



Global Commerce

Tennessee and the International Economy

GLOBALIZATION

REGIONAL PATTERNS IN GLOBAL SUCCESS: A LOOK ACROSS TENNESSEE COUNTIES

by Steven G. Livingston

Globalization brings both opportunities and challenges. Some regions are well positioned to gain from the continuing integration of the global economy, while others will be severely tested by this same development. From this perspective, we examine the situation in Tennessee with some simple maps of industry structure and export performance across its 95 counties.

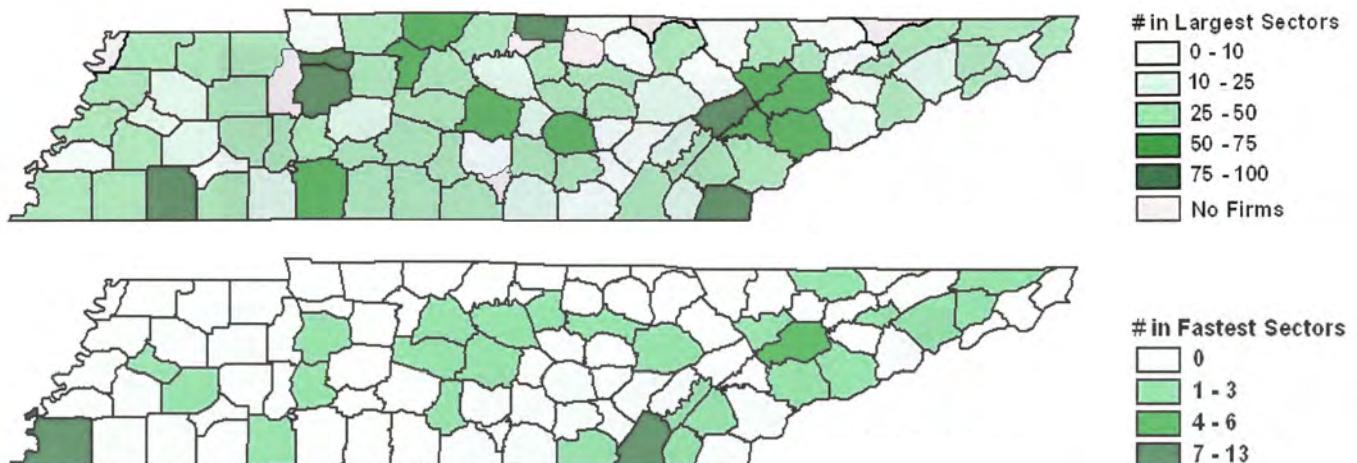
The regions most likely to prosper in a globalizing world are those whose businesses are located in America's most dynamic economic sectors. They will be globally competitive and will be able to take advantage of increased market access to other areas of the world. We can measure this competitiveness in several ways. The capacity to export is one convincing indicator of competitiveness. The dynamism of the industries located in the county is another.

A relatively small number of goods account for a large portion of American exports. Almost half of our exports come from just 15 sectors of the economy (measured at the four-digit NAICS level). Counties that are invested in these same sectors are likely to be the most competitive in coming years. We present a county map that shows the percentage of manufacturing in each Tennessee county that is in one of these 15 sectors. It shows a broad swath on the Cumberland Plateau and in the middle of west Tennessee that have relatively few manufacturing establishments in these sectors. These regions are not well positioned for the future. On the other hand, the outer ring of the Nashville MSA, the Tri-Cities, and most particularly the Oak Ridge/Knoxville area feature a substantial percentage of firms in America's top export sectors and are far better positioned to take advantage of increased global trade.

If we define dynamism as involvement in those sectors with the most rapidly growing exports, we can create a similar county map. America has 15 industries (at the five-digit NAICS level) for which exports have grown by more than two-thirds over the past five years. Given the smaller number of firms in these industries, we map each county

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Number of Establishments in America's Fastest-Growing Export Industries



REGIONAL PATTERNS

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by the number rather than the percentage of firms in these industries. Comparing this map to the first reveals a similar pattern. The most dynamic export industries are disproportionately located in the counties surrounding Nashville, Chattanooga, and Knoxville as well as the Tri-Cities area. The strong position of Hamilton County is the biggest difference in the two maps. Shelby County is well represented, but its surrounding counties are not. Unfortunately, these two maps suggest that the wealthier, more globalized parts of the state are best positioned to benefit from further globalization. Other areas of the state are less vested in the economic sectors that appear most likely to gain from the world economy.

Just as the capacity to export suggests an ability to prosper in a more globalized world, a vulnerability to import competition suggests a more difficult future. Locales in which firms are subject to pressure from lower-cost international competitors are those most likely to suffer in the years ahead.

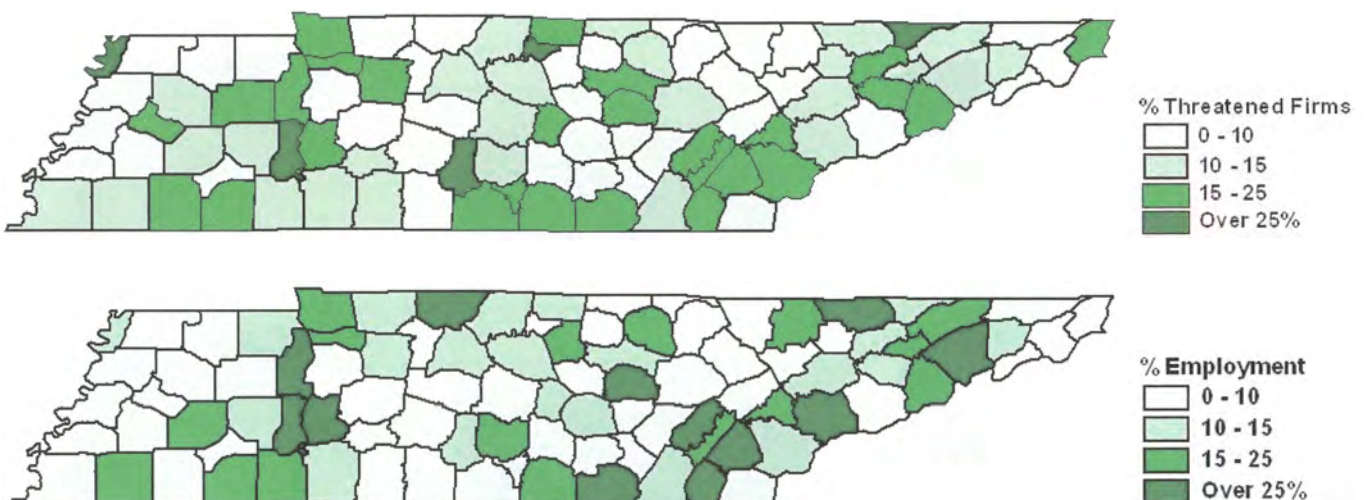
We identify threatened economic sectors as those in which imports are growing rapidly and domestic producers show a flat or declining level in their value of shipments. In other words, imports are taking market share from domestic firms. We anticipate that counties in which a substantial

portion of the local economy is found in such industries are the most prone to suffering economic losses due to foreign competition. The maps below show Tennessee counties by the percentage of their manufacturing firms and the percentage of manufacturing employment that is in these industries.

Across most of east Tennessee, there seems to be a rough balance between the size of the import-threatened sector and the size of the growing export sector. In the middle of the state, the position of the export sector is generally stronger than the vulnerability to imports, though some counties have a greater reliance on import-threatened industries. The problem lies in the area of the state between the Memphis and Nashville metropolitan areas, where the substantial vulnerability to import competition that we observe in the maps is not balanced by a sizable competitive export sector. This set of maps reveals this part of the state to be the most threatened going forward. Unfortunately, the upper Cumberland Plateau region today contains so little manufacturing that it is difficult to draw any strong conclusions about it from these maps.

Obviously we are presenting just a crude first cut at this issue, but it's clear that different areas of the state are quite differently positioned to take advantage of America's increasingly internationalized economy. Existing gaps in county income and employment are likely to be exacerbated. This must count as a major challenge for the state as globalization continues. ■

Percent of Manufacturing Employment in Threatened Sectors



1st Quarter 2012



Tennessee's Largest Export Sectors

	Exports	Change from Last Year	Change from Last Quarter
Medical Equipment & Supplies	\$786,756,650	4.4%	4.4%
Motor Vehicle Parts	\$695,880,732	-6.2%	2.5%
Basic Chemicals	\$592,594,876	17.3%	15.3%
Computer Equipment	\$587,497,592	22.5%	-6.4%
Resins, Synthetic Rubber, & Fibers	\$420,483,610	-3.1%	13.6%
Motor Vehicles	\$409,005,633	5.5%	11.0%

1st Quarter 2012



What's Hot and What's Not*

	Value of Exports	Growth	Decline
SECTORS WITH THE GREATEST GROWTH			
Machinery for Minerals	\$32,758,066	177.0%	
Electric Batteries and Parts	\$15,432,510	120.8%	
Tobacco	\$23,928,919	106.1%	
Automatic Control Instruments and Parts	\$50,928,633	102.1%	
Electrical Switchboards and Panels	\$17,145,406	887.2%	
SECTORS WITH THE GREATEST DECLINE			
Special Purpose Motor Vehicles	\$4,448,156		-85.1%
Miscellaneous Printed Matter	\$7,758,641		-68.3%
Wood	\$8,536,665		-56.8%
Coated Paper and Paperboard	\$9,511,193		-51.7%
Primary Acrylic Polymers	\$10,204,678		-45.3%

*Among Tennessee's top 100 exported goods.

1st Quarter 2012

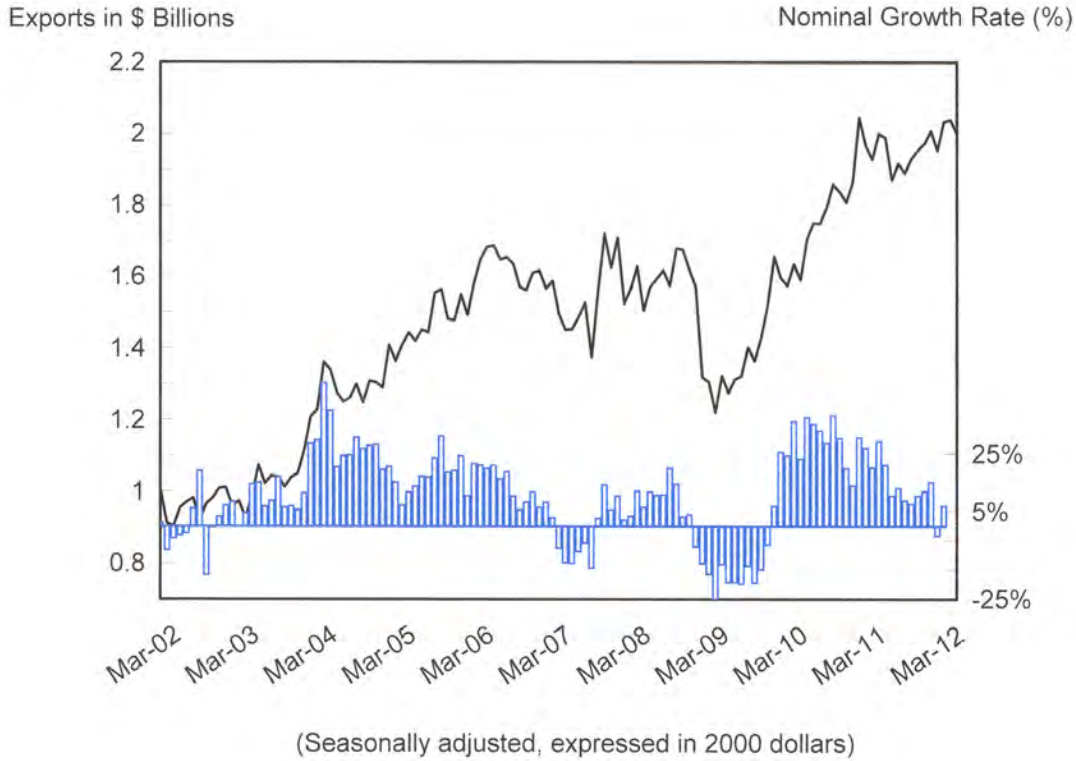


Fastest-Changing Export Destinations

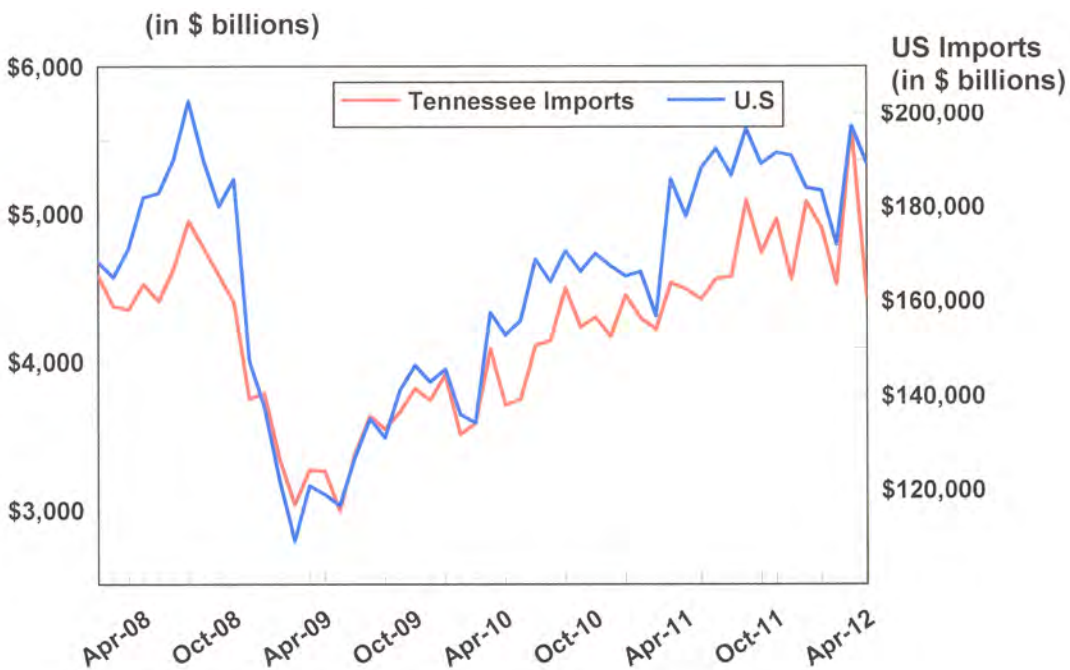
	Value of Exports	Gain	Decline
COUNTRIES WITH THE GREATEST GROWTH			
Angola	\$5,605,622	232.0%	
Norway	\$8,824,629	172.0%	
Oman	\$31,696,399	150.0%	
Jordan	\$4,957,166	139.0%	
Belgium	\$335,918,913	119.0%	
COUNTRIES WITH THE GREATEST DECLINE			
Luxembourg	\$1,290,973		-99.0%
Afghanistan	\$3,551,327		-90.0%
Morocco	\$2,729,362		-71.0%
Iraq	\$4,740,023		-55.0%
Austria	\$6,707,800		-48.0%

(Among countries averaging more than \$3 million in sales per quarter)

Tennessee Monthly Exports



Tennessee Monthly Imports





STATE EXPORTERS CONTINUED TO GAIN, BUT THE GLOBAL SLOWDOWN IS STARTING TO BITE.

Tennessee exports increased about \$500 million last quarter, a 6.7% gain that brought the state's foreign sales to \$7.846 billion. The state's numbers lagged a bit behind the U.S. average, with total U.S. exports growing 8.7% for the quarter. Though state exporters continued to make headway, it's clear the global economic slowdown is starting to bite.

Indeed if it were not for the state's NAFTA partners, it would have been a far more difficult quarter. Three-quarters of the state's increases in foreign sales were to Mexico or Canada. Exports to Canada were up \$175 million. The majority of the gains were in computers, auto parts, and industrial instruments. Mexico may have been the single best global market for the state. Tennessee shipments south of the border grew by just over \$200 million, a 24.8% increase from a year ago. The large increase was concentrated in the automotive sector, including auto parts, ignition equipment, pumps, and engines. The rest of the Americas were at least solid, with exports to Latin America growing from \$410 million to \$444 million. Chemicals, computer equipment, and aircraft formed the backbone of the gains, while both medical industry and industrial machinery exports suffered modest reverses in this region. Chile was the star Latin American performer, as its purchases of Tennessee goods soared 22%. This brought exports to Chile to just under \$100 million for the quarter. That accounted for half the state's export gains to the entire continent. The largest Latin American export market and the only one currently over \$100 million, Brazil, saw little change.

In the rest of the world, Australia was the state's best market last quarter. Thanks to strong growth in the computer and aircraft industries, \$256 million of Tennessee goods went Down Under, a 39% increase from a year ago. Japan continued to be a very strong market for the state. The medical sector has been the driver of increased sales to Japan for the past several years, and this quarter was no different. That sector now accounts for well over a quarter of all Tennessee exports to Japan. The figures from China were more problematic. Exports to China were up fairly strongly, about 17% for the quarter, but if we subtract increased cotton purchases, the state's remaining exports

actually fell modestly by about \$9 million for the quarter. Tennessee's global cotton exports declined \$77 million for the quarter, so the additional \$93 million of cotton purchased by China amounted more to a huge repositioning of the state's cotton market than a vast increase in global cotton sales.

The numbers from China are the most obvious signs of a slowing global trade environment. Tennessee exporters struggled to make headway across much of the world. Beyond China and Japan, East Asia was tough. Exports fell to South Korea by \$21 million, to Hong Kong by \$6 million, and to Taiwan by \$24 million. Southeast Asia was no better. Exports to the ASEAN countries fell by a fifth, to \$317 million. Though shipments to Singapore were steady, there were sharp falls to Thailand, the Philippines, and Indonesia. These were the sites of major losses in cotton sales. On the other side of Asia, Tennessee's exporters posted modest gains in the Middle East, entirely due to large sales of cars and aircraft in the Gulf States. The Saudi Arabian market was down 40%.



TENNESSEE EXPORTS ARE GROWING MORE SLOWLY, FROM AN EVER-NARROWING BASE.

As might be expected, there were few gains in Europe. The Eurozone's imports of Tennessee goods barely moved, from \$1.037 to \$1.042 billion. Exports to both France and Germany fell by \$1 million, while the Netherlands was off \$10 million. The crisis economies of Italy and Spain together purchased \$42 million less of Tennessee goods than a year ago. Medical instruments took the brunt of this drop. The rotation of medical and pharmaceutical exports into Belgium continued, giving that country the best numbers for the quarter, but as explained in earlier Trade Reports, these are not increased Tennessee shipments but merely a shift from Luxembourg to Belgium. Outside the Eurozone, things weren't much better in Europe, with exports to the U.K. dropping \$2 million, mostly as a result of a fall in Tennessee aircraft-related shipments.

Sectorally, we noted the decline in cotton exports. The only other industries with significant declines for the quarter were the auto parts industry, where the losses were all outside North America, and the printing industry. Perhaps the state's best performer was the computer industry,

TRADE REPORT

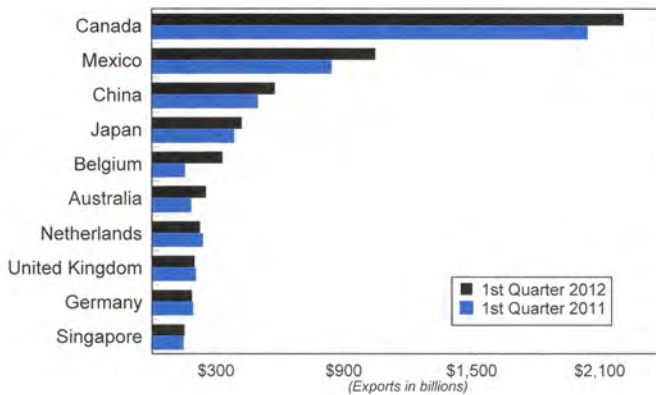
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which managed solid gains across a number of regions and grew by almost 20% for the quarter. The chemical sector continued its recent strong performance, posting a 17% gain. The medical equipment industry also was up, growing by \$43 million. The auto industry was basically flat, although shipments of engines and automotive instruments made gains. The latter were pretty much limited to Mexico, however. Most other industrial sectors forged only modest gains for the quarter.

TENNESSEE' SECOND QUARTER OPENED WITH AN ANEMIC 0.5% EXPORT GAIN FOR APRIL.

As this survey indicates, Tennessee exports continue to grow but more slowly and from an ever-narrowing base. Two years ago exports were growing across most global regions; today they are very much concentrated in North America and a handful of other countries. The number of strong sectors has shrunk as well. This has to be a worrying sign as we look ahead to the rest of the year. Indeed, Tennessee's second quarter has opened with a very anemic 0.5% export gain for the month of April. ■

Tennessee's Leading Trade Partners



Tennessee Trade-Weighted Dollar Index

