percent in 2015. There is already small evidence of upward pressure on wages: hourly wages experienced higher growth rates at the end of 2015 than at its beginning. Lessening slack in the labor market will also help push inflation upward.

In addition to all these factors, it is important to remember inflation expectations impact inflation itself. Inflation expectations can create environments where expectations become reality: if firms expect high rates of inflation in the next period, they may increase their current period demand in order to take advantage of relatively cheaper current period prices, which in turn will drive prices up.

Consumer surveys in 2015 point to consumers' inflation expectations falling as 2015 wound to a close. The Survey of Consumer Finances revealed that consumers' three-year inflation expectations fell 0.1 percentage points to 2.8 percent from the October survey to the November survey (Sajdak, 2015).

Janet Yellen, the Chair of the Fed's Board of Governors, points out that short-run consumer inflation expectations are often responsive to current inflation levels (Yellen, 2015), and short-run business forecasts may be more indicative of future short-run inflation. Business inflation expectations (as computed by the Federal Reserve of Atlanta) increased a tenth of a percentage point from the November survey to the December survey. Surveyed businesses expect to see 1.9 percent inflation in 2016. Global Insight, Inc., predicts that the core-CPI will reach 2.0 percent by 2016, and overall CPI will reach 2.0 by 2017. This forecast is dependent on rising wages, rising gasoline prices, and the continuation of the global slowdown.

1.4. Alternative Scenarios

Rising employment and consumption were the basis for the U.S. economy's strength in 2015. It is noteworthy that the national economy performed well in the face of strong headwinds from the global economy. Continued growth will depend on how the global slowdown plays out, commodity and gasoline price trends, the resilience of financial markets, and consumers' responses to the aforementioned.

In the pessimistic scenario (20 percent probability), the U.S. stock market weakens appreciably in 2016 and the global slowdown continues unabated. Foreign investors buy U.S. securities, driving up the value of the dollar further. The dollar's appreciation makes U.S. goods more expensive and demand for U.S. manufacturing falls precipitously. These events drive down consumer

and business confidence and thus job creation. The economy contracts and home sales decline. The Fed slows the rate at which it increases interest rates.

In the optimistic scenario (15 percent possibility), the global slowdown relents. Demand for gasoline outpaces supply, thus driving up prices. Structural changes occur in other economies that improve the fundamentals of the global economy. In addition to these positive external events, the stock market recovers from its correction in 2015. Credit conditions soften, which leads to more residential and nonresidential investment. Consumer confidence and spending rise, and the economy speeds up the pace of job creation. The Fed quickens the rate at which it increases interest rates.

1.5. Forecast Summary and Conclusions

- Inflation-adjusted GDP will grow at a healthy 2.7 percent rate in 2016, following 2.4 percent growth in 2015.
- The Fed will continue raising interest rates. The Federal Funds rate is expected to reach 1.3 percent by the fourth quarter of 2016, and the 30-Year Fixed Mortgage rate is expected to reach 4.6 percent.
- Consumer spending will continue to bolster the economy and grow by 3.0 percent in 2016 in response to growing disposable income and ongoing job creation.
- Inflation will remain low at 1.2 percent, due to falling energy prices.
- The recovery of the housing market will continue and residential investment will increase by 9.5 percent.
- Exports and imports will continue diverging as the U.S. economy remains strong, the dollar appreciates, and the global economy stumbles. Exports are expected to increase by 2.3 percent while imports increase by 4.9 percent.

1.6. References

- Arias, M. A., & Wen, Y. (2015). Recovery from the Great Recession has varied around the world. *The Regional Economist*: Federal Reserve Bank of St. Louis, 23(4), 10-11.
- International Monetary Fund. (2015). IMF Country Report: People's Republic of China. Retrieved January 13, 2016 from <https://www.imf.org/external/pubs/ft/scr/2015/cr15234.pdf>.
- Kessler, L. & Murray, M. (2015). Domestic economy remains strong in the face of the global slowdown. Report for Tennessee Valley Authority.
- Sajdak, K. (2015) Consumers anticipate better labor market, mixed inflation outcomes. *Liberty Street Economics*: Federal Reserve Bank of New York. Retrieved January 12, 2016 from <https://www.newyorkfed.org/newsevents/news/research/2015/an151109>.
- Wen, Y., & Wu, J. (2014). Withstanding the Great Recession like China. Working Paper, Federal Reserve Bank of St. Louis.
- Yellen, J.L. (2015). The economic outlook and monetary policy. Speech given for the Economic Club of Washington, D.C. Retrieved January 12, 2016 from <http://www.federalreserve.gov/newsevents/speech/yellen20151202a.htm>.

CHAPTER 2: THE TENNESSEE ECONOMY: SHORT-TERM OUTLOOK

In this chapter—

2.1. Introduction

2.2. The Current Economic Environment

The Labor Market
Income and Taxable Sales

2.3. Fiscal Update

Federal Government
State Finances across the Nation
The Southeastern States and Tennessee

2.4. Short-Term Outlook

2.4. Tennessee 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

Rural Economies and Well-Being

Governor's Rural Challenge

Summary

References Used

2.1. Introduction

Economic growth in Tennessee has been similar to that of the U.S. in recent years. Both the state and nation have now enjoyed more than six years of growth since the end of the Great Recession. In Tennessee, inflation-adjusted gross domestic product (GDP) expanded by 2.4 percent in 2015 and is projected to advance an additional 2.3 percent in 2016. Similarly, the U.S. economy grew by 2.4 percent in 2015 and growth is projected to accelerate to 2.7 percent in 2016.

In the U.S. there were 292,000 new jobs created last December and 2.7 million new jobs for 2015 as a whole. This was below the 3.1 million new jobs created in 2014, but outpaced job creation for the three years prior (2011-2013). Significant employment growth can also be seen in the Tennessee labor market, where nonfarm

employment increased by 1.9 percent in 2015, representing an additional 54,600 new jobs. Manufacturing employment also expanded by 1.9 percent in 2015, outpacing the 1.1 percent rate of growth seen in the nation. After recording a 6.5 percent unemployment rate during the first quarter of 2015, Tennessee's unemployment rate finally fell below 6 percent during the second quarter – it had been seven years since the state last registered an unemployment rate under 6 percent (Tennessee's unemployment rate was 5.7 percent during the first quarter of 2008.) In the second half of 2015, Tennessee's unemployment hovered between 5.6 and 5.7 percent. The state unemployment rate is projected to fall to 5.5 percent for 2016 which is slightly above the nation's 4.9 percent unemployment rate projected for 2016. In 2015,

2.1. Introduction, continued

nominal personal income in Tennessee grew at a faster pace than in the U.S., expanding by 4.7 percent compared to 4.5 percent growth for the nation. State personal income growth will accelerate to 4.8 percent in 2016, compared to only 4.2 percent growth projected for the nation. For nonfarm employees, the average annual wage

was \$47,219 in 2015, representing a 3.1 percent increase over the previous year, outstripping the rate of growth in inflation. Nominal taxable sales in Tennessee expanded by 6.2 percent in 2015, and are projected to grow an additional 4.7 percent in 2016.

2.2. The Current Economic Environment

The Labor Market

Tennessee nonfarm employment grew at a healthy 1.9 percent rate during 2015. This was slightly slower than the 2.1 percent growth rate registered one year prior. Job growth in Tennessee was also slower than national employment growth of 2.1 percent for 2015. Tennessee nonfarm employment growth started off slowly in 2015, growing by only 0.5 percent in the first quarter before rebounding to 2.0 percent growth (on a seasonally-adjusted basis) for both the second and third quarters. Similar to what occurred in 2014, the slow start to 2015 was largely due to a cold and snowy winter. For the year, nonfarm employment totaled 2,870,733 which is only slightly above the pre-recession peak of 2,797,781 in 2007. It is rather remarkable that employment in 2015 was so close to the level seen eight years earlier.

In 2015, nonfarm employment growth was led by the leisure and hospitality sector which grew by 3.3 percent. Employment in the natural resources, mining, and construction sector expanded by 3.2 percent, and job growth of 2.8 percent was seen in the professional and business services sector. Three sectors experienced job losses in 2015, including the information sector (-1.3 percent), other services (-1.0 percent), and the federal government (-1.1 percent). This marks the second consecutive year of job losses in Tennessee's information sector, and the fifth straight year of federal government job losses in Tennessee.

Manufacturing employment in Tennessee grew by 1.9 percent in 2015, outpacing the nation's 1.1

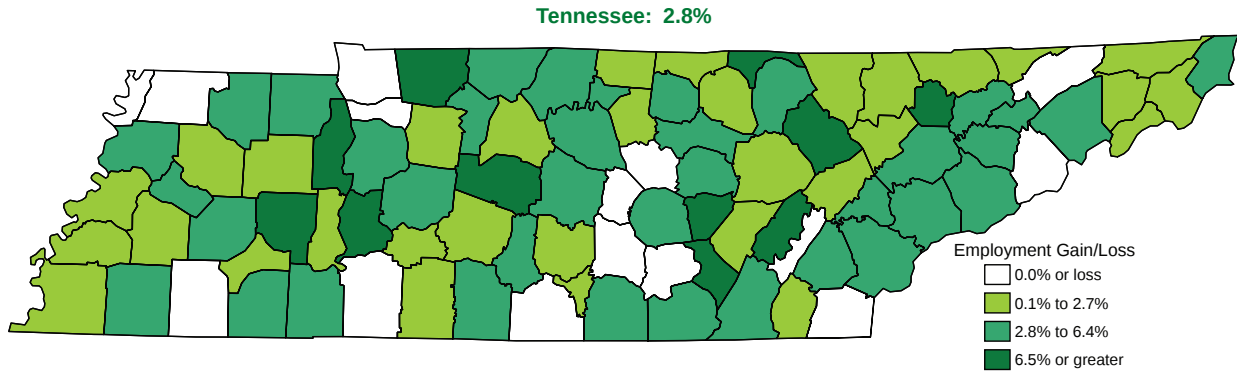
percent growth rate. This was the fifth consecutive year of manufacturing employment growth for the state following more than a decade of setbacks. Within manufacturing, employment in the durable goods manufacturing sector grew by 3.0 percent in 2015, while nondurable goods manufacturing employment grew by only 0.1 percent. Using the most recent data available, employment growth by county is presented in Figure 2.1. From June 2014 to June 2015, statewide employment grew by 2.8 percent. During this period there were 80 counties that reported employment gains, 44 of which outgained the state average of 2.8 percent. Among the counties to see employment growth, two enjoyed gains that exceeded 13 percent: Van Buren County reported employment growth of 15.3 percent and Pickett County experienced growth of 13.7 percent. By contrast there were 13 counties that faced employment contractions between June 2014 and June 2015. Job losses were the largest in Wayne County at -7.2 percent, followed by Lake County at -4.6 percent. Job growth was generally stronger in and around the state's metropolitan areas.

Tennessee's civilian labor force, which includes employed people and unemployed people who are actively seeking work, increased by 2.3 percent in 2015. This was largely driven by a 3.1 percent increase in the number of employed people in Tennessee. The number of unemployed people also fell by 8.0 percent in 2015 and the labor force participation rate (i.e. the percentage of the adult population in the civilian labor force) grew

2.2. The Current Economic Environment, continued

Figure 2.1: Over Eighty Percent of Tennessee Counties Experienced Job Growth in the Second Quarter of 2015

(Year-Over-Year Growth in Total Covered Employment, June 2014- June 2015)



Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

by 1.1 percent, indicating that more Tennesseans found jobs in 2015 than in 2014. This was the first time since 2010 that Tennessee's labor force participation rate increased. However, at 57.7 percent, the low labor force participation rate is indicative of ongoing problems in the labor market, paralleling the situation for the national economy (see Chapter 1). Figure 2.2 shows that the labor force participation rates for both the state and the nation have been declining for the last decade, however this trend has been much more pronounced in Tennessee. These declines can be explained, at least in part, by an increase in retirees as the baby boom generation ages out of the workforce, but this number also likely encapsulates discouraged workers who have quit searching for a job. The more serious problem in Tennessee is likely tied to the fact that the state has a more poorly educated workforce than the nation as a whole, as well as a less healthy adult population. Both educational attainment and health status are correlated with labor market participation. It remains to be seen if the turnaround in the labor force participation rate in 2015 is part of a new trend.

Tennessee's unemployment rate averaged 5.9 percent in 2015, which is higher than the 5.3 percent unemployment rate for the nation. Between 2014 and 2015 Tennessee's annual unemployment rate has fallen by 0.7 percentage

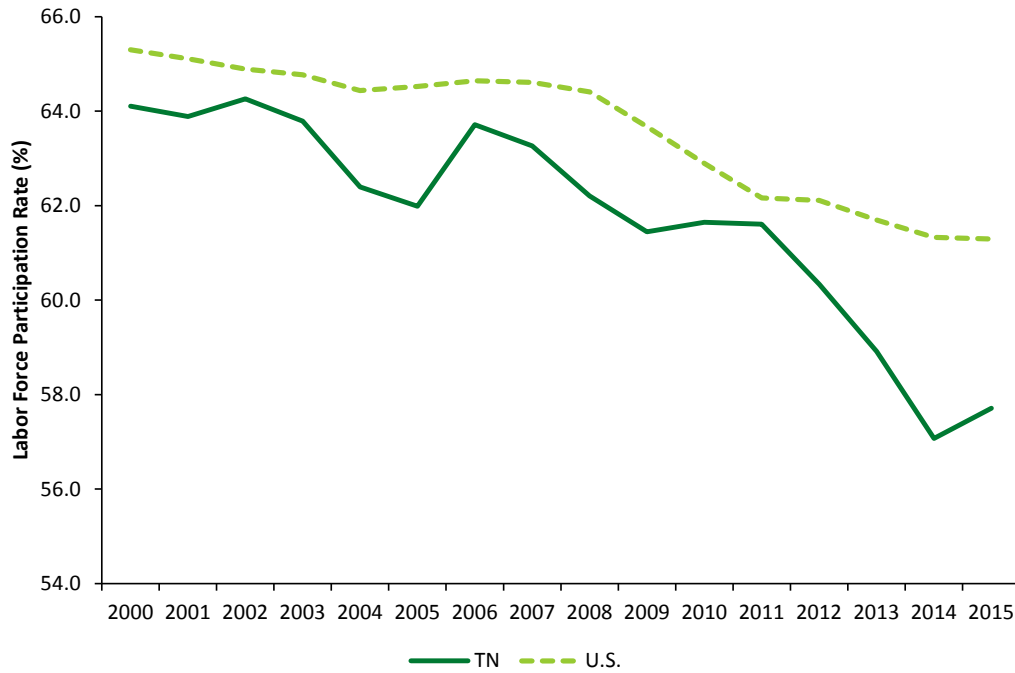
points, while the U.S. unemployment rate dropped 0.9 percentage points. During the first quarter of 2015 Tennessee's unemployment rate was pegged at 6.5 percent, but then dropped to 5.8 percent in the second quarter and 5.6 percent by the fourth quarter. This fourth quarter unemployment rate of 5.6 percent was Tennessee's lowest unemployment rate since the fourth quarter of 2007.

Figure 2.3 presents the seasonally-adjusted unemployment rates of all southeastern states for the month of December. Tennessee's unemployment rate of 5.6 percent was slightly above the southeast average of 5.5 percent but was lower than 5 of the 12 southeastern states. The highest unemployment rate in the region was in Mississippi (6.4 percent), followed by West Virginia (6.3 percent); the lowest rate in the region was in Virginia (4.2 percent).

Figure 2.4 presents non-seasonally adjusted county-level unemployment rates for November 2015. There were three counties that registered an unemployment rate above 9.0 percent – Hancock County (9.9 percent), Lauderdale County (9.4 percent) and Scott County (9.3 percent). While the unemployment rates in these counties were well above the non-seasonally adjusted state and national averages of 5.4 percent and 4.8 percent respectively, all three of these counties had reported unemployment rates above 10.5 percent one year prior so they are at least trending in the

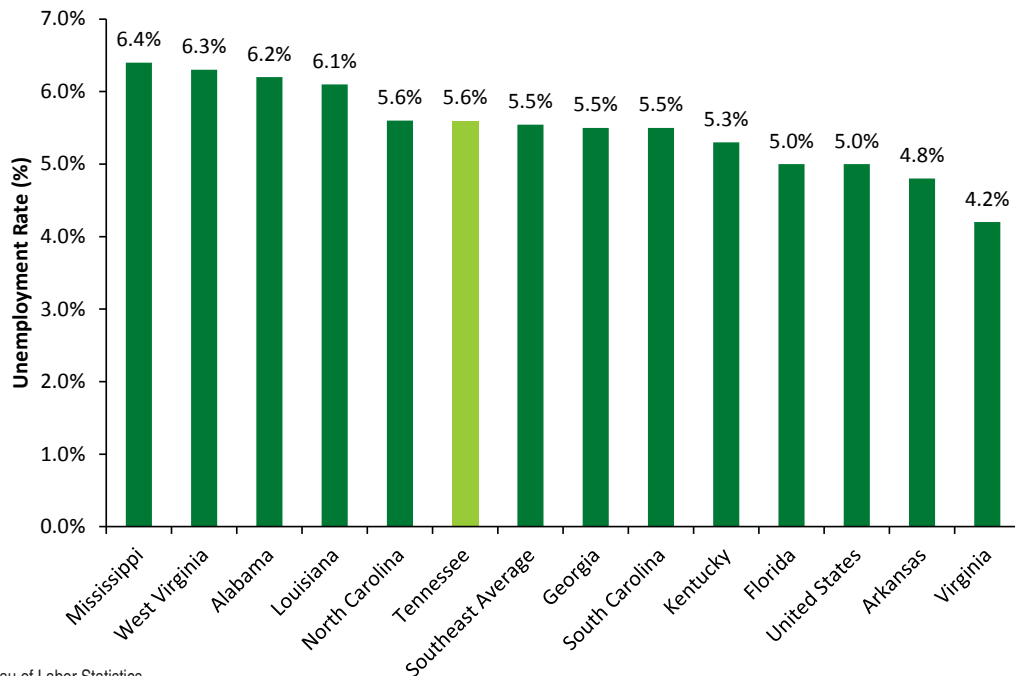
2.2. The Current Economic Environment, continued

Figure 2.2: The Labor Force Participation Rate Remains Low in Tennessee and in the Nation



Source: Bureau of Labor Statistics and CBER-UT.

Figure 2.3: Tennessee's Monthly Unemployment Rate Is Near the Middle of the Pack Among Southeast States (December 2015)



Source: Bureau of Labor Statistics.

2.2. The Current Economic Environment, continued

right direction. Conversely, there were 24 counties with unemployment rates below the state average of 5.4 percent. The lowest non-seasonally-adjusted unemployment rate in the state was in Williamson County (3.9 percent) followed by Rutherford County and Davidson County both at 4.2 percent. Each of these county's rates were below the national average of 4.8 percent.

Income and Taxable Sales

Nominal personal income in Tennessee grew by 4.7 percent in 2015, which was slightly faster than the 4.5 percent growth rate registered for the nation. Personal income growth was driven largely by proprietors' income which increased by 5.1 percent and wages and salary income which grew by 5.0 percent. Transfer payments were up 4.8 percent, and rent, interest, and dividend income increased by 4.1 percent. Nominal personal income per capita grew to \$41,603 in 2015, representing a 3.6 percent increase over 2014.

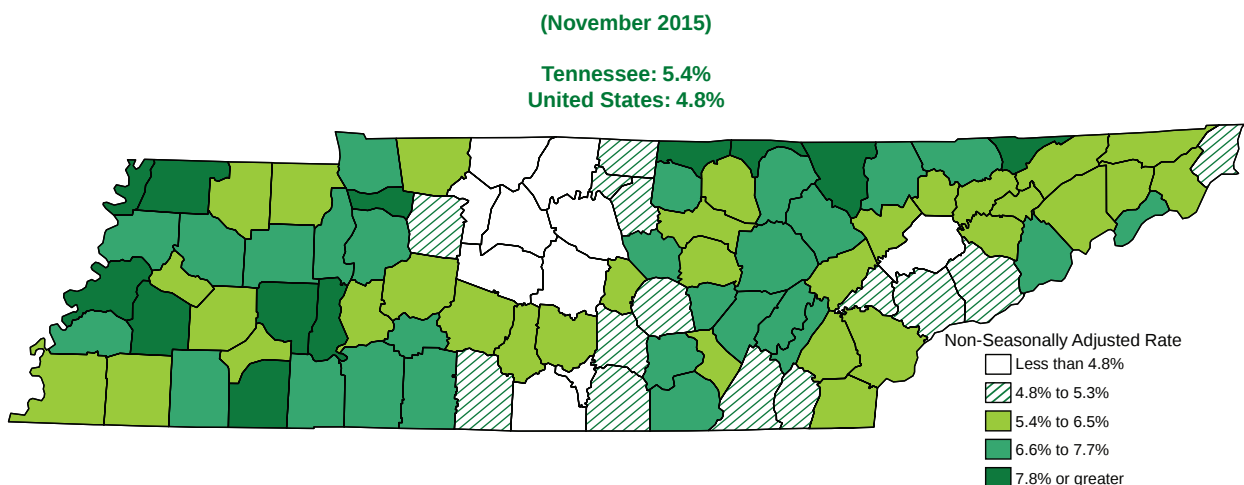
Figure 2.5 presents per capita personal income in current dollars for all southeastern states during the third quarter of 2015. At \$42,215 per person, Tennessee ranked fourth among the 12 southeast states. Per capita personal income in Tennessee was slightly below the southeast average of \$42,544 and

well below the national average of \$48,051. Among the southeastern states, Virginia had the highest per capita personal income (\$52,498) and was the only southeastern state where per capita income was above the national average. Per capita personal income was lowest in Mississippi (\$35,678) followed by West Virginia (\$37,228).

Figure 2.6 reports per capita personal income in current dollars across all Tennessee counties in 2014 (the most recent year for which data are available.) Williamson County continues to have the highest per capita personal income at \$71,761 and eclipses per capita income in even the second highest county (Davidson County at \$54,307). There were only four Tennessee counties with per capita income above the national average of \$46,049 – Williamson, Davidson, Trousdale, and Fayette. Including the aforementioned, there were only four additional counties where per capita income was above the state average of \$40,457 – Shelby, Hamilton, Knox, and Wilson. Conversely, per capita income was lowest in Bledsoe County at \$21,432, which is less than 50 percent of the national average.

Taxable sales continue to grow rapidly in Tennessee. Compared to a high base where taxable sales increased by 4.9 percent in 2014, taxable sales

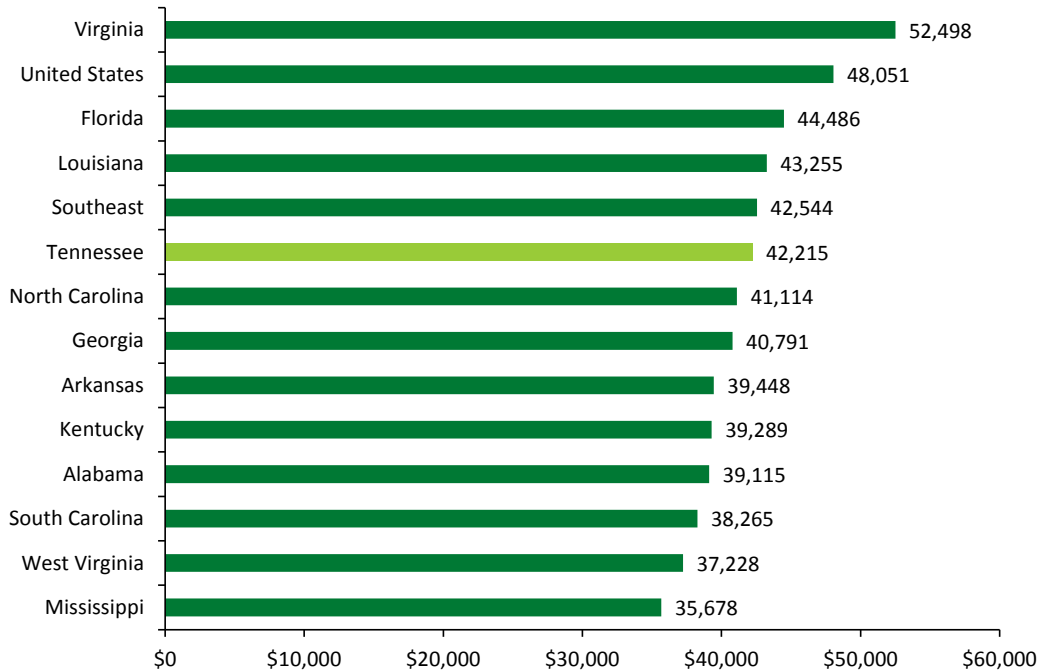
Figure 2.4: Eighty-Seven Percent of Tennessee Counties are Reporting Unemployment Rates Above the National Average



Note: Not Seasonally Adjusted
Source: U.S. Bureau of Labor Statistics.

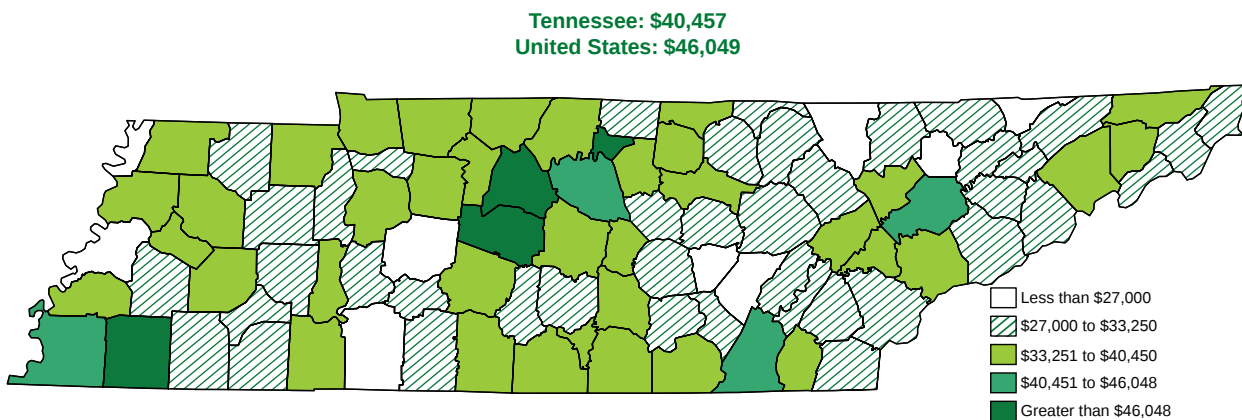
2.2. The Current Economic Environment, continued

Figure 2.5: Tennessee's Per Capita Personal Income (in Current Dollars) Is Slightly Below the Southeast Average, 2015Q3



Source: Bureau of Economic Analysis.

Figure 2.6: Per Capita Personal Income Is Lower Than the National Average in Most Tennessee Counties (2014 Per Capita Personal Income in Current Dollars)



Source: Bureau of Economic Analysis.

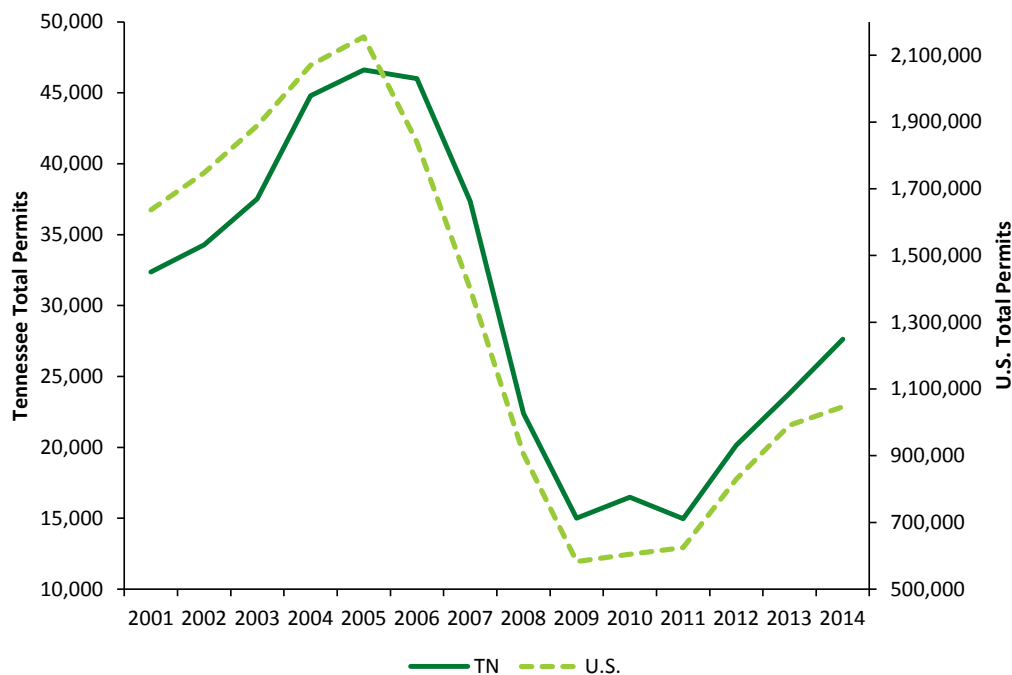
2.2. The Current Economic Environment, continued

grew by an additional 6.2 percent in 2015. On a fiscal year basis, nominal taxable sales grew by 6.1 percent in FY 2015. For a second consecutive year taxable sales growth was strongest in the hotels and motels sector, expanding 12.1 percent in 2015. Light vehicle sales also showed very strong growth, as taxable sales from auto dealers grew by 11.3 percent in 2015. This is likely a continuation of consumer efforts to satisfy the pent-up demand for automobiles since the end of the Great Recession. Lower gasoline prices have also sparked resurgence in light truck sales. In the U.S., light truck sales

reached 9.84 million in 2015, which was the first time in ten years that light truck sales surpassed 9.0 million units.

Building permits (authorizing construction of new privately-owned housing units) in the U.S. and Tennessee continue to grow. For the U.S., building permits have now grown for five straight years (2010 through 2014,) while Tennessee has experienced three consecutive years of growth (2012 through 2014). However, permitting activity is still well below the pre-recession peaks for both Tennessee and the nation (see Figure 2.7).

Figure 2.7: Building Permits Are Still Well Below the Pre-Recession Peaks of 2005



Source: Census Bureau Building Permits Survey Data, U.S. Census Bureau.

2.3. Fiscal Update

Federal Government

The federal budget deficit is expected to increase from \$438.9 billion in 2015 to \$500.5 billion in 2016 (see Figure 2.8). This will be the first time since 2011 that the deficit has grown. Despite this increase, the federal deficit is still less than half of its 2011 counterpart. The increased deficit is due to slightly higher government spending, largely attributable to increased Medicare and to a larger extent Medicaid spending. A bipartisan budget accord reached before the first of the year will lead to a larger deficit but reduce the likelihood of a crippling federal government shutdown.

In 2015 the national debt was \$18.5 trillion, which is projected to grow to \$19.4 trillion in 2016. The amount of debt held by the public peaked at 75.2 percent of GDP in 2014, fell slightly to 74.4 percent of GDP in 2015, and is expected to rise to 74.8 percent in 2016. By comparison, this figure was only 54.4 percent in 2009 and closer to 35.0 percent in 2007. Growing national debt may hinder long-term economic growth by crowding out private sector investment and leaves policymakers

with restricted options if faced with an unexpected economic downturn.

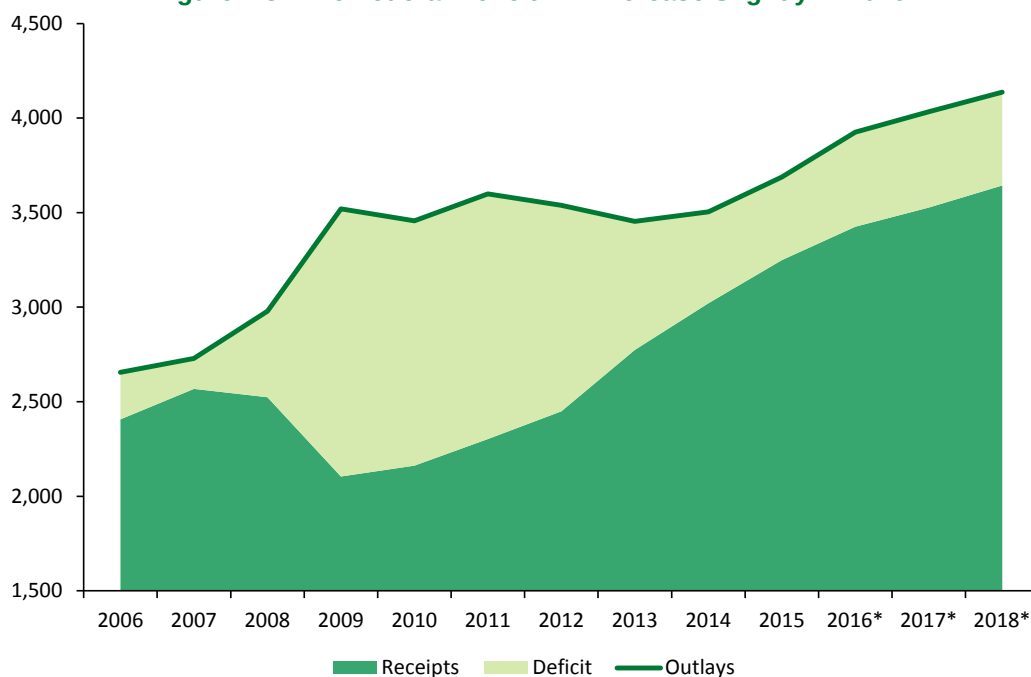
State Finances Across the Nation

States collected a total of \$912.4 billion in tax revenues during fiscal year 2015 (July 2014 – June 2015), representing a 5.6 percent increase over FY 2014. All major tax revenue categories grew in FY 2015. Personal income tax revenues saw the largest growth, expanding by 9.0 percent over FY 2014. Corporate income tax revenues advanced 6.2 percent, sales tax revenues grew by 5.4 percent, and motor vehicle fuel tax revenues increased by 2.4 percent.¹

State tax revenues grew in all regions of the nation in FY 2015. The Far West region experienced the strongest growth in FY 2015, with revenues expanding by 8.9 percent, followed by the Rocky Mountain region at 7.3 percent. Growth

¹Dadayan, Lucy & Boyd, Donald J. (November 2015). "Another Strong Tax Quarter for the States, But Less Promising Forecasts for Fiscal 2016." The Nelson A. Rockefeller Institute of Government. Retrieved from http://www.rockinst.org/pdf/government_finance/state_revenue_report/2015-11-16-SRR_101.pdf.

Figure 2.8: The Federal Deficit Will Increase Slightly in 2016



*2016, 2017, and 2018 are projections
Source: IHS Global Insights Inc.

2.3. Fiscal Update, continued

in the Far West region was primarily driven by large corporate and personal income tax gains in California which outweighed massive revenue losses in Alaska (73.4 percent decline in total tax revenues compared to FY2014) which relies heavily on oil and gas severance taxes. (Alaska is now discussing implementation of an income tax to help replace the revenue decline from oil and gas taxes.) Total tax revenue growth was the slowest in the Great Lakes region at 2.9 percent.

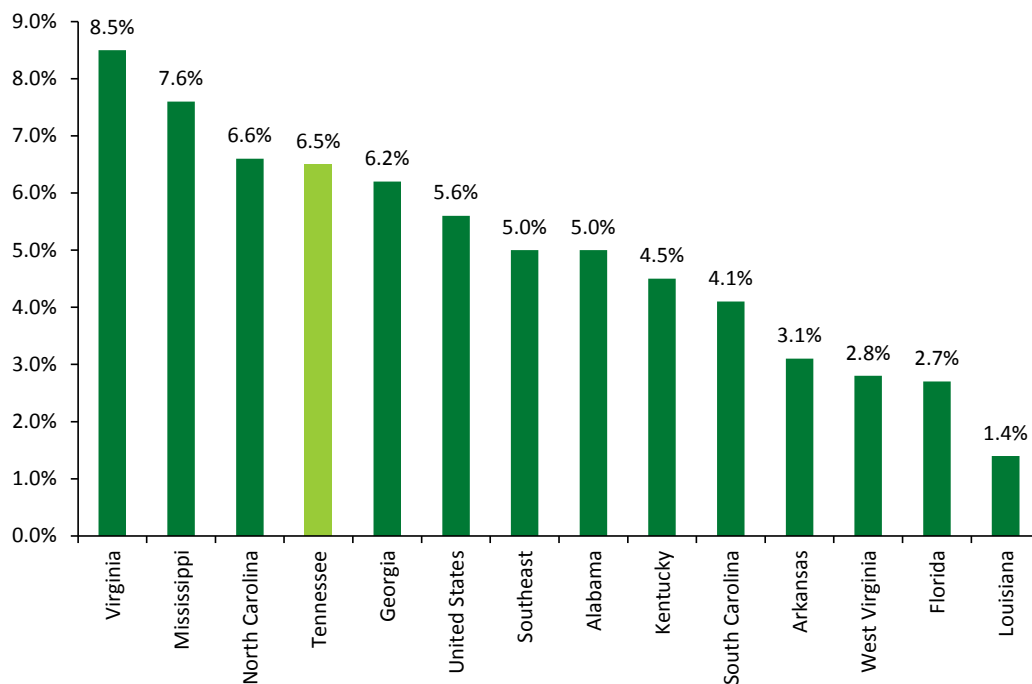
Preliminary data on the third quarter of 2015 peg aggregate state tax revenue growth at 4.3 percent over the third quarter of 2014. This is well below the growth rates registered during the first half of 2015 (5.3 percent in the first quarter and 6.8 percent in the second quarter.) Personal income tax revenues grew by 6.1 percent in the third quarter and sales tax revenues grew by 3.4 percent, while corporate income tax revenues contracted 1.3 percent.

The Southeastern States and Tennessee

Total revenue collections in the southeastern states (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia and West Virginia) grew by 5.0 percent in FY 2015. This was slightly slower than the 5.6 percent rate of growth registered for all states. Tax revenue growth in the southeast was driven by an 8.3 percent increase in corporate income tax revenues and a 7.6 percent increase in personal income tax collections. Among the southeast states, Virginia led the way with an 8.5 percent increase in total tax revenues, followed by Mississippi at 7.6 percent. Louisiana saw the slowest rate of growth at 1.4 percent (see Figure 2.9). In Tennessee, total tax collections grew by 6.5 percent for the fiscal year.² This was faster than both the national average of 5.6 percent and the southeast average of 5.0 percent. Among the 12 southeastern states, only Virginia, Mississippi, and

²Ibid.

Figure 2.9: Tennessee Has Fourth Highest Growth Rate in Total Tax Revenues Among Southeastern States, Fiscal Year 2015 (July 2014–June 2015)



Source: The Nelson A. Rockefeller Institute of Government.

2.3. Fiscal Update, continued

North Carolina enjoyed faster tax revenue growth than Tennessee

As of December 2015, Tennessee Department of Revenue tax collections have totaled \$5,113.5 million for the fiscal year-to-date (August 2015 – December 2015), representing a \$377.4 million or 8.0 percent increase over last fiscal year-to-date.

Tennessee tax revenue growth has largely been driven by sales tax revenues which are up \$222.9 million or 7.1 percent, and franchise and excise tax revenues (corporate income taxes) which have expanded by \$146.3 million or 23.8 percent compared to last fiscal year-to-date.

2.4. Short-Term Outlook

The short-term economic outlook for Tennessee calls for solid growth over the next three years. Output and personal income should continue to post healthy gains. Nonfarm employment growth in Tennessee will mimic national employment growth throughout the short-term forecast horizon, while state manufacturing employment will see modest gains. Tennessee's unemployment rate will continue to trend downwards but remain above the national unemployment rate throughout the short-term forecast window.

Table 2.1 provides a summary of the short-term economic outlook for Tennessee and the nation. Nonfarm employment in Tennessee is projected to increase by 1.7 percent in 2016 and 1.3 percent in 2017. Nonfarm jobs are expected to grow at a similar pace for the nation. Most broad sectors of the Tennessee economy are projected to see employment growth in 2016 and 2017. In 2016, nonfarm job growth will be driven by a 2.8 percent expansion in the professional and business services sector and a 2.6 percent increase in the natural resources, mining, and construction sector's workforce. Both the information and other services sectors will experience job losses in 2016. The information sector will face a 2.0 percent employment contraction, and employment in the other services sector will fall by 1.1 percent.

Manufacturing employment growth in Tennessee is expected to taper off in 2016. After increasing by 1.9 percent in 2015, manufacturing jobs will advance by 0.7 percent in both 2016 and 2017. As this report goes to press, there are signs of a deepening slowdown in the nation's

manufacturing sector that could ripple across the state. It is too early to tell whether this recent slowdown is a sign of a fundamental shift in prospects for the manufacturing sector or simply a short-term shock.

Figure 2.10 shows that while manufacturing employment has grown since the Great Recession, employments levels are still well below those prior to the recession. Simultaneously, manufacturing output, as shown in Figure 2.11, has been trending upwards indicating that manufacturing productivity (output per worker) is on the rise. The number of manufacturing jobs in Tennessee will likely remain below pre-recession levels and revert to contraction before the end of the decade.

Employment in durable goods manufacturing is projected to grow by 1.5 percent in both 2016 and 2017. Within durable goods manufacturing, the transportation equipment sector will see the strongest employment gains, growing by 3.7 percent in 2016 and in 2017. Wood products manufacturing will also see job gains of 1.9 percent in 2016 and 1.6 percent in 2017. Conversely, employment in nonmetallic minerals manufacturing will contract in both 2016 and 2017, and computers and electronics, and miscellaneous durable goods manufacturing will face job losses in 2017.

Nondurable goods manufacturing will face job losses of 0.7 percent in 2016 and 0.8 percent in 2017. Among the broad sectors of nondurable goods manufacturing only food manufacturing and plastics and rubber manufacturing will avoid job losses over the next two years while the remaining

continued on page 31

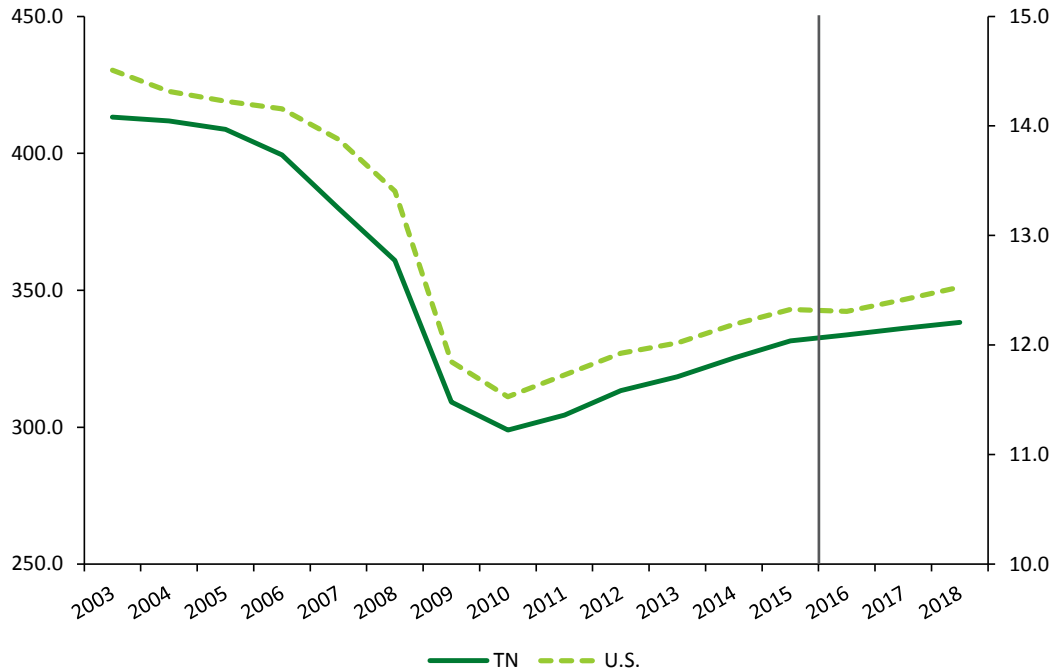
2.4. Short-Term Outlook, continued

Table 2.1: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted

	History		Forecast Data									Annual			
	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
US GDP (Bil2009\$) SAAR.....	16414.0	16462.5	16586.4	16708.4	16844.5	16983.1	17096.3	17225.3	17338.9	17437.6	17567.0	15961.7	16346.8	16780.6	17274.5
% Chg Prev Qtr SAAR.....	1.98	1.19	3.04	2.98	3.30	3.33	2.69	3.05	2.66	2.30	3.00	2.43	2.41	2.65	2.94
% Chg Same Qtr Last Yr.....	2.15	1.93	2.53	2.29	2.62	3.16	3.07	3.09	2.94	2.68	2.75	2.43	2.41	2.65	2.94
US GDP (Bil\$) SAAR.....	18060.2	18181.2	18391.4	18614.9	18860.4	19106.9	19318.4	19560.9	19794.5	20000.1	20259.9	17348.1	17951.1	18743.4	19668.4
% Chg Prev Qtr SAAR.....	3.31	2.71	4.70	4.95	5.38	5.33	4.50	5.12	4.86	4.22	5.30	4.11	3.48	4.41	4.94
% Chg Same Qtr Last Yr.....	3.07	3.21	4.20	3.91	4.43	5.09	5.04	5.08	4.95	4.67	4.87	4.11	3.48	4.41	4.94
TN PERSONAL INCOME (MIL2009\$) SAAR.....	254215	257680	260384	262090	263075	264591	266717	268147	269586	271585	273120	242848	253482	262535	269009
% Chg Prev Qtr SAAR.....	2.55	5.56	4.26	2.65	1.51	2.33	3.25	2.16	2.16	3.00	2.28	2.28	4.38	3.57	2.47
% Chg Same Qtr Last Yr.....	4.58	4.56	4.40	3.75	3.48	2.68	2.43	2.31	2.48	2.64	2.40	2.28	4.38	3.57	2.47
US PERSONAL INCOME (BIL2009\$) SAAR.....	14095	14224	14360	14435	14500	14604	14759	14879	14976	15100	15230	13468	14036	14475	14929
% Chg Prev Qtr SAAR.....	3.76	3.73	3.88	2.10	1.80	2.90	4.33	3.28	2.65	3.35	3.49	2.98	4.22	3.12	3.14
% Chg Same Qtr Last Yr.....	4.41	3.98	3.61	3.36	2.87	2.67	2.78	3.07	3.29	3.40	3.19	2.98	4.22	3.12	3.14
TN PERSONAL INCOME (MIL\$) SAAR.....	278958	282614	285656	288832	292132	295513	298903	302294	305795	309386	312604	264965	277316	290533	304095
% Chg Prev Qtr SAAR.....	3.84	5.35	4.37	4.52	4.65	4.71	4.67	4.62	4.71	4.78	4.22	3.74	4.66	4.77	4.67
% Chg Same Qtr Last Yr.....	4.85	4.89	5.27	4.52	4.72	4.56	4.64	4.66	4.68	4.69	4.58	3.74	4.66	4.77	4.67
US PERSONAL INCOME (BIL\$) SAAR.....	15468	15614	15750	15894	16073	16276	16502	16722	16933	17145	17390	14694	15360	15998	16825
% Chg Prev Qtr SAAR.....	5.09	3.84	3.52	3.70	4.59	5.14	5.67	5.45	5.14	5.10	5.84	4.45	4.53	4.16	5.17
% Chg Same Qtr Last Yr.....	4.69	4.40	4.44	4.04	3.91	4.24	4.77	5.21	5.35	5.34	5.38	4.45	4.53	4.16	5.17
TN NONFARM JOBS (THOUS).....	2874.9	2900.1	2906.8	2914.1	2921.4	2929.6	2940.2	2950.6	2961.5	2972.7	2982.4	2816.1	2870.7	2918.0	2956.2
% Chg Prev Qtr SAAR.....	1.97	3.57	0.92	1.01	1.01	1.13	1.45	1.42	1.49	1.53	1.30	2.08	1.94	1.65	1.31
% Chg Same Qtr Last Yr.....	1.79	2.00	2.10	1.85	1.62	1.02	1.15	1.25	1.37	1.47	1.43	2.08	1.94	1.65	1.31
US NONFARM JOBS (MIL).....	142.2	142.9	143.6	144.1	144.6	145.1	145.6	145.9	146.4	146.8	147.2	139.0	141.9	144.3	146.2
% Chg Prev Qtr SAAR.....	1.77	1.86	1.87	1.45	1.39	1.32	1.42	1.01	1.20	1.28	1.14	1.93	2.10	1.67	1.29
% Chg Same Qtr Last Yr.....	2.05	1.90	1.81	1.74	1.64	1.51	1.39	1.28	1.24	1.23	1.16	1.93	2.10	1.67	1.29
TN MFG JOBS (THOUS).....	331.5	332.7	333.0	333.4	334.0	334.7	335.3	335.8	336.4	337.0	337.6	325.2	331.5	333.7	336.1
% Chg Prev Qtr SAAR.....	1.00	1.53	0.37	0.41	0.71	0.85	0.73	0.68	0.62	0.80	0.70	2.13	1.93	0.68	0.71
% Chg Same Qtr Last Yr.....	1.74	1.17	0.60	0.78	0.75	0.58	0.67	0.74	0.72	0.71	0.70	2.13	1.93	0.68	0.71
US MFG JOBS (MIL).....	12.3	12.3	12.3	12.3	12.3	12.4	12.4	12.4	12.4	12.5	12.5	12.2	12.3	12.3	12.4
% Chg Prev Qtr SAAR.....	-0.05	-0.41	-0.51	-0.40	0.10	1.94	1.36	-0.02	0.80	1.11	0.71	1.41	1.12	-0.14	0.85
% Chg Same Qtr Last Yr.....	1.04	0.35	-0.17	-0.34	-0.31	0.28	0.74	0.84	1.02	0.81	0.65	1.41	1.12	-0.14	0.85
TN UNEMPLOYMENT RATE (%).....	5.7	5.6	5.6	5.6	5.5	5.5	5.5	5.4	5.4	5.4	5.4	6.6	5.9	5.5	5.4
US UNEMPLOYMENT RATE (%).....	5.2	5.0	5.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	6.2	5.3	4.9	4.9
CHAINED PRICE INDEX, GDP (2009=100.0).....	110.0	110.4	110.9	111.4	112.0	112.5	113.0	113.6	114.2	114.7	115.3	108.7	109.8	111.7	113.9
% Chg Prev Qtr SAAR.....	1.32	1.44	1.61	1.92	2.02	1.93	1.76	2.00	2.14	1.88	2.23	1.64	1.04	1.70	1.94
% Chg Same Qtr Last Yr.....	0.91	1.25	1.62	1.57	1.75	1.87	1.91	1.93	1.96	1.95	2.06	1.64	1.04	1.70	1.94
US PERS CONSUMP DEFL (2009=100.0).....	109.7	109.8	109.7	110.1	110.9	111.5	111.8	112.4	113.1	113.5	114.2	109.1	109.4	110.5	112.7
% Chg Prev Qtr SAAR.....	1.28	0.11	-0.34	1.57	2.75	2.18	1.28	2.10	2.43	1.69	2.28	1.43	0.29	1.00	1.97
% Chg Same Qtr Last Yr.....	0.27	0.41	0.81	0.65	1.01	1.53	1.94	2.08	2.00	1.87	2.12	1.43	0.29	1.00	1.97
CONSUMER PRICE INDEX, ALL-URBAN (82-84=1.000).....	2.379	2.381	2.374	2.386	2.409	2.427	2.435	2.452	2.471	2.483	2.501	2.367	2.370	2.399	2.460
% Chg Prev Qtr SAAR.....	1.58	0.33	-1.09	1.95	4.03	2.94	1.44	2.69	3.24	1.98	2.95	1.61	0.13	1.21	2.56
% Chg Same Qtr Last Yr.....	0.14	0.43	0.94	0.68	1.28	1.94	2.58	2.77	2.57	2.33	2.71	1.61	0.13	1.21	2.56
BANK PRIME INTEREST RATE (%).....	3.3	3.3	3.5	3.8	4.0	4.3	4.5	4.8	5.0	5.3	5.5	3.3	3.3	3.9	4.9
FEDERAL FUNDS RATE (% per annum).....	0.137	0.152	0.483	0.787	1.037	1.290	1.533	1.787	2.037	2.290	2.533	0.089	0.131	0.899	1.912
30-YEAR FIXED MORTGAGE RATE (%).....	4.0	3.9	4.2	4.4	4.5	4.6	4.7	4.7	4.8	4.9	5.0	4.2	3.9	4.4	4.7
TN TAXABLE SALES (MIL2009\$).....	26228	26353	26392	26580	26635	26708	26795	26878	26954	27127	27230	97036	102746	106315	107755
% Chg Prev Qtr SAAR.....	9.46	1.91	0.59	2.88	0.83	1.10	1.31	1.24	1.14	2.59	1.52	3.41	5.88	3.47	1.35
% Chg Same Qtr Last Yr.....	7.21	5.48	7.62	3.66	1.55	1.35	1.53	1.12	1.20	1.57	1.62	3.41	5.88	3.47	1.35
TN TAXABLE SALES (MIL\$).....	28781	28903	28953	29292	29577	29829	30028	30301	30575	30903	31167	105877	112414	117652	121807
% Chg Prev Qtr SAAR.....	10.84	1.70	0.70	4.76	3.95	3.45	2.70	3.67	3.67	4.37	3.45	4.89	6.17	4.66	3.53
% Chg Same Qtr Last Yr.....	7.49	5.82	8.52	4.43	2.77	3.20	3.71	3.44	3.37	3.60	3.79	4.89	6.17	4.66	3.53
TN AVG ANNUAL WAGE, NONFARM (2009\$).....	43269	43666	43973	44087	44059	44111	44274	44313	44347	44461	44544	41961	43161	44058	44349
% Chg Prev Qtr SAAR.....	-0.11	3.72	2.85	1.04	-0.26	0.48	1.48	0.35	0.30	1.04	0.75	1.18	2.86	2.08	0.66
% Chg Same Qtr Last Yr.....	3.46	3.10	3.64	1.86	1.82	1.02	0.68	0.51	0.65	0.79	0.61	1.18	2.86	2.08	0.66
TN AVG ANNUAL WAGE, NONFARM (\$)......	47481	47891	48241	48586	48925	49266	49616	49956	50303	50649	50984	45782	47219	48755	50131
% Chg Prev Qtr SAAR.....	1.14	3.50	2.96	2.89	2.82	2.82	2.87	2.77	2.81	2.78	2.67	2.62	3.14	3.25	2.82
% Chg Same Qtr Last Yr.....	3.73	3.44	4.51	2.62	3.04	2.87	2.85	2.82	2.82	2.81	2.76	2.62	3.14	3.25	2.82

2.4. Short-Term Outlook, continued

Figure 2.10: Despite Recent Growth, U.S. and Tennessee Manufacturing Employment Are Well Below Pre-Recession Levels From 2008



Source: Bureau of Economic Analysis and CBER-UT.

Figure 2.11: U.S. and Tennessee Manufacturing Output See Positive Growth



Source: Bureau of Economic Analysis.

2.4. Short-Term Outlook, continued

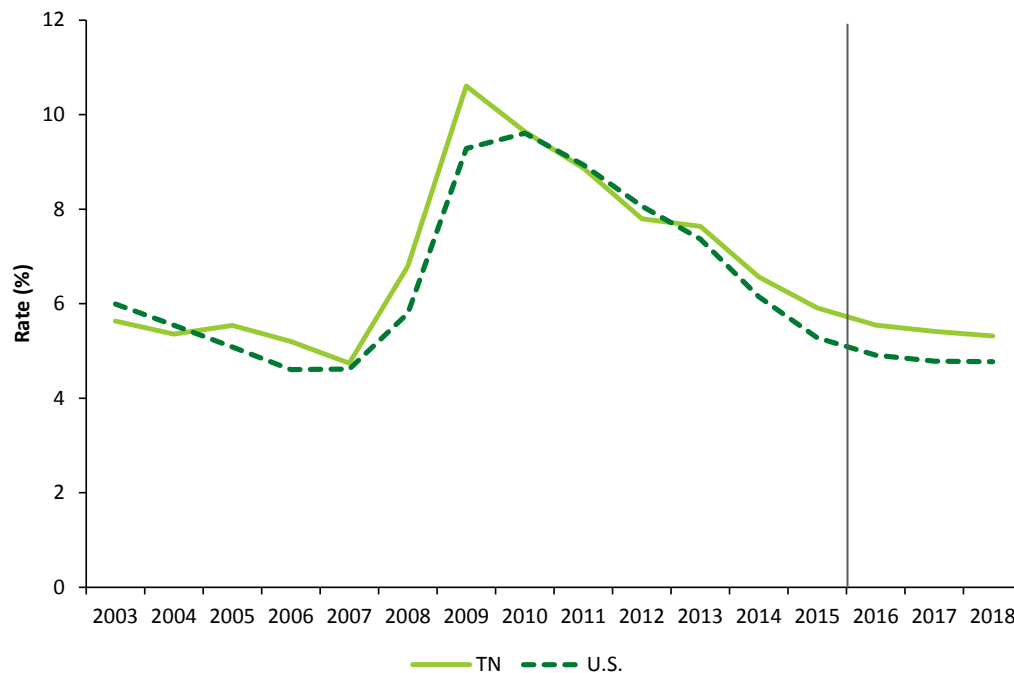
six broad sectors will experience contractions. Employment in plastics and rubber manufacturing will increase by 1.6 percent in 2016 and 1.5 percent in 2017, while food manufacturing employment will grow by 0.1 percent in both 2016 and 2017. By contrast, miscellaneous nondurable goods manufacturing will face the steepest job cuts, shrinking by 3.7 percent in 2016 and 5.6 percent in 2017. The textile mills and textile products manufacturing sector will also face significant jobs losses over the next two years, shrinking by 4.1 percent in 2016 and 5.0 percent in 2017.

Tennessee's unemployment rate is projected to remain at 5.6 percent for the first two quarters of 2016 and then fall to 5.5 percent during the second half of the year. In 2017, the state unemployment rate will drift slightly downward and is projected to average 5.4 percent for the year. The national unemployment rate will also continue its downward trend and as a result the state unemployment rate will remain above the national rate throughout the

short-term forecast horizon (see Figure 2.12).

In 2016, Tennessee's civilian labor force will effectively remain unchanged, falling by a mere 0.1 percent. This slight drop in the civilian labor force will occur because of a 6.2 percent reduction in the number of unemployed people combined with a relatively small 0.3 percentage increase in employed people. As a result there will be roughly 3,000 fewer Tennesseans in the labor force in 2016 than there were in 2015. In 2017, the civilian labor force will grow by 0.6 percent as the number of unemployed people falls by 1.7 percent and the number of employed people grows by 0.8 percent. However, Tennessee's labor force participation rate is projected to fall over the next two years, declining from 57.7 percent in 2015 to 57.0 percent in 2016 and 56.7 percent in 2017. By comparison, the national labor force participation rate is expected to hover between 61.6 percent and 61.8 percent over the next two years.

Figure 2.12: Tennessee's Unemployment Rate Is Projected to Stay Above the National Rate Through 2018



Source: Bureau of Labor Statistics, IHS Global Insights Inc., and CBER-UT.

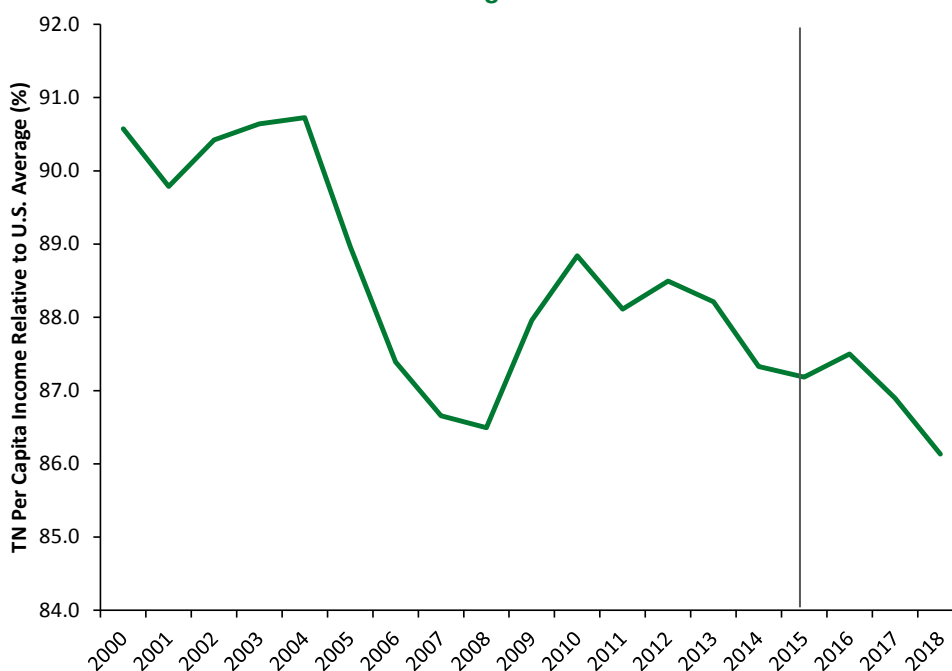
2.4. Short-Term Outlook, continued

Nominal personal income in Tennessee is forecasted to grow by 4.8 percent in 2016 followed by 4.7 percent growth in 2017. All components of personal income in Tennessee will enjoy healthy growth over the next two years. In 2016 wage and salary income will increase by the largest amount, expanding by 5.1 percent, followed by 4.3 percent growth in 2017. Proprietors' income will increase by 5.0 percent in 2016 and 4.8 percent in 2017, while rent, interest, and dividend income will grow by 4.4 percent in 2016 and 5.2 percent in 2017. Transfer payments are also projected to increase by 3.7 percent in 2016 and 4.1 percent in 2017. Per capita personal income will grow by 3.7 percent in 2016 and 3.6 percent in 2017. By 2017, per capita income in Tennessee will equal \$44,695, though this will equate to only 86.9 percent of the national average. This has become a growing concern as per capita personal income in Tennessee was equal to 90.7 percent of the national average in 2004 but has fallen relative to the U.S. average ever since

(see Figure 2.13). The state's education initiatives, including Tennessee Promise and the Drive to 55 should ultimately help turn this trend around. On a fiscal year basis, nominal personal income is projected to grow by 4.9 percent in FY 2016 and 4.7 percent in FY 2017.

In Tennessee, nominal taxable sales are expected to increase by 4.7 percent in 2016 and 3.5 percent in 2017. All categories of taxable sales will see growth over the next two years. In 2016, taxable sales on miscellaneous durable and nondurable goods, auto dealer sales, other retail and service sales, and purchases from manufacturers will all increase by more than 5.0 percent. Taxable sales at hotels and motels will also see robust growth of 4.6 percent. In 2017, hotels and motels will continue to enjoy strong growth as taxable sales are projected to grow by an additional 6.2 percent. On a fiscal year basis, nominal taxable sales will rise by 6.5 percent in FY 2016 and 3.3 percent in FY 2017.

Figure 2.13: Per Capita Personal Income in Tennessee Has Fallen Relative to the National Average



Source: Bureau of Economic Analysis, IHS Global Insights Inc., CBERT-UT.

2.4. Tennessee Forecast at a Glance

- In Tennessee, inflation-adjusted gross domestic product is projected to increase by 2.3 percent in 2016 and 2.2 percent in 2017, slightly below the 2.4 percent growth rate for 2015.
- Nonfarm jobs will grow by 1.9 percent in 2016 and 1.7 percent in 2017, as employment in the professional and business services, leisure and hospitality, and natural resources, mining, and construction sectors see healthy employment gains.
- Manufacturing employment will expand by 0.7 percent in 2016 and 2017.
- The state unemployment rate is projected to fall to 5.5 percent in 2016 and 5.4 percent in 2017. This would mark the first time since 2007 that the annual unemployment rate dropped below 6.0 percent.
- Nominal personal income will grow by 4.8 percent in 2016 and 4.7 percent in 2017.
- Nominal taxable sales will expand 4.7 percent in 2016 and 3.5 percent in 2017.
- On a fiscal year basis, nominal personal income will increase by 4.9 percent in FY 2016 and 4.7 percent in FY 2017. Nominal taxable sales will grow 6.5 percent in FY 2016 and 3.3 percent in FY 2017.

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

Introduction

The impacts on Tennessee's economy from agriculture and forestry are far ranging, from the farm and forest to food, fiber, and forest products manufacturing. The state's diverse topography for producing food, fiber, and forestry products is reflected in its agri-forestry industrial complex. This section of the report focuses on economic indicators for three main areas related to the agri-forestry industrial complex¹: **a)** primary agriculture and forestry, which includes farming and first-stage forestry; **b)** secondary agriculture and forestry, which includes manufacturing and processing facilities; and **c)** the rural communities that are so important to sustaining agri-forestry within the state. Indicators of progress toward recommendations made in the *The Governor's Rural Challenge* are also discussed.

¹Defined 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 were input supplying industries and value-added subsectors, which included food and beverage manufacturing, apparel and textiles, and forestry products manufacturing.

a. Agriculture and Primary Forestry

a.1. Agricultural Land Use and Farm Size

In 2014, 10.9 million acres in Tennessee were designated as farming operations (USDA/NASS 2015a), constituting over 40 percent of the state's nearly 27 million acres of land area. Of the land in farms, 5.3 million acres were in cropland and 2.9 million acres were in pasture (USDA/NASS 2012). Tennessee's farming industry is characterized by two types of farming operations: larger farms that rely primarily on farm income, and small farms, many of which are operated by part-time farmers. Of Tennessee's 67,300 farming operations, average farm size in 2014 was 162 acres, which is smaller than the average 218 acres of its neighboring states (USDA/NASS 2015a). Tennessee ranks only second to Kentucky among its neighbors in number of farms.

a.2. Tennessee's Crops and Livestock

The 2014 value of cash farm receipts from crops and livestock was over \$4.2 billion, with \$1.8

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

billion from animals and \$2.4 billion from crops (Table 2.2). Overall, Tennessee ranks 31st in the U.S. in cash farm receipts. The top ten Tennessee agricultural products in value of cash farm receipts are listed in Table 2.2, along with the state's ranking for each product. In 2014, the largest value of cash farm receipts was derived from soybeans, followed by cattle and calves. These were followed in magnitude by broilers, corn, cotton, wheat, dairy, hay, tobacco, and vegetables and melons. The top ten commodities in the state accounted for about 86.7 percent of 2014 cash farm receipts. Tennessee ranks in the top ten states in value of cash farm receipts from tobacco and cotton.

Table 2.2 shows cash farm receipts over the past five years. Cash farm receipts from soybeans, cattle and calves, corn, wheat, and hay each exhibited over 10 percent average annual growth from 2010 to 2014. Only cotton cash farm receipts experienced an overall decline during this time period. The market for Tennessee crops and livestock is strongly impacted by trends in

U.S. markets for these products. U.S. soybean prices peaked in 2012/2013 at \$14.40/bushel. The strengthening of domestic crush and export markets helped increase the disappearance of soybeans in 2014/15 compared with 2013/2014 (USDA/ERS 2014). U.S. cattle prices rose steadily since 2010, with record retail beef prices in 2014. The U.S. cattle herd inventory declined steadily between 2001 and 2014, and was 88.5 million in 2014, the smallest in half a century (USDA/NASS 2015b; USDA/ERS 2015e). The recent decline in inventory was largely driven by three consecutive drought years in the Southern Plains and the drought of 2012 that negatively impacted grain and oilseed production. Cattle prices set a record in 2014. However, the latter half of 2015 saw Tennessee cattle prices decline 35 to 40 percent. The value of Tennessee broiler production rose from \$431 million in 2005 to over \$598 million by 2014 (USDA/NASS 2015d). U.S. broiler prices rose from 2010 through 2014. While U.S. broiler production held steady, broiler exports grew

Table 2.2: Tennessee Cash Farm Receipts and Share of Commodity Exports, 2010–2014

	Value of Cash Receipts (Million \$)					Avg. Annual Growth (2010-2014)	Ranking in U.S. 2014	Share of Commodity Exports 2014
	2010	2011	2012	2013	2014			
All Commodities	3,084	3,290	3,743	4,091	4,237	8.3%	31	
Crops	1,746	1,881	2,225	2,541	2,418	8.8%	26	85.3%
Animals & Animal Products	1,337	1,409	1,518	1,550	1,820	8.2%	33	14.7%
Top 10 in 2014								
Soybeans	499	471	575	815	834	15.2%	15	27.2%
Cattle & Calves	545	588	746	626	825	12.6%	23	4.20%
Broilers	476	454	436	576	598	6.9%	16	4.3%
Corn	272	418	532	573	454	17.0%	20	5.4%
Cotton	332	311	357	284	239	-7.0%	10	8.4%
Wheat	52	104	147	227	215	47.2%	18	8.0%
Dairy Prod, Milk	151	175	157	163	192	6.8%	30	1.6%
Hay	82	91	102	119	126	11.5%	n/a	n/a
Tobacco	99	96	111	111	115	4.1%	3	4.2%
Vegetables & Melons ^a	69	48	41	54	76	6.9%	24	0.8%

^a Ranking and shares of exports are for vegetables only.
Sources: USDA/ERS 2015c and USDA/ERS 2015f.

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

through 2014 (USDA/ERS 2015e). In 2014 the world's largest poultry breeder discovered a fertility problem in a key rooster breed. The fertility issue resulted in fewer chicks hatching, which reduced production in 2014. Poultry exports, and consequently poultry prices, in 2015 have been negatively impacted by Highly Pathogenic Avian Influenza (HPAI). The broiler industry was not significantly impacted by HPAI, but its occurrence did result in a decline in exports. U.S. corn prices began declining, from more than \$6/bushel in 2013/2014 to less than \$4/bushel in 2014/2015 (USDA/ERS 2015d). Higher production of corn relative to demands for fuel and feed uses and exports pushed prices downward during this time period. U.S. cotton production was down in 2013/2014 from 2012/2013 (USDA/NASS 2015c); however, total disappearance decreased sharply in that time period, primarily due to decreased exports. Between 2013/2014 and 2014/2015, average U.S. cotton farm price declined from 82.5 cents per pound to 64.6 cents per pound (USDA/ERS 2015a).

Exports of agricultural products from Tennessee were valued at \$1.7 billion in 2014, with the majority of this coming from crops. Over 27 percent of the 2014 export value came from soybeans, followed by cotton at 8.4 percent, wheat at just under 8 percent, soybean meal at 6.3 percent, and corn at 5.4 percent. In 2014, major export destinations by product included soybeans – China, Mexico, Indonesia, Japan, and Taiwan; cotton – China, Turkey, Mexico, Vietnam, Indonesia; wheat-Japan, Mexico, Brazil, Nigeria, and the Philippines; and corn – Japan, Mexico, South Korea, Columbia, and Egypt (USDA/FAS 2015).

a.3. Commodity Market Trends and Outlook, Infrastructure, Agritourism and Direct Marketing Livestock, Poultry, and Dairy Outlook

Meat protein and dairy product prices will be driven by export markets. Many industry experts attribute most of the 2015 declines in exports to the significant increase in the dollar's value relative to other currencies. Meat proteins and

dairy products will continue to find difficulty being absorbed in the world market the first half of 2016. Beef production will continue to increase, resulting in lower beef and cattle prices over the next several years. The pork industry will likely have strong 2016 production numbers, unless the Porcine Epidemic Diarrhea (PED) becomes an issue. Poultry production is likely to continue increasing, as well. Increased production will inherently result in increased exports, but prices for the three major meat proteins will likely decline from 2015 levels. U.S. dairy production will continue to increase in the first half of 2016, resulting in lower prices for the year. The export market and ability to move nonfat dry milk and whey will be critical factors for dairy markets in 2016.

Incentives provided to producers through the Tennessee Agricultural Enhancement Program (TAEP) are targeted at increasing the quality and number of beef heifers statewide. Bringing quality bred heifers into production has represented a significant challenge to profitability of the state's beef cattle industry. A private-public partnership among the Tennessee Department of Agriculture, the University of Tennessee Institute of Agriculture and the Tennessee Farmer's Cooperative seeks to develop best management practices for bred heifers and to encourage their adoption by producers.

Crops Outlook. In 2015, two important issues dominated Tennessee row-crop management and marketing. The Agricultural Act of 2014 (the Farm Bill) provided a new direction for domestic farm policy. For Title I ("Commodities"), Direct Payments, Counter-Cyclical Payments, and Average Crop Revenue Election (ACRE) programs were repealed and replaced with two new programs: Agricultural Risk Coverage (ARC) and Price Loss Coverage (PLC). Of the 2.06^[2] million base

² The Agricultural Act of 2014 converted 744,000 cotton base acres in Tennessee, into generic base acres. Generic base acres are not included in this estimate as a unique set of commodity program payment rules apply to generic base acres. Additionally, it should be noted that approximately 20 percent of planted acres in Tennessee have no base and as such do not qualify for commodity program payments.

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

acres of cropland in Tennessee, 94 percent were enrolled in ARC and 6 percent in PLC (USDA/FSA 2015a). Additionally, the Farm Bill increased emphasis on Title II ("Conservation") and Title XI ("Crop Insurance"). The second major issue faced by row-crop producers in Tennessee was the continued decline in commodity prices. From their price peaks in 2012, corn, wheat, and soybean prices dropped 52 percent, 49 percent, and 36 percent, respectively, and cotton prices fell well below the cost of production resulting in planted acreage decreasing to an all-time low of 155,000 acres in 2015 (USDA/ERS 2015c). A bright spot for row-crop prices this spring was grain sorghum (milo). As a result of beneficial price incentives in the spring, Tennessee producers increased grain sorghum acreage from 33,000 in 2014 to over 120,000 acres in 2015 (USDA/FSA 2015b). Looking toward 2016, a strong U.S. dollar and record global supplies will continue to provide negative price implications for Tennessee row-crop producers. Barring a major production disruption at home or abroad, further reductions in prices should be anticipated. For the 2016 crop, current Tennessee farm-gate price estimates are: wheat – \$4.30-\$5.30; corn – \$3.15-\$4.20; grain sorghum – \$3.00-\$4.10; soybeans – \$8.10-\$9.60; and cotton – \$0.62-\$0.74.

Infrastructure. An indicator of growth in on-farm infrastructure is grain storage capacity. In 2012, Tennessee's on-farm grain storage capacity was 79.3 million bushels, while in 2007, it was 65.1 million bushels (USDA/NASS 2012). In 2013, a total of 17 grain and oilseed milling firms generated payroll of \$132.7 million in Tennessee. Among the 17 firms, two were wet corn milling and two were soybean and other oilseed processing. In addition, six cotton ginning companies in Tennessee paid nearly \$2 million in payroll. The demand for trucking in grain transportation has continuously increased over the past decade, while the modal share of rail for total grain shipment dropped to less than 30 percent nationwide in 2011. This trend implies

higher demand on local roads and bridges for the agricultural sector in Tennessee. In 2014, 181 projects in 62 counties were been approved by the legislature. An additional 765 projects identified by Tennessee Department of Transportation to address growth and safety in the infrastructure system were proposed in 2015. In addition, The American Society of Civil Engineering recommended expansion of the short-line freight service in rural areas.

Since 2005, the TAEP has invested more than \$123.4 million in 41,646 farm projects ranging from genetics and livestock equipment to commodity storage and specialty crops. For each dollar of TAEP investment, an estimated additional \$3.89 is generated in local economic activity (Menard, Jensen, and English 2011). Two program areas have helped build on-farm investment for hay and grain storage. Cumulative (FY06 – FY15) TAEP payments for hay storage structures totaled \$39.2 million while producer investments totaled an additional \$77.3 million. For grain storage, cumulative TAEP payments totaled \$10.5 million, while farmer investment was \$33.8 million.

Agritourism. Tennessee is uniquely positioned for growth in agritourism, building upon a well-developed tourism industry within the state and farming operations being located near or within tourism areas. The state had 616 agritourism operations with sales totaling over \$11.9 million Agriculture (USDA/NASS 2012). Agritourism visitors were estimated to spend \$34.4 million statewide in 2012, and with multiplier effects, the economic impacts from these expenditures were estimated at over \$54.2 (Jensen, Bruch, Menard, and English 2013). The visitor expenditure impacts represent only a portion of the economic impacts resulting from these farms since many of the operators also rely on other sources of farm income. Provisions passed in 2014 to amend the "Right to Farm Act" have expanded the definition of agriculture to include certain entertainment activities.

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

Direct Marketing. The “local foods” movement, along with technical and financial assistance provided by USDA, TDA, UTIA, and other agencies, have helped increase direct marketing by farmers. An important component of direct marketing is sales through farmers markets. Tennessee has seen a rapid expansion in the number of farmers markets with the number rising from 99 to 119 venues between 2013 and 2014 (USDA/AMS 2016). Current Agricultural Marketing Service directory listings indicate 124 farmers markets across the state.

a.4. Financial Indicators for Tennessee Farming Industries

Several measures can be used to indicate the financial well-being of farms and farm operators in Tennessee. Table 2 presents financial data from 2010-2014 for the Tennessee farming sector. Net cash farm income was just under \$740 million in 2014, averaging \$10,993 per operation (USDA/ERS 2015b). Net cash farm income on a per acre basis was \$67.87/acre.

The *net farm income ratio* (net farm income/ value of production) during 2010 to 2014 suggests about 15 to 30 percent efficiency in converting production to net farm income.³ However, the *interest expense ratios* for the farming sector 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 one, implying sufficient cash to meet interest payments, and in 2014 the value was 4.69. The state's *capital consumption ratio* was relatively low between 2010-2014, ranging between 0.10 and 0.20, suggesting only 10 to 20 percent of production is needed to cover the sector's capital consumption. In 2014, the state's farming sector had an *operating expense ratio* of 0.65, suggesting 65 percent of the value of production was used to cover operating expenses.

The 2014 estimated market value of land and buildings on farms was \$39.2 billion or around

³USDA's Economic Research definitions of farm sector financial ratios were used. A description of these can be found at <http://www.ers.usda.gov/data-products/farm-income-and-wealth-statistics/documentation-for-the-farm-sector-financial-ratios.aspx#eff>.

Table 2.3: Indicators of the Tennessee Farm Sector's Financial Well-Being, 2010–2014

	2010	2011	2012	2013	2014
	(Million \$)				
Value of Production	\$3,764	\$4,343	\$4,370	\$5,099	\$4,916
Net Farm Income	\$790	\$1,180	\$752	\$1,414	\$740
Interest Expense	\$260	\$250	\$240	\$191	\$201
Market Value of Farmland, Buildings, and Equipment	\$37,368	\$37,908	\$38,368	\$38,913	\$39,240
Capital Consumption	\$408	\$427	\$637	\$697	\$920
Total Expenses	\$3,127	\$3,303	\$3,794	\$3,834	\$4,297
	Ratios				
Net Farm Income Ratio	0.21	0.27	0.17	0.28	0.15
Capital Consumption Ratio	0.11	0.10	0.15	0.14	0.19
Operating Expense Ratio	0.65	0.60	0.67	0.58	0.65
Interest Expense Ratio	0.07	0.06	0.05	0.04	0.04
Times Interest Earned	4.03	5.72	4.13	8.40	4.69

Source: USDA/ERS 2015b.

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

\$583,061 per farm in Tennessee. The 2014 overall value is up from the 2010 value of \$37.4 billion. Farms comprising the majority of sales have much larger land and building asset values than other farms. Farms with sales of at least \$1 million had average market value of land and buildings of more than \$7.3 million per operation and those with \$500,000-\$999,999 in sales had over \$3.1 million in average market value of land and buildings per operation (USDA/NASS 2012). The 2014 average value of land and buildings among our neighboring states was \$694,897 per farm.

Tennessee's farm structure is characterized by many small farming operations; however, a relatively few larger farms make up the majority of farm sales. About 69.8 percent of all farms have sales of less than \$10,000. By contrast, 2,303 of the state's farms accounted for 75 percent of the market value of agricultural products sold in 2012 (USDA/NASS 2012). Just under 42 percent of farmers in Tennessee cite farming as their principal occupation, highlighting the importance of other sources of rural income to economic sustainability of the agricultural sector.

a.5. Primary Forestry in Tennessee

In 2013, among the state's 143 sawmill establishments, nearly 2,100 workers were employed with a payroll of close to \$61.0 million (US Census Bureau 2013). Logging establishment numbers totaled 135 for the same time period, employing 728 workers with a payroll of close to \$20.0 million. From 2009 through 2013, the average annual growth in the numbers of employees, payroll, and establishments for sawmills (NAICS 321113) were 3.1 percent, 7.9 percent, and -5.1 percent, respectively. For logging (NAICS 1133) in this same timeframe, the average annual growth values were 2.5 percent, 6.4 percent, and -1.3 percent, respectively, for employees, payroll, and establishments. According to the Forestry Inventory Analysis by U.S. Forest Service (USFS 2015), an estimated 1.4 billion board feet of sawtimber trees were removed from Tennessee (international 1/4 inch rule). Between 2009 and

2013, the average annual growth in sawtimber removals was -2.2 percent. Factors that influenced these trends in the primary forestry sector are: low new housing starts in 2009; slow recovery of new housing starts; and relatively flat U.S. demand for paper, paperboard, and pulp due to declining newsprint, printing and writing paper consumption (Howard and Westby 2013).

b. Food, Fiber, and Forestry Manufacturing in Tennessee

b.1. Value of Shipments, Number of Establishments, and Employees.

As seen in Table 2.4, the state's 1,591 food and fiber processing and manufacturing facilities employed 77,283 workers with a payroll of \$3.2 billion in 2013. The value of shipments originating from these industries was \$36.1 billion (US Census Bureau 2013). By comparison, the state's overall manufacturing employments was 290,841 workers in 2013 and the value of shipments was \$143.6 billion. This means that food and fiber related manufacturing employed more than 1 in 4 manufacturing workers and generated over 1 in 4 manufacturing shipment dollars. The largest percentage of the values of food and fiber-related manufacturing shipments, 51.3 percent, arose from food processing, followed by beverages at 17.1 percent.

Figure 2.14 displays the growth in value of shipments from 2009 through 2013 for Tennessee's food, beverage, and tobacco products manufacturing (NAICS 311 and 312 combined) and wood, paper, and furniture products (NAICS 321, 322, and 337 combined). Steady growth in food, beverage, and tobacco products manufacturing was primarily driven by growth in beverage and tobacco products (NAICS 312), which experienced an annual average growth of 7.2 percent from 2009 through 2013. Food processing (NAICS 311) experienced a 3.5 percent annual average growth over this time frame. Growth in forest products manufacturing was primarily driven by growth in wood products (NAICS 321) (8.6

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

Table 2.4: Tennessee Food, Fiber, and Forestry Manufacturing, 2013^a

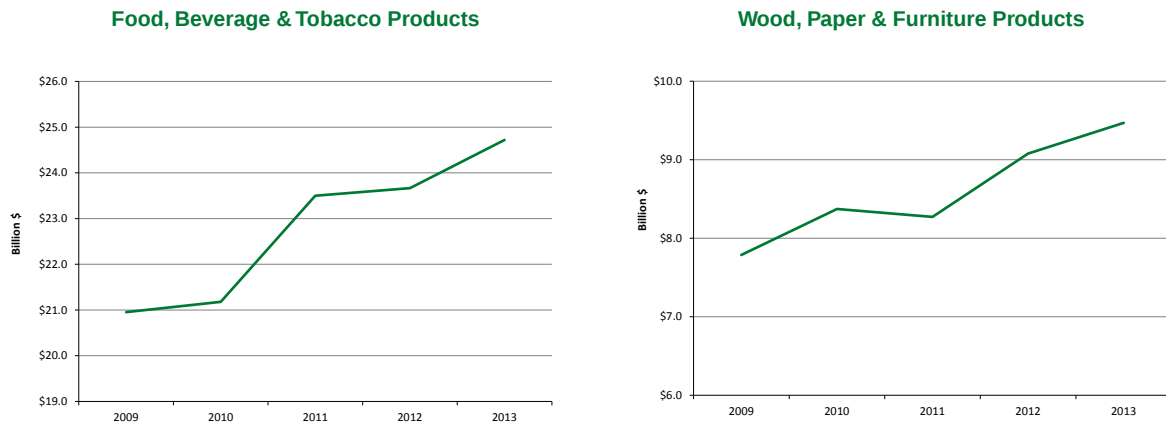
Manufacturing Industry/NAICS	Employees (Number)	Payroll (Million\$)	Establish- ments (Number)	Value of Shipments (Million \$)
Food (311)	34,430	\$1,446	306	\$18,530
Animal Slaughtering/Processing (3116)	10,603	\$308	59	\$3,415
Beverage & Tobacco Products (312)	3,227	\$190	91	\$6,191
Textile Mills (313)	2,692	\$125	55	\$987
Textile Product Mills (314)	2,487	\$81	138	\$601
Apparel (315)	3,449	\$93	94	\$354
Leather & Allied Products (316)	421	\$12	27	D
Wood Products (321)	10,909	\$351	461	\$2,169
Paper (322)	10,856	\$599	124	\$5,688
Furniture & Related Products (337)	8,812	\$322	295	\$1,614
Total	77,283	\$3,218	1,591	\$36,133

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

D = Data not disclosed

Source: US Census Bureau 2013.

Figure 2.14: Agri-forestry Products Manufacturing Value of Shipments, 2009–2013



percent) and paper (NAICS 322) manufacturing (5.1 percent), with furniture and related products (NAICS 337) experiencing a 1.5 percent annual average growth. For all agri-forestry products manufacturing between 2009 and 2013, growth averaged 3.6 percent per year. Relatively flat annual average growth occurred for textile mills (NAICS 313) (0.01 percent), with textile product mills (NAICS 314) experiencing a 5.3 percent decrease

in value of shipments. Tennessee's share of the national value of shipments for food processing was 2.4 percent, beverage and tobacco products was 4.2 percent, textile mills was 3.2 percent, textile product mills was 2.6 percent, wood products manufacturing was 2.4 percent, paper manufacturing was 3.1 percent, and furniture and related products was 2.3 percent.

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

Tennessee is a significant producer of ethanol in the Southeast U.S. Two major processors located in the state are Green Plains in Obion County and Tate & Lyle in Loudon County. The Energy Information Association lists capacity in Tennessee at 225 million gallons per year (EIA 2015).

b.2. Economic Impacts from the Agri-forestry Industrial Complex

In 2013, the agri-forestry industrial complex directly contributed (without multiplier effects) \$49.0 billion in economic activity to the state's economy, adding 179.7 thousand jobs (Menard, English, and Jensen 2016). The agri-forestry industrial complex contributed \$13.9 billion in value-added. When accounting for multiplier effects, the agri-forestry industrial complex added \$74.8 billion to Tennessee's economy, or 12.8 percent of the state's economic activity, and employed 349,398 individuals, or 9.4 percent of all workers. Agriculture, with multiplier effects, accounted for 9.0 percent of the state's economy and generated \$52.6 billion in output, employing close to 254,000 Tennesseans, with 109,000

employed (both full- and part-time) in agricultural production.

c. Rural Economies and Well-Being

Rural communities and their resources are important contributors to the health of the agri-forestry industrial complex. In 2014, about 22.8 percent of Tennessee's population was classified as rural. Table 2.5 presents several indicators, including median household income, education level, unemployment rate, and poverty rate across rural and urban counties in Tennessee. The data reflect lower household income, lower percentage of college graduates, and higher unemployment and poverty rates in rural areas of Tennessee than in urban areas. Individuals 25 and over are about half as likely to obtain a college degree as urban individuals. Persons who are part of the rural labor force are nearly 30 percent more likely to be unemployed than persons who are part of the urban labor force. A person residing in a rural area is over 20 percent more likely to fall below the poverty level than a person residing in an urban area.

Table 2.5: Household Income, Education Level, and Unemployment and Poverty Rates in Rural and Urban Areas of Tennessee

Measure	Rural	Urban	Rural/ Urban Ratio
Median Household Income (2013\$)	\$31,998	\$41,810	0.77
2009-2013 Education Level, Persons 25 and Over (5-Yr Avg) (Percent)			
Not Completed High School	20.9	13.9	1.50
Completed High School	41.2	30.5	1.35
Completed College	14.0	26.9	0.52
2014 Unemployment Rates (Percent)	8.0	6.3	1.27
2013 Poverty Rate (Percent)	20.6	17.0	1.21

Source: USDA/ERS 2015g.

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

d. Governor's Rural Challenge

The Governor's Rural Challenge set forward four major recommendations for Tennessee agriculture (TDA 2013). These recommendations were:

1. Advance agriculture, natural resources, and rural infrastructure as Tennessee business priorities;
2. Ensure a positive and predictable policy and regulatory environment;
3. Expand market opportunities for Tennessee producers and encourage new production; and
4. Increase the scope and depth of a skilled and educated workforce through career, technical, and higher education.

Indicators were developed as part of the strategic planning process to gauge progress

toward the aforementioned recommendations. While the indicators were developed in 2013, calculations for these indicator measures using recent data can be used as baselines for future growth. Notably, several of the "scorecard indicators" exhibited positive movement toward their goals in recent years. These are listed in Table 2.6.

Several indicators of progress toward Recommendation 1 showed positive progress. The indicators exhibiting positive outcomes during a 5-year time span between agricultural censuses (2007 to 2012) included reduction in the percentage of idle cropland, and growth in an index of major crop yields. These two indicators suggest that less cropland is sitting idle and that cropland use is resulting in higher crop yields.

Table 2.6: Scorecard Indicators of Positive Progress for Tennessee Agriculture

Indicator	2012	2007	Percent Change	Goal	Strategic Plan Recommendation
Percent of Cropland that is Idled (%)	6.06%	6.88%	-0.83%	Decrease	1
Index of Crop Yield Per Acre (7 major crops) ^a	120.60	100.00	20.60%	Increase	1
Tennessee Ag Enhancement Program Expenditures (TAEP) (Million \$)	\$18.31	\$6.00	205.14%	Increase	2
Inflation Adjusted Values by CPI (2007=100)	\$16.85	\$6.00	180.83%	Increase	
Economic Activity from Farming and Associated Activities (Million \$)	2011 \$3,870	2006 \$3,044	27.14%	Increase	3
Inflation Adjusted Values by CPI (2006=100)	\$3,498	\$3,044	14.91%	Increase	
Economic Activity from Food and Beverage Processing (Million \$)	\$21,110	\$18,114	16.54%	Increase	3
Inflation Adjusted Values by CPI (2006=100)	\$19,079	\$18,114	5.33%	Increase	
Percent of Agricultural Commodity Exports to Out-of-State (%)	2011 55.10%	2008 59.30%	-4.20%	Decrease	3
Graduates of Master Farmer/Gardener Programs (Number in total)	2007-2012 12,574	2007-2008 5,826	115.83%	Increase	4
Four Year Agricultural Degrees Awarded (Number per Year) ^b	2012-2013 621	2008-2009 516	20.35%	Increase	4

^aCorn, Cotton, Hay, Sorghum, Soybeans, Tobacco, and Wheat (USDA/NASS 2012). Yield ratios of 2012 to 2007 for each crop were share weighted by 2012 acres of each crop. Source: Tennessee Department of Higher Education Fact Books <http://www.state.tn.us/the/Legislative/Reports.html>.

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

Data was available to calculate the yield index for 2013 and 2014, with these values being 147.57 and 138.62 respectively, again indicating a growth in yields compared with 2007. As noted earlier, the capital consumption ratio was relatively low between 2010-2014 for Tennessee agriculture. TAEP investment assists farmers in expanding on-farm storage and building farm capital. TAEP expenditures investing in productivity and infrastructure of the agricultural sector grew by 180.83 percent from 2007 to 2012 (see Recommendation 2). Positive indicators of progress toward Recommendation 3 include growth in economic activity from farming and associated activities in real terms by 14.91 percent between 2006 and 2011, and economic activity from the food and beverage processing industries growing in real terms by 5.33 percent. For 2013, economic activity from farming and associated activities in real terms was \$4.1 billion (35.0 percent greater than 2006) and economic activity from food and beverage processing was \$21.4 billion (18.0 percent greater than 2006). While raw commodities exported out of state decreased, the inputs used in food and beverage processing imported from out of state increased, but only by 1.5 percent. Under Recommendation 4, two indicators reflect positive progress toward building a skilled and educated agricultural workforce. Educational programs, such as Master Farmer and Master Gardener, saw over 12,574 Tennesseans participating from 2007-2012. Four-year agricultural degrees awarded annually increased from 516 in 2008/2009 to 621 in 2012/2013. The number of four year agricultural degrees awarded for the 2013-2014 year was 670. This was 7.9 percent above the 2012-2013 year and 29.8 percent above the 2008-2009 year.

Summary

The agri-forestry industrial complex encompasses industries that produce food and fiber and those adding value to these commodities. This industrial complex is important to the state's economy, particularly to rural areas within the state.

These industries add \$49 billion directly to the state's economy and, with multiplier effects, \$74.8 billion in total. About 1 in 4 manufacturing jobs are in food- and fiber-related manufacturing.

The farming sector in Tennessee is quite diverse, which can help prevent large upswings and downswings due to market movements of one or two commodities. However, this diversity means that the state's farming sector, by and large, is a market-follower at the farm-gate level, heavily impacted by market changes and policies at the national level. Furthermore, increasingly, export markets impact farm pocketbooks. The state's farming sector is dual in nature, characterized with larger farms supplying the majority of sales and many smaller farms operated by part-time farmers who also rely on off-farm income. Building agricultural technology and infrastructure within the state to increase agricultural productivity and profitability will likely rely on increased rates of capital investment.

Food and beverage manufacturing have sustained steady growth. These industries have proven to be fairly resilient to economic downturns, such as those experienced in the late 2000's. The forest products sector has seen slower growth, with slowed domestic demands resulting in part from the economic downturn of the late 2000's. Economic growth and an upward trend in new housing starts may place future positive pressure on the demand for forest products.

Rural communities and counties are very important to the agri-forestry industrial complex, as is agri-forestry industrial complex to the rural economy within the state. However, gaps in income, educational attainments, unemployment, and poverty between rural and urban areas persist.

References Used

Howard, J. and R. Westby. 2013. U.S. Timber Production, Trade, Consumption and Price Statistics 1965–2011. USDA/USFS Forest Products Laboratory FPL-RP-676, http://www.fpl.fs.fed.us/documnts/fplrp/fpl_rp676.pdf.

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

- Jensen, K. M. Bruch, J. Menard, and B. English. 2013. "A Snapshot of Tennessee Agritourism: 2013 Update." Available at <http://aimag.ag.utk.edu/pubs/AgritourismJune2013.pdf>.
- Menard, R., B. English, and K. Jensen. Economic Contributions of Agriculture and Forestry in Tennessee, 2013. Agri-Industry Modeling & Analysis group Report, Department of Ag. and Resource Economics, The University of Tennessee, Knoxville, forthcoming 2016.
- Menard, J., K. Jensen, and B. English. 2011. "An Analysis of the Economic Impacts from the Tennessee Agricultural Enhancement Program (TAEPE)." Report to the Tennessee Department of Agriculture (TDA). Available at <http://aimag.ag.utk.edu/pubs/TAEPEconomicImpacts.pdf>.
- Tennessee Department of Agriculture. 2013. Governor's Rural Challenge a 10-Year Strategic Plan: Increasing Rural Tennessee's Capacity to Produce. <http://www.tn.gov/assets/entities/agriculture/attachments/AgBusRuralChallenge.pdf>.
- Tennessee Department of Higher Education. Tennessee Department of Higher Education Fact Books <http://www.state.tn.us/thec/Legislative/Reports.html>
- US Census Bureau. 2013. Annual Survey of Manufacturers, Geographic Area Statistics, Tennessee. <http://www.census.gov/manufacturing/asm/>.
- U.S. Energy Information Administration (EIA). 2015. Tennessee State Energy Profile. <https://www.eia.gov/state/print.cfm?sid=TN>.
- USDA/AMS. 2016. Farmers Markets and Direct-to-Consumer Marketing. Farmers Market Directory data <https://apps.ams.usda.gov/FarmersMarketsExport/ExcelExport.aspx>.
- USDA/ERS. 2015a. Cotton and Wood Yearbook. <http://www.ers.usda.gov/data-products/cotton,-wool,-and-textile-data/cotton-and-wool-yearbook.aspx>.
- USDA/ERS. 2015b. Farm Income and Wealth Statistics-Farm and Wealth Indicators. http://www.ers.usda.gov/data-products/farm-income-and-wealth-statistics/farm-finance-indicators-state-ranking.aspx#P7026ab87f420460ebfb73e2a2d2739b4_4_186iT0R0x16.
- USDA/ERS. 2015c. Farm Income and Wealth Statistics-Cash Receipts. <http://www.ers.usda.gov/data-products/farm-income-and-wealth-statistics/cash-receipts-by-commodity.aspx>.
- USDA/ERS. 2015d. Feed Grains Yearbook. <http://www.ers.usda.gov/data-products/feed-grains-database/feed-grains-yearbook-tables.aspx>.
- USDA/ERS. 2015e. Livestock, Poultry, and Dairy Outlook. November. <http://www.ers.usda.gov/media/1942630/ldpm257.pdf>.
- USDA/ERS. 2014. Oil Crops Outlook. <http://usda.mannlib.cornell.edu/usda/ers/OCS//2010s/2014/OCS-12-12-2014.pdf>.
- USDA/ERS. 2015f. State Export Data. <http://www.ers.usda.gov/data-products/state-export-data.aspx>.
- USDA/ERS. 2015g. State Fact Sheets: Tennessee. <http://www.ers.usda.gov/data-products/state-fact-sheets/state-data.aspx?StateFIPS=47&StateName=Tennessee>.
- USDA/FAS. 2015. Global Agricultural Trade System. <http://apps.fas.usda.gov/gats/default.aspx>.
- USDA/FSA. 2015a. ARC/PLC Election Data. http://www.fsa.usda.gov/programs-and-services/arcplc_program/.
- USDA/FSA. 2015b. Crop Acreage Data Reported to FSA. <http://www.fsa.usda.gov/news-room/efoia/electronic-reading-room/frequently-requested-information/crop-acreage-data/index>.
- USDA/NASS. 2012. Census of Agriculture, Tennessee. <http://www.agcensus.usda.gov/Publications/2012/>.

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

USDA/NASS. 2015a. Quick Stats. Tennessee Agricultural Overview. http://www.nass.usda.gov/Quick_Stats/Ag_Overview/stateOverview.php?state=TENNESSEE.

USDA/NASS. 2015b. Quick Stats. U.S. Cattle Inventory. <http://quickstats.nass.usda.gov/>.

USDA/NASS. 2015c. Quick Stats. Cotton Planted Acreage-Tennessee. <http://quickstats.nass.usda.gov/>.

USDA/NASS. 2015d. "Poultry Production and Value 2014 Summary." <http://usda.mannlib.cornell.edu/usda/current/PoulProdVa/PoulProdVa-04-30-2015.pdf>

USDA/USFS. 2015. Forest Inventory Analysis. <http://apps.fs.fed.us/fia/fido/index.html>.

CHAPTER 3: THE TENNESSEE ECONOMY: LONG-TERM OUTLOOK

In this chapter—

- 3.1. Introduction**
- 3.2. Employment Outlook**
- 3.3. Unemployment**
- 3.4. Population**
- 3.5. Personal Income and Taxable Sales**
- 3.6. State Gross Domestic Product**

3.1. Introduction

Previous chapters focused on the short-term outlook (10 quarters ahead) using a *cyclical* forecast which concentrated on the ups and downs of the business cycle. This chapter provides a longer-term view (10 years ahead) of economic growth in Tennessee based on a *trend* forecast. Typically, the ups and downs of a business cycle have little impact on the long-term trend performance of an economy, although this was certainly not the case with the Great Recession. More generally, long-term growth is driven by growth in factors of production such as population and the labor force, productivity, human capital (i.e. knowledge, education, and on-the-job experience), private sector investments in productive inputs (equipment and structures), and public investments in infrastructure (from broadband to roadways). All else equal, growth in any of these inputs will stimulate economic growth for the state. Recessions and economic booms are not built into the trend forecast as they are unpredictable, but it is likely that both will occur at some point in the next decade.

Between 2005 and 2015, inflation-adjusted state gross domestic product (GDP) in Tennessee grew

at a compound annual growth rate (CAGR) of 1.1 percent. This was slightly slower than the 1.4 percent CAGR for the U.S., but both were largely affected by the Great Recession. By comparison, inflation-adjusted state GDP is projected to advance at a 2.2 percent CAGR between 2015 and 2025 and a 2.4 percent CAGR for the nation. Over the last ten years, Tennessee personal income grew by 3.8 percent (CAGR) and kept pace with national income growth. Looking forward ten years, personal income in Tennessee is expected to increase by 4.5 percent (CAGR) between 2015 and 2025, which is slightly slower than the 4.8 percent CAGR projected for the nation. As a result, Tennessee's per capita nominal personal income is projected to fall from 87.2 percent of the national average in 2015 to only 83.2 percent by 2025.

Due to the Great Recession, overall employment growth was slow over the last ten years in both Tennessee and the nation. Between 2005 and 2015, nonfarm employment in Tennessee expanded by only 0.5 percent (CAGR), and national employment growth increased by only 0.6 percent (CAGR). A more optimistic employment outlook is projected for the next ten years, as

3.1. Introduction, continued

Tennessee employment is forecasted to grow by 1.1 percent (CAGR) between 2015 and 2025 and slightly outpace national employment growth of 1.0 percent (CAGR). Despite these gains, manufacturing employment in Tennessee is still projected to fall over the next ten years, though by only 0.1 percent (CAGR), with some near-term gains being overwhelmed by longer-term setbacks. This is much less severe than the 2.1

percent (CAGR) contraction in manufacturing jobs that occurred in Tennessee between 2005 and 2015. Manufacturing output, on the other hand, is expected to grow as a result of productivity gains between 2015 and 2025.

Subsequent sections of this chapter take a retrospective look at economic growth between 2005 and the present as well as the state's long-term outlook through 2025.

3.2. Employment Outlook

Between 2005 and 2015 nonfarm employment grew by 4.7 percent in Tennessee, which is equivalent to a meager 0.5 percent CAGR. Employment growth was slightly faster across the nation where jobs expanded by 5.9 percent, yielding a 0.6 percent CAGR. Slow growth during this period was largely due to the Great Recession, but there were still some bright spots in Tennessee's labor market. Employment in the education and health services sector grew by 24.1 percent, professional and business services employment expanded by 22.6 percent, and leisure and hospitality jobs grew by 16.7 percent. This was counteracted by an 18.9 percent reduction in manufacturing jobs, a 12.2 percent drop in information sector employment, and an 8.6 percent contraction in the natural resources, mining, and construction labor force.

Table 3.1 provides a snapshot of Tennessee's historical employment situation ten years ago as well as a projection of the state's employment outlook ten years from now. Over the last ten years the manufacturing sector has suffered the largest losses, losing over 77,000 jobs and contracting by 2.1 percent (CAGR). Table 3.2 provides a more detailed look into the employment dynamics of the manufacturing sector. Between 2005 and 2015 employment in the durable goods sector fell by 1.8 percent (CAGR) or 42,900 jobs, while nondurable goods employment fell by 2.5 percent (CAGR) or 34,400 jobs. All subsectors within manufacturing were on the decline except for transportation equipment which grew by 0.5 percent (CAGR)

or 3,600 jobs and in the beverage and tobacco sector where employment increased by 0.1 percent (CAGR). Employment in the furniture and printing and related support sectors saw the steepest declines, shrinking by 7.1 percent (CAGR) each.

Looking ahead ten years, nonfarm employment in Tennessee is projected to grow by 12.1 percent between 2015 and 2025, representing a compound annual growth rate of 1.1 percent. This is slightly faster than the 10.3 percent growth rate expected for the nation (equivalent to a 1.0 percent compound annual growth rate). The manufacturing sector is expected to see a very slight contraction in employment over the next ten years, while all other sectors are projected to grow or remain stable. Employment growth will be largest in the professional and business services sector, followed by education and health services, and natural resources, mining, and construction. Within the manufacturing sector, durable goods employment is projected to increase by 0.4 percent (CAGR) between 2015 and 2025 while nondurable goods employment will fall by 1.0 percent (CAGR).

Figure 3.1 shows state and national employment growth patterns over the long-term forecast period. Nonfarm employment growth in Tennessee closely mirrors the trend of the national economy, as both are expected to see positive growth throughout the forecast horizon. Of course, since this is a *trend* forecast the underlying assumption is that no recessions will occur within the next ten years, but a recession at some point during the long-term forecast horizon is possible if not likely.

3.2. Employment Outlook, continued

The outlook for manufacturing employment, on the other hand, is not as optimistic. For the nation, manufacturing employment growth will remain positive for most of the forecast horizon but trend towards zero. In Tennessee, manufacturing

employment will see some positive growth over the next four years, and then revert to trend contraction in 2020 and throughout the rest of the long-term outlook.

Figure 3.2 presents employment growth patterns

Table 3.1: Tennessee Nonfarm Employment by Broad Sector (Thousands of Jobs)

	Employment			Growth Rate (%)*	
	2005	2015	2025	2005 to 2015	2015 to 2025
Total Nonfarm	2,743.0	2,870.7	3,217.7	0.5	1.1
Natural Resources, Mining & Construction	125.3	114.5	136.4	-0.9	1.8
Manufacturing	408.8	331.5	327.3	-2.1	-0.1
Trade, Transportation, Utilities	598.0	607.5	651.6	0.2	0.7
Information	49.4	43.4	45.0	-1.3	0.4
Financial Activities	143.3	144.8	152.1	0.1	0.5
Professional & Business Services	312.5	383.0	509.3	2.1	2.9
Education & Health Services	330.3	409.8	489.1	2.2	1.8
Leisure & Hospitality	262.1	305.9	351.9	1.6	1.4
Other Services	100.7	104.8	103.0	0.4	-0.2
Government	412.7	425.6	452.0	0.3	0.6
U.S. Nonfarm	134.0	141.9	156.5	0.6	1.0
U.S. Manufacturing	14.2	12.3	12.9	-1.4	0.4

*Compound Annual Growth Rate

Source: Bureau of Labor Statistics and CBER-UT.

Table 3.2: Tennessee Manufacturing Employment by Sector (Thousands of Jobs)

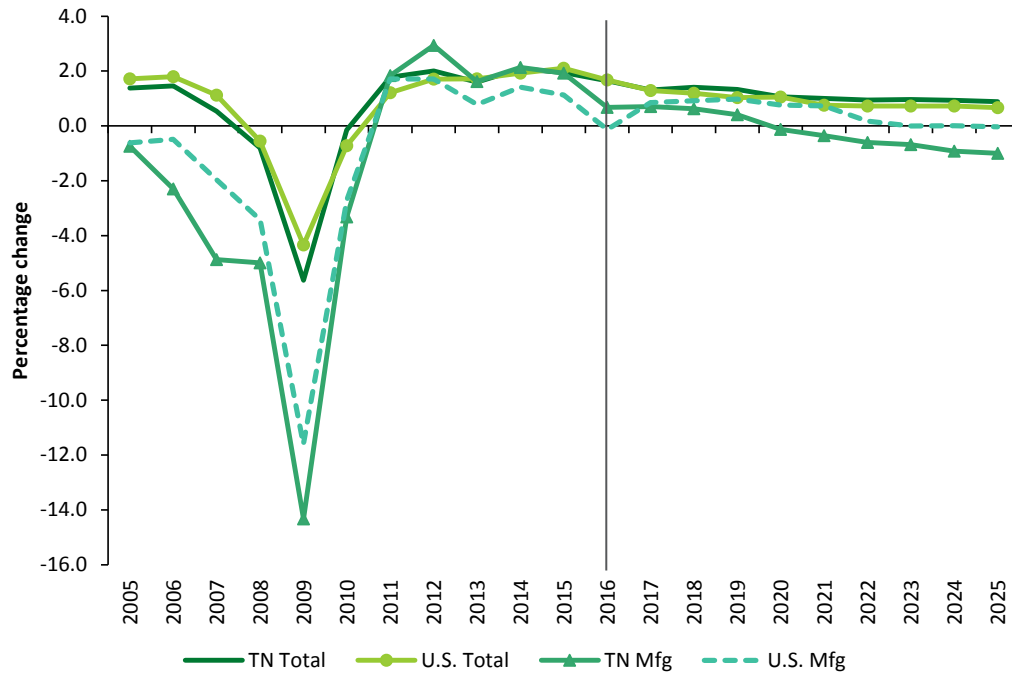
	Employment			Growth Rate (%)*	
	2005	2015	2025	2005 to 2015	2015 to 2025
Manufacturing	408.8	331.5	327.3	-2.1	-0.1
Total Durable Goods	254.6	211.7	219.3	-1.8	0.4
Wood Products	17.7	11.6	12.1	-4.2	0.4
Nonmetallic Minerals	15.9	11.7	11.2	-3.0	-0.4
Primary Metals	12.0	10.3	10.1	-1.5	-0.2
Fabricated Metals	42.6	35.2	34.2	-1.9	-0.3
Machinery	33.9	26.2	25.8	-2.5	-0.2
Computers & Electronics	10.4	5.1	3.7	-6.9	-3.2
Electrical Equipment, Appliances & Components	23.5	19.9	21.2	-1.6	0.6
Transportation Equipment	63.9	67.5	78.4	0.5	1.5
Furniture	19.2	9.2	7.9	-7.1	-1.5
Miscellaneous Durables	15.3	15.1	14.8	-0.1	-0.2
Total Nondurable Goods	154.2	119.8	107.9	-2.5	-1.0
Food	34.3	32.9	31.8	-0.4	-0.3
Beverage & Tobacco	5.4	5.5	4.8	0.1	-1.4
Textile Mills, Textile Mill Products & Apparel	18.0	9.6	6.4	-6.1	-4.0
Paper	18.9	14.3	11.8	-2.8	-1.9
Printing & Related Support	18.8	9.0	7.7	-7.1	-1.5
Chemicals	27.2	25.2	22.2	-0.8	-1.3
Plastics & Rubber	29.3	21.3	21.7	-3.1	0.2
Miscellaneous Nondurable Goods	2.3	2.1	1.5	-0.9	-3.3

*Compound Annual Growth Rate

Source: Bureau of Labor Statistics and CBER-UT.

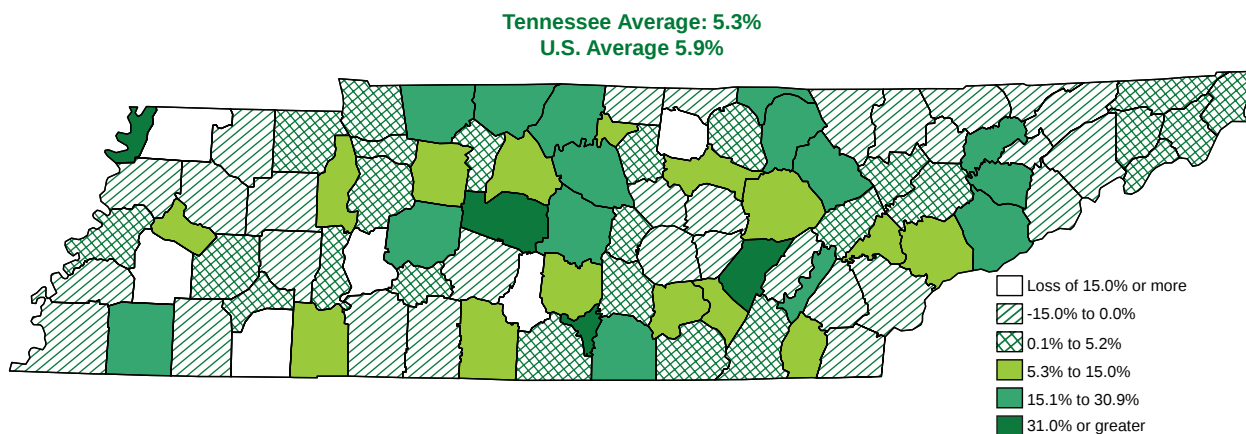
3.2. Employment Outlook, continued

Figure 3.1: Nonfarm Employment Continues to Grow While Manufacturing Employment Reverts to Trend Contraction Over the Long-Term Forecast Horizon



Source: Bureau of Labor Statistics, IHS Global Insight Inc., and CBER-UT.

**Figure 3.2: Total Covered Employment Growth
(June 2005 to June 2015)**



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

3.2. Employment Outlook, continued

across all Tennessee counties between 2005 and 2015. There were 36 counties that experienced employment contractions over the last ten years. Jackson County and McNairy County were hit hardest, contracting by 33.1 percent and 31.5 percent respectively. Conversely, there were ten counties which grew by at least 20.0 percent. Lake County saw the strongest employment gains, growing by an astounding 88.6 percent, though due to Lake County's small size, this only represented an increase of 893 jobs. Williamson

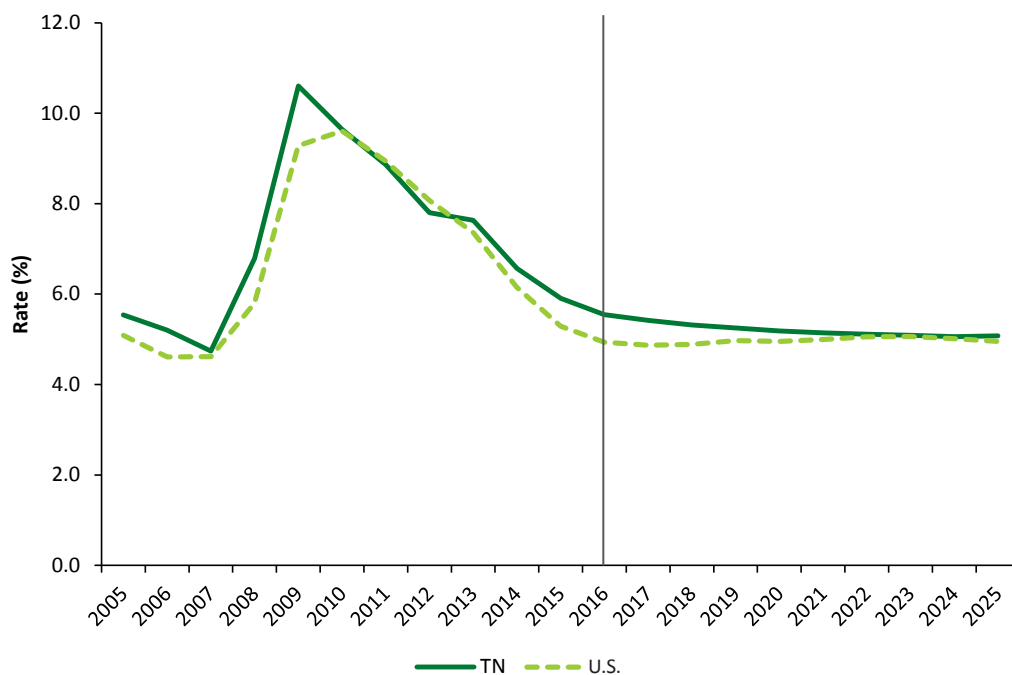
County came in second with employment growth of 54.4 percent, representing an additional 40,697 jobs, followed by Bledsoe County at 47.3 percent or 691 additional jobs. In addition, employment in Rutherford County grew by 22.0 percent or 20,878 jobs, Davidson County employment increased by 5.5 percent or 23,694 jobs, employment in Knox County expanded by 5.2 percent or 11,420 jobs, while in Shelby County employment fell by 2.2 percent or 11,081 jobs.

3.3. Unemployment

Over the last ten years the state unemployment rate has generally rested slightly above the national rate. A similar pattern is projected for the next ten years as Tennessee's unemployment rate will remain just above its national counterpart

throughout most of the long-term forecast (see Figure 3.3). However, the state and national rate are both expected to trend downwards over the next ten years. Tennessee's unemployment rate was 5.9 percent in 2015 and is projected to fall to

Figure 3.3: In the Long-Run, Tennessee's Unemployment Rate Will Trend Downwards but Remain Above the National Rate for Most of the Forecast Horizon



Source: Bureau of Labor Statistics, IHS Global Insight Inc., CBER-UT.

3.3. Unemployment, continued

5.1 percent by 2025. The national rate is pegged at 5.3 percent in 2015 and is expected to fall to 5.0 percent by 2025.

Tennessee's labor force participation rate has been severely depressed in recent years, as currently almost half of the state's adult population is not in the workforce. (The labor force is defined as the share of the adult population that is either employed or actively seeking employment.) In 2005, Tennessee's labor force participation rate was 62.0 percent and only slightly below the national participation rate of 64.5 percent. In 2015, the state's labor force participation rate fell to 57.7 percent and is projected to fall even further to 55.1 percent by 2025; the national labor force participation rate has fallen as well and will rest slightly above 60 percent in 2025. There are a number of reasons for this low participation rate in Tennessee. As was suggested in Chapter 2, poor health status and low educational attainment in Tennessee are two potential contributors to low labor force participation. Specifically, in 2013 Tennessee had the fifth highest adult smoking rate (24.3 percent in Tennessee compared to 19.0 percent in the U.S.) and fourth highest obesity rate in the nation (33.7 percent in Tennessee compared to 29.4 percent in the U.S.).¹ Moreover, Tennessee's average life

expectancy (76.3 years)² is the eight lowest in the nation and well below the national average of 78.8 years.³ Generally Tennesseans have poorer health status than their national counterparts. With regards to educational attainment, the percentage of Tennesseans with at least a high school degree (85.8 percent) is slightly below the national average (86.9 percent), but Tennessee has shown solid gains relative to the nation since 2010 (see Figure 3.4). More importantly, the percentage of Tennesseans with at least a Bachelor's degree (25.3 percent) lags behind the national average of 30.1 percent and has not shown the same gains relative to the national average as has been the case with high school achievement.

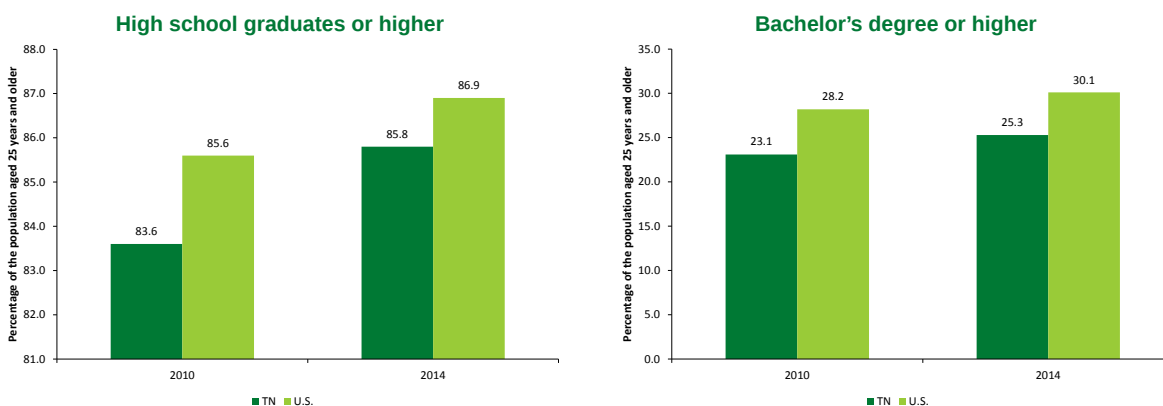
State initiatives such as the *Tennessee Promise*, which offers two years of tuition-free community college or technical college to all Tennessee high school graduates, and the *Drive to 55*, with its goal of increasing the percentage of Tennesseans with a college degree or certificate to 55 percent of the Tennessee population by 2025, aim to increase the education status of the state. If the hoped-for gains are realized, this will support a stronger growth trajectory for the state economy. This could support stronger income growth and a narrowing of the gap between the incomes of Tennesseans and other Americans.

¹Center for Disease Control and Prevention, Behavior Risk Factor Surveillance System.

²Measure of America 2013-2014.

³Center for Disease Control and Prevention, National Center for Health Statistics.

Figure 3.4: Educational Attainment Levels in Tennessee Are Below the National Average



Source: U.S. Census Bureau.

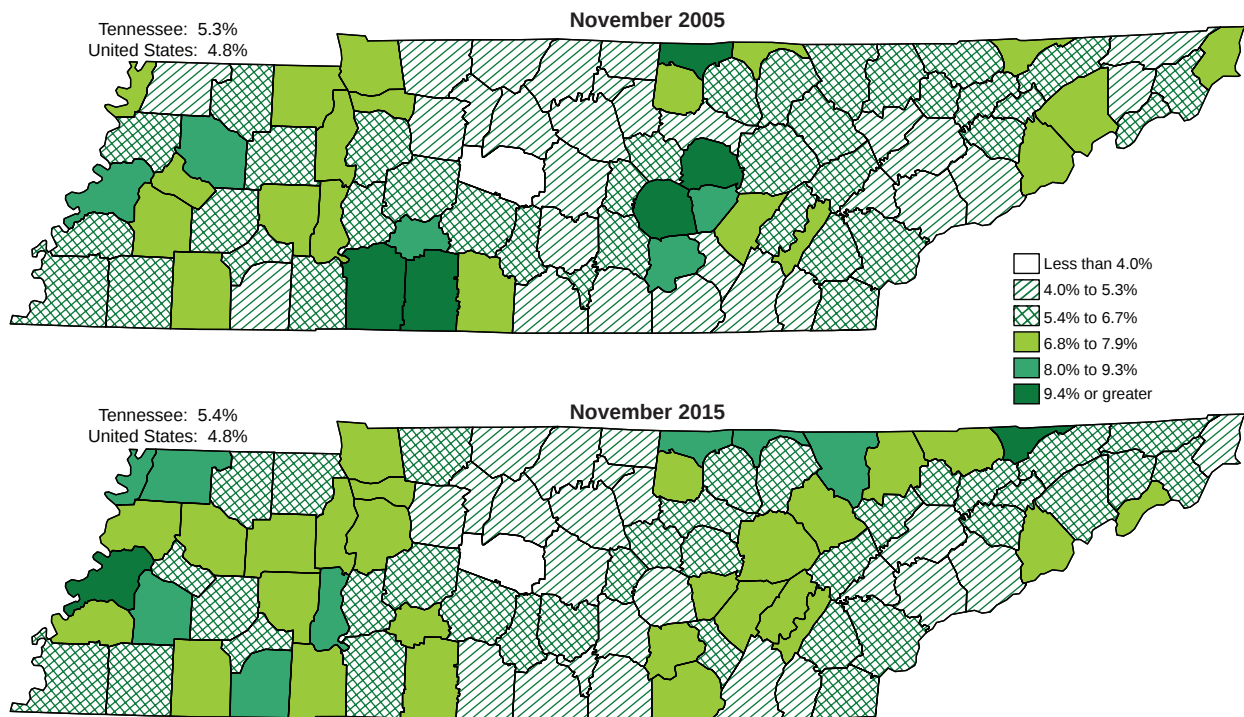
3.3. Unemployment, continued

None of these explanations fully explain the labor force participation trends that have taken place in Tennessee and across the country. As the Great Recession unfolded and participation rates began to sag, there was speculation that a stronger labor market and better job opportunities would ultimately draw workers back into the labor force. To date this has not occurred. However, it remains a distinct possibility as labor markets in Tennessee and across the U.S. tighten further and job gains remain robust.

Figure 3.5 reports non-seasonally adjusted unemployment rates across all Tennessee counties for November 2005 and November 2015. In November 2005, the unemployment rate in Tennessee was 5.3 percent (not seasonally-adjusted). There were 29 counties with an unemployment rate at or below the state average and 11 counties with a rate equal to or below the

national average of 4.8 percent (not seasonally-adjusted). Among all Tennessee counties in 2005, Williamson County registered the lowest unemployment rate at 3.9 percent, followed by Rutherford and Cheatham Counties at 4.2 percent, and Knox County at 4.3 percent. Conversely, there were four counties with unemployment rates above 10 percent – Clay County (13.4 percent), Lawrence County (13.4 percent), Wayne County (12.6 percent), and White County (10.2 percent). By comparison, in November 2015 Tennessee's unemployment rate was 5.4 percent (not seasonally-adjusted), which was slightly above the national rate of 4.8 percent (not seasonally-adjusted). There were 28 counties with an unemployment rate equal to or below the state rate and 12 counties equal to or below the national rate. Once again, the lowest unemployment rate was in Williamson County (3.9 percent), while Rutherford

Figure 3.5: Unemployment Rates in 2015 Are Comparable to Their 2005 Counterparts in Most Tennessee Counties



Source: U.S. Bureau of Labor Statistics.

3.3. Unemployment, continued

and Davidson Counties had the second lowest rate at 4.2 percent. Moreover, there were zero counties with an unemployment rate above 10 percent. Hancock County, with an unemployment rate of 9.9 percent, had the highest rate among Tennessee counties, followed by Lauderdale County at 9.4 percent.

In comparing county-level unemployment rates between 2005 and 2015, there were 30 counties that saw their unemployment rate fall, six counties that reported no change, and 59 counties that experienced an increase in their unemployment rate. However, in 33 counties the rate change was

less than 0.5 percentage points. Lawrence County saw the biggest drop in its unemployment rate, falling from 13.4 percent in 2005 down to 6.8 percent in 2015, an amazing 6.6 percentage point drop. Four other counties enjoyed unemployment rate drops in excess of 4.0 percentage points (Clay, Warren, Wayne, and White Counties.) Conversely, the largest rate increase was in Obion County where the unemployment rate increased from 5.3 percent in 2005 to 8.4 percent in 2015. Five additional counties saw their unemployment rate increase by 2.0 percentage points or more (Dyer, Hancock, Marion, McNairy, and Scott Counties)

3.4. Population

Over the long-term, population changes will have a large impact on employment and economic activity in Tennessee since population directly affects the size of the state's labor force. Between 2005 and 2015, Tennessee's population grew by 12.4 percent, outpacing national population growth of 8.7 percent. These records equate to compound annual growth rates of 1.2 percent for Tennessee and 0.8 percent for the nation. Between 2015 and 2025 population growth for the state and nation are projected to slow down slightly, as Tennessee will see an 11.2 percent growth rate while the U.S. will see 8.1 percent growth.

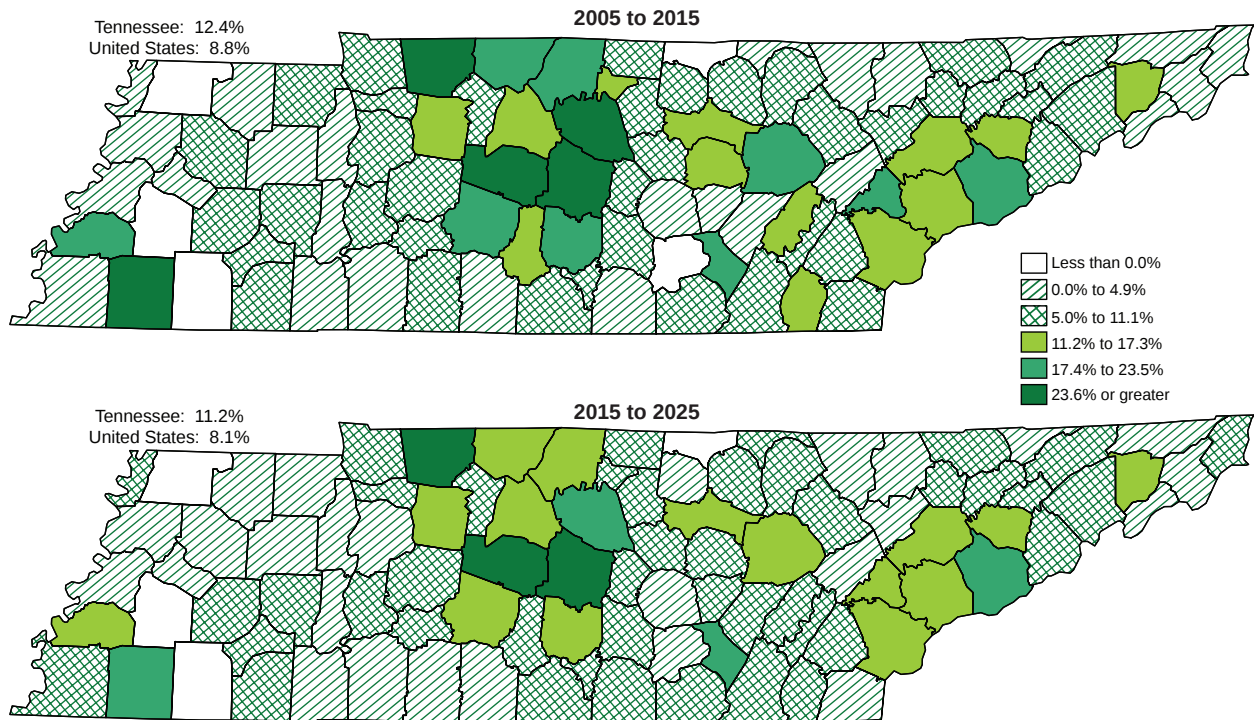
Figure 3.6 presents historical and projected population growth at the county level for 2005 to 2015 and 2015 to 2025. Between 2005 and 2015, Montgomery, Rutherford, and Williamson

Counties all saw spectacular population growth rates of 30 percent or higher. There were seven additional counties with growth between 20 and 30 percent (Fayette, Loudon, Robertson, Sequatchie, Sevier, Sumner, and Wilson County). Conversely, Clay, Grundy, Hardeman, Haywood, and Obion Counties all saw their populations decline.

Between 2015 and 2025, Williamson County is projected to see the strongest rate of population growth, expanding by 33.7 percent equating to an additional 71,117 residents, followed by Rutherford County at 29.7 percent or 90,689 additional residents. Fayette, Montgomery, and Wilson Counties will also see population growth in excess of 20 percent. Projections indicate that Clay, Hardeman, Haywood, and Obion Counties will experience population contractions.

3.4. Population, continued

Figure 3.6: Tennessee Population Growth



Source: U.S. Census Bureau and CBER-UT.

3.5. Personal Income and Taxable Sales

Between 2015 and 2025, nominal personal income is projected to grow by 4.5 percent (CAGR) in Tennessee, outpacing the 3.8 percent compound annual growth rate that was registered between 2005 and 2015. Income growth for the nation matched income growth in Tennessee between 2005 and 2015 but will surpass Tennessee income growth between 2015 and 2025.

Long-term income growth in Tennessee will be driven by a 5.4 percent (CAGR) increase in proprietors' income and a 4.8 percent (CAGR) expansion in rent, interest, and dividend income between 2015 and 2025. Wages and salary income will also grow by 3.8 percent (CAGR) over the next 10 years.

Per capita income in Tennessee was only 86.8 percent of the national average in 2015. From 2015 to 2025, per capita income growth in the state is expected to grow by 3.5 percent, but lag behind national per capita income growth of 4.0 percent. As a result, state per capita income will drop to 82.5 percent of the national average by 2025. Because the state starts with a lower *level* of per capita income, it must actually realize stronger *growth rates* to ultimately catch up with the nation. As noted earlier, the state has embarked on a number of initiatives to improve the educational standing of the state's workforce. If these investments are effective, they can mitigate or even reverse the trends that are projected here.

3.5. Personal Income and Taxable Sales, continued

Nominal taxable sales in Tennessee are expected to grow by 3.8 percent (CAGR) between 2015 and 2025. This is much stronger than the 2.5 percent compound annual growth rate that took place between 2005 and 2015. Taxable sales growth in Tennessee will be driven by hotel and motel sales which will increase by 5.0 percent (CAGR) over the next ten years, and stronger automobile dealer

sales, which are projected to grow by 4.6 percent (CAGR) between 2015 and 2025, compared to only 2.2 percent (CAGR) over the last ten years. Purchases from manufacturers will also increase by 3.9 percent (CAGR) in the next ten years, compared to only 0.1 percent (CAGR) growth between 2005 and 2015.

3.6. State Gross Domestic Product

Inflation-adjusted state gross domestic product (GDP) grew by only 0.7 percent in 2013 but then rebounded in 2014, growing by 2.3 percent. Growth of 2.4 percent is expected for 2015 and 2.3 percent growth is projected for 2016. Similar growth was seen in the nation as real GDP advanced 2.4 percent in both 2014 and 2015 but is expected to see a faster 2.7 percent growth rate in 2016. Over the long-run forecast horizon, output in Tennessee is expected to continue growing at a similar albeit slightly slower trend, averaging roughly 2.2 percent growth per year over the next ten years.

Table 3.3 presents a summary of the long-run outlook for inflation-adjusted state GDP. Between 2005 and 2015, inflation-adjusted state GDP grew by a sluggish 1.1 percent (CAGR) in Tennessee, which was slightly slower than the 1.4 percent compound annual growth rate that inflation-adjusted GDP registered for the nation. Of course, this time period encapsulates the Great Recession which suppressed output growth in the late 2000's. Over the last decade, production in the construction sector and other services sector were hit hardest, falling by a compound annual growth rate of 1.5 percent each. The manufacturing sector

grew by a sluggish 0.8 percent (CAGR) between 2005 and 2015, but production has nearly clawed back to the pre-recession peak levels registered in 2006. Conversely, service sectors such as professional and business services and education and health services saw output grow by more than 2.5 percent (CAGR) over the last ten years. Financial activities output also expanded by 2.5 percent (CAGR) and natural resources and mining production grew by 2.3 percent (CAGR).

Looking ahead ten years, inflation-adjusted state GDP will grow by 2.2 percent (CAGR) between 2015 and 2025. This is slightly slower than the 2.4 percent compound annual growth rate projected for national GDP. In Tennessee, professional and business services output is projected to grow the fastest over the next ten years, expanding by 3.7 percent (CAGR), followed by natural resources and mining output at 3.4 percent (CAGR). State manufacturing output will advance 2.3 percent (CAGR), as durable goods manufacturing production increases by 2.8 percent (CAGR) and nondurable goods manufacturing output grows 1.5 percent (CAGR). It is notable that manufacturing output will expand while manufacturing employment is expected to contract.

3.6. State Gross Domestic Product, continued

Table 3.3: Tennessee Inflation-Adjusted Gross Domestic Product by Sector

	Level (millions of 2009 dollars)			Growth Rate (%)*	
	2005	2015	2025	2005 to 2015	2015 to 2025
State Gross Domestic Product	252,717	281,548	349,209	1.1	2.2
Natural Resources & Mining	2,553	3,216	4,486	2.3	3.4
Construction	11,319	9,756	12,058	-1.5	2.1
Manufacturing	43,954	47,428	59,291	0.8	2.3
Durable Goods	26,116	27,410	36,122	0.5	2.8
Nondurable Goods	17,838	20,017	23,170	1.2	1.5
Trade, Transportation, Utilities	52,831	52,904	65,661	0.0	2.2
Wholesale Trade	18,420	18,933	24,685	0.3	2.7
Retail Trade	20,139	19,590	23,870	-0.3	2.0
Transportation & Utilities	14,272	14,382	17,106	0.1	1.7
Information	7,424	9,068	11,988	2.0	2.8
Financial Activities	35,367	45,432	56,876	2.5	2.3
Professional & Business Services	25,285	33,169	47,691	2.8	3.7
Education & Health Services	22,995	29,853	36,806	2.6	2.1
Leisure & Hospitality	11,330	11,960	14,349	0.5	1.8
Other Services	7,496	6,477	6,060	-1.5	-0.7
Government	32,163	32,285	33,943	0.0	0.5
Federal	8,507	7,582	6,214	-1.1	-2.0
State & Local	23,656	24,704	27,729	0.4	1.2

*Compound Annual Growth Rate

Source: Bureau of Economic Analysis and CBER-UT.

CHAPTER 4: TENNESSEE'S DRIVE TO 55: BACKGROUND, EARLY RESULTS, AND CHALLENGES LYING AHEAD

In this chapter—

- 4.1. Introduction and Key Points**
- 4.2. The Landscape of College Progression in Tennessee**
- 4.3. Will “Free Community College” Make a Difference in Tennessee? Early Indicators**
- 4.4. Challenges and Opportunities**
Changing the Culture of College Aspirations
Undermatching
Readiness and Research
The Other 45 percent
- 4.5. Acknowledgements**
- 4.6. References**

4.1. Introduction and Key Points

Tennessee’s “Drive to 55” is an effort initiated in 2013 to have 55 percent of working-age Tennesseans hold a higher education credential by 2025. The initiative has three major branches. Tennessee Promise focuses on young adults at the cusp between high school and college, offering state-funded grants to cover the gap between other sources of financial aid and community college tuition and fees. The underlying message, “Free Community College,” has proven to be compelling, in many cases instantly transforming a young person’s view of college. But with around 90,000 18-year old Tennesseans in a given year, Tennessee’s working-age population of 3.5 million will not meet the 55 percent threshold in twelve years by focusing exclusively on young, traditional

college students. With this in mind, the second branch of Drive to 55 applies to older adults who might like to go back to school: if so, Tennessee Reconnect grants offer them free passage through the Tennessee College of Applied Technology system, which provides laser-focused vocational programs. And to ensure that Tennessee Promise and Reconnect do not operate with blinders to actual job opportunities, the relatively newer Tennessee LEAP intends to identify skill gaps in the state and align them with college programs.

Stepping back a moment, why 55 percent? Influential 2012 and 2013 Georgetown University studies projected that by 2020, 55 – 58 percent of Tennessee jobs would require at least some college training, or conversely, that a high school diploma

4.1. Introduction and Key Points, continued

would suffice for only 42 – 45 percent of jobs. This study, alongside the Lumina Foundation's claim that 60 percent of Americans should hold a postsecondary credential by 2025 ("Goal 2025"), are typically cited as motivating factors behind Governor Haslam's choice of 55 percent. This is not as high as the Lumina Foundation's national target, but higher than the target implied by the Georgetown studies, which considered postsecondary certificates as equivalent to "some college, no degree." Regardless, the state's goal to raise postsecondary attainment to at least 55 percent within twelve years is rightly called a "moon launch" given that the starting point was closer to 36 percent.

This chapter focuses on the first branch of Drive to 55, that is, Tennessee Promise efforts that aim to increase the flow of young people into college and through college successfully. If Promise and affiliated programs are able to build and sustain higher rates of college enrollment and completion among traditional-aged students, Drive to 55 efforts will outlive 2025 as new waves of young adults build the base of college-educated workers with each passing year.

Section 1 surveys the pre-Promise landscape of student progression into college or the workforce after high school. Section 2 reviews early evidence on the effect of Promise and its privately-funded predecessors on college enrollment and persistence. Section 3 highlights some of the challenges and opportunities lying ahead. Key findings and points of discussion include:

- Prior to Tennessee Promise, 54 - 55 percent of high school graduates enrolled in college shortly after graduation. Those that did not go to college earned just \$8,715 – 8,838 the

year after graduation, on average, if they worked at all. Dropouts earned even less.

- Knox Achieves, one of the privately-funded initiatives that served as a model for Tennessee Promise, is linked to a 2 – 3 percentage-point greater rate of college enrollment among typical high school senior classes and a 3 – 5 percentage-point gain in community college enrollment. Results imply that most – but not all – of the students whose college decisions were swayed by the program chose college over work rather than a two-year college over a four-year college.
- Results from Knox Achieves foreshadowed the first year of Tennessee Promise. First-year student enrollment rose substantially across Tennessee's public higher education systems, but large growth in two-year programs were possibly offset to a degree by declines in four-year university enrollment.
- Going forward, one challenge for the Tennessee Promise branch of the Drive to 55 will be to ensure that transfer pathways between two-year and four-year college sectors are seamless. At the same time, high rates of remedial education in two-year colleges and low rates of degree or certificate completion call attention to college readiness and persistence. The state has a rich history of education policy research: more is needed now to identify cost-effective policies and programs that help students meet their postsecondary goals. Finally, factors behind economic security and success for "the other 45 percent" warrant closer examination.

4.2. The Landscape of College Progression in Tennessee

Before turning to early indicators of success for Tennessee Promise, we first survey the pre-Promise landscape of student progression through high school and into college. These patterns,

which closely reproduce similar data reported by the Harvard Strategic Data Project and the state Department of Education, offer a detailed view of the Drive to 55 starting point as it relates to

4.2. The Landscape of College Progression in Tennessee, continued

traditional college students. The extent to which these patterns change in the coming years will be one measure of the success of Tennessee Promise and the Drive to 55 more broadly.

Student progression is defined by the education choices students make after reaching the age when they can legally leave school (17 in Tennessee) as well as evident career readiness for students who do not pursue college. Here, we document trends in on-time high school progression, on-time regular high school graduation, seamless college enrollment, and for students who do not go on to college, first-year workforce outcomes. We include timely progression through high school alongside postsecondary benchmarks because over the coming years, student success in high school may reasonably be affected by policies that make college more feasible. More specific definitions for student progression outcomes are as follows:

- On-time 10th grade: enrolling in 10th grade one academic year after starting 9th grade.
- On-time 11th grade: enrolling in 11th grade two academic years after starting 9th grade.
- On-time 12th grade: enrolling in 12th grade three academic years after starting 9th grade.
- On-time regular high school graduation: obtaining a regular high school diploma (not a GED) within four academic years of starting 9th grade.
- Seamless college enrollment: enrolling in any college by October 1st following high school graduation.
- For high school graduates who do not enroll in college the year after high school (by March 1st of the year after graduation), we identify several workforce outcomes from the first calendar year (January through December) after graduation.
 - o Labor force participation: having any record of earnings in the state Unemployment Insurance (UI) data files. Note that this will exclude out-of-state work, self-employment, some agricultural work, and military enlistment.
 - o For graduates in the UI workforce,

January through December earnings.

- o For graduates in the UI workforce, the dominant industry of employment.
- o For dropouts, labor force participation and earnings five years after starting 9th grade.

We identified students who enrolled in Tennessee public schools as 9th graders in 2007-2008 and 2008-2009. Longitudinal data allow us to follow these students as they progressed through high school and into college or the workforce. Data were combined from administrative records held by the Tennessee Department of Education (TDOE), the Tennessee Higher Education Commission (including college enrollment records from the National Student Clearinghouse), and the Tennessee Department of Labor and Workforce Development.¹

Table 1 illustrates typical student progression patterns. From here on we refer to cohorts by the academic year they began high school (so, students entering in 2008-2009 represent the cohort of 2009 9th graders) or the academic year in which they graduated (students graduating in 2010-2011 represent the 2011 graduating cohort).

Trends depicted in Table 1 take place during a truly unique time that encompasses the Great Recession and its immediate aftermath. Significant job losses occurred in 2008 and 2009 and significant job gains were not realized until 2011, when the cohort of 2008 9th graders were typically in 12th grade and 2009 9th graders were in 11th grade. The annual state unemployment rate in Tennessee peaked at 10.5 percent in 2009 while the national rate peaked in the following year at 9.6 percent. Significant changes in labor force participation rates and inflation-adjusted earnings also occurred over this period of time. Many of these changes had a disproportionate effect on lower skilled and younger workers. Such patterns may have affected decisions on programs of study, college choice, and the tradeoff between work, college, and unemployment. These dramatic changes in the economy and labor market are

¹We exclude students who transferred out of Tennessee public schools prior to high school completion or prior to dropping out, but we include students who transferred in to Tennessee schools after 9th grade. We omit students in alternative or vocational high schools.

4.2. The Landscape of College Progression in Tennessee, continued

Table 4.1: Timely Student Progression Among 2007 and 2008 9th Graders

Spring year	Grade				
	9th	10th	11th	12th	Post-secondary
2008	C08				
2009	C09	C08			
2010		C09	C08		
2011			C09	C08	
2012				C09	C08 2007 cohort
2013					C09 2008 cohort
2014					

an important backdrop to all of the descriptive statistics discussed below.²

Table 2 lists descriptive statistics for each progression outcome, along with sample size. High school progression outcomes follow the expected pattern, with on time graduation noticeably less likely than on time 12th grade, which is less likely than on time 11th grade, which is less likely than on time 10th grade. We find that 87 - 88 percent of 9th graders in these cohorts completed high school within four years.³

Among all high school graduates, including on-time and late graduates, 51 – 52 percent seamlessly enrolled in college (whether part-time or full-time is not known) by October 1st of the year they graduated. Just over 1 in 3 graduates went to a four-year college or university and just over 1 in 6 went to a two-year community college or technology center.⁴

What happened to graduates who did not go straight to college? We find that 3 percent of graduates enrolled after a break from school but no later than March 1st of the year after graduation. The majority of late enrollees attended two-year institutions. For those who did not enroll in college at all the year after graduation, we can get a very short-sighted view of their career readiness by examining Tennessee workforce outcomes. Using statewide records on earnings reported to the

²See Chapter 4 of Murray et al. (2015) for a detailed analysis of structural changes in the labor market over the arc of the Great Recession.

³Not shown in Table 2: another 1 - 2 percent of students graduated one or two years later.

⁴These figures include enrollment at in-state, out-of-state, public, and private institutions. College enrollment data are drawn from the National Student Clearinghouse, a non-profit organization that maintains enrollment records for (as of this writing) well over 90 percent of postsecondary students.

Unemployment Insurance system,⁵ we find that just 2 out of 3 graduates who *did not* go straight to college were in the Tennessee workforce the year after graduation (Table 3). Of those who were working, nominal first-year earnings averaged \$8,715 for the 2008 cohort (who would have typically graduated in 2011) and \$8,838 for the 2009 cohort.⁶ Note that these low average earnings typically reference 2012 and 2013 calendar years, and thus they must be considered alongside the Great Recession cycle and its uneven impact on younger, lower skilled, less educated individuals.

Three-quarters of graduates who did not go straight to college were found working in one of three industries the year after graduation: food and accommodation services, retail, or business services.⁷ The “business service” category includes finance, accounting, insurance, real estate, and

⁵First-year earnings are measured over January – December of the year after high school graduation. Again, we note that Unemployment Insurance records exclude earnings from self-employment, earnings from other states, some forms of agricultural or domestic pay, and some federal earnings (including military pay).

⁶These earnings are not adjusted for inflation, which measured about 1 percent between 2012 and 2013 when, respectively, the 2008 and 2009 9th grade cohorts were typically out of high school and working. The 2008 cohort's inflation-adjusted earnings of \$8,802 were very similar to \$8,838 average earnings among the 2009 cohort. We do not observe hours worked, so it is not possible to directly discern who was working part-time and who was working full-time. A very small share of students had earnings that would exceed full-time pay at the minimum wage.

⁷Industry participation is assessed from NAICS codes reported by employers to the Unemployment Insurance system. Individuals can be associated with more than one industry in a given year or in a given quarter. These statistics refer to the primary, or most frequent, industry of occupation in the year after high school, allowing for ties between two or more industries. Accordingly, industry percentages add up to more than 100 percent. NAICS data do not allow identification of an individual's occupation. The NAICS code that an individual is linked to may change because his or her firm opted to identify under a difference NAICS (following a merger or change in operational focus, perhaps), although these instances are likely rare relative to the more common occurrence of a worker's movement into a different firm and industry.

4.2. The Landscape of College Progression in Tennessee, continued

Table 4.2: High School Progression, Graduation, and College Enrollment Means by Cohort

	Ninth-grade cohort (spring year of ninth grade)	2008	2009
High school progression			
On time 10th grade (%)		95.5	96.1
On time 11th grade (%)		95.0	95.9
On time 12th grade (%)		92.7	93.7
On time regular graduation (%)		87.0	88.0
Sample size for high school progression outcomes		67,932	68,124
Initial college enrollment (among graduates)			
Seamless college enrollment (% by October 1 following graduation)		51.9	50.8
Seamless two-year college enrollment (% in community colleges and TCATs)		17.3	16.7
Seamless four-year college enrollment (%)		34.5	34.1
Late college enrollment (% by March 1st of the following year)		3.0	2.9
Samples size for college enrollment outcomes (equal to the number of HS graduates)		59,158	59,936

Table 4.3: High School Graduates Who Do Not Go on to College: Workforce Participation, Earnings, and Industry by Cohort

	Ninth-grade cohort (spring year of ninth grade)	2008	2009
Tennessee workforce participation			
In Tennessee UI-covered labor force in the year following graduation (%)		66.7	65.9
Samples size for graduates' workforce participation		26,682	27,742
Earnings and primary industry of employment			
Earnings first academic year after graduation (Q1 - Q4, not including zeros)		\$8,715	\$8,838
Food service and accommodation (%)		29.36	30.09
Retail (%)		25.29	25.17
Business services (%)		22.00	22.33
Manufacturing (%)		6.40	6.65
Health (%)		6.05	5.40
Other services (%)		5.69	5.36
Transportation (%)		3.60	4.54
Construction (%)		3.42	3.10
Wholesale (%)		1.91	1.95
Professional services (%)		1.34	1.58
Arts (%)		1.55	1.35
Education (%)		1.34	1.38
Public services (%)		1.26	1.25
Mining, forestry, agriculture (%)		< 1.0	< 1.0
Utilities (%)		< 1.0	< 1.0
Unknown industry (%)		< 1.0	< 1.0
Samples size for wage and industry outcomes		17,785	18,270

Notes: An individual's primary industry is the one identified more frequently than any other over the course of the calendar year. Primary industry shares add up to more than 100 percent because we allow for ties between two or more primary industries.

office administration, but the majority of graduates in business services appear to be associated with temporary employment services or employment placement services.

Figure 1 illustrates first-year destinations for all high school graduates in the 2008 and 2009

cohorts, by region. The standout observation from Figure 1 is that for all three regions of the state – East, Middle, and West – four-year colleges and universities were the most frequent destinations among graduates, with two-year colleges a distant second. After college enrollment, the next most

4.2. The Landscape of College Progression in Tennessee, continued

frequent destination is the workforce, describing almost 40,000 students who we have categorized by primary industry of employment in Figure 1. Over 18,000 students from these two cohorts were not observed in college or in the Tennessee workforce. Across all three regions, the most popular industries for students who did not enroll in college, by far, were food and accommodation services, retail, and business services.

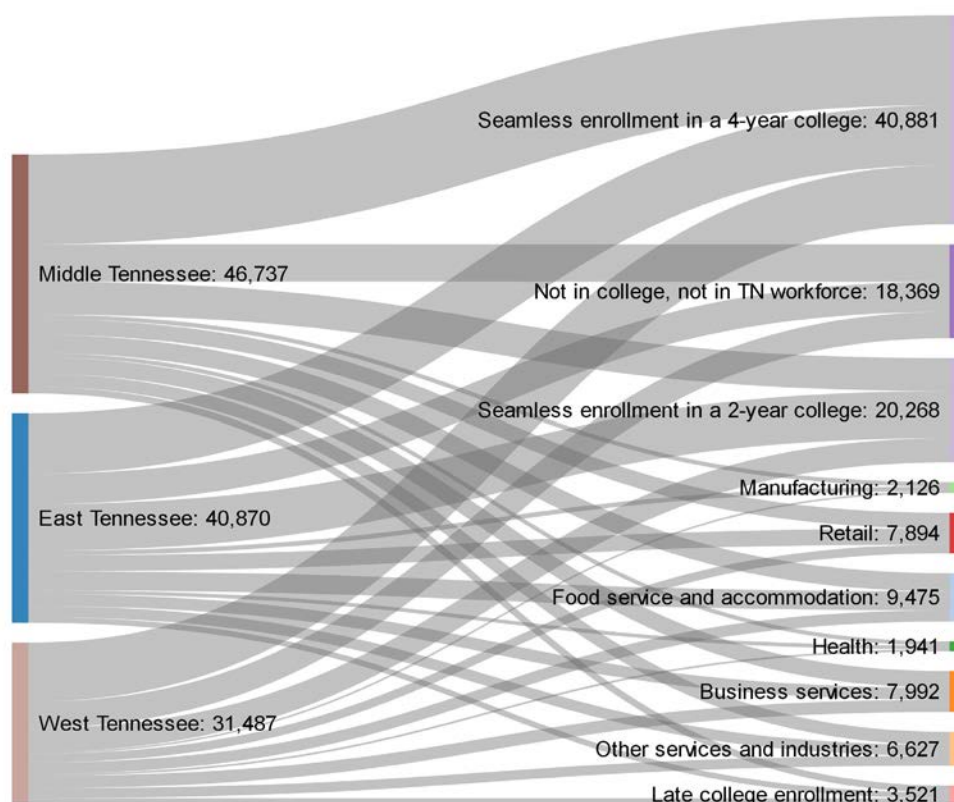
Another observation from Figure 1 is that East Tennessee high schools sent a higher share of graduates to two-year colleges (22 percent) than Middle or West Tennessee schools (13 – 15 percent). That distinction is even clearer in Figure 2, which illustrates 4-year and 2-year seamless college enrollment rates by county of students'

last high school.⁸ The bottom portion of Figure 2 also illustrates that geographic proximity to a four-year college or university is aligned with four-year enrollment rates. Spatial clusters of relatively high four-year enrollment coincide with the location of Tennessee's major four-year public institutions in the northwest, southwest, northeast, east-central, and central north parts of the state.

Last, what happened to students who did not complete high school? As we show in Table 4, less than half were found working in the Tennessee workforce five years after starting high school, and of those who were working, average annual

⁸Figure 2 depicts college enrollment rates by geographic boundaries, not by school district boundaries. City school districts are included with their respective counties.

Figure 4.1: College or Workforce Destinations the Year After High School Graduation, by Region



Notes: The figure depicts the first-year destinations of 119,094 high school graduates from the two cohorts starting 9th grade in 2007-2008 or 2008-2009, by the region of students' last high school.

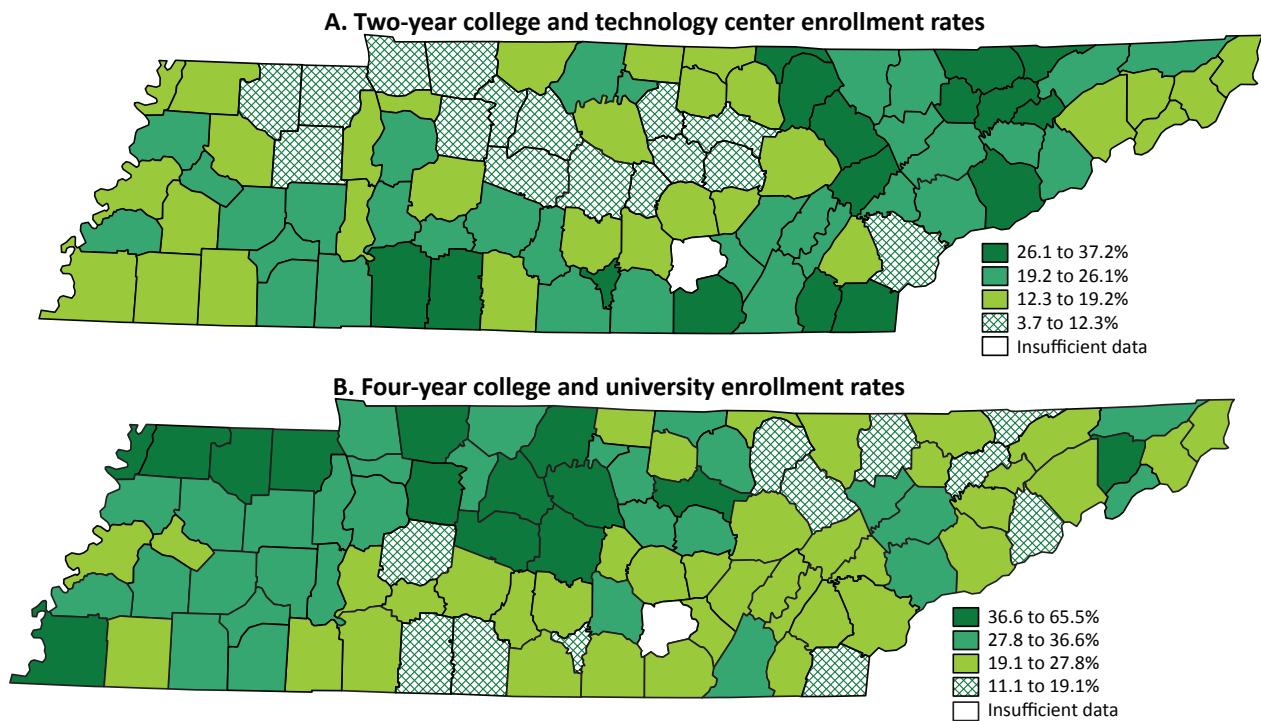
4.2. The Landscape of College Progression in Tennessee, continued

earnings were just \$6,000 – 6,100.⁹ It is worth noting that non-completers conceivably had more time to find employment and work toward pay raises than graduates, and yet dropout earnings were substantially lower at roughly the same

point in time. And for both graduates and non-completers, annual earnings of \$6,000 - \$8,838 are well below the federal poverty line for a one-person household (\$11,170 in 2012 and \$11,490 in 2013).

⁹Non-completers' primary industries of employment (not shown) followed a very similar pattern as that for graduates who did not go on to college (Table 3).

Figure 4.2: Seamless College Enrollment Rates by County of First High School



Notes: Seamless college enrollment is defined as attending college by October 1st after high school graduation. College enrollment includes attendance in any institution identified by the National Student Clearinghouse, including in-state, out-of-state, public, and private institutions. Color codes are aligned with standard deviations on college enrollment rates across counties.

Table 4.4: High School Dropouts: Workforce Participation, Earnings, and Industry Five Years After 9th Grade, by Cohort

	Ninth-grade cohort (spring year of ninth grade)	
	2008	2009
In Tennessee UI-covered labor force five years after starting 9th grade (%)	47.7	48.9
Earnings five years after starting 9th grade (Q1 - Q4, not including zeros)	\$6,100	\$6,000
Non-completer sample size	8,773	8,186

4.3. Will “Free Community College” Make A Difference in Tennessee? Early Indicators

On January 9th, 2015, President Obama proposed “America’s College Promise,” a partnership between states and the federal government that would pay for two years of community college tuition for “everybody who’s willing to work for it.”

The setting for this announcement – Pellissippi State Community College in Knoxville, Tennessee – coincided with the launch of Tennessee Promise. Nearly 58,000 students – the vast majority of eligible seniors – expressed interest in November 2014, and 31,000 were still active in the program as of April 2015. Prospective college students are not alone in their enthusiasm for Tennessee Promise. An astonishing 86 percent of registered voters approved of the initiative in a 2014 Vanderbilt poll.

Will Tennessee Promise push more students into college and fundamentally change some of the patterns presented in the previous section? A CBER study by Celeste Carruthers and William Fox suggests it will.

Tennessee Promise is a “last dollar” grant that covers the gap between state and federal scholarships (including “merit-based” Tennessee HOPE scholarships and “need-based” federal Pell grants) and the tuition and fees that students must pay to enroll. In a state where the median household income is \$44,000 and 18 percent of the population lives below the poverty level, many students qualify for Pell grants that cover community college tuition, fees, and more. In-state tuition and fees for Tennessee community colleges amounted to \$3,640 in 2013-2014, on average, while Pell grants were worth up to \$5,645 in the same year. HOPE scholarships pay an additional \$2,000 for eligible two-year students. Critics of last dollar programs are quick to point out that money does not actually flow to the neediest students, and moreover, that the cost of college does not stop at tuition. Books, supplies, transportation, child care, and living expenses are not covered by last dollar scholarships. This raises the question of why 58,000 students would sign up for financial aid that many of them will not receive.

A strong and clear message – “Free Community College” – is surely one piece of that puzzle.

Students are not perfectly aware of their financial aid options, especially if they would be the first in their family to go to college. “Free Community College,” though not strictly correct (economists will tell you that nothing is free), is an attractive banner. In Tennessee, that message is paired with one-on-one mentoring throughout students’ senior year of high school. Mentors are unpaid volunteers from the community who guide students and their families through college and financial aid applications and help students plan for orientation, registration, and basic logistics. Mentors who have “been there” provide critical support and experience. Importantly, mentors alleviate the onerous federal financial aid process.¹⁰ The Free Application for Federal Student Aid (FAFSA) was never intended to be a college entrance exam, and yet for many students, it is just that because of its complexity. Researchers have found that helping students complete the FAFSA improves the chance they enroll. Driven by the first Promise cohort, dependent Tennessee students submitted 6.9 percent more FAFSAs in the first half of 2015 than they did in 2014. This was the largest year-over-year growth in the United States.

The first wave of Tennessee Promise students – 16,291 ultimately enrolled, exceeding early expectations and pushing the freshman class up by 10 percent – are now in the midst of their second semester of college. It is too early to assess how many of those Promise students would not have been in college today without the program, or how long they will stay in college because of Tennessee Promise. But our study on the local initiative that inspired Tennessee Promise provides cause for optimism.

Privately-funded Knox Achieves launched in 2008 to support Knox County high school seniors making a seamless transition into community colleges. After three years exclusively serving its home county, Knox Achieves took on the name Tennessee Achieves – and later, tnAchieves – and expanded eligibility to seniors in more than twenty

¹⁰Within the largest Tennessee Promise partnering organization, tnAchieves, FAFSA guidance will shift from mentors to staff beginning with the 2015-2016 wave of Promise applicants.

4.3. Will “Free Community College” Make A Difference in Tennessee? Early Indicators, continued

counties throughout Middle and East Tennessee. We tested whether Knox County college enrollment rates changed after the introduction of Knox Achieves relative to college enrollment rates throughout East Tennessee and relative to Knox County’s own college enrollment rates prior to the class of 2009. Our major findings:

- The share of Knox County high school seniors going straight to a community college (as opposed to work, the military, or a four-year college) rose 3 – 5 percentage points after Knox Achieves began.
- College enrollment rates overall rose 2 – 3 percentage points, which means that most of the change in community college enrollment was coming from students who would not have gone to college otherwise.
- Students who expressed interest in Knox Achieves were 24 percentage points more likely to go to college than similar students in other counties (who were not eligible) and 30 percentage points more likely to go to a community college.
- Participants were also 5 percentage points less likely to enroll in a four-year college or university, and this finding was driven entirely by higher achieving and higher income students.

Substituting away from four-year universities is concerning. Researchers have found that starting

in a two-year college rather than a four-year college reduces the likelihood of completing a bachelor’s degree, even though most states have clearly defined transfer pathways between community colleges and universities. It is too early to tell how likely it is that Knox Achieves students will leave college with an associate’s or bachelor’s degree, or how quickly they will do so. Early signs are positive: participants earned 3 – 6 more college credits (equivalent to 1 – 2 additional classes) during the two years following high school.

The Carruthers and Fox (2015) study suggests that the combination of a strong message, financial aid, and guided mentoring can increase college enrollment immediately after high school. This bodes well for Tennessee Promise as well as at least eleven similar proposals in other states. It is worth emphasizing that our work on Knox Achieves is, by necessity, non-experimental. Knox Achieves participants may have been intent on going to a community college in ways that we could not observe. This would tend to inflate our estimates of the program’s effect on college enrollment. Another caveat to keep in mind is that we focus on the classes of 2009 – 2011, who graduated in the midst of a slow economic recovery when job prospects were very limited for young people. For some, a more robust job market today may be a bigger draw than free community college.

4.4. Challenges and Opportunities

Section I documented baseline college enrollment rates and Section II discussed early results from a program much like Tennessee Promise. Here, we build on this context to point to challenges that may hinder Drive to 55 success as well as actionable policy opportunities that will get ahead of these issues.

Changing the Culture of College Aspirations

Janice Gilliam, Northeast State Community College president, was quoted in a recent *Atlantic* article about Tennessee Promise:

“We have a lot of students who do not think about going to college. Some of their parents have not even finished high school. This is a huge step to break this cycle,” she says. “A lot of them don’t even know they have talent.”

Local and national media stories about Promise students support Dr. Gilliam’s impression. “I didn’t think college was for me” is a common sentiment among Promise students, followed quickly by their story about how the promise of free community college reversed that notion.

4.4. Challenges and Opportunities, continued

What many prospective Promise students do not realize, however, is that in reality the program provides a modest amount of aid, about \$1,000 per student per year, typically, and that many of them could pay for community college tuition, fees, and more with federal and state grants and without a dollar from Promise. The high rate of federal Pell grant eligibility is the major reason that the Promise program can contain its cost to Tennessee taxpayers.¹¹

One of the fundamental and underemphasized roles of Tennessee Promise, then, has been to offer a course correction for capable students who overestimate the cost of postsecondary education. The program has proven to be very successful at reshaping the college conversation that students have with their families, teachers, and counselors. Why wait until the senior year of high school to do this? If every high school freshman was more aware of the entry requirements for college – financial and scholastic – they would make more informed choices about life after high school graduation. And with a horizon that includes college, they might make better progress through high school coursework and ultimately require less remedial catch-up after enrolling in college.

The widespread popularity of Tennessee Promise is already affecting the plans of younger students, but the program could go a step further and create an official point of contact prior to senior year. Bridging the information gap that students and families have about college readiness will help to raise college enrollment and smooth transitions into college.

Undermatching

In the same way that there is an information gap about college costs and admissions broadly speaking, students are often misinformed about their prospects at different types of colleges. A short time before the higher education policy environment was captivated by free community college, the issue *du jour* and focus of a January 2014 White House summit was “undermatching,”

that is, the idea that high achieving students are not best served by less selective colleges and universities. Undermatching can happen unintentionally if students are not aware of their admission and financial aid opportunities at more selective (and usually, costlier) schools. One study showed that merely providing students with this information increased the likelihood that they applied to and enrolled in public flagship universities or selective private universities, both of which tend to have more resources for students and higher graduation rates. Of course, undermatching may be deliberate on the part of students who have a strong preference for a particular school or region despite their prospects elsewhere.

State policy may also play a role in undermatching. For some students, Tennessee Promise is certainly a nudge toward a community college rather than a four-year college or university. Although the 2015 freshman class was 10.1 percent greater in Tennessee public postsecondary institutions overall, large gains in two-year colleges and technology centers were offset to a degree by smaller freshman classes in some four-year universities. The 2015 entering class fell 13 percent at both the University of Tennessee-Martin and the University of Tennessee-Chattanooga.

Early indications are that most of the students whose college choices are changed by Tennessee Promise are those who are unsure about going to college at all. For those who decide to start at a community college rather than a four-year college or university, however, a long line of research suggests that their likelihood of completing a bachelor's degree is substantially lower. One study found that failure to transfer after accumulating 60 credits and the loss of credits upon transfer were two of the chief “choke points” that hindered community college students from attaining a bachelor's degree.

A broad structural solution to the undermatching problem, therefore, is to make the transition between two-year community colleges and four-year colleges and universities seamless for students who wish to attain a bachelor's degree

¹¹This underscores one potential threat to the fiscal impact of Tennessee Promise. Federal changes to the generosity or scope of the Pell grant program will have a direct bearing on the typical size of Tennessee Promise grants.

4.4. Challenges and Opportunities, continued

or greater. Tennessee already has a well-defined system of transfer pathways which are – in principle – the most cost-effective way for students to earn a bachelor's degree in the state public postsecondary system. Whether this is true in practice, however, remains an open question, and more research and analysis is necessary in order to determine if there are unnecessary hurdles along these pathways.

Another actionable policy response to undermatching is to ensure that Tennessee's high school students are at least aware of their options in two-year and four-year college sectors. Tennessee already has two opportunities to do so. Tennessee is one of many states that aspires to have all high school students take the ACT. Test takers indicate up to four institutions to receive their official scores for free – additional score reports cost at least \$12 and involve further action by students. Official ACT score reports serve as a formal channel between the ACT and college admissions offices, but also as a recruiting tool for colleges. The minor detail of *how many* schools a test-taker could list has had a remarkable effect on the quality of colleges that students ultimately choose. Tennessee's ACT test-takers should be encouraged to send their scores to as many schools as they wish, and to include schools that they may incorrectly believe are out of their league.

The second, newer opportunity to make students aware of their college options is a systemic part of Tennessee Promise itself. This initiative provides a new line of communication between students and state officials, partnering organizations, and volunteer mentors who all have the goal of helping more students get to college. This line of communication should include information about college options aside from those institutions eligible to receive Tennessee Promise students. The federal government has developed a valuable new tool for doing just that. The College Scorecard (<https://collegescorecard.ed.gov/>) allows prospective college students to quickly retrieve information describing U.S. colleges and universities, including costs, typical ACT or SAT scores of entering students, and even the typical

post-college earnings of former students who – much like most Tennessee Promise students – received some form of federal financial aid.

Readiness and Research

Although undermatching is recognized as a nationwide issue that disproportionately affects lower-income high-achieving students, a far greater number of students find themselves *overmatched* when they enroll in a community college. In fact, the majority of two-year college students in Tennessee enroll unready for the challenges of postsecondary coursework: 59 percent require at least one remedial class and only 28 percent complete a degree within 6 years.¹² The first year of Tennessee Promise has shown that it is remarkably easy to change the conversation about going to college, and student take-up in the program alongside their interest in college has exceeded expectations at each step. But elevating college readiness and the likelihood that students succeed in college will be harder and will require a closer examination of why students who earn a high school diploma and aspire to earn a two-year degree or more nevertheless struggle to do so.

Innovative research is underway to test whether a dual-credit initiative in Tennessee can help students catch up before they leave high school. More research is necessary to identify impactful programs and policies that raise student persistence after enrolling. A wide and growing array of such interventions are already underway, including fresh approaches to mentoring and college coaching within Tennessee Promise partnering organizations, but to date, their effectiveness and cost-effectiveness are speculative.

Tennessee has a strong history of improving on speculative hunches regarding educational practice. In the 1980s, there was considerable uncertainty about the benefits of smaller elementary classes, particularly when measured against the necessary costs of hiring more teachers to lead them. Determining if smaller classes benefitted students was complicated then, as now, by the fact that low student-to-teacher ratios do not arise by

¹² *Tennessee Higher Education Fact Book: 2014-2015.*

4.4. Challenges and Opportunities, continued

chance. Smaller classes are often intertwined with other district and school advantages. Tennessee's Project STAR experiment boldly tackled this problem by randomly assigning kindergarteners in 79 urban, suburban, and rural schools across the state to classes with 13 – 17 students or 22 – 25 students. This was one of the first large-scale field experiments in U.S. education, and despite imperfect execution, short-term and long-term results from Project STAR's forerunning design inform education stakeholders to this day. A new generation of experimental research – this time, set in the state's community college system – would go a long way toward identifying which higher education initiatives are pivotal in improving student retention and completion, and at what cost.

The Other 45 Percent

This chapter opened with an overview of the three branches of the Drive to 55. Aspiring to have 55 percent of working-age Tennesseans hold a postsecondary credential is a laudable goal and one that is supported by the best available research on the returns to higher education as well as the skill demands of the modern workforce. But a fourth branch, one that focuses on the other 45 percent, would provide a strong complement to the Drive to 55 strategy.

A college degree is not the only path toward financial security and success for working-age

adults. Some choose to enlist in the military after high school graduation; others choose to work in a skilled trade and earn industry certifications and licensures. There is abundant research on the payoff to enrolling in and completing college, but very little is known about the economic returns to credentials earned in the military or in work, nor is there a clear understanding of how the state and even the public higher education system can support the human capital development and career paths of individuals with no more than a high school diploma.

Tennessee has a demonstrated interest in raising college *and* career-readiness throughout the state, and state agencies are well positioned to pursue and support research on open questions about workers who stop or fall short of a postsecondary certificate or degree. What are the factors behind financial security aside from college completion? Who succeeds outside of the college track, and why? What are the individual returns to military service? To industry licensure? To “sampling” a college program or enrolling in a MOOC (i.e. a massive, open online course)? Making headway on these and related questions will illuminate the other 45 percent of the Tennessee workforce and sharpen our understanding of success in and outside of college.

4.5. Acknowledgements

The Section I analysis and discussion is drawn from a 2015 CBER report on student progression through high school and into college (Carruthers et al., 2015). That study was made possible by a contract with the Tennessee Consortium on Research, Evaluation, and Development (TNCRED) hosted at Vanderbilt University, and indirectly by Tennessee's First to the Top award from the U.S. Department of Education. Portions of Section II review work by Carruthers and

Fox (2015), which was made possible by data from tnAchieves, the Tennessee Department of Education, and the Tennessee Higher Education Commission. The opinions expressed in this chapter do not represent those of the U.S. Department of Education or any Tennessee agency.

Additionally, we are indebted to Antoniya Owens and others working with the Harvard Graduate School of Education Strategic Data

4.5. Acknowledgements, continued

Project for many consultations regarding data processing. Their research on college-going in Tennessee has greatly informed our own. We are also grateful to staff members in tnAchieves, the Tennessee Department of Education, and

the Tennessee Higher Education Commission for discussions related to data and policy. Jilleah Welch, Okila Elboeva, James Sheffield, and Marcus Bansah provided outstanding research assistance.

4.6. References

- Anderson, K. (2015). "Tennessee Promise ups enrollment at Chattanooga State, Cleveland State: University of Tennessee at Chattanooga enrollment declines." *Chattanooga Times Free Press*. October 4th, 2015.
- Bettinger, E. P., Long, B. T., Oreopoulos, P., & Sanbonmatsu, L. (2012). The role of application assistance and information in college decisions: Results from the h&r block fafsa experiment*. *The Quarterly Journal of Economics*, 127(3), 1205-1242.
- Bound, J., Lovenheim, M. F., & Turner, S.. (2010). Why Have College Completion Rates Declined? An Analysis of Changing Student Preparation and Collegiate Resources. *American Economic Journal: Applied Economics*, 2(3), 129–157.
- Carnevale, A. P., and N. Smith. (2012). *A Decade Behind: Breaking Out of the Low-Skill Trap in the Southern Economy*. Center on Education and the Workforce, Georgetown Public Policy Institute, Georgetown University.
- Carnevale, Anthony P., Nicole Smith, and Jeff Strohl. (2013). *Recovery: Job Growth and Education Requirements through 2020. State Report*. Center on Education and the Workforce, Georgetown Public Policy Institute, Georgetown University.
- Carruthers, Celeste K., Donald J. Bruce, William F. Fox, Matthew N. Murray (2015). *Student Progression in the Wake of First to the Top*. Prepared for the Tennessee Consortium on Research, Evaluation, and Development. Center for Business and Economic Research, University of Tennessee.
- Carruthers, C.K. and W.F. Fox (2015) "Aid for All: College coaching, financial aid, and postsecondary persistence in Tennessee." Forthcoming in *Economics of Education Review*.
- Chetty, R., Friedman, J. N., Hilger, N., Saez, E., Schanzenbach, D. W., & Yagan, D. (2011). How does your kindergarten classroom affect your earnings? Evidence from Project STAR. *Quarterly Journal of Economics* 126: 1593-1660.
- Cook, Nancy. (2015). "The Power of Free Community College." *The Atlantic*, September 5, 2015. Available online: <http://www.theatlantic.com/business/archive/2015/09/free-college-in-tennessee/403945/>
- Center for the Study of Democratic Institutions, (May 2014), "Ninth Vanderbilt University Poll."
- Dynarski, D., S. Hemelt, N. Schwartz. (2014). "Dual Credit Courses and the Road to College: Experimental Evidence from Tennessee." Grant No. R305H140028, Institute of Education Sciences, U.S. Department of Education.
- Dynarski, S., J. Scott-Clayton, and M. Wiederspan. (2013). "Simplifying tax incentives and aid for college: Progress and prospects." National Bureau of Economic Research Working Paper No. 18707.
- Farmer, Blake. (2013). "Average Wage for TN High School Grads Drops \$4,000 in Five Years; Governor Sees Moral Responsibility to Intervene." WPLN Public Radio News Archive: September 4, 2013.

4.6. References, continued

- Federal Student Aid (2015). FAFSA® Volume Reports. U.S. Department of Education.
- Goodman, J., M. Hurwitz, and J. Smith (2015). "College access, initial college choice and degree completion." National Bureau of Economic Research Working Paper No. 20996.
- House, E. (2015). "Tennessee Promise: Fall 2015 Update." Tennessee Higher Education Commission Fall Quarterly Meeting: November 19, 2015.
- Hoxby, C. and S. Turner. (2013). Expanding College Opportunities for High-Achieving, Low Income Students. SIEPR Discussion Paper 12-014.
- Lee, Jessica A. (9/17/2015). "Rethinking community college to boost enrollment and completion." Brookings Institution.
- Lumina Foundation. (2013). *A Stronger Nation through Higher Education: Visualizing data to help us achieve a big goal for college attainment*. Lumina Foundation for Education, Inc.
- Monaghan, D. B., & Attewell, P. (2015). The community college route to the bachelor's degree. *Educational Evaluation and Policy Analysis*, 37(1), 70-91.
- Mosteller, F. (1995). The Tennessee Study of Class Size in the Early School Grades. *The Future of Children* Summer/Fall: 113-127.
- Murray, Matthew N., and William F. Fox, Lawrence M. Kessler, Matthew C. Harris, Vickie C. Cunningham, and Mary Elizabeth Glenn. (2015). *An Economic Report to the Governor of the State of Tennessee*. University of Tennessee Center for Business and Economic Research. <http://cber.bus.utk.edu/erg/erg2015.pdf>
- Pallais, A. (2015). Small Differences That Matter: Mistakes in Applying to College. *Journal Of Labor Economics*, 33(2), 493-520.
- Smith, A. (2015). "Promise Provides Enrollment Boost." *Inside Higher Ed*. November 24, 2015.
- Smith, J. and K. Stange. (2015). A New Measure of College Quality to Study the Effects of College Sector and Peers on Degree Attainment. National Bureau of Economic Research Working Paper No. 21605.
- SDP *College-Going Diagnostic: Tennessee Department of Education* (2015). Strategic Data Project, Center for Education Policy Research, Harvard University.
- Tamburin, A. (2015). "College enrollment jumps under TN Promise." *The Tennessean*. September 12, 2015.
- Tennessee Higher Education Fact Book: 2014-2015*. (2015). Tennessee Higher Education Commission.

APPENDIX A: FORECAST DATA

In this section—

Appendix A: Forecast Data

Quarterly	pages 2–25 (2015:4 to 2018:1)
Annual	pages 26–40 (2015 to 2025)

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 (millions of 2009 dollars)	5
Table 4:	Tennessee Personal Income Components, Seasonally Adjusted Annual Rates (millions of current dollars)	6
Table 5:	Tennessee Nonfarm Employment by Sector, Not Seasonally Adjusted (thousands of jobs)	7
Table 6:	Tennessee Durable Goods Manufacturing Employment, Not Seasonally Adjusted (thousands of jobs)	8
Table 7:	Tennessee Nondurable Goods Manufacturing Employment, Not Seasonally Adjusted (thousands of jobs)	9
Table 8:	Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs)	10
Table 9:	Tennessee Durable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs)	12
Table 10:	Tennessee Nondurable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs)	13
Table 11:	Tennessee Average Annual Wage and Salary Rate by Sector, Not Seasonally Adjusted (2009 dollars)	14
Table 12:	Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (2009 dollars)	15
Table 13:	Tennessee Average Annual Wage and Salary Rate by Sector, Not Seasonally Adjusted (current dollars)	17
Table 14:	Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (current dollars)	18
Table 15:	Tennessee Civilian Labor Force and Unemployment Rate, Not Seasonally Adjusted	20
Table 16:	Tennessee Civilian Labor Force and Unemployment Rate, Seasonally Adjusted	21
Table 17:	Tennessee Taxable Sales, Not Seasonally Adjusted (millions of 2009 dollars)	22
Table 18:	Tennessee Taxable Sales, Seasonally Adjusted (millions of 2009 dollars)	23
Table 19:	Tennessee Taxable Sales, Not Seasonally Adjusted (millions of current dollars)	24
Table 20:	Tennessee Taxable Sales, Seasonally Adjusted (millions of current dollars)	25

Annual Forecast Tables

Table 1:	Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted	26
Table 2:	Selected Per Capita U.S. and Tennessee Economic Indicators	27
Table 3:	Tennessee Personal Income Components (millions of 2009 dollars)	28
Table 4:	Tennessee Personal Income Components (millions of current dollars)	29
Table 5:	Tennessee Nonfarm Employment by Sector (thousands of jobs)	30
Table 6:	Tennessee Durable Goods Manufacturing Employment (thousands of jobs)	31
Table 7:	Tennessee Nondurable Goods Manufacturing Employment (thousands of jobs)	32
Table 8:	Tennessee Average Annual Wage and Salary Rate by Sector (2009 dollars)	33
Table 9:	Tennessee Average Annual Wage and Salary Rate by Sector (current dollars)	34
Table 10:	Tennessee Civilian Labor Force and Unemployment Rate	35
Table 11:	Tennessee Taxable Sales (millions of 2009 dollars)	36
Table 12:	Tennessee Taxable Sales (millions of current dollars)	37
Table 13:	Tennessee Gross Domestic Product by Sector (millions of 2009 dollars)	38
Table 14:	Tennessee Gross Domestic Product by Sector (millions of current dollars)	40

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

January 2016

	History		Forecast Data									Annual			
	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
US GDP (Bil2009\$) SAAR.....	16414.0	16462.5	16586.4	16708.4	16844.5	16983.1	17096.3	17225.3	17338.9	17437.6	17567.0	15961.7	16346.8	16780.6	17274.5
% Chg Prev Qtr SAAR.....	1.98	1.19	3.04	2.98	3.30	3.33	2.69	3.05	2.66	2.30	3.00	2.43	2.41	2.65	2.94
% Chg Same Qtr Last Yr.....	2.15	1.93	2.53	2.29	2.62	3.16	3.07	3.09	2.94	2.68	2.75	2.43	2.41	2.65	2.94
US GDP (Bil\$) SAAR.....	18060.2	18181.2	18391.4	18614.9	18860.4	19106.9	19318.4	19560.9	19794.5	20000.1	20259.9	17348.1	17951.1	18743.4	19668.4
% Chg Prev Qtr SAAR.....	3.31	2.71	4.70	4.95	5.38	5.33	4.50	5.12	4.86	4.22	5.30	4.11	3.48	4.41	4.94
% Chg Same Qtr Last Yr.....	3.07	3.21	4.20	3.91	4.43	5.09	5.04	5.08	4.95	4.67	4.87	4.11	3.48	4.41	4.94
TN PERSONAL INCOME (MIL2009\$) SAAR...	254215	257680	260384	262090	263075	264591	266717	268147	269586	271585	273120	242848	253482	262535	269009
% Chg Prev Qtr SAAR.....	2.55	5.56	4.26	2.65	1.51	2.33	3.25	2.16	2.16	3.00	2.28	2.28	4.38	3.57	2.47
% Chg Same Qtr Last Yr.....	4.58	4.56	4.40	3.75	3.48	2.68	2.43	2.31	2.48	2.64	2.40	2.28	4.38	3.57	2.47
US PERSONAL INCOME (BIL2009\$) SAAR....	14095	14224	14360	14435	14500	14604	14759	14879	14976	15100	15230	13468	14036	14475	14929
% Chg Prev Qtr SAAR.....	3.76	3.73	3.88	2.10	1.80	2.90	4.33	3.28	2.65	3.35	3.49	2.98	4.22	3.12	3.14
% Chg Same Qtr Last Yr.....	4.41	3.98	3.61	3.36	2.87	2.67	2.78	3.07	3.29	3.40	3.19	2.98	4.22	3.12	3.14
TN PERSONAL INCOME (MIL\$) SAAR.....	278958	282614	285656	288832	292132	295513	298903	302294	305795	309386	312604	264965	277316	290533	304095
% Chg Prev Qtr SAAR.....	3.84	5.35	4.37	4.52	4.65	4.71	4.67	4.62	4.71	4.78	4.22	3.74	4.66	4.77	4.67
% Chg Same Qtr Last Yr.....	4.85	4.89	5.27	4.52	4.72	4.56	4.64	4.66	4.68	4.69	4.58	3.74	4.66	4.77	4.67
US PERSONAL INCOME (BIL\$) SAAR.....	15468	15614	15750	15894	16073	16276	16502	16722	16933	17145	17390	14694	15360	15998	16825
% Chg Prev Qtr SAAR.....	5.09	3.84	3.52	3.70	4.59	5.14	5.67	5.45	5.14	5.10	5.84	4.45	4.53	4.16	5.17
% Chg Same Qtr Last Yr.....	4.69	4.40	4.44	4.04	3.91	4.24	4.77	5.21	5.35	5.34	5.38	4.45	4.53	4.16	5.17
TN NONFARM JOBS (THOUS).....	2874.9	2900.1	2906.8	2914.1	2921.4	2929.6	2940.2	2950.6	2961.5	2972.7	2982.4	2816.1	2870.7	2918.0	2956.2
% Chg Prev Qtr SAAR.....	1.97	3.57	0.92	1.01	1.01	1.13	1.45	1.42	1.49	1.53	1.30	2.08	1.94	1.65	1.31
% Chg Same Qtr Last Yr.....	1.79	2.00	2.10	1.85	1.62	1.02	1.15	1.25	1.37	1.47	1.43	2.08	1.94	1.65	1.31
US NONFARM JOBS (MIL).....	142.2	142.9	143.6	144.1	144.6	145.1	145.6	145.9	146.4	146.8	147.2	139.0	141.9	144.3	146.2
% Chg Prev Qtr SAAR.....	1.77	1.86	1.87	1.45	1.39	1.32	1.42	1.01	1.20	1.28	1.14	1.93	2.10	1.67	1.29
% Chg Same Qtr Last Yr.....	2.05	1.90	1.81	1.74	1.64	1.51	1.39	1.28	1.24	1.23	1.16	1.93	2.10	1.67	1.29
TN MFG JOBS (THOUS).....	331.5	332.7	333.0	333.4	334.0	334.7	335.3	335.8	336.4	337.0	337.6	325.2	331.5	333.7	336.1
% Chg Prev Qtr SAAR.....	1.00	1.53	0.37	0.41	0.71	0.85	0.73	0.68	0.62	0.80	0.70	2.13	1.93	0.68	0.71
% Chg Same Qtr Last Yr.....	1.74	1.17	0.60	0.78	0.75	0.58	0.67	0.74	0.72	0.71	0.70	2.13	1.93	0.68	0.71
US MFG JOBS (MIL).....	12.3	12.3	12.3	12.3	12.3	12.4	12.4	12.4	12.4	12.5	12.5	12.2	12.3	12.3	12.4
% Chg Prev Qtr SAAR.....	-0.05	-0.41	-0.51	-0.40	0.10	1.94	1.36	-0.02	0.80	1.11	0.71	1.41	1.12	-0.14	0.85
% Chg Same Qtr Last Yr.....	1.04	0.35	-0.17	-0.34	-0.31	0.28	0.74	0.84	1.02	0.81	0.65	1.41	1.12	-0.14	0.85
TN UNEMPLOYMENT RATE (%).....	5.7	5.6	5.6	5.6	5.5	5.5	5.5	5.4	5.4	5.4	5.4	6.6	5.9	5.5	5.4
US UNEMPLOYMENT RATE (%).....	5.2	5.0	5.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	6.2	5.3	4.9	4.9

(CONTINUED ON NEXT PAGE)

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

January 2016

	History		Forecast Data									Annual			
	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
CHAINED PRICE INDEX, GDP															
(2009=100.0).....	110.0	110.4	110.9	111.4	112.0	112.5	113.0	113.6	114.2	114.7	115.3	108.7	109.8	111.7	113.9
% Chg Prev Qtr SAAR.....	1.32	1.44	1.61	1.92	2.02	1.93	1.76	2.00	2.14	1.88	2.23	1.64	1.04	1.70	1.94
% Chg Same Qtr Last Yr.....	0.91	1.25	1.62	1.57	1.75	1.87	1.91	1.93	1.96	1.95	2.06	1.64	1.04	1.70	1.94
US PERS CONSUMP DEFL (2009=100.0).....	109.7	109.8	109.7	110.1	110.9	111.5	111.8	112.4	113.1	113.5	114.2	109.1	109.4	110.5	112.7
% Chg Prev Qtr SAAR.....	1.28	0.11	-0.34	1.57	2.75	2.18	1.28	2.10	2.43	1.69	2.28	1.43	0.29	1.00	1.97
% Chg Same Qtr Last Yr.....	0.27	0.41	0.81	0.65	1.01	1.53	1.94	2.08	2.00	1.87	2.12	1.43	0.29	1.00	1.97
CONSUMER PRICE INDEX,															
ALL-URBAN (82-84=1.000).....	2.379	2.381	2.374	2.386	2.409	2.427	2.435	2.452	2.471	2.483	2.501	2.367	2.370	2.399	2.460
% Chg Prev Qtr SAAR.....	1.58	0.33	-1.09	1.95	4.03	2.94	1.44	2.69	3.24	1.98	2.95	1.61	0.13	1.21	2.56
% Chg Same Qtr Last Yr.....	0.14	0.43	0.94	0.68	1.28	1.94	2.58	2.77	2.57	2.33	2.71	1.61	0.13	1.21	2.56
BANK PRIME INTEREST RATE (%).....	3.3	3.3	3.5	3.8	4.0	4.3	4.5	4.8	5.0	5.3	5.5	3.3	3.3	3.9	4.9
FEDERAL FUNDS RATE (% per annum).....	0.137	0.152	0.483	0.787	1.037	1.290	1.533	1.787	2.037	2.290	2.533	0.089	0.131	0.899	1.912
30-YEAR FIXED MORTGAGE RATE (%).....	4.0	3.9	4.2	4.4	4.5	4.6	4.7	4.7	4.8	4.9	5.0	4.2	3.9	4.4	4.7
TN TAXABLE SALES (MIL2009\$).....	26228	26353	26392	26580	26635	26708	26795	26878	26954	27127	27230	97036	102746	106315	107755
% Chg Prev Qtr SAAR.....	9.46	1.91	0.59	2.88	0.83	1.10	1.31	1.24	1.14	2.59	1.52	3.41	5.88	3.47	1.35
% Chg Same Qtr Last Yr.....	7.21	5.48	7.62	3.66	1.55	1.35	1.53	1.12	1.20	1.57	1.62	3.41	5.88	3.47	1.35
TN TAXABLE SALES (MIL\$).....	28781	28903	28953	29292	29577	29829	30028	30301	30575	30903	31167	105877	112414	117652	121807
% Chg Prev Qtr SAAR.....	10.84	1.70	0.70	4.76	3.95	3.45	2.70	3.67	3.67	4.37	3.45	4.89	6.17	4.66	3.53
% Chg Same Qtr Last Yr.....	7.49	5.82	8.52	4.43	2.77	3.20	3.71	3.44	3.37	3.60	3.79	4.89	6.17	4.66	3.53
TN AVG ANNUAL WAGE, NONFARM															
(2009\$).....	43269	43666	43973	44087	44059	44111	44274	44313	44347	44461	44544	41961	43161	44058	44349
% Chg Prev Qtr SAAR.....	-0.11	3.72	2.85	1.04	-0.26	0.48	1.48	0.35	0.30	1.04	0.75	1.18	2.86	2.08	0.66
% Chg Same Qtr Last Yr.....	3.46	3.10	3.64	1.86	1.82	1.02	0.68	0.51	0.65	0.79	0.61	1.18	2.86	2.08	0.66
TN AVG ANNUAL WAGE, NONFARM (\$)......	47481	47891	48241	48586	48925	49266	49616	49956	50303	50649	50984	45782	47219	48755	50131
% Chg Prev Qtr SAAR.....	1.14	3.50	2.96	2.89	2.82	2.82	2.87	2.77	2.81	2.78	2.67	2.62	3.14	3.25	2.82
% Chg Same Qtr Last Yr.....	3.73	3.44	4.51	2.62	3.04	2.87	2.85	2.82	2.82	2.81	2.76	2.62	3.14	3.25	2.82

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

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

January 2016

	History		Forecast Data										Annual			
	2015:2	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
US GDP (2009\$) SAAR.....	50798	50944	50990	51270	51542	51857	52178	52420	52709	52950	53145	53432	49964	50787	51712	52807
% Chg Prev Qtr SAAR.....	3.08	1.16	0.37	2.21	2.14	2.46	2.50	1.87	2.23	1.84	1.48	2.18	1.68	1.65	1.82	2.12
% Chg Same Qtr Last Yr.....	1.95	1.39	1.14	1.70	1.47	1.79	2.33	2.24	2.26	2.11	1.85	1.93	1.68	1.65	1.82	2.12
US GDP (\$) SAAR.....	55712	56053	56314	56849	57423	58063	58703	59233	59856	60449	60954	61623	54304	55771	57761	60125
% Chg Prev Qtr SAAR.....	5.27	2.47	1.87	3.86	4.10	4.53	4.48	3.66	4.27	4.02	3.39	4.46	3.35	2.70	3.57	4.09
% Chg Same Qtr Last Yr.....	2.95	2.31	2.41	3.36	3.07	3.59	4.24	4.19	4.24	4.11	3.84	4.03	3.35	2.70	3.57	4.09
TN PERSONAL INCOME (2009\$) SAAR....	37949	38089	38509	38812	38966	39013	39137	39352	39462	39574	39767	39892	36816	38028	38982	39539
% Chg Prev Qtr SAAR.....	4.14	1.49	4.47	3.19	1.60	0.47	1.28	2.21	1.13	1.14	1.96	1.26	1.20	3.29	2.51	1.43
% Chg Same Qtr Last Yr.....	3.39	3.49	3.47	3.32	2.68	2.42	1.63	1.39	1.27	1.44	1.61	1.37	1.20	3.29	2.51	1.43
US PERSONAL INCOME (2009\$) SAAR....	43433	43746	44058	44389	44530	44638	44868	45254	45529	45735	46021	46324	42157	43609	44607	45635
% Chg Prev Qtr SAAR.....	2.22	2.92	2.89	3.04	1.27	0.97	2.07	3.49	2.45	1.83	2.52	2.66	2.23	3.44	2.29	2.31
% Chg Same Qtr Last Yr.....	3.50	3.63	3.18	2.76	2.53	2.04	1.84	1.95	2.24	2.46	2.57	2.36	2.23	3.44	2.29	2.31
TN PERSONAL INCOME (\$) SAAR.....	41512	41797	42235	42579	42942	43322	43711	44100	44488	44889	45302	45659	40168	41603	43139	44695
% Chg Prev Qtr SAAR.....	6.44	2.77	4.26	3.30	3.45	3.58	3.64	3.61	3.56	3.66	3.73	3.19	2.65	3.57	3.69	3.61
% Chg Same Qtr Last Yr.....	3.65	3.77	3.81	4.18	3.44	3.65	3.50	3.57	3.60	3.62	3.64	3.53	2.65	3.57	3.69	3.61
US PERSONAL INCOME (\$) SAAR.....	47512	48007	48363	48684	49029	49482	50005	50597	51169	51711	52252	52893	45996	47720	49301	51434
% Chg Prev Qtr SAAR.....	4.48	4.24	3.00	2.69	2.87	3.75	4.29	4.82	4.60	4.30	4.26	5.00	3.69	3.75	3.31	4.33
% Chg Same Qtr Last Yr.....	3.76	3.91	3.60	3.60	3.19	3.07	3.40	3.93	4.37	4.50	4.49	4.54	3.69	3.75	3.31	4.33
TN TAXABLE SALES (2009\$).....	3852	3930	3938	3934	3952	3950	3951	3953	3956	3957	3972	3977	14710	15414	15786	15838
% Chg Prev Qtr SAAR.....	18.31	8.33	0.86	-0.44	1.83	-0.20	0.07	0.29	0.22	0.13	1.56	0.51	2.32	4.78	2.42	0.33
% Chg Same Qtr Last Yr.....	6.59	6.09	4.38	6.51	2.59	0.51	0.31	0.49	0.09	0.17	0.55	0.60	2.32	4.78	2.42	0.33
TN TAXABLE SALES (\$).....	4214	4312	4319	4316	4355	4386	4412	4430	4459	4488	4525	4552	16050	16864	17469	17903
% Chg Prev Qtr SAAR.....	20.93	9.69	0.65	-0.33	3.69	2.89	2.40	1.66	2.63	2.63	3.32	2.42	3.78	5.07	3.59	2.48
% Chg Same Qtr Last Yr.....	6.86	6.38	4.72	7.40	3.35	1.71	2.15	2.66	2.39	2.33	2.56	2.75	3.78	5.07	3.59	2.48

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 3: Tennessee Personal Income Components, Seasonally Adjusted Annual Rates (millions of 2009 dollars)

January 2016

	History		Forecast Data										Annual			
	2015:2	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
TN PERSONAL INCOME.....	252618	254215	257680	260384	262090	263075	264591	266717	268147	269586	271585	273120	242848	253482	262535	269009
% Chg Prev Qtr SAAR.....	5.23	2.55	5.56	4.26	2.65	1.51	2.33	3.25	2.16	2.16	3.00	2.28	2.28	4.38	3.57	2.47
% Chg Same Qtr Last Yr.....	4.47	4.58	4.56	4.40	3.75	3.48	2.68	2.43	2.31	2.48	2.64	2.40	2.28	4.38	3.57	2.47
WAGES AND SALARIES.....	124682	125258	126977	128451	129300	129704	130334	131279	131841	132409	133239	133940	119019	124639	129447	132192
% Chg Prev Qtr SAAR.....	10.39	1.86	5.60	4.73	2.67	1.25	1.96	2.93	1.72	1.74	2.53	2.12	3.26	4.72	3.86	2.12
% Chg Same Qtr Last Yr.....	5.48	5.29	4.71	5.60	3.70	3.55	2.64	2.20	1.97	2.09	2.23	2.03	3.26	4.72	3.86	2.12
OTHER LABOR INCOME.....	27756	27846	28123	28407	28563	28654	28811	29041	29208	29365	29561	29715	27148	27759	28609	29294
% Chg Prev Qtr SAAR.....	6.70	1.30	4.04	4.10	2.21	1.28	2.21	3.23	2.32	2.16	2.70	2.10	-2.03	2.25	3.06	2.39
% Chg Same Qtr Last Yr.....	2.38	3.13	3.42	4.02	2.91	2.90	2.44	2.23	2.26	2.48	2.60	2.32	-2.03	2.25	3.06	2.39
PROPRIETORS INCOME.....	33497	33913	34440	34721	35009	35158	35347	35655	35796	36004	36351	36635	32225	33781	35059	35952
% Chg Prev Qtr SAAR.....	2.70	5.07	6.35	3.31	3.37	1.71	2.17	3.53	1.59	2.34	3.91	3.17	4.11	4.83	3.78	2.55
% Chg Same Qtr Last Yr.....	4.11	4.93	4.69	4.35	4.52	3.67	2.63	2.69	2.25	2.41	2.84	2.75	4.11	4.83	3.78	2.55
RENT, INTEREST, DIVIDENDS.....	35625	35876	36259	36619	36802	36926	37203	37574	37857	38109	38441	38738	34428	35754	36888	37995
% Chg Prev Qtr SAAR.....	4.24	2.84	4.34	4.03	2.02	1.36	3.03	4.04	3.05	2.69	3.53	3.13	2.64	3.85	3.17	3.00
% Chg Same Qtr Last Yr.....	3.64	4.16	4.19	3.86	3.30	2.93	2.60	2.61	2.87	3.20	3.33	3.10	2.64	3.85	3.17	3.00
TRANSFER PAYMENTS.....	52135	52411	53076	53500	53742	53907	54151	54482	54732	54944	55241	55415	50249	52529	53825	54850
% Chg Prev Qtr SAAR.....	-2.71	2.14	5.18	3.23	1.82	1.24	1.82	2.46	1.85	1.56	2.18	1.26	0.91	4.54	2.47	1.90
% Chg Same Qtr Last Yr.....	4.14	3.72	4.53	1.92	3.08	2.86	2.02	1.83	1.84	1.92	2.01	1.71	0.91	4.54	2.47	1.90
LESS: PERS CONT FOR SOC INS...	19797	19829	19936	20054	20071	20028	20013	20075	20056	20020	20027	20107	19059	19736	20042	20045
% Chg Prev Qtr SAAR.....	8.83	0.66	2.16	2.40	0.34	-0.85	-0.29	1.24	-0.37	-0.73	0.14	1.62	2.52	3.55	1.55	0.01
% Chg Same Qtr Last Yr.....	4.39	4.29	3.30	3.47	1.39	1.00	0.39	0.10	-0.07	-0.04	0.07	0.16	2.52	3.55	1.55	0.01
RESIDENCE ADJUSTMENT.....	-1280	-1259	-1259	-1260	-1255	-1247	-1241	-1238	-1231	-1225	-1221	-1216	-1163	-1243	-1251	-1229
% Chg Prev Qtr SAAR.....	40.83	-6.30	-0.01	0.18	-1.45	-2.67	-1.96	-0.99	-2.00	-2.05	-1.30	-1.67	-5.89	6.94	0.58	-1.75
% Chg Same Qtr Last Yr.....	10.80	9.00	6.60	7.22	-1.93	-0.99	-1.48	-1.77	-1.91	-1.75	-1.58	-1.75	-5.89	6.94	0.58	-1.75
PER CAPITA PERSONAL INCOME (\$)...	37949	38089	38509	38812	38966	39013	39137	39352	39462	39574	39767	39892	36816	38028	38982	39539
% Chg Prev Qtr SAAR.....	4.14	1.49	4.47	3.19	1.60	0.47	1.28	2.21	1.13	1.14	1.96	1.26	1.20	3.29	2.51	1.43
% Chg Same Qtr Last Yr.....	3.39	3.49	3.47	3.32	2.68	2.42	1.63	1.39	1.27	1.44	1.61	1.37	1.20	3.29	2.51	1.43

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 4: Tennessee Personal Income Components, Seasonally Adjusted Annual Rates (millions of current dollars)**January 2016**

	History		Forecast Data										Annual			
	2015:2	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
TN PERSONAL INCOME.....	276341	278958	282614	285656	288832	292132	295513	298903	302294	305795	309386	312604	264965	277316	290533	304095
% Chg Prev Qtr SAAR.....	7.56	3.84	5.35	4.37	4.52	4.65	4.71	4.67	4.62	4.71	4.78	4.22	3.74	4.66	4.77	4.67
% Chg Same Qtr Last Yr.....	4.74	4.85	4.89	5.27	4.52	4.72	4.56	4.64	4.66	4.68	4.69	4.58	3.74	4.66	4.77	4.67
WAGES AND SALARIES.....	136391	137449	139264	140918	142493	144030	145565	147121	148630	150194	151784	153303	129859	136360	143252	149432
% Chg Prev Qtr SAAR.....	12.83	3.14	5.38	4.84	4.55	4.38	4.33	4.34	4.17	4.27	4.30	4.06	4.73	5.01	5.05	4.31
% Chg Same Qtr Last Yr.....	5.75	5.57	5.05	6.48	4.47	4.79	4.52	4.40	4.31	4.28	4.27	4.20	4.73	5.01	5.05	4.31
OTHER LABOR INCOME.....	30362	30556	30845	31164	31477	31819	32178	32545	32928	33309	33676	34011	29620	30369	31659	33114
% Chg Prev Qtr SAAR.....	9.05	2.58	3.83	4.21	4.08	4.41	4.59	4.65	4.78	4.71	4.48	4.04	-0.63	2.53	4.25	4.60
% Chg Same Qtr Last Yr.....	2.64	3.40	3.75	4.89	3.67	4.13	4.32	4.43	4.61	4.68	4.65	4.50	-0.63	2.53	4.25	4.60
PROPRIETORS INCOME.....	36642	37214	37772	38091	38581	39041	39478	39958	40355	40840	41411	41932	35161	36957	38798	40641
% Chg Prev Qtr SAAR.....	4.97	6.39	6.13	3.42	5.25	4.85	4.55	4.95	4.03	4.90	5.71	5.13	5.60	5.11	4.98	4.75
% Chg Same Qtr Last Yr.....	4.38	5.21	5.03	5.22	5.29	4.91	4.52	4.90	4.60	4.61	4.90	4.94	5.60	5.11	4.98	4.75
RENT, INTEREST, DIVIDENDS.....	38971	39368	39768	40173	40557	41005	41551	42108	42678	43228	43791	44338	37563	39116	40822	42951
% Chg Prev Qtr SAAR.....	6.55	4.13	4.13	4.14	3.88	4.49	5.43	5.47	5.53	5.25	5.32	5.09	4.10	4.13	4.36	5.22
% Chg Same Qtr Last Yr.....	3.90	4.44	4.53	4.73	4.07	4.16	4.48	4.82	5.23	5.42	5.39	5.30	4.10	4.13	4.36	5.22
TRANSFER PAYMENTS.....	57031	57512	58212	58692	59225	59862	60479	61056	61702	62323	62930	63426	54826	57466	59565	62003
% Chg Prev Qtr SAAR.....	-0.56	3.42	4.96	3.34	3.68	4.37	4.19	3.87	4.30	4.09	3.95	3.19	2.35	4.82	3.65	4.09
% Chg Same Qtr Last Yr.....	4.40	3.99	4.87	2.77	3.85	4.09	3.89	4.03	4.18	4.11	4.05	3.88	2.35	4.82	3.65	4.09
LESS: PERS CONT FOR SOC INS.....	21656	21759	21865	22001	22119	22240	22352	22498	22611	22709	22814	23014	20795	21592	22178	22658
% Chg Prev Qtr SAAR.....	11.23	1.93	1.95	2.51	2.17	2.21	2.03	2.63	2.02	1.75	1.87	3.55	3.98	3.83	2.72	2.16
% Chg Same Qtr Last Yr.....	4.65	4.57	3.63	4.33	2.14	2.21	2.23	2.26	2.22	2.11	2.07	2.29	3.98	3.83	2.72	2.16
RESIDENCE ADJUSTMENT.....	-1400	-1382	-1381	-1382	-1383	-1384	-1386	-1387	-1388	-1389	-1391	-1392	-1268	-1360	-1384	-1389
% Chg Prev Qtr SAAR.....	43.94	-5.12	-0.22	0.29	0.35	0.34	0.32	0.37	0.35	0.40	0.41	0.20	-4.55	7.24	1.73	0.36
% Chg Same Qtr Last Yr.....	11.08	9.29	6.95	8.12	-1.20	0.19	0.33	0.34	0.35	0.36	0.38	0.34	-4.55	7.24	1.73	0.36
PER CAPITA PERSONAL INCOME (\$).	41512	41797	42235	42579	42942	43322	43711	44100	44488	44889	45302	45659	40168	41603	43139	44695
% Chg Prev Qtr SAAR.....	6.44	2.77	4.26	3.30	3.45	3.58	3.64	3.61	3.56	3.66	3.73	3.19	2.65	3.57	3.69	3.61
% Chg Same Qtr Last Yr.....	3.65	3.77	3.81	4.18	3.44	3.65	3.50	3.57	3.60	3.62	3.64	3.53	2.65	3.57	3.69	3.61

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 5: Tennessee Nonfarm Employment by Sector, Not Seasonally Adjusted (thousands of jobs)

January 2016

	History		Forecast Data									Annual			
	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
TOTAL NONFARM.....	2869.0	2927.8	2881.0	2919.4	2915.6	2957.6	2914.0	2956.0	2955.7	3001.1	2955.6	2815.4	2871.3	2918.4	2956.7
% Chg Same Qtr Last Yr.....	1.90	2.01	2.09	1.86	1.62	1.02	1.14	1.25	1.38	1.47	1.43	2.05	1.98	1.64	1.31
NATURAL RESOURCES, MINING & CONSTRUCTION..	115.7	117.1	111.8	118.0	120.8	120.2	115.0	121.5	124.5	123.9	118.3	111.0	114.6	117.7	121.2
% Chg Same Qtr Last Yr.....	2.21	1.91	1.10	2.39	4.43	2.62	2.92	2.99	3.05	3.11	2.84	2.92	3.26	2.66	3.02
MANUFACTURING.....	331.6	333.8	332.1	333.1	334.0	335.8	334.3	335.6	336.4	338.2	336.7	325.2	331.5	333.8	336.1
% Chg Same Qtr Last Yr.....	1.71	1.21	0.60	0.77	0.75	0.59	0.68	0.74	0.71	0.71	0.70	2.14	1.93	0.68	0.71
DURABLE GOODS.....	211.8	213.4	213.1	214.2	215.1	216.8	216.4	217.7	218.3	220.0	219.6	205.5	211.7	214.8	218.1
% Chg Same Qtr Last Yr.....	2.97	1.89	1.40	1.35	1.56	1.58	1.56	1.59	1.51	1.46	1.49	3.36	2.99	1.47	1.53
NONDURABLE GOODS.....	119.8	120.4	119.0	118.9	119.0	119.0	117.9	117.9	118.1	118.2	117.0	119.7	119.8	119.0	118.0
% Chg Same Qtr Last Yr.....	-0.44	0.03	-0.80	-0.25	-0.68	-1.17	-0.91	-0.81	-0.72	-0.67	-0.75	0.10	0.10	-0.73	-0.77
TRADE, TRANSPORTATION, UTILITIES.....	610.0	624.6	609.7	618.1	618.6	629.7	615.4	624.4	625.9	637.5	622.9	591.6	607.6	619.0	625.8
% Chg Same Qtr Last Yr.....	2.95	3.07	2.82	2.52	1.41	0.81	0.93	1.02	1.17	1.24	1.22	1.64	2.70	1.87	1.09
WHOLESALE TRADE.....	127.8	130.1	129.0	130.2	130.5	130.4	129.5	131.0	131.6	131.7	130.8	123.3	127.0	130.0	131.0
% Chg Same Qtr Last Yr.....	3.20	4.41	3.86	3.54	2.16	0.21	0.40	0.59	0.82	0.99	0.96	1.18	3.01	2.42	0.70
RETAIL TRADE.....	328.4	337.3	326.6	332.4	332.3	340.2	329.8	335.6	335.9	343.9	333.1	320.5	327.9	332.9	336.3
% Chg Same Qtr Last Yr.....	2.56	2.59	2.30	1.77	1.19	0.86	0.95	0.97	1.08	1.09	1.02	1.76	2.32	1.52	1.03
TRANSPORTATION & UTILITIES.....	153.8	157.2	154.0	155.5	155.8	159.1	156.1	157.8	158.3	161.9	159.0	147.9	152.8	156.1	158.5
% Chg Same Qtr Last Yr.....	3.59	3.01	3.09	3.27	1.25	1.21	1.33	1.46	1.66	1.78	1.86	1.76	3.28	2.19	1.56
INFORMATION.....	42.9	42.5	42.4	42.5	42.1	42.7	42.6	42.8	42.2	42.8	42.7	43.9	43.3	42.5	42.6
% Chg Same Qtr Last Yr.....	-2.06	-4.35	-3.91	-2.78	-1.70	0.46	0.48	0.47	0.21	0.27	0.21	-0.30	-1.37	-2.01	0.36
FINANCIAL ACTIVITIES.....	145.4	147.9	147.0	147.5	147.9	148.2	147.6	148.5	149.3	149.9	149.1	141.4	144.8	147.6	148.8
% Chg Same Qtr Last Yr.....	1.99	3.74	3.49	2.42	1.72	0.18	0.44	0.66	0.92	1.14	1.02	2.41	2.39	1.94	0.79
PROFESSIONAL & BUSINESS SERVICES.....	382.8	396.4	387.2	392.2	393.2	401.9	394.7	401.4	404.2	414.4	406.4	372.4	382.9	393.6	403.7
% Chg Same Qtr Last Yr.....	2.28	2.93	4.18	3.02	2.71	1.38	1.93	2.34	2.78	3.12	2.98	5.43	2.82	2.80	2.55
EDUCATION & HEALTH SERVICES.....	406.6	416.5	414.4	416.4	416.4	424.5	422.2	424.2	424.3	432.8	430.1	402.8	409.8	417.9	425.8
% Chg Same Qtr Last Yr.....	1.30	1.68	1.68	1.89	2.42	1.91	1.86	1.88	1.88	1.94	1.88	1.09	1.75	1.97	1.89
LEISURE & HOSPITALITY.....	316.7	307.5	299.8	320.5	321.5	312.9	305.3	326.6	327.5	318.6	310.8	296.3	305.9	313.7	319.5
% Chg Same Qtr Last Yr.....	3.44	3.63	4.23	2.73	1.51	1.76	1.84	1.89	1.89	1.84	1.79	3.64	3.25	2.53	1.87
OTHER SERVICES.....	105.4	104.2	103.2	105.2	103.6	102.6	101.5	103.6	102.5	102.1	101.5	105.9	104.8	103.6	102.4
% Chg Same Qtr Last Yr.....	-0.85	-0.86	-0.61	-0.57	-1.71	-1.53	-1.57	-1.52	-1.09	-0.56	-0.06	0.27	-1.00	-1.11	-1.19
GOVERNMENT.....	412.0	437.2	433.5	425.8	417.4	439.1	435.3	427.4	419.0	440.9	437.1	424.8	425.9	429.0	430.7
% Chg Same Qtr Last Yr.....	0.62	0.34	0.42	0.77	1.30	0.44	0.41	0.39	0.39	0.40	0.41	-0.07	0.26	0.73	0.40
FEDERAL, CIVILIAN.....	47.6	47.8	46.5	45.9	46.8	47.4	46.0	45.2	46.1	46.6	45.2	48.1	47.6	46.7	46.0
% Chg Same Qtr Last Yr.....	0.71	0.84	-1.74	-3.65	-1.53	-0.83	-1.17	-1.45	-1.54	-1.56	-1.63	-2.65	-1.16	-1.93	-1.43
STATE & LOCAL.....	364.4	389.4	387.0	379.9	370.6	391.8	389.4	382.2	372.9	394.3	391.9	376.6	378.3	382.3	384.7
% Chg Same Qtr Last Yr.....	0.61	0.27	0.70	1.34	1.68	0.60	0.61	0.62	0.62	0.64	0.66	0.27	0.44	1.07	0.62

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 6: Tennessee Durable Goods Manufacturing Employment, Not Seasonally Adjusted (thousands of jobs)**January 2016**

	History												Annual			
	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1		2014	2015	2016	2017
TOTAL DURABLE GOODS.....	211.8	213.4	213.1	214.2	215.1	216.8	216.4	217.7	218.3	220.0	219.6		205.5	211.7	214.8	218.1
% Chg Same Qtr Last Yr.....	2.97	1.89	1.40	1.35	1.56	1.58	1.56	1.59	1.51	1.46	1.49		3.36	2.99	1.47	1.53
WOOD PRODUCTS.....	11.8	11.8	11.6	11.8	12.0	12.0	11.8	12.0	12.2	12.1	11.9		11.2	11.6	11.8	12.0
% Chg Same Qtr Last Yr.....	3.22	2.92	2.23	1.82	1.87	1.68	1.66	1.60	1.51	1.44	1.43		3.45	3.41	1.90	1.55
NONMETALLIC MINERAL PRODUCTS.....	11.7	11.7	11.5	11.6	11.7	11.6	11.4	11.5	11.5	11.5	11.3		11.9	11.7	11.6	11.5
% Chg Same Qtr Last Yr.....	-2.49	-1.68	-1.37	-0.85	-0.61	-1.10	-0.99	-1.00	-0.99	-0.90	-0.83		-1.92	-1.68	-0.98	-0.97
PRIMARY METALS.....	10.2	10.4	10.3	10.4	10.4	10.4	10.4	10.4	10.4	10.5	10.5		10.1	10.3	10.4	10.4
% Chg Same Qtr Last Yr.....	1.32	2.30	1.29	1.26	1.34	0.41	0.50	0.57	0.67	0.83	0.87		1.00	1.90	1.07	0.64
FABRICATED METAL PRODUCTS.....	35.1	35.1	35.1	35.3	35.2	35.4	35.4	35.5	35.4	35.5	35.4		34.4	35.2	35.3	35.4
% Chg Same Qtr Last Yr.....	2.13	1.35	-0.56	0.45	0.29	0.98	0.86	0.53	0.46	0.03	0.02		1.35	2.28	0.29	0.47
MACHINERY.....	26.2	25.7	26.2	26.4	26.0	25.9	26.5	26.6	26.3	26.2	26.8		25.7	26.2	26.1	26.4
% Chg Same Qtr Last Yr.....	2.21	-2.90	-0.45	-1.36	-0.56	0.88	0.96	1.02	1.05	1.13	1.21		1.41	1.98	-0.38	1.04
COMPUTER & ELECTRONIC PRODUCTS.....	5.1	5.2	5.1	5.1	5.1	5.0	5.0	5.0	4.9	4.9	4.9		5.0	5.1	5.1	5.0
% Chg Same Qtr Last Yr.....	1.99	3.33	2.73	1.46	-0.99	-2.94	-2.71	-2.66	-2.61	-2.57	-2.46		-3.67	1.16	0.04	-2.64
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS.....	20.0	20.1	20.0	20.1	20.4	20.4	20.3	20.4	20.6	20.7	20.6		19.4	19.9	20.2	20.5
% Chg Same Qtr Last Yr.....	2.39	2.55	1.44	1.75	2.00	1.48	1.38	1.31	1.22	1.52	1.52		4.49	2.58	1.67	1.36
TRANSPORTATION EQUIPMENT.....	67.4	69.1	68.9	69.1	70.0	71.8	71.5	71.8	72.5	74.3	74.0		64.0	67.5	70.0	72.5
% Chg Same Qtr Last Yr.....	5.76	4.38	3.70	3.36	3.91	3.85	3.68	3.90	3.63	3.47	3.61		7.55	5.39	3.71	3.67
FURNITURE.....	9.2	9.2	9.2	9.3	9.2	9.2	9.3	9.4	9.3	9.3	9.3		9.1	9.2	9.3	9.3
% Chg Same Qtr Last Yr.....	1.85	1.47	0.87	1.28	0.43	0.17	0.88	1.21	0.92	0.62	-0.04		3.52	1.38	0.68	0.91
MISCELLANEOUS DURABLE GOODS.....	15.1	15.2	15.0	15.1	15.1	15.0	14.9	15.0	15.1	15.0	14.9		14.7	15.1	15.1	15.0
% Chg Same Qtr Last Yr.....	1.34	1.34	0.54	0.20	0.23	-0.89	-0.70	-0.72	-0.43	-0.10	-0.13		1.26	2.38	0.02	-0.49

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 7: Tennessee Nondurable Goods Manufacturing Employment, Not Seasonally Adjusted (thousands of jobs)

January 2016

	History											Annual			
	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
TOTAL NONDURABLE GOODS.....	119.8	120.4	119.0	118.9	119.0	119.0	117.9	117.9	118.1	118.2	117.0	119.7	119.8	119.0	118.0
% Chg Same Qtr Last Yr.....	-0.44	0.03	-0.80	-0.25	-0.68	-1.17	-0.91	-0.81	-0.72	-0.67	-0.75	0.10	0.10	-0.73	-0.77
FOOD.....	33.0	33.1	32.8	32.7	33.0	33.2	32.8	32.8	33.1	33.2	32.9	32.7	32.9	32.9	33.0
% Chg Same Qtr Last Yr.....	0.41	0.20	0.05	0.31	0.04	0.09	0.12	0.11	0.12	0.12	0.09	0.95	0.54	0.12	0.12
BEVERAGE & TOBACCO.....	5.5	5.5	5.4	5.5	5.5	5.4	5.4	5.4	5.4	5.4	5.3	5.4	5.5	5.5	5.4
% Chg Same Qtr Last Yr.....	0.00	1.85	0.90	0.67	0.02	-1.37	-1.14	-1.05	-0.94	-0.83	-0.85	1.88	0.77	0.05	-0.99
TEXTILE MILLS, TEXTILE MILL															
PRODUCTS & APPAREL.....	9.6	9.6	9.3	9.2	9.2	9.1	8.8	8.8	8.7	8.6	8.4	10.0	9.6	9.2	8.7
% Chg Same Qtr Last Yr.....	-3.68	-2.71	-3.44	-3.59	-4.21	-5.12	-4.80	-4.93	-5.09	-5.17	-5.25	-4.54	-4.09	-4.09	-5.00
PAPER.....	14.4	14.3	13.9	14.0	14.1	13.8	13.6	13.7	13.7	13.5	13.3	14.6	14.3	14.0	13.6
% Chg Same Qtr Last Yr.....	-2.92	-2.06	-2.01	-1.68	-2.34	-3.09	-2.74	-2.51	-2.28	-2.05	-2.07	-0.51	-2.22	-2.28	-2.39
PRINTING & RELATED SUPPORT.....	9.0	8.9	8.8	8.9	8.8	8.8	8.8	8.8	8.7	8.8	8.7	9.4	9.0	8.8	8.8
% Chg Same Qtr Last Yr.....	-4.61	-4.63	-3.88	-2.24	-1.79	-1.03	-0.43	-0.52	-0.65	-0.76	-1.43	-1.73	-4.32	-2.25	-0.59
CHEMICALS.....	25.3	25.3	25.1	25.0	25.0	24.9	24.8	24.7	24.7	24.6	24.5	25.3	25.2	25.0	24.7
% Chg Same Qtr Last Yr.....	-0.79	-0.39	-0.72	-0.59	-1.21	-1.57	-1.32	-1.16	-0.99	-0.90	-0.93	2.12	-0.39	-1.02	-1.09
PLASTICS & RUBBER.....	21.3	21.5	21.6	21.6	21.6	21.7	21.8	21.9	21.9	22.1	22.2	20.7	21.3	21.6	21.9
% Chg Same Qtr Last Yr.....	1.59	1.74	1.56	2.55	1.54	0.86	1.20	1.47	1.64	1.73	1.62	2.40	2.90	1.62	1.51
MISCELLANEOUS NONDURABLE GOODS....	1.8	2.2	2.0	2.0	1.9	2.1	1.9	1.9	1.8	2.0	1.8	1.5	2.1	2.0	1.9
% Chg Same Qtr Last Yr.....	30.95	36.73	-8.97	-1.72	2.50	-5.88	-5.70	-5.47	-5.62	-5.78	-6.18	-27.45	35.68	-3.84	-5.64

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 8: Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs)

January 2016

	History											Annual			
	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
TOTAL NONFARM.....	2874.8	2900.1	2906.8	2914.1	2921.4	2929.6	2940.2	2950.6	2961.5	2972.7	2982.4	2816.1	2870.7	2918.0	2956.2
% Chg Prev Qtr SAAR.....	1.94	3.57	0.92	1.01	1.01	1.13	1.45	1.42	1.49	1.53	1.30	2.08	1.94	1.65	1.31
% Chg Same Qtr Last Yr.....	1.79	2.00	2.10	1.85	1.62	1.02	1.15	1.25	1.37	1.47	1.43	2.08	1.94	1.65	1.31
NATURAL RESOURCES, MINING AND CONSTRUCTION.....	112.9	115.7	116.3	117.1	117.9	118.8	119.7	120.6	121.5	122.5	123.1	110.9	114.5	117.5	121.0
% Chg Prev Qtr SAAR.....	-5.03	10.55	1.87	2.78	2.76	3.09	3.07	3.04	3.02	3.33	1.97	2.87	3.20	2.63	3.02
% Chg Same Qtr Last Yr.....	2.08	1.91	1.10	2.39	4.43	2.62	2.92	2.99	3.05	3.11	2.84	2.87	3.20	2.63	3.02
MANUFACTURING.....	331.5	332.7	333.0	333.4	334.0	334.7	335.3	335.8	336.4	337.0	337.6	325.2	331.5	333.7	336.1
% Chg Prev Qtr SAAR.....	0.81	1.53	0.37	0.41	0.71	0.85	0.73	0.68	0.62	0.80	0.70	2.13	1.93	0.68	0.71
% Chg Same Qtr Last Yr.....	1.74	1.17	0.60	0.78	0.75	0.58	0.67	0.74	0.72	0.71	0.70	2.13	1.93	0.68	0.71
DURABLE GOODS.....	211.9	212.8	213.6	214.2	215.2	216.2	216.9	217.7	218.4	219.3	220.1	205.5	211.7	214.8	218.1
% Chg Prev Qtr SAAR.....	0.92	1.86	1.39	1.26	1.74	1.89	1.35	1.42	1.39	1.67	1.49	3.36	2.99	1.47	1.53
% Chg Same Qtr Last Yr.....	3.00	1.86	1.40	1.36	1.56	1.57	1.56	1.60	1.51	1.46	1.49	3.36	2.99	1.47	1.53
NONDURABLE GOODS.....	119.6	119.9	119.4	119.1	118.8	118.5	118.4	118.2	117.9	117.7	117.5	119.7	119.8	119.0	118.0
% Chg Prev Qtr SAAR.....	0.61	0.95	-1.42	-1.10	-1.11	-1.03	-0.40	-0.67	-0.78	-0.79	-0.76	0.09	0.10	-0.72	-0.77
% Chg Same Qtr Last Yr.....	-0.42	-0.02	-0.81	-0.25	-0.68	-1.17	-0.91	-0.80	-0.72	-0.66	-0.75	0.09	0.10	-0.72	-0.77
TRADE, TRANSPORTATION, UTILITIES.....	610.9	615.9	616.9	618.3	619.5	620.9	622.7	624.6	626.8	628.7	630.3	592.1	607.5	618.9	625.7
% Chg Prev Qtr SAAR.....	5.27	3.34	0.65	0.87	0.80	0.94	1.13	1.21	1.42	1.22	1.03	1.71	2.60	1.88	1.09
% Chg Same Qtr Last Yr.....	2.85	3.06	2.82	2.52	1.41	0.81	0.93	1.02	1.17	1.24	1.22	1.71	2.60	1.88	1.09
WHOLESALE TRADE.....	127.3	129.9	130.0	130.0	130.1	130.2	130.5	130.8	131.1	131.5	131.7	123.3	127.0	130.1	131.0
% Chg Prev Qtr SAAR.....	5.75	8.42	0.09	0.16	0.21	0.39	0.84	0.93	1.12	1.07	0.74	1.22	2.99	2.42	0.70
% Chg Same Qtr Last Yr.....	3.02	4.42	3.86	3.54	2.16	0.21	0.40	0.59	0.82	0.99	0.96	1.22	2.99	2.42	0.70
RETAIL TRADE.....	329.3	331.1	331.7	332.5	333.2	334.0	334.8	335.7	336.8	337.6	338.3	320.8	327.8	332.8	336.3
% Chg Prev Qtr SAAR.....	3.22	2.25	0.67	0.98	0.87	0.94	1.02	1.07	1.30	0.98	0.73	1.86	2.19	1.53	1.03
% Chg Same Qtr Last Yr.....	2.31	2.56	2.30	1.77	1.19	0.86	0.95	0.97	1.08	1.09	1.02	1.86	2.19	1.53	1.03
TRANSPORTATION & UTILITIES.....	154.3	154.9	155.3	155.8	156.2	156.7	157.4	158.0	158.8	159.5	160.3	148.0	152.7	156.0	158.4
% Chg Prev Qtr SAAR.....	9.42	1.56	1.09	1.22	1.14	1.38	1.59	1.73	1.94	1.86	1.92	1.81	3.15	2.19	1.56
% Chg Same Qtr Last Yr.....	3.86	3.02	3.09	3.27	1.25	1.21	1.33	1.46	1.66	1.78	1.86	1.81	3.15	2.19	1.56
INFORMATION.....	43.2	42.4	42.4	42.5	42.5	42.6	42.6	42.7	42.6	42.7	42.7	43.9	43.4	42.5	42.6
% Chg Prev Qtr SAAR.....	-3.91	-7.78	0.39	0.42	0.45	0.58	0.49	0.37	-0.60	0.81	0.26	-0.36	-1.27	-2.01	0.36
% Chg Same Qtr Last Yr.....	-1.52	-4.36	-3.91	-2.78	-1.70	0.46	0.48	0.47	0.21	0.27	0.21	-0.36	-1.27	-2.01	0.36
FINANCIAL ACTIVITIES.....	145.1	147.5	147.5	147.6	147.6	147.8	148.2	148.6	149.0	149.4	149.7	141.5	144.8	147.6	148.8
% Chg Prev Qtr SAAR.....	2.90	6.68	0.04	0.21	0.12	0.35	1.07	1.10	1.16	1.22	0.59	2.41	2.34	1.94	0.79
% Chg Same Qtr Last Yr.....	2.06	3.68	3.49	2.42	1.72	0.18	0.44	0.66	0.92	1.14	1.02	2.41	2.34	1.94	0.79

(CONTINUED ON NEXT PAGE)

Table 8: Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs)

January 2016

	History											Annual			
	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
PROFESSIONAL & BUSINESS SERVICES..	384.0	390.7	391.8	393.0	394.4	396.1	399.3	402.2	405.4	408.4	411.2	372.6	383.0	393.8	403.8
% Chg Prev Qtr SAAR.....	2.65	7.20	1.09	1.27	1.41	1.74	3.32	2.92	3.16	3.08	2.75	5.54	2.80	2.81	2.55
% Chg Same Qtr Last Yr.....	2.13	2.95	4.18	3.02	2.71	1.38	1.93	2.34	2.78	3.12	2.98	5.54	2.80	2.81	2.55
EDUCATION & HEALTH SERVICES.....	409.0	412.8	415.0	417.0	418.9	420.7	422.7	424.8	426.8	428.9	430.7	402.6	409.8	417.9	425.8
% Chg Prev Qtr SAAR.....	-0.26	3.84	2.09	1.94	1.84	1.78	1.89	2.01	1.85	2.02	1.64	1.05	1.78	1.98	1.89
% Chg Same Qtr Last Yr.....	1.41	1.67	1.68	1.89	2.42	1.91	1.86	1.88	1.88	1.94	1.88	1.05	1.78	1.98	1.89
LEISURE & HOSPITALITY.....	309.6	310.3	311.6	312.9	314.3	315.8	317.4	318.8	320.2	321.6	323.1	296.1	305.9	313.6	319.5
% Chg Prev Qtr SAAR.....	6.82	0.95	1.67	1.59	1.85	1.93	1.99	1.78	1.86	1.74	1.80	3.62	3.28	2.54	1.86
% Chg Same Qtr Last Yr.....	3.73	3.62	4.23	2.73	1.51	1.76	1.84	1.89	1.89	1.84	1.79	3.62	3.28	2.54	1.86
OTHER SERVICES.....	105.2	104.6	104.2	103.9	103.4	103.0	102.6	102.4	102.3	102.4	102.5	105.8	104.8	103.6	102.4
% Chg Prev Qtr SAAR.....	2.71	-2.51	-1.31	-1.07	-1.95	-1.79	-1.47	-0.87	-0.22	0.34	0.51	0.21	-0.97	-1.11	-1.19
% Chg Same Qtr Last Yr.....	-0.47	-0.85	-0.61	-0.57	-1.71	-1.53	-1.57	-1.52	-1.09	-0.56	-0.06	0.21	-0.97	-1.11	-1.19
GOVERNMENT.....	423.5	427.5	428.0	428.6	429.0	429.4	429.8	430.2	430.7	431.1	431.6	425.2	425.6	428.7	430.4
% Chg Prev Qtr SAAR.....	-1.68	3.83	0.54	0.49	0.39	0.36	0.42	0.40	0.39	0.39	0.46	0.00	0.10	0.73	0.40
% Chg Same Qtr Last Yr.....	-0.18	0.32	0.42	0.77	1.30	0.44	0.41	0.39	0.39	0.40	0.41	0.00	0.10	0.73	0.40
FEDERAL, CIVILIAN.....	47.2	46.6	46.6	46.6	46.4	46.2	46.1	45.9	45.7	45.5	45.3	47.9	47.4	46.5	45.8
% Chg Prev Qtr SAAR.....	-9.56	-4.45	0.07	-0.33	-1.34	-1.70	-1.33	-1.45	-1.66	-1.80	-1.62	-3.33	-1.06	-1.95	-1.43
% Chg Same Qtr Last Yr.....	-1.19	0.58	-1.74	-3.65	-1.53	-0.83	-1.17	-1.45	-1.54	-1.56	-1.63	-3.33	-1.06	-1.95	-1.43
STATE & LOCAL.....	376.3	380.8	381.4	382.0	382.5	383.1	383.7	384.3	384.9	385.6	386.2	377.3	378.2	382.3	384.6
% Chg Prev Qtr SAAR.....	-0.64	4.91	0.60	0.59	0.61	0.61	0.63	0.63	0.63	0.65	0.71	0.44	0.24	1.07	0.62
% Chg Same Qtr Last Yr.....	-0.05	0.29	0.70	1.34	1.66	0.60	0.61	0.62	0.63	0.64	0.66	0.44	0.24	1.07	0.62
STATISTICAL DISCREPANCY (%).....	0.01	-0.01										0.00	0.00		

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 9: Tennessee Durable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs)

January 2016

	History											Annual			
	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
TOTAL DURABLE GOODS.....	211.9	212.8	213.6	214.2	215.2	216.2	216.9	217.7	218.4	219.3	220.1	205.5	211.7	214.8	218.1
% Chg Prev Qtr SAAR.....	0.92	1.86	1.39	1.26	1.74	1.89	1.35	1.42	1.39	1.67	1.49	3.36	2.99	1.47	1.53
% Chg Same Qtr Last Yr.....	3.00	1.86	1.40	1.36	1.56	1.57	1.56	1.60	1.51	1.46	1.49	3.36	2.99	1.47	1.53
WOOD PRODUCTS.....	11.6	11.7	11.8	11.8	11.9	11.9	12.0	12.0	12.0	12.1	12.1	11.2	11.6	11.8	12.0
% Chg Prev Qtr SAAR.....	1.54	2.39	1.63	1.71	1.75	1.62	1.57	1.45	1.40	1.36	1.50	3.44	3.40	1.90	1.55
% Chg Same Qtr Last Yr.....	3.26	2.90	2.23	1.82	1.87	1.68	1.66	1.60	1.51	1.45	1.43	3.44	3.40	1.90	1.55
NONMETALLIC MINERALS.....	11.6	11.7	11.6	11.6	11.6	11.5	11.5	11.5	11.5	11.4	11.4	11.9	11.7	11.6	11.5
% Chg Prev Qtr SAAR.....	-2.02	0.98	-1.31	-1.03	-1.07	-0.98	-0.89	-1.07	-1.02	-0.60	-0.62	-1.94	-1.68	-0.98	-0.97
% Chg Same Qtr Last Yr.....	-2.47	-1.71	-1.37	-0.85	-0.61	-1.10	-0.99	-1.00	-0.99	-0.90	-0.83	-1.94	-1.68	-0.98	-0.97
PRIMARY METALS.....	10.2	10.3	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.5	10.5	10.1	10.3	10.4	10.4
% Chg Prev Qtr SAAR.....	0.18	4.01	0.38	0.54	0.49	0.22	0.77	0.82	0.86	0.87	0.92	0.99	1.90	1.07	0.64
% Chg Same Qtr Last Yr.....	1.31	2.31	1.29	1.26	1.34	0.41	0.50	0.57	0.67	0.83	0.87	0.99	1.90	1.07	0.64
FABRICATED METALS.....	35.1	35.1	35.1	35.2	35.2	35.4	35.4	35.4	35.4	35.5	35.4	34.4	35.2	35.3	35.4
% Chg Prev Qtr SAAR.....	0.99	-0.41	0.49	0.73	0.37	2.35	0.00	-0.58	0.11	0.61	-0.06	1.35	2.28	0.29	0.47
% Chg Same Qtr Last Yr.....	2.16	1.35	-0.56	0.45	0.29	0.98	0.86	0.53	0.46	0.03	0.02	1.35	2.28	0.29	0.47
MACHINERY.....	26.3	26.0	26.0	26.1	26.2	26.2	26.3	26.4	26.4	26.5	26.6	25.7	26.2	26.1	26.4
% Chg Prev Qtr SAAR.....	-2.31	-4.64	0.73	0.89	0.91	0.98	1.07	1.11	1.05	1.29	1.38	1.44	1.94	-0.38	1.04
% Chg Same Qtr Last Yr.....	2.23	-2.95	-0.45	-1.36	-0.56	0.88	0.96	1.02	1.05	1.13	1.21	1.44	1.94	-0.38	1.04
COMPUTERS & ELECTRONICS.....	5.1	5.2	5.1	5.1	5.1	5.0	5.0	5.0	4.9	4.9	4.9	5.0	5.1	5.1	5.0
% Chg Prev Qtr SAAR.....	7.23	5.23	-3.27	-2.91	-2.76	-2.83	-2.35	-2.68	-2.59	-2.66	-1.92	-3.66	1.16	0.03	-2.64
% Chg Same Qtr Last Yr.....	1.96	3.37	2.73	1.46	-0.99	-2.94	-2.71	-2.66	-2.61	-2.57	-2.46	-3.66	1.16	0.03	-2.64
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS.....	19.9	20.0	20.1	20.2	20.3	20.3	20.4	20.5	20.5	20.6	20.7	19.4	19.9	20.2	20.5
% Chg Prev Qtr SAAR.....	0.95	2.43	1.86	1.78	1.92	0.35	1.48	1.49	1.57	1.54	1.50	4.49	2.58	1.67	1.36
% Chg Same Qtr Last Yr.....	2.40	2.54	1.44	1.75	2.00	1.48	1.38	1.31	1.22	1.52	1.52	4.49	2.58	1.67	1.36
TRANSPORTATION EQUIP.....	67.6	68.4	69.0	69.5	70.3	71.0	71.5	72.2	72.8	73.5	74.1	64.0	67.5	70.0	72.5
% Chg Prev Qtr SAAR.....	2.18	4.45	3.76	3.05	4.40	4.21	3.05	3.96	3.29	3.58	3.60	7.55	5.39	3.71	3.67
% Chg Same Qtr Last Yr.....	5.80	4.35	3.70	3.36	3.91	3.85	3.68	3.90	3.63	3.47	3.61	7.55	5.39	3.71	3.67
FURNITURE.....	9.2	9.3	9.3	9.2	9.3	9.3	9.3	9.3	9.3	9.4	9.3	9.1	9.2	9.3	9.3
% Chg Prev Qtr SAAR.....	4.64	2.60	-1.00	-1.01	1.16	1.55	1.85	0.27	0.03	0.33	-0.82	3.50	1.38	0.68	0.91
% Chg Same Qtr Last Yr.....	1.94	1.41	0.87	1.28	0.43	0.17	0.88	1.21	0.92	0.62	-0.04	3.50	1.38	0.68	0.91
MISCELLANEOUS DURABLES.....	15.0	15.2	15.1	15.1	15.0	15.0	15.0	15.0	15.0	15.0	15.0	14.7	15.1	15.1	15.0
% Chg Prev Qtr SAAR.....	-1.09	3.79	-0.92	-0.87	-1.01	-0.75	-0.17	-0.93	0.12	0.60	-0.31	1.26	2.39	0.02	-0.49
% Chg Same Qtr Last Yr.....	1.32	1.34	0.54	0.20	0.23	-0.89	-0.70	-0.72	-0.43	-0.10	-0.13	1.26	2.39	0.02	-0.49

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 10: Tennessee Nondurable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs)

January 2016

	History											Annual			
	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
TOTAL NONDURABLE GOODS.....	119.6	119.9	119.4	119.1	118.8	118.5	118.4	118.2	117.9	117.7	117.5	119.7	119.8	119.0	118.0
% Chg Prev Qtr SAAR.....	0.61	0.95	-1.42	-1.10	-1.11	-1.03	-0.40	-0.67	-0.78	-0.79	-0.76	0.09	0.10	-0.72	-0.77
% Chg Same Qtr Last Yr.....	-0.42	-0.02	-0.81	-0.25	-0.68	-1.17	-0.91	-0.80	-0.72	-0.66	-0.75	0.09	0.10	-0.72	-0.77
FOOD.....	32.9	32.9	32.9	32.9	32.9	32.9	32.9	33.0	33.0	33.0	33.0	32.7	32.9	32.9	33.0
% Chg Prev Qtr SAAR.....	1.18	-0.09	0.04	0.12	0.09	0.10	0.17	0.10	0.12	0.10	0.06	0.95	0.54	0.12	0.12
% Chg Same Qtr Last Yr.....	0.40	0.19	0.05	0.31	0.04	0.09	0.12	0.11	0.12	0.12	0.09	0.95	0.54	0.12	0.12
BEVERAGE & TOBACCO.....	5.4	5.5	5.5	5.5	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.5	5.5	5.4
% Chg Prev Qtr SAAR.....	1.25	4.48	-1.72	-1.19	-1.37	-1.21	-0.79	-0.84	-0.90	-0.77	-0.87	1.89	0.77	0.05	-0.99
% Chg Same Qtr Last Yr.....	0.03	1.87	0.90	0.67	0.02	-1.37	-1.14	-1.05	-0.94	-0.83	-0.85	1.89	0.77	0.05	-0.99
TEXTILE MILLS, TEXTILE MILL															
PRODUCTS & APPAREL.....	9.5	9.5	9.4	9.2	9.1	9.0	8.9	8.8	8.7	8.6	8.4	10.0	9.6	9.2	8.7
% Chg Prev Qtr SAAR.....	-2.36	-1.35	-5.64	-4.97	-4.83	-5.02	-4.39	-5.49	-5.45	-5.35	-4.72	-4.53	-4.10	-4.09	-5.00
% Chg Same Qtr Last Yr.....	-3.66	-2.76	-3.44	-3.59	-4.21	-5.12	-4.80	-4.93	-5.09	-5.17	-5.25	-4.53	-4.10	-4.09	-5.00
PAPER.....	14.2	14.3	14.1	14.0	13.9	13.8	13.7	13.7	13.6	13.5	13.5	14.6	14.3	14.0	13.6
% Chg Prev Qtr SAAR.....	-0.30	0.24	-3.55	-3.07	-2.93	-2.81	-2.13	-2.16	-2.03	-1.88	-2.20	-0.53	-2.23	-2.28	-2.40
% Chg Same Qtr Last Yr.....	-2.89	-2.07	-2.01	-1.68	-2.34	-3.09	-2.74	-2.51	-2.28	-2.05	-2.07	-0.53	-2.23	-2.28	-2.40
PRINTING & RELATED SUPPORT.....	9.0	8.9	8.9	8.9	8.8	8.8	8.8	8.8	8.8	8.7	8.7	9.5	9.0	8.8	8.8
% Chg Prev Qtr SAAR.....	-2.85	-4.00	-1.19	-0.88	-1.05	-1.01	1.24	-1.23	-1.59	-1.41	-1.47	-1.73	-4.32	-2.25	-0.59
% Chg Same Qtr Last Yr.....	-4.61	-4.63	-3.88	-2.24	-1.79	-1.03	-0.43	-0.52	-0.65	-0.76	-1.43	-1.73	-4.32	-2.25	-0.59
CHEMICALS.....	25.2	25.2	25.1	25.0	24.9	24.8	24.8	24.7	24.7	24.6	24.5	25.3	25.2	25.0	24.7
% Chg Prev Qtr SAAR.....	0.95	-0.01	-1.79	-1.47	-1.55	-1.48	-0.79	-0.81	-0.89	-1.10	-0.91	2.12	-0.40	-1.02	-1.09
% Chg Same Qtr Last Yr.....	-0.79	-0.40	-0.72	-0.59	-1.21	-1.57	-1.32	-1.16	-0.99	-0.90	-0.93	2.12	-0.40	-1.02	-1.09
PLASTICS & RUBBER.....	21.3	21.5	21.5	21.6	21.6	21.7	21.8	21.9	22.0	22.1	22.1	20.7	21.3	21.6	21.9
% Chg Prev Qtr SAAR.....	5.00	3.86	0.54	0.87	0.91	1.14	1.88	1.94	1.60	1.50	1.45	2.39	2.90	1.62	1.51
% Chg Same Qtr Last Yr.....	1.52	1.75	1.56	2.55	1.54	0.86	1.20	1.47	1.64	1.73	1.62	2.39	2.90	1.62	1.51
MISCELLANEOUS NONDURABLE GOODS.....	1.9	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.5	2.1	2.0	1.9
% Chg Prev Qtr SAAR.....	-20.70	32.68	-5.85	-5.80	-6.21	-5.65	-5.14	-4.86	-6.83	-6.27	-6.76	-27.54	35.66	-3.74	-5.64
% Chg Same Qtr Last Yr.....	31.50	35.85	-8.97	-1.72	2.50	-5.88	-5.70	-5.47	-5.62	-5.78	-6.18	-27.54	35.66	-3.74	-5.64

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 11: Tennessee Average Annual Wage and Salary Rate by Sector, Not Seasonally Adjusted (2009 dollars)

January 2016

	History		Forecast Data										Annual			
	2015:2	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
TOTAL NONFARM.....	43201	43357	43262	44366	44004	44145	43704	44672	44229	44432	44050	44948	41973	43155	44055	44346
% Chg Same Qtr Last Yr.....	3.46	3.35	3.11	3.66	1.86	1.82	1.02	0.69	0.51	0.65	0.79	0.62	1.20	2.82	2.08	0.66
NATURAL RESOURCES, MINING AND CONSTRUCTION.....	49672	49815	50771	53788	51404	50503	51210	54121	51693	50885	51719	54548	47206	49911	51726	52104
% Chg Same Qtr Last Yr.....	5.75	7.83	8.26	8.91	3.49	1.38	0.86	0.62	0.56	0.76	0.99	0.79	3.20	5.73	3.64	0.73
MANUFACTURING.....	52689	53229	53766	54469	54520	54549	54551	55048	54976	55037	55097	55471	51605	52464	54522	55039
% Chg Same Qtr Last Yr.....	2.34	3.83	2.90	8.57	3.48	2.48	1.46	1.06	0.84	0.89	1.00	0.77	1.40	1.66	3.92	0.95
DURABLE GOODS.....	51051	51364	51833	52365	52332	52446	52380	52818	52719	52904	52935	53270	50494	50846	52381	52844
% Chg Same Qtr Last Yr.....	1.14	2.27	0.94	6.57	2.51	2.11	1.06	0.86	0.74	0.87	1.06	0.86	2.00	0.70	3.02	0.88
NONDURABLE GOODS.....	55594	56527	57212	58245	58469	58347	58511	59141	59144	58974	59130	59602	53509	55329	58393	59097
% Chg Same Qtr Last Yr.....	4.47	6.54	6.30	12.05	5.17	3.22	2.27	1.54	1.15	1.07	1.06	0.78	0.60	3.40	5.54	1.21
TRADE, TRANSPORTATION, UTILITIES.....	39131	39138	38861	40211	39910	39960	39444	40675	40295	40415	39935	41108	38748	39032	39881	40330
% Chg Same Qtr Last Yr.....	2.27	1.64	-1.11	3.11	1.99	2.10	1.50	1.16	0.96	1.14	1.24	1.06	1.37	0.73	2.18	1.13
WHOLESALE TRADE.....	59725	59131	59738	60835	60521	60464	60701	61509	61066	61030	61304	62048	59172	59361	60630	61227
% Chg Same Qtr Last Yr.....	2.68	0.33	-0.83	3.37	1.33	2.25	1.61	1.11	0.90	0.94	0.99	0.88	2.55	0.32	2.14	0.98
RETAIL TRADE.....	26647	26986	26637	27743	27438	27487	26987	28040	27689	27813	27328	28331	26510	26683	27414	27718
% Chg Same Qtr Last Yr.....	2.10	2.78	-1.86	4.85	2.97	1.86	1.32	1.07	0.91	1.19	1.26	1.04	1.42	0.65	2.74	1.11
TRANSPORTATION & UTILITIES.....	49003	48479	48009	49534	49402	49432	48657	50055	49825	49967	49273	50570	48242	48694	49256	49780
% Chg Same Qtr Last Yr.....	2.02	1.23	-0.78	0.50	0.81	1.97	1.35	1.05	0.86	1.08	1.27	1.03	0.33	0.94	1.15	1.06
INFORMATION.....	56909	58773	58666	59235	59304	59875	59247	59567	59588	60342	59859	60058	55891	57841	59416	59839
% Chg Same Qtr Last Yr.....	0.61	3.84	9.75	3.89	4.21	1.88	0.99	0.56	0.48	0.78	1.03	0.82	3.32	3.49	2.72	0.71
FINANCIAL ACTIVITIES.....	64660	64744	65463	66457	66508	66344	66428	67131	67038	66907	67046	67566	63255	64649	66434	67030
% Chg Same Qtr Last Yr.....	3.13	3.67	2.35	4.28	2.86	2.47	1.47	1.01	0.80	0.85	0.93	0.65	2.66	2.20	2.76	0.90
PROFESSIONAL & BUSINESS SERVICES...	52018	50679	50169	51860	51482	51502	50657	52194	51733	51819	51036	52507	47659	51092	51375	51695
% Chg Same Qtr Last Yr.....	8.87	6.59	6.89	0.70	-1.03	1.62	0.97	0.64	0.49	0.62	0.75	0.60	-1.55	7.20	0.55	0.62
EDUCATION & HEALTH SERVICES.....	43759	44501	44188	44904	44998	45161	44551	45182	45206	45455	44910	45484	42791	44062	44904	45188
% Chg Same Qtr Last Yr.....	2.31	3.40	4.28	2.53	2.83	1.48	0.82	0.62	0.46	0.65	0.81	0.67	0.55	2.97	1.91	0.63
LEISURE & HOSPITALITY.....	21089	20653	21626	22500	21220	21254	22000	22762	21425	21500	22282	23014	20161	21141	21743	21992
% Chg Same Qtr Last Yr.....	7.21	5.27	3.92	6.14	0.62	2.91	1.73	1.16	0.97	1.16	1.29	1.10	2.43	4.86	2.85	1.15
OTHER SERVICES.....	40132	40532	41232	41750	40884	41235	41427	41823	40922	41366	41654	42025	38855	40495	41324	41441
% Chg Same Qtr Last Yr.....	5.62	5.21	3.91	4.16	1.87	1.74	0.47	0.18	0.09	0.32	0.55	0.48	4.37	4.22	2.05	0.28
GOVERNMENT.....	39702	40934	39273	39816	40570	41267	39178	39567	40240	40980	38955	39282	39475	39721	40208	39936
% Chg Same Qtr Last Yr.....	-0.23	-0.28	2.41	2.16	2.19	0.81	-0.24	-0.63	-0.81	-0.69	-0.57	-0.72	1.44	0.62	1.22	-0.68
FEDERAL, CIVILIAN.....	74425	75277	75296	77526	78600	76563	75545	77465	78409	76465	75530	77346	71511	74856	77059	76967
% Chg Same Qtr Last Yr.....	4.59	4.06	3.73	4.16	5.61	1.71	0.33	-0.08	-0.24	-0.13	-0.02	-0.15	8.59	4.68	2.94	-0.12
STATE & LOCAL.....	35290	36451	34762	35162	35858	36689	34682	34972	35608	36481	34532	34770	35381	35277	35598	35398
% Chg Same Qtr Last Yr.....	-1.06	-1.39	1.72	1.61	1.61	0.65	-0.23	-0.54	-0.70	-0.56	-0.43	-0.58	0.03	-0.29	0.91	-0.56

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 12: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (2009 dollars)

January 2016

	History		Forecast Data										Annual			
	2015:2	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
TOTAL NONFARM.....	43281	43269	43666	43973	44087	44059	44111	44274	44313	44347	44461	44544	41961	43161	44058	44349
% Chg Prev Qtr SAAR.....	8.28	-0.11	3.72	2.85	1.04	-0.26	0.48	1.48	0.35	0.30	1.04	0.75	1.18	2.86	2.08	0.66
% Chg Same Qtr Last Yr.....	3.50	3.46	3.10	3.64	1.86	1.82	1.02	0.68	0.51	0.65	0.79	0.61	1.18	2.86	2.08	0.66
NATURAL RESOURCES, MINING																
AND CONSTRUCTION.....	50063	51066	51367	51699	51808	51770	51811	52019	52100	52162	52326	52429	47214	49991	51772	52152
% Chg Prev Qtr SAAR.....	23.73	8.26	2.38	2.61	0.85	-0.29	0.31	1.62	0.62	0.48	1.26	0.79	3.24	5.88	3.56	0.73
% Chg Same Qtr Last Yr.....	5.91	7.96	8.26	8.91	3.49	1.38	0.86	0.62	0.56	0.76	0.99	0.79	3.24	5.88	3.56	0.73
MANUFACTURING.....	52672	53241	53900	54332	54501	54558	54689	54911	54956	55042	55240	55335	51603	52464	54520	55037
% Chg Prev Qtr SAAR.....	22.74	4.39	5.05	3.24	1.25	0.42	0.97	1.63	0.33	0.63	1.45	0.69	1.41	1.67	3.92	0.95
% Chg Same Qtr Last Yr.....	2.32	3.79	2.91	8.57	3.47	2.47	1.46	1.07	0.83	0.89	1.01	0.77	1.41	1.67	3.92	0.95
DURABLE GOODS.....	51073	51311	51960	52259	52351	52389	52513	52711	52735	52843	53073	53164	50493	50844	52378	52841
% Chg Prev Qtr SAAR.....	17.69	1.88	5.16	2.32	0.71	0.29	0.95	1.52	0.18	0.82	1.75	0.69	2.00	0.70	3.02	0.88
% Chg Same Qtr Last Yr.....	1.13	2.23	0.95	6.58	2.50	2.10	1.06	0.87	0.73	0.87	1.07	0.86	2.00	0.70	3.02	0.88
NONDURABLE GOODS.....	55504	56665	57360	58047	58374	58489	58661	58943	59047	59117	59280	59405	53507	55333	58393	59097
% Chg Prev Qtr SAAR.....	31.76	8.63	5.00	4.88	2.27	0.79	1.18	1.93	0.71	0.47	1.11	0.84	0.60	3.41	5.53	1.21
% Chg Same Qtr Last Yr.....	4.43	6.53	6.31	12.05	5.17	3.22	2.27	1.54	1.15	1.07	1.05	0.78	0.60	3.41	5.53	1.21
TRADE, TRANSPORTATION, UTILITIES.....	39120	39083	39405	39737	39899	39903	39996	40196	40284	40357	40494	40624	38716	39037	39884	40333
% Chg Prev Qtr SAAR.....	6.17	-0.38	3.33	3.42	1.64	0.04	0.93	2.02	0.88	0.73	1.36	1.30	1.31	0.83	2.17	1.13
% Chg Same Qtr Last Yr.....	2.58	1.75	-1.11	3.11	1.99	2.10	1.50	1.16	0.96	1.14	1.24	1.06	1.31	0.83	2.17	1.13
WHOLESALE TRADE.....	59820	59333	59834	60397	60617	60670	60799	61067	61163	61238	61403	61602	59151	59353	60621	61218
% Chg Prev Qtr SAAR.....	9.88	-3.22	3.42	3.82	1.47	0.35	0.85	1.77	0.63	0.49	1.08	1.30	2.51	0.34	2.14	0.98
% Chg Same Qtr Last Yr.....	2.59	0.51	-0.83	3.37	1.33	2.25	1.61	1.11	0.90	0.94	0.99	0.88	2.51	0.34	2.14	0.98
RETAIL TRADE.....	26636	26915	27124	27321	27427	27415	27481	27614	27677	27740	27827	27900	26483	26683	27411	27715
% Chg Prev Qtr SAAR.....	9.18	4.25	3.14	2.94	1.56	-0.19	0.97	1.95	0.93	0.91	1.26	1.05	1.36	0.76	2.73	1.11
% Chg Same Qtr Last Yr.....	2.51	3.04	-1.86	4.85	2.97	1.86	1.32	1.07	0.91	1.19	1.26	1.04	1.36	0.76	2.73	1.11
TRANSPORTATION & UTILITIES.....	48927	48343	48732	49128	49325	49293	49390	49645	49748	49827	50015	50156	48212	48721	49284	49809
% Chg Prev Qtr SAAR.....	0.36	-4.69	3.26	3.29	1.61	-0.26	0.79	2.08	0.83	0.64	1.52	1.13	0.28	1.06	1.16	1.06
% Chg Same Qtr Last Yr.....	2.44	0.96	-0.78	0.50	0.81	1.97	1.35	1.05	0.86	1.08	1.27	1.03	0.28	1.06	1.16	1.06
INFORMATION.....	57039	58274	58842	59280	59440	59368	59426	59612	59725	59830	60039	60104	55910	57804	59378	59802
% Chg Prev Qtr SAAR.....	-0.15	8.95	3.95	3.01	1.08	-0.49	0.39	1.26	0.76	0.71	1.41	0.43	3.38	3.39	2.72	0.71
% Chg Same Qtr Last Yr.....	0.68	3.28	9.75	3.89	4.21	1.88	0.99	0.56	0.48	0.78	1.03	0.82	3.38	3.39	2.72	0.71
FINANCIAL ACTIVITIES.....	64615	64863	65601	66209	66461	66466	66568	66879	66991	67030	67187	67314	63223	64642	66426	67022
% Chg Prev Qtr SAAR.....	7.28	1.54	4.63	3.76	1.54	0.03	0.62	1.88	0.67	0.23	0.94	0.75	2.66	2.24	2.76	0.90
% Chg Same Qtr Last Yr.....	3.05	3.59	2.35	4.28	2.86	2.47	1.47	1.01	0.80	0.85	0.93	0.65	2.66	2.24	2.76	0.90

(CONTINUED ON NEXT PAGE)

Table 12: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (2009 dollars)

January 2016

	History		Forecast Data										Annual			
	2015:2	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
PROFESSIONAL & BUSINESS SERVICES..	51918	50530	50914	51258	51383	51350	51408	51587	51634	51666	51793	51897	47621	51066	51350	51670
% Chg Prev Qtr SAAR.....	8.22	-10.27	3.07	2.73	0.99	-0.26	0.46	1.40	0.36	0.25	0.99	0.80	-1.63	7.23	0.56	0.62
% Chg Same Qtr Last Yr.....	8.67	6.75	6.89	0.70	-1.03	1.62	0.97	0.64	0.49	0.62	0.75	0.60	-1.63	7.23	0.56	0.62
EDUCATION & HEALTH SERVICES.....	43698	44240	44580	44845	44936	44896	44946	45123	45144	45188	45309	45425	42809	44065	44906	45191
% Chg Prev Qtr SAAR.....	-0.39	5.05	3.11	2.40	0.81	-0.35	0.44	1.59	0.18	0.39	1.07	1.03	0.58	2.93	1.91	0.63
% Chg Same Qtr Last Yr.....	2.34	3.30	4.28	2.53	2.83	1.48	0.82	0.62	0.46	0.65	0.81	0.67	0.58	2.93	1.91	0.63
LEISURE & HOSPITALITY.....	21606	21124	21423	21647	21740	21739	21794	21900	21951	21990	22074	22141	20158	21137	21730	21979
% Chg Prev Qtr SAAR.....	25.95	-8.63	5.79	4.25	1.72	-0.02	1.02	1.95	0.93	0.73	1.53	1.23	2.45	4.86	2.81	1.14
% Chg Same Qtr Last Yr.....	7.12	4.98	3.92	6.14	0.62	2.91	1.73	1.16	0.97	1.16	1.29	1.10	2.45	4.86	2.81	1.14
OTHER SERVICES.....	40619	40596	41102	41325	41379	41300	41296	41398	41418	41431	41523	41598	38866	40498	41325	41442
% Chg Prev Qtr SAAR.....	9.86	-0.22	5.08	2.19	0.52	-0.76	-0.04	0.99	0.19	0.13	0.88	0.73	4.44	4.20	2.04	0.28
% Chg Same Qtr Last Yr.....	5.84	4.81	3.91	4.16	1.87	1.74	0.47	0.18	0.09	0.32	0.55	0.48	4.44	4.20	2.04	0.28
GOVERNMENT.....	39444	39826	40161	40326	40306	40149	40064	40074	39979	39870	39836	39786	39409	39726	40211	39940
% Chg Prev Qtr SAAR.....	-0.32	3.93	3.41	1.66	-0.20	-1.55	-0.85	0.10	-0.95	-1.08	-0.35	-0.50	1.33	0.81	1.22	-0.68
% Chg Same Qtr Last Yr.....	-0.25	0.52	2.41	2.16	2.19	0.81	-0.24	-0.63	-0.81	-0.69	-0.57	-0.72	1.33	0.81	1.22	-0.68
FEDERAL, CIVILIAN.....	73296	75916	76920	77362	77409	77212	77175	77302	77220	77113	77159	77183	71860	75100	77290	77198
% Chg Prev Qtr SAAR.....	-5.14	15.08	5.40	2.32	0.24	-1.01	-0.19	0.66	-0.42	-0.55	0.24	0.13	9.38	4.51	2.92	-0.12
% Chg Same Qtr Last Yr.....	1.95	6.05	3.73	4.16	5.61	1.71	0.33	-0.08	-0.24	-0.13	-0.02	-0.15	9.38	4.51	2.92	-0.12
STATE & LOCAL.....	35100	35302	35553	35683	35665	35535	35471	35489	35416	35334	35317	35285	35292	35267	35588	35389
% Chg Prev Qtr SAAR.....	-0.17	2.32	2.87	1.47	-0.20	-1.45	-0.72	0.21	-0.82	-0.92	-0.19	-0.36	-0.17	-0.07	0.91	-0.56
% Chg Same Qtr Last Yr.....	-0.75	-0.74	1.72	1.62	1.61	0.66	-0.23	-0.54	-0.70	-0.57	-0.43	-0.57	-0.17	-0.07	0.91	-0.56

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 13: Tennessee Average Annual Wage and Salary Rate by Sector, Not Seasonally Adjusted (current dollars)**January 2016**

	History		Forecast Data										Annual			
	2015:2	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
TOTAL NONFARM.....	47258	47577	47449	48672	48493	49021	48811	50063	49861	50400	50181	51446	45795	47212	48749	50126
% Chg Same Qtr Last Yr.....	3.72	3.63	3.44	4.53	2.61	3.04	2.87	2.86	2.82	2.81	2.81	2.76	2.64	3.10	3.26	2.82
NATURAL RESOURCES, MINING AND CONSTRUCTION.....	54336	54664	55684	59009	56649	56081	57194	60652	58276	57720	58917	62434	51501	54603	57233	58891
% Chg Same Qtr Last Yr.....	6.02	8.12	8.61	9.83	4.26	2.59	2.71	2.78	2.87	2.92	3.01	2.94	4.67	6.02	4.82	2.90
MANUFACTURING.....	57637	58410	58969	59756	60083	60574	60926	61690	61977	62429	62766	63490	56304	57400	60335	62216
% Chg Same Qtr Last Yr.....	2.59	4.10	3.23	9.48	4.24	3.70	3.32	3.24	3.15	3.06	3.02	2.92	2.85	1.95	5.11	3.12
DURABLE GOODS.....	55845	56363	56848	57448	57672	58239	58501	59191	59432	60010	60302	60971	55093	55629	57965	59734
% Chg Same Qtr Last Yr.....	1.40	2.55	1.26	7.46	3.27	3.33	2.91	3.03	3.05	3.04	3.08	3.01	3.45	0.97	4.20	3.05
NONDURABLE GOODS.....	60814	62028	62748	63898	64435	64792	65349	66278	66676	66895	67360	68219	58381	60536	64618	66802
% Chg Same Qtr Last Yr.....	4.73	6.83	6.65	12.99	5.95	4.45	4.15	3.73	3.48	3.25	3.08	2.93	2.03	3.69	6.74	3.38
TRADE, TRANSPORTATION, UTILITIES.....	42806	42948	42621	44113	43982	44374	44053	45584	45427	45843	45493	47051	42276	42701	44131	45587
% Chg Same Qtr Last Yr.....	2.53	1.91	-0.79	3.97	2.75	3.32	3.36	3.33	3.28	3.31	3.27	3.22	2.82	1.01	3.35	3.30
WHOLESALE TRADE.....	65334	64887	65518	66739	66696	67143	67795	68931	68842	69228	69837	71018	64560	64941	67093	69210
% Chg Same Qtr Last Yr.....	2.93	0.60	-0.50	4.24	2.09	3.48	3.47	3.28	3.22	3.11	3.01	3.03	4.01	0.59	3.31	3.15
RETAIL TRADE.....	29150	29612	29215	30436	30238	30523	30141	31424	31215	31549	31131	32426	28924	29191	30335	31330
% Chg Same Qtr Last Yr.....	2.36	3.06	-1.54	5.72	3.73	3.07	3.17	3.25	3.23	3.36	3.28	3.19	2.87	0.92	3.92	3.28
TRANSPORTATION & UTILITIES.....	53605	53198	52654	54342	54443	54892	54343	56095	56170	56678	56131	57881	52634	53269	54505	56268
% Chg Same Qtr Last Yr.....	2.27	1.50	-0.46	1.34	1.56	3.18	3.21	3.23	3.17	3.25	3.29	3.18	1.76	1.21	2.32	3.24
INFORMATION.....	62253	64493	64342	64984	65355	66489	66171	66755	67177	68447	68191	68741	60978	63280	65750	67642
% Chg Same Qtr Last Yr.....	0.86	4.12	10.10	4.76	4.98	3.09	2.84	2.72	2.79	2.94	3.05	2.97	4.79	3.78	3.90	2.88
FINANCIAL ACTIVITIES.....	70732	71046	71797	72908	73294	73672	74191	75231	75575	75893	76378	77334	69014	70727	73516	75769
% Chg Same Qtr Last Yr.....	3.38	3.94	2.68	5.15	3.62	3.70	3.33	3.19	3.11	3.01	2.95	2.79	4.12	2.48	3.94	3.06
PROFESSIONAL & BUSINESS SERVICES.....	56903	55612	55023	56893	56735	57190	56576	58492	58321	58779	58139	60097	51997	55892	56849	58433
% Chg Same Qtr Last Yr.....	9.14	6.88	7.24	1.54	-0.29	2.84	2.82	2.81	2.79	2.78	2.76	2.74	-0.15	7.49	1.71	2.79
EDUCATION & HEALTH SERVICES.....	47868	48832	48464	49262	49589	50150	49757	50634	50963	51560	51161	52060	46687	48204	49690	51080
% Chg Same Qtr Last Yr.....	2.57	3.67	4.62	3.38	3.60	2.70	2.67	2.78	2.77	2.81	2.82	2.81	1.98	3.25	3.08	2.80
LEISURE & HOSPITALITY.....	23069	22663	23718	24684	23385	23601	24571	25509	24154	24387	25384	26341	21996	23128	24060	24859
% Chg Same Qtr Last Yr.....	7.48	5.55	4.25	7.03	1.37	4.14	3.59	3.34	3.29	3.33	3.31	3.26	3.89	5.15	4.03	3.32
OTHER SERVICES.....	43901	44477	45222	45802	45055	45790	46269	46870	46133	46922	47452	48100	42393	44302	45729	46844
% Chg Same Qtr Last Yr.....	5.89	5.49	4.25	5.03	2.63	2.95	2.32	2.33	2.39	2.47	2.56	2.62	5.86	4.50	3.22	2.44
GOVERNMENT.....	43431	44918	43074	43680	44710	45825	43757	44341	45365	46484	44377	44961	43071	43456	44493	45142
% Chg Same Qtr Last Yr.....	0.02	-0.01	2.74	3.01	2.94	2.02	1.59	1.51	1.47	1.44	1.42	1.40	2.89	0.90	2.38	1.46
FEDERAL, CIVILIAN.....	81414	82604	82582	85050	86620	85020	84374	86813	88394	86735	86042	88527	78025	81893	85266	86996
% Chg Same Qtr Last Yr.....	4.85	4.33	4.07	5.04	6.39	2.92	2.17	2.07	2.05	2.02	1.98	1.97	10.14	4.96	4.12	2.03
STATE & LOCAL.....	38604	39999	38126	38575	39517	40741	38735	39192	40142	41381	39338	39797	38604	38595	39392	40013
% Chg Same Qtr Last Yr.....	-0.81	-1.13	2.05	2.46	2.36	1.85	1.60	1.60	1.58	1.57	1.56	1.54	1.46	-0.03	2.07	1.58

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 14: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (current dollars)

January 2016

	History		Forecast Data										Annual			
	2015:2	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
TOTAL NONFARM.....	47346	47481	47891	48241	48586	48925	49266	49616	49956	50303	50649	50984	45782	47219	48755	50131
% Chg Prev Qtr SAAR.....	10.68	1.14	3.50	2.96	2.89	2.82	2.82	2.87	2.77	2.81	2.78	2.67	2.62	3.14	3.25	2.82
% Chg Same Qtr Last Yr.....	3.76	3.73	3.44	4.51	2.62	3.04	2.87	2.85	2.82	2.82	2.81	2.76	2.62	3.14	3.25	2.82
NATURAL RESOURCES, MINING & CONSTRUCTION.....	54764	56036	56338	56717	57094	57489	57866	58296	58734	59169	59609	60009	51513	54695	57291	58952
% Chg Prev Qtr SAAR.....	26.46	9.62	2.17	2.72	2.69	2.79	2.65	3.01	3.04	2.99	3.01	2.71	4.71	6.18	4.75	2.90
% Chg Same Qtr Last Yr.....	6.18	8.25	8.61	9.83	4.26	2.59	2.71	2.78	2.87	2.92	3.01	2.94	4.71	6.18	4.75	2.90
MANUFACTURING.....	57619	58423	59116	59605	60062	60584	61081	61537	61954	62435	62929	63334	56302	57400	60333	62214
% Chg Prev Qtr SAAR.....	25.45	5.70	4.83	3.35	3.10	3.52	3.32	3.02	2.74	3.15	3.20	2.60	2.85	1.95	5.11	3.12
% Chg Same Qtr Last Yr.....	2.58	4.07	3.24	9.48	4.24	3.70	3.32	3.24	3.15	3.06	3.03	2.92	2.85	1.95	5.11	3.12
DURABLE GOODS.....	55869	56305	56988	57331	57693	58176	58650	59072	59451	59941	60460	60849	55092	55627	57962	59731
% Chg Prev Qtr SAAR.....	20.29	3.16	4.94	2.43	2.55	3.39	3.30	2.91	2.59	3.34	3.51	2.60	3.45	0.97	4.20	3.05
% Chg Same Qtr Last Yr.....	1.39	2.50	1.28	7.47	3.26	3.32	2.92	3.04	3.05	3.03	3.09	3.01	3.45	0.97	4.20	3.05
NONDURABLE GOODS.....	60716	62180	62910	63681	64330	64949	65517	66055	66566	67057	67531	67993	58379	60542	64619	66803
% Chg Prev Qtr SAAR.....	34.67	10.00	4.78	4.99	4.14	3.91	3.54	3.33	3.13	2.98	2.86	2.76	2.03	3.71	6.73	3.38
% Chg Same Qtr Last Yr.....	4.70	6.82	6.65	12.98	5.95	4.45	4.14	3.73	3.48	3.24	3.07	2.93	2.03	3.71	6.73	3.38
TRADE, TRANSPORTATION, UTILITIES.....	42794	42887	43218	43594	43970	44311	44670	45047	45414	45778	46130	46497	42242	42707	44136	45592
% Chg Prev Qtr SAAR.....	8.51	0.87	3.12	3.53	3.50	3.13	3.28	3.42	3.30	3.24	3.11	3.22	2.75	1.10	3.35	3.30
% Chg Same Qtr Last Yr.....	2.84	2.02	-0.79	3.97	2.75	3.32	3.36	3.33	3.28	3.31	3.27	3.22	2.75	1.10	3.35	3.30
WHOLESALE TRADE.....	65438	65107	65624	66259	66802	67371	67904	68436	68952	69463	69949	70508	64537	64934	67084	69200
% Chg Prev Qtr SAAR.....	12.31	-2.00	3.21	3.93	3.32	3.45	3.20	3.17	3.05	3.00	2.83	3.23	3.97	0.61	3.31	3.15
% Chg Same Qtr Last Yr.....	2.85	0.78	-0.50	4.24	2.09	3.48	3.47	3.28	3.22	3.10	3.01	3.03	3.97	0.61	3.31	3.15
RETAIL TRADE.....	29138	29534	29748	29973	30226	30443	30692	30946	31202	31466	31700	31933	28895	29193	30333	31329
% Chg Prev Qtr SAAR.....	11.59	5.56	2.93	3.05	3.42	2.90	3.32	3.35	3.35	3.43	3.01	2.97	2.80	1.03	3.91	3.28
% Chg Same Qtr Last Yr.....	2.77	3.31	-1.54	5.72	3.73	3.07	3.17	3.25	3.23	3.36	3.28	3.19	2.80	1.03	3.91	3.28
TRANSPORTATION & UTILITIES.....	53522	53048	53448	53897	54358	54738	55162	55636	56083	56519	56977	57407	52602	53300	54539	56304
% Chg Prev Qtr SAAR.....	2.58	-3.49	3.05	3.40	3.47	2.82	3.14	3.48	3.25	3.15	3.28	3.05	1.71	1.33	2.32	3.24
% Chg Same Qtr Last Yr.....	2.70	1.23	-0.46	1.34	1.56	3.18	3.21	3.23	3.17	3.25	3.29	3.18	1.71	1.33	2.32	3.24
INFORMATION.....	62396	63946	64536	65034	65505	65925	66370	66806	67331	67866	68396	68793	60999	63239	65708	67600
% Chg Prev Qtr SAAR.....	2.06	10.31	3.74	3.12	2.93	2.59	2.73	2.65	3.18	3.22	3.16	2.34	4.85	3.67	3.90	2.88
% Chg Same Qtr Last Yr.....	0.94	3.55	10.10	4.76	4.98	3.09	2.84	2.72	2.79	2.94	3.05	2.97	4.85	3.67	3.90	2.88
FINANCIAL ACTIVITIES.....	70683	71177	71949	72635	73243	73807	74348	74950	75522	76033	76539	77045	68979	70721	73508	75761
% Chg Prev Qtr SAAR.....	9.65	2.82	4.41	3.87	3.39	3.12	2.96	3.28	3.09	2.73	2.69	2.67	4.12	2.52	3.94	3.06
% Chg Same Qtr Last Yr.....	3.31	3.87	2.68	5.16	3.62	3.70	3.33	3.19	3.11	3.01	2.95	2.79	4.12	2.52	3.94	3.06

(CONTINUED ON NEXT PAGE)

Table 14: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (current dollars)**January 2016**

	History		Forecast Data										Annual			
	2015:2	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
PROFESSIONAL & BUSINESS SERVICES.....	56794	55448	55840	56232	56626	57021	57416	57813	58209	58605	59002	59400	51957	55865	56824	58407
% Chg Prev Qtr SAAR.....	10.61	-9.15	2.86	2.84	2.83	2.82	2.80	2.79	2.77	2.75	2.74	2.72	-0.22	7.52	1.72	2.79
% Chg Same Qtr Last Yr.....	8.94	7.04	7.24	1.54	-0.29	2.84	2.82	2.81	2.79	2.78	2.76	2.75	-0.22	7.52	1.72	2.79
EDUCATION & HEALTH SERVICES.....	47802	48546	48894	49198	49521	49855	50198	50568	50892	51257	51615	51992	46707	48207	49693	51083
% Chg Prev Qtr SAAR.....	1.81	6.37	2.90	2.51	2.65	2.73	2.78	2.98	2.59	2.90	2.82	2.95	2.02	3.21	3.08	2.80
% Chg Same Qtr Last Yr.....	2.59	3.57	4.62	3.38	3.60	2.70	2.67	2.78	2.77	2.81	2.82	2.81	2.02	3.21	3.08	2.80
LEISURE & HOSPITALITY.....	23635	23180	23496	23749	23958	24140	24341	24542	24746	24944	25147	25342	21995	23125	24047	24845
% Chg Prev Qtr SAAR.....	28.74	-7.48	5.57	4.36	3.58	3.07	3.37	3.35	3.36	3.24	3.29	3.15	3.92	5.14	3.99	3.32
% Chg Same Qtr Last Yr.....	7.39	5.26	4.25	7.03	1.37	4.14	3.59	3.34	3.29	3.33	3.31	3.26	3.92	5.14	3.99	3.32
OTHER SERVICES.....	44433	44547	45079	45336	45601	45862	46122	46393	46692	46996	47302	47611	42406	44306	45730	46846
% Chg Prev Qtr SAAR.....	12.29	1.03	4.86	2.30	2.36	2.31	2.29	2.37	2.60	2.63	2.63	2.64	5.92	4.48	3.22	2.44
% Chg Same Qtr Last Yr.....	6.10	5.09	4.25	5.03	2.63	2.95	2.31	2.33	2.39	2.47	2.56	2.63	5.92	4.48	3.22	2.44
GOVERNMENT.....	43148	43702	44047	44240	44419	44584	44746	44910	45070	45226	45380	45538	42997	43461	44497	45146
% Chg Prev Qtr SAAR.....	1.89	5.23	3.20	1.76	1.62	1.49	1.46	1.47	1.43	1.39	1.38	1.39	2.78	1.08	2.38	1.46
% Chg Same Qtr Last Yr.....	0.00	0.79	2.74	3.01	2.94	2.02	1.59	1.51	1.47	1.44	1.42	1.40	2.78	1.08	2.38	1.46
FEDERAL, CIVILIAN.....	80179	83305	84363	84871	85307	85741	86194	86630	87053	87470	87898	88341	78407	82162	85528	87263
% Chg Prev Qtr SAAR.....	-3.04	16.53	5.18	2.43	2.07	2.05	2.13	2.04	1.97	1.93	1.97	2.03	10.94	4.79	4.10	2.03
% Chg Same Qtr Last Yr.....	2.21	6.33	4.07	5.04	6.39	2.92	2.17	2.07	2.05	2.02	1.98	1.97	10.94	4.79	4.10	2.03
STATE & LOCAL.....	38396	38738	38993	39146	39304	39460	39616	39771	39926	40079	40233	40386	38505	38582	39381	40002
% Chg Prev Qtr SAAR.....	2.03	3.61	2.66	1.58	1.62	1.60	1.59	1.58	1.56	1.55	1.54	1.53	1.25	0.20	2.07	1.58
% Chg Same Qtr Last Yr.....	-0.50	-0.48	2.05	2.47	2.36	1.86	1.60	1.60	1.58	1.57	1.56	1.55	1.25	0.20	2.07	1.58

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 15: Tennessee Civilian Labor Force and Unemployment Rate, Not Seasonally Adjusted**January 2016**

	History												Annual			
	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017	
CIVILIAN LABOR FORCE (THOUS).....	3066	3064	3042	3068	3069	3067	3057	3087	3089	3090	3081	3011	3065	3062	3081	
% Chg Same Qtr Last Yr.....	1.61	2.47	0.62	-1.21	0.09	0.13	0.50	0.62	0.67	0.74	0.77	-2.27	1.76	-0.10	0.63	
EMPLOYED PERSONS (THOUS).....	2883	2899	2875	2899	2891	2905	2892	2921	2915	2930	2918	2811	2884	2893	2915	
% Chg Same Qtr Last Yr.....	2.78	3.45	1.61	-0.93	0.28	0.21	0.62	0.76	0.82	0.87	0.89	-1.10	2.62	0.28	0.77	
UNEMPLOYED PERSONS (THOUS).....	183	164	168	169	177	162	165	165	174	160	163	201	180	169	166	
% Chg Same Qtr Last Yr.....	-13.89	-12.10	-13.83	-5.73	-2.88	-1.24	-1.58	-1.88	-1.80	-1.60	-1.33	-16.17	-10.21	-6.17	-1.72	
PARTICIPATION RATE (PERCENT).....	57.7	57.5	56.9	57.2	57.1	56.9	56.5	56.9	56.8	56.7	56.4	57.4	57.7	57.0	56.7	
% Chg Same Qtr Last Yr.....	0.41	1.26	-0.56	-2.36	-1.06	-1.02	-0.64	-0.51	-0.44	-0.37	-0.32	-3.43	0.55	-1.26	-0.49	
UNEMPLOYMENT RATE (PERCENT).....	6.0	5.4	5.5	5.5	5.8	5.3	5.4	5.4	5.6	5.2	5.3	6.7	5.9	5.5	5.4	

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 16: Tennessee Civilian Labor Force and Unemployment Rate, Seasonally Adjusted

	History		Forecast Data										Annual			
	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017	
CIVILIAN LABOR FORCE (THOUS).....	3058	3062	3056	3058	3061	3065	3071	3077	3082	3088	3094	2993	3063	3060	3079	
% Chg Prev Qtr SAAR.....	-4.74	0.42	-0.79	0.35	0.43	0.52	0.69	0.83	0.67	0.73	0.85	-1.97	2.33	-0.10	0.63	
% Chg Same Qtr Last Yr.....	2.39	2.63	0.61	-1.21	0.10	0.12	0.49	0.62	0.68	0.73	0.77	-1.97	2.33	-0.10	0.63	
EMPLOYED PERSONS (THOUS).....	2884	2891	2885	2888	2892	2897	2903	2910	2916	2922	2929	2797	2882	2890	2913	
% Chg Prev Qtr SAAR.....	-4.22	0.97	-0.80	0.42	0.56	0.66	0.83	1.00	0.80	0.83	0.94	-0.84	3.05	0.28	0.77	
% Chg Same Qtr Last Yr.....	3.40	3.75	1.61	-0.93	0.28	0.21	0.62	0.76	0.82	0.87	0.89	-0.84	3.05	0.28	0.77	
UNEMPLOYED PERSONS (THOUS).....	174	171	171	170	169	169	168	167	166	166	166	197	181	170	167	
% Chg Prev Qtr SAAR.....	-12.79	-8.29	-0.48	-0.80	-1.75	-1.93	-1.85	-2.00	-1.44	-1.11	-0.76	-15.69	-7.97	-6.20	-1.72	
% Chg Same Qtr Last Yr.....	-11.83	-13.30	-13.83	-5.73	-2.88	-1.24	-1.58	-1.88	-1.80	-1.60	-1.33	-15.69	-7.97	-6.20	-1.72	
PARTICIPATION RATE (PERCENT).....	57.5	57.4	57.1	57.0	56.9	56.8	56.8	56.7	56.7	56.6	56.6	57.1	57.7	57.0	56.7	
% Chg Prev Qtr SAAR.....	-5.87	-0.77	-1.92	-0.80	-0.72	-0.63	-0.42	-0.27	-0.43	-0.37	-0.23	-3.13	1.12	-1.26	-0.49	
% Chg Same Qtr Last Yr.....	1.18	1.41	-0.58	-2.36	-1.05	-1.02	-0.64	-0.51	-0.44	-0.37	-0.32	-3.13	1.12	-1.26	-0.49	
UNEMPLOYMENT RATE (PERCENT).....	5.7	5.6	5.6	5.6	5.5	5.5	5.5	5.4	5.4	5.4	5.4	6.6	5.9	5.5	5.4	

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 17: Tennessee Taxable Sales, Not Seasonally Adjusted (millions of 2009 dollars)

January 2016

	History		Forecast Data										Annual			
	2015:2	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
TOTAL TAXABLE SALES.....	26057	25942	27861	24740	27009	26344	28236	25119	27313	26657	28680	25526	97118	102863	106329	107769
% Chg Same Qtr Last Yr.....	7.72	7.27	5.41	7.55	3.65	1.55	1.35	1.53	1.13	1.19	1.57	1.62	3.48	5.92	3.37	1.35
AUTO DEALERS.....	2750	2870	2592	2717	2865	2953	2650	2805	2855	2925	2690	2900	9683	10748	11185	11275
% Chg Same Qtr Last Yr.....	13.37	12.91	9.16	7.13	4.20	2.88	2.22	3.26	-0.36	-0.94	1.52	3.39	5.90	11.00	4.06	0.81
PURCHASES FROM MANUFACTURERS....	1100	1136	1311	957	1164	1149	1319	965	1180	1166	1341	981	4109	4431	4590	4652
% Chg Same Qtr Last Yr.....	9.19	9.67	5.12	8.26	5.90	1.17	0.58	0.82	1.36	1.46	1.66	1.66	5.64	7.84	3.58	1.36
MISC DURABLE GOODS.....	4547	4346	4478	3909	4688	4416	4527	3961	4750	4486	4606	4026	16103	16903	17540	17803
% Chg Same Qtr Last Yr.....	7.15	5.49	5.83	10.67	3.10	1.61	1.11	1.33	1.31	1.60	1.73	1.64	3.01	4.97	3.77	1.49
EATING AND DRINKING PLACES.....	2833	2808	2768	2713	2918	2859	2812	2761	2967	2912	2870	2814	10260	10961	11301	11510
% Chg Same Qtr Last Yr.....	8.68	7.36	6.00	6.30	2.98	1.80	1.59	1.80	1.69	1.85	2.07	1.92	4.35	6.84	3.10	1.85
FOOD STORES.....	2420	2457	2673	2370	2482	2480	2693	2380	2490	2489	2706	2388	9490	9861	10024	10065
% Chg Same Qtr Last Yr.....	3.91	3.83	3.44	2.57	2.54	0.94	0.73	0.41	0.36	0.36	0.51	0.33	1.29	3.91	1.66	0.41
LIQUOR STORES.....	211	210	262	211	219	214	266	213	222	218	271	218	821	883	909	925
% Chg Same Qtr Last Yr.....	9.22	8.12	6.18	5.50	3.57	1.90	1.36	1.39	1.52	1.71	2.07	2.01	5.48	7.62	2.95	1.69
HOTELS AND MOTELS.....	801	832	757	636	827	827	765	661	859	860	795	685	2647	2965	3055	3174
% Chg Same Qtr Last Yr.....	12.38	13.97	12.88	10.66	3.20	-0.63	1.07	3.84	3.94	3.95	3.92	3.74	12.27	12.00	3.03	3.92
OTHER RETAIL AND SERVICE.....	7789	7708	8946	7635	8122	7829	9121	7766	8254	7969	9290	7894	29923	31457	32707	33279
% Chg Same Qtr Last Yr.....	6.24	8.01	4.73	8.86	4.27	1.56	1.96	1.71	1.63	1.79	1.86	1.65	3.84	5.13	3.97	1.75
MISC NONDURABLE GOODS.....	2134	2098	2518	2102	2236	2146	2555	2130	2265	2178	2597	2160	8297	8665	9040	9170
% Chg Same Qtr Last Yr.....	4.37	5.75	5.83	9.74	4.80	2.31	1.47	1.29	1.29	1.50	1.65	1.44	2.66	4.44	4.32	1.44
TRANSPORTATION, COMMUNICATION.....	1472	1476	1556	1491	1488	1471	1529	1477	1471	1454	1513	1460	5786	5989	5978	5915
% Chg Same Qtr Last Yr.....	13.65	1.21	0.80	0.36	1.10	-0.33	-1.75	-0.93	-1.17	-1.11	-1.01	-1.17	-2.78	3.51	-0.17	-1.05
PER CAPITA (\$)......	3914	3887	4164	3688	4016	3907	4177	3706	4020	3913	4199	3728	14721	15429	15786	15838
% Chg Same Qtr Last Yr.....	6.60	6.16	4.32	6.44	2.58	0.51	0.31	0.50	0.10	0.17	0.55	0.60	2.39	4.81	2.31	0.33

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 18: Tennessee Taxable Sales, Seasonally Adjusted (millions of 2009 dollars)

January 2016

	History		Forecast Data										Annual			
	2015:2	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
TOTAL TAXABLE SALES.....	25642	26228	26353	26392	26580	26635	26708	26795	26878	26954	27127	27230	97036	102746	106315	107755
% Chg Prev Qtr SAAR.....	19.55	9.46	1.91	0.59	2.88	0.83	1.10	1.31	1.24	1.14	2.59	1.52	3.41	5.88	3.47	1.35
% Chg Same Qtr Last Yr.....	7.71	7.21	5.48	7.62	3.66	1.55	1.35	1.53	1.12	1.20	1.57	1.62	3.41	5.88	3.47	1.35
AUTO DEALERS.....	2697	2754	2774	2706	2810	2833	2836	2794	2800	2806	2879	2889	9689	10751	11185	11279
% Chg Prev Qtr SAAR.....	29.95	8.67	3.02	-9.45	16.28	3.28	0.39	-5.71	0.84	0.89	10.74	1.43	5.98	10.95	4.04	0.85
% Chg Same Qtr Last Yr.....	13.53	12.79	9.16	7.13	4.20	2.88	2.22	3.26	-0.36	-0.94	1.52	3.39	5.98	10.95	4.04	0.85
PURCHASES FROM MANUFACTURERS....	1081	1135	1144	1147	1145	1148	1151	1156	1161	1165	1170	1176	4089	4420	4591	4652
% Chg Prev Qtr SAAR.....	8.58	21.27	3.23	1.06	-0.61	1.03	0.86	2.02	1.55	1.41	1.68	2.02	5.42	8.09	3.87	1.33
% Chg Same Qtr Last Yr.....	9.28	9.81	5.12	8.26	5.90	1.17	0.58	0.82	1.36	1.46	1.66	1.66	5.42	8.09	3.87	1.33
MISC DURABLE GOODS.....	4252	4317	4352	4366	4384	4386	4400	4424	4442	4456	4476	4497	16089	16866	17537	17799
% Chg Prev Qtr SAAR.....	34.98	6.21	3.30	1.30	1.66	0.18	1.31	2.18	1.58	1.32	1.83	1.81	2.96	4.83	3.98	1.49
% Chg Same Qtr Last Yr.....	7.15	5.44	5.83	10.67	3.10	1.61	1.11	1.33	1.31	1.60	1.73	1.64	2.96	4.83	3.98	1.49
EATING AND DRINKING PLACES.....	2741	2779	2796	2808	2823	2829	2841	2859	2870	2882	2899	2914	10259	10958	11301	11510
% Chg Prev Qtr SAAR.....	15.86	5.72	2.46	1.73	2.06	0.97	1.61	2.56	1.62	1.59	2.51	1.96	4.35	6.81	3.13	1.85
% Chg Same Qtr Last Yr.....	8.64	7.36	6.00	6.30	2.98	1.80	1.59	1.80	1.69	1.85	2.07	1.92	4.35	6.81	3.13	1.85
FOOD STORES.....	2445	2483	2489	2503	2507	2507	2507	2513	2516	2516	2520	2522	9487	9858	10024	10065
% Chg Prev Qtr SAAR.....	0.82	6.40	0.91	2.24	0.70	-0.09	0.08	0.97	0.48	-0.08	0.67	0.26	1.21	3.91	1.69	0.41
% Chg Same Qtr Last Yr.....	3.95	3.83	3.44	2.57	2.54	0.94	0.73	0.41	0.36	0.36	0.51	0.33	1.21	3.91	1.69	0.41
LIQUOR STORES.....	219	223	225	226	227	228	228	230	230	231	233	234	819	882	909	924
% Chg Prev Qtr SAAR.....	8.75	7.79	3.42	2.17	1.04	1.00	1.24	2.30	1.53	1.76	2.70	2.07	5.36	7.69	3.05	1.67
% Chg Same Qtr Last Yr.....	9.31	8.05	6.18	5.50	3.57	1.90	1.36	1.39	1.52	1.71	2.07	2.01	5.36	7.69	3.05	1.67
HOTELS AND MOTELS.....	737	771	765	753	760	766	773	782	790	796	803	812	2642	2953	3053	3172
% Chg Prev Qtr SAAR.....	37.30	19.59	-2.95	-5.90	3.85	2.81	3.86	4.85	4.26	2.84	3.75	4.11	11.91	11.78	3.37	3.91
% Chg Same Qtr Last Yr.....	12.32	13.88	12.88	10.66	3.20	-0.63	1.07	3.84	3.94	3.95	3.92	3.74	11.91	11.78	3.37	3.91
OTHER RETAIL AND SERVICE.....	7832	8060	8058	8130	8166	8186	8216	8269	8299	8332	8369	8406	29891	31419	32699	33270
% Chg Prev Qtr SAAR.....	20.96	12.16	-0.10	3.62	1.79	0.97	1.49	2.61	1.45	1.60	1.76	1.78	3.72	5.11	4.07	1.75
% Chg Same Qtr Last Yr.....	6.23	7.99	4.73	8.86	4.27	1.56	1.96	1.71	1.63	1.79	1.86	1.65	3.72	5.11	4.07	1.75
MISC NONDURABLE GOODS.....	2155	2209	2235	2251	2258	2260	2268	2280	2287	2294	2305	2313	8289	8650	9037	9167
% Chg Prev Qtr SAAR.....	21.73	10.46	4.79	2.92	1.24	0.36	1.36	2.23	1.22	1.19	1.95	1.41	2.57	4.36	4.47	1.43
% Chg Same Qtr Last Yr.....	4.36	5.70	5.83	9.74	4.80	2.31	1.47	1.29	1.29	1.50	1.65	1.44	2.57	4.36	4.47	1.43
TRANSPORTATION, COMMUNICATION....	1483	1497	1514	1501	1499	1492	1488	1487	1481	1476	1473	1469	5782	5989	5980	5917
% Chg Prev Qtr SAAR.....	-3.32	4.06	4.60	-3.60	-0.42	-1.72	-1.22	-0.34	-1.40	-1.50	-0.79	-0.99	-2.77	3.59	-0.16	-1.05
% Chg Same Qtr Last Yr.....	13.72	1.26	0.80	0.36	1.10	-0.33	-1.75	-0.93	-1.17	-1.11	-1.01	-1.17	-2.77	3.59	-0.16	-1.05
PER CAPITA (\$).....	3852	3930	3938	3934	3952	3950	3951	3953	3956	3957	3972	3977	14710	15414	15786	15838
% Chg Prev Qtr SAAR.....	18.31	8.33	0.86	-0.44	1.83	-0.20	0.07	0.29	0.22	0.13	1.56	0.51	2.32	4.78	2.42	0.33
% Chg Same Qtr Last Yr.....	6.59	6.09	4.38	6.51	2.59	0.51	0.31	0.49	0.09	0.17	0.55	0.60	2.32	4.78	2.42	0.33

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 19: Tennessee Taxable Sales, Not Seasonally Adjusted (millions of current dollars)

January 2016

	History		Forecast Data										Annual			
	2015:2	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
TOTAL TAXABLE SALES.....	28505	28466	30557	27142	29764	29253	31536	28150	30792	30237	32671	29216	105976	112554	117695	121850
% Chg Same Qtr Last Yr.....	7.99	7.56	5.75	8.45	4.42	2.76	3.20	3.72	3.45	3.36	3.60	3.79	4.96	6.21	4.57	3.53
AUTO DEALERS.....	3008	3150	2843	2980	3158	3279	2959	3144	3219	3318	3064	3320	10565	11760	12376	12745
% Chg Same Qtr Last Yr.....	13.65	13.21	9.51	8.03	4.97	4.11	4.09	5.48	1.93	1.19	3.55	5.60	7.42	11.31	5.24	2.98
PURCHASES FROM MANUFACTURERS.....	1203	1246	1438	1050	1283	1276	1473	1081	1331	1322	1528	1123	4484	4849	5082	5262
% Chg Same Qtr Last Yr.....	9.46	9.96	5.46	9.17	6.68	2.38	2.43	2.99	3.69	3.64	3.70	3.83	7.15	8.14	4.81	3.54
MISC DURABLE GOODS.....	4974	4769	4911	4288	5167	4904	5057	4439	5355	5089	5247	4608	17572	18497	19415	20129
% Chg Same Qtr Last Yr.....	7.42	5.77	6.17	11.60	3.87	2.82	2.97	3.51	3.64	3.78	3.76	3.80	4.49	5.26	4.96	3.68
EATING AND DRINKING PLACES.....	3099	3082	3036	2976	3215	3175	3141	3095	3345	3303	3270	3221	11195	11993	12507	13012
% Chg Same Qtr Last Yr.....	8.95	7.65	6.34	7.19	3.74	3.02	3.45	3.99	4.02	4.03	4.11	4.09	5.84	7.13	4.28	4.04
FOOD STORES.....	2647	2696	2932	2600	2735	2754	3007	2667	2808	2823	3083	2733	10356	10789	11096	11381
% Chg Same Qtr Last Yr.....	4.17	4.11	3.78	3.43	3.30	2.15	2.57	2.58	2.66	2.51	2.51	2.47	2.74	4.19	2.84	2.57
LIQUOR STORES.....	231	231	287	231	241	238	297	239	250	247	309	249	896	967	1007	1046
% Chg Same Qtr Last Yr.....	9.49	8.41	6.53	6.38	4.34	3.12	3.22	3.58	3.85	3.89	4.11	4.19	6.97	7.92	4.17	3.87
HOTELS AND MOTELS.....	876	913	830	698	911	918	854	740	969	975	905	785	2889	3245	3381	3589
% Chg Same Qtr Last Yr.....	12.66	14.28	13.25	11.59	3.97	0.56	2.92	6.08	6.33	6.18	6.00	5.95	13.90	12.31	4.21	6.15
OTHER RETAIL AND SERVICE.....	8521	8459	9811	8376	8950	8693	10187	8703	9305	9039	10583	9035	32652	34421	36207	37631
% Chg Same Qtr Last Yr.....	6.51	8.30	5.07	9.77	5.04	2.78	3.83	3.90	3.96	3.97	3.89	3.81	5.31	5.42	5.19	3.93
MISC NONDURABLE GOODS.....	2334	2302	2762	2306	2464	2383	2853	2386	2554	2471	2958	2473	9053	9482	10007	10369
% Chg Same Qtr Last Yr.....	4.63	6.03	6.17	10.66	5.57	3.54	3.32	3.47	3.61	3.68	3.68	3.60	4.12	4.73	5.54	3.62
TRANSPORTATION, COMMUNICATION.....	1610	1619	1707	1635	1640	1633	1707	1655	1658	1650	1724	1671	6313	6552	6616	6687
% Chg Same Qtr Last Yr.....	13.94	1.48	1.13	1.20	1.85	0.86	0.05	1.21	1.10	1.01	0.97	0.94	-1.39	3.79	0.98	1.07
PER CAPITA (\$)......	4282	4265	4566	4046	4425	4338	4665	4153	4532	4439	4784	4267	16063	16883	17474	17907
% Chg Same Qtr Last Yr.....	6.87	6.44	4.66	7.33	3.35	1.71	2.15	2.66	2.40	2.32	2.56	2.75	3.85	5.10	3.50	2.48

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 20: Tennessee Taxable Sales, Seasonally Adjusted (millions of current dollars)

January 2016

	History		Forecast Data										Annual			
	2015:2	2015:3	2015:4	2016:1	2016:2	2016:3	2016:4	2017:1	2017:2	2017:3	2017:4	2018:1	2014	2015	2016	2017
TOTAL TAXABLE SALES.....	28050	28781	28903	28953	29292	29577	29829	30028	30301	30575	30903	31167	105877	112414	117652	121807
% Chg Prev Qtr SAAR.....	22.19	10.84	1.70	0.70	4.76	3.95	3.45	2.70	3.67	3.67	4.37	3.45	4.89	6.17	4.66	3.53
% Chg Same Qtr Last Yr.....	7.98	7.49	5.82	8.52	4.43	2.77	3.20	3.71	3.44	3.37	3.60	3.79	4.89	6.17	4.66	3.53
AUTO DEALERS.....	2950	3022	3043	2969	3097	3146	3167	3131	3157	3183	3279	3307	10572	11762	12378	12751
% Chg Prev Qtr SAAR.....	32.82	10.03	2.81	-9.35	18.40	6.47	2.73	-4.42	3.26	3.40	12.65	3.36	7.49	11.26	5.24	3.01
% Chg Same Qtr Last Yr.....	13.82	13.09	9.51	8.03	4.97	4.11	4.09	5.48	1.93	1.19	3.55	5.60	7.49	11.26	5.24	3.01
PURCHASES FROM MANUFACTURERS....	1183	1245	1255	1258	1262	1275	1285	1296	1309	1321	1333	1346	4461	4836	5080	5258
% Chg Prev Qtr SAAR.....	10.98	22.79	3.02	1.17	1.21	4.15	3.21	3.42	3.99	3.94	3.44	3.96	6.93	8.39	5.06	3.51
% Chg Same Qtr Last Yr.....	9.55	10.10	5.46	9.17	6.68	2.38	2.43	2.99	3.69	3.64	3.70	3.83	6.93	8.39	5.06	3.51
MISC DURABLE GOODS.....	4652	4737	4773	4790	4832	4871	4915	4958	5007	5055	5100	5147	17555	18454	19407	20120
% Chg Prev Qtr SAAR.....	37.96	7.54	3.09	1.41	3.52	3.28	3.67	3.58	4.02	3.85	3.59	3.75	4.44	5.12	5.16	3.67
% Chg Same Qtr Last Yr.....	7.42	5.72	6.17	11.60	3.87	2.82	2.97	3.51	3.64	3.78	3.76	3.80	4.44	5.12	5.16	3.67
EATING AND DRINKING PLACES.....	2998	3050	3067	3081	3111	3142	3173	3204	3236	3269	3303	3335	11194	11989	12506	13011
% Chg Prev Qtr SAAR.....	18.42	7.05	2.25	1.84	3.92	4.09	3.98	3.97	4.06	4.13	4.28	3.90	5.84	7.10	4.31	4.04
% Chg Same Qtr Last Yr.....	8.92	7.65	6.34	7.19	3.74	3.02	3.45	3.99	4.02	4.03	4.11	4.09	5.84	7.10	4.31	4.04
FOOD STORES.....	2675	2725	2730	2746	2763	2784	2800	2817	2837	2854	2871	2886	10351	10785	11093	11377
% Chg Prev Qtr SAAR.....	3.05	7.74	0.71	2.35	2.54	3.00	2.41	2.35	2.89	2.41	2.41	2.16	2.66	4.19	2.86	2.57
% Chg Same Qtr Last Yr.....	4.21	4.11	3.78	3.43	3.30	2.15	2.57	2.58	2.66	2.52	2.51	2.47	2.66	4.19	2.86	2.57
LIQUOR STORES.....	240	245	247	248	250	253	255	257	260	262	265	268	894	965	1006	1045
% Chg Prev Qtr SAAR.....	11.15	9.14	3.21	2.28	2.89	4.12	3.60	3.70	3.97	4.30	4.48	4.01	6.86	7.98	4.24	3.86
% Chg Same Qtr Last Yr.....	9.58	8.34	6.53	6.38	4.34	3.12	3.22	3.58	3.85	3.89	4.11	4.19	6.86	7.98	4.24	3.86
HOTELS AND MOTELS.....	806	846	839	826	838	850	863	877	891	903	915	929	2883	3231	3378	3586
% Chg Prev Qtr SAAR.....	40.33	21.10	-3.15	-5.80	5.75	5.99	6.28	6.29	6.76	5.41	5.55	6.09	13.51	12.09	4.55	6.15
% Chg Same Qtr Last Yr.....	12.60	14.18	13.25	11.59	3.97	0.56	2.92	6.08	6.33	6.18	6.00	5.95	13.51	12.09	4.55	6.15
OTHER RETAIL AND SERVICE.....	8568	8845	8838	8919	9000	9090	9176	9267	9356	9452	9534	9621	32614	34376	36186	37609
% Chg Prev Qtr SAAR.....	23.64	13.57	-0.30	3.73	3.65	4.09	3.85	4.02	3.89	4.14	3.52	3.71	5.20	5.40	5.27	3.93
% Chg Same Qtr Last Yr.....	6.49	8.28	5.07	9.77	5.04	2.78	3.83	3.90	3.96	3.97	3.89	3.81	5.20	5.40	5.27	3.93
MISC NONDURABLE GOODS.....	2357	2424	2451	2470	2489	2510	2533	2556	2579	2602	2626	2648	9044	9464	10001	10362
% Chg Prev Qtr SAAR.....	24.42	11.85	4.57	3.03	3.09	3.46	3.72	3.63	3.65	3.72	3.71	3.34	4.04	4.64	5.67	3.61
% Chg Same Qtr Last Yr.....	4.63	5.98	6.17	10.66	5.57	3.54	3.32	3.47	3.61	3.68	3.68	3.60	4.04	4.64	5.67	3.61
TRANSPORTATION, COMMUNICATION.....	1622	1643	1661	1646	1652	1657	1662	1666	1670	1674	1678	1682	6308	6552	6617	6688
% Chg Prev Qtr SAAR.....	-1.18	5.37	4.39	-3.50	1.40	1.32	1.08	1.03	0.97	0.96	0.93	0.90	-1.38	3.87	0.99	1.07
% Chg Same Qtr Last Yr.....	14.00	1.53	1.13	1.20	1.85	0.86	0.05	1.21	1.10	1.01	0.97	0.94	-1.38	3.87	0.99	1.07
PER CAPITA (\$)......	4214	4312	4319	4316	4355	4386	4412	4430	4459	4488	4525	4552	16050	16864	17469	17903
% Chg Prev Qtr SAAR.....	20.93	9.69	0.65	-0.33	3.69	2.89	2.40	1.66	2.63	2.63	3.32	2.42	3.78	5.07	3.59	2.48
% Chg Same Qtr Last Yr.....	6.86	6.38	4.72	7.40	3.35	1.71	2.15	2.66	2.39	2.33	2.56	2.75	3.78	5.07	3.59	2.48

Center for Business and Economic Research, University of Tennessee

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

January 2016

	Forecast Data										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
US GDP (Bil2009\$) SAAR.....	16346.8	16780.6	17274.5	17728.6	18160.0	18600.2	19001.4	19410.7	19846.1	20292.1	20734.5
Percentage change.....	2.41	2.65	2.94	2.63	2.43	2.42	2.16	2.15	2.24	2.25	2.18
US GDP (Bil\$) SAAR.....	17951.1	18743.4	19668.4	20597.6	21531.1	22517.9	23499.8	24524.2	25592.8	26693.8	27826.3
Percentage change.....	3.48	4.41	4.94	4.72	4.53	4.58	4.36	4.36	4.36	4.30	4.24
TN PERSONAL INCOME (MIL2009\$) SAAR.....	253482	262535	269009	275712	282315	289062	295381	301349	307344	313789	320868
Percentage change.....	4.38	3.57	2.47	2.49	2.39	2.39	2.19	2.02	1.99	2.10	2.26
US PERSONAL INCOME (BIL2009\$) SAAR.....	14036	14475	14929	15382	15819	16257	16662	17051	17449	17853	18267
Percentage change.....	4.22	3.12	3.14	3.04	2.84	2.77	2.49	2.33	2.34	2.32	2.32
TN PERSONAL INCOME (MIL\$) SAAR.....	277316	290533	304095	317862	331870	346797	362031	377731	394009	411133	429289
Percentage change.....	4.66	4.77	4.67	4.53	4.41	4.50	4.39	4.34	4.31	4.35	4.42
US PERSONAL INCOME (BIL\$) SAAR.....	15360	15998	16825	17707	18591	19505	20424	21375	22372	23394	24446
Percentage change.....	4.53	4.16	5.17	5.24	4.99	4.92	4.71	4.65	4.66	4.57	4.50
TN NONFARM JOBS (THOUS).....	2870.7	2918.0	2956.2	2997.7	3037.7	3070.0	3100.8	3130.1	3160.1	3189.6	3217.7
Percentage change.....	1.94	1.65	1.31	1.40	1.33	1.06	1.00	0.94	0.96	0.93	0.88
US NONFARM JOBS (MIL).....	141.9	144.3	146.2	147.9	149.4	151.0	152.2	153.3	154.4	155.5	156.5
Percentage change.....	2.10	1.67	1.29	1.19	1.03	1.05	0.76	0.73	0.72	0.73	0.67
TN MFG JOBS (THOUS).....	331.5	333.7	336.1	338.2	339.6	339.2	338.0	335.9	333.7	330.6	327.3
Percentage change.....	1.93	0.68	0.71	0.63	0.41	-0.13	-0.36	-0.60	-0.68	-0.92	-1.00
US MFG JOBS (MIL).....	12.3	12.3	12.4	12.5	12.6	12.7	12.8	12.9	12.9	12.9	12.9
Percentage change.....	1.12	-0.14	0.85	0.92	0.97	0.76	0.73	0.18	0.00	0.00	-0.03
TN UNEMPLOYMENT RATE (%).....	5.9	5.5	5.4	5.3	5.2	5.2	5.1	5.1	5.1	5.1	5.1
US UNEMPLOYMENT RATE (%).....	5.3	4.9	4.9	4.9	5.0	5.0	5.0	5.1	5.1	5.0	5.0
CHAINED PRICE INDEX, GDP (2009=100.0).....	109.8	111.7	113.9	116.2	118.6	121.1	123.7	126.3	129.0	131.5	134.2
Percentage change.....	1.04	1.70	1.94	2.04	2.05	2.11	2.16	2.16	2.07	2.01	2.02
US PERS CONSUMP DEFL (2009=100.0).....	109.4	110.5	112.7	115.1	117.5	120.0	122.6	125.4	128.2	131.0	133.8
Percentage change.....	0.29	1.00	1.97	2.14	2.09	2.09	2.16	2.27	2.27	2.20	2.13
CONSUMER PRICE INDEX, ALL-URBAN (82-84=1.000)....	2.370	2.399	2.460	2.526	2.591	2.655	2.724	2.798	2.874	2.947	3.018
Percentage change.....	0.13	1.21	2.56	2.68	2.54	2.50	2.58	2.72	2.70	2.56	2.41
BANK PRIME INTEREST RATE (%).....	3.3	3.9	4.9	5.9	6.3	6.3	6.3	6.3	6.3	6.3	6.3
FEDERAL FUNDS RATE (% per annum).....	0.131	0.899	1.912	2.902	3.250	3.250	3.250	3.250	3.250	3.250	3.250
30-YEAR FIXED MORTGAGE RATE (%).....	3.9	4.4	4.7	5.4	5.8	5.8	5.8	5.8	5.8	5.8	5.8
TN TAXABLE SALES (MIL2009\$).....	102746	106315	107755	109560	111496	113387	115204	116993	118691	120455	122480
Percentage change.....	5.88	3.47	1.35	1.68	1.77	1.70	1.60	1.55	1.45	1.49	1.68
TN TAXABLE SALES (MIL\$).....	112414	117652	121807	126307	131066	136033	141197	146646	152158	157821	163864
Percentage change.....	6.17	4.66	3.53	3.69	3.77	3.79	3.80	3.86	3.76	3.72	3.83
TN AVG ANNUAL WAGE, NONFARM (2009\$).....	43161	44058	44349	44652	44929	45141	45276	45354	45451	45592	45765
Percentage change.....	2.86	2.08	0.66	0.68	0.62	0.47	0.30	0.17	0.21	0.31	0.38
TN AVG ANNUAL WAGE, NONFARM (\$).....	47219	48755	50131	51477	52814	54155	55490	56848	58265	59733	61227
Percentage change.....	3.14	3.25	2.82	2.68	2.60	2.54	2.46	2.45	2.49	2.52	2.50

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

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

January 2016

	Forecast Data										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
TN GDP (2009\$) SAAR.....	42240	42745	43222	43719	44261	44761	45297	45848	46395	46947	47550
Percentage change.....	1.33	1.20	1.12	1.15	1.24	1.13	1.20	1.22	1.19	1.19	1.29
US GDP (2009\$) SAAR.....	50787	51712	52807	53762	54636	55522	56283	57058	57901	58766	59613
Percentage change.....	1.65	1.82	2.12	1.81	1.62	1.62	1.37	1.38	1.48	1.49	1.44
TN GDP (\$) SAAR.....	46690	48202	49652	51154	52726	54309	56021	57816	59627	61486	63451
Percentage change.....	3.13	3.24	3.01	3.02	3.07	3.00	3.15	3.20	3.13	3.12	3.20
US GDP (\$) SAAR.....	55771	57761	60125	62463	64778	67217	69607	72089	74667	77305	80002
Percentage change.....	2.70	3.57	4.09	3.89	3.71	3.77	3.56	3.57	3.58	3.53	3.49
TN PERSONAL INCOME (2009\$) SAAR.....	38028	38982	39539	40119	40676	41243	41741	42182	42621	43115	43691
Percentage change.....	3.29	2.51	1.43	1.47	1.39	1.40	1.21	1.06	1.04	1.16	1.33
US PERSONAL INCOME (2009\$) SAAR.....	43609	44607	45635	46647	47593	48528	49354	50120	50907	51703	52520
Percentage change.....	3.44	2.29	2.31	2.22	2.03	1.96	1.70	1.55	1.57	1.56	1.58
TN PERSONAL INCOME (\$) SAAR.....	41603	43139	44695	46252	47815	49480	51159	52873	54638	56490	58453
Percentage change.....	3.57	3.69	3.61	3.48	3.38	3.48	3.39	3.35	3.34	3.39	3.48
US PERSONAL INCOME (\$) SAAR.....	47720	49301	51434	53698	55932	58224	60497	62831	65270	67750	70284
Percentage change.....	3.75	3.31	4.33	4.40	4.16	4.10	3.90	3.86	3.88	3.80	3.74
TN TAXABLE SALES (2009\$).....	15414	15786	15838	15942	16064	16178	16280	16376	16459	16551	16677
Percentage change.....	4.78	2.42	0.33	0.66	0.76	0.71	0.63	0.59	0.51	0.56	0.77
TN TAXABLE SALES (\$).....	16864	17469	17903	18379	18884	19409	19953	20527	21100	21685	22312
Percentage change.....	5.07	3.59	2.48	2.66	2.75	2.78	2.80	2.88	2.79	2.77	2.89

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 3: Tennessee Personal Income Components (millions of 2009 dollars)**January 2016**

	Forecast Data										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
TN PERSONAL INCOME.....	253482	262535	269009	275712	282315	289062	295381	301349	307344	313789	320868
Percentage change.....	4.38	3.57	2.47	2.49	2.39	2.39	2.19	2.02	1.99	2.10	2.26
WAGES AND SALARIES.....	124639	129447	132192	134946	137561	139658	141457	143022	144684	146471	148304
Percentage change.....	4.72	3.86	2.12	2.08	1.94	1.52	1.29	1.11	1.16	1.23	1.25
OTHER LABOR INCOME.....	27759	28609	29294	29927	30459	30949	31355	31705	32057	32391	32759
Percentage change.....	2.25	3.06	2.39	2.16	1.78	1.61	1.31	1.11	1.11	1.04	1.13
PROPRIETORS INCOME.....	33781	35059	35952	37039	37982	39398	40855	42211	43514	44930	46555
Percentage change.....	4.83	3.78	2.55	3.03	2.55	3.73	3.70	3.32	3.09	3.25	3.62
RENT, INTEREST, DIVIDENDS.....	35754	36888	37995	39208	40317	41392	42398	43305	44281	45350	46570
Percentage change.....	3.85	3.17	3.00	3.19	2.83	2.67	2.43	2.14	2.25	2.41	2.69
TRANSFER PAYMENTS.....	52529	53825	54850	55886	57238	58876	60456	62134	63711	65423	67331
Percentage change.....	4.54	2.47	1.90	1.89	2.42	2.86	2.68	2.78	2.54	2.69	2.92
LESS: PERS CONT FOR SOC INS.....	19736	20042	20045	20087	20059	20058	20015	19934	19840	19742	19645
Percentage change.....	3.55	1.55	0.01	0.21	-0.14	-0.01	-0.21	-0.40	-0.47	-0.49	-0.49
RESIDENCE ADJUSTMENT.....	-1243	-1251	-1229	-1208	-1184	-1155	-1124	-1093	-1063	-1033	-1005
Percentage change.....	6.94	0.58	-1.75	-1.68	-2.00	-2.48	-2.61	-2.76	-2.80	-2.76	-2.71
PER CAPITA PERSONAL INCOME (\$).	38028	38982	39539	40119	40676	41243	41741	42182	42621	43115	43691
Percentage change.....	3.29	2.51	1.43	1.47	1.39	1.40	1.21	1.06	1.04	1.16	1.33

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

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

January 2016

	Forecast Data										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
TN PERSONAL INCOME.....	277316	290533	304095	317862	331870	346797	362031	377731	394009	411133	429289
Percentage change.....	4.66	4.77	4.67	4.53	4.41	4.50	4.39	4.34	4.31	4.35	4.42
WAGES AND SALARIES.....	136360	143252	149432	155575	161706	167550	173373	179270	185479	191906	198412
Percentage change.....	5.01	5.05	4.31	4.11	3.94	3.61	3.48	3.40	3.46	3.47	3.39
OTHER LABOR INCOME.....	30369	31659	33114	34502	35805	37130	38430	39740	41095	42439	43827
Percentage change.....	2.53	4.25	4.60	4.19	3.78	3.70	3.50	3.41	3.41	3.27	3.27
PROPRIETORS INCOME.....	36957	38798	40641	42702	44650	47269	50074	52911	55785	58869	62287
Percentage change.....	5.11	4.98	4.75	5.07	4.56	5.87	5.94	5.67	5.43	5.53	5.81
RENT, INTEREST, DIVIDENDS.....	39116	40822	42951	45203	47395	49660	51964	54282	56768	59419	62307
Percentage change.....	4.13	4.36	5.22	5.24	4.85	4.78	4.64	4.46	4.58	4.67	4.86
TRANSFER PAYMENTS.....	57466	59565	62003	64430	67285	70636	74097	77884	81677	85720	90083
Percentage change.....	4.82	3.65	4.09	3.91	4.43	4.98	4.90	5.11	4.87	4.95	5.09
LESS: PERS CONT FOR SOC INS.....	21592	22178	22658	23157	23580	24063	24530	24986	25433	25866	26282
Percentage change.....	3.83	2.72	2.16	2.20	1.82	2.05	1.94	1.86	1.79	1.70	1.61
RESIDENCE ADJUSTMENT.....	-1360	-1384	-1389	-1393	-1392	-1385	-1378	-1370	-1362	-1354	-1345
Percentage change.....	7.24	1.73	0.36	0.27	-0.08	-0.47	-0.51	-0.55	-0.59	-0.62	-0.65
PER CAPITA PERSONAL INCOME (\$).	41603	43139	44695	46252	47815	49480	51159	52873	54638	56490	58453
Percentage change.....	3.57	3.69	3.61	3.48	3.38	3.48	3.39	3.35	3.34	3.39	3.48

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

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

January 2016

	Forecast Data										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
TOTAL NONFARM.....	2870.7	2918.0	2956.2	2997.7	3037.7	3070.0	3100.8	3130.1	3160.1	3189.6	3217.7
Percentage change.....	1.94	1.65	1.31	1.40	1.33	1.06	1.00	0.94	0.96	0.93	0.88
NATURAL RESOURCES, MINING & CONSTRUCTION....	114.5	117.5	121.0	124.1	126.2	128.7	130.9	132.0	133.3	134.9	136.4
Percentage change.....	3.20	2.63	3.02	2.49	1.75	1.93	1.73	0.87	1.00	1.16	1.14
MANUFACTURING.....	331.5	333.7	336.1	338.2	339.6	339.2	338.0	335.9	333.7	330.6	327.3
Percentage change.....	1.93	0.68	0.71	0.63	0.41	-0.13	-0.36	-0.60	-0.68	-0.92	-1.00
DURABLE GOODS.....	211.7	214.8	218.1	221.1	223.2	223.8	223.8	223.3	222.6	221.1	219.3
Percentage change.....	2.99	1.47	1.53	1.40	0.94	0.25	0.02	-0.23	-0.31	-0.68	-0.79
NONDURABLE GOODS.....	119.8	119.0	118.0	117.1	116.4	115.4	114.2	112.6	111.0	109.5	107.9
Percentage change.....	0.10	-0.72	-0.77	-0.79	-0.60	-0.85	-1.08	-1.34	-1.41	-1.41	-1.42
TRADE, TRANSPORTATION, UTILITIES.....	607.5	618.9	625.7	632.8	638.1	641.1	642.9	644.9	647.5	649.5	651.6
Percentage change.....	2.60	1.88	1.09	1.13	0.85	0.46	0.29	0.30	0.40	0.31	0.33
WHOLESALE TRADE.....	127.0	130.1	131.0	132.1	133.2	134.2	134.7	135.0	135.4	135.7	136.2
Percentage change.....	2.99	2.42	0.70	0.86	0.83	0.72	0.42	0.23	0.29	0.20	0.36
RETAIL TRADE.....	327.8	332.8	336.3	339.4	342.1	342.5	343.0	343.5	344.2	344.7	345.2
Percentage change.....	2.19	1.53	1.03	0.94	0.78	0.13	0.14	0.14	0.21	0.15	0.13
TRANSPORTATION & UTILITIES.....	152.7	156.0	158.4	161.2	162.9	164.4	165.2	166.3	167.8	169.1	170.2
Percentage change.....	3.15	2.19	1.56	1.77	1.03	0.92	0.48	0.71	0.90	0.72	0.70
INFORMATION.....	43.4	42.5	42.6	42.7	43.0	43.3	43.6	43.9	44.3	44.7	45.0
Percentage change.....	-1.27	-2.01	0.36	0.21	0.55	0.72	0.70	0.84	0.77	0.96	0.62
FINANCIAL ACTIVITIES.....	144.8	147.6	148.8	150.3	151.8	151.7	151.8	152.0	152.0	152.1	152.1
Percentage change.....	2.34	1.94	0.79	0.99	1.03	-0.08	0.10	0.12	0.01	0.05	-0.02
PROFESSIONAL & BUSINESS SERVICES.....	383.0	393.8	403.8	416.0	429.5	442.8	455.9	468.6	481.9	495.7	509.3
Percentage change.....	2.80	2.81	2.55	3.01	3.26	3.09	2.97	2.78	2.83	2.87	2.74
EDUCATION & HEALTH SERVICES.....	409.8	417.9	425.8	433.8	441.9	449.3	457.3	465.3	473.2	481.2	489.1
Percentage change.....	1.78	1.98	1.89	1.88	1.86	1.67	1.80	1.75	1.69	1.68	1.66
LEISURE & HOSPITALITY.....	305.9	313.6	319.5	325.1	329.9	333.6	337.3	341.6	345.2	349.3	351.9
Percentage change.....	3.28	2.54	1.86	1.75	1.49	1.11	1.12	1.25	1.08	1.17	0.74
OTHER SERVICES.....	104.8	103.6	102.4	102.6	102.7	102.7	102.8	102.9	103.2	102.9	103.0
Percentage change.....	-0.97	-1.11	-1.19	0.18	0.11	0.00	0.05	0.17	0.29	-0.34	0.10
GOVERNMENT.....	425.6	428.7	430.4	432.3	434.9	437.8	440.2	442.8	445.7	448.8	452.0
Percentage change.....	0.10	0.73	0.40	0.42	0.61	0.67	0.56	0.59	0.66	0.69	0.71
FEDERAL, CIVILIAN.....	47.4	46.5	45.8	45.1	44.4	43.9	43.3	42.9	42.7	42.4	42.1
Percentage change.....	-1.06	-1.95	-1.43	-1.65	-1.58	-1.09	-1.24	-0.89	-0.63	-0.62	-0.64
STATE & LOCAL.....	378.2	382.3	384.6	387.2	390.6	393.9	396.9	399.9	403.1	406.4	409.9
Percentage change.....	0.24	1.07	0.62	0.67	0.87	0.87	0.76	0.75	0.80	0.83	0.85

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 6: Tennessee Durable Goods Manufacturing Employment (thousands of jobs)**January 2016**

	Forecast Data										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
TOTAL DURABLE GOODS.....	211.7	214.8	218.1	221.1	223.2	223.8	223.8	223.3	222.6	221.1	219.3
Percentage change.....	2.99	1.47	1.53	1.40	0.94	0.25	0.02	-0.23	-0.31	-0.68	-0.79
WOOD PRODUCTS.....	11.6	11.8	12.0	12.2	12.3	12.3	12.2	12.2	12.1	12.1	12.1
Percentage change.....	3.40	1.90	1.55	1.29	0.79	-0.11	-0.34	-0.30	-0.31	-0.38	-0.29
NONMETALLIC MINERALS.....	11.7	11.6	11.5	11.4	11.4	11.4	11.4	11.4	11.3	11.3	11.2
Percentage change.....	-1.68	-0.98	-0.97	-0.63	-0.16	-0.06	-0.06	-0.13	-0.34	-0.35	-0.91
PRIMARY METALS.....	10.3	10.4	10.4	10.5	10.6	10.6	10.5	10.5	10.4	10.3	10.1
Percentage change.....	1.90	1.07	0.64	0.91	0.90	-0.46	-0.53	-0.46	-0.69	-1.08	-1.48
FABRICATED METALS.....	35.2	35.3	35.4	35.5	35.7	35.4	35.1	34.8	34.6	34.3	34.2
Percentage change.....	2.28	0.29	0.47	0.16	0.67	-0.93	-0.85	-0.72	-0.70	-0.68	-0.57
MACHINERY.....	26.2	26.1	26.4	26.7	26.9	27.1	27.0	26.7	26.4	26.1	25.8
Percentage change.....	1.94	-0.38	1.04	1.12	0.86	0.53	-0.44	-1.09	-0.96	-0.99	-1.14
COMPUTERS & ELECTRONICS.....	5.1	5.1	5.0	4.8	4.7	4.5	4.3	4.1	4.0	3.8	3.7
Percentage change.....	1.16	0.03	-2.64	-2.30	-3.35	-4.04	-4.10	-3.74	-4.20	-4.07	-4.15
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS.....	19.9	20.2	20.5	20.8	21.1	21.2	21.3	21.4	21.4	21.3	21.2
Percentage change.....	2.58	1.67	1.36	1.50	1.15	0.83	0.57	0.09	-0.05	-0.41	-0.48
TRANSPORTATION EQUIPMENT.....	67.5	70.0	72.5	74.9	76.3	77.4	78.2	78.7	79.0	78.8	78.4
Percentage change.....	5.39	3.71	3.67	3.23	1.87	1.43	1.09	0.64	0.43	-0.34	-0.52
FURNITURE.....	9.2	9.3	9.3	9.3	9.3	9.1	8.9	8.7	8.5	8.2	7.9
Percentage change.....	1.38	0.68	0.91	-0.27	-0.63	-1.76	-2.62	-2.38	-2.30	-2.84	-3.25
MISCELLANEOUS DURABLES.....	15.1	15.1	15.0	15.0	15.0	14.9	15.0	14.9	14.9	14.9	14.8
Percentage change.....	2.39	0.02	-0.49	0.02	0.20	-0.63	0.12	-0.10	-0.03	-0.35	-0.23

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

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

January 2016

	Forecast Data										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
TOTAL NONDURABLE GOODS.....	119.8	119.0	118.0	117.1	116.4	115.4	114.2	112.6	111.0	109.5	107.9
Percentage change.....	0.10	-0.72	-0.77	-0.79	-0.60	-0.85	-1.08	-1.34	-1.41	-1.41	-1.42
FOOD.....	32.9	32.9	33.0	33.0	33.0	32.9	32.7	32.5	32.3	32.0	31.8
Percentage change.....	0.54	0.12	0.12	0.08	0.09	-0.40	-0.53	-0.60	-0.75	-0.71	-0.62
BEVERAGE & TOBACCO.....	5.5	5.5	5.4	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.8
Percentage change.....	0.77	0.05	-0.99	-0.89	-0.75	-1.57	-1.49	-1.38	-1.62	-1.75	-1.55
TEXTILE MILLS, TEXTILE MILL PRODUCTS & APPAREL.....	9.6	9.2	8.7	8.3	8.0	7.7	7.4	7.1	6.9	6.6	6.4
Percentage change.....	-4.10	-4.09	-5.00	-4.85	-3.57	-3.64	-3.82	-4.00	-3.86	-3.72	-3.27
PAPER.....	14.3	14.0	13.6	13.4	13.1	12.8	12.6	12.4	12.2	12.0	11.8
Percentage change.....	-2.23	-2.28	-2.40	-2.04	-2.00	-1.85	-1.84	-1.72	-1.64	-1.60	-1.54
PRINTING & RELATED SUPPORT.....	9.0	8.8	8.8	8.7	8.6	8.4	8.3	8.1	8.0	7.8	7.7
Percentage change.....	-4.32	-2.25	-0.59	-1.52	-1.03	-1.97	-1.67	-1.62	-1.54	-1.93	-1.97
CHEMICALS.....	25.2	25.0	24.7	24.4	24.2	23.9	23.5	23.2	22.9	22.6	22.2
Percentage change.....	-0.40	-1.02	-1.09	-1.00	-0.92	-1.30	-1.51	-1.48	-1.42	-1.38	-1.62
PLASTICS & RUBBER.....	21.3	21.6	21.9	22.2	22.5	22.7	22.8	22.6	22.3	22.0	21.7
Percentage change.....	2.90	1.62	1.51	1.32	1.08	1.25	0.30	-1.02	-1.29	-1.34	-1.48
MISCELLANEOUS NONDURABLE GOODS.....	2.1	2.0	1.9	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.5
Percentage change.....	35.66	-3.74	-5.64	-6.17	-3.23	-1.90	-2.05	-2.01	-2.08	-1.88	-2.07

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 8: Tennessee Average Annual Wage and Salary Rate by Sector (2009 dollars)

January 2016

	Forecast Data										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
TOTAL NONFARM.....	43161	44058	44349	44652	44929	45141	45276	45354	45451	45592	45765
Percentage change.....	2.86	2.08	0.66	0.68	0.62	0.47	0.30	0.17	0.21	0.31	0.38
NATURAL RESOURCES, MINING											
AND CONSTRUCTION.....	49991	51772	52152	52564	52937	53223	53442	53667	53843	53983	54215
Percentage change.....	5.88	3.56	0.73	0.79	0.71	0.54	0.41	0.42	0.33	0.26	0.43
MANUFACTURING.....	52464	54520	55037	55472	55749	56050	56195	56361	56717	56899	57077
Percentage change.....	1.67	3.92	0.95	0.79	0.50	0.54	0.26	0.30	0.63	0.32	0.31
DURABLE GOODS.....	50844	52378	52841	53308	53596	53812	53902	54070	54332	54495	54627
Percentage change.....	0.70	3.02	0.88	0.89	0.54	0.40	0.17	0.31	0.48	0.30	0.24
NONDURABLE GOODS.....	55333	58393	59097	59559	59877	60388	60690	60903	61496	61753	62054
Percentage change.....	3.41	5.53	1.21	0.78	0.53	0.85	0.50	0.35	0.97	0.42	0.49
TRADE, TRANSPORTATION, UTILITIES.....	39037	39884	40333	40792	41238	41525	41801	41995	42212	42497	42877
Percentage change.....	0.83	2.17	1.13	1.14	1.09	0.69	0.67	0.46	0.52	0.67	0.89
WHOLESALE TRADE.....	59353	60621	61218	61845	62478	62735	63129	63209	63453	63985	64510
Percentage change.....	0.34	2.14	0.98	1.03	1.02	0.41	0.63	0.13	0.39	0.84	0.82
RETAIL TRADE.....	26683	27411	27715	28022	28385	28692	28939	29191	29409	29610	29966
Percentage change.....	0.76	2.73	1.11	1.11	1.30	1.08	0.86	0.87	0.75	0.68	1.20
TRANSPORTATION & UTILITIES.....	48721	49284	49809	50346	50765	50860	51025	51124	51242	51441	51666
Percentage change.....	1.06	1.16	1.06	1.08	0.83	0.19	0.32	0.20	0.23	0.39	0.44
INFORMATION.....	57804	59378	59802	60193	60385	60658	60855	61009	61114	61196	61434
Percentage change.....	3.39	2.72	0.71	0.65	0.32	0.45	0.32	0.25	0.17	0.13	0.39
FINANCIAL ACTIVITIES.....	64642	66426	67022	67485	67889	68196	68390	68477	68761	68995	69196
Percentage change.....	2.24	2.76	0.90	0.69	0.60	0.45	0.29	0.13	0.42	0.34	0.29
PROFESSIONAL & BUSINESS SERVICES..	51066	51350	51670	52043	52406	52766	53030	53289	53490	53760	54017
Percentage change.....	7.23	0.56	0.62	0.72	0.70	0.69	0.50	0.49	0.38	0.51	0.48
EDUCATION & HEALTH SERVICES.....	44065	44906	45191	45568	46026	46433	46733	46930	47088	47432	47756
Percentage change.....	2.93	1.91	0.63	0.83	1.01	0.88	0.65	0.42	0.34	0.73	0.68
LEISURE & HOSPITALITY.....	21137	21730	21979	22205	22371	22532	22578	22591	22588	22689	22813
Percentage change.....	4.86	2.81	1.14	1.03	0.75	0.72	0.21	0.06	-0.01	0.45	0.55
OTHER SERVICES.....	40498	41325	41442	41671	41670	41405	41122	40808	40499	40220	39979
Percentage change.....	4.20	2.04	0.28	0.55	0.00	-0.64	-0.68	-0.76	-0.76	-0.69	-0.60
GOVERNMENT.....	39726	40211	39940	39706	39465	39201	38884	38529	38169	37827	37506
Percentage change.....	0.81	1.22	-0.68	-0.59	-0.61	-0.67	-0.81	-0.91	-0.93	-0.90	-0.85
FEDERAL, CIVILIAN.....	75100	77290	77198	77218	77314	77352	77323	77202	77062	76962	76907
Percentage change.....	4.51	2.92	-0.12	0.03	0.12	0.05	-0.04	-0.16	-0.18	-0.13	-0.07
STATE & LOCAL.....	35267	35588	35389	35230	35062	34849	34587	34276	33952	33646	33358
Percentage change.....	-0.07	0.91	-0.56	-0.45	-0.48	-0.61	-0.75	-0.90	-0.94	-0.90	-0.85

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

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

January 2016

	Forecast Data										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
TOTAL NONFARM.....	47219	48755	50131	51477	52814	54155	55490	56848	58265	59733	61227
Percentage change.....	3.14	3.25	2.82	2.68	2.60	2.54	2.46	2.45	2.49	2.52	2.50
NATURAL RESOURCES, MINING & CONSTRUCTION.....	54695	57291	58952	60598	62228	63852	65499	67268	69023	70728	72532
Percentage change.....	6.18	4.75	2.90	2.79	2.69	2.61	2.58	2.70	2.61	2.47	2.55
MANUFACTURING.....	57400	60333	62214	63951	65533	67243	68873	70645	72707	74548	76361
Percentage change.....	1.95	5.11	3.12	2.79	2.47	2.61	2.42	2.57	2.92	2.53	2.43
DURABLE GOODS.....	55627	57962	59731	61456	63001	64558	66062	67773	69650	71398	73083
Percentage change.....	0.97	4.20	3.05	2.89	2.51	2.47	2.33	2.59	2.77	2.51	2.36
NONDURABLE GOODS.....	60542	64619	66803	68662	70385	72448	74382	76338	78835	80908	83020
Percentage change.....	3.71	6.73	3.38	2.78	2.51	2.93	2.67	2.63	3.27	2.63	2.61
TRADE, TRANSPORTATION, UTILITIES.....	42707	44136	45592	47027	48475	49817	51232	52638	54114	55679	57363
Percentage change.....	1.10	3.35	3.30	3.15	3.08	2.77	2.84	2.74	2.80	2.89	3.03
WHOLESALE TRADE.....	64934	67084	69200	71298	73442	75264	77371	79228	81343	83833	86306
Percentage change.....	0.61	3.31	3.15	3.03	3.01	2.48	2.80	2.40	2.67	3.06	2.95
RETAIL TRADE.....	29193	30333	31329	32305	33367	34422	35468	36589	37701	38795	40090
Percentage change.....	1.03	3.91	3.28	3.12	3.29	3.16	3.04	3.16	3.04	2.90	3.34
TRANSPORTATION & UTILITIES.....	53300	54539	56304	58041	59674	61017	62536	64081	65689	67397	69122
Percentage change.....	1.33	2.32	3.24	3.09	2.81	2.25	2.49	2.47	2.51	2.60	2.56
INFORMATION.....	63239	65708	67600	69393	70983	72772	74584	76471	78344	80177	82190
Percentage change.....	3.67	3.90	2.88	2.65	2.29	2.52	2.49	2.53	2.45	2.34	2.51
FINANCIAL ACTIVITIES.....	70721	73508	75761	77800	79803	81814	83819	85830	88148	90396	92574
Percentage change.....	2.52	3.94	3.06	2.69	2.58	2.52	2.45	2.40	2.70	2.55	2.41
PROFESSIONAL & BUSINESS SERVICES.....	55865	56824	58407	59997	61603	63303	64994	66794	68571	70436	72267
Percentage change.....	7.52	1.72	2.79	2.72	2.68	2.76	2.67	2.77	2.66	2.72	2.60
EDUCATION & HEALTH SERVICES.....	48207	49693	51083	52533	54104	55706	57276	58823	60364	62145	63891
Percentage change.....	3.21	3.08	2.80	2.84	2.99	2.96	2.82	2.70	2.62	2.95	2.81
LEISURE & HOSPITALITY.....	23125	24047	24845	25599	26297	27031	27672	28317	28956	29727	30520
Percentage change.....	5.14	3.99	3.32	3.04	2.73	2.79	2.37	2.33	2.26	2.66	2.67
OTHER SERVICES.....	44306	45730	46846	48041	48982	49673	50398	51149	51917	52695	53486
Percentage change.....	4.48	3.22	2.44	2.55	1.96	1.41	1.46	1.49	1.50	1.50	1.50
GOVERNMENT.....	43461	44497	45146	45774	46390	47029	47656	48292	48930	49560	50177
Percentage change.....	1.08	2.38	1.46	1.39	1.35	1.38	1.33	1.34	1.32	1.29	1.24
FEDERAL, CIVILIAN.....	82162	85528	87263	89019	90881	92799	94766	96766	98788	100833	102890
Percentage change.....	4.79	4.10	2.03	2.01	2.09	2.11	2.12	2.11	2.09	2.07	2.04
STATE & LOCAL.....	38582	39381	40002	40614	41214	41808	42389	42961	43524	44081	44628
Percentage change.....	0.20	2.07	1.58	1.53	1.48	1.44	1.39	1.35	1.31	1.28	1.24

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 10: Tennessee Civilian Labor Force and Unemployment Rate

January 2016

	Forecast Data										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
CIVILIAN LABOR FORCE (THOUS).....	3063	3060	3079	3103	3124	3148	3170	3191	3209	3226	3243
Percentage change.....	2.33	-0.10	0.63	0.78	0.66	0.78	0.69	0.66	0.57	0.52	0.51
EMPLOYED PERSONS (THOUS).....	2882	2890	2913	2938	2960	2985	3007	3028	3046	3063	3078
Percentage change.....	3.05	0.28	0.77	0.89	0.73	0.84	0.74	0.70	0.59	0.56	0.49
UNEMPLOYED PERSONS (THOUS).....	181	170	167	165	164	163	163	163	163	163	165
Percentage change.....	-7.97	-6.20	-1.72	-1.07	-0.61	-0.41	-0.14	-0.03	0.17	-0.11	0.95
PARTICIPATION RATE (PERCENT).....	57.7	57.0	56.7	56.5	56.3	56.2	56.0	55.8	55.5	55.3	55.1
Percentage change.....	1.12	-1.26	-0.49	-0.30	-0.41	-0.27	-0.34	-0.36	-0.43	-0.43	-0.39
UNEMPLOYMENT RATE (PERCENT).....	5.9	5.5	5.4	5.3	5.2	5.2	5.1	5.1	5.1	5.1	5.1
Center for Business and Economic Research, University of Tennessee								Tennessee Econometric Model			

Table 11: Tennessee Taxable Sales (millions of 2009 dollars)**January 2016**

	Forecast Data										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
TOTAL TAXABLE SALES.....	102746	106315	107755	109560	111496	113387	115204	116993	118691	120455	122480
Percentage change.....	5.88	3.47	1.35	1.68	1.77	1.70	1.60	1.55	1.45	1.49	1.68
AUTO DEALERS.....	10751	11185	11279	11615	11865	12159	12495	12841	13150	13453	13766
Percentage change.....	10.95	4.04	0.85	2.98	2.15	2.48	2.76	2.78	2.40	2.31	2.33
PURCHASES FROM MANUFACTURERS.....	4420	4591	4652	4729	4807	4899	4967	5040	5114	5186	5274
Percentage change.....	8.09	3.87	1.33	1.66	1.65	1.90	1.40	1.46	1.47	1.41	1.70
MISC DURABLE GOODS.....	16866	17537	17799	18085	18449	18828	19247	19687	20056	20471	20906
Percentage change.....	4.83	3.98	1.49	1.61	2.01	2.06	2.22	2.29	1.87	2.07	2.12
EATING AND DRINKING PLACES.....	10958	11301	11510	11762	12057	12312	12605	12885	13180	13443	13786
Percentage change.....	6.81	3.13	1.85	2.19	2.51	2.12	2.38	2.22	2.29	1.99	2.55
FOOD STORES.....	9858	10024	10065	10101	10209	10329	10414	10518	10654	10766	10917
Percentage change.....	3.91	1.69	0.41	0.36	1.06	1.18	0.82	1.00	1.30	1.05	1.40
LIQUOR STORES.....	882	909	924	946	974	1001	1020	1041	1058	1079	1102
Percentage change.....	7.69	3.05	1.67	2.38	2.97	2.71	1.91	2.03	1.66	1.96	2.19
HOTELS AND MOTELS.....	2953	3053	3172	3299	3425	3497	3573	3648	3733	3836	3949
Percentage change.....	11.78	3.37	3.91	4.02	3.81	2.10	2.17	2.10	2.31	2.78	2.94
OTHER RETAIL AND SERVICE.....	31419	32699	33270	33858	34432	34948	35363	35712	36041	36424	36869
Percentage change.....	5.11	4.07	1.75	1.77	1.70	1.50	1.19	0.99	0.92	1.06	1.22
MISC NONDURABLE GOODS.....	8650	9037	9167	9310	9454	9599	9729	9846	9962	10091	10236
Percentage change.....	4.36	4.47	1.43	1.57	1.55	1.53	1.35	1.21	1.18	1.29	1.44
TRANSPORTATION, COMMUNICATION.....	5989	5980	5917	5854	5823	5814	5792	5776	5743	5706	5675
Percentage change.....	3.59	-0.16	-1.05	-1.07	-0.51	-0.16	-0.39	-0.27	-0.56	-0.66	-0.54
PER CAPITA (\$).....	15414	15786	15838	15942	16064	16178	16280	16376	16459	16551	16677
Percentage change.....	4.78	2.42	0.33	0.66	0.76	0.71	0.63	0.59	0.51	0.56	0.77

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

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

January 2016

	Forecast Data										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
TOTAL TAXABLE SALES.....	112414	117652	121807	126307	131066	136033	141197	146646	152158	157821	163864
Percentage change.....	6.17	4.66	3.53	3.69	3.77	3.79	3.80	3.86	3.76	3.72	3.83
AUTO DEALERS.....	11762	12378	12751	13391	13947	14588	15314	16097	16858	17627	18418
Percentage change.....	11.26	5.24	3.01	5.02	4.16	4.59	4.98	5.11	4.73	4.56	4.49
PURCHASES FROM MANUFACTURERS....	4836	5080	5258	5452	5651	5877	6088	6317	6556	6795	7056
Percentage change.....	8.39	5.06	3.51	3.68	3.65	4.00	3.59	3.76	3.78	3.64	3.85
MISC DURABLE GOODS.....	18454	19407	20120	20850	21687	22589	23590	24677	25711	26822	27970
Percentage change.....	5.12	5.16	3.67	3.63	4.02	4.16	4.43	4.61	4.19	4.32	4.28
EATING AND DRINKING PLACES.....	11989	12506	13011	13560	14173	14771	15449	16150	16897	17613	18444
Percentage change.....	7.10	4.31	4.04	4.22	4.52	4.22	4.59	4.54	4.62	4.24	4.72
FOOD STORES.....	10785	11093	11377	11645	12001	12392	12764	13183	13658	14106	14605
Percentage change.....	4.19	2.86	2.57	2.35	3.05	3.26	3.00	3.29	3.60	3.28	3.54
LIQUOR STORES.....	965	1006	1045	1091	1145	1201	1250	1304	1356	1413	1475
Percentage change.....	7.98	4.24	3.86	4.41	5.00	4.82	4.11	4.35	3.97	4.21	4.35
HOTELS AND MOTELS.....	3231	3378	3586	3804	4027	4196	4380	4573	4785	5026	5283
Percentage change.....	12.09	4.55	6.15	6.08	5.85	4.20	4.38	4.42	4.64	5.04	5.11
OTHER RETAIL AND SERVICE.....	34376	36186	37609	39033	40475	41928	43341	44763	46203	47723	49326
Percentage change.....	5.40	5.27	3.93	3.79	3.69	3.59	3.37	3.28	3.22	3.29	3.36
MISC NONDURABLE GOODS.....	9464	10001	10362	10733	11114	11516	11923	12341	12771	13221	13695
Percentage change.....	4.64	5.67	3.61	3.58	3.54	3.62	3.54	3.51	3.48	3.52	3.58
TRANSPORTATION, COMMUNICATION.....	6552	6617	6688	6748	6845	6975	7098	7239	7363	7475	7592
Percentage change.....	3.87	0.99	1.07	0.90	1.44	1.90	1.76	1.99	1.70	1.53	1.56
PER CAPITA (\$).	16864	17469	17903	18379	18884	19409	19953	20527	21100	21685	22312
Percentage change.....	5.07	3.59	2.48	2.66	2.75	2.78	2.80	2.88	2.79	2.77	2.89

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 13: Tennessee Gross Domestic Product by Sector (millions of 2009 dollars) **January 2016**

	Forecast Data										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
GROSS DOMESTIC PRODUCT.....	281,548	287,872	294,064	300,449	307,195	313,710	320,540	327,536	334,562	341,669	349,209
Percentage change.....	2.40	2.25	2.15	2.17	2.25	2.12	2.18	2.18	2.15	2.12	2.21
NATURAL RESOURCES & MINING.....	3,216	3,343	3,468	3,594	3,721	3,850	3,978	4,106	4,229	4,353	4,486
Percentage change.....	6.03	3.95	3.74	3.63	3.53	3.46	3.33	3.23	2.98	2.94	3.06
CONSTRUCTION.....	9,756	10,036	10,248	10,458	10,671	10,879	11,109	11,340	11,568	11,814	12,058
Percentage change.....	3.12	2.87	2.11	2.05	2.03	1.95	2.12	2.08	2.01	2.12	2.07
MANUFACTURING.....	47,428	48,617	49,807	51,005	52,249	53,379	54,554	55,781	57,041	58,101	59,291
Percentage change.....	2.86	2.51	2.45	2.41	2.44	2.16	2.20	2.25	2.26	1.86	2.05
DURABLE GOODS.....	27,410	28,262	29,134	30,039	30,971	31,773	32,629	33,532	34,465	35,245	36,122
Percentage change.....	3.63	3.11	3.08	3.11	3.10	2.59	2.69	2.77	2.78	2.26	2.49
WOOD PRODUCTS.....	575	583	591	600	608	617	625	633	642	651	660
Percentage change.....	1.01	1.49	1.37	1.48	1.29	1.50	1.27	1.34	1.41	1.40	1.47
NONMETALLIC MINERAL PRODUCTS.....	1,038	1,042	1,046	1,049	1,053	1,057	1,061	1,065	1,066	1,067	1,070
Percentage change.....	0.49	0.36	0.42	0.28	0.35	0.40	0.39	0.33	0.12	0.10	0.23
PRIMARY METALS.....	1,240	1,251	1,260	1,272	1,281	1,293	1,301	1,312	1,323	1,330	1,341
Percentage change.....	0.98	0.93	0.67	0.95	0.75	0.88	0.63	0.83	0.84	0.55	0.81
FABRICATED METAL PRODUCTS.....	3,616	3,643	3,677	3,701	3,743	3,725	3,711	3,701	3,692	3,684	3,680
Percentage change.....	2.09	0.75	0.94	0.63	1.14	-0.47	-0.39	-0.26	-0.24	-0.22	-0.11
MACHINERY.....	3,119	3,176	3,239	3,299	3,351	3,404	3,455	3,510	3,563	3,610	3,665
Percentage change.....	1.93	1.82	1.98	1.86	1.57	1.59	1.49	1.59	1.50	1.32	1.53
COMPUTER & ELECTRONIC PRODUCTS.....	1,539	1,626	1,710	1,799	1,895	1,993	2,102	2,212	2,329	2,448	2,585
Percentage change.....	5.73	5.66	5.17	5.22	5.32	5.20	5.47	5.22	5.31	5.09	5.58
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS.....	3,218	3,283	3,370	3,452	3,539	3,613	3,711	3,803	3,911	4,000	4,111
Percentage change.....	2.51	2.03	2.65	2.44	2.52	2.08	2.71	2.50	2.83	2.28	2.78
MOTOR VEHICLES, BODIES & TRAILERS, & PARTS.....	10,107	10,616	11,134	11,699	12,269	12,764	13,264	13,805	14,373	14,815	15,296
Percentage change.....	6.12	5.04	4.88	5.07	4.88	4.03	3.92	4.08	4.11	3.08	3.24
OTHER TRANSPORTATION EQUIPMENT.....	385	392	401	408	416	421	428	435	440	447	454
Percentage change.....	2.12	1.81	2.17	1.89	1.87	1.38	1.61	1.48	1.26	1.64	1.51
FURNITURE.....	473	479	484	487	488	483	475	468	461	452	444
Percentage change.....	2.09	1.22	1.07	0.61	0.17	-0.89	-1.76	-1.52	-1.44	-1.98	-1.76
MISCELLANEOUS DURABLE GOODS.....	2,101	2,171	2,222	2,274	2,329	2,402	2,496	2,588	2,665	2,740	2,817
Percentage change.....	2.02	3.33	2.35	2.33	2.42	3.14	3.92	3.69	2.96	2.83	2.79
NONDURABLE GOODS.....	20,017	20,355	20,673	20,966	21,278	21,606	21,925	22,249	22,576	22,856	23,170
Percentage change.....	1.82	1.68	1.56	1.42	1.49	1.54	1.47	1.48	1.47	1.24	1.37
FOOD AND BEVERAGE & TOBACCO.....	6,815	6,966	7,101	7,233	7,371	7,470	7,562	7,652	7,731	7,812	7,903
Percentage change.....	2.46	2.21	1.94	1.86	1.90	1.34	1.24	1.19	1.03	1.05	1.16

(CONTINUED ON NEXT PAGE)

Table 13: Tennessee Gross Domestic Product by Sector (millions of 2009 dollars)**January 2016**

	Forecast Data										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
TEXTILE MILLS & TEXTILE PRODUCT MILLS	441	435	429	422	415	409	402	396	390	385	380
Percentage change.....	-1.57	-1.49	-1.38	-1.63	-1.56	-1.59	-1.59	-1.47	-1.51	-1.40	-1.34
APPAREL & LEATHER PRODUCTS.....	303	294	285	277	269	261	254	247	241	235	230
Percentage change.....	-3.00	-2.95	-2.92	-2.91	-2.84	-2.84	-2.79	-2.68	-2.56	-2.42	-2.08
PAPER.....	2,776	2,818	2,861	2,904	2,950	3,001	3,053	3,103	3,152	3,201	3,247
Percentage change.....	1.63	1.54	1.51	1.52	1.58	1.72	1.73	1.64	1.59	1.53	1.44
PRINTING & RELATED SUPPORT.....	1,158	1,155	1,153	1,152	1,153	1,156	1,160	1,164	1,170	1,175	1,181
Percentage change.....	1.55	-0.28	-0.19	-0.02	0.04	0.27	0.35	0.37	0.46	0.46	0.48
CHEMICALS.....	6,157	6,328	6,494	6,634	6,783	6,978	7,163	7,355	7,557	7,705	7,876
Percentage change.....	2.65	2.79	2.61	2.16	2.25	2.87	2.65	2.68	2.75	1.96	2.22
PLASTICS & RUBBER.....	1,939	1,931	1,924	1,917	1,911	1,907	1,906	1,906	1,909	1,915	1,923
Percentage change.....	-0.46	-0.40	-0.37	-0.34	-0.31	-0.21	-0.07	0.00	0.13	0.36	0.41
MISCELLANEOUS NONDURABLE GOODS.....	429	428	427	426	425	424	425	425	427	428	430
Percentage change.....	-0.35	-0.32	-0.23	-0.21	-0.15	-0.14	0.07	0.14	0.37	0.38	0.44
TRADE, TRANSPORTATION & UTILITIES.....	52,904	54,018	55,058	56,189	57,446	58,646	59,970	61,303	62,635	64,095	65,661
Percentage change.....	4.33	3.71	3.09	2.88	2.51	2.22	2.00	2.00	2.10	2.00	2.44
WHOLESALE TRADE.....	18,933	19,382	19,785	20,258	20,855	21,373	22,020	22,646	23,302	23,957	24,685
Percentage change.....	2.75	2.37	2.08	2.39	2.95	2.48	3.03	2.84	2.90	2.81	3.04
RETAIL TRADE.....	19,590	19,981	20,359	20,784	21,208	21,594	22,020	22,425	22,838	23,331	23,870
Percentage change.....	2.02	2.00	1.89	2.09	2.04	1.82	1.97	1.84	1.84	2.16	2.31
TRANSPORTATION & UTILITIES.....	14,382	14,655	14,914	15,147	15,382	15,679	15,929	16,232	16,495	16,807	17,106
Percentage change.....	1.73	1.90	1.77	1.56	1.55	1.93	1.60	1.90	1.62	1.89	1.78
INFORMATION.....	9,068	9,333	9,599	9,872	10,161	10,450	10,729	11,028	11,346	11,671	11,988
Percentage change.....	2.71	2.92	2.86	2.84	2.93	2.84	2.67	2.79	2.88	2.87	2.71
FINANCIAL ACTIVITIES.....	45,432	46,518	47,644	48,773	49,958	51,017	52,190	53,401	54,581	55,689	56,876
Percentage change.....	2.53	2.39	2.42	2.37	2.43	2.12	2.30	2.32	2.21	2.03	2.13
PROFESSIONAL & BUSINESS SERVICES.....	33,169	34,390	35,679	37,064	38,483	39,965	41,456	42,960	44,451	46,074	47,691
Percentage change.....	3.99	3.68	3.75	3.88	3.83	3.85	3.73	3.63	3.47	3.65	3.51
EDUCATION & HEALTH SERVICES.....	29,853	30,561	31,251	31,929	32,606	33,245	33,940	34,636	35,322	36,018	36,806
Percentage change.....	2.47	2.37	2.26	2.17	2.12	1.96	2.09	2.05	1.98	1.97	2.19
LEISURE & HOSPITALITY.....	11,960	12,311	12,514	12,737	12,951	13,182	13,398	13,612	13,831	14,090	14,349
Percentage change.....	3.08	2.94	1.65	1.78	1.68	1.78	1.64	1.60	1.61	1.87	1.84
OTHER SERVICES.....	6,477	6,414	6,380	6,325	6,274	6,230	6,186	6,148	6,114	6,082	6,060
Percentage change.....	-1.01	-0.97	-0.53	-0.85	-0.82	-0.70	-0.70	-0.61	-0.56	-0.52	-0.37
GOVERNMENT.....	32,285	32,331	32,414	32,501	32,675	32,868	33,030	33,219	33,444	33,682	33,943
Percentage change.....	0.02	0.14	0.26	0.27	0.53	0.59	0.49	0.57	0.68	0.71	0.77
FEDERAL.....	7,582	7,450	7,274	7,087	6,910	6,771	6,625	6,505	6,403	6,304	6,214
Percentage change.....	-1.82	-1.74	-2.36	-2.57	-2.50	-2.01	-2.16	-1.81	-1.56	-1.55	-1.43
STATE & LOCAL.....	24,704	24,881	25,140	25,414	25,765	26,097	26,405	26,714	27,040	27,378	27,729
Percentage change.....	0.60	0.72	1.04	1.09	1.38	1.29	1.18	1.17	1.22	1.25	1.28

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 14: Tennessee Gross Domestic Product by Sector (millions of current dollars)

January 2016

	Forecast Data										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
GROSS DOMESTIC PRODUCT.....	311,211	324,625	337,815	351,543	365,947	380,631	396,433	413,034	429,979	447,484	465,985
Percentage change.....	4.22	4.31	4.06	4.06	4.10	4.01	4.15	4.19	4.10	4.07	4.13
NATURAL RESOURCES & MINING.....	4,021	4,466	4,806	5,157	5,523	5,916	6,335	6,777	7,220	7,677	8,167
Percentage change.....	4.29	11.07	7.60	7.31	7.09	7.12	7.08	6.98	6.53	6.34	6.38
CONSTRUCTION.....	11,085	11,751	12,218	12,716	13,216	13,719	14,294	14,890	15,502	16,154	16,800
Percentage change.....	6.04	6.01	3.97	4.08	3.93	3.81	4.19	4.17	4.11	4.20	4.00
MANUFACTURING.....	50,656	52,521	54,392	56,368	58,408	60,323	62,374	64,538	66,782	68,963	71,316
Percentage change.....	4.08	3.68	3.56	3.63	3.62	3.28	3.40	3.47	3.48	3.27	3.41
DURABLE GOODS.....	27,815	28,980	30,190	31,496	32,785	33,977	35,243	36,614	38,056	39,367	40,819
Percentage change.....	4.74	4.19	4.18	4.32	4.09	3.64	3.73	3.89	3.94	3.44	3.69
WOOD PRODUCTS.....	693	718	742	765	786	810	834	859	886	916	948
Percentage change.....	2.82	3.52	3.40	3.03	2.83	3.02	2.90	3.09	3.07	3.43	3.46
NONMETALLIC MINERAL PRODUCTS.....	1,096	1,109	1,125	1,141	1,157	1,172	1,186	1,203	1,218	1,232	1,245
Percentage change.....	1.44	1.22	1.42	1.40	1.44	1.25	1.25	1.43	1.20	1.16	1.04
PRIMARY METALS.....	1,344	1,329	1,312	1,298	1,282	1,268	1,249	1,235	1,221	1,204	1,188
Percentage change.....	-0.96	-1.17	-1.24	-1.12	-1.18	-1.10	-1.52	-1.10	-1.11	-1.41	-1.38
FABRICATED METAL PRODUCTS.....	3,819	3,948	4,075	4,214	4,347	4,425	4,498	4,617	4,743	4,851	4,987
Percentage change.....	4.57	3.38	3.21	3.40	3.17	1.80	1.63	2.64	2.73	2.27	2.82
MACHINERY.....	3,338	3,454	3,584	3,713	3,834	3,965	4,097	4,240	4,387	4,514	4,670
Percentage change.....	3.51	3.49	3.74	3.60	3.27	3.43	3.33	3.48	3.47	2.89	3.47
COMPUTER & ELECTRONIC PRODUCTS.....	1,383	1,432	1,460	1,494	1,534	1,572	1,613	1,650	1,689	1,725	1,769
Percentage change.....	4.38	3.59	1.94	2.29	2.70	2.47	2.63	2.26	2.36	2.16	2.55
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS.....	3,499	3,639	3,844	4,059	4,285	4,495	4,719	4,950	5,199	5,460	5,728
Percentage change.....	4.68	4.00	5.63	5.60	5.56	4.90	4.98	4.90	5.03	5.02	4.92
MOTOR VEHICLES, BODIES & TRAILERS & PARTS.....	9,474	10,062	10,654	11,320	11,957	12,541	13,164	13,837	14,553	15,174	15,863
Percentage change.....	7.05	6.21	5.89	6.25	5.63	4.88	4.97	5.11	5.18	4.27	4.54
OTHER TRANSPORTATION EQUIPMENT.....	429	446	468	489	512	533	558	580	601	625	652
Percentage change.....	4.57	4.00	4.95	4.51	4.63	4.25	4.66	3.83	3.75	3.96	4.27
FURNITURE.....	486	499	512	522	533	533	534	534	536	533	530
Percentage change.....	3.98	2.71	2.62	1.77	2.13	0.16	0.16	-0.14	0.36	-0.47	-0.48
MISCELLANEOUS DURABLE GOODS.....	2,253	2,343	2,414	2,484	2,558	2,662	2,790	2,910	3,025	3,133	3,239
Percentage change.....	3.74	3.98	3.01	2.90	2.99	4.06	4.83	4.29	3.93	3.59	3.38
NONDURABLE GOODS.....	22,842	23,542	24,202	24,872	25,623	26,346	27,131	27,924	28,726	29,596	30,497
Percentage change.....	3.28	3.06	2.81	2.77	3.02	2.82	2.98	2.92	2.87	3.03	3.04
FOOD AND BEVERAGE & TOBACCO.....	7,670	8,017	8,305	8,601	8,935	9,208	9,509	9,778	10,030	10,332	10,628
Percentage change.....	5.60	4.52	3.59	3.57	3.88	3.06	3.26	2.83	2.58	3.01	2.87

(CONTINUED ON NEXT PAGE)

Table 14: Tennessee Gross Domestic Product by Sector (millions of current dollars)

January 2016

	Forecast Data										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
TEXTILE MILLS & TEXTILE PRODUCT MILLS	464	458	455	452	449	444	441	438	434	432	430
Percentage change.....	-2.31	-1.23	-0.62	-0.77	-0.65	-1.00	-0.72	-0.61	-0.94	-0.57	-0.38
APPAREL & LEATHER PRODUCTS.....	296	283	271	261	252	244	235	228	221	214	209
Percentage change.....	-3.37	-4.28	-4.25	-3.77	-3.42	-3.40	-3.34	-3.26	-3.13	-2.96	-2.62
PAPER.....	3,151	3,261	3,371	3,491	3,616	3,756	3,905	4,057	4,209	4,362	4,516
Percentage change.....	3.63	3.49	3.38	3.56	3.60	3.86	3.96	3.89	3.76	3.63	3.53
PRINTING & RELATED SUPPORT.....	1,099	1,104	1,099	1,097	1,098	1,101	1,104	1,108	1,113	1,118	1,124
Percentage change.....	2.92	0.47	-0.43	-0.16	0.04	0.25	0.35	0.34	0.44	0.47	0.50
CHEMICALS.....	859	902	943	983	1,025	1,074	1,123	1,175	1,231	1,281	1,336
Percentage change.....	4.86	4.95	4.59	4.25	4.23	4.78	4.59	4.59	4.77	4.06	4.32
PLASTICS & RUBBER.....	7,136	7,311	7,507	7,696	7,912	8,134	8,372	8,630	8,912	9,219	9,530
Percentage change.....	1.59	2.45	2.68	2.51	2.81	2.80	2.93	3.08	3.27	3.44	3.37
MISCELLANEOUS NONDURABLE GOODS.....	2,166	2,206	2,250	2,291	2,337	2,385	2,441	2,510	2,576	2,638	2,724
Percentage change.....	2.22	1.81	2.03	1.81	1.99	2.09	2.33	2.84	2.60	2.43	3.26
TRADE, TRANSPORTATION & UTILITIES.....	59,227	61,691	64,147	66,823	69,726	72,730	76,055	79,534	83,067	86,829	90,844
Percentage change.....	4.18	4.16	3.98	4.17	4.34	4.31	4.57	4.57	4.44	4.53	4.62
WHOLESALE TRADE.....	21,686	22,786	23,779	24,892	26,199	27,481	29,010	30,576	32,215	33,887	35,713
Percentage change.....	5.40	5.07	4.36	4.68	5.25	4.89	5.56	5.40	5.36	5.19	5.39
RETAIL TRADE.....	21,375	22,088	22,918	23,826	24,737	25,646	26,643	27,657	28,694	29,846	31,087
Percentage change.....	3.10	3.33	3.76	3.96	3.82	3.68	3.89	3.81	3.75	4.02	4.16
TRANSPORTATION & UTILITIES.....	16,166	16,817	17,450	18,105	18,790	19,602	20,402	21,301	22,158	23,096	24,044
Percentage change.....	4.02	4.03	3.76	3.75	3.79	4.32	4.08	4.41	4.03	4.23	4.11
INFORMATION.....	8,975	9,191	9,414	9,645	9,889	10,117	10,329	10,569	10,823	11,061	11,311
Percentage change.....	1.80	2.41	2.43	2.45	2.53	2.31	2.10	2.33	2.40	2.20	2.26
FINANCIAL ACTIVITIES.....	50,981	53,525	55,905	58,290	60,777	63,198	65,862	68,675	71,509	74,315	77,316
Percentage change.....	4.86	4.99	4.45	4.27	4.27	3.98	4.22	4.27	4.13	3.92	4.04
PROFESSIONAL & BUSINESS SERVICES.....	35,854	37,853	40,074	42,410	44,829	47,458	50,226	53,107	56,011	59,129	62,339
Percentage change.....	6.14	5.57	5.87	5.83	5.70	5.86	5.83	5.74	5.47	5.57	5.43
EDUCATION & HEALTH SERVICES.....	32,949	34,300	35,640	36,983	38,391	39,762	41,246	42,791	44,379	46,044	47,868
Percentage change.....	4.23	4.10	3.91	3.77	3.81	3.57	3.73	3.75	3.71	3.75	3.96
LEISURE & HOSPITALITY.....	13,245	13,987	14,562	15,167	15,748	16,397	17,082	17,797	18,537	19,341	20,151
Percentage change.....	5.12	5.61	4.11	4.16	3.83	4.12	4.18	4.19	4.16	4.34	4.19
OTHER SERVICES.....	7,560	7,670	7,861	8,013	8,171	8,349	8,534	8,733	8,940	9,146	9,367
Percentage change.....	1.63	1.46	2.48	1.94	1.98	2.18	2.21	2.34	2.37	2.31	2.41
GOVERNMENT.....	36,657	37,668	38,797	39,971	41,268	42,663	44,097	45,623	47,208	48,824	50,508
Percentage change.....	2.02	2.76	3.00	3.03	3.25	3.38	3.36	3.46	3.47	3.42	3.45
FEDERAL.....	8,523	8,532	8,456	8,395	8,346	8,333	8,310	8,322	8,357	8,386	8,419
Percentage change.....	-0.16	0.10	-0.89	-0.71	-0.59	-0.15	-0.28	0.14	0.42	0.36	0.39
STATE & LOCAL.....	28,134	29,136	30,341	31,575	32,922	34,330	35,787	37,301	38,851	40,438	42,089
Percentage change.....	2.70	3.56	4.13	4.07	4.27	4.28	4.24	4.23	4.15	4.08	4.08

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

APPENDIX B: HISTORICAL DATA

In this section—

Appendix B: Historical Data

Quarterly	pages 44–67 (2012:2 to 2015:3)
Annual	pages 68–82 (2003 to 2014)

Quarterly History Tables

Table 1:	Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted.....	44
Table 2:	Selected Per Capita U.S. and Tennessee Economic Indicators, Seasonally Adjusted.....	46
Table 3:	Tennessee Personal Income Components, Seasonally Adjusted Annual Rates (millions of 2009 dollars).....	47
Table 4:	Tennessee Personal Income Components, Seasonally Adjusted Annual Rates (millions of current dollars).....	48
Table 5:	Tennessee Nonfarm Employment by Sector, Not Seasonally Adjusted (thousands of jobs).....	49
Table 6:	Tennessee Durable Goods Manufacturing Employment, Not Seasonally Adjusted (thousands of jobs).....	50
Table 7:	Tennessee Nondurable Goods Manufacturing Employment, Not Seasonally Adjusted (thousands of jobs).....	51
Table 8:	Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs).....	52
Table 9:	Tennessee Durable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs).....	54
Table 10:	Tennessee Nondurable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs).....	55
Table 11:	Tennessee Average Annual Wage and Salary Rate by Sector, Not Seasonally Adjusted (2009 dollars).....	56
Table 12:	Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (2009 dollars).....	57
Table 13:	Tennessee Average Annual Wage and Salary Rate by Sector, Not Seasonally Adjusted (current dollars).....	59
Table 14:	Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (current dollars).....	60
Table 15:	Tennessee Civilian Labor Force and Unemployment Rate, Not Seasonally Adjusted.....	62
Table 16:	Tennessee Civilian Labor Force and Unemployment Rate, Seasonally Adjusted.....	63
Table 17:	Tennessee Taxable Sales, Not Seasonally Adjusted (millions of 2009 dollars).....	64
Table 18:	Tennessee Taxable Sales, Seasonally Adjusted (millions of 2009 dollars).....	65
Table 19:	Tennessee Taxable Sales, Not Seasonally Adjusted (millions of current dollars).....	66
Table 20:	Tennessee Taxable Sales, Seasonally Adjusted (millions of current dollars).....	67

Annual History Tables

Table 1:	Selected U.S. and Tennessee Economic Indicators.....	68
Table 2:	Selected Per Capita U.S. and Tennessee Economic Indicators.....	69
Table 3:	Tennessee Personal Income Components (millions of 2009 dollars).....	70
Table 4:	Tennessee Personal Income Components (millions of current dollars).....	71
Table 5:	Tennessee Nonfarm Employment by Sector (thousands of jobs).....	72
Table 6:	Tennessee Durable Goods Manufacturing Employment (thousands of jobs).....	73
Table 7:	Tennessee Nondurable Goods Manufacturing Employment (thousands of jobs).....	74
Table 8:	Tennessee Average Annual Wage and Salary Rate by Sector (2009 dollars).....	75
Table 9:	Tennessee Average Annual Wage and Salary Rate by Sector (current dollars).....	76
Table 10:	Tennessee Civilian Labor Force and Unemployment Rate.....	77
Table 11:	Tennessee Taxable Sales (millions of 2009 dollars).....	78
Table 12:	Tennessee Taxable Sales (millions of current dollars).....	79
Table 13:	Tennessee Gross Domestic Product by Sector (millions of 2009 dollars).....	80
Table 14:	Tennessee Gross Domestic Product by Sector (millions of current dollars).....	82

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

January 2016

	Historical Data														Annual		
	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2012	2013	2014
US GDP (Bil2009\$) SAAR.....	15380.8	15384.3	15457.2	15500.2	15614.4	15761.5	15724.9	15901.5	16068.8	16151.4	16177.3	16333.6	16414.0	16462.5	15354.6	15583.3	15961.7
% Chg Prev Qtr SAAR.....	0.48	0.09	1.91	1.12	2.98	3.82	-0.93	4.57	4.28	2.07	0.64	3.92	1.98	1.19	2.22	1.49	2.43
% Chg Same Qtr Last Yr.....	2.39	1.28	1.09	0.90	1.52	2.45	1.73	2.59	2.91	2.47	2.88	2.72	2.15	1.93	2.22	1.49	2.43
US GDP (Bil\$) SAAR.....	16227.9	16297.3	16440.7	16526.8	16727.5	16957.6	16984.3	17270.0	17522.1	17615.9	17649.3	17913.7	18060.2	18181.2	16155.3	16663.2	17348.1
% Chg Prev Qtr SAAR.....	2.66	1.72	3.57	2.11	4.95	5.62	0.63	6.90	5.97	2.16	0.76	6.13	3.31	2.71	4.11	3.14	4.11
% Chg Same Qtr Last Yr.....	4.11	3.24	2.92	2.51	3.08	4.05	3.31	4.50	4.75	3.88	3.92	3.73	3.07	3.21	4.11	3.14	4.11
TN PERSONAL INCOME (MIL2009\$) SAAR.....	237772	241833	236631	237037	237691	238407	240048	241798	243093	246452	249416	252618	254215	257680	238054	237442	242848
% Chg Prev Qtr SAAR.....	0.34	7.01	-8.33	0.69	1.11	1.21	2.78	2.95	2.16	5.64	4.90	5.23	2.55	5.56	3.82	-0.26	2.28
% Chg Same Qtr Last Yr.....	3.45	4.95	0.68	-0.22	-0.03	-1.42	1.44	2.01	2.27	3.37	3.90	4.47	4.58	4.56	3.82	-0.26	2.28
US PERSONAL INCOME (BIL2009\$) SAAR.....	13054	13405	12962	13073	13122	13154	13298	13392	13500	13680	13861	13965	14095	14224	13112	13078	13468
% Chg Prev Qtr SAAR.....	0.22	11.21	-12.56	3.46	1.52	0.98	4.44	2.86	3.28	5.45	5.38	3.06	3.76	3.73	3.03	-0.26	2.98
% Chg Same Qtr Last Yr.....	2.29	5.01	0.15	0.20	0.53	-1.87	2.59	2.44	2.88	4.00	4.23	4.28	4.41	3.98	3.03	-0.26	2.98
TN PERSONAL INCOME (MIL\$) SAAR.....	252589	258288	253588	254303	256060	257738	260548	263843	266044	269426	271353	276341	278958	282614	252636	255422	264965
% Chg Prev Qtr SAAR.....	1.66	9.33	-7.08	1.13	2.79	2.65	4.43	5.16	3.38	5.18	2.89	7.56	3.84	5.35	5.79	1.10	3.74
% Chg Same Qtr Last Yr.....	5.07	6.80	2.21	1.09	1.37	-0.21	2.74	3.75	3.90	4.54	4.15	4.74	4.85	4.89	5.79	1.10	3.74
US PERSONAL INCOME (BIL\$) SAAR.....	13867	14317	13891	14025	14136	14221	14434	14613	14775	14956	15080	15277	15468	15614	13915	14068	14694
% Chg Prev Qtr SAAR.....	1.54	13.62	-11.37	3.91	3.21	2.41	6.12	5.06	4.51	4.99	3.36	5.33	5.09	3.84	4.98	1.10	4.45
% Chg Same Qtr Last Yr.....	3.89	6.86	1.68	1.53	1.94	-0.67	3.90	4.19	4.52	5.17	4.48	4.55	4.69	4.40	4.98	1.10	4.45
TN NONFARM JOBS (THOUS).....	2718.8	2729.8	2739.6	2752.0	2761.6	2781.6	2790.5	2806.3	2824.2	2843.4	2846.8	2860.9	2874.9	2900.1	2715.3	2758.7	2816.1
% Chg Prev Qtr SAAR.....	0.87	1.63	1.45	1.82	1.40	2.93	1.29	2.29	2.57	2.76	0.47	2.00	1.97	3.57	2.00	1.60	2.08
% Chg Same Qtr Last Yr.....	1.75	1.73	1.47	1.44	1.58	1.90	1.86	1.97	2.27	2.22	2.02	1.94	1.79	2.00	2.00	1.60	2.08
US NONFARM JOBS (MIL).....	134.3	134.8	135.5	136.1	136.6	137.3	137.8	138.6	139.4	140.2	141.0	141.6	142.2	142.9	134.1	136.4	139.0
% Chg Prev Qtr SAAR.....	1.23	1.74	2.10	1.65	1.60	1.94	1.60	2.33	2.16	2.46	2.24	1.74	1.77	1.86	1.71	1.71	1.93
% Chg Same Qtr Last Yr.....	1.65	1.66	1.57	1.68	1.77	1.82	1.70	1.87	2.01	2.14	2.30	2.15	2.05	1.90	1.71	1.71	1.93
TN MFG JOBS (THOUS).....	315.1	316.0	316.9	317.3	318.5	321.1	322.8	323.3	325.8	329.0	330.9	330.7	331.5	332.7	313.4	318.4	325.2
% Chg Prev Qtr SAAR.....	1.63	1.14	1.16	0.57	1.53	3.26	2.14	0.65	3.14	4.02	2.29	-0.29	1.00	1.53	2.94	1.61	2.13
% Chg Same Qtr Last Yr.....	3.35	2.97	2.62	1.12	1.10	1.62	1.87	1.89	2.29	2.48	2.52	2.28	1.74	1.17	2.94	1.61	2.13
US MFG JOBS (MIL).....	12.0	12.0	12.0	12.0	12.0	12.1	12.1	12.2	12.2	12.3	12.3	12.3	12.3	12.3	11.9	12.0	12.2
% Chg Prev Qtr SAAR.....	0.98	-0.17	1.45	0.33	-0.02	2.04	1.75	1.30	1.51	2.31	1.60	0.30	-0.05	-0.41	1.71	0.78	1.41
% Chg Same Qtr Last Yr.....	1.69	1.44	1.12	0.65	0.40	0.95	1.02	1.26	1.65	1.72	1.68	1.43	1.04	0.35	1.71	0.78	1.41
TN UNEMPLOYMENT RATE (%).....	7.8	7.7	7.9	7.9	7.7	7.1	6.5	6.5	6.6	6.6	6.5	5.8	5.7	5.6	7.8	7.6	6.6
US UNEMPLOYMENT RATE (%).....	8.0	7.8	7.7	7.5	7.2	7.0	6.6	6.2	6.1	5.7	5.6	5.4	5.2	5.0	8.1	7.4	6.2

(CONTINUED ON NEXT PAGE)

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

January 2016

	Historical Data														Annual		
	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2012	2013	2014
CHAINED PRICE INDEX, GDP																	
((2009=100.0)).....	105.5	105.9	106.3	106.6	107.2	107.6	108.0	108.6	109.0	109.1	109.1	109.7	110.0	110.4	105.2	106.9	108.7
% Chg Prev Qtr SAAR.....	2.37	1.49	1.50	1.10	2.00	1.79	1.48	2.23	1.59	0.12	0.11	2.12	1.32	1.44	1.84	1.63	1.64
% Chg Same Qtr Last Yr.....	1.71	1.95	1.79	1.62	1.52	1.60	1.59	1.87	1.77	1.35	1.01	0.98	0.91	1.25	1.84	1.63	1.64
US PERS CONSUMP DEFL (2009=100.0)...	106.2	106.8	107.2	107.3	107.7	108.1	108.5	109.1	109.4	109.3	108.8	109.4	109.7	109.8	106.1	107.6	109.1
% Chg Prev Qtr SAAR.....	1.32	2.17	1.36	0.44	1.67	1.42	1.61	2.14	1.19	-0.43	-1.91	2.21	1.28	0.11	1.89	1.37	1.43
% Chg Same Qtr Last Yr.....	1.57	1.76	1.52	1.32	1.41	1.22	1.28	1.71	1.59	1.12	0.23	0.25	0.27	0.41	1.89	1.37	1.43
CONSUMER PRICE INDEX,																	
ALL-URBAN (82-84=1.000).....	2.299	2.314	2.322	2.321	2.334	2.342	2.354	2.368	2.375	2.370	2.352	2.369	2.379	2.381	2.296	2.330	2.367
% Chg Prev Qtr SAAR.....	1.77	2.64	1.38	-0.14	2.27	1.42	2.09	2.44	1.18	-0.85	-3.06	2.98	1.58	0.33	2.08	1.46	1.61
% Chg Same Qtr Last Yr.....	1.68	1.91	1.69	1.41	1.53	1.23	1.40	2.05	1.78	1.20	-0.10	0.04	0.14	0.43	2.08	1.46	1.61
BANK PRIME INTEREST RATE (%).....	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
FEDERAL FUNDS RATE (% per annum).....	0.143	0.160	0.143	0.117	0.083	0.087	0.073	0.093	0.090	0.100	0.110	0.123	0.137	0.152	0.140	0.108	0.089
30-YEAR FIXED MORTGAGE RATE (%).....	3.6	3.4	3.5	3.7	4.4	4.3	4.4	4.2	4.1	4.0	3.7	3.8	4.0	3.9	3.7	4.0	4.2
TN TAXABLE SALES (MIL2009\$).....	22878	23007	23361	23472	23389	23615	23780	23807	24465	24985	24523	25642	26228	26353	92389	93837	97036
% Chg Prev Qtr SAAR.....	-1.93	2.28	6.30	1.91	-1.41	3.94	2.81	0.45	11.54	8.76	-7.19	19.55	9.46	1.91	2.77	1.57	3.41
% Chg Same Qtr Last Yr.....	0.93	1.02	-0.66	2.10	2.23	2.65	1.79	1.43	4.60	5.80	3.12	7.71	7.21	5.48	2.77	1.57	3.41
TN TAXABLE SALES (MIL\$).....	24303	24572	25035	25181	25196	25530	25811	25977	26775	27314	26679	28050	28781	28903	98041	100943	105877
% Chg Prev Qtr SAAR.....	-0.64	4.50	7.75	2.36	0.23	5.41	4.47	2.60	12.87	8.29	-8.97	22.19	10.84	1.70	4.70	2.96	4.89
% Chg Same Qtr Last Yr.....	2.51	2.80	0.85	3.45	3.67	3.90	3.10	3.16	6.27	6.99	3.37	7.98	7.49	5.82	4.70	2.96	4.89
TN AVG ANNUAL WAGE, NONFARM																	
(2009\$).....	41745	42345	41492	41477	41449	41474	41853	41816	41824	42351	42429	43281	43269	43666	41968	41473	41961
% Chg Prev Qtr SAAR.....	-2.20	5.87	-7.81	-0.15	-0.27	0.24	3.71	-0.36	0.07	5.14	0.73	8.28	-0.11	3.72	1.59	-1.18	1.18
% Chg Same Qtr Last Yr.....	0.60	3.74	-0.74	-1.19	-0.71	-2.06	0.87	0.82	0.90	2.12	1.37	3.50	3.46	3.10	1.59	-1.18	1.18
TN AVG ANNUAL WAGE, NONFARM (\$)...	44347	45226	44466	44498	44652	44837	45427	45628	45772	46299	46160	47346	47481	47891	44537	44613	45782
% Chg Prev Qtr SAAR.....	-0.91	8.17	-6.56	0.29	1.39	1.66	5.38	1.78	1.27	4.68	-1.19	10.68	1.14	3.50	3.52	0.17	2.62
% Chg Same Qtr Last Yr.....	2.18	5.56	0.77	0.11	0.69	-0.86	2.16	2.54	2.51	3.26	1.61	3.76	3.73	3.44	3.52	0.17	2.62

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

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

January 2016

	Historical Data														Annual		
	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2012	2013	2014
US GDP (2009\$) SAAR.....	48855	48808	48731	48881	48928	49184	49559	49364	49827	50246	50415	50414	50798	50944	48777	49139	49964
% Chg Prev Qtr SAAR.....	1.15	-0.38	-0.63	1.24	0.38	2.11	3.09	-1.57	3.81	3.40	1.36	-0.01	3.08	1.16	1.47	0.74	1.68
% Chg Same Qtr Last Yr.....	1.73	1.64	0.53	0.34	0.15	0.77	1.70	0.99	1.84	2.16	1.73	2.13	1.95	1.39	1.47	0.74	1.68
US GDP (\$) SAAR.....	51270	51496	51623	51991	52168	52690	53320	53317	54115	54790	54987	55002	55712	56053	51321	52544	54304
% Chg Prev Qtr SAAR.....	3.01	1.77	0.99	2.89	1.37	4.06	4.87	-0.02	6.12	5.08	1.44	0.11	5.27	2.47	3.34	2.38	3.35
% Chg Same Qtr Last Yr.....	3.51	3.34	2.48	2.16	1.75	2.32	3.29	2.55	3.73	3.99	3.13	3.16	2.95	2.31	3.34	2.38	3.35
TN PERSONAL INCOME (2009\$) SAAR.....	36835	36769	37297	36398	36364	36368	36382	36536	36705	36805	37216	37565	37949	38089	36860	36378	36816
% Chg Prev Qtr SAAR.....	3.26	-0.72	5.88	-9.30	-0.37	0.04	0.15	1.70	1.87	1.09	4.54	3.81	4.14	1.49	2.71	-1.31	1.20
% Chg Same Qtr Last Yr.....	2.91	2.35	3.84	-0.39	-1.28	-1.09	-2.46	0.38	0.94	1.20	2.29	2.82	3.39	3.49	2.71	-1.31	1.20
US PERSONAL INCOME (2009\$) SAAR.....	41490	41423	42460	40992	41266	41334	41361	41745	41963	42214	42702	43195	43433	43746	41653	41238	42157
% Chg Prev Qtr SAAR.....	2.51	-0.64	10.40	-13.13	2.70	0.66	0.26	3.76	2.11	2.41	4.71	4.70	2.22	2.92	2.27	-0.99	2.23
% Chg Same Qtr Last Yr.....	2.12	1.54	4.23	-0.59	-0.54	-0.22	-2.59	1.84	1.69	2.13	3.24	3.47	3.50	3.63	2.27	-0.99	2.23
TN PERSONAL INCOME (\$) SAAR.....	39003	39060	39835	39007	39013	39179	39332	39656	40052	40280	40685	40869	41512	41797	39118	39133	40168
% Chg Prev Qtr SAAR.....	4.53	0.59	8.18	-8.06	0.06	1.71	1.57	3.34	4.05	2.30	4.09	1.82	6.44	2.77	4.66	0.04	2.65
% Chg Same Qtr Last Yr.....	4.73	3.95	5.67	1.12	0.03	0.30	-1.26	1.66	2.66	2.81	3.44	3.06	3.65	3.77	4.66	0.04	2.65
US PERSONAL INCOME (\$) SAAR.....	43931	44005	45349	43929	44272	44528	44715	45310	45789	46200	46683	46994	47512	48007	44204	44362	45996
% Chg Prev Qtr SAAR.....	3.76	0.67	12.80	-11.95	3.15	2.34	1.69	5.43	4.30	3.63	4.25	2.69	4.48	4.24	4.21	0.36	3.69
% Chg Same Qtr Last Yr.....	3.92	3.13	6.07	0.92	0.78	1.19	-1.40	3.14	3.43	3.75	4.40	3.72	3.76	3.91	4.21	0.36	3.69
TN TAXABLE SALES (2009\$).....	3565	3538	3548	3593	3601	3579	3604	3619	3614	3704	3773	3693	3852	3930	14306	14377	14710
% Chg Prev Qtr SAAR.....	-9.62	-2.97	1.20	5.18	0.83	-2.45	2.85	1.74	-0.60	10.37	7.63	-8.16	18.31	8.33	1.68	0.49	2.32
% Chg Same Qtr Last Yr.....	1.63	-0.14	-0.05	-1.71	1.02	1.15	1.56	0.72	0.36	3.51	4.69	2.05	6.59	6.09	1.68	0.49	2.32
TN TAXABLE SALES (\$).....	3774	3758	3790	3851	3863	3855	3896	3928	3943	4054	4125	4018	4214	4312	15181	15465	16050
% Chg Prev Qtr SAAR.....	-8.51	-1.69	3.40	6.61	1.28	-0.82	4.31	3.37	1.53	11.69	7.16	-9.92	20.93	9.69	3.59	1.87	3.78
% Chg Same Qtr Last Yr.....	3.43	1.42	1.71	-0.21	2.35	2.58	2.80	2.01	2.08	5.15	5.87	2.29	6.86	6.38	3.59	1.87	3.78

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 3: Tennessee Personal Income Components, Seasonally Adjusted Annual Rates (millions of 2009 dollars)

January 2016

	Historical Data														Annual		
	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2012	2013	2014
TN PERSONAL INCOME.....	237568	237772	241833	236631	237037	237691	238407	240048	241798	243093	246452	249416	252618	254215	238054	237442	242848
% Chg Prev Qtr SAAR.....	4.37	0.34	7.01	-8.33	0.69	1.11	1.21	2.78	2.95	2.16	5.64	4.90	5.23	2.55	3.82	-0.26	2.28
% Chg Same Qtr Last Yr.....	4.02	3.45	4.95	0.68	-0.22	-0.03	-1.42	1.44	2.01	2.27	3.37	3.90	4.47	4.58	3.82	-0.26	2.28
WAGES AND SALARIES.....	114754	114363	116463	114532	114997	115321	116213	117642	118201	118966	121268	121639	124682	125258	114827	115266	119019
% Chg Prev Qtr SAAR.....	3.65	-1.36	7.55	-6.47	1.63	1.13	3.13	5.01	1.92	2.62	7.97	1.23	10.39	1.86	3.59	0.38	3.26
% Chg Same Qtr Last Yr.....	3.84	2.34	5.48	0.71	0.21	0.84	-0.22	2.71	2.79	3.16	4.35	3.40	5.48	5.29	3.59	0.38	3.26
OTHER LABOR INCOME.....	27863	28087	28240	27971	27787	27602	27479	27288	27110	27001	27194	27310	27756	27846	27860	27710	27148
% Chg Prev Qtr SAAR.....	9.34	3.25	2.21	-3.76	-2.60	-2.64	-1.77	-2.75	-2.57	-1.61	2.88	1.72	6.70	1.30	7.11	-0.54	-2.03
% Chg Same Qtr Last Yr.....	8.08	7.42	7.00	2.65	-0.27	-1.73	-2.70	-2.44	-2.44	-2.18	-1.04	0.08	2.38	3.13	7.11	-0.54	-2.03
PROPRIETORS INCOME.....	29709	29757	29984	31182	30864	30975	30792	31512	32173	32319	32897	33274	33497	33913	29745	30953	32225
% Chg Prev Qtr SAAR.....	2.44	0.65	3.09	16.96	-4.02	1.45	-2.34	9.68	8.66	1.83	7.35	4.67	2.70	5.07	6.63	4.06	4.11
% Chg Same Qtr Last Yr.....	7.35	5.73	5.11	5.59	3.89	4.09	2.69	1.06	4.24	4.34	6.84	5.59	4.11	4.93	6.63	4.06	4.11
RENT, INTEREST, DIVIDENDS.....	33692	33702	35795	33232	33493	33750	33698	34096	34373	34443	34800	35257	35625	35876	34082	33543	34428
% Chg Prev Qtr SAAR.....	6.85	0.11	27.25	-25.71	3.19	3.11	-0.62	4.80	3.30	0.81	4.21	5.36	4.24	2.84	6.32	-1.58	2.64
% Chg Same Qtr Last Yr.....	5.83	4.99	9.64	0.28	-0.59	0.14	-5.86	2.60	2.63	2.05	3.27	3.41	3.64	4.16	6.32	-1.58	2.64
TRANSFER PAYMENTS.....	48989	49198	49011	49435	49689	49880	50182	49629	50061	50533	50774	52494	52135	52411	48980	49797	50249
% Chg Prev Qtr SAAR.....	2.22	1.72	-1.52	3.51	2.07	1.55	2.45	-4.33	3.52	3.83	1.92	14.25	-2.71	2.14	-0.83	1.67	0.91
% Chg Same Qtr Last Yr.....	-1.00	0.92	-0.39	1.47	1.43	1.39	2.39	0.39	0.75	1.31	1.18	5.77	4.14	3.72	-0.83	1.67	0.91
LESS: PERS CONT FOR SOC INS...	16323	16200	16458	18490	18571	18606	18699	18959	18965	19013	19299	19382	19797	19829	16314	18592	19059
% Chg Prev Qtr SAAR.....	1.16	-2.97	6.51	59.32	1.77	0.76	2.02	5.68	0.12	1.02	6.16	1.73	8.83	0.66	1.07	13.96	2.52
% Chg Same Qtr Last Yr.....	1.13	-0.29	3.02	13.60	13.77	14.85	13.62	2.54	2.12	2.19	3.21	2.23	4.39	4.29	1.07	13.96	2.52
RESIDENCE ADJUSTMENT.....	-1116	-1135	-1203	-1231	-1222	-1231	-1257	-1159	-1155	-1155	-1181	-1175	-1280	-1259	-1126	-1235	-1163
% Chg Prev Qtr SAAR.....	27.25	6.95	26.03	9.68	-2.78	3.05	8.76	-27.87	-1.26	0.06	9.29	-2.12	40.83	-6.30	45.87	9.70	-5.89
% Chg Same Qtr Last Yr.....	46.55	41.83	53.41	17.11	9.49	8.48	4.56	-5.84	-5.48	-6.17	-6.06	1.39	10.80	9.00	45.87	9.70	-5.89
PER CAPITA PERSONAL INCOME (\$)...	36835	36769	37297	36398	36364	36368	36382	36536	36705	36805	37216	37565	37949	38089	36860	36378	36816
% Chg Prev Qtr SAAR.....	3.26	-0.72	5.88	-9.30	-0.37	0.04	0.15	1.70	1.87	1.09	4.54	3.81	4.14	1.49	2.71	-1.31	1.20
% Chg Same Qtr Last Yr.....	2.91	2.35	3.84	-0.39	-1.28	-1.09	-2.46	0.38	0.94	1.20	2.29	2.82	3.39	3.49	2.71	-1.31	1.20

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 4: Tennessee Personal Income Components, Seasonally Adjusted Annual Rates (millions of current dollars)**January 2015**

	Historical Data														Annual		
	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2012	2013	2014
TN PERSONAL INCOME.....	251549	252589	258288	253588	254303	256060	257738	260548	263843	266044	269426	271353	276341	278958	252636	255422	264965
% Chg Prev Qtr SAAR.....	5.65	1.66	9.33	-7.08	1.13	2.79	2.65	4.43	5.16	3.38	5.18	2.89	7.56	3.84	5.79	1.10	3.74
% Chg Same Qtr Last Yr.....	5.86	5.07	6.80	2.21	1.09	1.37	-0.21	2.74	3.75	3.90	4.54	4.15	4.74	4.85	5.79	1.10	3.74
WAGES AND SALARIES.....	121507	121490	124387	122739	123373	124233	125635	127688	128977	130198	132573	132337	136391	137449	121860	123995	129859
% Chg Prev Qtr SAAR.....	4.92	-0.06	9.89	-5.19	2.08	2.82	4.59	6.70	4.10	3.84	7.50	-0.71	12.83	3.14	5.55	1.75	4.73
% Chg Same Qtr Last Yr.....	5.68	3.94	7.34	2.23	1.54	2.26	1.00	4.03	4.54	4.80	5.52	3.64	5.75	5.57	5.55	1.75	4.73
OTHER LABOR INCOME.....	29503	29837	30162	29976	29811	29735	29707	29618	29582	29550	29729	29712	30362	30556	29566	29807	29620
% Chg Prev Qtr SAAR.....	10.68	4.61	4.43	-2.45	-2.17	-1.02	-0.38	-1.19	-0.49	-0.43	2.44	-0.23	9.05	2.58	9.13	0.81	-0.63
% Chg Same Qtr Last Yr.....	9.99	9.10	8.88	4.21	1.05	-0.34	-1.51	-1.19	-0.77	-0.62	0.07	0.32	2.64	3.40	9.13	0.81	-0.63
PROPRIETORS INCOME.....	31458	31612	32025	33417	33112	33369	33289	34203	35106	35370	35964	36201	36642	37214	31567	33297	35161
% Chg Prev Qtr SAAR.....	3.70	1.97	5.33	18.56	-3.60	3.14	-0.96	11.44	10.99	3.04	6.88	2.66	4.97	6.39	8.64	5.48	5.60
% Chg Same Qtr Last Yr.....	9.25	7.39	6.96	7.20	5.26	5.56	3.95	2.35	6.02	6.00	8.03	5.84	4.38	5.21	8.64	5.48	5.60
RENT, INTEREST, DIVIDENDS.....	35675	35802	38230	35613	35933	36359	36430	37007	37507	37694	38044	38358	38971	39368	36172	36084	37563
% Chg Prev Qtr SAAR.....	8.16	1.43	30.01	-24.70	3.64	4.83	0.79	6.49	5.51	2.02	3.76	3.34	6.55	4.13	8.34	-0.25	4.10
% Chg Same Qtr Last Yr.....	7.70	6.63	11.57	1.80	0.72	1.55	-4.71	3.92	4.38	3.67	4.43	3.65	3.90	4.44	8.34	-0.25	4.10
TRANSFER PAYMENTS.....	51872	52264	52345	52977	53308	53735	54251	53868	54625	55304	55507	57110	57031	57512	51978	53568	54826
% Chg Prev Qtr SAAR.....	3.47	3.06	0.62	4.92	2.52	3.24	3.90	-2.80	5.74	5.06	1.48	12.07	-0.56	3.42	1.06	3.06	2.35
% Chg Same Qtr Last Yr.....	0.75	2.50	1.36	3.01	2.77	2.81	3.64	1.68	2.47	2.92	2.32	6.02	4.40	3.99	1.06	3.06	2.35
LESS: PERS CONT FOR SOC INS.....	17283	17210	17577	19815	19924	20044	20216	20579	20694	20808	21099	21087	21656	21759	17313	20000	20795
% Chg Prev Qtr SAAR.....	2.40	-1.69	8.82	61.49	2.22	2.44	3.47	7.38	2.26	2.23	5.70	-0.22	11.23	1.93	2.99	15.52	3.98
% Chg Same Qtr Last Yr.....	2.92	1.27	4.83	15.33	15.28	16.47	15.01	3.85	3.87	3.81	4.37	2.47	4.65	4.57	2.99	15.52	3.98
RESIDENCE ADJUSTMENT.....	-1182	-1206	-1284	-1319	-1311	-1326	-1359	-1258	-1260	-1264	-1291	-1278	-1400	-1382	-1195	-1329	-1268
% Chg Prev Qtr SAAR.....	28.81	8.36	28.76	11.17	-2.35	4.77	10.30	-26.71	0.86	1.26	8.81	-3.99	43.94	-5.12	48.63	11.18	-4.55
% Chg Same Qtr Last Yr.....	49.14	44.05	56.11	18.89	10.94	10.01	5.83	-4.64	-3.86	-4.68	-5.00	1.63	11.08	9.29	48.63	11.18	-4.55
PER CAPITA PERSONAL INCOME (\$).....	39003	39060	39835	39007	39013	39179	39332	39656	40052	40280	40685	40869	41512	41797	39118	39133	40168
% Chg Prev Qtr SAAR.....	4.53	0.59	8.18	-8.06	0.06	1.71	1.57	3.34	4.05	2.30	4.09	1.82	6.44	2.77	4.66	0.04	2.65
% Chg Same Qtr Last Yr.....	4.73	3.95	5.67	1.12	0.03	0.30	-1.26	1.66	2.66	2.81	3.44	3.06	3.65	3.77	4.66	0.04	2.65

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 5: Tennessee Nonfarm Employment by Sector, Not Seasonally Adjusted (thousands of jobs)

January 2016

	Historical Data														Annual		
	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2012	2013	2014
TOTAL NONFARM.....	2712.2	2760.4	2711.9	2756.0	2753.6	2813.7	2765.8	2810.3	2815.6	2870.1	2822.1	2866.2	2869.0	2927.8	2715.0	2758.8	2815.4
% Chg Same Qtr Last Yr.....	1.68	1.87	1.50	1.49	1.53	1.93	1.99	1.97	2.25	2.00	2.04	1.99	1.90	2.01	2.01	1.61	2.05
NATURAL RESOURCES, MINING & CONSTRUCTION.....	111.3	109.2	103.6	108.3	110.1	109.5	105.0	111.0	113.2	114.9	110.5	115.2	115.7	117.1	108.9	107.9	111.0
% Chg Same Qtr Last Yr.....	-1.62	-2.85	-1.96	-0.91	-1.08	0.21	1.42	2.43	2.78	4.96	5.24	3.84	2.21	1.91	0.19	-0.93	2.92
MANUFACTURING.....	315.6	316.6	315.7	317.4	318.8	321.8	321.8	323.3	326.0	329.8	330.1	330.6	331.6	333.8	313.4	318.4	325.2
% Chg Same Qtr Last Yr.....	3.28	2.96	2.69	1.13	1.02	1.64	1.93	1.86	2.25	2.50	2.56	2.26	1.71	1.21	2.94	1.61	2.14
DURABLE GOODS.....	196.1	196.8	196.6	197.9	199.2	201.7	203.0	204.0	205.7	209.5	210.1	211.4	211.8	213.4	193.9	198.9	205.5
% Chg Same Qtr Last Yr.....	5.96	5.17	4.10	2.03	1.56	2.52	3.26	3.08	3.26	3.83	3.53	3.61	2.97	1.89	5.56	2.54	3.36
NONDURABLE GOODS.....	119.5	119.8	119.2	119.4	119.7	120.1	118.9	119.2	120.3	120.4	119.9	119.2	119.8	120.4	119.5	119.6	119.7
% Chg Same Qtr Last Yr.....	-0.83	-0.47	0.45	-0.33	0.14	0.19	-0.25	-0.17	0.56	0.25	0.90	-0.06	-0.44	0.03	-1.04	0.11	0.10
TRADE, TRANSPORTATION, UTILITIES.....	574.2	588.8	572.7	578.5	580.9	596.3	579.6	588.4	592.5	606.0	592.9	602.9	610.0	624.6	575.1	582.1	591.6
% Chg Same Qtr Last Yr.....	1.86	2.00	1.40	1.04	1.17	1.27	1.21	1.71	2.00	1.63	2.29	2.47	2.95	3.07	2.05	1.22	1.64
WHOLESALE TRADE.....	120.9	121.5	120.5	121.9	122.3	122.6	121.6	123.1	123.8	124.6	124.2	125.8	127.8	130.1	120.5	121.8	123.3
% Chg Same Qtr Last Yr.....	2.05	2.07	1.37	1.05	1.13	0.88	0.89	0.93	1.23	1.69	2.19	2.19	3.20	4.41	2.22	1.11	1.18
RETAIL TRADE.....	311.1	321.1	308.7	312.1	313.9	325.1	313.9	319.0	320.2	328.8	319.3	326.6	328.4	337.3	312.8	314.9	320.5
% Chg Same Qtr Last Yr.....	0.88	1.36	0.43	0.10	0.90	1.22	1.70	2.20	2.02	1.14	1.72	2.38	2.56	2.59	1.18	0.67	1.76
TRANSPORTATION & UTILITIES.....	142.1	146.2	143.5	144.5	144.7	148.7	144.2	146.4	148.5	152.6	149.4	150.6	153.8	157.2	141.8	145.4	147.9
% Chg Same Qtr Last Yr.....	3.90	3.39	3.56	3.14	1.81	1.69	0.44	1.29	2.63	2.65	3.63	2.89	3.59	3.01	3.87	2.53	1.76
INFORMATION.....	42.7	43.5	43.8	44.3	44.0	44.2	43.7	43.8	43.8	44.4	44.2	43.8	42.9	42.5	43.2	44.1	43.9
% Chg Same Qtr Last Yr.....	-2.22	0.85	1.94	1.45	3.13	1.45	-0.15	-1.13	-0.53	0.60	1.07	-0.08	-2.06	-4.35	-1.26	1.99	-0.30
FINANCIAL ACTIVITIES.....	137.2	137.1	136.0	137.7	139.0	139.7	139.3	141.3	142.6	142.6	142.0	144.0	145.4	147.9	137.1	138.1	141.4
% Chg Same Qtr Last Yr.....	-0.10	-0.24	-0.54	0.27	1.34	1.85	2.43	2.61	2.54	2.08	1.91	1.91	1.99	3.74	0.42	0.73	2.41
PROFESSIONAL & BUSINESS SERVICES.....	339.3	349.3	340.7	348.7	352.4	371.1	359.9	370.4	374.3	385.1	371.7	380.7	382.8	396.4	338.5	353.2	372.4
% Chg Same Qtr Last Yr.....	4.41	4.10	4.06	3.23	3.86	6.24	5.62	6.22	6.22	3.77	3.28	2.80	2.28	2.93	4.85	4.37	5.43
EDUCATION & HEALTH SERVICES.....	393.2	399.5	397.8	398.0	395.7	402.4	399.8	400.4	401.3	409.7	407.6	408.7	406.6	416.5	393.8	398.5	402.8
% Chg Same Qtr Last Yr.....	2.25	2.27	1.87	1.54	0.65	0.73	0.51	0.62	1.42	1.81	1.95	2.06	1.30	1.68	2.47	1.19	1.09
LEISURE & HOSPITALITY.....	283.9	277.5	270.8	291.8	294.6	286.5	280.0	302.5	306.1	296.7	287.6	312.0	316.7	307.5	276.8	285.9	296.3
% Chg Same Qtr Last Yr.....	2.92	3.51	3.10	3.02	3.76	3.22	3.41	3.66	3.91	3.57	2.73	3.15	3.44	3.63	3.44	3.28	3.64
OTHER SERVICES.....	105.0	104.0	103.8	106.7	106.5	105.3	105.0	107.1	106.3	105.1	103.8	105.8	105.4	104.2	104.2	105.6	105.9
% Chg Same Qtr Last Yr.....	1.97	1.79	0.97	1.52	1.40	1.25	1.16	0.31	-0.19	-0.19	-1.11	-1.18	-0.85	-0.86	2.15	1.29	0.27
GOVERNMENT.....	409.8	434.7	427.0	424.6	411.5	437.0	431.6	422.2	409.5	435.7	431.7	422.5	412.0	437.2	424.0	425.0	424.8
% Chg Same Qtr Last Yr.....	-1.39	-0.18	-0.91	0.94	0.42	0.53	1.07	-0.56	-0.50	-0.29	0.02	0.06	0.62	0.34	-0.87	0.24	-0.07
FEDERAL, CIVILIAN.....	50.1	50.2	49.6	49.6	49.3	49.2	48.9	49.1	47.2	47.4	47.4	47.6	47.6	47.8	50.1	49.5	48.1
% Chg Same Qtr Last Yr.....	-0.86	-0.72	-0.93	-1.06	-1.46	-1.99	-1.48	-1.08	-4.26	-3.79	-3.14	-2.92	0.71	0.84	-0.81	-1.36	-2.65
STATE & LOCAL.....	359.7	384.5	377.4	375.0	362.2	387.8	382.7	373.2	362.2	388.4	384.3	374.9	364.4	389.4	373.9	375.6	376.6
% Chg Same Qtr Last Yr.....	-1.46	-0.11	-0.91	1.21	0.69	0.86	1.40	-0.49	0.01	0.15	0.43	0.46	0.61	0.27	-0.88	0.45	0.27

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 6: Tennessee Durable Goods Manufacturing Employment, Not Seasonally Adjusted (thousands of jobs)**January 2016**

	Historical Data														Annual		
	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2012	2013	2014
TOTAL DURABLE GOODS.....	196.1	196.8	196.6	197.9	199.2	201.7	203.0	204.0	205.7	209.5	210.1	211.4	211.8	213.4	193.9	198.9	205.5
% Chg Same Qtr Last Yr.....	5.96	5.17	4.10	2.03	1.56	2.52	3.26	3.08	3.26	3.83	3.53	3.61	2.97	1.89	5.56	2.54	3.36
WOOD PRODUCTS.....	11.3	11.0	10.7	10.8	10.9	11.0	11.0	11.1	11.4	11.4	11.3	11.6	11.8	11.8	11.0	10.9	11.2
% Chg Same Qtr Last Yr.....	2.74	0.91	-0.62	-2.11	-3.25	-0.30	2.49	2.77	4.59	3.94	3.34	4.19	3.22	2.92	2.24	-1.59	3.45
NONMETALLIC MINERAL PRODUCTS.....	12.7	12.6	12.4	12.2	12.1	11.9	11.8	11.9	12.0	11.9	11.7	11.7	11.7	11.7	12.5	12.1	11.9
% Chg Same Qtr Last Yr.....	5.83	4.70	2.48	-2.14	-4.99	-5.80	-5.11	-2.19	-0.28	0.00	-0.85	-1.68	-2.49	-1.68	5.80	-2.67	-1.92
PRIMARY METALS.....	9.8	9.8	9.9	9.9	10.0	10.1	10.0	10.0	10.1	10.1	10.2	10.2	10.2	10.4	9.7	10.0	10.1
% Chg Same Qtr Last Yr.....	6.52	3.90	5.69	2.41	1.70	3.07	1.01	1.01	1.34	0.66	2.00	1.99	1.32	2.30	4.89	3.19	1.00
FABRICATED METAL PRODUCTS.....	34.6	34.3	33.8	33.9	33.9	34.0	34.1	34.4	34.4	34.6	35.3	35.1	35.1	35.1	34.5	33.9	34.4
% Chg Same Qtr Last Yr.....	2.57	0.78	-1.65	-2.31	-2.02	-0.68	0.79	1.47	1.38	1.76	3.52	2.13	2.13	1.35	2.68	-1.67	1.35
MACHINERY.....	25.5	25.2	25.7	25.7	25.2	24.9	25.4	25.4	25.6	26.4	26.4	26.7	26.2	25.7	25.5	25.4	25.7
% Chg Same Qtr Last Yr.....	1.46	2.30	1.18	-1.40	-1.18	-1.32	-1.04	-1.17	1.72	6.30	3.67	5.11	2.21	-2.90	1.66	-0.69	1.41
COMPUTER & ELECTRONIC PRODUCTS....	5.5	5.3	5.3	5.3	5.2	5.1	5.0	5.1	5.0	5.0	5.0	5.1	5.1	5.2	5.6	5.2	5.0
% Chg Same Qtr Last Yr.....	-2.35	-9.60	-8.62	-9.66	-6.02	-4.38	-5.03	-4.40	-3.21	-1.96	-0.66	0.00	1.99	3.33	0.60	-7.25	-3.67
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS.....	18.0	18.1	17.8	18.3	18.9	19.2	19.5	19.0	19.5	19.6	19.7	19.8	20.0	20.1	17.9	18.6	19.4
% Chg Same Qtr Last Yr.....	0.94	1.87	0.38	2.23	5.19	6.07	9.16	3.83	3.17	2.08	1.37	4.04	2.39	2.55	1.65	3.48	4.49
TRANSPORTATION EQUIPMENT.....	55.1	57.2	57.8	58.3	59.8	62.2	62.8	63.3	63.7	66.2	66.5	66.9	67.4	69.1	53.6	59.5	64.0
% Chg Same Qtr Last Yr.....	18.49	17.93	16.36	11.19	8.47	8.62	8.53	8.63	6.58	6.54	5.89	5.58	5.76	4.38	17.02	11.00	7.55
FURNITURE.....	8.8	8.4	8.6	8.8	8.7	8.9	9.1	9.1	9.0	9.1	9.2	9.2	9.2	9.2	8.7	8.8	9.1
% Chg Same Qtr Last Yr.....	-0.38	-2.69	0.00	-0.38	-1.14	5.93	5.43	3.02	3.83	1.87	1.10	1.10	1.85	1.47	-2.89	1.06	3.52
MISCELLANEOUS DURABLE GOODS.....	14.9	14.7	14.5	14.6	14.6	14.4	14.4	14.6	14.9	15.0	14.9	15.1	15.1	15.2	14.9	14.5	14.7
% Chg Same Qtr Last Yr.....	-2.62	-2.86	-3.12	-2.01	-1.79	-2.04	-0.69	0.00	2.05	3.70	3.70	3.20	1.34	1.34	-2.30	-2.24	1.26

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 7: Tennessee Nondurable Goods Manufacturing Employment, Not Seasonally Adjusted (thousands of jobs)

January 2016

	Historical Data														Annual		
	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2012	2013	2014
TOTAL NONDURABLE GOODS.....	119.5	119.8	119.2	119.4	119.7	120.1	118.9	119.2	120.3	120.4	119.9	119.2	119.8	120.4	119.5	119.6	119.7
% Chg Same Qtr Last Yr.....	-0.83	-0.47	0.45	-0.33	0.14	0.19	-0.25	-0.17	0.56	0.25	0.90	-0.06	-0.44	0.03	-1.04	0.11	0.10
FOOD.....	33.0	32.7	32.1	32.2	32.5	32.8	32.5	32.4	32.9	33.1	32.8	32.6	33.0	33.1	33.0	32.4	32.7
% Chg Same Qtr Last Yr.....	-0.80	-2.29	-3.50	-2.72	-1.52	0.20	1.04	0.62	1.23	0.92	0.92	0.62	0.41	0.20	-0.25	-1.89	0.95
BEVERAGE & TOBACCO.....	5.2	5.3	5.3	5.3	5.3	5.3	5.3	5.4	5.5	5.4	5.4	5.4	5.5	5.5	5.2	5.3	5.4
% Chg Same Qtr Last Yr.....	1.97	3.27	3.27	2.58	3.23	1.27	1.27	2.52	2.50	1.25	1.25	0.00	0.00	1.85	3.50	2.58	1.88
TEXTILE MILLS, TEXTILE MILL																	
PRODUCTS & APPAREL.....	10.7	10.7	10.4	10.4	10.5	10.5	10.2	10.0	10.0	9.8	9.6	9.6	9.6	9.6	10.7	10.5	10.0
% Chg Same Qtr Last Yr.....	-0.92	-0.62	-1.26	-2.80	-1.86	-1.87	-2.24	-4.47	-5.38	-6.05	-5.88	-4.01	-3.68	-2.71	-0.08	-1.95	-4.54
PAPER.....	14.9	14.7	14.7	14.8	14.7	14.6	14.4	14.6	14.8	14.6	14.2	14.3	14.4	14.3	14.7	14.7	14.6
% Chg Same Qtr Last Yr.....	-3.88	-2.00	1.15	-0.45	-0.90	-0.45	-1.59	-0.90	0.68	-0.23	-1.39	-2.51	-2.92	-2.059	-3.76	-0.17	-0.51
PRINTING & RELATED SUPPORT.....	9.6	9.6	9.6	9.7	9.6	9.6	9.5	9.5	9.4	9.4	9.2	9.1	9.0	8.9	9.6	9.6	9.4
% Chg Same Qtr Last Yr.....	-2.04	-1.70	0.35	0.35	-0.35	0.00	-0.69	-1.72	-1.74	-2.77	-3.50	-4.56	-4.61	-4.626	-3.43	0.09	-1.73
CHEMICALS.....	24.4	24.5	24.6	24.6	24.9	25.1	25.2	25.3	25.5	25.4	25.3	25.1	25.3	25.3	24.4	24.8	25.3
% Chg Same Qtr Last Yr.....	-1.08	-0.14	1.23	1.23	1.91	2.31	2.30	2.71	2.41	1.06	0.40	-0.79	-0.79	-0.394	-0.68	1.67	2.12
PLASTICS & RUBBER.....	19.9	20.3	20.4	20.3	20.0	20.0	20.2	20.4	20.9	21.1	21.2	21.0	21.3	21.5	20.0	20.2	20.7
% Chg Same Qtr Last Yr.....	0.67	0.83	4.43	0.83	0.50	-1.48	-1.31	0.49	4.67	5.84	5.29	3.10	1.59	1.735	-2.44	1.04	2.40
MISCELLANEOUS NONDURABLE GOODS....	1.9	2.1	2.0	2.1	2.2	2.2	1.6	1.6	1.4	1.6	2.2	2.1	1.8	2.2	1.9	2.1	1.5
% Chg Same Qtr Last Yr.....	12.00	26.00	17.31	12.50	16.07	4.76	-22.95	-25.40	-35.38	-25.76	42.55	31.91	30.95	36.73	14.65	12.33	-27.45

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 8: Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs)

January 2016

	Historical Data														Annual		
	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2012	2013	2014
TOTAL NONFARM.....	2718.7	2729.7	2739.7	2752.1	2761.6	2781.4	2790.6	2806.4	2824.2	2843.3	2846.9	2861.0	2874.8	2900.1	2715.3	2758.7	2816.1
% Chg Prev Qtr SAAR.....	0.86	1.62	1.48	1.82	1.38	2.91	1.32	2.29	2.55	2.73	0.52	1.99	1.94	3.57	2.00	1.60	2.08
% Chg Same Qtr Last Yr.....	1.75	1.73	1.48	1.44	1.58	1.90	1.86	1.97	2.27	2.22	2.02	1.94	1.79	2.00	2.00	1.60	2.08
NATURAL RESOURCES, MINING AND CONSTRUCTION.....	108.50	107.77	107.90	107.77	107.50	108.17	109.33	110.27	110.57	113.57	115	114.33	112.87	115.73	108.92	107.83	110.93
% Chg Prev Qtr SAAR.....	-2.42	-2.68	0.50	-0.49	-0.99	2.50	4.38	3.46	1.09	11.30	5.14	-2.30	-5.03	10.55	0.17	-0.99	2.87
% Chg Same Qtr Last Yr.....	-1.72	-2.74	-2.12	-1.28	-0.92	0.37	1.33	2.32	2.85	4.99	5.18	3.69	2.08	1.91	0.17	-0.99	2.87
MANUFACTURING.....	315.0	315.8	316.9	317.4	318.5	320.9	322.9	323.4	325.8	328.9	331.0	330.8	331.5	332.7	313.4	318.4	325.2
% Chg Prev Qtr SAAR.....	1.55	1.02	1.39	0.58	1.40	3.09	2.45	0.66	2.98	3.81	2.68	-0.30	0.81	1.53	2.94	1.61	2.13
% Chg Same Qtr Last Yr.....	3.35	2.95	2.63	1.13	1.10	1.61	1.87	1.90	2.29	2.47	2.53	2.28	1.74	1.17	2.94	1.61	2.13
DURABLE GOODS.....	195.8	196.5	197.2	197.9	199.0	201.3	203.5	204.0	205.7	209.0	210.6	211.4	211.9	212.8	193.9	198.9	205.5
% Chg Prev Qtr SAAR.....	3.89	1.33	1.46	1.39	2.44	4.68	4.35	0.97	3.41	6.49	3.22	1.45	0.92	1.86	5.55	2.54	3.36
% Chg Same Qtr Last Yr.....	6.05	5.15	4.05	2.01	1.65	2.48	3.21	3.10	3.34	3.79	3.50	3.63	3.00	1.86	5.55	2.54	3.36
NONDURABLE GOODS.....	119.2	119.4	119.8	119.5	119.5	119.6	119.4	119.4	120.1	119.9	120.4	119.4	119.6	119.9	119.5	119.6	119.7
% Chg Prev Qtr SAAR.....	-2.16	0.52	1.26	-0.74	-0.30	0.47	-0.69	0.15	2.24	-0.66	1.75	-3.30	0.61	0.95	-1.04	0.11	0.09
% Chg Same Qtr Last Yr.....	-0.79	-0.48	0.38	-0.29	0.18	0.17	-0.32	-0.10	0.54	0.25	0.86	-0.02	-0.42	-0.02	-1.04	0.11	0.09
TRADE, TRANSPORTATION, UTILITIES.....	575.4	578.6	580.2	580.4	582.2	585.7	586.5	590.3	594.0	597.6	600.0	603.1	610.9	615.9	575.1	582.1	592.1
% Chg Prev Qtr SAAR.....	0.86	2.27	1.11	0.09	1.29	2.40	0.55	2.64	2.51	2.47	1.59	2.08	5.27	3.34	2.05	1.22	1.71
% Chg Same Qtr Last Yr.....	1.91	1.84	1.40	1.08	1.19	1.22	1.08	1.72	2.02	2.04	2.30	2.16	2.85	3.06	2.05	1.22	1.71
WHOLESALE TRADE.....	120.7	121.2	121.3	121.6	122.1	122.2	122.4	122.8	123.6	124.4	125.1	125.6	127.3	129.9	120.5	121.8	123.3
% Chg Prev Qtr SAAR.....	1.00	1.56	0.44	0.99	1.54	0.44	0.66	1.09	2.74	2.72	2.27	1.39	5.75	8.42	2.21	1.09	1.22
% Chg Same Qtr Last Yr.....	2.11	1.99	1.36	1.00	1.13	0.85	0.91	0.93	1.23	1.80	2.21	2.28	3.02	4.42	2.21	1.09	1.22
RETAIL TRADE.....	312.6	313.7	313.7	313.4	315.4	317.3	318.2	320.4	321.9	322.9	324.2	326.7	329.3	331.1	312.8	315.0	320.8
% Chg Prev Qtr SAAR.....	-0.34	1.42	0.00	-0.30	2.58	2.39	1.14	2.75	1.89	1.25	1.70	3.08	3.22	2.25	1.18	0.68	1.86
% Chg Same Qtr Last Yr.....	0.94	1.08	0.45	0.19	0.92	1.16	1.45	2.21	2.04	1.75	1.90	1.98	2.31	2.56	1.18	0.68	1.86
TRANSPORTATION & UTILITIES.....	142.1	143.8	145.2	145.3	144.7	146.2	145.9	147.2	148.5	150.3	150.6	150.8	154.3	154.9	141.8	145.4	148.0
% Chg Prev Qtr SAAR.....	3.45	4.77	4.14	0.18	-1.64	4.12	-0.82	3.71	3.67	4.94	0.80	0.53	9.42	1.56	3.89	2.54	1.81
% Chg Same Qtr Last Yr.....	3.95	3.38	3.57	3.12	1.83	1.67	0.44	1.31	2.65	2.85	3.27	2.47	3.86	3.02	3.89	2.54	1.81
INFORMATION.....	42.8	43.3	43.9	44.3	44.2	43.9	43.7	43.7	43.9	44.3	44.1	43.7	43.2	42.4	43.2	44.1	43.9
% Chg Prev Qtr SAAR.....	-6.28	4.43	5.66	3.38	-0.90	-2.10	-2.11	0.31	1.53	3.69	-1.50	-4.16	-3.91	-7.78	-1.35	2.08	-0.36
% Chg Same Qtr Last Yr.....	-2.21	0.54	2.09	1.68	3.11	1.46	-0.46	-1.20	-0.60	0.83	0.99	-0.15	-1.52	-4.36	-1.35	2.08	-0.36
FINANCIAL ACTIVITIES.....	136.8	136.8	137.1	137.7	138.6	139.3	140.3	141.3	142.2	142.3	142.5	144.1	145.1	147.5	137.1	138.2	141.5
% Chg Prev Qtr SAAR.....	-0.68	0.00	0.78	1.86	2.64	2.13	2.71	2.98	2.57	0.19	0.75	4.47	2.90	6.68	0.45	0.78	2.41
% Chg Same Qtr Last Yr.....	-0.07	-0.32	-0.53	0.49	1.32	1.85	2.33	2.61	2.60	2.11	1.62	1.98	2.06	3.68	0.45	0.78	2.41

(CONTINUED ON NEXT PAGE)

Table 8: Tennessee Nonfarm Employment by Sector, Seasonally Adjusted (thousands of jobs)

January 2016

	Historical Data														Annual		
	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2012	2013	2014
PROFESSIONAL & BUSINESS SERVICES..	340.7	342.1	346.4	348.6	353.9	363.3	364.6	370.4	376.0	379.5	376.0	381.5	384.0	390.7	338.6	353.1	372.6
% Chg Prev Qtr SAAR.....	2.38	1.65	5.12	2.49	6.26	11.06	1.48	6.48	6.15	3.81	-3.60	5.91	2.65	7.20	4.82	4.26	5.54
% Chg Same Qtr Last Yr.....	4.47	3.82	4.05	2.90	3.86	6.19	5.25	6.26	6.24	4.46	3.13	2.99	2.13	2.95	4.82	4.26	5.54
EDUCATION & HEALTH SERVICES.....	394.6	396.5	398.4	398.6	397.5	399.2	400.0	401.1	403.3	406.1	408.1	409.2	409.0	412.8	393.8	398.4	402.6
% Chg Prev Qtr SAAR.....	1.67	1.97	1.86	0.23	-1.10	1.76	0.77	1.10	2.21	2.77	2.05	1.08	-0.26	3.84	2.44	1.17	1.05
% Chg Same Qtr Last Yr.....	2.16	2.16	1.82	1.43	0.73	0.68	0.41	0.63	1.46	1.71	2.03	2.03	1.41	1.67	2.44	1.17	1.05
LEISURE & HOSPITALITY.....	276.5	279.9	282.7	284.5	287.1	288.9	291.6	295.0	298.5	299.5	299.0	304.5	309.6	310.3	276.8	285.8	296.1
% Chg Prev Qtr SAAR.....	0.48	4.96	4.06	2.52	3.75	2.48	3.89	4.65	4.83	1.39	-0.71	7.66	6.82	0.95	3.40	3.26	3.62
% Chg Same Qtr Last Yr.....	2.89	3.26	3.04	2.99	3.82	3.20	3.16	3.69	3.96	3.68	2.51	3.24	3.73	3.62	3.40	3.26	3.62
OTHER SERVICES.....	104.5	104.6	104.8	105.7	105.9	106.0	106.1	106.0	105.7	105.5	104.9	104.5	105.2	104.6	104.3	105.6	105.8
% Chg Prev Qtr SAAR.....	1.03	0.26	0.77	3.61	0.76	0.13	0.50	-0.38	-1.00	-1.01	-2.26	-1.27	2.71	-2.51	2.21	1.27	0.21
% Chg Same Qtr Last Yr.....	2.12	1.92	1.03	1.41	1.34	1.31	1.24	0.25	-0.19	-0.47	-1.16	-1.38	-0.47	-0.85	2.21	1.27	0.21
GOVERNMENT.....	423.8	424.2	421.4	427.2	426.1	426.0	425.5	424.9	424.2	426.1	426.2	425.3	423.5	427.5	424.1	425.2	425.2
% Chg Prev Qtr SAAR.....	0.70	0.38	-2.61	5.69	-1.03	-0.13	-0.44	-0.56	-0.66	1.77	0.13	-0.90	-1.68	3.83	-0.86	0.25	0.00
% Chg Same Qtr Last Yr.....	-0.99	-0.41	-0.98	0.99	0.56	0.43	0.99	-0.54	-0.45	0.02	0.16	0.08	-0.18	0.32	-0.86	0.25	0.00
FEDERAL, CIVILIAN.....	50.7	50.4	49.6	49.3	49.9	49.5	49.0	48.6	47.7	46.4	47.5	48.4	47.2	46.6	50.2	49.6	47.9
% Chg Prev Qtr SAAR.....	7.43	-2.35	-5.95	-2.66	5.52	-3.69	-3.72	-3.49	-6.69	-10.97	9.83	7.80	-9.56	-4.45	-0.45	-1.23	-3.33
% Chg Same Qtr Last Yr.....	-0.78	-0.07	-0.67	-1.00	-1.45	-1.79	-1.21	-1.42	-4.41	-6.27	-3.13	-0.41	-1.19	0.58	-0.45	-1.23	-3.33
STATE & LOCAL.....	373.1	373.8	371.8	378.0	376.2	376.5	376.5	376.4	376.5	379.7	378.8	376.9	376.3	380.8	373.9	375.6	377.3
% Chg Prev Qtr SAAR.....	-0.18	0.75	-2.16	6.84	-1.86	0.35	0.00	-0.18	0.14	3.48	-1.01	-1.96	-0.64	4.91	-0.91	0.45	0.44
% Chg Same Qtr Last Yr.....	-1.02	-0.45	-1.02	1.26	0.83	0.73	1.28	-0.42	0.08	0.85	0.59	0.14	-0.05	0.29	-0.91	0.45	0.44
STATISTICAL DISCREPANCY (%).....	0.01	-0.01	-0.01	0.01	0.01	-0.01	0.00	0.01	0.01	0.00	-0.04	0.03	0.01	-0.01	-0.01	0.00	0.00

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 9: Tennessee Durable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs)**January 2016**

	Historical Data														Annual		
	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2012	2013	2014
TOTAL DURABLE GOODS.....	195.8	196.5	197.2	197.9	199.0	201.3	203.5	204.0	205.7	209.0	210.6	211.4	211.9	212.8	193.9	198.9	205.5
% Chg Prev Qtr SAAR.....	3.89	1.33	1.46	1.39	2.44	4.68	4.35	0.97	3.41	6.49	3.22	1.45	0.92	1.86	5.55	2.54	3.36
% Chg Same Qtr Last Yr.....	6.05	5.15	4.05	2.01	1.65	2.48	3.21	3.10	3.34	3.79	3.50	3.63	3.00	1.86	5.55	2.54	3.36
WOOD PRODUCTS.....	11.1	11.0	10.9	10.8	10.8	11.0	11.1	11.1	11.3	11.4	11.5	11.6	11.6	11.7	11.0	10.9	11.2
% Chg Prev Qtr SAAR.....	1.77	-5.02	-3.40	-1.85	-2.26	6.84	7.11	-0.32	5.29	3.85	4.32	3.36	1.54	2.39	2.25	-1.59	3.44
% Chg Same Qtr Last Yr.....	2.88	1.05	-0.80	-2.16	-3.14	-0.25	2.36	2.76	4.69	3.95	3.26	4.20	3.26	2.90	2.25	-1.59	3.44
NONMETALLIC MINERALS.....	12.6	12.6	12.6	12.2	12.0	11.9	11.9	11.9	11.9	11.9	11.8	11.7	11.6	11.7	12.5	12.1	11.9
% Chg Prev Qtr SAAR.....	5.05	1.50	-2.12	-12.01	-6.33	-2.66	0.69	-0.09	1.33	-2.11	-2.65	-3.08	-2.02	0.98	5.80	-2.66	-1.94
% Chg Same Qtr Last Yr.....	5.95	4.70	2.34	-2.11	-4.87	-5.86	-5.19	-2.14	-0.19	-0.06	-0.90	-1.64	-2.47	-1.71	5.80	-2.66	-1.94
PRIMARY METALS.....	9.8	9.7	9.9	9.9	10.0	10.0	10.0	10.0	10.1	10.1	10.2	10.2	10.2	10.3	9.7	10.0	10.1
% Chg Prev Qtr SAAR.....	4.22	-3.10	8.31	0.28	1.54	2.80	-0.82	0.52	2.99	-0.02	4.49	0.64	0.18	4.01	4.88	3.19	0.99
% Chg Same Qtr Last Yr.....	6.51	4.06	5.65	2.34	1.67	3.19	0.94	1.00	1.36	0.66	1.98	2.01	1.31	2.31	4.88	3.19	0.99
FABRICATED METALS.....	34.6	34.3	33.9	33.8	33.9	34.0	34.1	34.3	34.4	34.6	35.3	35.0	35.1	35.1	34.5	33.9	34.4
% Chg Prev Qtr SAAR.....	-1.00	-3.67	-4.19	-0.60	0.73	1.54	1.41	1.98	0.89	2.79	8.43	-3.24	0.99	-0.41	2.66	-1.67	1.35
% Chg Same Qtr Last Yr.....	2.63	0.88	-1.69	-2.38	-1.96	-0.66	0.76	1.41	1.45	1.76	3.48	2.13	2.16	1.35	2.66	-1.67	1.35
MACHINERY.....	25.6	25.6	25.5	25.4	25.3	25.2	25.2	25.2	25.7	26.8	26.2	26.5	26.3	26.0	25.5	25.4	25.7
% Chg Prev Qtr SAAR.....	-3.63	-0.12	-0.38	-1.47	-2.37	-1.19	0.58	-1.41	9.47	17.42	-9.04	4.67	-2.31	-4.64	1.66	-0.70	1.44
% Chg Same Qtr Last Yr.....	1.53	2.37	1.08	-1.41	-1.09	-1.35	-1.12	-1.10	1.77	6.25	3.62	5.18	2.23	-2.95	1.66	-0.70	1.44
COMPUTERS & ELECTRONICS.....	5.5	5.3	5.3	5.3	5.2	5.1	5.0	5.0	5.0	5.0	5.0	5.0	5.1	5.2	5.6	5.2	5.0
% Chg Prev Qtr SAAR.....	-19.67	-12.78	-3.24	-2.26	-5.71	-6.00	-5.71	-0.34	-0.97	-0.40	-0.81	2.03	7.23	5.23	0.58	-7.24	-3.66
% Chg Same Qtr Last Yr.....	-2.40	-9.59	-8.47	-9.78	-6.09	-4.32	-4.93	-4.47	-3.29	-1.88	-0.63	-0.05	1.96	3.37	0.58	-7.24	-3.66
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS.....	17.9	18.0	17.9	18.4	18.8	19.1	19.6	19.1	19.4	19.5	19.8	19.9	19.9	20.0	17.9	18.6	19.4
% Chg Prev Qtr SAAR.....	-2.13	3.41	-2.56	10.54	10.13	6.72	9.10	-9.34	7.55	1.87	6.37	0.52	0.95	2.43	1.65	3.47	4.49
% Chg Same Qtr Last Yr.....	0.96	1.90	0.38	2.18	5.24	6.07	9.11	3.84	3.22	2.03	1.39	4.04	2.40	2.54	1.65	3.47	4.49
TRANSPORTATION EQUIPMENT.....	55.2	56.7	57.9	58.6	59.9	61.6	62.9	63.7	63.9	65.5	66.5	67.3	67.6	68.4	53.6	59.5	64.0
% Chg Prev Qtr SAAR.....	19.55	11.71	8.94	4.97	8.90	11.44	8.71	5.58	1.34	10.40	6.39	4.41	2.18	4.45	17.03	11.02	7.55
% Chg Same Qtr Last Yr.....	18.62	17.78	16.37	11.17	8.60	8.54	8.48	8.64	6.70	6.45	5.88	5.59	5.80	4.35	17.03	11.02	7.55
FURNITURE.....	8.8	8.5	8.6	8.8	8.7	9.0	9.1	9.0	9.0	9.2	9.2	9.1	9.2	9.3	8.7	8.8	9.1
% Chg Prev Qtr SAAR.....	-1.57	-12.40	6.21	6.82	-3.03	14.40	3.87	-2.49	1.07	4.77	1.14	-2.60	4.64	2.60	-2.92	1.06	3.50
% Chg Same Qtr Last Yr.....	-0.08	-2.69	-0.07	-0.55	-0.92	5.92	5.33	2.96	4.03	1.77	1.09	1.06	1.94	1.41	-2.92	1.06	3.50
MISCELLANEOUS DURABLES.....	14.8	14.7	14.6	14.6	14.5	14.4	14.5	14.6	14.8	15.0	15.0	15.1	15.0	15.2	14.9	14.5	14.7
% Chg Prev Qtr SAAR.....	-2.20	-2.07	-3.38	-0.25	-1.68	-2.79	2.15	2.45	6.53	3.67	2.29	0.46	-1.09	3.79	-2.30	-2.25	1.26
% Chg Same Qtr Last Yr.....	-2.68	-2.81	-3.12	-1.98	-1.85	-2.03	-0.66	0.01	2.03	3.69	3.72	3.21	1.32	1.34	-2.30	-2.25	1.26

Table 10: Tennessee Nondurable Goods Manufacturing Employment, Seasonally Adjusted (thousands of jobs)

January 2016

	Historical Data														Annual		
	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2012	2013	2014
TOTAL NONDURABLE GOODS.....	119.2	119.4	119.8	119.5	119.5	119.6	119.4	119.4	120.1	119.9	120.4	119.4	119.6	119.9	119.5	119.6	119.7
% Chg Prev Qtr SAAR.....	-2.16	0.52	1.26	-0.74	-0.30	0.47	-0.69	0.15	2.24	-0.66	1.75	-3.30	0.61	0.95	-1.04	0.11	0.09
% Chg Same Qtr Last Yr.....	-0.79	-0.48	0.38	-0.29	0.18	0.17	-0.32	-0.10	0.54	0.25	0.86	-0.02	-0.42	-0.02	-1.04	0.11	0.09
FOOD.....	32.9	32.5	32.3	32.4	32.4	32.5	32.6	32.6	32.8	32.8	32.9	32.8	32.9	32.9	33.0	32.4	32.7
% Chg Prev Qtr SAAR.....	-4.74	-4.87	-2.84	1.86	-0.14	1.98	0.46	0.34	2.06	0.78	0.57	-0.90	1.18	-0.09	-0.24	-1.90	0.95
% Chg Same Qtr Last Yr.....	-0.83	-2.27	-3.53	-2.69	-1.53	0.19	1.03	0.66	1.21	0.91	0.94	0.62	0.40	0.19	-0.24	-1.90	0.95
BEVERAGE & TOBACCO.....	5.1	5.3	5.3	5.3	5.3	5.3	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.5	5.2	5.3	5.4
% Chg Prev Qtr SAAR.....	-2.27	10.49	2.28	0.02	0.73	2.01	2.30	4.87	0.99	-2.88	2.10	-0.29	1.25	4.48	3.51	2.59	1.89
% Chg Same Qtr Last Yr.....	2.03	3.20	3.30	2.52	3.30	1.26	1.26	2.47	2.53	1.28	1.23	-0.04	0.03	1.87	3.51	2.59	1.89
TEXTILE MILLS, TEXTILE MILL																	
PRODUCTS & APPAREL.....	10.6	10.6	10.6	10.4	10.5	10.4	10.3	10.0	9.9	9.8	9.7	9.6	9.5	9.5	10.7	10.5	10.0
% Chg Prev Qtr SAAR.....	-3.21	-1.12	-2.01	-4.46	0.54	-1.76	-3.62	-12.11	-3.49	-4.94	-2.96	-4.36	-2.36	-1.35	-0.07	-1.96	-4.53
% Chg Same Qtr Last Yr.....	-0.87	-0.65	-1.38	-2.71	-1.78	-1.94	-2.34	-4.36	-5.33	-6.11	-5.95	-3.94	-3.66	-2.76	-0.07	-1.96	-4.53
PAPER.....	14.7	14.6	14.9	14.8	14.6	14.6	14.6	14.6	14.7	14.6	14.4	14.3	14.2	14.3	14.7	14.7	14.6
% Chg Prev Qtr SAAR.....	-3.80	-1.02	6.54	-3.29	-5.17	0.71	1.13	-0.17	1.29	-3.04	-3.79	-4.36	-0.30	0.24	-3.76	-0.17	-0.53
% Chg Same Qtr Last Yr.....	-3.83	-1.94	1.05	-0.48	-0.83	-0.40	-1.69	-0.91	0.74	-0.21	-1.45	-2.50	-2.89	-2.07	-3.76	-0.17	-0.53
PRINTING & RELATED SUPPORT.....	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.5	9.4	9.3	9.2	9.1	9.0	8.9	9.6	9.6	9.5
% Chg Prev Qtr SAAR.....	1.04	-1.06	2.19	-0.36	-2.09	0.33	-1.11	-3.59	-2.49	-3.90	-4.23	-7.37	-2.85	-4.00	-3.45	0.08	-1.73
% Chg Same Qtr Last Yr.....	-2.01	-1.68	0.23	0.45	-0.34	0.01	-0.81	-1.63	-1.73	-2.78	-3.56	-4.52	-4.61	-4.63	-3.45	0.08	-1.73
CHEMICALS.....	24.4	24.5	24.6	24.7	24.8	25.1	25.2	25.4	25.4	25.3	25.3	25.2	25.2	25.2	24.4	24.8	25.3
% Chg Prev Qtr SAAR.....	-0.04	1.98	2.45	0.70	2.41	3.75	2.23	2.60	1.04	-1.58	-0.50	-2.01	0.95	-0.01	-0.68	1.68	2.12
% Chg Same Qtr Last Yr.....	-1.10	-0.13	1.22	1.27	1.89	2.32	2.27	2.75	2.40	1.06	0.38	-0.77	-0.79	-0.40	-0.68	1.68	2.12
PLASTICS & RUBBER.....	20.0	20.3	20.4	20.2	20.1	20.0	20.1	20.4	21.0	21.1	21.2	21.0	21.3	21.5	20.0	20.2	20.7
% Chg Prev Qtr SAAR.....	-1.82	6.19	3.41	-3.61	-3.70	-1.81	3.64	4.75	12.28	2.93	1.29	-2.99	5.00	3.86	-2.45	1.03	2.39
% Chg Same Qtr Last Yr.....	0.75	0.89	4.24	0.96	0.48	-1.47	-1.41	0.66	4.60	5.83	5.23	3.23	1.52	1.75	-2.45	1.03	2.39
MISCELLANEOUS NONDURABLE GOODS.....	1.9	2.0	2.1	2.1	2.3	2.1	1.6	1.6	1.5	1.5	2.3	2.1	1.9	2.1	1.9	2.1	1.5
% Chg Prev Qtr SAAR.....	18.23	23.04	5.63	4.87	40.57	-26.92	-67.39	-6.11	-18.82	16.47	366.98	-30.68	-20.70	32.68	14.54	12.53	-27.54
% Chg Same Qtr Last Yr.....	13.22	24.21	17.47	12.67	17.65	3.28	-23.01	-25.11	-34.72	-26.65	42.69	32.27	31.50	35.85	14.54	12.53	-27.54

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 11: Tennessee Average Annual Wage and Salary Rate by Sector, Not Seasonally Adjusted (2009 dollars)**January 2016**

	Historical Data														Annual		
	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2012	2013	2014
TOTAL NONFARM.....	41938	41847	41875	41917	41417	41569	41000	42227	41757	41951	41958	42800	43201	43357	41975	41476	41973
% Chg Same Qtr Last Yr.....	1.72	0.67	3.60	-0.76	-1.24	-0.66	-2.09	0.74	0.82	0.92	2.34	1.36	3.46	3.35	1.57	-1.19	1.20
NATURAL RESOURCES, MINING																	
AND CONSTRUCTION.....	45180	44064	45129	47622	45052	44612	45684	48760	46969	46199	46897	49386	49672	49815	45973	45742	47206
% Chg Same Qtr Last Yr.....	-2.06	-1.26	4.46	-3.83	-0.28	1.24	1.23	2.39	4.26	3.56	2.65	1.28	5.75	7.83	1.02	-0.50	3.20
MANUFACTURING.....	53288	50255	51676	51249	50615	50846	50852	51414	51486	51268	52252	50170	52689	53229	51672	50890	51605
% Chg Same Qtr Last Yr.....	6.22	-1.59	4.19	-0.43	-5.02	1.18	-1.59	0.32	1.72	0.83	2.75	-2.42	2.34	3.83	1.83	-1.51	1.40
DURABLE GOODS.....	53801	49322	50848	49959	49263	49277	49527	49931	50474	50221	51352	49136	51051	51364	51262	49507	50494
% Chg Same Qtr Last Yr.....	10.13	-1.00	3.76	-2.19	-8.43	-0.09	-2.60	-0.06	2.46	1.92	3.68	-1.59	1.14	2.27	3.20	-3.43	2.00
NONDURABLE GOODS.....	52457	51785	53036	53378	52854	53456	53079	53945	53217	53056	53820	51982	55594	56527	52342	53192	53509
% Chg Same Qtr Last Yr.....	0.59	-2.26	4.98	2.48	0.76	3.23	0.08	1.06	0.69	-0.75	1.40	-3.64	4.47	6.54	-0.06	1.62	0.60
TRADE, TRANSPORTATION, UTILITIES...	38979	38487	38469	38416	38602	38370	37510	38925	38262	38506	39298	38999	39131	39138	38773	38224	38748
% Chg Same Qtr Last Yr.....	1.13	-0.55	2.13	-1.89	-0.97	-0.30	-2.49	1.32	-0.88	0.35	4.77	0.19	2.27	1.64	0.64	-1.41	1.37
WHOLESALE TRADE.....	58391	56984	61541	57278	58056	57634	57843	59347	58168	58938	60235	58850	59725	59131	58800	57703	59172
% Chg Same Qtr Last Yr.....	1.80	-0.36	8.62	-1.73	-0.57	1.14	-6.01	3.61	0.19	2.26	4.14	-0.84	2.68	0.33	2.48	-1.87	2.55
RETAIL TRADE.....	27109	26636	25778	26518	26245	26376	25418	26546	26099	26255	27142	26461	26647	26986	26727	26139	26510
% Chg Same Qtr Last Yr.....	1.82	-2.75	-2.54	-3.17	-3.19	-0.98	-1.40	0.11	-0.56	-0.46	6.79	-0.32	2.10	2.78	-0.75	-2.20	1.42
TRANSPORTATION & UTILITIES.....	48674	48688	47170	48170	48876	48108	47186	48659	48033	47892	48386	49287	49003	48479	48347	48085	48242
% Chg Same Qtr Last Yr.....	-1.22	1.07	0.75	-1.40	0.41	-1.19	0.03	1.01	-1.72	-0.45	2.54	1.29	2.02	1.23	-0.37	-0.54	0.33
INFORMATION.....	54425	55449	55942	53905	54646	54905	52932	56947	56566	56597	53456	57018	56909	58773	55114	54097	55891
% Chg Same Qtr Last Yr.....	0.37	2.96	3.66	-1.35	0.41	-0.98	-5.38	5.64	3.51	3.08	0.99	0.12	0.61	3.84	1.74	-1.85	3.32
FINANCIAL ACTIVITIES.....	64773	62827	64496	61642	61501	61126	62205	63905	62700	62454	63963	63729	64660	64744	63321	61619	63255
% Chg Same Qtr Last Yr.....	10.75	3.20	7.12	0.74	-5.05	-2.71	-3.55	3.67	1.95	2.17	2.83	-0.28	3.13	3.67	5.06	-2.69	2.66
PROFESSIONAL & BUSINESS SERVICES	47123	48785	49331	49718	48661	48549	46718	48376	47781	47545	46934	51501	52018	50679	48621	48412	47659
% Chg Same Qtr Last Yr.....	1.35	5.76	11.60	0.96	3.26	-0.48	-5.30	-2.70	-1.81	-2.07	0.46	6.46	8.87	6.59	5.38	-0.43	-1.55
EDUCATION & HEALTH SERVICES.....	42605	42975	42811	42581	42666	42978	42012	42982	42771	43038	42373	43798	43759	44501	42834	42559	42791
% Chg Same Qtr Last Yr.....	-1.76	-0.72	1.52	-0.84	0.14	0.01	-1.87	0.94	0.25	0.14	0.86	1.90	2.31	3.40	-0.14	-0.64	0.55
LEISURE & HOSPITALITY.....	19717	19672	20121	20342	19197	19245	19945	20544	19670	19619	20810	21199	21089	20653	20227	19682	20161
% Chg Same Qtr Last Yr.....	2.08	-1.63	1.57	-4.95	-2.64	-2.17	-0.87	1.00	2.47	1.94	4.34	3.19	7.21	5.27	1.14	-2.70	2.43
OTHER SERVICES.....	38018	37130	37470	37187	36508	37294	37921	39219	37997	38525	39681	40082	40132	40532	37500	37228	38855
% Chg Same Qtr Last Yr.....	4.39	0.85	0.97	-0.52	-3.97	0.44	1.21	5.46	4.08	3.30	4.64	2.20	5.62	5.21	0.81	-0.73	4.37
GOVERNMENT.....	39061	40783	38079	38805	38941	39804	38108	38707	39794	41047	38350	38975	39702	40934	39121	38914	39475
% Chg Same Qtr Last Yr.....	-1.34	1.15	-0.50	0.63	-0.31	-2.40	0.07	-0.25	2.19	3.12	0.64	0.69	-0.23	-0.28	-0.23	-0.53	1.44
FEDERAL, CIVILIAN.....	67383	66795	65888	65516	65431	64778	67683	69951	71162	72342	72587	74426	74425	75277	67023	65852	71511
% Chg Same Qtr Last Yr.....	-0.60	-1.14	-2.79	-3.69	-2.90	-3.02	2.72	6.77	8.76	11.68	7.25	6.40	4.59	4.06	-1.35	-1.75	8.59
STATE & LOCAL.....	35229	37162	34446	35292	35437	36403	34353	34715	35669	36967	34175	34606	35290	36451	35381	35371	35381
% Chg Same Qtr Last Yr.....	-1.54	1.67	0.16	1.75	0.59	-2.04	-0.27	-1.63	0.66	1.55	-0.52	-0.31	-1.06	-1.39	0.05	-0.03	0.03

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 12: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (2009 dollars)

January 2016

	Historical Data														Annual		
	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2012	2013	2014
TOTAL NONFARM.....	41978	41745	42345	41492	41477	41449	41474	41853	41816	41824	42351	42429	43281	43269	41968	41473	41961
% Chg Prev Qtr SAAR.....	1.69	-2.20	5.87	-7.81	-0.15	-0.27	0.24	3.71	-0.36	0.07	5.14	0.73	8.28	-0.11	1.59	-1.18	1.18
% Chg Same Qtr Last Yr.....	1.70	0.60	3.74	-0.74	-1.19	-0.71	-2.06	0.87	0.82	0.90	2.12	1.37	3.50	3.46	1.59	-1.18	1.18
NATURAL RESOURCES, MINING																	
AND CONSTRUCTION.....	45249	45214	45743	45709	45289	45705	46233	46842	47267	47299	47447	47468	50063	51066	45915	45734	47214
% Chg Prev Qtr SAAR.....	-17.31	-0.31	4.76	-0.30	-3.63	3.73	4.70	5.37	3.68	0.27	1.26	0.17	23.73	8.26	1.09	-0.39	3.24
% Chg Same Qtr Last Yr.....	-1.85	-1.16	4.35	-3.67	0.09	1.08	1.07	2.48	4.37	3.49	2.63	1.34	5.91	7.96	1.09	-0.39	3.24
MANUFACTURING.....	53296	50341	51782	51066	50623	50896	50965	51261	51478	51296	52377	50042	52672	53241	51667	50887	51603
% Chg Prev Qtr SAAR.....	16.96	-20.40	11.95	-5.42	-3.42	2.17	0.55	2.34	1.71	-1.41	8.70	-16.67	22.74	4.39	1.83	-1.51	1.41
% Chg Same Qtr Last Yr.....	6.24	-1.66	4.18	-0.36	-5.02	1.10	-1.58	0.38	1.69	0.79	2.77	-2.38	2.32	3.79	1.83	-1.51	1.41
DURABLE GOODS.....	53820	49385	50928	49812	49294	49288	49624	49811	50501	50190	51470	49035	51073	51311	51259	49504	50493
% Chg Prev Qtr SAAR.....	24.98	-29.11	13.10	-8.48	-4.10	-0.05	2.75	1.52	5.66	-2.44	10.59	-17.62	17.69	1.88	3.21	-3.42	2.00
% Chg Same Qtr Last Yr.....	10.19	-1.09	3.77	-2.14	-8.41	-0.20	-2.56	0.00	2.45	1.83	3.72	-1.56	1.13	2.23	3.21	-3.42	2.00
NONDURABLE GOODS.....	52448	51912	53185	53130	52823	53577	53221	53733	53147	53191	53957	51806	55504	56665	52336	53188	53507
% Chg Prev Qtr SAAR.....	5.10	-4.03	10.17	-0.41	-2.29	5.83	-2.63	3.91	-4.29	0.33	5.89	-15.02	31.76	8.63	-0.05	1.63	0.60
% Chg Same Qtr Last Yr.....	0.55	-2.28	4.94	2.57	0.72	3.21	0.07	1.13	0.61	-0.72	1.38	-3.59	4.43	6.53	-0.05	1.63	0.60
TRADE, TRANSPORTATION, UTILITIES.....	38870	38405	39147	37918	38480	38282	38188	38469	38137	38411	39848	38539	39120	39083	38768	38217	38716
% Chg Prev Qtr SAAR.....	2.29	-4.70	7.96	-11.98	6.07	-2.04	-0.98	2.97	-3.41	2.90	15.83	-12.50	6.17	-0.38	0.65	-1.42	1.31
% Chg Same Qtr Last Yr.....	1.10	-0.60	2.29	-1.90	-1.00	-0.32	-2.45	1.45	-0.89	0.34	4.35	0.18	2.58	1.75	0.65	-1.42	1.31
WHOLESALE TRADE.....	58505	57078	61693	56885	58199	57728	58000	58927	58310	59033	60332	58427	59820	59333	58788	57703	59151
% Chg Prev Qtr SAAR.....	4.40	-9.40	36.48	-27.72	9.57	-3.20	1.90	6.54	-4.12	5.05	9.10	-12.04	9.88	-3.22	2.50	-1.85	2.51
% Chg Same Qtr Last Yr.....	1.80	-0.42	8.70	-1.72	-0.52	1.14	-5.99	3.59	0.19	2.26	4.02	-0.85	2.59	0.51	2.50	-1.85	2.51
RETAIL TRADE.....	27020	26511	26391	26095	26133	26248	26040	26187	25985	26122	27638	26058	26636	26915	26719	26129	26483
% Chg Prev Qtr SAAR.....	0.99	-7.32	-1.80	-4.42	0.59	1.77	-3.13	2.28	-3.05	2.13	25.32	-20.98	9.18	4.25	-0.77	-2.21	1.36
% Chg Same Qtr Last Yr.....	1.77	-2.81	-2.27	-3.19	-3.28	-0.99	-1.33	0.35	-0.57	-0.48	6.14	-0.49	2.51	3.04	-0.77	-2.21	1.36
TRANSPORTATION & UTILITIES.....	48398	48700	47969	47606	48607	48108	47993	48091	47761	47881	49116	48883	48927	48343	48338	48078	48212
% Chg Prev Qtr SAAR.....	0.94	2.52	-5.87	-2.99	8.68	-4.05	-0.95	0.82	-2.72	1.01	10.72	-1.88	0.36	-4.69	-0.38	-0.54	0.28
% Chg Same Qtr Last Yr.....	-1.20	1.02	0.76	-1.40	0.43	-1.22	0.05	1.02	-1.74	-0.47	2.34	1.65	2.44	0.96	-0.38	-0.54	0.28
INFORMATION.....	54592	55233	56244	53741	54687	54698	53213	56947	56652	56425	53617	57061	57039	58274	55156	54085	55910
% Chg Prev Qtr SAAR.....	0.26	4.78	7.53	-16.65	7.23	0.08	-10.42	31.16	-2.05	-1.59	-18.47	28.28	-0.15	8.95	1.83	-1.94	3.38
% Chg Same Qtr Last Yr.....	0.52	2.95	3.97	-1.49	0.17	-0.97	-5.39	5.97	3.59	3.16	0.76	0.20	0.68	3.28	1.83	-1.94	3.38
FINANCIAL ACTIVITIES.....	64915	63010	64653	61178	61501	61317	62353	63479	62700	62615	64098	63490	64615	64863	63326	61587	63223
% Chg Prev Qtr SAAR.....	30.56	-11.23	10.84	-19.83	2.13	-1.19	6.93	7.42	-4.82	-0.54	9.81	-3.74	7.28	1.54	5.04	-2.75	2.66
% Chg Same Qtr Last Yr.....	10.54	3.18	7.20	0.74	-5.26	-2.69	-3.56	3.76	1.95	2.12	2.80	0.02	3.05	3.59	5.04	-2.75	2.66

(CONTINUED ON NEXT PAGE)

Table 12: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (2009 dollars)

January 2016

	Historical Data														Annual		
	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2012	2013	2014
PROFESSIONAL & BUSINESS SERVICES..	46989	48575	50369	48900	48675	48339	47725	47744	47777	47334	47630	50903	51918	50530	48591	48410	47621
% Chg Prev Qtr SAAR.....	-11.40	14.20	15.61	-11.17	-1.83	-2.73	-4.98	0.16	0.27	-3.65	2.52	30.45	8.22	-10.27	5.46	-0.37	-1.63
% Chg Same Qtr Last Yr.....	1.38	5.70	11.90	0.97	3.59	-0.49	-5.25	-2.36	-1.85	-2.08	-0.20	6.62	8.67	6.75	5.46	-0.37	-1.63
EDUCATION & HEALTH SERVICES.....	42493	42819	43131	42517	42598	42787	42345	42960	42700	42829	42749	43741	43698	44240	42826	42561	42809
% Chg Prev Qtr SAAR.....	-3.37	3.10	2.95	-5.58	0.77	1.78	-4.07	5.94	-2.40	1.21	-0.74	9.61	-0.39	5.05	-0.11	-0.62	0.58
% Chg Same Qtr Last Yr.....	-1.89	-0.64	1.62	-0.80	0.25	-0.08	-1.82	1.04	0.24	0.10	0.95	1.82	2.34	3.30	-0.11	-0.62	0.58
LEISURE & HOSPITALITY.....	20219	20198	19950	19483	19692	19747	19780	19725	20170	20123	20616	20395	21606	21124	20213	19675	20158
% Chg Prev Qtr SAAR.....	-5.10	-0.41	-4.81	-9.05	4.35	1.14	0.65	-1.11	9.35	-0.94	10.16	-4.22	25.95	-8.63	1.16	-2.66	2.45
% Chg Same Qtr Last Yr.....	1.97	-1.59	1.82	-4.89	-2.61	-2.23	-0.86	1.24	2.43	1.90	4.23	3.40	7.12	4.98	1.16	-2.66	2.45
OTHER SERVICES.....	38334	37308	37267	36820	36853	37494	37695	38800	38379	38732	39555	39675	40619	40596	37485	37216	38866
% Chg Prev Qtr SAAR.....	14.82	-10.28	-0.44	-4.71	0.36	7.13	2.16	12.25	-4.27	3.73	8.78	1.21	9.86	-0.22	0.77	-0.72	4.44
% Chg Same Qtr Last Yr.....	4.36	0.71	0.85	-0.57	-3.86	0.50	1.15	5.38	4.14	3.30	4.94	2.25	5.84	4.81	0.77	-0.72	4.44
GOVERNMENT.....	38842	39438	39025	39326	38701	38441	39092	39259	39541	39619	39217	39475	39444	39826	39090	38890	39409
% Chg Prev Qtr SAAR.....	-2.14	6.28	-4.13	3.13	-6.21	-2.66	6.95	1.72	2.91	0.79	-3.99	2.66	-0.32	3.93	-0.26	-0.51	1.33
% Chg Same Qtr Last Yr.....	-1.31	0.74	-0.28	0.70	-0.36	-2.53	0.17	-0.17	2.17	3.06	0.32	0.55	-0.25	0.52	-0.26	-0.51	1.33
FEDERAL, CIVILIAN.....	67880	66004	65714	65560	65874	63999	67364	69808	71894	71585	74153	74269	73296	75916	66962	65699	71860
% Chg Prev Qtr SAAR.....	-2.16	-10.60	-1.75	-0.94	1.93	-10.91	22.75	15.32	12.50	-1.71	15.14	0.63	-5.14	15.08	-1.71	-1.89	9.38
% Chg Same Qtr Last Yr.....	-1.05	-1.21	-3.43	-3.94	-2.96	-3.04	2.51	6.48	9.14	11.85	10.08	6.39	1.95	6.05	-1.71	-1.89	9.38
STATE & LOCAL.....	34971	35831	35429	35827	35159	35048	35378	35283	35366	35566	34952	35115	35100	35302	35351	35353	35292
% Chg Prev Qtr SAAR.....	-2.26	10.20	-4.41	4.57	-7.25	-1.26	3.81	-1.06	0.94	2.28	-6.73	1.88	-0.17	2.32	0.07	0.01	-0.17
% Chg Same Qtr Last Yr.....	-1.45	1.22	0.50	1.86	0.54	-2.18	-0.14	-1.52	0.59	1.48	-1.20	-0.48	-0.75	-0.74	0.07	0.01	-0.17

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 13: Tennessee Average Annual Wage and Salary Rate by Sector, Not Seasonally Adjusted (current dollars)**January 2016**

	Historical Data														Annual		
	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2012	2013	2014
TOTAL NONFARM.....	44406	44455	44724	44921	44434	44781	44324	45834	45564	45912	45869	46564	47258	47577	44544	44615	45795
% Chg Same Qtr Last Yr.....	3.52	2.24	5.42	0.74	0.06	0.73	-0.89	2.03	2.54	2.52	3.49	1.59	3.72	3.63	3.50	0.16	2.64
NATURAL RESOURCES, MINING																	
AND CONSTRUCTION.....	47839	46810	48200	51034	48333	48060	49388	52924	51251	50561	51268	53729	54336	54664	48780	49204	51501
% Chg Same Qtr Last Yr.....	-0.33	0.28	6.30	-2.37	1.03	2.67	2.47	3.70	6.04	5.20	3.81	1.52	6.02	8.12	2.94	0.87	4.67
MANUFACTURING.....	56424	53387	55192	54922	54301	54775	54975	55804	56180	56108	57123	54583	57637	58410	54834	54743	56304
% Chg Same Qtr Last Yr.....	8.10	-0.05	6.02	1.09	-3.76	2.60	-0.39	1.61	3.46	2.43	3.91	-2.19	2.59	4.10	3.76	-0.16	2.85
DURABLE GOODS.....	56967	52396	54307	53539	52852	53086	53543	54195	55076	54963	56139	53457	55845	56363	54398	53255	55093
% Chg Same Qtr Last Yr.....	12.08	0.55	5.58	-0.71	-7.22	1.32	-1.41	1.23	4.21	3.54	4.85	-1.36	1.40	2.55	5.16	-2.10	3.45
NONDURABLE GOODS.....	55545	55012	56645	57203	56704	57587	57383	58552	58069	58065	58837	56554	60814	62028	55547	57219	58381
% Chg Same Qtr Last Yr.....	2.37	-0.73	6.83	4.03	2.09	4.68	1.30	2.36	2.41	0.83	2.53	-3.41	4.73	6.83	1.85	3.01	2.03
TRADE, TRANSPORTATION, UTILITIES.....	41272	40886	41086	41169	41414	41335	40551	42249	41751	42141	42961	42428	42806	42948	41145	41117	42276
% Chg Same Qtr Last Yr.....	2.92	1.01	3.92	-0.40	0.34	1.10	-1.30	2.62	0.81	1.95	5.94	0.42	2.53	1.91	2.55	-0.07	2.82
WHOLESALE TRADE.....	61828	60535	65728	61382	62285	62087	62533	64415	63471	64502	65850	64026	65334	64887	62404	62072	64560
% Chg Same Qtr Last Yr.....	3.60	1.20	10.53	-0.23	0.74	2.56	-4.86	4.94	1.90	3.89	5.31	-0.60	2.93	0.60	4.44	-0.53	4.01
RETAIL TRADE.....	28705	28296	27532	28418	28156	28414	27478	28813	28478	28734	29672	28788	29150	29612	28361	28117	28924
% Chg Same Qtr Last Yr.....	3.63	-1.23	-0.82	-1.70	-1.91	0.42	-0.19	1.39	1.14	1.12	7.98	-0.09	2.36	3.06	1.12	-0.86	2.87
TRANSPORTATION & UTILITIES.....	51539	51723	50380	51622	52436	51825	51012	52814	52412	52413	52897	53622	53605	53198	51303	51724	52634
% Chg Same Qtr Last Yr.....	0.53	2.65	2.52	0.10	1.74	0.20	1.25	2.31	-0.05	1.13	3.70	1.53	2.27	1.50	1.53	0.82	1.76
INFORMATION.....	57628	58904	59749	57767	58626	59148	57223	61810	61723	61940	58439	62033	62253	64493	58490	58191	60978
% Chg Same Qtr Last Yr.....	2.14	4.57	5.48	0.15	1.73	0.41	-4.23	7.00	5.28	4.72	2.12	0.36	0.86	4.12	3.67	-0.51	4.79
FINANCIAL ACTIVITIES.....	68585	66742	68884	66060	65981	65850	67248	69362	68417	68350	69925	69333	70732	71046	67200	66285	69014
% Chg Same Qtr Last Yr.....	12.72	4.82	9.01	2.27	-3.80	-1.34	-2.37	5.00	3.69	3.80	3.98	-0.04	3.38	3.94	7.06	-1.36	4.12
PROFESSIONAL & BUSINESS SERVICES.....	49896	51826	52688	53281	52206	52301	50506	52508	52137	52034	51309	56030	56903	55612	51599	52073	51997
% Chg Same Qtr Last Yr.....	3.14	7.41	13.56	2.49	4.63	0.92	-4.14	-1.45	-0.13	-0.51	1.59	6.71	9.14	6.88	7.40	0.92	-0.15
EDUCATION & HEALTH SERVICES.....	45113	45653	45723	45632	45774	46299	45418	46652	46670	47102	46323	47650	47868	48832	45455	45781	46687
% Chg Same Qtr Last Yr.....	-0.02	0.83	3.30	0.66	1.46	1.41	-0.67	2.24	1.96	1.73	1.99	2.14	2.57	3.67	1.75	0.72	1.98
LEISURE & HOSPITALITY.....	20877	20898	21490	21799	20595	20732	21563	22299	21463	21471	22750	23063	23069	22663	21464	21172	21996
% Chg Same Qtr Last Yr.....	3.89	-0.09	3.36	-3.50	-1.35	-0.79	0.34	2.29	4.22	3.57	5.51	3.43	7.48	5.55	3.06	-1.36	3.89
OTHER SERVICES.....	40255	39444	40019	39852	39167	40177	40996	42568	41461	42162	43380	43608	43901	44477	39795	40048	42393
% Chg Same Qtr Last Yr.....	6.23	2.43	2.75	0.99	-2.70	1.86	2.44	6.82	5.85	4.94	5.81	2.44	5.89	5.49	2.73	0.64	5.86
GOVERNMENT.....	41360	43324	40670	41585	41777	42880	41198	42013	43422	44923	41925	42403	43431	44918	41515	41860	43071
% Chg Same Qtr Last Yr.....	0.41	2.73	1.25	2.16	1.01	-1.02	1.30	1.03	3.94	4.76	1.77	0.93	0.02	-0.01	1.66	0.83	2.89
FEDERAL, CIVILIAN.....	71349	70958	70371	70210	70197	69784	73171	75924	77650	79172	79354	80972	81414	82604	71122	70841	78025
% Chg Same Qtr Last Yr.....	1.16	0.41	-1.08	-2.23	-1.61	-1.65	3.98	8.14	10.62	13.45	8.45	6.65	4.85	4.33	0.52	-0.40	10.14
STATE & LOCAL.....	37302	39478	36790	37821	38018	39216	37138	37679	38921	40457	37360	37650	38604	39999	37546	38048	38604
% Chg Same Qtr Last Yr.....	0.21	3.27	1.92	3.29	1.92	-0.66	0.95	-0.37	2.38	3.16	0.60	-0.08	-0.81	-1.13	1.94	1.34	1.46

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 14: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (current dollars)

January 2016

	Historical Data														Annual		
	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2012	2013	2014
TOTAL NONFARM.....	44448	44347	45226	44466	44498	44652	44837	45427	45628	45772	46299	46160	47346	47481	44537	44613	45782
% Chg Prev Qtr SAAR.....	2.94	-0.91	8.17	-6.56	0.29	1.39	1.66	5.38	1.78	1.27	4.68	-1.19	10.68	1.14	3.52	0.17	2.62
% Chg Same Qtr Last Yr.....	3.50	2.18	5.56	0.77	0.11	0.69	-0.86	2.16	2.54	2.51	3.26	1.61	3.76	3.73	3.52	0.17	2.62
NATURAL RESOURCES, MINING & CONSTRUCTION...	47912	48032	48856	48985	48587	49237	49982	50842	51576	51765	51870	51642	54764	56036	48723	49198	51513
% Chg Prev Qtr SAAR.....	-16.30	1.01	7.04	1.06	-3.21	5.46	6.19	7.07	5.90	1.47	0.82	-1.74	26.46	9.62	3.01	0.97	4.71
% Chg Same Qtr Last Yr.....	-0.11	0.39	6.18	-2.21	1.41	2.51	2.30	3.79	6.15	5.13	3.78	1.57	6.18	8.25	3.01	0.97	4.71
MANUFACTURING.....	56433	53478	55305	54725	54310	54829	55098	55639	56172	56139	57260	54444	57619	58423	54829	54740	56302
% Chg Prev Qtr SAAR.....	18.39	-19.35	14.38	-4.13	-3.00	3.87	1.98	3.99	3.89	-0.24	8.23	-18.27	25.45	5.70	3.77	-0.16	2.85
% Chg Same Qtr Last Yr.....	8.12	-0.12	6.01	1.16	-3.76	2.53	-0.37	1.67	3.43	2.39	3.92	-2.15	2.58	4.07	3.77	-0.16	2.85
DURABLE GOODS.....	56988	52462	54394	53382	52884	53097	53647	54065	55106	54929	56268	53347	55869	56305	54394	53253	55092
% Chg Prev Qtr SAAR.....	26.51	-28.17	15.56	-7.24	-3.67	1.62	4.21	3.15	7.92	-1.28	10.11	-19.20	20.29	3.16	5.16	-2.10	3.45
% Chg Same Qtr Last Yr.....	12.14	0.45	5.60	-0.66	-7.20	1.21	-1.37	1.28	4.20	3.45	4.88	-1.33	1.39	2.50	5.16	-2.10	3.45
NONDURABLE GOODS.....	55534	55147	56803	56938	56671	57717	57536	58322	57993	58213	58987	56362	60716	62180	55542	57215	58379
% Chg Prev Qtr SAAR.....	6.39	-2.76	12.57	0.95	-1.86	7.59	-1.25	5.58	-2.24	1.53	5.43	-16.65	34.67	10.00	1.85	3.01	2.03
% Chg Same Qtr Last Yr.....	2.33	-0.75	6.79	4.13	2.05	4.66	1.29	2.43	2.33	0.86	2.52	-3.36	4.70	6.82	1.85	3.01	2.03
TRADE, TRANSPORTATION, UTILITIES.....	41157	40798	41810	40635	41283	41241	41285	41755	41614	42037	43563	41929	42794	42887	41142	41111	42242
% Chg Prev Qtr SAAR.....	3.54	-3.45	10.30	-10.78	6.53	-0.41	0.43	4.63	-1.34	4.13	15.32	-14.18	8.51	0.87	2.56	-0.08	2.75
% Chg Same Qtr Last Yr.....	2.89	0.95	4.09	-0.41	0.30	1.08	-1.26	2.76	0.80	1.93	5.52	0.42	2.84	2.02	2.56	-0.08	2.75
WHOLESALE TRADE.....	61948	60635	65891	60961	62438	62189	62703	63959	63626	64606	65956	63566	65438	65107	62393	62073	64537
% Chg Prev Qtr SAAR.....	5.68	-8.21	39.44	-26.73	10.05	-1.59	3.35	8.26	-2.07	6.31	8.62	-13.73	12.31	-2.00	4.45	-0.51	3.97
% Chg Same Qtr Last Yr.....	3.60	1.14	10.62	-0.22	0.79	2.56	-4.84	4.92	1.90	3.89	5.19	-0.62	2.85	0.78	4.45	-0.51	3.97
RETAIL TRADE.....	28610	28163	28187	27965	28037	28276	28151	28423	28354	28588	30215	28350	29138	29534	28353	28107	28895
% Chg Prev Qtr SAAR.....	2.22	-6.10	0.34	-3.12	1.03	3.46	-1.76	3.92	-0.97	3.35	24.78	-22.49	11.59	5.56	1.11	-0.87	2.80
% Chg Same Qtr Last Yr.....	3.57	-1.29	-0.55	-1.72	-2.00	0.40	-0.13	1.64	1.13	1.10	7.33	-0.26	2.77	3.31	1.11	-0.87	2.80
TRANSPORTATION & UTILITIES.....	51246	51735	51233	51018	52147	51825	51884	52198	52116	52401	53695	53182	53522	53048	51296	51719	52602
% Chg Prev Qtr SAAR.....	2.18	3.87	-3.83	-1.67	9.16	-2.45	0.45	2.45	-0.63	2.21	10.24	-3.76	2.58	-3.49	1.52	0.82	1.71
% Chg Same Qtr Last Yr.....	0.55	2.60	2.54	0.09	1.76	0.17	1.27	2.31	-0.06	1.11	3.49	1.89	2.70	1.23	1.52	0.82	1.71
INFORMATION.....	57804	58675	60071	57592	58670	58925	57527	61810	61817	61752	58615	62079	62396	63946	58535	58179	60999
% Chg Prev Qtr SAAR.....	1.49	6.16	9.86	-15.51	7.70	1.74	-9.15	33.27	0.04	-0.42	-18.82	25.82	2.06	10.31	3.77	-0.61	4.85
% Chg Same Qtr Last Yr.....	2.30	4.56	5.80	0.00	1.50	0.43	-4.23	7.32	5.36	4.80	1.89	0.44	0.94	3.55	3.77	-0.61	4.85
FINANCIAL ACTIVITIES.....	68735	66937	69052	65562	65981	66056	67409	68901	68417	68527	70073	69074	70683	71177	67208	66252	68979
% Chg Prev Qtr SAAR.....	32.16	-10.06	13.25	-18.74	2.58	0.46	8.45	9.15	-2.78	0.64	9.34	-5.58	9.65	2.82	7.04	-1.42	4.12
% Chg Same Qtr Last Yr.....	12.49	4.79	9.09	2.27	-4.01	-1.32	-2.38	5.09	3.69	3.74	3.95	0.25	3.31	3.87	7.04	-1.42	4.12

(CONTINUED ON NEXT PAGE)

Table 14: Tennessee Average Annual Wage and Salary Rate by Sector, Seasonally Adjusted (current dollars)

January 2016

	Historical Data															Annual		
	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2012	2013	2014	
PROFESSIONAL & BUSINESS SERVICES.....	49754	51602	53797	52404	52221	52075	51595	51821	52132	51803	52070	55380	56794	55448	51570	52074	51957	
% Chg Prev Qtr SAAR.....	-10.31	15.71	18.12	-9.96	-1.39	-1.11	-3.64	1.77	2.42	-2.50	2.08	27.95	10.61	-9.15	7.48	0.98	-0.22	
% Chg Same Qtr Last Yr.....	3.17	7.35	13.87	2.50	4.96	0.92	-4.09	-1.11	-0.17	-0.52	0.92	6.87	8.94	7.04	7.48	0.98	-0.22	
EDUCATION & HEALTH SERVICES.....	44994	45487	46065	45563	45701	46093	45778	46629	46593	46872	46734	47588	47802	48546	45448	45784	46707	
% Chg Prev Qtr SAAR.....	-2.19	4.46	5.18	-4.29	1.21	3.48	-2.71	7.65	-0.31	2.42	-1.17	7.51	1.81	6.37	1.78	0.74	2.02	
% Chg Same Qtr Last Yr.....	-0.15	0.92	3.41	0.71	1.57	1.33	-0.62	2.34	1.95	1.69	2.09	2.06	2.59	3.57	1.78	0.74	2.02	
LEISURE & HOSPITALITY.....	21409	21457	21308	20879	21126	21274	21383	21409	22009	22023	22538	22189	23635	23180	21450	21165	21995	
% Chg Prev Qtr SAAR.....	-3.94	0.90	-2.75	-7.81	4.81	2.82	2.08	0.48	11.69	0.25	9.69	-6.05	28.74	-7.48	3.07	-1.32	3.92	
% Chg Same Qtr Last Yr.....	3.78	-0.05	3.61	-3.45	-1.32	-0.85	0.35	2.54	4.18	3.52	5.40	3.64	7.39	5.26	3.07	-1.32	3.92	
OTHER SERVICES.....	40590	39633	39802	39459	39538	40391	40751	42113	41878	42388	43243	43164	44433	44547	39779	40035	42406	
% Chg Prev Qtr SAAR.....	16.23	-9.10	1.72	-3.41	0.81	8.92	3.61	14.06	-2.22	4.97	8.31	-0.72	12.29	1.03	2.69	0.64	5.92	
% Chg Same Qtr Last Yr.....	6.21	2.29	2.63	0.94	-2.59	1.91	2.38	6.73	5.92	4.94	6.11	2.49	6.10	5.09	2.69	0.64	5.92	
GOVERNMENT.....	41128	41896	41680	42145	41520	41411	42261	42612	43146	43359	42873	42947	43148	43702	41483	41834	42997	
% Chg Prev Qtr SAAR.....	-0.94	7.68	-2.05	4.53	-5.80	-1.04	8.47	3.36	5.11	1.99	-4.41	0.69	1.89	5.23	1.63	0.85	2.78	
% Chg Same Qtr Last Yr.....	0.43	2.32	1.48	2.23	0.95	-1.16	1.39	1.11	3.92	4.70	1.45	0.79	0.00	0.79	1.63	0.85	2.78	
FEDERAL, CIVILIAN.....	71875	70117	70185	70258	70672	68945	72826	75769	78449	78343	81065	80801	80179	83305	71056	70675	78407	
% Chg Prev Qtr SAAR.....	-0.96	-9.43	0.39	0.41	2.38	-9.42	24.49	17.17	14.91	-0.54	14.64	-1.30	-3.04	16.53	0.15	-0.54	10.94	
% Chg Same Qtr Last Yr.....	0.70	0.33	-1.73	-2.49	-1.67	-1.67	3.76	7.85	11.00	13.63	11.31	6.64	2.21	6.33	0.15	-0.54	10.94	
STATE & LOCAL.....	37029	38064	37839	38394	37720	37757	38246	38297	38591	38924	38210	38203	38396	38738	37515	38029	38505	
% Chg Prev Qtr SAAR.....	-1.06	11.66	-2.34	5.99	-6.84	0.39	5.28	0.53	3.11	3.50	-7.14	-0.07	2.03	3.61	1.96	1.37	1.25	
% Chg Same Qtr Last Yr.....	0.30	2.80	2.27	3.41	1.87	-0.81	1.07	-0.25	2.31	3.09	-0.09	-0.24	-0.50	-0.48	1.96	1.37	1.25	

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 15: Tennessee Civilian Labor Force and Unemployment Rate, Not Seasonally Adjusted**January 2016**

	Historical Data														Annual		
	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2012	2013	2014
CIVILIAN LABOR FORCE (THOUS).....	3119	3115	3089	3110	3086	3041	3014	3025	3017	2990	3024	3105	3066	3064	3111	3082	3011
% Chg Same Qtr Last Yr.....	-0.63	-0.39	-0.05	-0.25	-1.06	-2.37	-2.45	-2.72	-2.22	-1.69	0.33	2.64	1.61	2.47	-0.62	-0.93	-2.27
EMPLOYED PERSONS (THOUS).....	2871	2887	2833	2862	2844	2830	2807	2828	2805	2803	2829	2926	2883	2899	2868	2842	2811
% Chg Same Qtr Last Yr.....	0.54	0.29	-0.22	-0.44	-0.94	-1.99	-0.91	-1.16	-1.38	-0.96	0.78	3.46	2.78	3.45	0.64	-0.90	-1.10
UNEMPLOYED PERSONS (THOUS).....	247	228	257	248	242	211	207	197	212	187	195	179	183	164	243	239	201
% Chg Same Qtr Last Yr.....	-12.41	-8.19	1.89	1.98	-2.36	-7.24	-19.44	-20.70	-12.12	-11.50	-5.84	-9.03	-13.89	-12.10	-13.52	-1.31	-16.17
PARTICIPATION RATE (PERCENT).....	60.8	60.5	59.9	60.1	59.4	58.4	57.7	57.8	57.4	56.7	57.2	58.6	57.7	57.5	60.7	59.5	57.4
% Chg Same Qtr Last Yr.....	-1.81	-1.56	-1.23	-1.42	-2.21	-3.51	-3.59	-3.87	-3.38	-2.86	-0.86	1.43	0.41	1.26	-1.81	-2.09	-3.43
UNEMPLOYMENT RATE (PERCENT).....	7.9	7.3	8.3	8.0	7.8	6.9	6.9	6.5	7.0	6.3	6.4	5.8	6.0	5.4	7.8	7.8	6.7

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 16: Tennessee Civilian Labor Force and Unemployment Rate, Seasonally Adjusted

January 2016

	Historical Data														Annual		
	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2015:4	2012	2013	2014
CIVILIAN LABOR FORCE (THOUS).....	3092	3091	3082	3067	3045	3020	3007	2997	2987	2983	3037	3096	3058	3062	3091	3054	2993
% Chg Prev Qtr SAAR.....	0.49	-0.10	-1.18	-1.88	-2.89	-3.23	-1.72	-1.36	-1.32	-0.49	7.43	7.94	-4.74	0.42	-0.88	-1.20	-1.97
% Chg Same Qtr Last Yr.....	-0.87	-0.65	-0.32	-0.67	-1.51	-2.30	-2.43	-2.30	-1.91	-1.22	1.00	3.30	2.39	2.63	-0.88	-1.20	-1.97
EMPLOYED PERSONS (THOUS).....	2852	2852	2838	2826	2812	2805	2811	2802	2789	2786	2839	2915	2884	2891	2850	2820	2797
% Chg Prev Qtr SAAR.....	0.83	0.06	-1.94	-1.67	-2.00	-0.96	0.78	-1.28	-1.80	-0.39	7.83	11.14	-4.22	0.97	0.28	-1.03	-0.84
% Chg Same Qtr Last Yr.....	0.25	-0.01	-0.38	-0.69	-1.39	-1.65	-0.97	-0.87	-0.82	-0.68	1.02	4.05	3.40	3.75	0.28	-1.03	-0.84
UNEMPLOYED PERSONS (THOUS).....	240	239	244	241	233	215	196	195	198	197	198	181	174	171	241	233	197
% Chg Prev Qtr SAAR.....	-3.47	-2.02	8.34	-4.25	-12.84	-27.66	-30.21	-2.48	5.69	-1.91	1.99	-30.73	-12.79	-8.29	-12.79	-3.27	-15.69
% Chg Same Qtr Last Yr.....	-12.50	-7.78	0.35	-0.48	-2.98	-10.07	-19.43	-19.06	-15.06	-8.35	0.77	-7.49	-11.83	-13.30	-12.79	-3.27	-15.69
PARTICIPATION RATE (PERCENT).....	60.3	60.1	59.7	59.3	58.7	58.0	57.6	57.2	56.9	56.6	57.5	58.4	57.5	57.4	60.3	58.9	57.1
% Chg Prev Qtr SAAR.....	-0.69	-1.27	-2.34	-3.02	-4.02	-4.36	-2.89	-2.53	-2.49	-1.67	6.16	6.66	-5.87	-0.77	-2.07	-2.36	-3.13
% Chg Same Qtr Last Yr.....	-2.05	-1.83	-1.49	-1.84	-2.67	-3.44	-3.57	-3.45	-3.07	-2.39	-0.20	2.08	1.18	1.41	-2.07	-2.36	-3.13
UNEMPLOYMENT RATE (PERCENT).....	7.8	7.7	7.9	7.9	7.7	7.1	6.5	6.5	6.6	6.6	6.5	5.8	5.7	5.6	7.8	7.6	6.6

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 17: Tennessee Taxable Sales, Not Seasonally Adjusted (millions of 2009 dollars)

January 2016

	Historical Data														Annual		
	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2012	2013	2014
TOTAL TAXABLE SALES.....	23376	22622	24312	21915	23858	23108	24973	22314	24190	24183	26431	23004	26057	25942	92342	93853	97118
% Chg Same Qtr Last Yr.....	2.74	0.72	1.15	-0.53	2.06	2.15	2.72	1.82	1.39	4.65	5.84	3.09	7.72	7.27	2.70	1.64	3.48
AUTO DEALERS.....	2222	2269	2037	2241	2309	2413	2180	2340	2426	2542	2375	2536	2750	2870	8745	9144	9683
% Chg Same Qtr Last Yr.....	7.26	9.30	3.25	1.08	3.93	6.35	7.01	4.44	5.04	5.34	8.92	8.35	13.37	12.91	8.16	4.55	5.90
PURCHASES FROM MANUFACTURERS.....	974	929	1119	806	989	968	1126	818	1007	1036	1247	884	1100	1136	3826	3889	4109
% Chg Same Qtr Last Yr.....	-2.00	-7.74	7.77	0.39	1.57	4.18	0.57	1.53	1.79	6.96	10.83	8.03	9.19	9.67	-0.78	1.66	5.64
MISC DURABLE GOODS.....	4078	3741	3895	3491	4181	3933	4027	3508	4244	4120	4231	3532	4547	4346	15404	15632	16103
% Chg Same Qtr Last Yr.....	2.53	-2.95	0.59	-5.40	2.52	5.14	3.39	0.47	1.51	4.75	5.07	0.69	7.15	5.49	2.87	1.48	3.01
EATING AND DRINKING PLACES.....	2460	2422	2385	2352	2552	2480	2448	2426	2607	2616	2611	2552	2833	2808	9610	9833	10260
% Chg Same Qtr Last Yr.....	5.51	3.52	3.73	0.41	3.74	2.40	2.64	3.14	2.16	5.46	6.66	5.19	8.68	7.36	5.27	2.32	4.35
FOOD STORES.....	2253	2278	2459	2251	2326	2289	2504	2211	2329	2367	2584	2311	2420	2457	9131	9369	9490
% Chg Same Qtr Last Yr.....	2.98	3.63	1.68	5.11	3.24	0.48	1.84	-1.79	0.15	3.39	3.20	4.52	3.91	3.83	3.14	2.61	1.29
LIQUOR STORES.....	183	174	219	178	184	187	230	186	193	195	247	200	211	210	747	778	821
% Chg Same Qtr Last Yr.....	9.56	4.99	4.23	3.52	0.57	7.28	4.94	4.62	5.32	4.02	7.47	7.36	9.22	8.12	6.78	4.10	5.48
HOTELS AND MOTELS.....	638	627	582	502	630	626	600	534	713	730	670	575	801	832	2343	2358	2647
% Chg Same Qtr Last Yr.....	4.87	0.08	2.89	1.30	-1.28	-0.22	3.11	6.27	13.18	16.69	11.74	7.69	12.38	13.97	4.44	0.64	12.27
OTHER RETAIL AND SERVICE.....	7071	6790	7857	6703	7175	6877	8063	6913	7332	7137	8542	7014	7789	7708	28411	28818	29923
% Chg Same Qtr Last Yr.....	3.90	1.83	0.81	0.15	1.46	1.28	2.63	3.14	2.19	3.77	5.93	1.46	6.24	8.01	2.96	1.43	3.84
MISC NONDURABLE GOODS.....	1960	1872	2221	1893	1994	1910	2284	1889	2045	1984	2379	1916	2134	2098	7934	8082	8297
% Chg Same Qtr Last Yr.....	3.58	2.00	1.88	0.62	1.72	2.04	2.86	-0.22	2.53	3.84	4.17	1.42	4.37	5.75	3.46	1.86	2.66
TRANSPORTATION, COMMUNICATION.....	1536	1519	1539	1498	1519	1424	1510	1489	1295	1458	1544	1485	1472	1476	6190	5951	5786
% Chg Same Qtr Last Yr.....	-10.46	-10.07	-8.72	-6.15	-1.14	-6.24	-1.84	-0.57	-14.73	2.36	2.20	-0.27	13.65	1.21	-9.14	-3.85	-2.78
PER CAPITA (\$).....	3624	3498	3750	3371	3660	3536	3811	3396	3672	3661	3991	3465	3914	3887	14297	14378	14721
% Chg Same Qtr Last Yr.....	1.64	-0.35	0.08	-1.59	0.99	1.07	1.63	0.75	0.33	3.55	4.73	2.01	6.60	6.16	1.61	0.56	2.39

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 18: Tennessee Taxable Sales, Seasonally Adjusted (millions of 2009 dollars)**January 2016**

	Historical Data														Annual		
	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2012	2013	2014
TOTAL TAXABLE SALES.....	22989	22878	23007	23361	23472	23389	23615	23780	23807	24465	24985	24523	25642	26228	92389	93837	97036
% Chg Prev Qtr SAAR.....	-8.65	-1.93	2.28	6.30	1.91	-1.41	3.94	2.81	0.45	11.54	8.76	-7.19	19.55	9.46	2.77	1.57	3.41
% Chg Same Qtr Last Yr.....	2.73	0.93	1.02	-0.66	2.10	2.23	2.65	1.79	1.43	4.60	5.80	3.12	7.71	7.21	2.77	1.57	3.41
AUTO DEALERS.....	2155	2180	2194	2233	2252	2321	2337	2331	2375	2441	2541	2526	2697	2754	8743	9143	9689
% Chg Prev Qtr SAAR.....	-10.37	4.61	2.64	7.43	3.45	12.64	2.79	-0.91	7.80	11.57	17.42	-2.40	29.95	8.67	8.02	4.57	5.98
% Chg Same Qtr Last Yr.....	7.84	9.76	2.49	0.84	4.52	6.47	6.51	4.38	5.46	5.21	8.77	8.35	13.53	12.79	8.02	4.57	5.98
PURCHASES FROM MANUFACTURERS....	952	919	995	957	969	964	988	977	990	1034	1088	1059	1081	1135	3813	3878	4089
% Chg Prev Qtr SAAR.....	1.85	-12.84	37.21	-14.50	5.22	-2.11	10.52	-4.39	5.12	18.96	22.91	-10.17	8.58	21.27	-0.94	1.70	5.42
% Chg Same Qtr Last Yr.....	-1.78	-7.20	6.40	1.02	1.84	4.84	-0.68	2.14	2.11	7.22	10.10	8.40	9.28	9.81	-0.94	1.70	5.42
MISC DURABLE GOODS.....	3813	3711	3797	3892	3908	3908	3918	3914	3968	4094	4112	3945	4252	4317	15433	15626	16089
% Chg Prev Qtr SAAR.....	-26.03	-10.23	9.62	10.34	1.67	-0.03	1.06	-0.40	5.65	13.28	1.81	-15.31	34.98	6.21	3.15	1.26	2.96
% Chg Same Qtr Last Yr.....	2.42	-2.64	0.29	-5.33	2.50	5.30	3.18	0.57	1.54	4.76	4.96	0.79	7.15	5.44	3.15	1.26	2.96
EATING AND DRINKING PLACES.....	2385	2392	2412	2433	2470	2455	2474	2510	2523	2589	2638	2642	2741	2779	9611	9832	10259
% Chg Prev Qtr SAAR.....	-5.98	1.22	3.43	3.51	6.11	-2.41	3.21	5.91	2.08	10.87	7.82	0.59	15.86	5.72	5.29	2.29	4.35
% Chg Same Qtr Last Yr.....	5.33	3.74	3.66	0.47	3.55	2.61	2.56	3.15	2.15	5.46	6.62	5.26	8.64	7.36	5.29	2.29	4.35
FOOD STORES.....	2272	2298	2290	2382	2347	2312	2332	2336	2352	2392	2406	2440	2445	2483	9131	9373	9487
% Chg Prev Qtr SAAR.....	0.24	4.56	-1.37	17.13	-5.73	-5.91	3.47	0.81	2.72	6.89	2.44	5.77	0.82	6.40	3.19	2.65	1.21
% Chg Same Qtr Last Yr.....	2.96	4.00	1.57	4.90	3.30	0.61	1.82	-1.92	0.20	3.45	3.19	4.44	3.95	3.83	3.19	2.65	1.21
LIQUOR STORES.....	189	185	188	191	190	199	197	200	200	207	212	215	219	223	747	778	819
% Chg Prev Qtr SAAR.....	8.56	-7.12	5.65	7.40	-2.56	19.65	-3.06	5.64	0.96	12.90	10.89	4.86	8.75	7.79	6.93	4.06	5.36
% Chg Same Qtr Last Yr.....	9.63	4.91	4.29	3.42	0.66	7.24	4.96	4.53	5.46	3.94	7.49	7.30	9.31	8.05	6.93	4.06	5.36
HOTELS AND MOTELS.....	588	581	587	595	580	580	606	632	656	677	678	681	737	771	2345	2361	2642
% Chg Prev Qtr SAAR.....	-0.92	-5.09	4.57	5.39	-9.80	0.55	18.65	18.09	16.47	13.18	0.52	1.88	37.30	19.59	4.74	0.66	11.91
% Chg Same Qtr Last Yr.....	4.47	0.46	3.23	0.90	-1.44	-0.01	3.20	6.17	13.18	16.58	11.84	7.79	12.32	13.88	4.74	0.66	11.91
OTHER RETAIL AND SERVICE.....	7122	7095	7063	7148	7217	7192	7262	7360	7373	7464	7694	7468	7832	8060	28444	28818	29891
% Chg Prev Qtr SAAR.....	-2.32	-1.53	-1.77	4.88	3.92	-1.35	3.93	5.50	0.74	5.02	12.94	-11.25	20.96	12.16	3.02	1.32	3.72
% Chg Same Qtr Last Yr.....	3.71	1.95	1.23	-0.23	1.33	1.37	2.81	2.97	2.17	3.78	5.96	1.48	6.23	7.99	3.02	1.32	3.72
MISC NONDURABLE GOODS.....	1982	1977	1967	2026	2014	2015	2026	2023	2065	2090	2112	2051	2155	2209	7939	8081	8289
% Chg Prev Qtr SAAR.....	-6.09	-0.97	-1.91	12.52	-2.41	0.20	2.21	-0.66	8.57	4.98	4.29	-10.99	21.73	10.46	3.51	1.79	2.57
% Chg Same Qtr Last Yr.....	3.29	2.00	2.04	0.65	1.63	1.92	2.98	-0.18	2.52	3.72	4.24	1.42	4.36	5.70	3.51	1.79	2.57
TRANSPORTATION, COMMUNICATION.....	1532	1540	1513	1503	1524	1443	1476	1497	1304	1479	1502	1495	1483	1497	6182	5946	5782
% Chg Prev Qtr SAAR.....	-15.37	2.07	-6.82	-2.55	5.82	-19.69	9.31	5.91	-42.47	65.49	6.53	-1.89	-3.32	4.06	-9.13	-3.81	-2.77
% Chg Same Qtr Last Yr.....	-9.72	-9.97	-9.70	-5.89	-0.49	-6.28	-2.46	-0.41	-14.48	2.46	1.80	-0.13	13.72	1.26	-9.13	-3.81	-2.77
PER CAPITA (\$).....	3565	3538	3548	3593	3601	3579	3604	3619	3614	3704	3773	3693	3852	3930	14306	14377	14710
% Chg Prev Qtr SAAR.....	-9.62	-2.97	1.20	5.18	0.83	-2.45	2.85	1.74	-0.60	10.37	7.63	-8.16	18.31	8.33	1.68	0.49	2.32
% Chg Same Qtr Last Yr.....	1.63	-0.14	-0.05	-1.71	1.02	1.15	1.56	0.72	0.36	3.51	4.69	2.05	6.59	6.09	1.68	0.49	2.32

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 19: Tennessee Taxable Sales, Not Seasonally Adjusted (millions of current dollars)

January 2016

	Historical Data														Annual		
	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2012	2013	2014
TOTAL TAXABLE SALES.....	24751	24032	25967	23485	25596	24894	26997	24220	26396	26466	28894	25027	28505	28466	98007	100972	#####
% Chg Same Qtr Last Yr.....	4.56	2.30	2.93	0.98	3.41	3.59	3.97	3.13	3.12	6.32	7.03	3.33	7.99	7.56	4.62	3.03	4.96
AUTO DEALERS.....	2353	2411	2176	2401	2477	2600	2357	2540	2647	2782	2596	2759	3008	3150	9279	9836	10565
% Chg Same Qtr Last Yr.....	9.16	11.02	5.07	2.62	5.30	7.85	8.32	5.78	6.84	7.01	10.14	8.61	13.65	13.21	10.19	5.99	7.42
PURCHASES FROM MANUFACTURERS.....	1031	987	1195	864	1061	1043	1217	888	1099	1134	1364	962	1203	1246	4062	4185	4484
% Chg Same Qtr Last Yr.....	-0.27	-6.29	9.67	1.92	2.91	5.65	1.79	2.83	3.53	8.66	12.07	8.28	9.46	9.96	1.08	3.04	7.15
MISC DURABLE GOODS.....	4318	3974	4160	3741	4485	4237	4353	3807	4631	4509	4626	3843	4974	4769	16348	16817	17572
% Chg Same Qtr Last Yr.....	4.34	-1.43	2.36	-3.97	3.87	6.62	4.65	1.76	3.25	6.42	6.25	0.93	7.42	5.77	4.77	2.87	4.49
EATING AND DRINKING PLACES.....	2605	2573	2548	2521	2738	2672	2647	2633	2845	2863	2855	2776	3099	3082	10198	10577	11195
% Chg Same Qtr Last Yr.....	7.38	5.14	5.56	1.93	5.11	3.84	3.90	4.46	3.90	7.14	7.86	5.44	8.95	7.65	7.24	3.72	5.84
FOOD STORES.....	2385	2420	2626	2412	2495	2466	2707	2399	2541	2590	2825	2514	2647	2696	9692	10080	10356
% Chg Same Qtr Last Yr.....	4.80	5.25	3.47	6.71	4.60	1.90	3.08	-0.53	1.86	5.04	4.35	4.77	4.17	4.11	5.08	4.01	2.74
LIQUOR STORES.....	193	185	234	190	197	202	248	202	211	213	270	217	231	231	793	837	896
% Chg Same Qtr Last Yr.....	11.50	6.64	6.07	5.09	1.90	8.80	6.22	5.96	7.12	5.67	8.68	7.61	9.49	8.41	8.77	5.51	6.97
HOTELS AND MOTELS.....	675	666	621	538	676	674	649	580	778	799	733	626	876	913	2486	2537	2889
% Chg Same Qtr Last Yr.....	6.73	1.65	4.70	2.84	0.02	1.19	4.37	7.63	15.11	18.55	13.00	7.94	12.66	14.28	6.36	2.01	13.90
OTHER RETAIL AND SERVICE.....	7488	7214	8392	7183	7697	7409	8717	7503	8000	7811	9338	7631	8521	8459	30158	31006	32652
% Chg Same Qtr Last Yr.....	5.74	3.43	2.59	1.67	2.80	2.70	3.88	4.46	3.93	5.42	7.12	1.69	6.51	8.30	4.89	2.81	5.31
MISC NONDURABLE GOODS.....	2076	1989	2372	2029	2139	2058	2469	2050	2231	2171	2601	2084	2334	2302	8422	8695	9053
% Chg Same Qtr Last Yr.....	5.41	3.60	3.68	2.15	3.06	3.48	4.12	1.06	4.29	5.49	5.34	1.66	4.63	6.03	5.40	3.24	4.12
TRANSPORTATION, COMMUNICATION.....	1627	1614	1643	1605	1630	1534	1633	1617	1413	1596	1687	1616	1610	1619	6569	6402	6313
% Chg Same Qtr Last Yr.....	-8.87	-8.66	-7.11	-4.72	0.17	-4.92	-0.64	0.71	-13.28	3.99	3.35	-0.04	13.94	1.48	-7.41	-2.54	-1.39
PER CAPITA (\$)	3838	3716	4005	3612	3927	3809	4120	3686	4007	4007	4363	3769	4282	4265	15174	15468	16063
% Chg Same Qtr Last Yr.....	3.44	1.21	1.84	-0.09	2.32	2.49	2.87	2.04	2.04	5.20	5.91	2.25	6.87	6.44	3.51	1.93	3.85

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 20: Tennessee Taxable Sales, Seasonally Adjusted (millions of current dollars)

January 2016

	Historical Data														Annual		
	2012:2	2012:3	2012:4	2013:1	2013:2	2013:3	2013:4	2014:1	2014:2	2014:3	2014:4	2015:1	2015:2	2015:3	2012	2013	2014
TOTAL TAXABLE SALES.....	24342	24303	24572	25035	25181	25196	25530	25811	25977	26775	27314	26679	28050	28781	98041	100943	105877
% Chg Prev Qtr SAAR.....	-7.53	-0.64	4.50	7.75	2.36	0.23	5.41	4.47	2.60	12.87	8.29	-8.97	22.19	10.84	4.70	2.96	4.89
% Chg Same Qtr Last Yr.....	4.55	2.51	2.80	0.85	3.45	3.67	3.90	3.10	3.16	6.27	6.99	3.37	7.98	7.49	4.70	2.96	4.89
AUTO DEALERS.....	2282	2315	2343	2394	2417	2500	2526	2530	2592	2672	2778	2748	2950	3022	9279	9836	10572
% Chg Prev Qtr SAAR.....	-9.27	5.99	4.87	8.90	3.91	14.51	4.25	0.69	10.11	12.90	16.91	-4.27	32.82	10.03	10.05	6.01	7.49
% Chg Same Qtr Last Yr.....	9.75	11.48	4.29	2.37	5.90	7.97	7.81	5.72	7.26	6.88	9.99	8.61	13.82	13.09	10.05	6.01	7.49
PURCHASES FROM MANUFACTURERS....	1008	977	1063	1025	1040	1038	1069	1061	1080	1131	1190	1153	1183	1245	4047	4172	4461
% Chg Prev Qtr SAAR.....	3.10	-11.69	40.19	-13.34	5.68	-0.48	12.09	-2.85	7.37	20.38	22.37	-11.89	10.98	22.79	0.94	3.09	6.93
% Chg Same Qtr Last Yr.....	-0.04	-5.75	8.28	2.55	3.19	6.32	0.54	3.45	3.86	8.92	11.34	8.65	9.55	10.10	0.94	3.09	6.93
MISC DURABLE GOODS.....	4037	3943	4056	4171	4193	4210	4236	4249	4330	4481	4496	4292	4652	4737	16375	16810	17555
% Chg Prev Qtr SAAR.....	-25.13	-9.04	12.00	11.84	2.12	1.64	2.49	1.20	7.91	14.63	1.36	-16.93	37.96	7.54	5.08	2.65	4.44
% Chg Same Qtr Last Yr.....	4.23	-1.12	2.06	-3.89	3.86	6.78	4.44	1.86	3.28	6.43	6.14	1.02	7.42	5.72	5.08	2.65	4.44
EATING AND DRINKING PLACES.....	2525	2541	2577	2608	2649	2644	2675	2724	2753	2833	2884	2874	2998	3050	10200	10576	11194
% Chg Prev Qtr SAAR.....	-4.83	2.55	5.68	4.92	6.58	-0.79	4.67	7.62	4.27	12.19	7.36	-1.34	18.42	7.05	7.28	3.69	5.84
% Chg Same Qtr Last Yr.....	7.20	5.36	5.48	1.99	4.92	4.06	3.81	4.47	3.90	7.14	7.82	5.51	8.92	7.65	7.28	3.69	5.84
FOOD STORES.....	2406	2441	2446	2553	2518	2491	2521	2536	2567	2618	2631	2655	2675	2725	9690	10083	10351
% Chg Prev Qtr SAAR.....	1.47	5.94	0.77	18.73	-5.31	-4.34	4.94	2.43	4.93	8.17	2.00	3.75	3.05	7.74	5.14	4.05	2.66
% Chg Same Qtr Last Yr.....	4.78	5.62	3.35	6.49	4.67	2.03	3.07	-0.67	1.92	5.10	4.35	4.69	4.21	4.11	5.14	4.05	2.66
LIQUOR STORES.....	200	197	201	205	204	214	213	217	219	226	232	233	240	245	793	836	894
% Chg Prev Qtr SAAR.....	9.89	-5.90	7.94	8.86	-2.13	21.64	-1.69	7.34	3.12	14.24	10.41	2.86	11.15	9.14	8.94	5.49	6.86
% Chg Same Qtr Last Yr.....	11.57	6.56	6.13	4.99	1.99	8.75	6.24	5.87	7.26	5.59	8.70	7.55	9.58	8.34	8.94	5.49	6.86
HOTELS AND MOTELS.....	623	617	627	637	622	625	655	685	716	741	741	741	806	846	2489	2540	2883
% Chg Prev Qtr SAAR.....	0.29	-3.84	6.84	6.83	-9.40	2.22	20.33	19.99	18.96	14.53	0.09	-0.07	40.33	21.10	6.70	2.04	13.51
% Chg Same Qtr Last Yr.....	6.32	2.03	5.05	2.43	-0.14	1.40	4.46	7.53	15.11	18.43	13.10	8.05	12.60	14.18	6.70	2.04	13.51
OTHER RETAIL AND SERVICE.....	7541	7537	7544	7660	7742	7748	7851	7988	8045	8169	8412	8125	8568	8845	30184	31000	32614
% Chg Prev Qtr SAAR.....	-1.12	-0.23	0.36	6.30	4.38	0.30	5.40	7.19	2.90	6.27	12.45	-12.95	23.64	13.57	4.96	2.70	5.20
% Chg Same Qtr Last Yr.....	5.55	3.55	3.02	1.28	2.67	2.80	4.07	4.29	3.91	5.43	7.15	1.72	6.49	8.28	4.96	2.70	5.20
MISC NONDURABLE GOODS.....	2098	2100	2101	2171	2161	2171	2190	2195	2253	2287	2309	2232	2357	2424	8425	8693	9044
% Chg Prev Qtr SAAR.....	-4.94	0.34	0.22	14.05	-1.98	1.87	3.66	0.94	10.90	6.23	3.84	-12.69	24.42	11.85	5.46	3.18	4.04
% Chg Same Qtr Last Yr.....	5.12	3.60	3.84	2.18	2.97	3.36	4.24	1.10	4.27	5.37	5.41	1.66	4.63	5.98	5.46	3.18	4.04
TRANSPORTATION, COMMUNICATION....	1622	1636	1616	1611	1636	1555	1595	1625	1423	1618	1642	1627	1622	1643	6560	6396	6308
% Chg Prev Qtr SAAR.....	-14.33	3.41	-4.80	-1.22	6.28	-18.35	10.86	7.62	-41.24	67.46	6.06	-3.77	-1.18	5.37	-7.42	-2.49	-1.38
% Chg Same Qtr Last Yr.....	-8.12	-8.57	-8.11	-4.46	0.83	-4.96	-1.27	0.87	-13.02	4.09	2.95	0.11	14.00	1.53	-7.42	-2.49	-1.38
PER CAPITA (\$).....	3774	3758	3790	3851	3863	3855	3896	3928	3943	4054	4125	4018	4214	4312	15181	15465	16050
% Chg Prev Qtr SAAR.....	-8.51	-1.69	3.40	6.61	1.28	-0.82	4.31	3.37	1.53	11.69	7.16	-9.92	20.93	9.69	3.59	1.87	3.78
% Chg Same Qtr Last Yr.....	3.43	1.42	1.71	-0.21	2.35	2.58	2.80	2.01	2.08	5.15	5.87	2.29	6.86	6.38	3.59	1.87	3.78

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

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

January 2016

	Historical Data											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
TN GDP (Mil2009\$) SAAR.....	240376	250288	252717	258027	255313	257567	247316	251094	258257	266947	268707	274962
Percentage change.....	2.34	4.12	0.97	2.10	-1.05	0.88	-3.98	1.53	2.85	3.36	0.66	2.33
US GDP (Bil2009\$) SAAR.....	13271.1	13773.5	14234.3	14613.8	14873.8	14830.4	14418.8	14783.8	15020.6	15354.6	15583.3	15961.7
Percentage change.....	2.81	3.79	3.35	2.67	1.78	-0.29	-2.78	2.53	1.60	2.22	1.49	2.43
TN GDP (Mil\$) SAAR.....	206562	220573	228724	239395	243368	250402	247316	253252	264022	279654	286908	298623
Percentage change.....	4.44	6.78	3.70	4.67	1.66	2.89	-1.23	2.40	4.25	5.92	2.59	4.08
US GDP (Bil\$) SAAR.....	11510.7	12274.9	13093.7	13855.9	14477.6	14718.6	14418.7	14964.4	15517.9	16155.3	16663.2	17348.1
Percentage change.....	4.86	6.64	6.67	5.82	4.49	1.66	-2.04	3.78	3.70	4.11	3.14	4.11
TN PERSONAL INCOME (MIL2009\$) SAAR.....	196674	203762	205807	212564	217676	220441	217358	222615	229291	238054	237442	242848
Percentage change.....	1.84	3.60	1.00	3.28	2.40	1.27	-1.40	2.42	3.00	3.82	-0.26	2.28
US PERSONAL INCOME (BIL2009\$) SAAR.....	10838	11206	11504	12028	12358	12494	12095	12274	12726	13112	13078	13468
Percentage change.....	1.67	3.40	2.66	4.56	2.75	1.10	-3.19	1.48	3.69	3.03	-0.26	2.98
TN PERSONAL INCOME (MIL\$) SAAR.....	172239	182791	189889	201367	211376	220580	217354	226302	238810	252636	255422	264965
Percentage change.....	3.86	6.13	3.88	6.04	4.97	4.35	-1.46	4.12	5.53	5.79	1.10	3.74
US PERSONAL INCOME (BIL\$) SAAR.....	9491	10053	10614	11394	12000	12502	12095	12477	13255	13915	14068	14694
Percentage change.....	3.68	5.92	5.58	7.35	5.32	4.18	-3.26	3.16	6.23	4.98	1.10	4.45
TN NONFARM JOBS (THOUS).....	2662.6	2705.6	2743.0	2782.9	2797.8	2775.4	2619.3	2615.5	2661.9	2715.3	2758.7	2816.1
Percentage change.....	-0.10	1.62	1.38	1.46	0.53	-0.80	-5.62	-0.15	1.78	2.00	1.60	2.08
US NONFARM JOBS (MIL).....	130.3	131.7	134.0	136.4	137.9	137.2	131.2	130.3	131.8	134.1	136.4	139.0
Percentage change.....	-0.24	1.09	1.72	1.80	1.12	-0.56	-4.34	-0.73	1.21	1.71	1.71	1.93
TN MFG JOBS (THOUS).....	413.3	411.8	408.8	399.4	379.9	360.9	309.2	299.0	304.4	313.4	318.4	325.2
Percentage change.....	-3.56	-0.35	-0.74	-2.30	-4.87	-4.99	-14.33	-3.32	1.84	2.94	1.61	2.13
US MFG JOBS (MIL).....	14.5	14.3	14.2	14.2	13.9	13.4	11.8	11.5	11.7	11.9	12.0	12.2
Percentage change.....	-4.90	-1.34	-0.62	-0.49	-1.97	-3.42	-11.61	-2.69	1.71	1.71	0.78	1.41
TN UNEMPLOYMENT RATE (%).....	5.6	5.4	5.5	5.2	4.7	6.8	10.6	9.6	8.9	7.8	7.6	6.6
US UNEMPLOYMENT RATE (%).....	6.0	5.5	5.1	4.6	4.6	5.8	9.3	9.6	8.9	8.1	7.4	6.2
CHAINED PRICE INDEX, GDP (2009=100.0).....	86.7	89.1	92.0	94.8	97.3	99.2	100.0	101.2	103.3	105.2	106.9	108.7
Percentage change.....	1.99	2.75	3.22	3.07	2.67	1.93	0.79	1.23	2.06	1.84	1.63	1.64
US PERS CONSUMP DEFL (2009=100.0).....	87.6	89.7	92.3	94.7	97.1	100.1	100.0	101.7	104.1	106.1	107.6	109.1
Percentage change.....	1.98	2.43	2.85	2.68	2.50	3.05	-0.06	1.65	2.46	1.89	1.37	1.43
CONSUMER PRICE INDEX, ALL-URBAN (82-84=1.000)....	1.840	1.889	1.953	2.016	2.073	2.153	2.146	2.181	2.249	2.296	2.330	2.367
Percentage change.....	2.30	2.67	3.37	3.22	2.87	3.81	-0.32	1.64	3.14	2.08	1.46	1.61
BANK PRIME INTEREST RATE (%).....	4.1	4.3	6.2	8.0	8.1	5.1	3.3	3.3	3.3	3.3	3.3	3.3
FEDERAL FUNDS RATE (% per annum).....	1.128	1.349	3.213	4.964	5.019	1.928	0.160	0.175	0.102	0.140	0.108	0.089
30-YEAR FIXED MORTGAGE RATE (%).....	5.8	5.8	5.9	6.4	6.3	6.0	5.0	4.7	4.5	3.7	4.0	4.2
TN TAXABLE SALES (MIL2009\$).....	89918	92218	95680	97860	98872	93182	86223	86956	89903	92389	93837	97036
Percentage change.....	2.32	2.56	3.75	2.28	1.03	-5.76	-7.47	0.85	3.39	2.77	1.57	3.41
TN TAXABLE SALES (MIL\$).....	78749	82725	88284	92705	95999	93236	86219	88395	93641	98041	100943	105877
Percentage change.....	4.35	5.05	6.72	5.01	3.55	-2.88	-7.53	2.52	5.93	4.70	2.96	4.89
TN AVG ANNUAL WAGE, NONFARM (2009\$).....	38815	39485	39441	40242	40847	40545	40821	41444	41310	41968	41473	41961
Percentage change.....	1.34	1.73	-0.11	2.03	1.50	-0.74	0.68	1.53	-0.32	1.59	-1.18	1.18
TN AVG ANNUAL WAGE, NONFARM (\$).....	33993	35421	36388	38122	39664	40570	40822	42129	43022	44537	44613	45782
Percentage change.....	3.35	4.20	2.73	4.77	4.04	2.28	0.62	3.20	2.12	3.52	0.17	2.62

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

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

January 2016

	Historical Data											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
TN GDP (2009\$) SAAR.....	41243	42514	42395	42634	41561	41406	39356	39661	40420	41335	41168	41685
Percentage change.....	1.47	3.08	-0.28	0.56	-2.52	-0.37	-4.95	0.77	1.92	2.26	-0.40	1.25
US GDP (2009\$) SAAR.....	45587	46887	48014	48830	49214	48633	46878	47673	48071	48777	49139	49964
Percentage change.....	1.86	2.85	2.40	1.70	0.79	-1.18	-3.61	1.70	0.84	1.47	0.74	1.68
TN GDP (\$) SAAR.....	35441	37467	38370	39556	39616	40254	39356	40001	41323	43303	43957	45272
Percentage change.....	3.56	5.72	2.41	3.09	0.15	1.61	-2.23	1.64	3.30	4.79	1.51	2.99
US GDP (\$) SAAR.....	39540	41786	44167	46297	47903	48266	46878	48255	49663	51321	52544	54304
Percentage change.....	3.89	5.68	5.70	4.82	3.47	0.76	-2.88	2.94	2.92	3.34	2.38	3.35
TN PERSONAL INCOME (2009\$) SAAR.....	33744	34611	34525	35122	35434	35439	34589	35162	35887	36860	36378	36816
Percentage change.....	0.98	2.57	-0.25	1.73	0.89	0.01	-2.40	1.65	2.06	2.71	-1.31	1.20
US PERSONAL INCOME (2009\$) SAAR.....	37228	38147	38803	40188	40890	40972	39324	39579	40728	41653	41238	42157
Percentage change.....	0.73	2.47	1.72	3.57	1.75	0.20	-4.02	0.65	2.90	2.27	-0.99	2.23
TN PERSONAL INCOME (\$) SAAR.....	29551	31048	31854	33271	34407	35461	34588	35744	37376	39118	39133	40168
Percentage change.....	2.98	5.06	2.60	4.45	3.42	3.06	-2.46	3.34	4.57	4.66	0.04	2.65
US PERSONAL INCOME (\$) SAAR.....	32603	34222	35803	38071	39706	40998	39322	40235	42419	44204	44362	45996
Percentage change.....	2.73	4.97	4.62	6.34	4.29	3.25	-4.09	2.32	5.43	4.21	0.36	3.69
TN TAXABLE SALES (2009\$).....	15427	15664	16051	16169	16096	14981	13721	13735	14071	14306	14377	14710
Percentage change.....	1.45	1.54	2.47	0.74	-0.46	-6.92	-8.41	0.10	2.45	1.68	0.49	2.32
TN TAXABLE SALES (\$).....	13511	14051	14809	15317	15627	14990	13720	13962	14655	15181	15465	16050
Percentage change.....	3.46	4.00	5.40	3.43	2.02	-4.08	-8.47	1.76	4.97	3.59	1.87	3.78

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 3: Tennessee Personal Income Components (millions of 2009 dollars)**January 2016**

	Historical Data											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
TN PERSONAL INCOME.....	196674	203762	205807	212564	217676	220441	217358	222615	229291	238054	237442	242848
Percentage change.....	1.84	3.60	1.00	3.28	2.40	1.27	-1.40	2.42	3.00	3.82	-0.26	2.28
WAGES AND SALARIES.....	104284	107774	109129	112922	115251	113521	107965	109400	110853	114827	115266	119019
Percentage change.....	1.37	3.35	1.26	3.48	2.06	-1.50	-4.89	1.33	1.33	3.59	0.38	3.26
OTHER LABOR INCOME.....	24968	26158	26715	25965	26618	26803	25817	25481	26011	27860	27710	27148
Percentage change.....	6.51	4.77	2.13	-2.81	2.51	0.70	-3.68	-1.30	2.08	7.11	-0.54	-2.03
PROPRIETORS INCOME.....	26618	27967	26282	27188	24205	24017	26095	26133	27896	29745	30953	32225
Percentage change.....	-1.56	5.07	-6.02	3.44	-10.97	-0.78	8.65	0.15	6.75	6.63	4.06	4.11
RENT, INTEREST, DIVIDENDS.....	26736	26714	27238	29476	31792	32598	30022	30559	32056	34082	33543	34428
Percentage change.....	0.15	-0.08	1.96	8.22	7.86	2.53	-7.90	1.79	4.90	6.32	-1.58	2.64
TRANSFER PAYMENTS.....	32876	34138	35531	36559	39183	42789	46062	49595	49388	48980	49797	50249
Percentage change.....	4.13	3.84	4.08	2.89	7.18	9.20	7.65	7.67	-0.42	-0.83	1.67	0.91
LESS: PERS CONT FOR SOC INS...	16506	16998	17219	17684	18051	17978	17644	17799	16140	16314	18592	19059
Percentage change.....	1.61	2.98	1.30	2.70	2.07	-0.40	-1.86	0.88	-9.32	1.07	13.96	2.52
RESIDENCE ADJUSTMENT.....	-2302	-1991	-1870	-1861	-1323	-1309	-958	-753	-772	-1126	-1235	-1163
Percentage change.....	1.76	-13.48	-6.09	-0.46	-28.93	-1.03	-26.83	-21.42	2.58	45.87	9.70	-5.89
PER CAPITA PERSONAL INCOME (\$)...	33744	34611	34525	35122	35434	35439	34589	35162	35887	36860	36378	36816
Percentage change.....	0.98	2.57	-0.25	1.73	0.89	0.01	-2.40	1.65	2.06	2.71	-1.31	1.20

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

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

January 2016

	Historical Data											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
TN PERSONAL INCOME.....	172239	182791	189889	201367	211376	220580	217354	226302	238810	252636	255422	264965
Percentage change.....	3.86	6.13	3.88	6.04	4.97	4.35	-1.46	4.12	5.53	5.79	1.10	3.74
WAGES AND SALARIES.....	91328	96683	100686	106974	111913	113587	107961	111211	115453	121860	123995	129859
Percentage change.....	3.38	5.86	4.14	6.24	4.62	1.50	-4.95	3.01	3.81	5.55	1.75	4.73
OTHER LABOR INCOME.....	21866	23467	24646	24597	25849	26819	25814	25902	27092	29566	29807	29620
Percentage change.....	8.62	7.32	5.02	-0.20	5.09	3.75	-3.75	0.34	4.59	9.13	0.81	-0.63
PROPRIETORS INCOME.....	23310	25087	24254	25754	23500	24032	26099	26565	29057	31567	33297	35161
Percentage change.....	0.39	7.62	-3.32	6.18	-8.75	2.27	8.60	1.78	9.38	8.64	5.48	5.60
RENT, INTEREST, DIVIDENDS.....	23414	23965	25134	27925	30876	32619	30017	31066	33388	36172	36084	37563
Percentage change.....	2.14	2.35	4.88	11.10	10.57	5.64	-7.98	3.49	7.48	8.34	-0.25	4.10
TRANSFER PAYMENTS.....	28792	30624	32780	34633	38051	42822	46064	50417	51434	51978	53568	54826
Percentage change.....	6.19	6.36	7.04	5.65	9.87	12.54	7.57	9.45	2.02	1.06	3.06	2.35
LESS: PERS CONT FOR SOC INS....	14455	15248	15886	16752	17528	17989	17644	18093	16810	17313	20000	20795
Percentage change.....	3.62	5.48	4.19	5.45	4.63	2.63	-1.92	2.55	-7.09	2.99	15.52	3.98
RESIDENCE ADJUSTMENT.....	-2016	-1786	-1725	-1763	-1285	-1310	-958	-765	-804	-1195	-1329	-1268
Percentage change.....	3.78	-11.38	-3.43	2.22	-27.14	1.96	-26.89	-20.10	5.11	48.63	11.18	-4.55
PER CAPITA PERSONAL INCOME (\$)...	29551	31048	31854	33271	34407	35461	34588	35744	37376	39118	39133	40168
Percentage change.....	2.98	5.06	2.60	4.45	3.42	3.06	-2.46	3.34	4.57	4.66	0.04	2.65

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

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

January 2016

	Historical Data											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
TOTAL NONFARM.....	2662.6	2705.6	2743.0	2782.9	2797.8	2775.4	2619.3	2615.5	2661.9	2715.3	2758.7	2816.1
Percentage change.....	-0.10	1.62	1.38	1.46	0.53	-0.80	-5.62	-0.15	1.78	2.00	1.60	2.08
NATURAL RESOURCES, MINING												
AND CONSTRUCTION.....	119.6	121.3	125.3	134.3	137.8	132.4	109.9	105.1	108.7	108.9	107.8	110.9
Percentage change.....	0.08	1.41	3.28	7.23	2.56	-3.90	-16.97	-4.37	3.43	0.17	-0.99	2.87
MANUFACTURING.....	413.3	411.8	408.8	399.4	379.9	360.9	309.2	299.0	304.4	313.4	318.4	325.2
Percentage change.....	-3.56	-0.35	-0.74	-2.30	-4.87	-4.99	-14.33	-3.32	1.84	2.94	1.61	2.13
DURABLE GOODS.....	250.9	254.0	254.6	251.8	237.1	220.8	181.8	176.3	183.7	193.9	198.9	205.5
Percentage change.....	-3.15	1.25	0.22	-1.11	-5.83	-6.85	-17.66	-3.04	4.21	5.55	2.54	3.36
NONDURABLE GOODS.....	162.4	157.8	154.2	147.6	142.8	140.1	127.4	122.6	120.7	119.5	119.6	119.7
Percentage change.....	-4.19	-2.82	-2.28	-4.25	-3.24	-1.91	-9.08	-3.72	-1.57	-1.04	0.11	0.09
TRADE, TRANSPORTATION, UTILITIES.....	578.7	587.8	598.0	607.4	610.7	600.3	559.3	555.0	563.5	575.1	582.1	592.1
Percentage change.....	0.30	1.58	1.73	1.56	0.54	-1.70	-6.82	-0.76	1.54	2.05	1.22	1.71
WHOLESALE TRADE.....	126.5	128.0	130.3	132.1	133.0	131.7	120.7	116.8	117.9	120.5	121.8	123.3
Percentage change.....	0.00	1.14	1.82	1.36	0.70	-1.00	-8.31	-3.26	0.96	2.21	1.09	1.22
RETAIL TRADE.....	313.2	319.6	324.3	328.3	330.6	325.5	306.9	306.7	309.2	312.8	315.0	320.8
Percentage change.....	0.27	2.05	1.49	1.22	0.70	-1.55	-5.71	-0.06	0.81	1.18	0.68	1.86
TRANSPORTATION & UTILITIES.....	139.0	140.3	143.4	147.0	147.1	143.1	131.7	131.5	136.4	141.8	145.4	148.0
Percentage change.....	0.64	0.91	2.22	2.52	0.04	-2.70	-8.00	-0.12	3.75	3.89	2.54	1.81
INFORMATION.....	51.2	49.5	49.4	49.6	50.3	50.5	46.9	45.0	43.8	43.2	44.1	43.9
Percentage change.....	-4.08	-3.31	-0.20	0.37	1.41	0.51	-7.27	-3.98	-2.74	-1.35	2.08	-0.36
FINANCIAL ACTIVITIES.....	139.8	141.9	143.3	143.6	144.8	145.1	140.5	137.1	136.5	137.1	138.2	141.5
Percentage change.....	1.15	1.46	0.99	0.20	0.89	0.18	-3.15	-2.45	-0.44	0.45	0.78	2.41
PROFESSIONAL & BUSINESS SERVICES..	287.3	302.3	312.5	319.2	322.8	321.4	293.6	304.1	323.1	338.6	353.1	372.6
Percentage change.....	-3.15	5.21	3.38	2.13	1.14	-0.43	-8.64	3.57	6.24	4.82	4.26	5.54
EDUCATION & HEALTH SERVICES.....	312.7	320.7	330.3	340.8	349.9	358.7	365.7	373.9	384.4	393.8	398.4	402.6
Percentage change.....	4.20	2.57	3.00	3.16	2.68	2.50	1.96	2.24	2.81	2.44	1.17	1.05
LEISURE & HOSPITALITY.....	246.7	253.6	262.1	270.1	276.2	273.7	263.5	262.0	267.7	276.8	285.8	296.1
Percentage change.....	2.81	2.82	3.34	3.07	2.23	-0.88	-3.73	-0.58	2.15	3.40	3.26	3.62
OTHER SERVICES.....	102.3	101.7	100.7	101.7	104.0	104.5	102.0	101.2	102.0	104.3	105.6	105.8
Percentage change.....	0.62	-0.57	-0.99	0.99	2.33	0.42	-2.36	-0.82	0.85	2.21	1.27	0.21
GOVERNMENT.....	411.1	415.0	412.7	417.0	421.4	427.8	428.6	433.1	427.8	424.1	425.2	425.2
Percentage change.....	0.20	0.96	-0.56	1.05	1.07	1.52	0.18	1.04	-1.22	-0.86	0.25	0.00
FEDERAL, CIVILIAN.....	51.2	50.1	49.2	48.9	48.8	49.5	50.1	52.4	50.4	50.2	49.6	47.9
Percentage change.....	-1.21	-2.23	-1.65	-0.64	-0.27	1.35	1.21	4.66	-3.77	-0.45	-1.23	-3.33
STATE & LOCAL.....	359.9	364.9	363.4	368.1	372.6	378.4	378.6	380.7	377.4	373.9	375.6	377.3
Percentage change.....	0.41	1.41	-0.42	1.27	1.24	1.55	0.04	0.57	-0.87	-0.91	0.45	0.44
STATISTICAL DISCREPANCY (%).....	0.00	0.00	0.00	-0.01	0.00	0.00	0.01	0.00	-0.01	-0.01	0.00	0.01

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

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

January 2016

	Historical Data											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
TOTAL DURABLE GOODS.....	250.9	254.0	254.6	251.8	237.1	220.8	181.8	176.3	183.7	193.9	198.9	205.5
Percentage change.....	-3.15	1.25	0.22	-1.11	-5.83	-6.85	-17.66	-3.04	4.21	5.55	2.54	3.36
WOOD PRODUCTS.....	16.7	17.4	17.7	17.9	16.1	14.3	11.3	10.9	10.8	11.0	10.9	11.2
Percentage change.....	-4.74	4.07	1.91	0.95	-10.14	-11.24	-20.84	-3.55	-1.07	2.25	-1.59	3.44
NONMETALLIC MINERALS.....	15.6	15.7	15.9	16.1	15.5	14.2	11.6	11.3	11.8	12.5	12.1	11.9
Percentage change.....	2.94	0.64	1.73	1.05	-3.52	-8.38	-18.89	-2.05	4.20	5.80	-2.66	-1.94
PRIMARY METALS.....	11.8	12.1	12.0	11.8	11.7	11.1	9.0	8.8	9.2	9.7	10.0	10.1
Percentage change.....	-6.74	2.90	-0.97	-1.55	-0.85	-4.97	-18.84	-2.68	4.66	4.89	3.19	0.99
FABRICATED METALS.....	41.4	41.7	42.6	43.4	41.5	39.7	33.6	33.0	33.6	34.5	33.9	34.4
Percentage change.....	-0.05	0.68	2.23	1.92	-4.46	-4.30	-15.37	-1.95	1.92	2.67	-1.67	1.35
MACHINERY.....	33.2	34.3	33.9	33.2	32.0	31.2	26.0	24.8	25.1	25.5	25.4	25.7
Percentage change.....	-7.52	3.21	-1.16	-1.97	-3.69	-2.50	-16.63	-4.79	1.48	1.67	-0.70	1.44
COMPUTERS & ELECTRONICS.....	11.7	11.3	10.4	9.3	8.1	7.4	6.2	5.6	5.6	5.6	5.2	5.0
Percentage change.....	-9.59	-3.39	-7.48	-11.27	-12.55	-8.27	-16.07	-10.58	0.44	0.58	-7.24	-3.66
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS.....	23.6	23.1	23.5	23.2	22.1	20.6	17.8	16.9	17.7	17.9	18.6	19.4
Percentage change.....	-5.65	-2.22	1.65	-1.36	-4.66	-6.94	-13.52	-5.00	4.51	1.65	3.47	4.49
TRANSPORTATION EQUIPMENT.....	60.2	62.9	63.9	63.7	58.6	52.5	40.4	40.5	45.8	53.6	59.5	64.0
Percentage change.....	0.28	4.53	1.59	-0.27	-7.99	-10.46	-22.96	0.03	13.20	17.03	11.02	7.55
FURNITURE.....	19.9	19.6	19.2	17.7	16.0	14.2	10.8	9.7	8.9	8.7	8.8	9.1
Percentage change.....	-6.59	-1.34	-2.04	-7.71	-9.72	-11.08	-24.26	-10.21	-7.73	-2.92	1.06	3.50
MISCELLANEOUS DURABLES.....	16.8	15.9	15.3	15.3	15.4	15.5	15.0	14.9	15.2	14.9	14.5	14.7
Percentage change.....	-1.76	-5.22	-3.83	0.16	0.18	0.98	-2.99	-0.68	1.83	-2.30	-2.25	1.26

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

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

January 2016

	Historical Data											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
TOTAL NONDURABLE GOODS.....	162.4	157.8	154.2	147.6	142.8	140.1	127.4	122.6	120.7	119.5	119.6	119.7
Percentage change.....	-4.19	-2.82	-2.28	-4.25	-3.24	-1.91	-9.08	-3.72	-1.57	-1.04	0.11	0.09
FOOD.....	35.9	34.8	34.3	34.0	32.7	32.5	32.3	32.6	33.1	33.0	32.4	32.7
Percentage change.....	-0.43	-3.04	-1.38	-0.97	-3.84	-0.62	-0.46	0.80	1.62	-0.24	-1.90	0.95
BEVERAGE & TOBACCO.....	6.1	5.8	5.4	5.2	5.1	5.1	5.1	5.0	5.0	5.2	5.3	5.4
Percentage change.....	-3.77	-6.12	-5.79	-4.31	-2.56	0.14	0.16	-1.64	0.18	3.51	2.58	1.88
TEXTILE MILLS, TEXTILE MILL PRODUCTS & APPAREL.....	21.3	19.4	18.0	16.1	15.1	14.8	12.6	11.5	10.7	10.7	10.5	10.0
Percentage change.....	-12.94	-8.85	-7.37	-10.55	-6.37	-2.09	-14.93	-8.35	-7.20	-0.07	-1.96	-4.53
PAPER.....	19.6	18.8	18.9	18.3	17.4	17.2	16.2	15.7	15.3	14.7	14.7	14.6
Percentage change.....	-4.02	-3.92	0.72	-3.23	-5.06	-1.02	-6.13	-2.94	-2.53	-3.76	-0.17	-0.53
PRINTING & RELATED SUPPORT.....	19.9	19.6	18.8	17.8	17.0	15.7	13.3	11.4	10.0	9.6	9.6	9.5
Percentage change.....	-3.16	-1.20	-4.32	-5.39	-4.51	-7.53	-15.27	-13.96	-12.93	-3.45	0.08	-1.73
CHEMICALS.....	28.6	27.6	27.2	26.3	26.9	27.5	25.8	25.0	24.6	24.4	24.8	25.3
Percentage change.....	0.36	-3.29	-1.76	-3.14	2.34	2.20	-6.17	-3.26	-1.63	-0.68	1.68	2.12
PLASTICS & RUBBER.....	28.2	28.9	29.3	27.6	26.6	25.4	20.4	19.9	20.5	20.0	20.2	20.7
Percentage change.....	-6.14	2.59	1.46	-5.76	-3.64	-4.39	-19.81	-2.49	2.90	-2.45	1.03	2.39
MISCELLANEOUS NONDURABLE GOODS.....	2.8	2.8	2.3	2.3	2.1	2.0	1.8	1.6	1.7	1.9	2.1	1.5
Percentage change.....	-10.49	0.06	-20.22	3.32	-8.57	-9.00	-9.44	-10.87	4.82	14.67	12.41	-27.57

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 8: Tennessee Average Annual Wage and Salary Rate by Sector (2009 dollars)

January 2016

	Historical Data											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
TOTAL NONFARM.....	38815	39485	39441	40242	40847	40545	40821	41444	41310	41968	41473	41961
Percentage change.....	1.34	1.73	-0.11	2.03	1.50	-0.74	0.68	1.53	-0.32	1.59	-1.18	1.18
NATURAL RESOURCES, MINING AND CONSTRUCTION.....	41700	41541	42264	44071	45329	45128	44526	45426	45418	45915	45734	47214
Percentage change.....	0.85	-0.38	1.74	4.27	2.86	-0.44	-1.33	2.02	-0.02	1.09	-0.39	3.24
MANUFACTURING.....	45856	46892	46605	47371	48006	48163	48923	51200	50738	51667	50887	51603
Percentage change.....	1.63	2.26	-0.61	1.64	1.34	0.33	1.58	4.66	-0.90	1.83	-1.51	1.41
DURABLE GOODS.....	45284	46069	45774	46584	47071	47379	48242	50335	49667	51259	49504	50493
Percentage change.....	0.91	1.73	-0.64	1.77	1.04	0.66	1.82	4.34	-1.33	3.21	-3.42	2.00
NONDURABLE GOODS.....	46742	48219	47976	48721	49551	49402	49884	52453	52365	52336	53188	53507
Percentage change.....	2.74	3.16	-0.50	1.55	1.70	-0.30	0.97	5.15	-0.17	-0.05	1.63	0.60
TRADE, TRANSPORTATION, UTILITIES.....	36969	37525	37797	38337	38926	38008	37815	38270	38519	38768	38217	38716
Percentage change.....	0.91	1.50	0.72	1.43	1.54	-2.36	-0.51	1.20	0.65	0.65	-1.42	1.31
WHOLESALE TRADE.....	51712	53743	54161	56196	57141	56361	55941	56904	57355	58788	57703	59151
Percentage change.....	2.08	3.93	0.78	3.76	1.68	-1.37	-0.74	1.72	0.79	2.50	-1.85	2.51
RETAIL TRADE.....	26656	26489	26583	26659	27206	26281	26401	26841	26925	26719	26129	26483
Percentage change.....	0.30	-0.63	0.36	0.29	2.05	-3.40	0.46	1.67	0.31	-0.77	-2.21	1.36
TRANSPORTATION & UTILITIES.....	46786	47872	48297	48367	48796	47789	47801	48376	48520	48338	48078	48212
Percentage change.....	0.52	2.32	0.89	0.15	0.89	-2.06	0.02	1.20	0.30	-0.38	-0.54	0.28
INFORMATION.....	46609	48212	48521	52767	52342	51111	51533	52405	54163	55156	54085	55910
Percentage change.....	1.28	3.44	0.64	8.75	-0.81	-2.35	0.83	1.69	3.35	1.83	-1.94	3.38
FINANCIAL ACTIVITIES.....	54730	56157	54620	57508	58928	57322	57385	60363	60287	63326	61587	63223
Percentage change.....	5.52	2.61	-2.74	5.29	2.47	-2.73	0.11	5.19	-0.13	5.04	-2.75	2.66
PROFESSIONAL & BUSINESS SERVICES..	39828	40484	40405	41932	43665	44569	46282	46898	46076	48591	48410	47621
Percentage change.....	0.91	1.65	-0.20	3.78	4.13	2.07	3.84	1.33	-1.75	5.46	-0.37	-1.63
EDUCATION & HEALTH SERVICES.....	40127	41473	42147	42295	42744	42642	43665	43532	42873	42826	42561	42809
Percentage change.....	0.57	3.35	1.62	0.35	1.06	-0.24	2.40	-0.30	-1.51	-0.11	-0.62	0.58
LEISURE & HOSPITALITY.....	19556	19545	19397	19858	20195	19686	19666	20077	19982	20213	19675	20158
Percentage change.....	0.85	-0.05	-0.76	2.38	1.69	-2.52	-0.10	2.09	-0.47	1.16	-2.66	2.45
OTHER SERVICES.....	35909	37014	36314	37234	36543	36437	37018	37008	37199	37485	37216	38866
Percentage change.....	2.17	3.08	-1.89	2.53	-1.85	-0.29	1.60	-0.03	0.52	0.77	-0.72	4.44
GOVERNMENT.....	37683	38100	38110	38495	38989	38902	39122	39028	39191	39090	38890	39409
Percentage change.....	2.14	1.11	0.03	1.01	1.28	-0.22	0.57	-0.24	0.42	-0.26	-0.51	1.33
FEDERAL, CIVILIAN.....	60785	63097	63215	63610	64920	63166	64208	65783	68125	66962	65699	71860
Percentage change.....	4.50	3.80	0.19	0.62	2.06	-2.70	1.65	2.45	3.56	-1.71	-1.89	9.38
STATE & LOCAL.....	34395	34671	34709	35156	35593	35731	35805	35362	35327	35351	35353	35292
Percentage change.....	1.71	0.80	0.11	1.29	1.24	0.39	0.21	-1.24	-0.10	0.07	0.01	-0.17

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

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

January 2016

	Historical Data											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
TOTAL NONFARM.....	33993	35421	36388	38122	39664	40570	40822	42129	43022	44537	44613	45782
Percentage change.....	3.35	4.20	2.73	4.77	4.04	2.28	0.62	3.20	2.12	3.52	0.17	2.62
NATURAL RESOURCES, MINING & CONSTRUCTION...	36519	37263	38995	41749	44020	45155	44523	46175	47298	48723	49198	51513
Percentage change.....	2.86	2.04	4.65	7.06	5.44	2.58	-1.40	3.71	2.43	3.01	0.97	4.71
MANUFACTURING.....	40160	42067	42999	44875	46615	48192	48934	52048	52839	54829	54740	56302
Percentage change.....	3.65	4.75	2.22	4.36	3.88	3.38	1.54	6.36	1.52	3.77	-0.16	2.85
DURABLE GOODS.....	39659	41328	42231	44128	45705	47412	48252	51167	51724	54394	53253	55092
Percentage change.....	2.92	4.21	2.19	4.49	3.57	3.74	1.77	6.04	1.09	5.16	-2.10	3.45
NONDURABLE GOODS.....	40936	43260	44266	46156	48119	49426	49896	53325	54531	55542	57215	58379
Percentage change.....	4.78	5.68	2.33	4.27	4.25	2.72	0.95	6.87	2.26	1.85	3.01	2.03
TRADE, TRANSPORTATION, UTILITIES.....	32376	33663	34872	36317	37796	38030	37816	38903	40116	41142	41111	42242
Percentage change.....	2.91	3.97	3.59	4.14	4.07	0.62	-0.56	2.87	3.12	2.56	-0.08	2.75
WHOLESALE TRADE.....	45288	48212	49972	53236	55483	56395	55941	57846	59732	62393	62073	64537
Percentage change.....	4.11	6.46	3.65	6.53	4.22	1.64	-0.81	3.41	3.26	4.45	-0.51	3.97
RETAIL TRADE.....	23344	23762	24525	25255	26417	26298	26402	27285	28043	28353	28107	28895
Percentage change.....	2.30	1.79	3.21	2.98	4.60	-0.45	0.40	3.34	2.78	1.11	-0.87	2.80
TRANSPORTATION & UTILITIES.....	40974	42943	44556	45819	47379	47815	47802	49176	50528	51296	51719	52602
Percentage change.....	2.51	4.81	3.75	2.84	3.40	0.92	-0.03	2.87	2.75	1.52	0.82	1.71
INFORMATION.....	40816	43247	44752	49988	50817	51141	51535	53268	56408	58535	58179	60999
Percentage change.....	3.28	5.96	3.48	11.70	1.66	0.64	0.77	3.36	5.89	3.77	-0.61	4.85
FINANCIAL ACTIVITIES.....	47931	50379	50399	54482	57219	57358	57388	61370	62787	67208	66252	68979
Percentage change.....	7.61	5.11	0.04	8.10	5.02	0.24	0.05	6.94	2.31	7.04	-1.42	4.12
PROFESSIONAL & BUSINESS SERVICES.....	34880	36314	37273	39723	42403	44594	46283	47673	47982	51570	52074	51957
Percentage change.....	2.91	4.11	2.64	6.57	6.75	5.17	3.79	3.00	0.65	7.48	0.98	-0.22
EDUCATION & HEALTH SERVICES.....	35143	37206	38886	40065	41506	42670	43666	44252	44652	45448	45784	46707
Percentage change.....	2.57	5.87	4.52	3.03	3.60	2.80	2.33	1.34	0.90	1.78	0.74	2.02
LEISURE & HOSPITALITY.....	17126	17532	17896	18812	19610	19698	19666	20409	20811	21450	21165	21995
Percentage change.....	2.85	2.37	2.07	5.12	4.24	0.45	-0.17	3.78	1.97	3.07	-1.32	3.92
OTHER SERVICES.....	31446	33199	33504	35272	35482	36458	37021	37619	38739	39779	40035	42406
Percentage change.....	4.18	5.57	0.92	5.27	0.60	2.75	1.54	1.61	2.98	2.69	0.64	5.92
GOVERNMENT.....	33000	34178	35159	36467	37858	38925	39120	39672	40817	41483	41834	42997
Percentage change.....	4.16	3.57	2.87	3.72	3.82	2.82	0.50	1.41	2.88	1.63	0.85	2.78
FEDERAL, CIVILIAN.....	53231	56597	58318	60258	63034	63202	64209	66876	70947	71056	70675	78407
Percentage change.....	6.58	6.32	3.04	3.33	4.61	0.27	1.59	4.15	6.09	0.15	-0.54	10.94
STATE & LOCAL.....	30121	31103	32021	33304	34562	35753	35803	35946	36793	37515	38029	38505
Percentage change.....	3.72	3.26	2.95	4.01	3.78	3.45	0.14	0.40	2.36	1.96	1.37	1.25

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 10: Tennessee Civilian Labor Force and Unemployment Rate

January 2016

	Historical Data											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
CIVILIAN LABOR FORCE (THOUS).....	2912	2880	2901	3032	3062	3052	3050	3088	3118	3091	3054	2993
Percentage change.....	0.18	-1.11	0.73	4.52	0.97	-0.32	-0.05	1.23	0.99	-0.88	-1.20	-1.97
EMPLOYED PERSONS (THOUS).....	2748	2726	2740	2874	2916	2845	2727	2790	2842	2850	2820	2797
Percentage change.....	-0.29	-0.81	0.54	4.89	1.46	-2.46	-4.14	2.32	1.85	0.28	-1.03	-0.84
UNEMPLOYED PERSONS (THOUS).....	164	154	161	158	145	207	323	298	276	241	233	197
Percentage change.....	8.81	-6.01	4.17	-1.86	-7.93	42.71	56.11	-7.95	-7.13	-12.79	-3.27	-15.69
PARTICIPATION RATE (PERCENT).....	63.8	62.4	62.0	63.7	63.3	62.2	61.4	61.6	61.6	60.3	58.9	57.1
Percentage change.....	-0.73	-2.18	-0.66	2.78	-0.70	-1.67	-1.22	0.32	-0.06	-2.07	-2.36	-3.13
UNEMPLOYMENT RATE (PERCENT).....	5.6	5.4	5.5	5.2	4.7	6.8	10.6	9.6	8.9	7.8	7.6	6.6
Center for Business and Economic Research, University of Tennessee						Tennessee Econometric Model						

Table 11: Tennessee Taxable Sales (millions of 2009 dollars)**January 2016**

	Historical Data											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
TOTAL TAXABLE SALES.....	89918	92218	95680	97860	98872	93182	86223	86956	89903	92389	93837	97036
Percentage change.....	2.32	2.56	3.75	2.28	1.03	-5.76	-7.47	0.85	3.39	2.77	1.57	3.41
AUTO DEALERS.....	10769	10529	10224	9911	9788	7935	6724	7546	8094	8743	9143	9689
Percentage change.....	4.67	-2.23	-2.90	-3.06	-1.24	-18.93	-15.27	12.22	7.26	8.02	4.57	5.98
PURCHASES FROM MANUFACTURERS....	4490	4626	5205	4940	4888	4495	3491	3595	3850	3813	3878	4089
Percentage change.....	5.59	3.02	12.52	-5.10	-1.06	-8.04	-22.33	2.96	7.09	-0.94	1.70	5.42
MISC DURABLE GOODS.....	14719	15810	17170	18165	17964	16339	13748	14258	14961	15433	15626	16089
Percentage change.....	3.00	7.41	8.60	5.80	-1.11	-9.05	-15.86	3.71	4.93	3.15	1.26	2.96
EATING AND DRINKING PLACES.....	7896	8309	8627	8935	9144	8968	8841	8909	9128	9611	9832	10259
Percentage change.....	3.28	5.24	3.83	3.56	2.35	-1.92	-1.42	0.78	2.45	5.29	2.29	4.35
FOOD STORES.....	8966	8849	8884	8887	8992	8592	8822	8740	8849	9131	9373	9487
Percentage change.....	-3.55	-1.31	0.40	0.04	1.17	-4.44	2.68	-0.93	1.24	3.19	2.65	1.21
LIQUOR STORES.....	495	510	536	578	612	636	657	673	699	747	778	819
Percentage change.....	4.10	3.20	5.09	7.76	5.86	3.89	3.37	2.48	3.75	6.93	4.06	5.36
HOTELS AND MOTELS.....	2079	2096	2215	2342	2425	2312	2038	2033	2239	2345	2361	2642
Percentage change.....	0.51	0.81	5.66	5.73	3.56	-4.66	-11.84	-0.25	10.13	4.74	0.66	11.91
OTHER RETAIL AND SERVICE.....	26505	27074	27970	28642	29151	28220	26806	26871	27611	28444	28818	29891
Percentage change.....	3.32	2.15	3.31	2.40	1.78	-3.19	-5.01	0.24	2.75	3.02	1.32	3.72
MISC NONDURABLE GOODS.....	7128	7269	7613	7698	7990	7780	7364	7521	7670	7939	8081	8289
Percentage change.....	-1.69	1.98	4.72	1.12	3.79	-2.63	-5.34	2.13	1.98	3.51	1.79	2.57
TRANSPORTATION, COMMUNICATION.....	6870	7146	7237	7763	7919	7905	7731	6808	6803	6182	5946	5782
Percentage change.....	3.10	4.02	1.27	7.27	2.01	-0.17	-2.20	-11.94	-0.08	-9.13	-3.81	-2.77
PER CAPITA (\$).....	15427	15664	16051	16169	16096	14981	13721	13735	14071	14306	14377	14710
Percentage change.....	1.45	1.54	2.47	0.74	-0.46	-6.92	-8.41	0.10	2.45	1.68	0.49	2.32

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

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

January 2016

	Historical Data											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
TOTAL TAXABLE SALES.....	78749	82725	88284	92705	95999	93236	86219	88395	93641	98041	100943	105877
Percentage change.....	4.35	5.05	6.72	5.01	3.55	-2.88	-7.53	2.52	5.93	4.70	2.96	4.89
AUTO DEALERS.....	9431	9444	9429	9389	9503	7938	6725	7672	8431	9279	9836	10572
Percentage change.....	6.74	0.14	-0.16	-0.43	1.21	-16.47	-15.28	14.07	9.90	10.05	6.01	7.49
PURCHASES FROM MANUFACTURERS....	3933	4150	4803	4679	4745	4497	3491	3654	4009	4047	4172	4461
Percentage change.....	7.69	5.52	15.73	-2.58	1.41	-5.22	-22.37	4.68	9.72	0.94	3.09	6.93
MISC DURABLE GOODS.....	12892	14183	15845	17208	17440	16347	13747	14494	15583	16375	16810	17555
Percentage change.....	5.06	10.02	11.72	8.60	1.35	-6.27	-15.90	5.43	7.52	5.08	2.65	4.44
EATING AND DRINKING PLACES.....	6915	7454	7960	8464	8880	8973	8840	9057	9508	10200	10576	11194
Percentage change.....	5.34	7.80	6.79	6.34	4.91	1.06	-1.48	2.45	4.98	7.28	3.69	5.84
FOOD STORES.....	7852	7937	8196	8419	8731	8601	8821	8885	9217	9690	10083	10351
Percentage change.....	-1.64	1.09	3.26	2.72	3.70	-1.49	2.57	0.72	3.74	5.14	4.05	2.66
LIQUOR STORES.....	433	458	495	548	594	636	657	685	728	793	836	894
Percentage change.....	6.17	5.71	8.10	10.63	8.51	7.05	3.32	4.17	6.31	8.94	5.49	6.86
HOTELS AND MOTELS.....	1821	1881	2044	2218	2355	2313	2038	2067	2333	2489	2540	2883
Percentage change.....	2.50	3.27	8.67	8.55	6.15	-1.78	-11.87	1.40	12.85	6.70	2.04	13.51
OTHER RETAIL AND SERVICE.....	23213	24286	25806	27134	28304	28237	26806	27316	28758	30184	31000	32614
Percentage change.....	5.37	4.62	6.26	5.15	4.31	-0.24	-5.07	1.90	5.28	4.96	2.70	5.20
MISC NONDURABLE GOODS.....	6243	6521	7024	7293	7758	7784	7364	7646	7989	8425	8693	9044
Percentage change.....	0.27	4.45	7.72	3.82	6.38	0.34	-5.39	3.82	4.49	5.46	3.18	4.04
TRANSPORTATION, COMMUNICATION....	6016	6410	6682	7353	7689	7910	7729	6921	7085	6560	6396	6308
Percentage change.....	5.15	6.55	4.23	10.05	4.57	2.87	-2.29	-10.45	2.37	-7.42	-2.49	-1.38
PER CAPITA (\$).	13511	14051	14809	15317	15627	14990	13720	13962	14655	15181	15465	16050
Percentage change.....	3.46	4.00	5.40	3.43	2.02	-4.08	-8.47	1.76	4.97	3.59	1.87	3.78

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

Table 13: Tennessee Gross Domestic Product by Sector (millions of 2009 dollars)

January 2016

	Historical Data											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GROSS DOMESTIC PRODUCT.....	240,376	250,288	252,717	258,027	255,313	257,567	247,316	251,094	258,257	266,947	268,707	274,962
Percentage change.....	2.34	4.12	0.97	2.10	-1.05	0.88	-3.98	1.53	2.85	3.36	0.66	2.33
NATURAL RESOURCES & MINING.....	2,409	2,449	2,553	2,697	2,034	2,333	2,676	2,575	2,451	2,313	2,838	3,033
Percentage change.....	9.00	1.66	4.25	5.64	-24.58	14.70	14.70	-3.77	-4.82	-5.63	22.70	6.88
CONSTRUCTION.....	11,484	11,434	11,319	11,407	11,112	10,171	9,066	8,995	9,157	9,525	9,297	9,461
Percentage change.....	-1.50	-0.44	-1.01	0.78	-2.59	-8.47	-10.86	-0.78	1.80	4.02	-2.39	1.77
MANUFACTURING.....	39,647	44,681	43,954	45,674	43,772	42,827	38,639	39,488	41,425	44,136	44,914	46,110
Percentage change.....	3.78	12.70	-1.63	3.91	-4.16	-2.16	-9.78	2.20	4.91	6.54	1.76	2.66
DURABLE GOODS.....	22,702	25,103	26,116	27,090	24,479	24,898	20,627	20,498	23,023	25,302	25,593	26,450
Percentage change.....	10.88	10.58	4.04	3.73	-9.64	1.71	-17.15	-0.63	12.32	9.90	1.15	3.35
WOOD PRODUCTS.....	622	655	705	730	814	809	603	611	663	660	560	569
Percentage change.....	-11.27	5.31	7.63	3.55	11.51	-0.61	-25.46	1.33	8.51	-0.45	-15.15	1.59
NONMETALLIC MINERAL PRODUCTS.....	1,547	1,675	1,497	1,335	1,332	1,112	875	959	1,068	1,089	1,030	1,033
Percentage change.....	14.09	8.27	-10.63	-10.82	-0.22	-16.52	-21.31	9.60	11.37	1.97	-5.42	0.31
PRIMARY METALS.....	990	1,134	1,121	1,075	853	848	767	875	993	1,159	1,219	1,228
Percentage change.....	-19.90	14.55	-1.15	-4.10	-20.65	-0.59	-9.55	14.08	13.49	16.72	5.18	0.73
FABRICATED METAL PRODUCTS.....	3,965	4,477	4,294	4,601	4,483	3,899	3,527	3,751	3,625	3,710	3,478	3,542
Percentage change.....	7.37	12.91	-4.09	7.15	-2.56	-13.03	-9.54	6.35	-3.36	2.34	-6.25	1.84
MACHINERY.....	3,467	3,299	3,797	3,534	3,064	3,614	2,761	2,598	2,802	2,553	3,010	3,060
Percentage change.....	6.02	-4.85	15.10	-6.93	-13.30	17.95	-23.60	-5.90	7.85	-8.89	17.90	1.67
COMPUTER & ELECTRONIC PRODUCTS.....	2252	2868	2561	2302	2752	3897	4072	1210	1176	1278	1,385	1,455
Percentage change.....	95.15	27.35	-10.70	-10.11	19.55	41.61	4.49	-70.28	-2.81	8.67	8.37	5.07
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS.....	2,590	2,583	2,828	3,090	2,487	3,088	2,909	2,536	2,696	3,484	3,070	3,139
Percentage change.....	8.87	-0.27	9.49	9.26	-19.51	24.17	-5.80	-12.82	6.31	29.23	-11.88	2.24
MOTOR VEHICLES, BODIES & TRAILERS & PARTS.....	4,127	5,018	5,856	7,077	5,312	4,398	1,969	4,792	6,821	8,297	8,994	9,524
Percentage change.....	19.66	21.59	16.70	20.85	-24.94	-17.21	-55.23	143.37	42.34	21.64	8.40	5.89
OTHER TRANSPORTATION EQUIPMENT.....	671	893	946	805	751	631	423	495	540	455	369	377
Percentage change.....	-6.93	33.08	5.94	-14.90	-6.71	-15.98	-32.96	17.02	9.09	-15.74	-18.90	2.18
FURNITURE.....	1,028	990	905	849	826	651	471	423	404	426	456	463
Percentage change.....	-7.80	-3.70	-8.59	-6.19	-2.71	-21.19	-27.65	-10.19	-4.49	5.45	7.04	1.63
MISCELLANEOUS DURABLE GOODS.....	1,443	1,511	1,606	1,692	1,805	1,951	2,250	2,248	2,235	2,191	2,022	2,060
Percentage change.....	3.07	4.71	6.29	5.35	6.68	8.09	15.33	-0.09	-0.58	-1.97	-7.71	1.86
NONDURABLE GOODS.....	16,945	19,578	17,838	18,584	19,293	17,929	18,012	18,990	18,402	18,834	19,321	19,660
Percentage change.....	-4.43	15.54	-8.89	4.18	3.82	-7.07	0.46	5.43	-3.10	2.35	2.59	1.75
FOOD AND BEVERAGE & TOBACCO.....	5,388	6,014	5,938	6,585	7,369	6,779	6,912	7,120	6,761	6,769	6,501	6,652
Percentage change.....	-3.42	11.62	-1.26	10.90	11.91	-8.01	1.96	3.01	-5.04	0.12	-3.96	2.32

(CONTINUED ON NEXT PAGE)

Table 13: Tennessee Gross Domestic Product by Sector (millions of 2009 dollars)

January 2016

	Historical Data											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
TEXTILE MILLS & TEXTILE PRODUCT MILLS.....	675	725	618	668	582	615	421	369	295	332	455	448
Percentage change.....	-6.38	7.41	-14.76	8.09	-12.87	5.67	-31.54	-12.35	-20.05	12.54	37.05	-1.46
PAPER.....	2,285	2,402	2,462	2,746	2,348	2,385	2,590	2,709	2,452	2,610	2,683	2,731
Percentage change.....	1.78	5.12	2.50	11.54	-14.49	1.58	8.60	4.59	-9.49	6.44	2.80	1.79
PRINTING & RELATED SUPPORT.....	1,211	1,233	1,256	1,304	1,276	1,237	1,093	1,064	1,041	995	1,121	1,140
Percentage change.....	6.88	1.82	1.87	3.82	-2.15	-3.06	-11.64	-2.65	-2.16	-4.42	12.66	1.72
CHEMICALS.....	3,535	5,506	4,218	4,604	4,781	4,337	4,557	5,198	5,622	5,740	5,852	5,998
Percentage change.....	-17.64	55.76	-23.39	9.15	3.84	-9.29	5.07	14.07	8.16	2.10	1.95	2.49
PLASTICS & RUBBER.....	2,451	2,509	2,280	1,932	2,121	1,919	1,757	1,894	1,749	1,782	1,957	1,948
Percentage change.....	1.49	2.37	-9.13	-15.26	9.78	-9.52	-8.44	7.80	-7.66	1.89	9.82	-0.47
MISCELLANEOUS NONDURABLE GOODS.....	1,020	841	768	505	586	415	470	395	275	397	432	430
Percentage change.....	15.38	-17.55	-8.68	-34.24	16.04	-29.18	13.25	-15.96	-30.38	44.36	8.82	-0.37
TRADE, TRANSPORTATION, UTILITIES.....	48,398	50,717	52,831	54,084	53,733	52,319	47,471	49,142	49,883	50,770	50,708	51,765
Percentage change.....	6.09	4.79	4.17	2.37	-0.65	-2.63	-9.27	3.52	1.51	1.78	-0.12	3.20
WHOLESALE TRADE.....	16,648	17,765	18,420	19,025	19,537	19,414	16,467	16,740	16,876	17,612	17,935	18,426
Percentage change.....	7.32	6.71	3.69	3.28	2.69	-0.63	-15.18	1.66	0.81	4.36	1.83	2.74
RETAIL TRADE.....	18,926	19,307	20,139	20,156	19,928	18,871	18,229	18,805	18,909	19,184	18,864	19,202
Percentage change.....	7.40	2.01	4.31	0.08	-1.13	-5.30	-3.40	3.16	0.55	1.45	-1.67	1.79
TRANSPORTATION & UTILITIES.....	12,824	13,645	14,272	14,903	14,268	14,034	12,775	13,597	14,098	13,974	13,909	14,137
Percentage change.....	2.72	6.40	4.60	4.42	-4.26	-1.64	-8.97	6.43	3.68	-0.88	-0.47	1.64
INFORMATION.....	6,339	6,897	7,424	8,033	8,532	8,808	8,330	8,516	8,359	8,395	8,583	8,828
Percentage change.....	4.53	8.80	7.64	8.20	6.21	3.23	-5.43	2.23	-1.84	0.43	2.24	2.86
FINANCIAL ACTIVITIES.....	36,980	35,988	35,367	36,027	37,767	38,658	39,929	41,490	42,980	43,242	43,188	44,311
Percentage change.....	0.42	-2.68	-1.73	1.87	4.83	2.36	3.29	3.91	3.59	0.61	-0.12	2.60
PROFESSIONAL & BUSINESS SERVICES.....	24,214	25,269	25,285	25,374	25,656	27,151	25,606	26,821	27,840	30,019	30,649	31,896
Percentage change.....	3.96	4.36	0.06	0.35	1.11	5.83	-5.69	4.74	3.80	7.83	2.10	4.07
EDUCATION & HEALTH SERVICES.....	21,501	22,963	22,995	23,497	23,665	25,297	26,373	26,477	27,224	27,967	28,398	29,134
Percentage change.....	3.50	6.80	0.14	2.18	0.71	6.90	4.25	0.39	2.82	2.73	1.54	2.59
LEISURE & HOSPITALITY.....	11,047	11,341	11,330	11,608	11,606	11,020	10,285	10,541	10,936	11,292	11,260	11,602
Percentage change.....	3.80	2.66	-0.10	2.45	-0.02	-5.05	-6.67	2.49	3.75	3.26	-0.28	3.04
OTHER SERVICES.....	7,366	7,526	7,496	7,544	7,201	6,860	6,524	6,479	6,529	6,771	6,608	6,543
Percentage change.....	-2.96	2.17	-0.40	0.64	-4.55	-4.74	-4.90	-0.69	0.77	3.71	-2.41	-0.99
GOVERNMENT.....	30,991	31,023	32,163	32,082	30,235	32,123	32,417	30,570	31,473	32,517	32,264	32,279
Percentage change.....	-3.17	0.10	3.67	-0.25	-5.76	6.24	0.92	-5.70	2.95	3.32	-0.78	0.05
FEDERAL.....	9,579	9,245	8,507	8,496	8,457	7,859	7,790	7,738	7,647	7,573	7,876	7,722
Percentage change.....	-1.32	-3.49	-7.98	-0.13	-0.46	-7.07	-0.88	-0.67	-1.18	-0.97	4.00	-1.95
STATE & LOCAL.....	21,412	21,778	23,656	23,586	21,778	24,264	24,627	22,832	23,826	24,944	24,388	24,556
Percentage change.....	-3.98	1.71	8.62	-0.30	-7.67	11.42	1.50	-7.29	4.35	4.69	-2.23	0.69

Table 14: Tennessee Gross Domestic Product by Sector (millions of current dollars)

January 2016

	Historical Data											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
GROSS DOMESTIC PRODUCT.....	206,562	220,573	228,724	239,395	243,368	250,402	247,316	253,252	264,022	279,654	286,908	298,623
Percentage change.....	4.44	6.78	3.70	4.67	1.66	2.89	-1.23	2.40	4.25	5.92	2.59	4.08
NATURAL RESOURCES & MINING.....	1,796	2,098	2,150	2,369	2,097	2,590	2,676	2,894	3,297	3,135	3,811	3,855
Percentage change.....	17.54	16.82	2.48	10.19	-11.48	23.51	3.32	8.15	13.93	-4.91	21.56	1.17
CONSTRUCTION.....	8,132	8,719	9,581	10,571	10,956	10,030	9,066	8,832	9,123	9,767	9,867	10,454
Percentage change.....	3.11	7.22	9.89	10.33	3.64	-8.45	-9.61	-2.58	3.29	7.06	1.02	5.95
MANUFACTURING.....	36,987	41,192	41,088	42,256	40,282	40,068	38,639	38,898	40,805	45,296	46,913	48,671
Percentage change.....	5.11	11.37	-0.25	2.84	-4.67	-0.53	-3.57	0.67	4.90	11.01	3.57	3.75
DURABLE GOODS.....	22,764	25,106	25,800	26,011	23,410	23,536	20,627	19,878	21,865	24,753	25,418	26,555
Percentage change.....	12.43	10.29	2.76	0.82	-10.00	0.54	-12.36	-3.63	10.00	13.21	2.69	4.48
WOOD PRODUCTS.....	735	893	942	907	887	834	603	631	626	664	654	674
Percentage change.....	-6.37	21.50	5.49	-3.72	-2.21	-5.98	-27.70	4.64	-0.79	6.07	-1.51	3.11
NONMETALLIC MINERAL PRODUCTS.....	1,283	1,401	1,333	1,316	1,307	1,039	875	929	999	1,060	1,055	1,080
Percentage change.....	11.66	9.20	-4.85	-1.28	-0.68	-20.50	-15.78	6.17	7.53	6.11	-0.47	2.39
PRIMARY METALS.....	892	1,305	1,433	1,672	1,401	1,410	767	1,105	1,437	1,484	1,376	1,357
Percentage change.....	-21.13	46.30	9.81	16.68	-16.21	0.64	-45.60	44.07	30.05	3.27	-7.28	-1.35
FABRICATED METAL PRODUCTS.....	3,016	3,462	3,474	3,706	3,696	3,356	3,527	3,491	3,361	3,623	3,503	3,652
Percentage change.....	5.71	14.79	0.35	6.68	-0.27	-9.20	5.10	-1.02	-3.72	7.80	-3.31	4.26
MACHINERY.....	3,107	2,857	3,359	3,116	2,746	3,234	2,761	2,483	2,651	2,530	3,121	3,225
Percentage change.....	5.29	-8.05	17.57	-7.23	-11.87	17.77	-14.63	-10.07	6.77	-4.56	23.36	3.32
COMPUTER & ELECTRONIC PRODUCTS.....	3,655	4,245	3,515	2,866	3,086	4,010	4,072	1,178	1,105	1,187	1,297	1,325
Percentage change.....	75.13	16.14	-17.20	-18.46	7.68	29.94	1.55	-71.07	-6.20	7.42	9.27	2.14
ELECTRICAL EQUIPMENT, APPLIANCES & COMPONENTS.....	2,169	2,118	2,358	2,636	2,211	2,829	2,909	2,470	2,593	3,558	3,203	3,343
Percentage change.....	5.70	-2.35	11.33	11.79	-16.12	27.95	2.83	-15.09	4.98	37.22	-9.98	4.36
MOTOR VEHICLES, BODIES & TRAILERS & PARTS.....	4,983	5,734	6,188	6,673	4,877	3,775	1,969	4,463	5,945	7,541	8,264	8,850
Percentage change.....	16.86	15.07	7.92	7.84	-26.91	-22.60	-47.84	126.66	33.21	26.85	9.59	7.09
OTHER TRANSPORTATION EQUIPMENT.....	581	790	862	754	709	596	423	494	545	470	392	410
Percentage change.....	-3.17	35.97	9.11	-12.53	-5.97	-15.94	-29.03	16.78	10.32	-13.76	-16.60	4.56
FURNITURE.....	895	818	773	729	734	578	471	405	386	423	453	468
Percentage change.....	-8.30	-8.60	-5.50	-5.69	0.69	-21.25	-18.51	-14.01	-4.69	9.59	7.09	3.23
MISCELLANEOUS DURABLE GOODS.....	1,448	1,483	1,563	1,636	1,756	1,875	2,250	2,229	2,217	2,213	2,100	2,172
Percentage change.....	3.50	2.42	5.39	4.67	7.33	6.78	20.00	-0.93	-0.54	-0.18	-5.11	3.44
NONDURABLE GOODS.....	14,223	16,086	15,288	16,245	16,872	16,532	18,012	19,020	18,940	20,543	21,495	22,116
Percentage change.....	-4.82	13.10	-4.96	6.26	3.86	-2.02	8.95	5.60	-0.42	8.46	4.63	2.89
FOOD AND BEVERAGE & TOBACCO.....	4,642	5,010	5,036	5,442	6,060	6,052	6,912	7,010	6,503	7,019	6,932	7,263
Percentage change.....	-4.80	7.93	0.52	8.06	11.36	-0.13	14.21	1.42	-7.23	7.93	-1.24	4.78

(CONTINUED ON NEXT PAGE)

Table 14: Tennessee Gross Domestic Product by Sector (millions of current dollars)

January 2016

	Historical Data											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
TEXTILE MILLS & TEXTILE PRODUCT MILLS.....	609	645	576	636	553	572	421	369	332	358	486	475
Percentage change.....	-13.25	5.91	-10.70	10.42	-13.05	3.44	-26.40	-12.35	-10.03	7.83	35.75	-2.32
APPAREL & LEATHER PRODUCTS.....	415	371	311	246	231	239	212	235	203	206	316	306
Percentage change.....	-18.79	-10.60	-16.17	-20.90	-6.10	3.46	-11.30	10.85	-13.62	1.48	53.40	-3.06
PAPER.....	1,857	1,894	1,971	2,334	2,040	2,171	2,590	2,806	2,537	2,693	2,925	3,040
Percentage change.....	-2.26	1.99	4.07	18.42	-12.60	6.42	19.30	8.34	-9.59	6.15	8.61	3.94
PRINTING & RELATED SUPPORT.....	1,192	1,203	1,258	1,350	1,307	1,222	1,093	1,039	973	922	1,040	1,068
Percentage change.....	6.33	0.92	4.57	7.31	-3.19	-6.50	-10.56	-4.94	-6.35	-5.24	12.80	2.67
CHEMICALS.....	727	690	860	651	821	548	470	521	551	848	785	820
Percentage change.....	38.48	-5.09	24.64	-24.30	26.11	-33.25	-14.23	10.85	5.76	53.90	-7.43	4.41
PLASTICS & RUBBER.....	2,694	4,216	3,367	3,806	3,962	3,983	4,557	5,205	6,089	6,624	6,927	7,025
Percentage change.....	-16.00	56.50	-20.14	13.04	4.10	0.53	14.41	14.22	16.98	8.79	4.57	1.41
MISCELLANEOUS NONDURABLE GOODS.....	2,087	2,057	1,909	1,780	1,898	1,745	1,757	1,835	1,752	1,873	2,084	2,119
Percentage change.....	-0.67	-1.44	-7.19	-6.76	6.63	-8.06	0.69	4.44	-4.52	6.91	11.27	1.69
TRADE, TRANSPORTATION, UTILITIES.....	41,117	44,015	47,012	49,584	50,417	50,336	47,471	49,691	51,450	53,880	54,604	56,848
Percentage change.....	6.09	7.05	6.81	5.47	1.68	-0.16	-5.69	4.68	3.54	4.72	1.34	4.11
WHOLESALE TRADE.....	13,433	14,777	15,722	16,806	17,620	18,063	16,467	17,137	17,679	19,024	19,551	20,575
Percentage change.....	6.21	10.01	6.40	6.89	4.84	2.51	-8.84	4.07	3.16	7.61	2.77	5.24
RETAIL TRADE.....	16,634	17,306	18,478	19,034	19,342	18,647	18,229	18,950	19,436	20,249	20,108	20,732
Percentage change.....	6.76	4.04	6.77	3.01	1.62	-3.59	-2.24	3.96	2.56	4.18	-0.70	3.10
TRANSPORTATION & UTILITIES.....	11,050	11,932	12,812	13,744	13,455	13,626	12,775	13,604	14,335	14,607	14,945	15,541
Percentage change.....	4.95	7.98	7.38	7.27	-2.10	1.27	-6.25	6.49	5.37	1.90	2.31	3.99
INFORMATION.....	6,812	7,357	7,722	8,220	8,614	8,801	8,330	8,464	8,273	8,317	8,568	8,817
Percentage change.....	4.35	8.00	4.96	6.45	4.79	2.17	-5.35	1.61	-2.26	0.53	3.02	2.90
FINANCIAL ACTIVITIES.....	33,976	33,843	33,976	35,388	37,774	39,067	39,929	41,778	43,818	45,276	46,390	48,619
Percentage change.....	3.04	-0.39	0.39	4.16	6.74	3.42	2.21	4.63	4.88	3.33	2.46	4.81
PROFESSIONAL & BUSINESS SERVICES.....	20,394	22,162	22,784	23,695	25,012	26,784	25,606	26,957	28,216	30,826	31,928	33,779
Percentage change.....	5.33	8.67	2.81	4.00	5.56	7.08	-4.40	5.28	4.67	9.25	3.57	5.80
EDUCATION & HEALTH SERVICES.....	17,900	19,716	20,348	21,316	22,356	24,393	26,373	27,077	28,225	29,538	30,334	31,611
Percentage change.....	6.83	10.15	3.21	4.76	4.88	9.11	8.12	2.67	4.24	4.65	2.69	4.21
LEISURE & HOSPITALITY.....	8,898	9,339	9,705	10,303	10,737	10,524	10,285	10,542	10,921	11,703	11,975	12,599
Percentage change.....	5.34	4.96	3.92	6.16	4.21	-1.98	-2.27	2.50	3.60	7.16	2.32	5.21
OTHER SERVICES.....	5,803	6,116	6,339	6,639	6,595	6,533	6,524	6,649	6,856	7,301	7,326	7,439
Percentage change.....	-0.19	5.39	3.65	4.73	-0.66	-0.94	-0.14	1.92	3.11	6.49	0.34	1.54
GOVERNMENT.....	24,747	26,016	28,019	29,054	28,528	31,276	32,417	31,470	33,038	34,615	35,192	35,930
Percentage change.....	0.86	5.13	7.70	3.69	-1.81	9.63	3.65	-2.92	4.98	4.77	1.67	2.10
FEDERAL.....	7,857	7,956	7,638	7,862	8,117	7,714	7,790	8,028	8,124	8,051	8,564	8,537
Percentage change.....	3.81	1.26	-3.99	2.93	3.24	-4.96	0.98	3.06	1.20	-0.90	6.38	-0.32
STATE & LOCAL.....	16,890	18,060	20,381	21,192	20,411	23,562	24,627	23,442	24,914	26,564	26,628	27,394
Percentage change.....	-0.46	6.93	12.85	3.98	-3.69	15.44	4.52	-4.81	6.28	6.62	0.24	2.88

Center for Business and Economic Research, University of Tennessee

Tennessee Econometric Model

