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EXPORT PATTERNS

TENNESSEE COUNTIES, 1995-2010

by Steven G. Livingston

Recent issues of *Global Commerce* have examined trade trends across the state's 95 counties. This issue looks at changes over a longer period. In real terms, Tennessee exports grew by more than 60% between 1995 and 2010. But how was that growth distributed across the state? Do we see larger patterns to the state's export performance over a longer horizon?

As might be expected, a handful of counties dominate the state's export picture. These have not changed much over the past 15 years. Shelby County remains Tennessee's largest exporter, although its share of state exports has declined. Rutherford and Hamilton counties join Williamson and Anderson among the counties that have significantly increased their share of state exports. On the other hand, Maury, Montgomery, and Washington counties, among larger exporters, all saw a relative decrease. These are rather modest shifts, though, given this rather extended period of time.

If we adjust exporting for the size of a county's economy, we see a good deal more change. On this measure, only two counties ranked among the state's top eight in both 1995 and 2010. Unfortunately, a change in this ranking may reflect improved exporting, or it may reflect a relative decline in total economic activity. In several cases (e.g., Lake County) it is almost certainly the latter. Taking this into account, our first insight is that the state has not seen a seismic shift in the location of export activity over the past decade and a half.

A visual inspection of county export ranking in 1995 and 2010 reinforces this conclusion. While the state had clear geographic export clusters in 1995, there has not been any substantial change in them over the ensuing years. If anything, the existing clusters have merely become stronger. If we divide counties into those in which per capita exports have grown faster than the state average versus those that grew more slowly, the resulting map highlights the superior export performance of much of middle Tennessee from the Nashville area down through the Chattanooga region and also the counties around Knoxville. This map illustrates the strong performance of the Chattanooga metropolitan area relative to the rest of the state in recent years. A related map, showing the change in exports adjusted for county population, offers a similar picture of the fundamental trend in Tennessee county exports: an increasing concentration

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Top Exporting Counties

	2010	1995
1	Shelby	Shelby
2	Davidson	Davidson
3	Rutherford	Rutherford
4	Hamilton	Maury
5	Knox	Sullivan
6	Sullivan	Hamilton
7	Anderson	Knox
8	Williamson	Montgomery

Biggest Export Gains

(per capita, ranked by % increase)

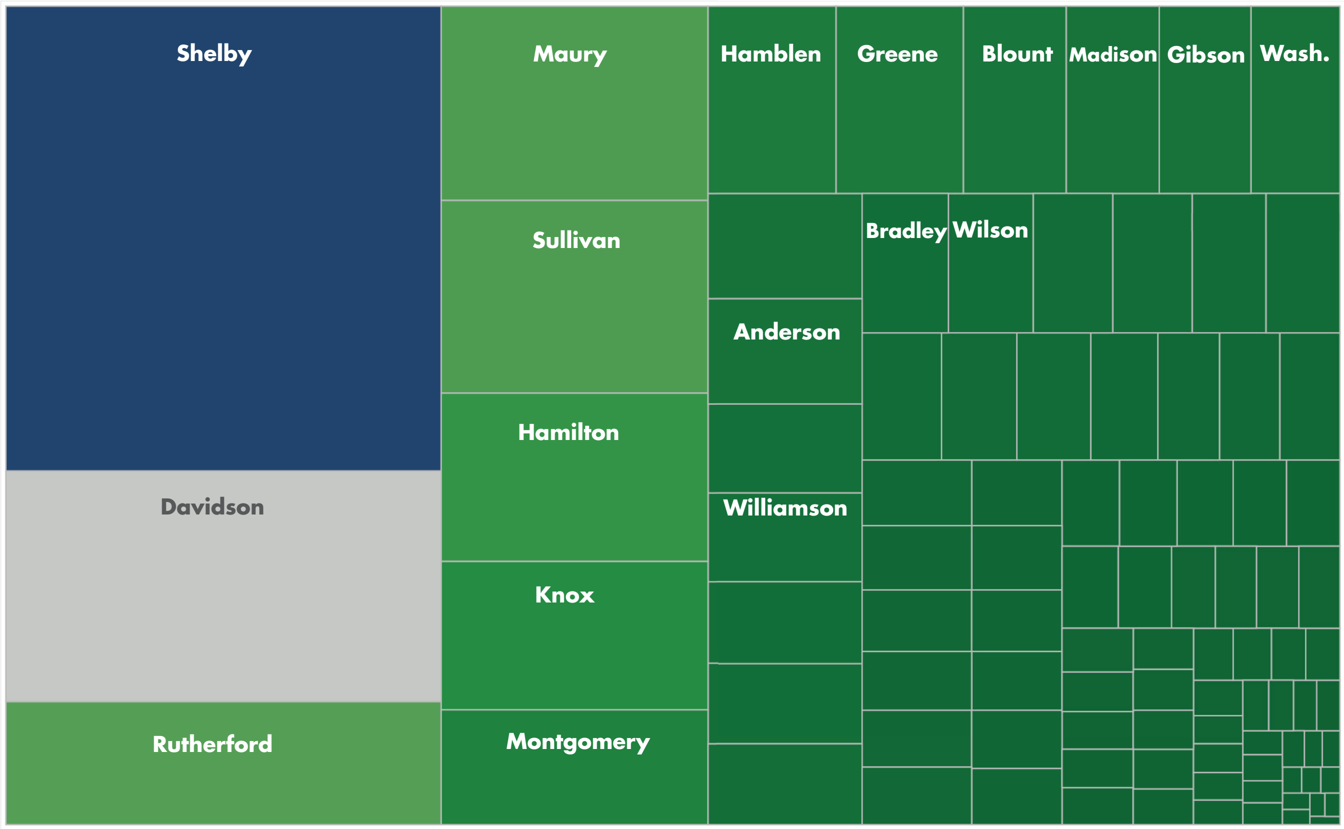
1	Unicoi
2	Meigs
3	Moore
4	Hardin
5	Macon
6	Stewart
7	Fayette
8	Marion

Exports/Total Economic Activity

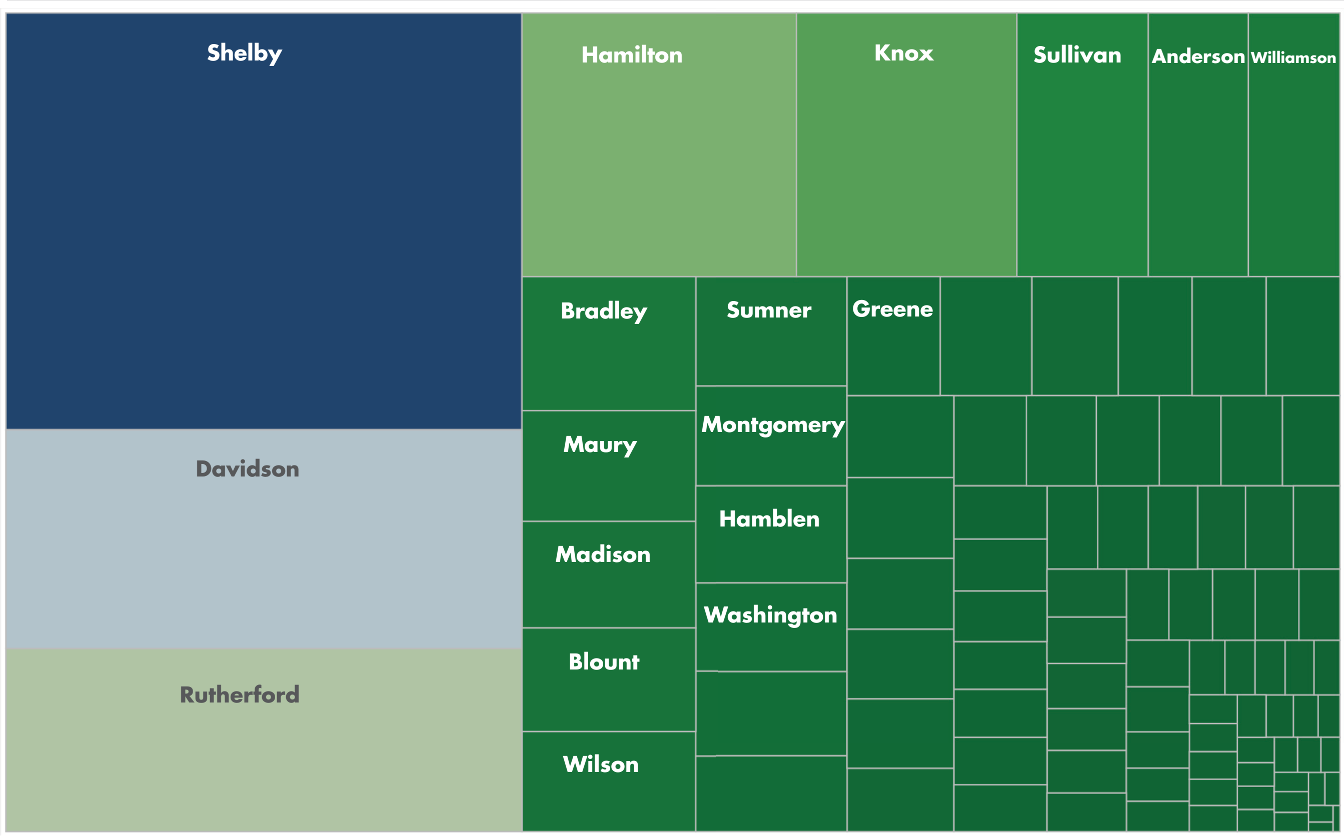
	2010	1995
1	Unicoi	Jackson
2	Crockett	Humphries
3	Rutherford	Maury
4	Moore	Sequatchie
5	Humphries	Lawrence
6	Lake	Crockett
7	Morgan	Cheatham
8	Hawkins	Smith

THE STATE HAS NOT SEEN A SEISMIC SHIFT IN THE LOCATION OF EXPORT ACTIVITY OVER THE PAST DECADE AND A HALF.

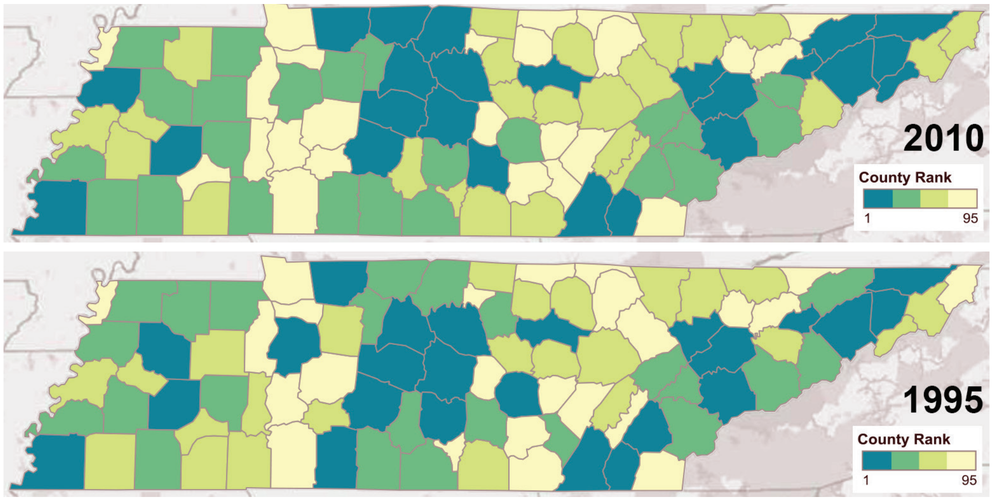
County Exports 1995



County Exports 2010



What's Changed? County Export Rank in 2010 vs. 1995



THE STATE HAD CLEAR GEOGRAPHIC EXPORT CLUSTERS IN 1995, THERE HAS NOT BEEN ANY SUBSTANTIAL CHANGE IN THEM OVER THE ENSUING YEARS. THE EXISTING CLUSTERS HAVE MERELY BECOME STRONGER.

EXPORT PATTERNS

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of state exports in several regional pockets. Though to a degree the pockets align with the state's metropolitan areas, they are better understood as formed around the location of the state's major export industries: automotive, chemical, and health care.

The red counties in this map are those that actually saw their exports decline over the past 15 years. If we adjust to account for inflation and for population growth, 31 Tennessee counties exported less per capita in 2010 than they did in 1995. This is nearly one-third of the state's counties.

Our last map breaks out these counties. Surprisingly, this includes Montgomery County along with a scattering of counties in Appalachia and on the Cumberland Plateau. The largest concentration of export losses, however, has been across the rural counties of west Tennessee. The situation would appear direr if we did not adjust for population losses in some of these counties. This part of the state is not home to any major state export industry. Losses in older manufacturing, apparel, and commodity sectors have not been

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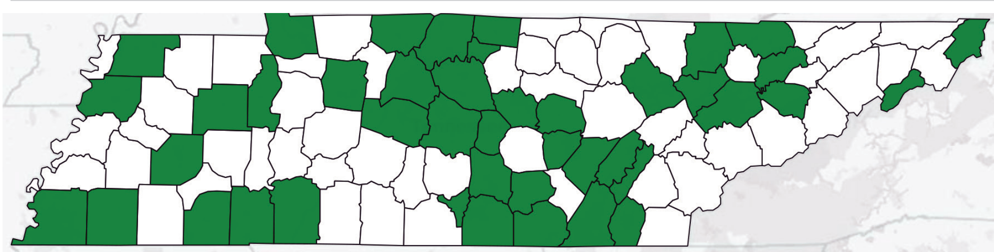
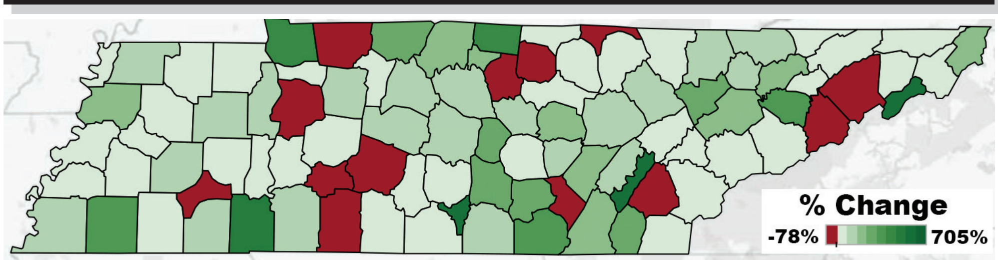
Export per Capita Growth Exceeded State Average, 1995-2010



THE AREAS AROUND NASHVILLE, KNOXVILLE, AND CHATTANOOGA EXHIBIT SUPERIOR EXPORT PERFORMANCE.

Change in Exports per Capita, 1995-2010



EXPORTS INCREASINGLY CONCENTRATE IN POCKETS AROUND THE AUTOMOTIVE, CHEMICAL, AND HEALTH CARE INDUSTRIES.

4th Quarter 2012

Tennessee's Largest Export Sectors

	Value of Exports	Change from Last Year	Change from Last Quarter
Medical Equipment	$787,608,204	4.8%	-2.0%
Motor Vehicle Parts	$724,988,724	6.7%	2.0%
Computer Equipment	$526,751,706	-16.7%	0.1%
Basic Chemicals	$478,086,694	-7.0%	-10.1%
Instruments & Controls	$423,670,010	9.6%	12.9%
Synthetic Fibers & Filaments	$411,957,590	11.3%	-4.9%
Motor Vehicles	$392,601,499	4.9%	1.2%

4th Quarter 2012

What's Hot and What's Not*

	Value of Exports	Growth	Decline
SECTORS WITH THE GREATEST GROWTH			
Titanium	$19,301,602	53,408.5%	
Miscellaneous Kraft Paper and Paperboard	$52,310,579	105.9%	
Semiconductor Parts	$42,706,732	81.9%	
X-Ray Apparatus Parts	$30,961,232	79.7%	
Electric Motors and Generators	$31,552,107	74.1%	
SECTORS WITH THE GREATEST DECLINE			
Commercial Trucks	$9,953,843		-88.1%
Cameras and Recorders	$4,412,899		-82.0%
Ploughs, Moving and Grading Machinery	$7,055,863		-75.3%
Aluminum Waste and Scrap	$5,682,796		-69.9%
Video Game Consoles	$35,174,319		-69.1%

**Among Tennessee's top 100 exported goods.*

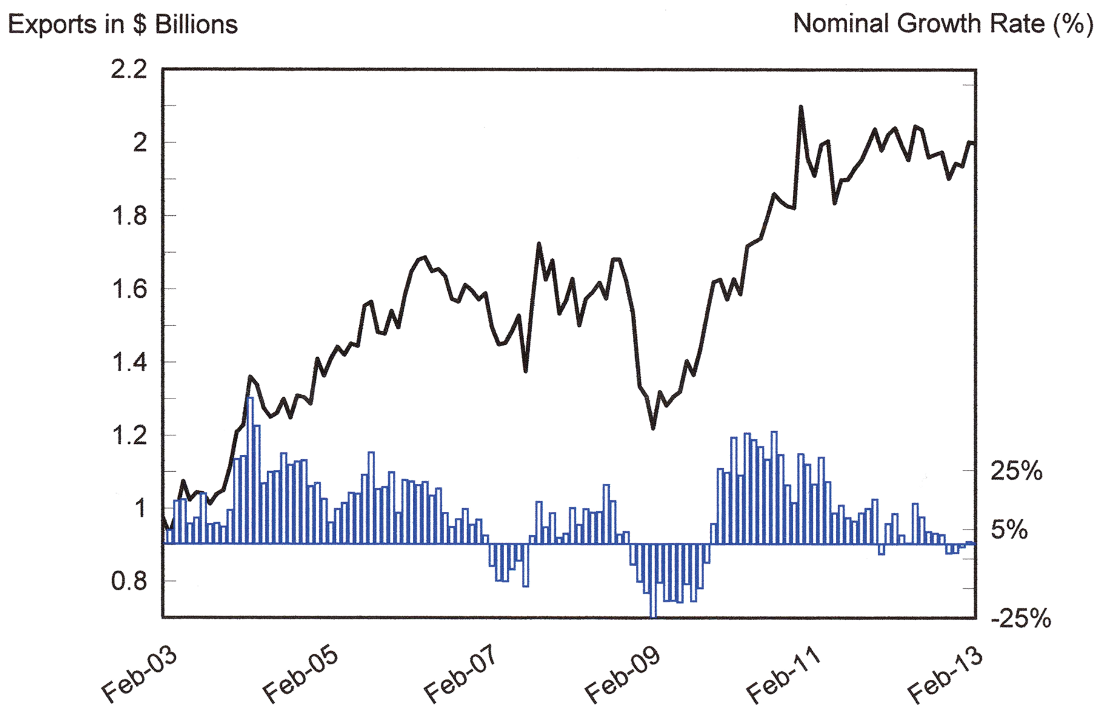
4th Quarter 2012

Fastest-Changing Export Destinations

	Value of Exports	Gain	Decline
COUNTRIES WITH THE GREATEST GROWTH			
Bangladesh	$9,284,750	126.4%	
Ecuador	$28,458,374	104.2%	
Bahrain	$19,668,382	89.4%	
Iraq	$10,681,292	70.1%	
Poland	$17,403,584	59.6%	
COUNTRIES WITH THE GREATEST DECLINE			
Morocco	$2,112,263		-70.9%
Greece	$2,432,828		-66.9%
Finland	$5,819,353		-51.5%
Indonesia	$26,962,578		-48.3%
Nigeria	$20,102,144		-44.8%

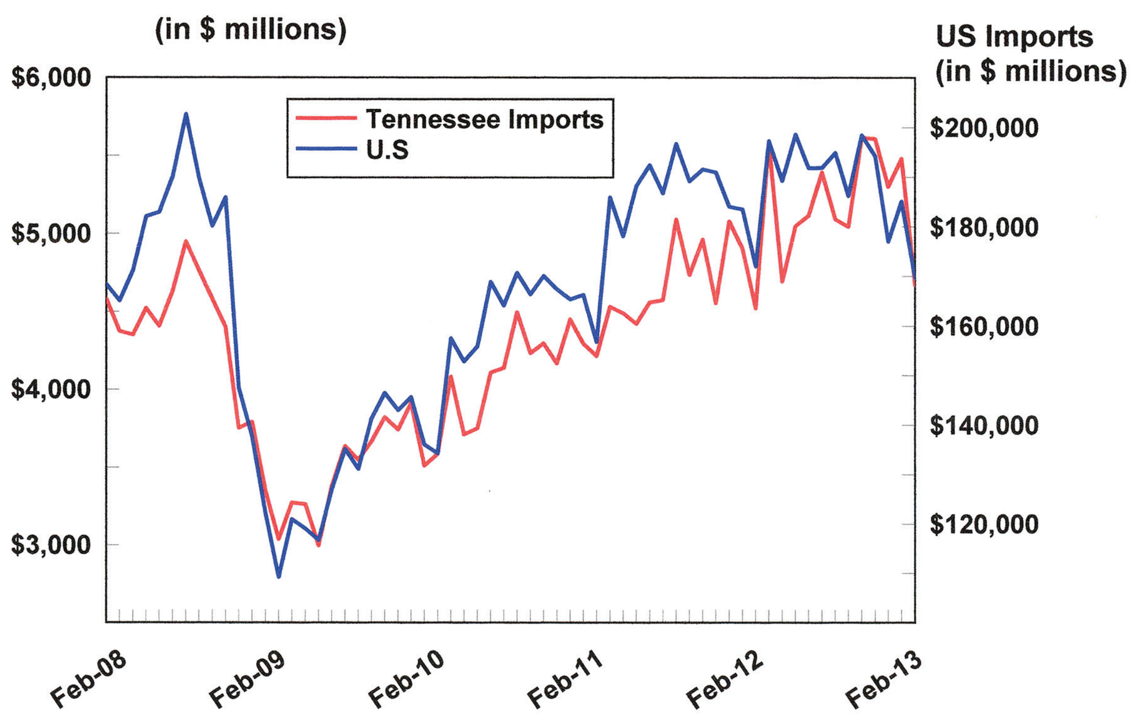
(Among countries averaging more than $5 million in sales per quarter)

Tennessee Monthly Exports

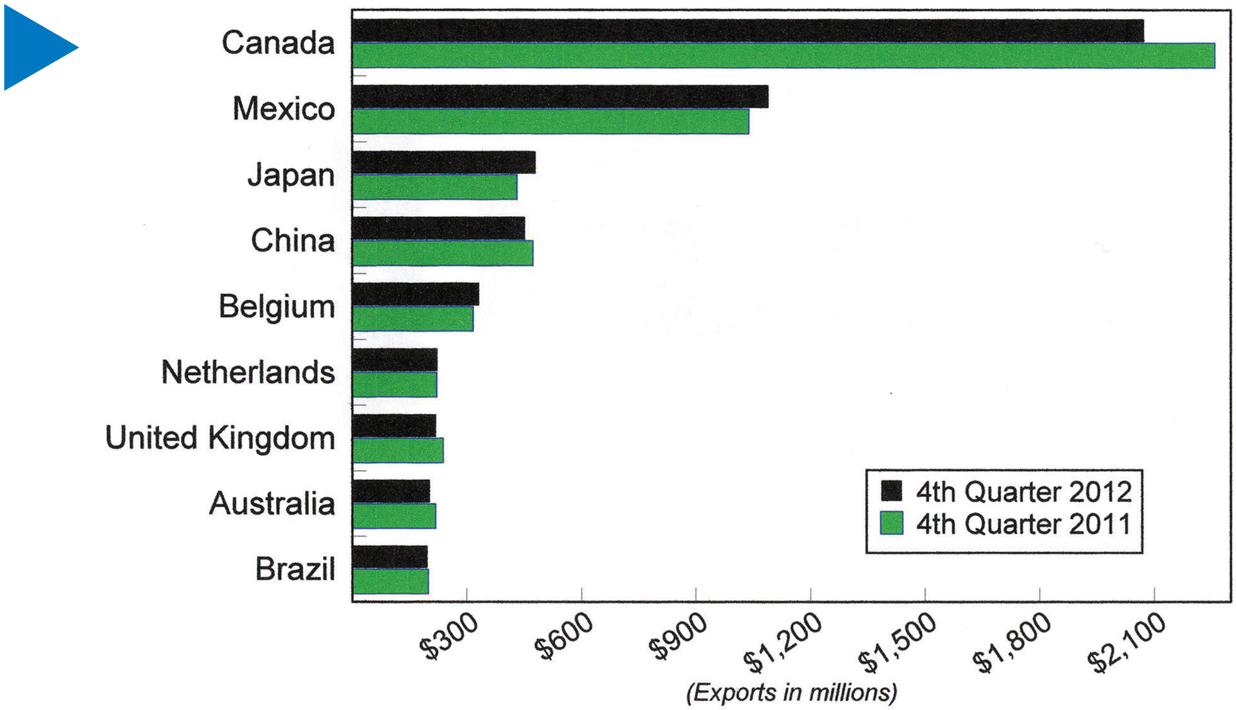


(Seasonally adjusted, expressed in 2000 dollars)

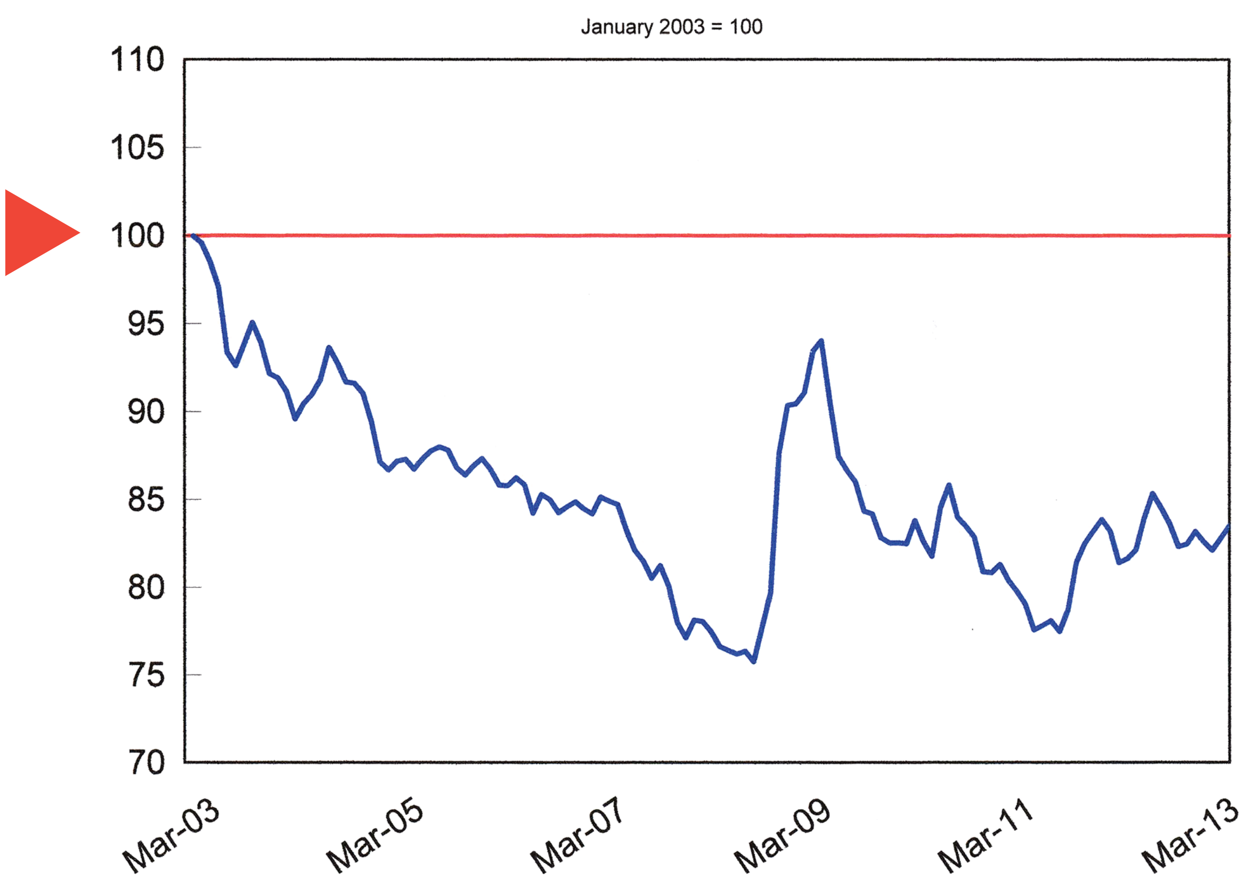
Tennessee Monthly Imports



Tennessee's Leading Trade Partners



Tennessee Trade-Weighted Dollar Index



FOURTH-QUARTER EXPORTS FELL BY NEARLY $200 MILLION, A DROP OF 2.45% FROM 2011

Last year was not a banner year for Tennessee exports. Though foreign sales grew by over a billion dollars more than in 2011, this was a significantly smaller gain than over the past several years, and the state's rate of export growth lagged that of the nation. The primary reason for this relatively weak performance was a poor fourth quarter. Tennessee fourth-quarter exports fell by nearly $200 million, a drop of 2.45% from 2011, while national exports continued to grow, albeit at a modest 2.81%. Tennessee ranked 36th in state export performance. Among the southeast states, only Mississippi had as difficult a quarter.

Though the evidence of a global slowdown was everywhere, the decline in state exports started close to home. Shipments to Canada fell by more than $200 million for the quarter, with December being particularly slow. With fourth-quarter exports valued at $2.076 billion, Canada remains far and away the state's largest market. Tennessee exporters simply were unable to recoup this loss in other markets. Though automotive shipments held up well, more specialized vehicles, such as dumpers, snowplows, or shovel loaders, had a terrible quarter, losing more than half of their Canadian sales from a year earlier. The video game console sector lost most of its multi-million dollar market. Computers experienced large losses. Laptop shipments dropped nearly $50 million (to $94 million), while desktops declined by about $20 million. Amidst these declines were some strong performances, especially a large increase in DVD sales, but essentially it was the weak performance in Canada that accounted for Tennessee's slippage compared to other American states. Though exports to our other NAFTA partner, Mexico, grew a solid 5% (to $1.093 billion), this was not nearly enough to make up for the Canadian shortfall. The Mexican gains were primarily due to civilian aircraft sales.

The global trend of slowing Tennessee exports was seen across Africa (down 28%), the Middle East (declining 18%), the Caribbean (off 7%), Australia (down 6%), China and Hong Kong (8% lower), and the U.K. (off 7%). Under the circumstances, Latin America and the European Union might be regarded as among the state's "stronger" markets, since the decline in each was more modest. Latin American exports dropped $4 million to $731 million for the quarter. This hides quite a bit of churn, with the Chilean and Ecuadorian markets growing strongly, while Venezuela and Colombia suffered sizable reverses. Brazil, which accounts for more than a quarter of Tennessee's shipments to Latin America, was flat. The E.U. was also down slightly, with Tennessee shipping $15 million less to its member nations than in 2011 (a decline of less than 2%). Oddly, Italy was the strongest market in Europe. France was the weakest, excluding the dire markets of the bail-out nations of Ireland, Greece, and Portugal.

This leaves the quarter's two bright stars: Japan and Singapore. Exports surged to Japan. The value of exports to Japan grew 12% in the fourth quarter. The resulting $51 million gain pushed Japan ahead of China as the state's third-largest market. Semiconductor and electronics exports were at the heart of this gain. Singapore's imports from Tennessee grew by an astounding 43%, thanks to large increases in medical-related products, including pharmaceuticals and medical instruments. This performance is all the more remarkable given that the state exported 7% less to Singapore's fellow ASEAN members. Because Singapore accounts for close to half the states' exports to Southeast Asia, it was the one global region in which Tennessee exports were net positive for the quarter.

As this survey might suggest, a number of the state's foundational export industries did not have good quarters. Cotton sales fell by $76 million, with the largest losses in China and Turkey. Chemical exports were also down substantially, including dye and coloring materials, while computer sales were off more than $50 million from a year earlier. For the latter, losses were concentrated in laptop shipments. Diesel engine exports, too, had a tough quarter, with shipments down more than 40%. One newer export industry had a particularly bad quarter: exports of video game consoles (and parts) exports crashed. They were down by more than two-thirds. At $72 million, this was the largest single-product quarterly loss.

Fortunately, a number of Tennessee export industries turned in strong quarters despite the global slowdown. Aircraft sales were up over 20%. Guadeloupe, of all places, was the site of the largest gains. Medical instrument exports grew by more than $50 million, as it remained the state's single largest exported product by value. Other medical-related

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TRADE REPORT

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IN ONLY THREE MONTHS OF 2012 DID STATE EXPORTS FALL, OCTOBER THROUGH DECEMBER.

products, such as orthopedics, also had strong quarters. Cellular phone component exports grew by about a quarter (to $154 million), with gains in Korea, Japan, and the U.K. The plastics industry posted a 15% gain in exports, with increased sales in Europe and the Far East. Last, it was a good quarter for the state's automotive industry. Car sales were up strongly, growing from $300 million in the fourth quarter of 2011 to $388 million last quarter. Most of the increase was to Canada, Mexico, and Korea. Shipments of motor vehicle parts were also up, crossing the $400 million mark.

The fourth quarter was a tough one for state exporters. In only three months of 2012 did Tennessee exports fall, the three months of the fourth quarter. Fortunately, this streak disappeared with the new year. Tennessee's exports grew solidly in January and February, roughly in line with national performance, but a stronger tailwind from a struggling world economy would be welcomed as 2013 proceeds. ■

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balanced by gains in other economic sectors.

The trend of the past 15 years reinforces and underscores the patterns we identified over the past several issues. Tennessee exports are becoming relatively more concentrated, sectorally and geographically. Counties that are home to flourishing export industries account for an ever larger part of the state's foreign shipments. While nearly one-third of the state's counties were losing exports in real terms, 16 other counties saw their exports per capita more than double over this same period. Five of these counties ring Chattanooga, and two others (Cannon and Coffee) are in the "transportation corridor" between that city and the Nashville MSA. Maps make this apparent.

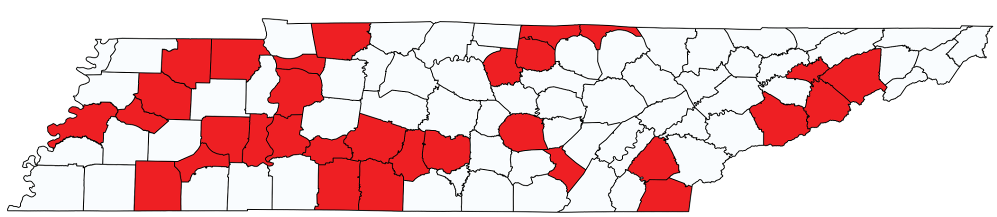
In sum, while we cannot call the change over the past 15 years dramatic, there has been a pattern to it. In a nutshell, in export terms, the rich have gotten richer and the poor poorer. The only region of Tennessee that can make a claim for much of a deviation from this is the area around Chattanooga. Hamilton County and five of the six counties surrounding it have all risen in the state's county export rankings, no matter what their position in 1995 (the exception is Sequatchie County). Otherwise, a continuing concentration of activity has been the main geographic trend to Tennessee's exports over the past 15 years. ■

Counties with Declining Exports

(ranked by % decline)

1	Sequatchie
2	Jackson
3	Lawrence
4	Lewis
5	Pickett
6	Marshall
7	Maury
8	Chester
9	Cocke
10	Smith

Real Exports per Capita Lower in 2010 than 1995



THE RED COUNTIES IN THIS MAP ARE THOSE THAT ACTUALLY SAW THEIR EXPORTS DECLINE OVER THE PAST 15 YEARS.

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