



# Global Commerce

## Tennessee and the International Economy

### STATE EXPORTS BY REGION

#### A COMPARISON OF EXPORTING STATISTICS BY TENNESSEE MSA

by Steven G. Livingston

Tennessee's exports have grown substantially over the past few years, but where do they come from? Do those exports come from all parts of the state, or are they concentrated in certain regions? We can examine this question by looking at the size and composition of the foreign sales that come from each of Tennessee's MSAs (metropolitan statistical areas). An MSA is composed of a major urban area—the central city and the counties that are economically connected to it. Tennessee has 10 MSAs.<sup>1</sup> How are the state's exports spread among these MSAs?

To begin, most Tennessee MSAs export more, absolutely and relatively, than they did 10 years ago. All the state's MSAs have risen in the export rankings of American MSAs over that period, with the single exception of Johnson City. And this is a statistical illusion because the Tri-Cities region of East Tennessee was separated into two MSAs in the interim.

We can see that four MSAs, led by Memphis and Nashville, lead the pack. The pie chart shows these four along with the fifth-largest exporting MSA, Chattanooga. (The figures from the MSAs that cross state lines are adjusted to report only the Tennessee portions of their exports.<sup>2</sup>) We also see that exports from rural Tennessee are not insignificant. Almost a fifth of the state's exports are from rural areas, almost equaling the size of exports from Nashville. Of course, the absolute size of the value of exports reflects the size of the MSA itself. To examine the relative export strength of each Tennessee MSA, we can look at either exports per person or exports as a percentage of the total economic activity of that region. Here we see a bit more equality. The big exception is Kingsport, which is by far the most export-intensive region of Tennessee. This reflects the activity of Eastman Chemical, historically the state's largest single exporting company. Exports equal more than a quarter of the total economic activity in the Kingsport area! Memphis is the only other area for which exports equal more than a 10th of the region's economic production. If ranked by population, Nashville, Knoxville, and Morristown close the gap a bit, but Kingsport and

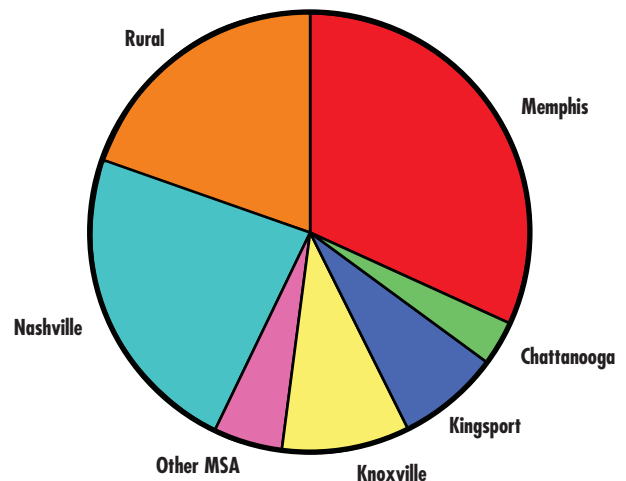
Exports of Tennessee MSAs			
	2007 Exports	U.S. MSA Rank	1998 Rank
Chattanooga	\$809,170,896	148	159
Clarksville	\$309,719,325	225	a
Cleveland	\$172,806,299	283	a
Jackson	\$254,694,588	248	179
Johnson City	\$130,524,935	306	73
Kingsport	\$2,408,520,440	71	a
Knoxville	\$2,093,997,297	76	100
Memphis	\$8,138,188,390	29	39
Morristown	\$337,570,284	220	a
Nashville	\$5,105,870,660	40	58

a = not defined as an MSA in 1998. 1998 figure is taken from the exporter location series, which is no longer collected.

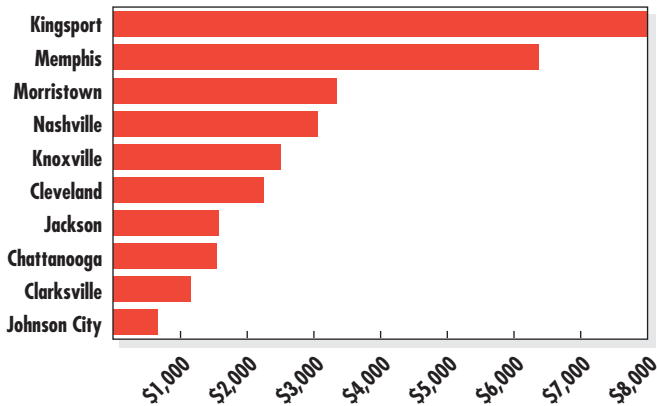
Memphis are still far in the lead. Memphis exports almost twice as much per person as does Nashville. Two of the less export-intensive regions, Cleveland and Chattanooga, are likely to see significant increases in coming years due to recently announced large German investments. Clarksville and Johnson City are the least focused on international sales. In the case of Clarksville, this is presum-

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#### 2007 Tennessee Exports by Region

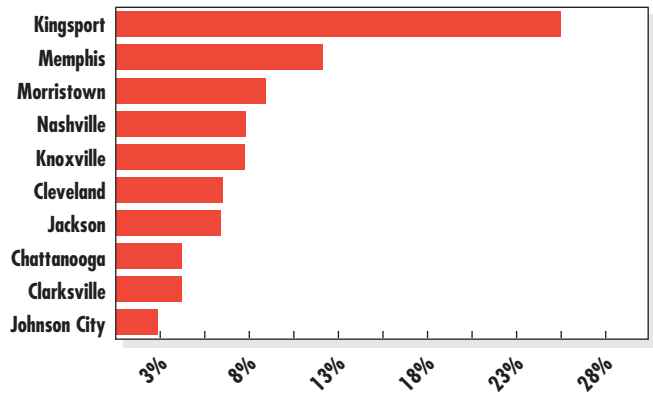


## Exports per Person (\$ Value)



## Exports as % of Economic Activity

(as measured by regional GDP, 2006)



## EXPORTS BY MSA

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ably because of the economic importance of Fort Campbell, which obviously does not export.

If we look at export growth, the picture changes a bit. The smallest exporting MSA, Johnson City, is, however, the fastest growing. It joins Knoxville and Chattanooga in posting a better than one-third increase in exports over the 2005-7 period. Six MSAs exceeded the state's export growth rate. Jackson, unfortunately, went in the other direction. Thanks to the loss of significant paper exports, its sales overseas dropped by nearly half over this period.

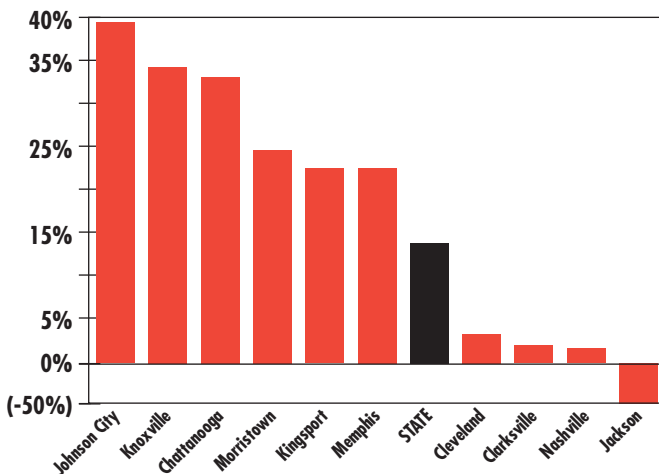
To a significant extent, the differences in growth performance reflect what and to where these different MSAs export. In terms of destination, the state features two export patterns. Nashville, Knoxville, Clarksville, and Jackson are primarily focused on North American markets. The other MSAs are more global in scope. In 2007, Memphis exported goods to China valued at \$450 million, for example, whereas Nashville's exports to that market were insignificant. Cleveland appears to have the strangest pat-

tern, as few of its exports go to any of the major world economic regions. Instead, much of its trade goes to Latin America.

These regional differences are largely determined by what is being exported. MSAs that are heavily invested in the automotive industry largely export to Canada and Mexico. This is especially true of Nashville and Clarksville. (Nashville's second largest export sector, computers, is focused upon Canada.) Morristown and Knoxville also concentrate in the transportation sector and so are also disproportionately exporting to the NAFTA countries. The MSAs that feature large chemical sectors are more global in their orientation. This includes Kingsport, of course, but also Chattanooga, for which chemicals are also the largest exported product. The most diverse exporter is Memphis. With large foreign sales of electronics, medical equipment (mostly orthopedics), and paper, it is very balanced across the regions of the world. For two MSAs, Johnson City and Jackson, fabricated metals account for the largest portion of exports. However, the markets are quite different, with Jackson concentrated upon NAFTA, while Johnson City

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## Export Growth Rate, 2005-2007



## Export Destinations

% of 2007 MSA exports to each global region

	NAFTA	Asia	EU
Chattanooga	43.02%	22.00%	20.15%
Clarksville	68.93%	9.06%	15.21%
Cleveland	19.08%	1.16%	2.31%
Jackson	75.29%	5.10%	8.63%
Johnson City	38.17%	16.03%	28.24%
Kingsport	13.49%	31.76%	32.21%
Knoxville	49.19%	19.25%	15.09%
Memphis	32.90%	25.94%	23.72%
Morristown	49.11%	13.61%	27.81%
Nashville	59.02%	11.46%	11.07%

4th Quarter 2008

CHEMICALS AND ELECTRONICS BOTH FELT THE IMPACT OF THE GLOBAL ECONOMIC CRISIS.



### Tennessee's Largest Export Sectors

Exports	Change from Last Year	Change from Last Quarter
Transportation Equipment	-1.7%	-0.6%
Chemicals	-19.5%	-26.1%
Computer and Electronic Products	-15.1%	-8.4%
Miscellaneous Manufactured Goods	8.8%	6.5%
Nonelectrical Machinery	-2.6%	-9.1%
Agricultural Products	48.5%	9.8%

4th Quarter 2008

AN ODDITY: SOME OF THE STATE'S BEST MARKETS WERE ALSO AMONG THE MOST TROUBLED.



### Fastest-Changing Export Destinations

Value of Exports	Gain	Decline
<b>COUNTRIES WITH THE GREATEST GROWTH</b>		
Afghanistan	840.1%	
Iraq	229.6%	
Nigeria	219.4%	
Bangladesh	174.8%	
Lebanon	134.8%	
<b>COUNTRIES WITH THE GREATEST DECLINE</b>		
Macao		-93.7%
Luxembourg		-80.7%
Kenya		-80.1%
Bulgaria		-77.2%
Pakistan		-55.9%

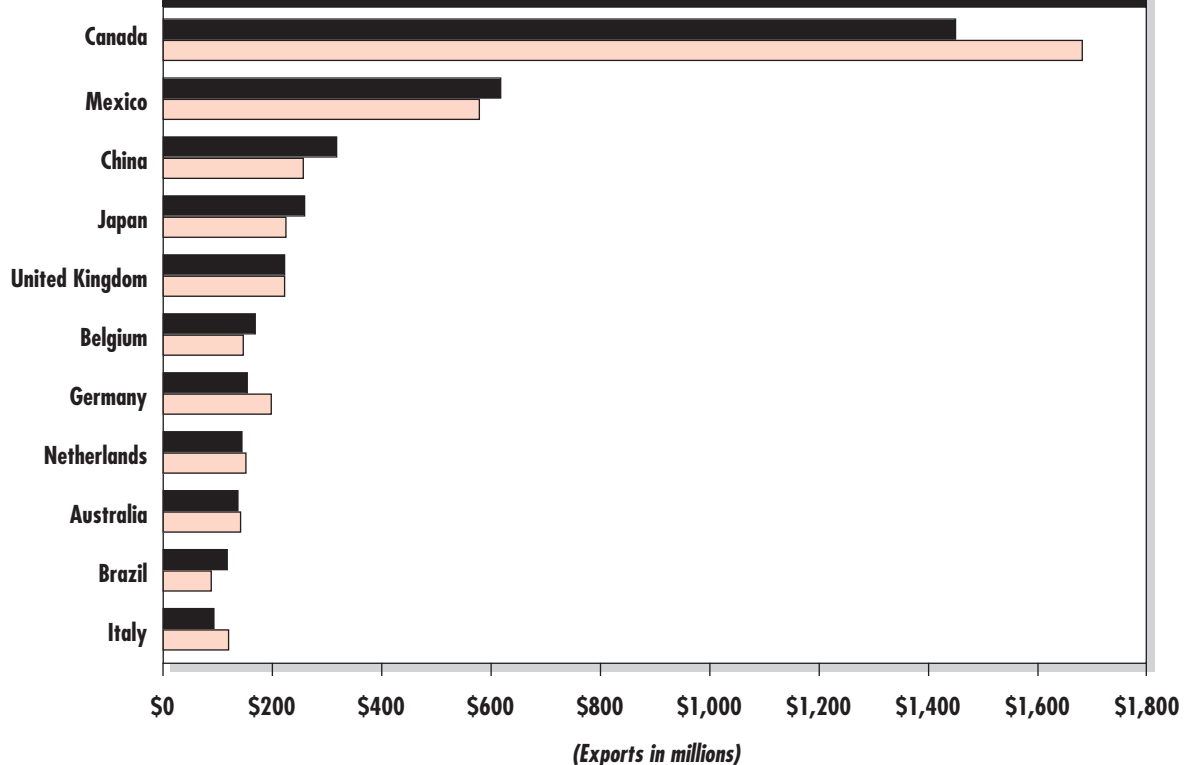
(Among countries averaging more than \$2 million in sales per quarter)

4th Quarter 2008  
4th Quarter 2007

HALF OF THE STATE'S TOP MARKETS FELL IN THE FOURTH QUARTER



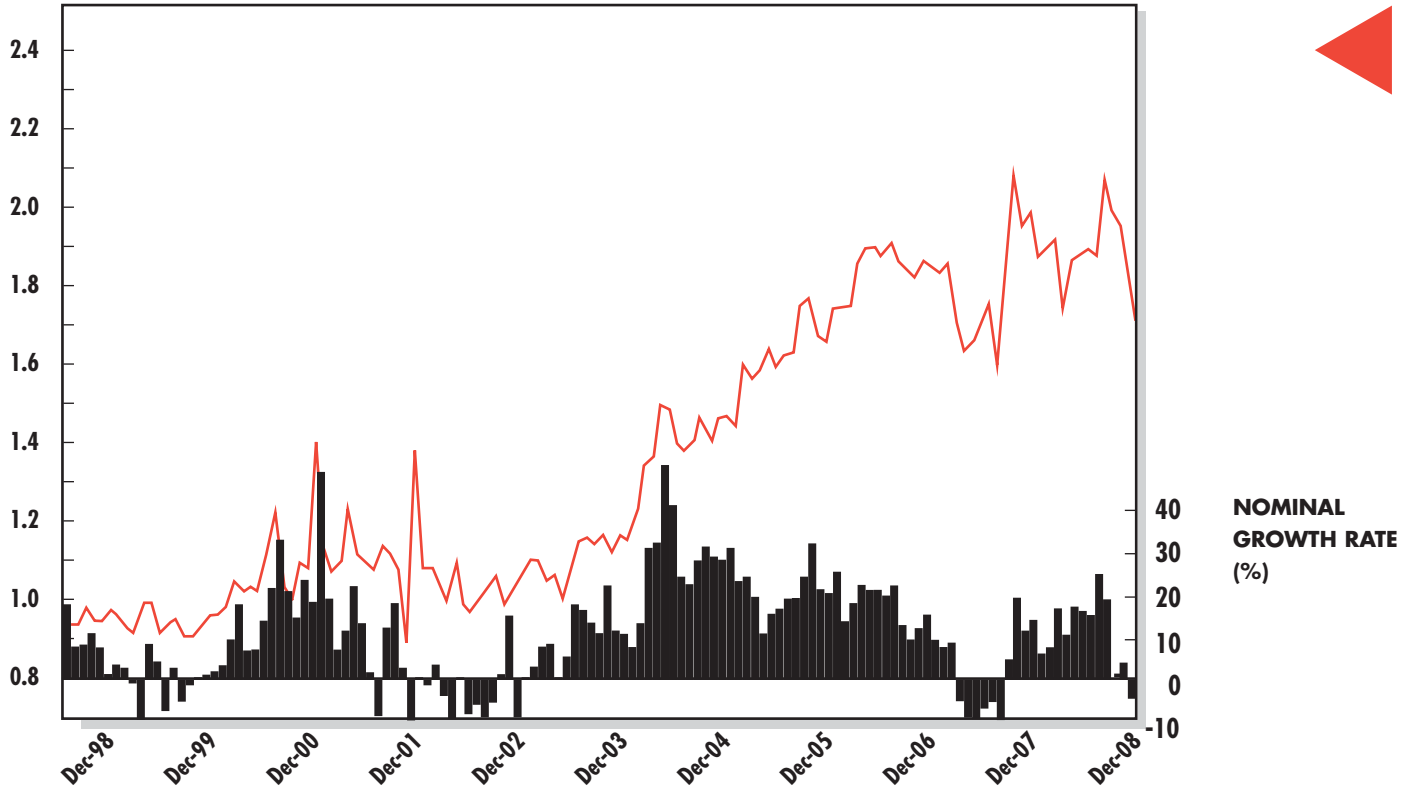
### Tennessee's Leading Trade Partners



## Tennessee Monthly Exports

Exports in \$ billions

(Seasonally adjusted, expressed in year 2000 dollars)



4th Quarter 2008

### What's Hot and What's Not\*

	Value of Exports	Growth	Decline
<b>SECTORS WITH THE GREATEST GROWTH</b>			
USB Flash Disks	\$28,948,199	66,420.1%	
Wood Pulp, Dissolving Grades	\$13,451,592	1,294.4%	
Medical Needles, Catheters, and Parts	\$36,265,852	400.5%	
Cellular Phones	\$16,476,501	275.1%	
Suspension Shock Absorbers	\$26,310,878	223.2%	
<b>SECTORS WITH THE GREATEST DECLINE</b>			
Polyethylene Terephthalate	\$13,512,417		-58.1%
Tapeless DVRs	\$3,436,860		-54.1%
Terephthalic Acid and Its Salts	\$9,686,446		-53.9%
TV or Digital Cameras and VCRs	\$33,565,732		-53.2%
Bleached Paper or Paperboard > 150 mg	\$15,463,910		-52.5%

USB-DRIVE EXPORTS BUCKED A VERY DIFFICULT QUARTER FOR ELECTRONICS.

\*Among Tennessee's top 100 exported goods

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**MIDDLE TENNESSEE**  
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## **MOST OF TENNESSEE'S FOREIGN MARKETS ARE FARING EVEN WORSE THAN THE U.S.**

Tennessee exporters are beginning to feel the consequences of the global economic credit crunch. After a solid October, the state's foreign sales fell moderately in November but far more steeply in December. As a result, at \$5.587 billion, quarterly exports were down 4.79% from a year ago: the first quarterly drop in exports since the second quarter of 2007. The biggest percentage losses were in the electronics industry and various raw material and intermediate goods industries such as chemicals and primary metal manufacturing. The worst-performing industry in the state was the once-robust waste and scrap metal sector. These results are consistent with what is occurring in other states and indeed around the world. Electronics and computer sales globally have dropped dramatically, and the large decline in manufacturing has been catastrophic for those sectors that supply it with material.

Two sectors continued to shine. The medical industry continued to forge gains, picking up an additional \$59 million in exports for the quarter. However, this occurred in October and November; it, too, suffered losses in December. The agricultural sector grew by 48% to \$230 million as the state sold significant amounts of soybeans overseas (along with the usual cotton) for the first time in years.

Exports to Canada fell by more than \$200 million. To a degree this reflects the continuing problems experienced by the state's automotive sector exporters. But this quarter, their difficulties were joined by problems in the computer and electronics industry. Video games and laptops suffered large declines in sales. So did TVs and other television equipment. These losses more than outweighed the state's strong DVD exports north of the border.

Mexico turned in better numbers, as Tennessee exports grew from \$611 million to \$659 million in its second-largest market. The gains were almost entirely due to a large increase in the export of motor vehicle parts, though this was to a degree counterbalanced by a big loss in automotive aluminum plating. Mexico was also one of the biggest markets for soybeans (\$14 million).

Elsewhere, some of the best gains occurred in Japan. Medical instruments and orthopedic exports combined for nearly \$100 million in exports and account for most of the \$43 million in increased sales to Japan. A third medical sector, pharmaceuticals, was also strong, quintupling its Japanese sales for the quarter. Recent news of the collapse of Japan's own exports (down over 40% thus far in 2009) suggests that next quarter's Tennessee exports to this market are likely to be down very sharply, however.

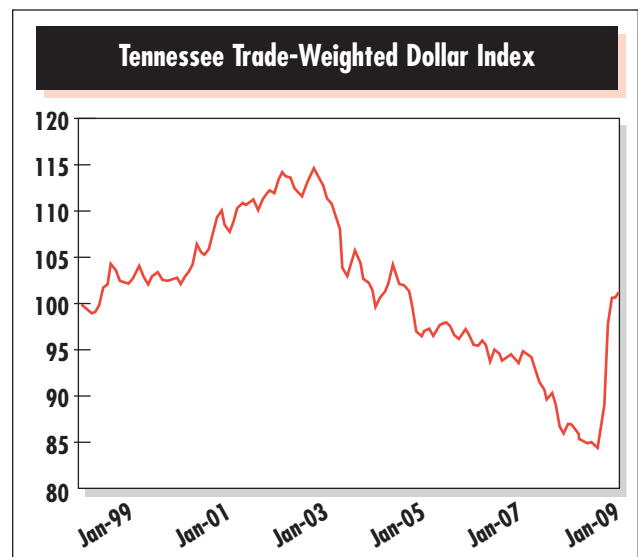
Exports to most "emerging market" nations were down, sometimes substantially. The two exceptions were Brazil and China. Sales to Brazil were up 40% and involved a variety of industries including computers, medical instruments, and line telephony. Exports to China grew by almost a quarter (to \$344 million). The major reason was agriculture. Cotton and soybeans combined for more than \$80 million in new exports. Artificial filament sales

were also up strongly. As with Japan, the steep fall in Chinese exports does not bode well for continuing gains by these industries.

Across the rest of the developing world, the export picture was pretty bleak: Argentina down by a third, South Korea a quarter, Malaysia 40%, Taiwan 40%. You get the picture. Total state exports to Southeast Asia were off more than 20%. Electronics and various chemicals bore the brunt of these losses. The Middle East was a bit of an exception due to extremely strong automotive exports during October. However, the next two months clawed back more than 80% of that gain, leaving the state barely in the black for the quarter.

Tennessee exports to Europe did not suffer reverses of that magnitude. However, losses were the order of the day. Though the state eked out a \$3 million gain in the U.K. (1.25%), its exports to the entire European Union fell by just over \$100 million. The timeline was the same: a weak \$10 million gain in October was followed by a sizable \$30 million loss in November and then a steep loss of \$80 million in December. Not all industries suffered. The medical instrument and pharmaceutical industries had good quarters. The former's exports grew by \$50 million. But auto parts (mostly to Spain), chemical exports, and scrap metal sales fell substantially. There was also some shifting within Europe. Exports to France and Germany were off more than \$30 million each, and sales to both Spain and Italy fell by more than \$20 million. Belgium, however, the site of most of the medical instrument export gains, increased its purchases of Tennessee goods by about \$30 million.

One can't look forward to 2009's numbers without some trepidation. Most of Tennessee's foreign markets are faring even worse than the American economy, and many of the major products Tennessee sells abroad are materials or components for manufactured goods, the sector bearing the brunt of the current economic contraction. Perhaps we should be grateful that at this point many of Tennessee's larger, developed markets appear to be contracting but not collapsing. ■



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also has significant exports to Europe. Morristown’s machinery and transportation exports mostly go to NAFTA, but there are substantial sales in Europe as well. Cleveland is one of the smaller exporting MSAs, but its diverse exports (food, textiles, chemicals, appliances) account for the unusual market profile of the goods shipped by companies from that part of Tennessee.

It is not surprising that when we unpack the state’s exports we find that particular parts of the state are concentrated in specific industries and tend to export to specific places. There are also sizable differences in their levels of exporting. Recent difficulties in the auto sector account for the relatively poor export growth of those MSAs that specialize in that industry. Presuming that is corrected, there isn’t much evidence that Tennessee’s regions are diverging when it comes to their ability to export. Recent patterns have held rather steady. The next few years may put this to the test, but based upon on the past few years, it appears that most regions of Tennessee are contributing to the state’s export growth, and we would expect this to continue in the years ahead. ■

1. Some MSAs cross state boundaries. This is the case for four Tennessee MSAs: Chattanooga, Clarksville, Kingsport, and Memphis.

2. This was accomplished by estimating exports using a function of the number of MSA employment located in the Tennessee portion of the MSA.

**Sign o’ the Times?**

The current world economic crisis is shrinking world trade at an astounding pace. As we look ahead to Tennessee’s trade in 2009, the global decline in exports to many of its significant export markets is nothing less than startling. January 2009 imports into almost all emerging-market nations are down from a year ago, often 40% or more. Though this collapse of trade is not as severe in the developed world, these numbers suggest a very difficult year is in store for state exporters.

**Change in Imports: January 2008 to January 2009**

