The Economic Expansion Continues After 10 Years

William F. Fox, Director
October 22, 2019
The Current Expansion is the Longest in History

[Bar chart showing the duration of various economic expansions, with the current expansion highlighted in a darker color.]
GDP growth accelerated in 2018, but is reverting to trend
Consumers are Driving the Expansion
Light Vehicle Sales are Already Slowing
<table>
<thead>
<tr>
<th></th>
<th>Tennessee Employment</th>
<th>Share</th>
<th>U.S. Employment</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Employment</td>
<td>2,930,932</td>
<td>100.0%</td>
<td>143,859,855</td>
<td>100.0%</td>
</tr>
<tr>
<td>Vehicle Manufacturing</td>
<td>72,507</td>
<td>2.47%</td>
<td>1,023,674</td>
<td>0.71%</td>
</tr>
<tr>
<td>Vehicle Support</td>
<td>118,993</td>
<td>4.06%</td>
<td>5,425,489</td>
<td>3.77%</td>
</tr>
<tr>
<td>Motor Vehicle Operators &amp; Other On-the-Job Drivers</td>
<td>291,000</td>
<td>9.93%</td>
<td>16,571,180</td>
<td>11.52%</td>
</tr>
<tr>
<td>Total, Vehicle-Related</td>
<td>482,500</td>
<td>16.46%</td>
<td>23,020,343</td>
<td>16.00%</td>
</tr>
</tbody>
</table>

Percentage of total U.S. population, by age group

First projection year is 2016, at which point lines are dotted.
Population 65 Years and Older, 2017

U.S. Average: 15.6%

Population percentages:
- Less than 15.6%
- 15.6% to 16.9%
- 17.0% to 18.9%
- 19.0% to 19.7%
- Greater than 19.7%
Birth rates are Particularly low for Mothers Under 30 (Birth rates per thousand by mother age)

<table>
<thead>
<tr>
<th>Age Band</th>
<th>2007 Birth Rate Per Thousand</th>
<th>2016 Birth Rate Per Thousand</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-19</td>
<td>42.5</td>
<td>18.8</td>
</tr>
<tr>
<td>18-19</td>
<td>73.9</td>
<td>35.1</td>
</tr>
<tr>
<td>20-24</td>
<td>106.3</td>
<td>71.0</td>
</tr>
<tr>
<td>25-29</td>
<td>117.5</td>
<td>98.0</td>
</tr>
<tr>
<td>30-34</td>
<td>99.9</td>
<td>100.3</td>
</tr>
<tr>
<td>35-39</td>
<td>47.5</td>
<td>52.3</td>
</tr>
<tr>
<td>40-44</td>
<td>9.5</td>
<td>11.6</td>
</tr>
</tbody>
</table>

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Household Formation has Slowed Dramatically

All Housing Units (in millions)

Housing Sales Rising but Low for an Expansion

[Graph showing trends in existing home sales and housing starts from 1991 to 2019.]

- **Existing Home Sales**
- **Housing Starts**

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E-Commerce Sales are Growing Very Rapidly

![Graph showing the growth of e-commerce sales from 2000 to 2016, with separate bars for B2B and B2C transactions.](http://cber.haslam.utk.edu)
Sales Tax Growth Rates by Category
(Quarter Ending August 2018 Quarter Ending August 2019, year-over-year)

- TOTAL SERVICES
- Eating and Drinking Places
- Apparel and Accessory Stores
- Misc Retail Stores
- Auto Dealers and Service Stations
- Furniture and Home Furnishings
- General Merchandise & Food Stores
- Building Materials

Growth rate
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Investment has Responded Modestly to Tax Reform and Economic Growth
Deficits Rise Rapidly in the Future (billions)

Source: IHS

2004, $413
2009, $1,416
2018, $779
2019, $1,038
2024, $1,120
2029, $1,457

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The United States Is on Pace to Lead the World in Debt Increase as a Percentage of GDP

SOURCE: International Monetary Fund, World Economic Outlook, April 2019.

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Aging Society and Interest Costs Raise Federal Spending from 21% to 28% of GDP in 2049

Source: Congressional Budget Office, *The 2019 Long-Term Budget Outlook*, June, 2019, Figure 1-2.
Interest Rates are Falling and Inflation Has Stabilized
The Yield Curve Has Flattened

October 18, 2019

October 18, 2018

Interest Rate, in Percent

3-Months 6-Months 1-Year 2-Years 5-Years 10-Years

3.17 3.03 2.87 2.67 2.47 2.32

1.74 1.56 1.58 1.59 1.62 1.66

0 0.5 1 1.5 2 2.5 3 3.5

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TN Employment has Generally Grown Faster than the Nation during the Expansion

Percentage Change, Same Month Last Year

-8.0 -6.0 -4.0 -2.0 0.0 2.0 4.0

Tennessee
U.S.

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Tennessee Unemployment Rate is Historically Low

The graph shows the unemployment rate for Tennessee and the U.S. from September 2005 to September 2019. The unemployment rate for Tennessee in September 2019 was 3.4%, and for the U.S. it was 3.5%. The graph indicates a general decrease in unemployment rates over the years for both Tennessee and the U.S.
Labor Force Participation Rates Show Signs of a Turnaround


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Full Recovery from the Great Recession in Most TN Sectors
(Tennessee, September 2019 as a Share of December 2007)

- Professional & Business Services: 129.1%
- Leisure & Hospitality: 127.8%
- Education & Health Services: 124.0%
- Financial Activities: 116.0%
- Other Services: 114.3%
- Total Nonfarm: 111.3%
- Government: 105.1%
- Trade, Transportation, Utilities: 103.8%
- Manufacturing: 97.0%
- Mining, Logging, Construction: 93.3%
- Information: 91.8%

Nashville has Dominated TN Employment Growth, 2007-2018

- Nashville: 2.50%
- TN: 1.00%
- U.S: 0.50%
- Knoxville: 0.25%
- Chattanooga: 0.25%
- Memphis: 0.00%

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Tennessee Population Growth Fastest around Nashville, 1990–2018

Tennessee: 1.17%
United States: 0.97%

*compound annual growth rate
TN Per Capita Income has Been Falling as a Percent of the U.S.
Per Capita Personal Income Falling in Most Parts of the State, but not Nashville
Tennesseans Have Lower Educational Attainment Levels

High school graduates or higher

<table>
<thead>
<tr>
<th>Year</th>
<th>TN</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>84.0</td>
<td>80.9</td>
</tr>
<tr>
<td>2012</td>
<td>83.9</td>
<td>84.0</td>
</tr>
<tr>
<td>2017</td>
<td>86.5</td>
<td>87.3</td>
</tr>
</tbody>
</table>

Bachelor’s degree or higher

<table>
<thead>
<tr>
<th>Year</th>
<th>TN</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>21.7</td>
<td>27.0</td>
</tr>
<tr>
<td>2012</td>
<td>23.5</td>
<td>28.5</td>
</tr>
<tr>
<td>2017</td>
<td>26.1</td>
<td>30.9</td>
</tr>
</tbody>
</table>

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Return to Education is Very High in Tennessee
(Average Full-Time Income of Tennessee Students 5 Years After Graduation)


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Tennessee 9th Grade Pipeline

For every 100 ninth-graders in Tennessee:

- 86 graduate high school in four years
- 56 enroll in a postsecondary institution
- 23 graduate college within six years of high school
Tennessee Tax Revenues are Falling Relative to the Economy

[Graph showing the trends in Tennessee tax revenues and their share of personal income over time.]
TN S & L Tax Revenue as a Share of the Economy is one of the Lowest in the Nation

United States = 10.3%
Tennessee = 8.0%

- 8.0% or less (4)
- 8.0% to 10.0% (21)
- 10.0% to 12.9% (23)
- 13.0% and greater (3)

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