

Tennessee and US Economy Rebounded from the Covid Recession, But?

Presented to

TGFOA

September 30, 2021

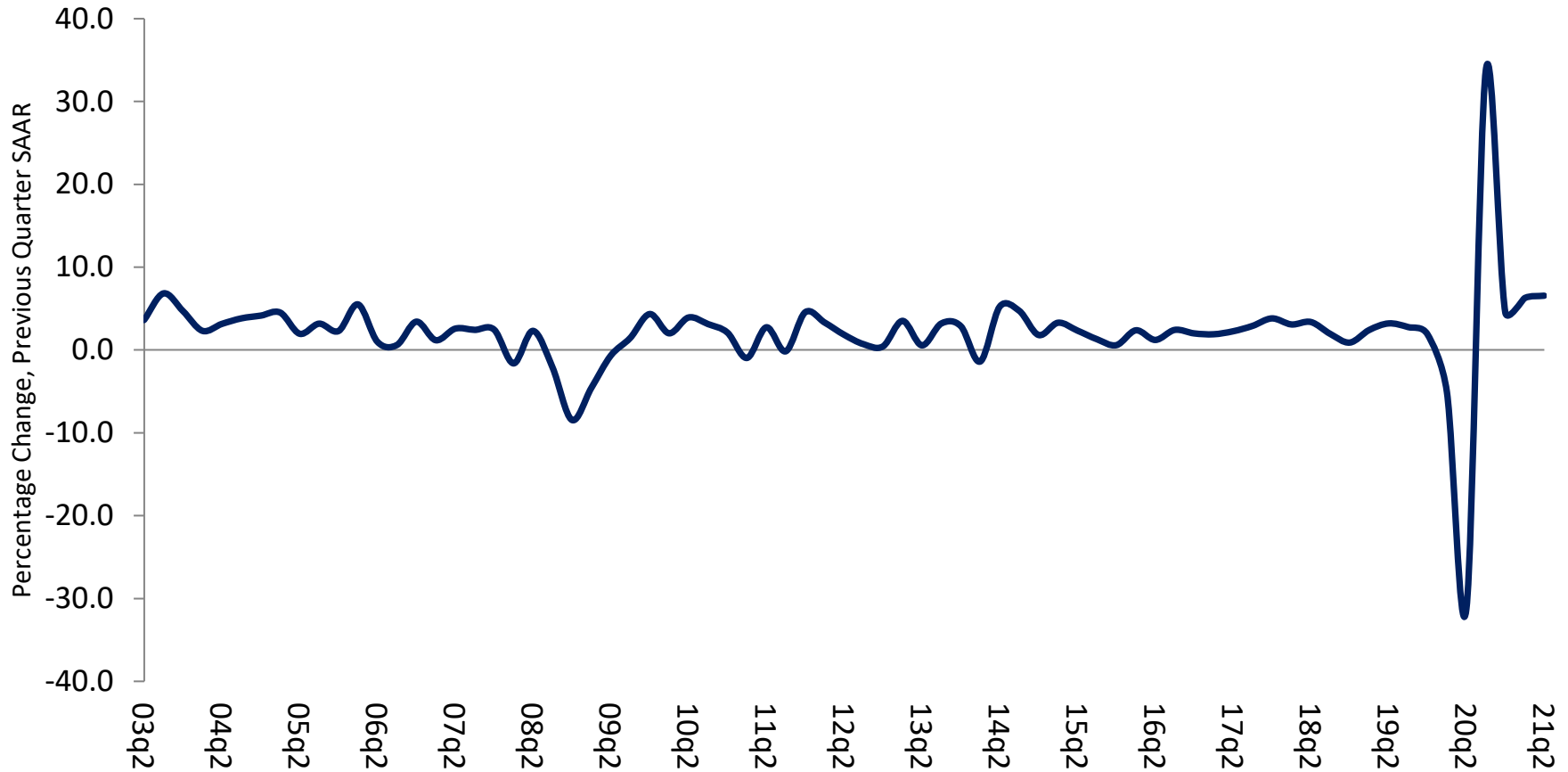
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THE UNIVERSITY OF
TENNESSEE
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BOYD CENTER FOR BUSINESS
AND ECONOMIC RESEARCH

GDP Growth Fell Dramatically due to the Pandemic, but Quickly Recovered to Pre-Pandemic Levels

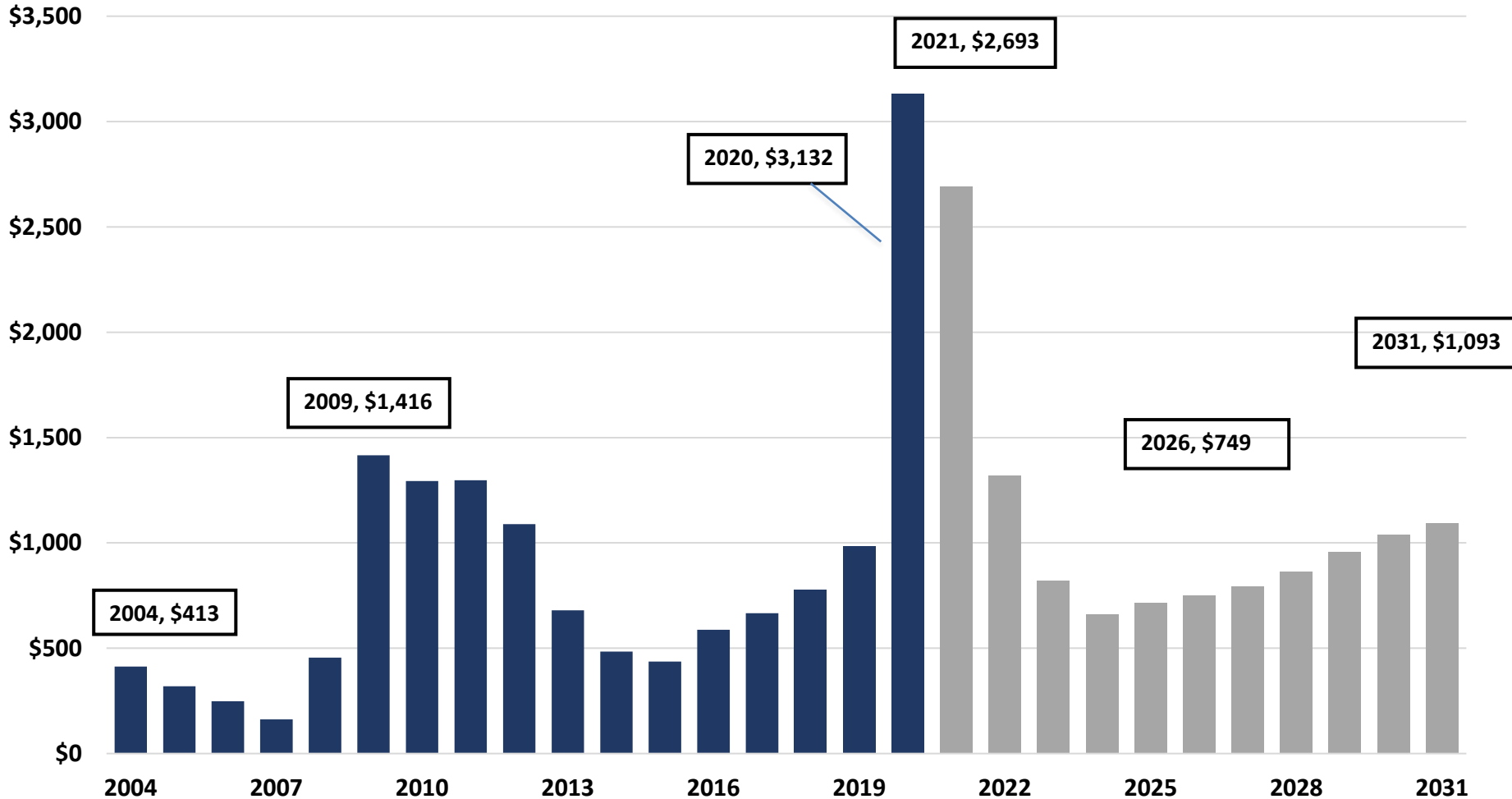


Unprecedented Fiscal Stimulus Exceeds \$5 trillion and Continues at Least through 2025, though waning. Is more to come?

Relief Package	Date Enacted	Cost in Billions of Dollars
Coronavirus Preparedness and Response Supplemental Appropriations Act	March 6, 2020	\$7.8
Families First Coronavirus Response Act	March 18, 2020	\$192
The Coronavirus Aid, Relief, and Economic Security (CARES) Act	March 27, 2020	\$2,000
Paycheck Protection Program and Health Care Enhancement Act	April 24, 2020	\$483
Consolidated Appropriations Act, 2021	December 27, 2020	\$868
American Rescue Plan	March 11, 2021	\$1,900

Source: Peter G. Peterson Foundation

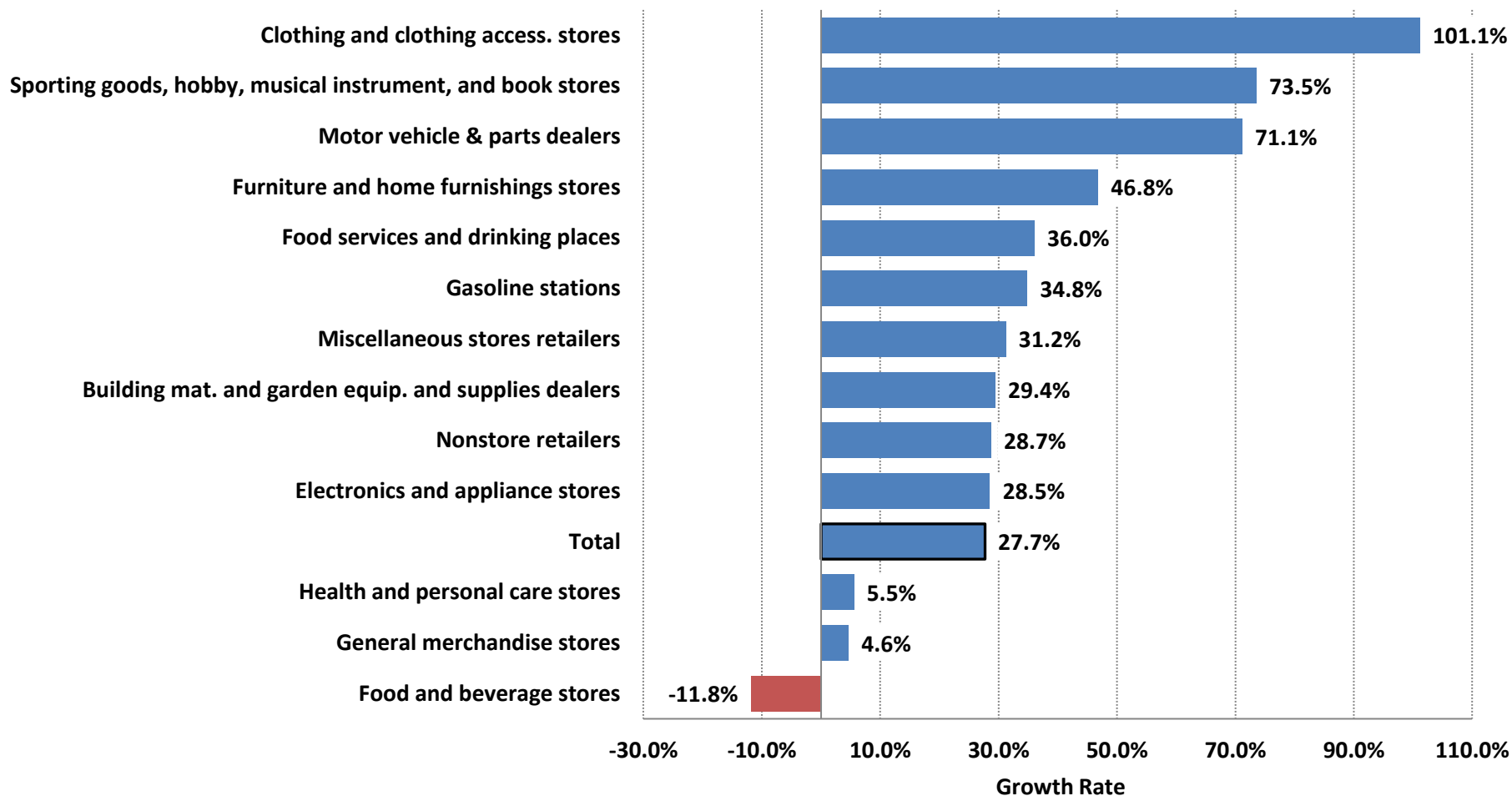
Deficits Are at Historic Levels and will Remain High



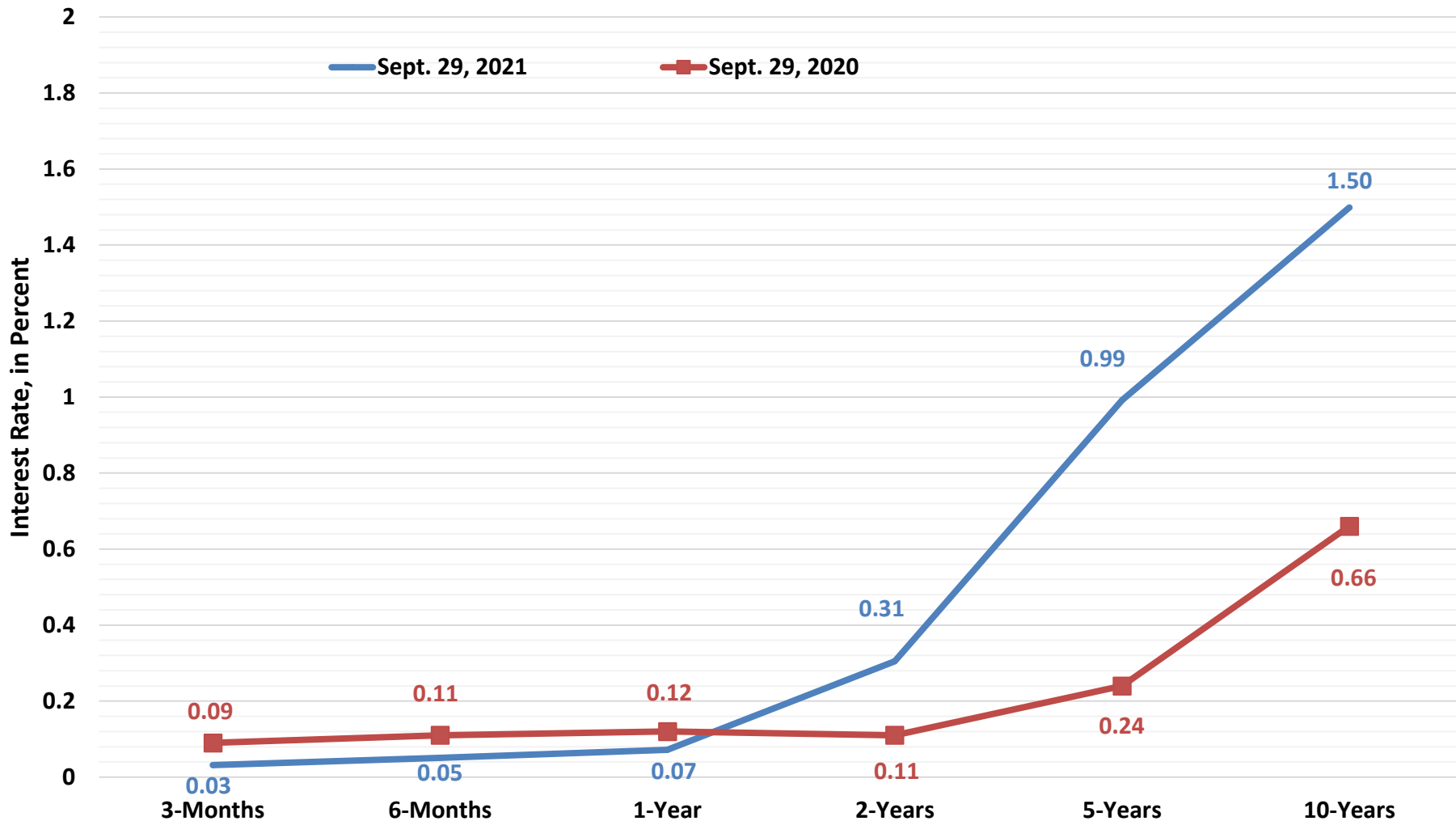
Source: IHS

Retail Sales Response Differs Widely by Category

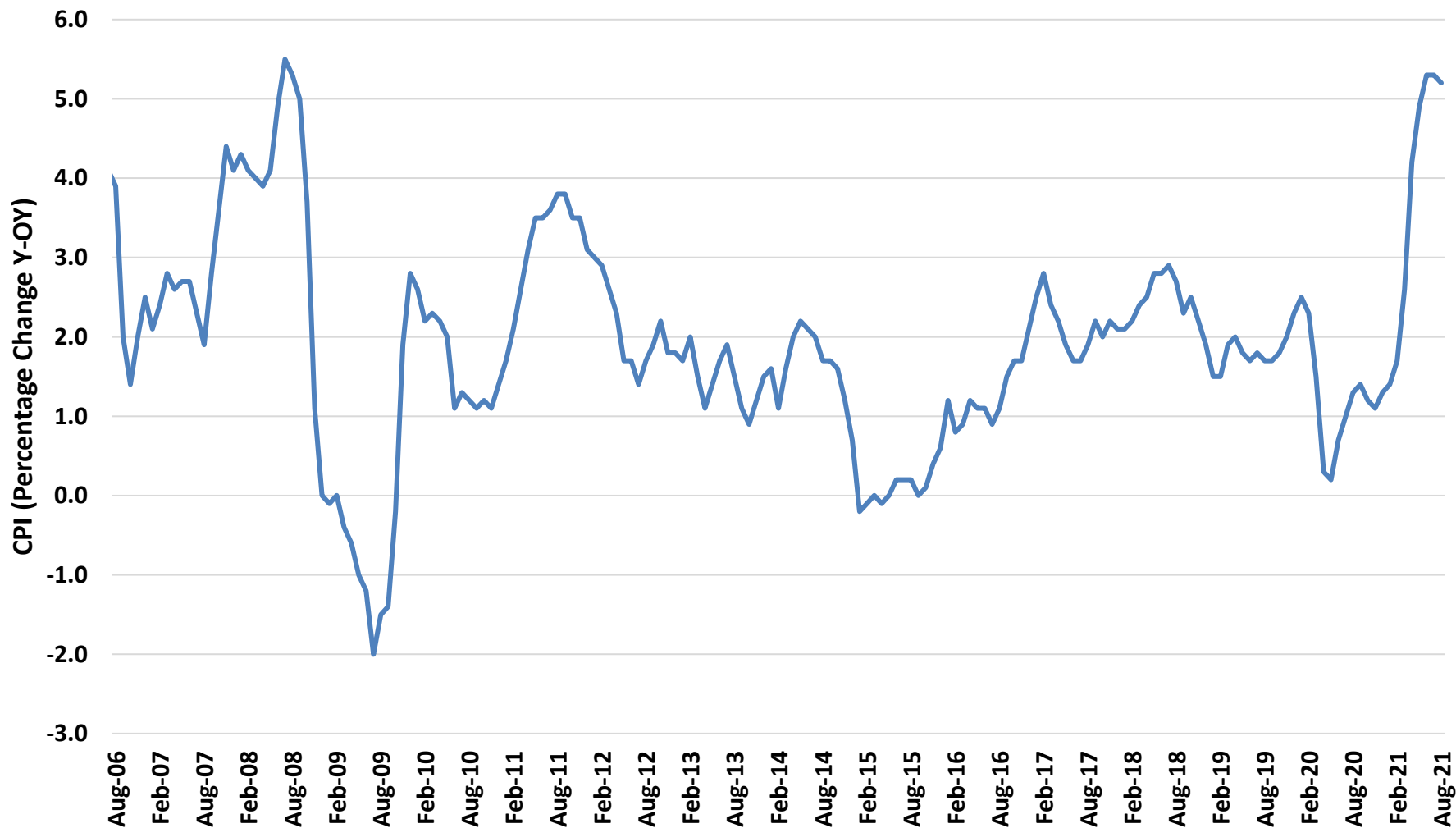
(March Year over Year Change)



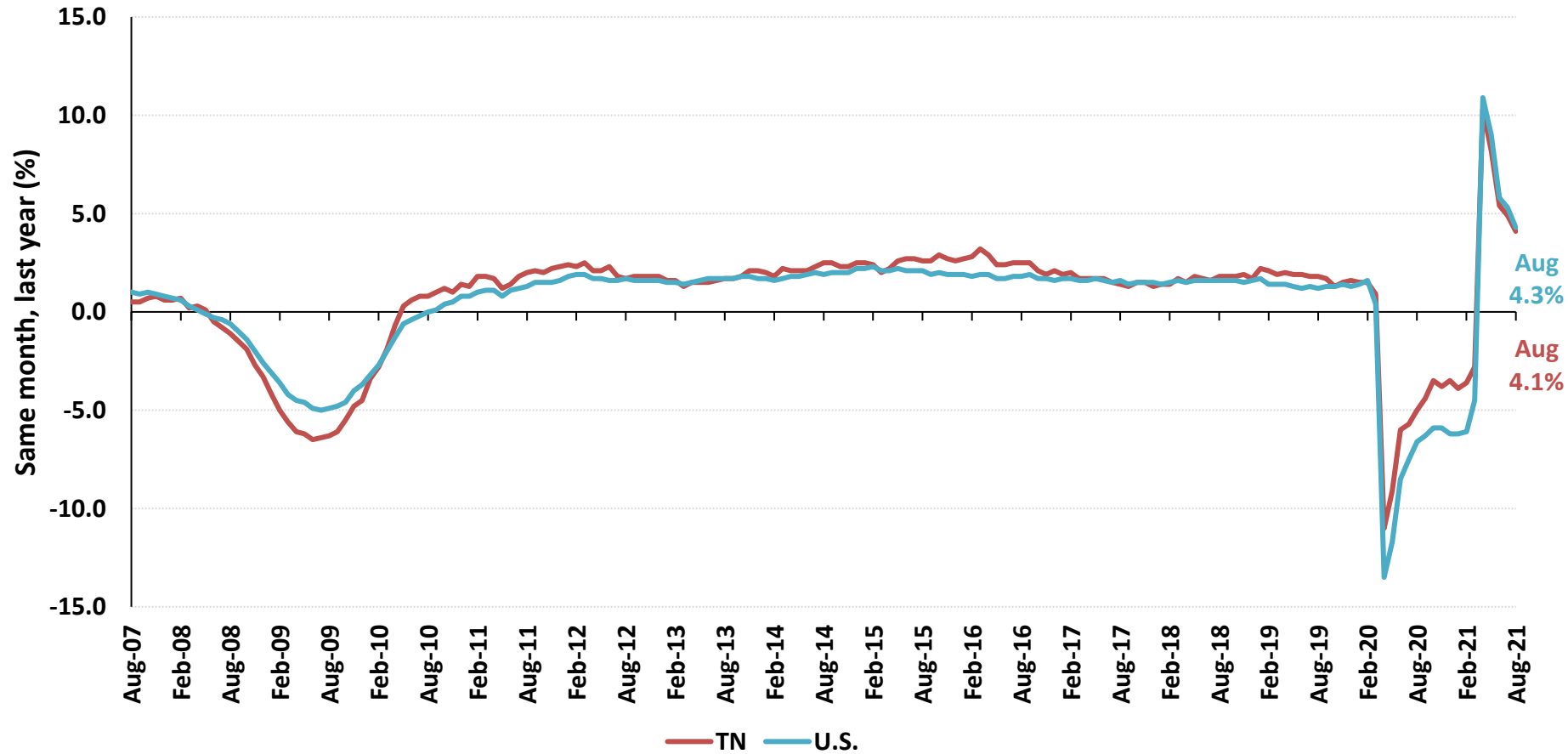
Medium Term Yield Curve has Become Much Steeper in Recent Months (days)



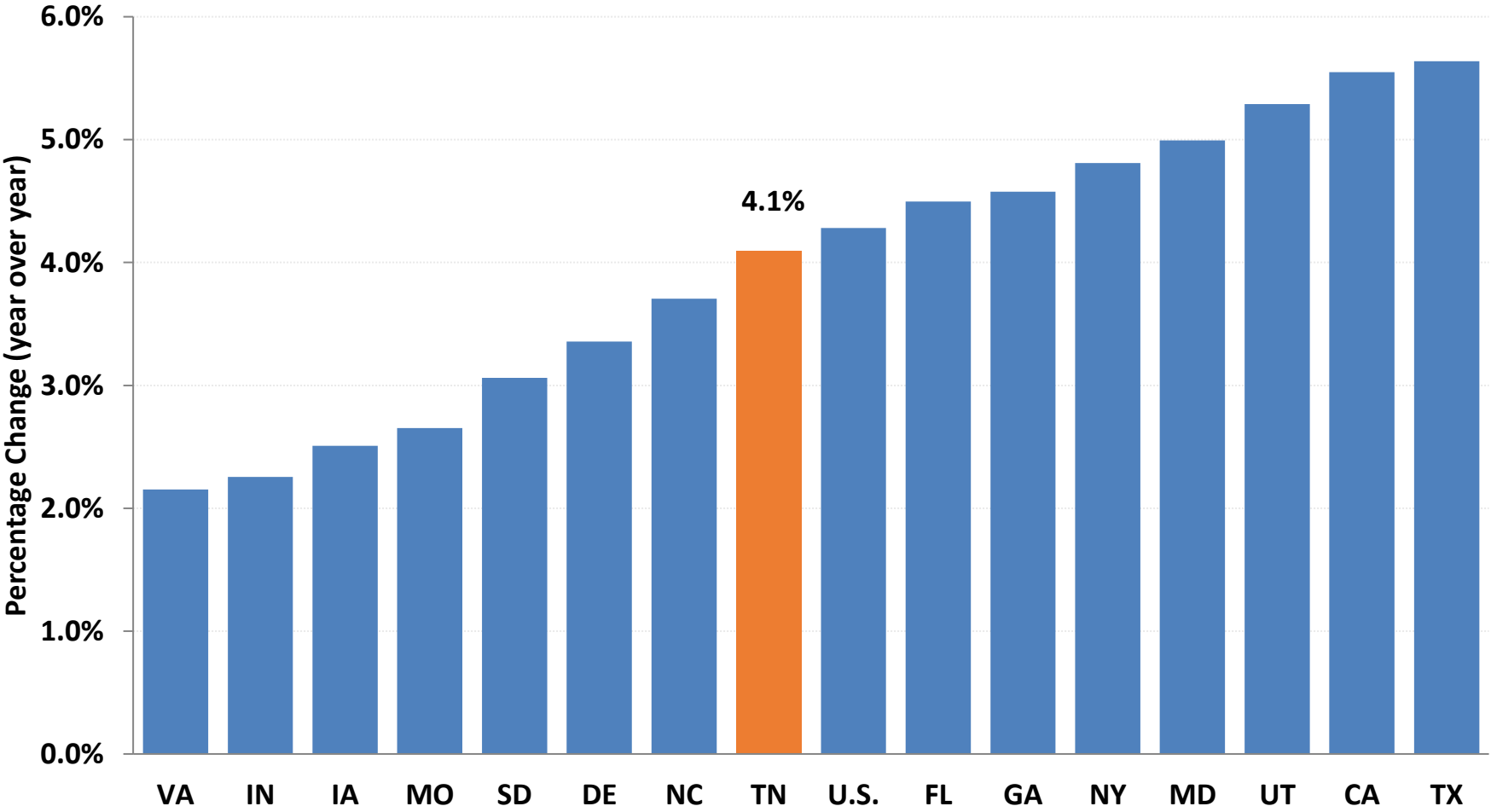
Inflation has been much Higher over Past Six Months – Is it Transitory?



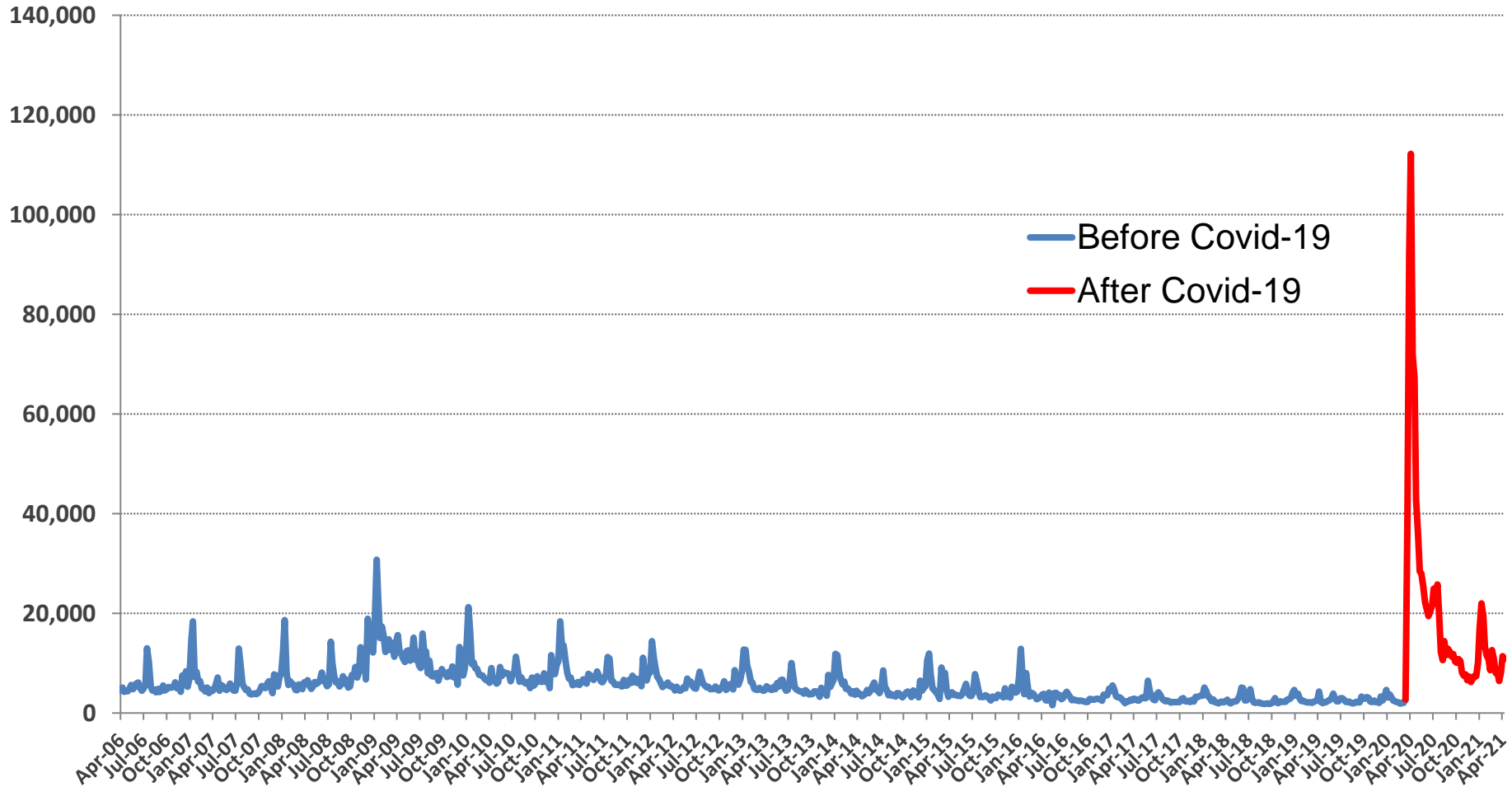
Tennessee seeing similar job gains as the nation, but smaller losses last year



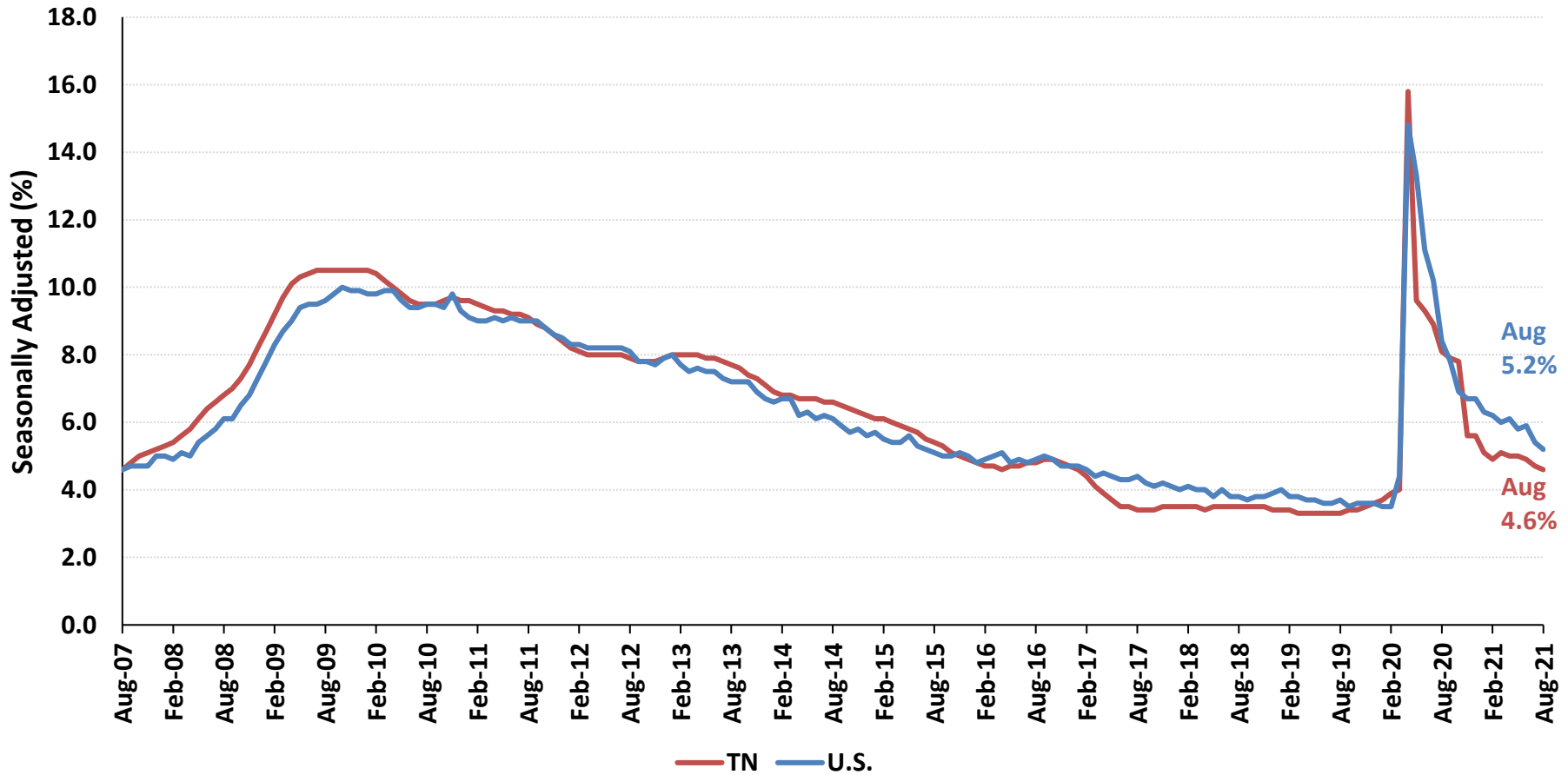
Large Cross State Differences in Job Gains over the Past Year



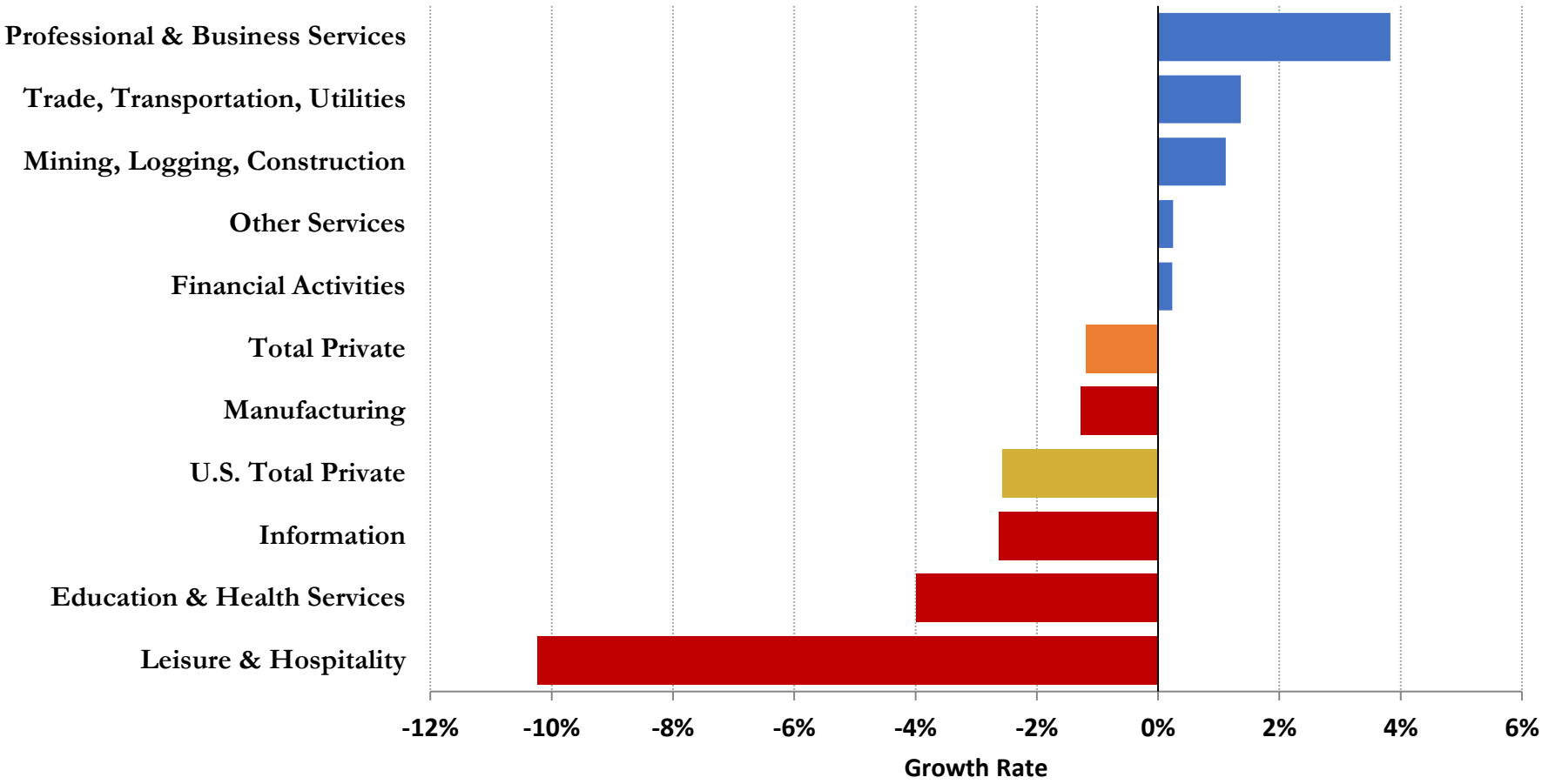
Unemployment Insurance Claims Were Huge on Historical Standards



TN Unemployment Rate Notably Below the US

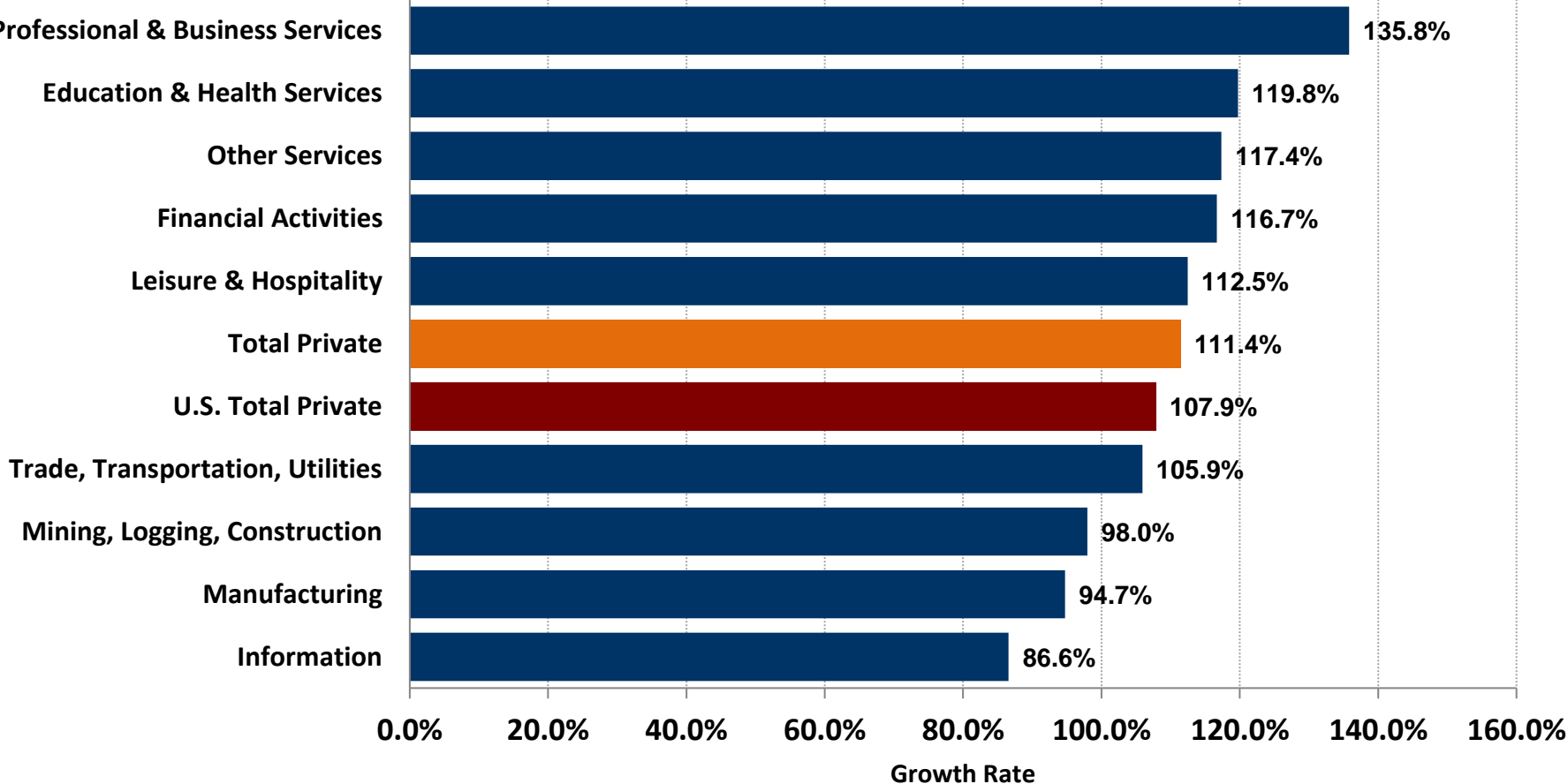


Tennessee Employment Impacted Very Differently by Sector: August 2019-2021

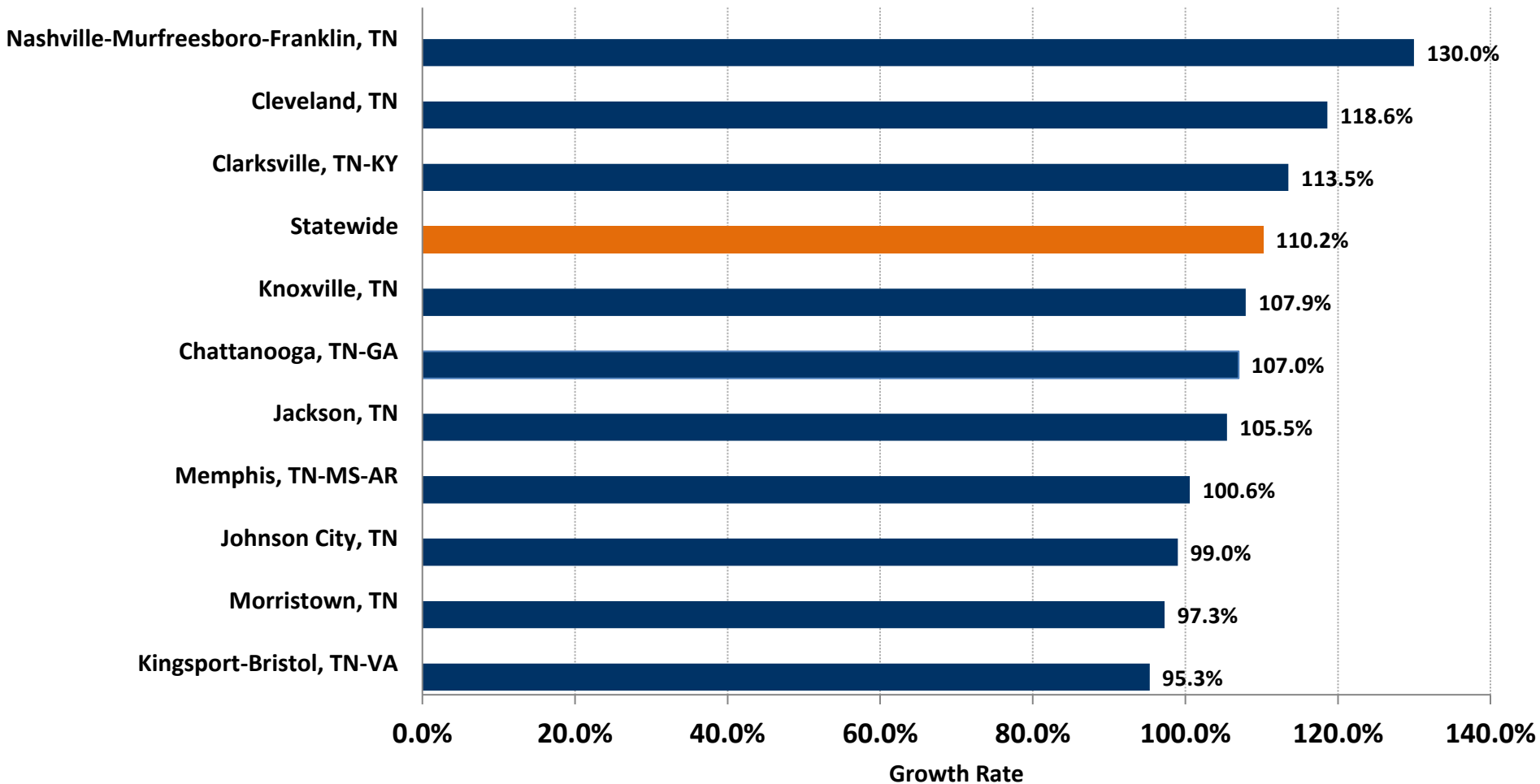


Full Recovery from the Great Recession in Most TN Sectors

(Tennessee, August 2021 as a Share of December 2007)



Long Term Employment Growth Differs Dramatically Across Tennessee (Growth Since Great Recession)



Some Trends Accelerated by COVID 19

- Many retail and restaurant job losses are permanent as businesses right size themselves – Best Buy laid off 5000
- Retail space falls and fulfillment space grows as online and pick up purchasing doesn't retreat
- Firms are learning new ways to use technology
 - Teleoffice and telemedicine - Acceptability of remote work has expanded
 - Replacing workers with technology – remote cleaning and disinfecting, drones; AI generally
- Still, reduction in modest skilled workers in the labor force, and the problem does not go away

Retail Bankruptcies in 2020 & 2021

Retailer	Merchant Type	Current Rank*	Date of Bankruptcy	Additional Brands
Schurman Fine Paper Corp.	Consumer Brand Manufacturer	482	January 23, 2020	Papyrus, American Greetings, Blue Mountain, Card store, Just Wink
Pier 1 Imports	Retail Chain	99	February 17, 2020	NA
Art Van Furniture	Retail Chain	473	March 8, 2020	NA
Bluestern Brands	Catalog/Call center	57	March 10, 2020	Fingerhut, Gettington.com, Blair, Haband
Modell's Sporting Goods	Retail Chain	1312	March 11, 2020	NA
True Religion	Consumer Brand Manufacturer	898	April 13, 2020	NA
J.Crew	Retail Chain	47	May 4, 2020	J. Crew Group, J. Crew Factory, Madewell
J. Hilburn Inc.	Consumer Brand Manufacturer	316	May 4, 2020	NA
Neiman Marcus	Retail Chain	41	May 7, 2020	Bergdorf Goodman, Horchow, MyThersa.com, Neiman Marcus Last Call
Stage Stores Inc.	Retail Chain	737	May 10, 2020	Palais Royal, Bealls, Gordmans
J.C.Penney	Retail Chain	32	May 15, 2020	NA
Roots Corp.**	Consumer Brand Manufacturer	579	June 10, 2020	NA
GNC Holdings	Retail Chain	287	June 24, 2020	Lucky Vitamin, DiscountSupplements.com
Lucky Brand	Consumer Brand Manufacturer	625	July 3, 2020	NA
G-Star RAW	Consumer Brand Manufacturer	183 [^]	July 3, 2020	NA
Brooks Brothers	Consumer Brand Manufacturer	162	July 8, 2020	NA
Sur La Table	Retail Chain	238	July 8, 2020	NA
New York & Co.	Retail Chain	184	July 13, 2020	Parent company that filed: RTW Retailwinds.
Ascena Retail Group	Retail Chain	38	July 23, 2020	Ann Taylor, Dressbarn, Justice, Lane Bryant, Lou & Grey, Catherines, Loft, Loft Outlet, Ash & Erie
Tailored Brands	Retail Chain	150	August 2, 2020	The Men's Warehouse, Jos. A. Bank
Le Tote	Web Only^^	835	August 2, 2020	Lord & Taylor
Stein Mart	Retail Chain	N/A	August 12, 2020	N/A
Century 21	Retail Chain	N/A	September 10, 2020	N/A
Guitar Center	Retail Chain	N/A	November 23, 2020	N/A
Francesca's	Retail Chain	N/A	December 4, 2020	N/A
Christophe & Banks Corp	Retail Chain	535	January 14, 2021	N/A
Belk	Retail Chain	N/A	February 24, 2021	N/A
Paper Source	Retail Chain	N/A	March 2, 2021	N/A
The Collected Group	Retail Chain	N/A	April 5, 2021	N/A
Alex and Ani	Retail Chain	N/A	June 9, 2021	N/A

*Digital Commerce 360 Top and Next 1000 rank

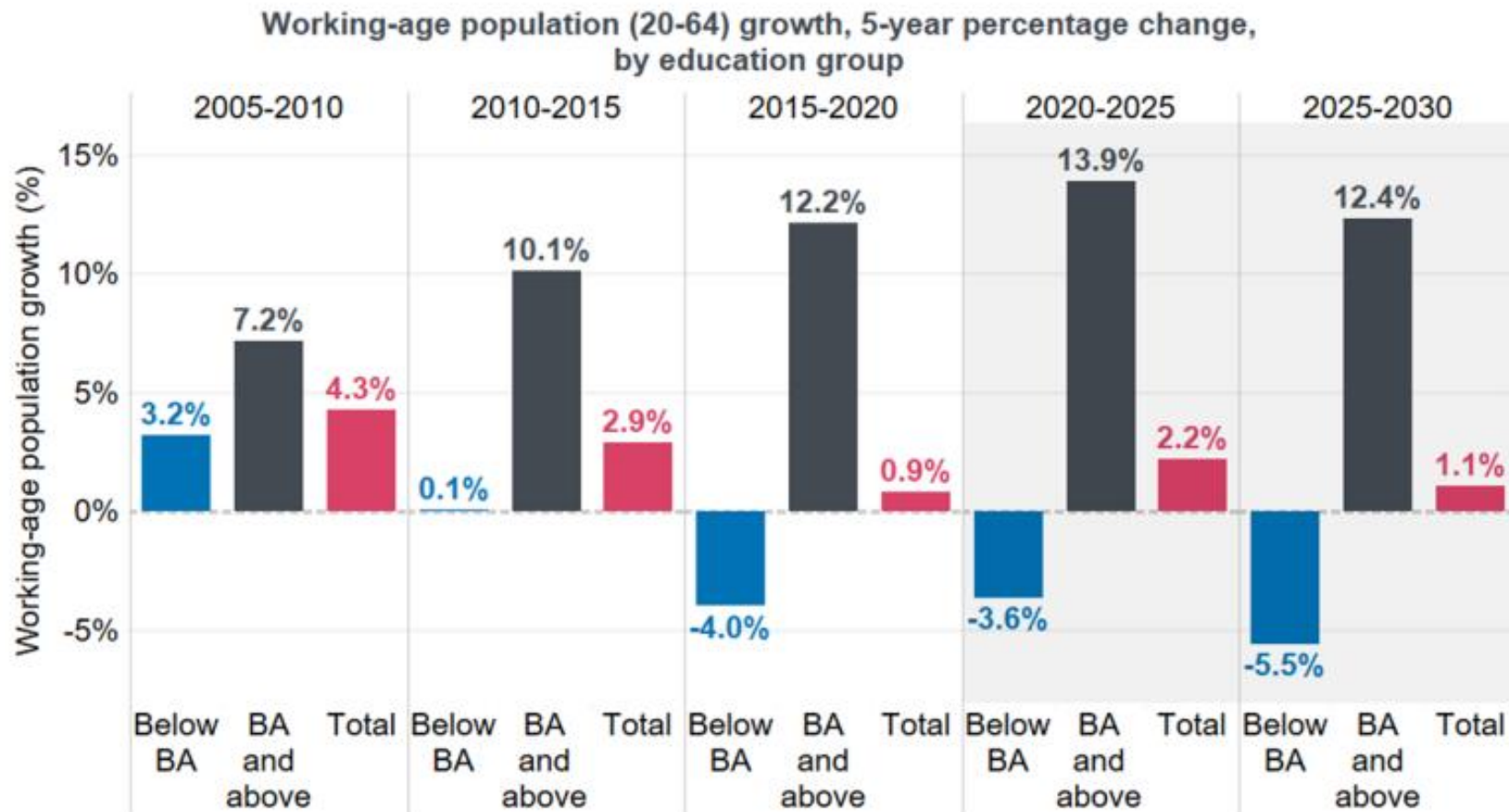
**Roots Corp. (Roots Canada) filed Chapter 7 bankruptcy for its U.S. subsidiary only.

[^]European rank

^{^^}Le Tote's Lord & Taylor brand is a retail chain.

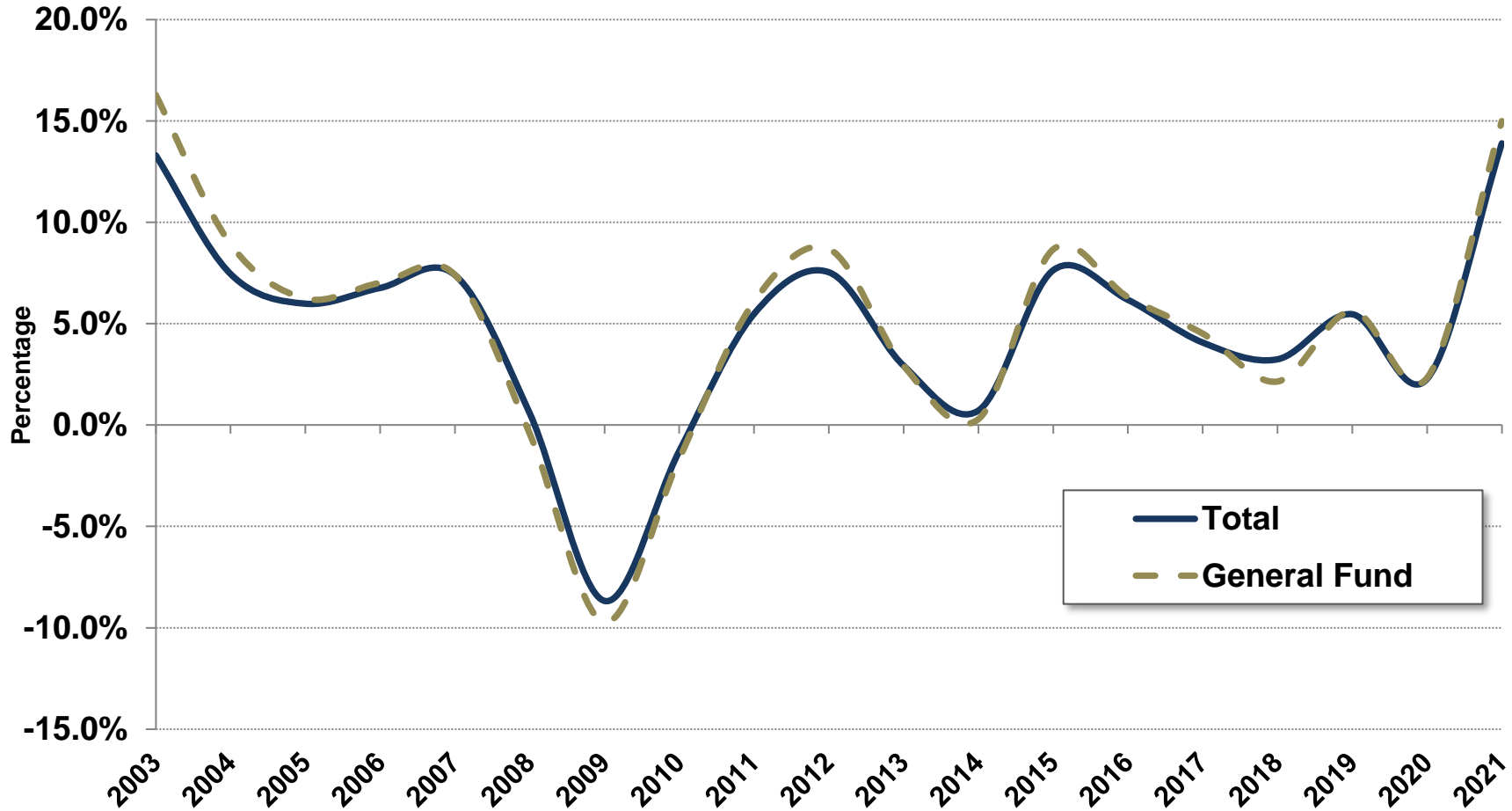
Source: Digital Commerce 360 analysis of company reports & CNET. Data as of February 17, 2020.

The number of working-age people without a bachelor's degree is expected to rapidly shrink in the coming decade

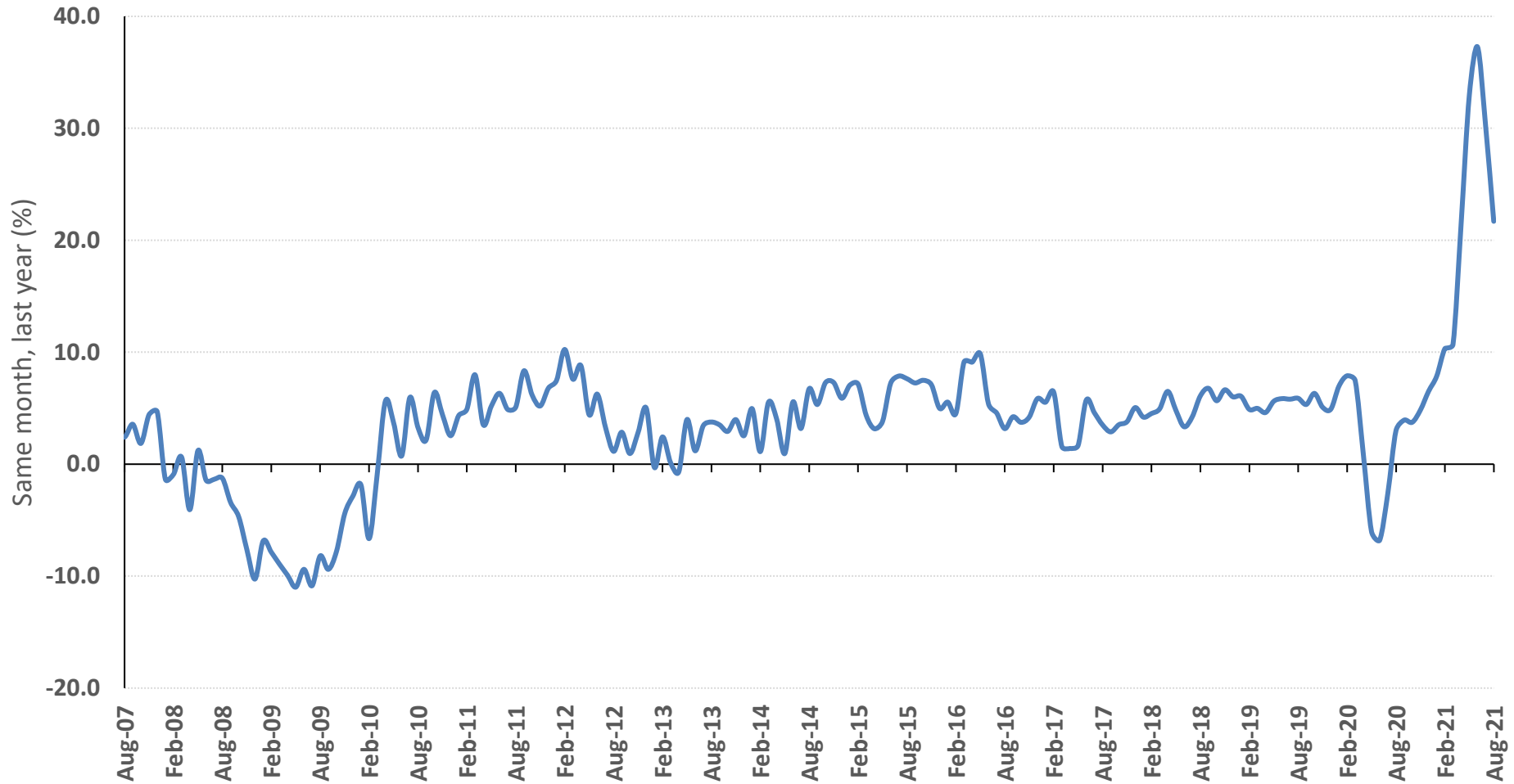


Source: The Conference Board calculations using data from US Census Bureau and IPUMS-ACS, University of Minnesota

Tennessee Tax Revenue Accelerated in FY21

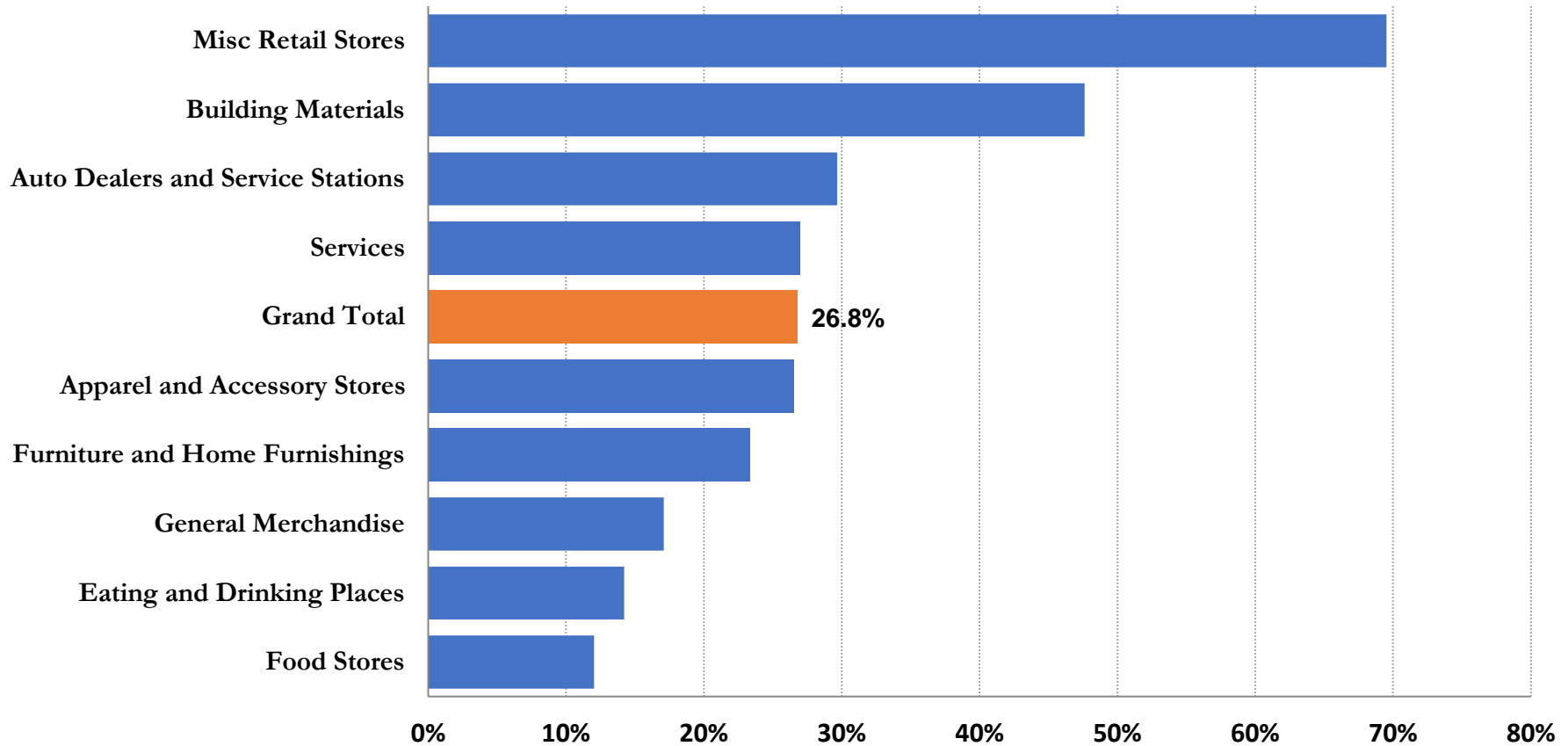


Sales Tax Revenue Growth Remains Extremely Strong (3-month moving average)

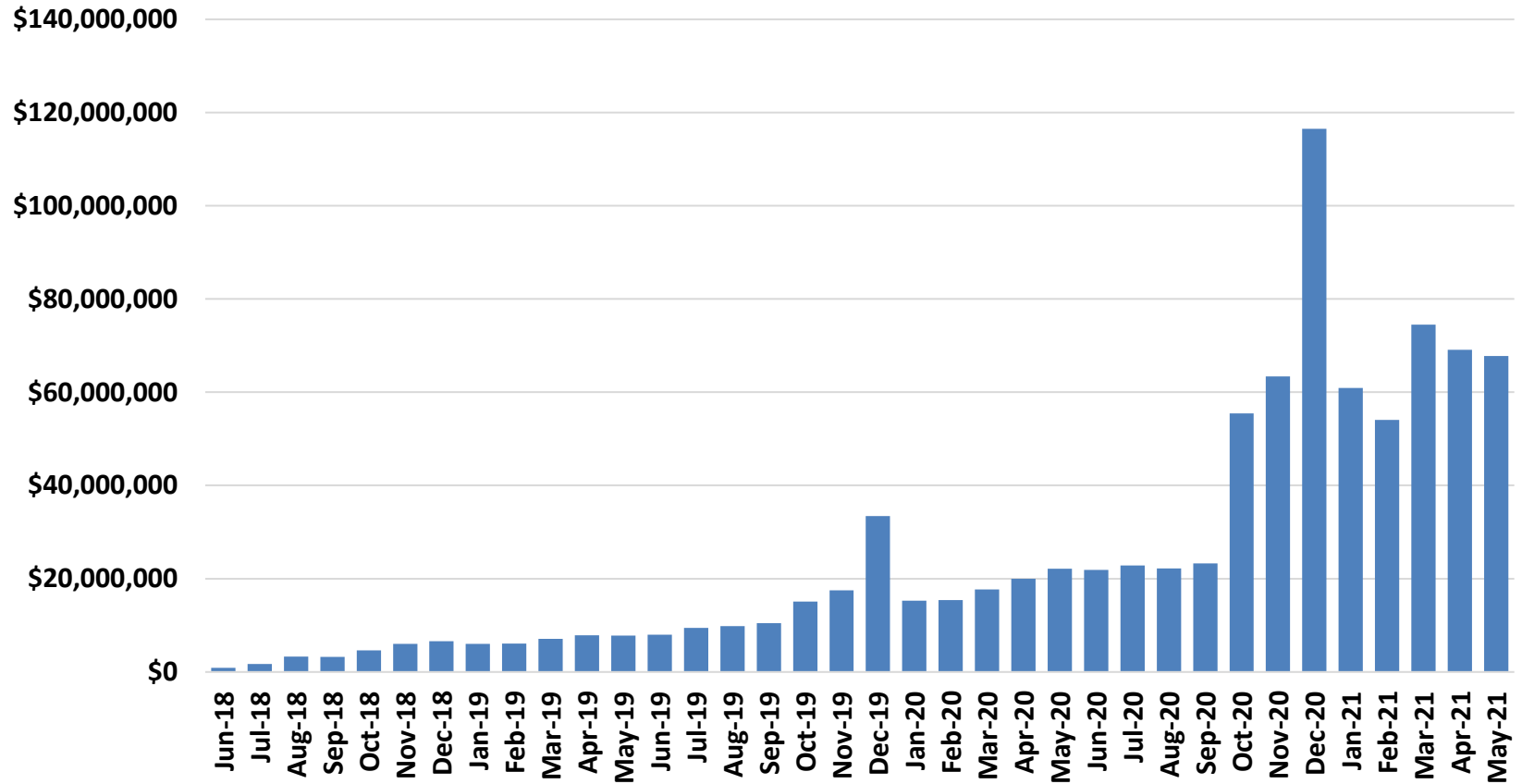


Stunning Sales Tax Growth Over Past Two Year, Tennessee

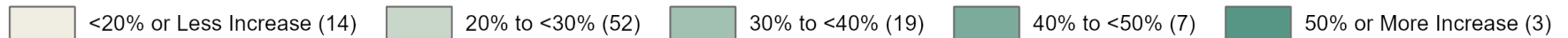
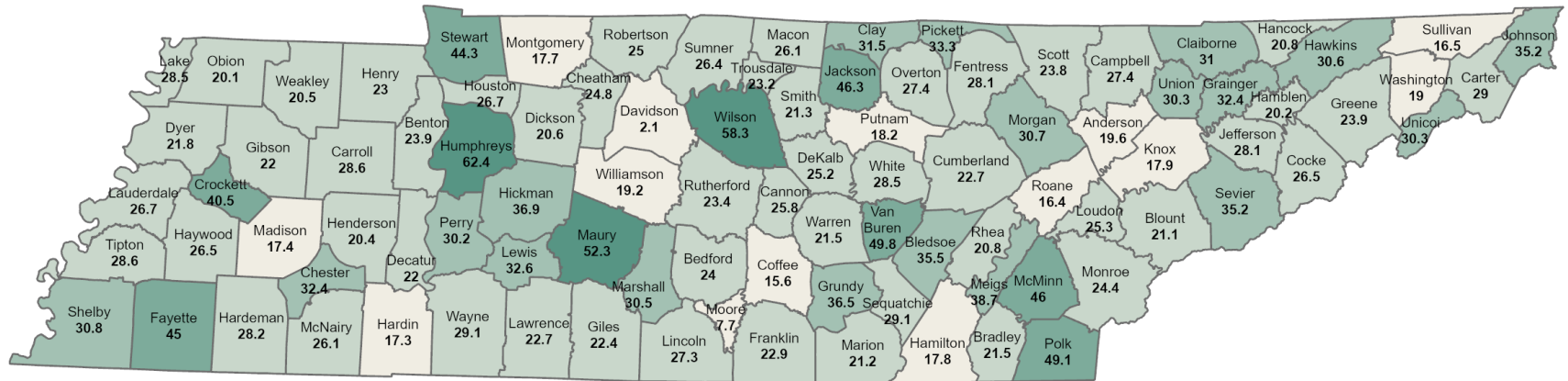
July 2019 to July 2021, 3-month moving average (year-over-year)



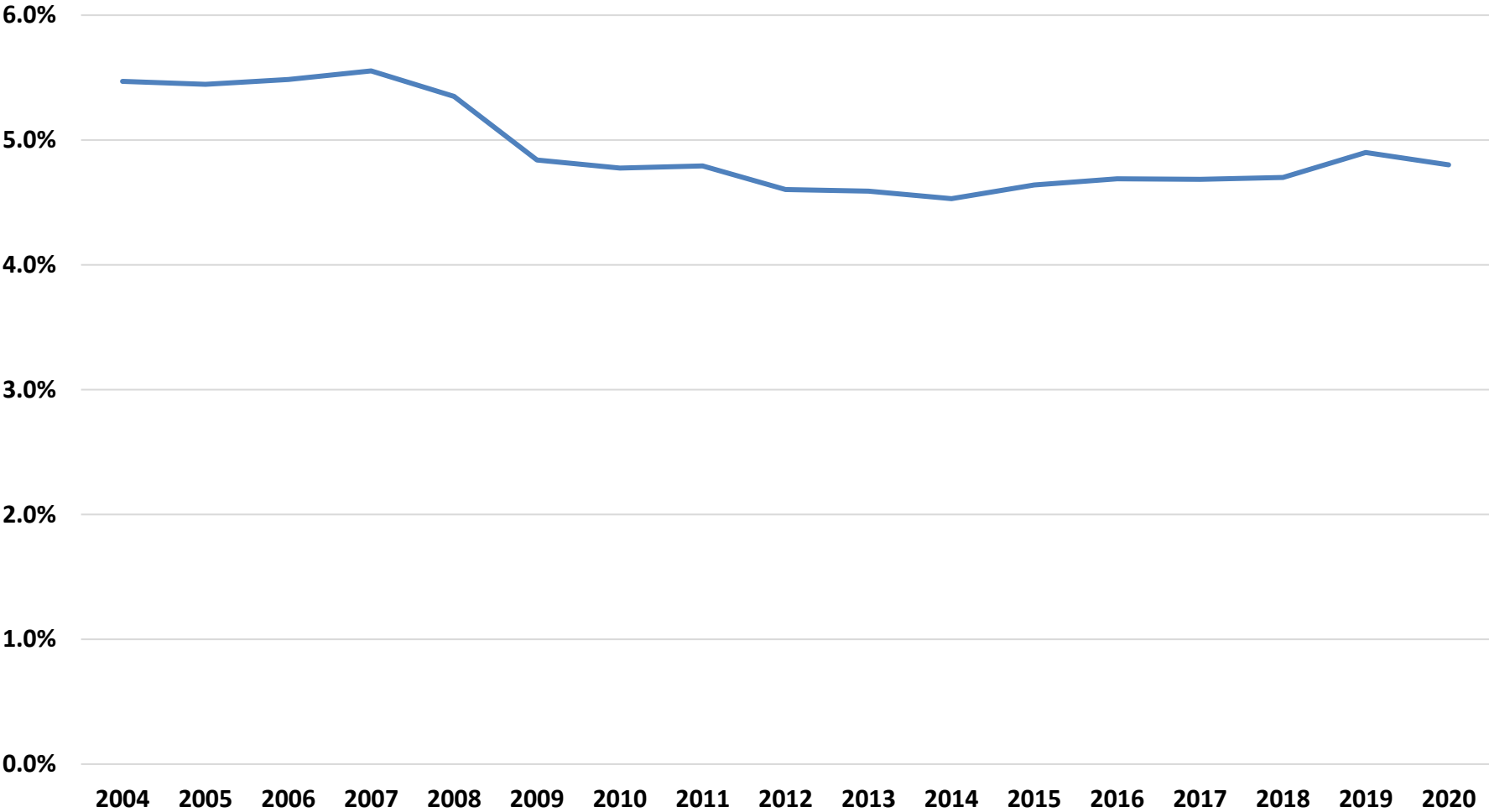
Tennessee Tax on New Remote Sellers has Risen Dramatically Since the Wayfair Case



Local Option Sales Tax Revenues have Boomed during the Current Fiscal Year (May 2021 YTD)



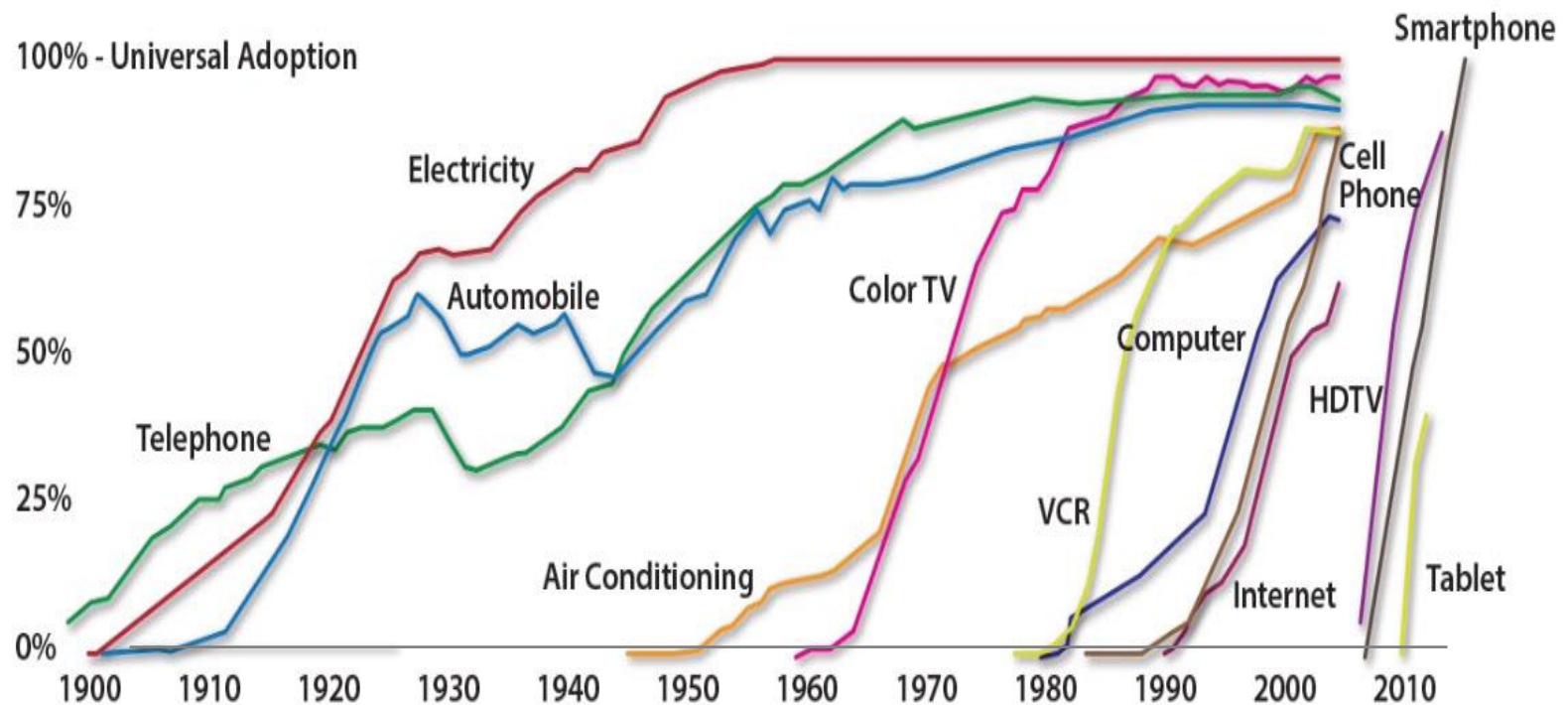
Tennessee State Taxes Have Fallen as a Share of Personal Income, and Will Continue Doing So



Economic Transitions

- Changes in
 - What we buy
 - How we acquire goods and services
 - The form of goods and services
 - How they are produced
- These transitions affect almost every tax in some way – the question is whether tax systems will be modernized for the rapidly changing world

Adoption Rates for New Technologies are Accelerating – Must Accelerate Sales Tax Base Expansion



Source: HDR CAV Services

1 in 5 Jobs are in Vehicle Intensive Occupations, 2019

	Tennessee		U.S.	
	Employment	Share	Employment	Share
Total Employment	2,614,962	100.00%	126,307,286	100.00%
Vehicle Manufacturing	72,652	2.78%	1,054,481	0.83%
Vehicle Support	124,253	4.75%	5,526,730	4.38%
Motor Vehicle Operators & Other On-the-Job Drivers	364,910	13.95%	18,383,130	14.55%
Total, Vehicle-Related	561,815	21.48%	24,964,341	19.76%

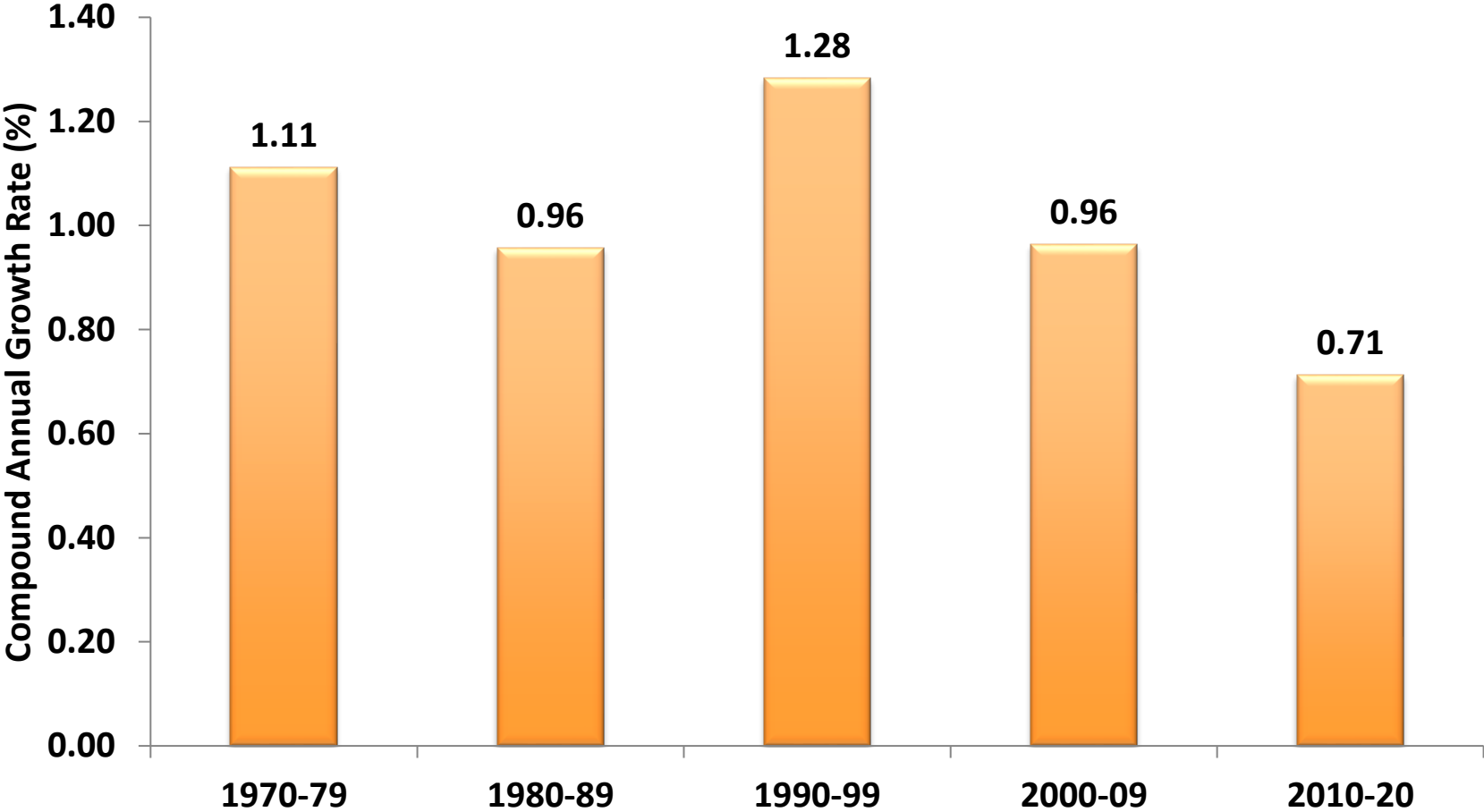
Notes: 2019 data are preliminary

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

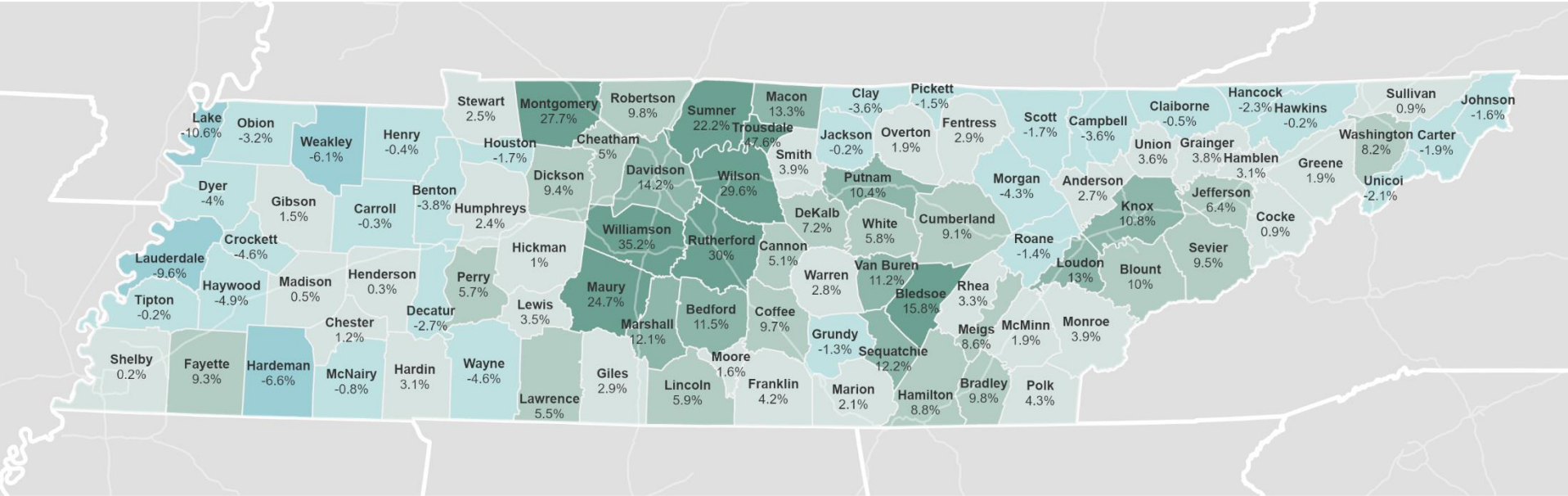
Tennessee Taxes Fall Dramatically with EV/AVs, (\$thousands)

	AVs fully adopted	Current Practice
Gasoline Tax	0	1,023,824
Motor Fuel Tax	0	328,833
Gasoline Inspection	0	78,377
Motor Vehicle Registration	192,196	384,393
Motor Vehicle Title	30,128	60,256
Motor Vehicle Sales Tax	1,300,568	2,601,136
Privilege Tax	14,725	13,154
Electric Vehicles	346,381	
December, 2019 Total Vehicle Related	1,883,998	4,489,972

U.S. Population Growing More Slowly



Tennessee 2020 Census Percent Change in County Population (2010-2020)



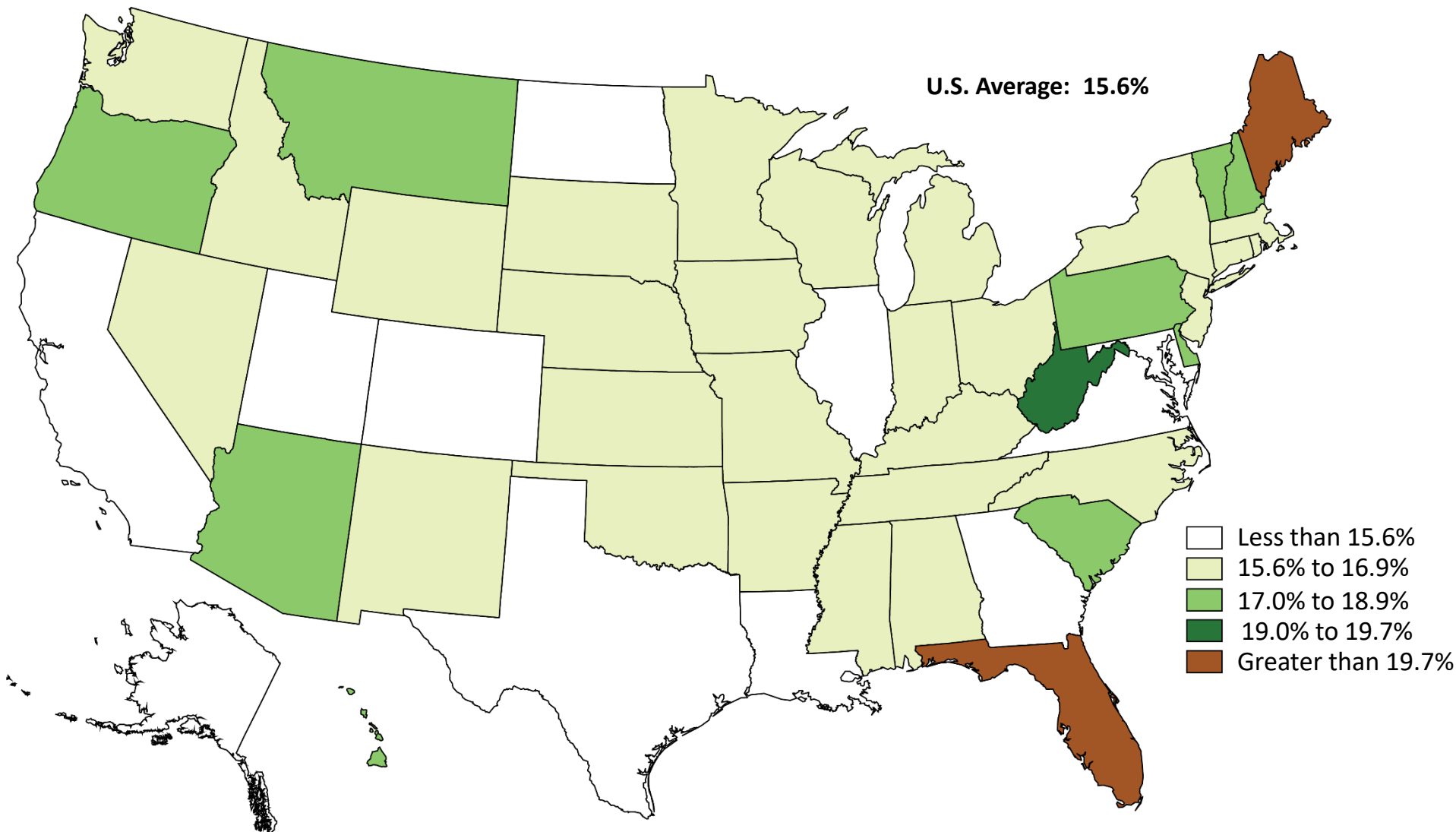
Map: Tennessee State Data Center, University of Tennessee, Knoxville • Source: 2020 Census P.L. 94-171 Redistricting Data Summary File, 2010 Census Summary File 1 by U.S. Census Bureau



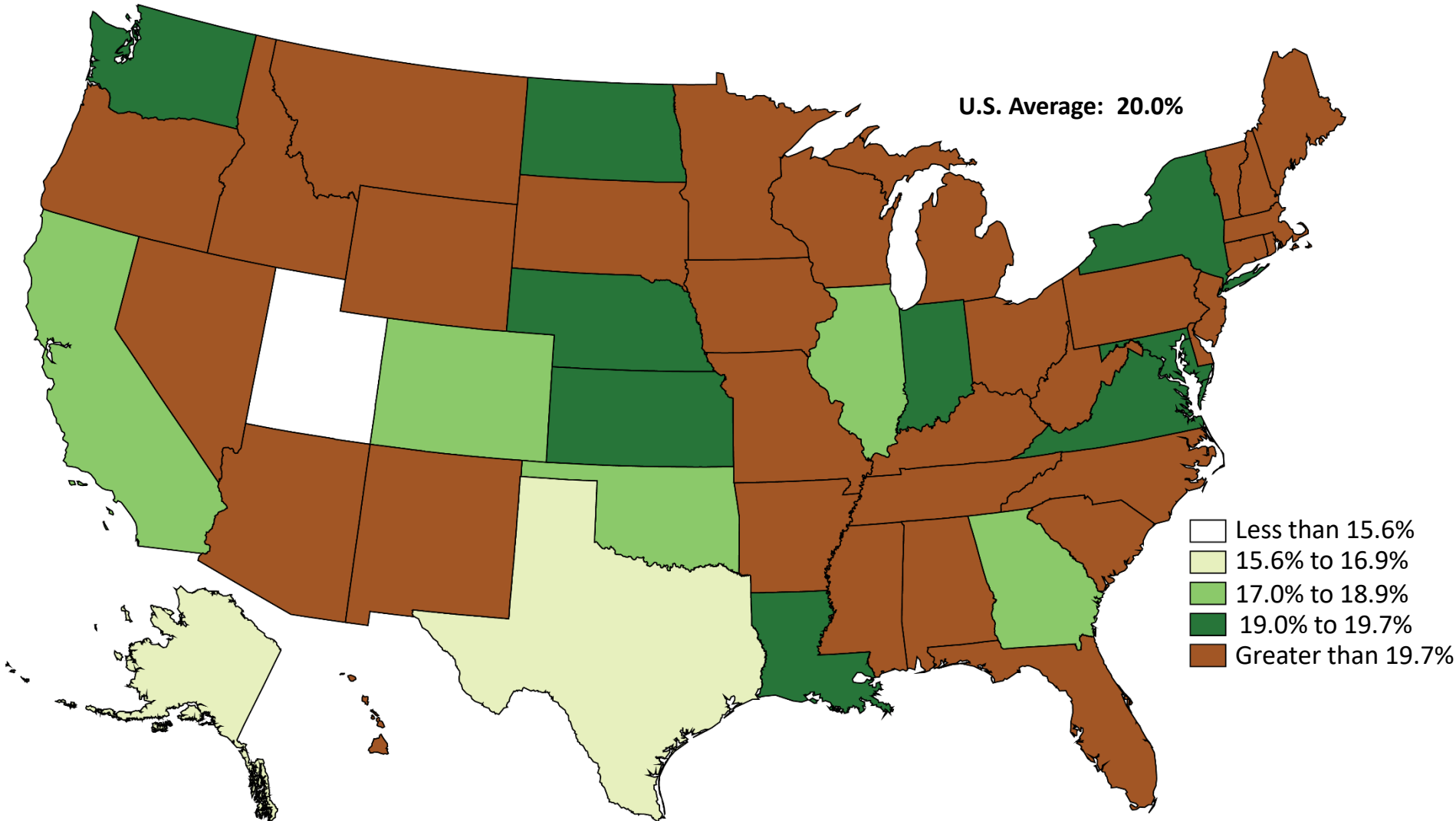
Birth rates are lower for Mothers Under 35 (Birth rates per thousand by mother age)

Age Band	2007 Birth Rate Per Thousand	2019 Birth Rate Per Thousand
15-19	42.5	16.7
18-19	73.9	31.1
20-24	106.3	66.6
25-29	117.5	93.7
30-34	99.9	98.3
35-39	47.5	52.8
40-44	9.5	12.0

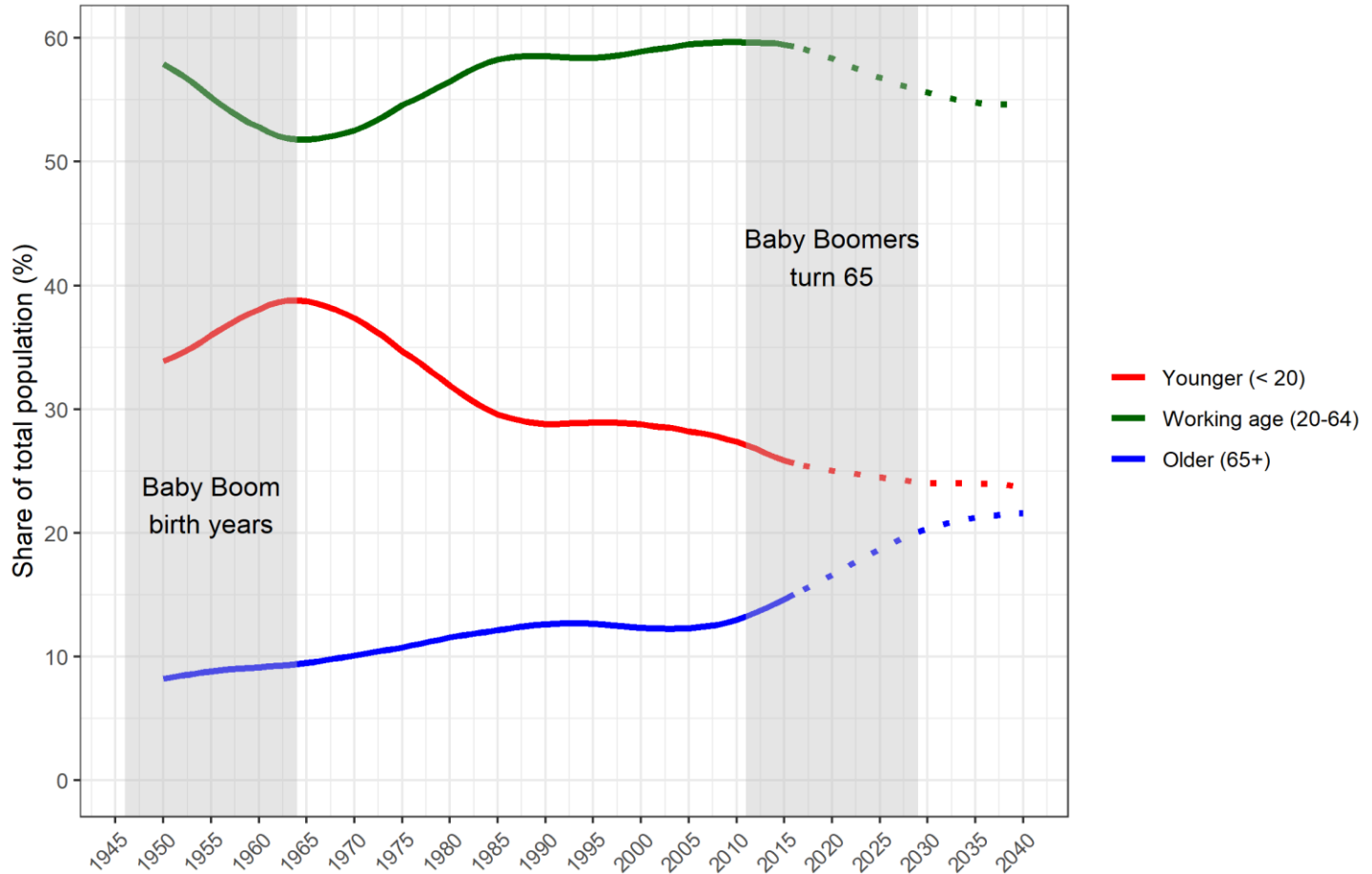
Population 65 Years and Older, 2017



Population Aging in Every State (Population 65 Years and Older, 2030)

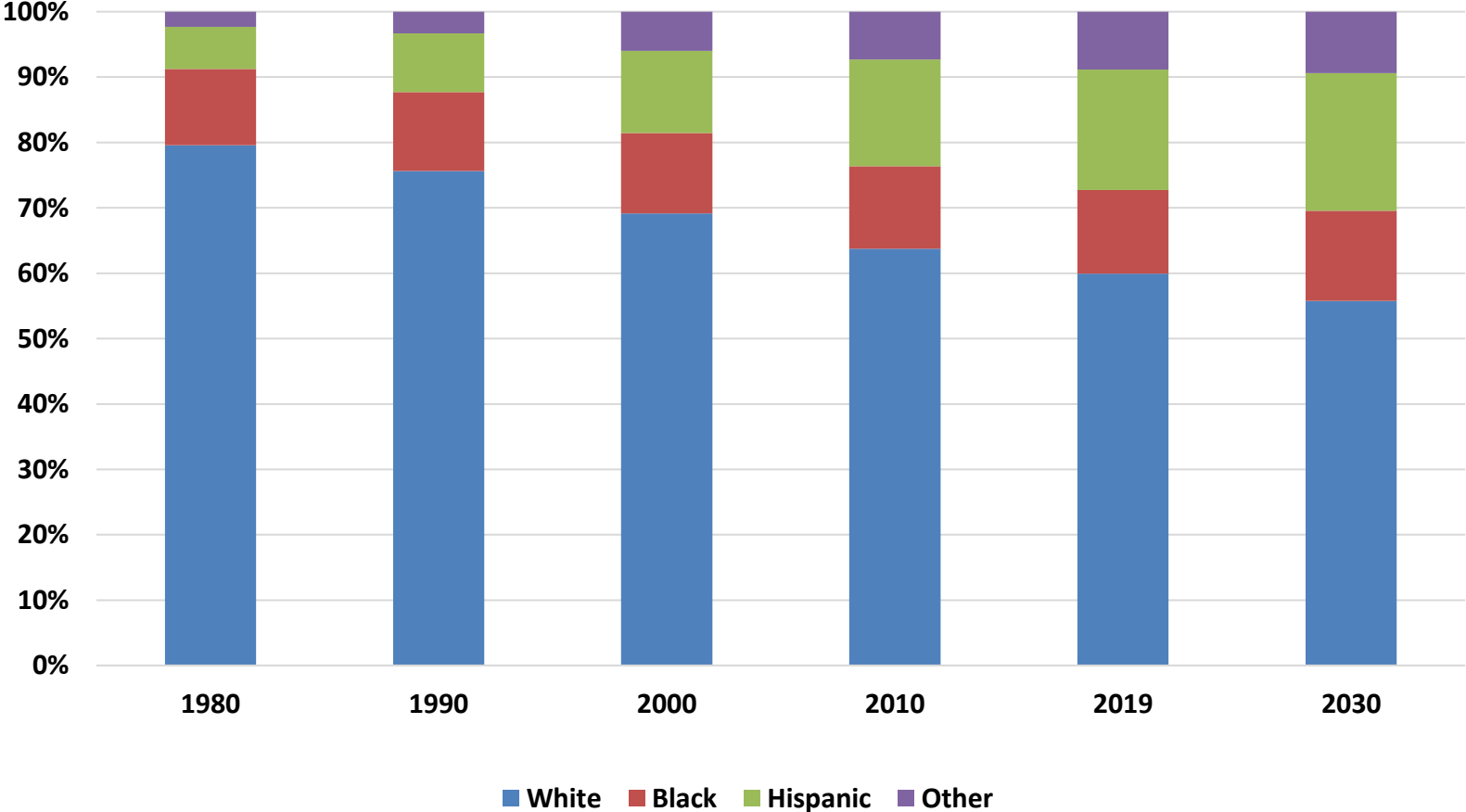


Percentage of total U.S. population, by age group



Source: Data underlying 2017 Revision of World Population Prospects, The United Nations, <https://population.un.org/wpp/>, ([https://population.un.org/wpp/DVD/Files/1_Indicators%20\(Standard\)/CSV_FILES/WPP2017_PopulationBySingleAgeSex.csv](https://population.un.org/wpp/DVD/Files/1_Indicators%20(Standard)/CSV_FILES/WPP2017_PopulationBySingleAgeSex.csv)) First projection year is 2016, at which point lines are dotted.

US Becoming Increasingly Heterogeneous



Source: Census
White is reported as white only not Hispanic, but all other races may include individuals who identify as Hispanic.
2030 are projections performed by the Census in 2017.

