



Global Commerce

Tennessee and the International Economy

TENNESSEE MSA EXPORTS



A COMPARISON OF 10 METRO AREAS

by Steven G. Livingston

In the past several months, both the International Trade Administration and the Brookings “Export Nation” project have released estimates of metro-area exports for 2012. They provide some interesting details about the export activity of Tennessee’s 10 metro areas (formally known as metropolitan statistical areas, or MSAs). As one might expect, the large majority of Tennessee exports come from its major cities. About 79% of Tennessee’s 2012 exports came from the state’s metro areas, versus the 77% of Tennesseans that live in them. (That figure includes only the portions of an MSA located in this state. Several of Tennessee’s metro areas—Memphis, Chattanooga, Kingsport, and Clarksville—cross state lines.)

Most of the urban areas have seen solid export growth over the past several years. Chattanooga posted by far the best record, more than doubling its exports since 2007. Jackson

% of MSA Exports from Tennessee

Memphis, TN-MS-AR	86%
Chattanooga, TN-GA	85%
Kingsport-Bristol, TN-VA	75%
Clarksville, TN-KY	57%

and Kingsport-Bristol both exceeded the overall export growth rate for the state, while Knoxville grew roughly at the same rate as the rest of the state. The laggards were the smaller metro areas. Morristown’s, Johnson City’s, and Cleveland’s export activity barely budged, each growing by less than 5%, in the past five years. Over this time, four of the 10 metro areas have risen in the rankings of America’s top exporting MSAs, as shown in our summary table.

This mixed bag of performances is indicative of some very different export profiles. The closest thing to a constant among them is the importance of the NAFTA market. NAFTA dominates the trading pattern of Clarksville, Morristown, Nashville, and Chattanooga and is the largest

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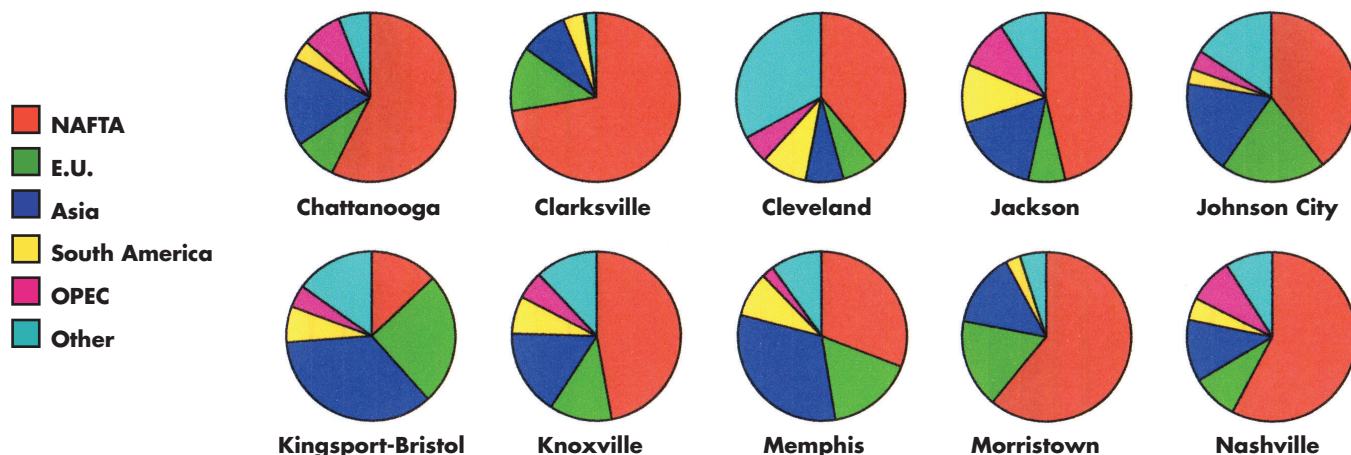
Tennessee MSA Exports

	2012 Exports	2007 Exports	2012 Rank*	2007 Rank*
Chattanooga, TN-GA	\$1,849,105,623	\$809,170,896	104	148
Clarksville, TN-KY	\$326,330,250	\$309,719,325	244	227
Cleveland	\$204,003,726	\$172,806,299	295	286
Jackson	\$396,967,503	\$254,694,588	228	250
Johnson City	\$134,070,413	\$130,524,935	319	309
Kingsport-Bristol, TN-VA	\$4,092,028,070	\$2,408,520,440	60	70
Knoxville	\$2,656,750,920	\$2,093,997,297	81	75
Memphis, TN-MS-AR	\$11,360,128,200	\$8,138,188,390	27	28
Morristown	\$345,324,485	\$337,570,284	238	221
Nashville	\$6,402,109,820	\$5,105,870,660	40	39

Source: International Trade Administration data

*Among the 366 American MSAs

Regional Destination of Exports



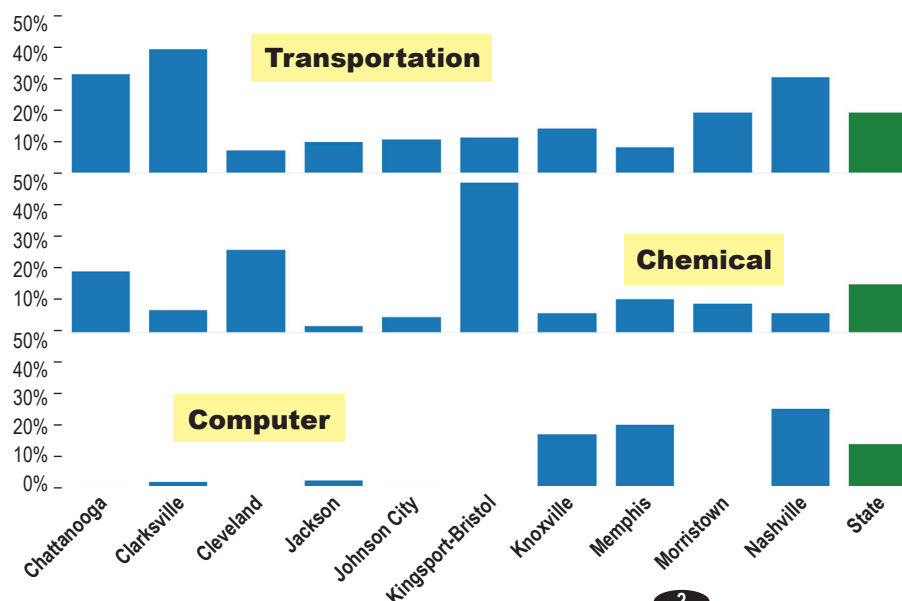
market for all the other Tennessee metro areas except Kingsport-Bristol. Kingsport-Bristol joins Memphis as having the most diverse geographical profile, followed by Johnson City and Jackson. These different geographic patterns, of course, are significantly determined by what the metro area is exporting. Auto-related exports are NAFTA-focused. The larger importance of Asia to Kingsport-Bristol and Memphis is determined by the former's concentration in chemicals and synthetics and the Bluff City's substantial medical equipment and agricultural industries. (That agriculture, cotton to be exact, is mostly brokered through Memphis, not grown there!)

If we look at the metro areas' export activity across three of the state's major export industries—transportation, chemicals, and computers—we see strikingly different patterns. Most areas are heavily invested in one of these industries. No metro area significantly exports across all three, though Nashville comes closest. Kingsport clearly has more of its exporting in one basket than does any other region, though half or more of the exports from Chattanooga, Clarksville, and Nashville are in these three exporting sectors.

There is increasing interest in service exports, which many believe to be America's comparative advantage in trade. The government does not compile service exports at the regional level, but Brookings has estimated them. For six of Tennessee's metro areas, service exports account for

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% of Exports in Major Tennessee Industries



Service Exports

% of Total Exports	
Memphis	30.1
Nashville	29.5
U.S. Metro Average	29.1
Knoxville	27.3
Johnson City	24.9
Chattanooga	24.6
Cleveland	21.8
Clarksville	14.9
Morristown	14.4
Jackson	11.9
Kingsport-Bristol	11.3

2nd Quarter 2013



Tennessee's Largest Export Sectors

	Value of Exports	Change from Last Year	Change from Last Quarter
Medical Equipment	\$902,954,211	11.0%	0.3%
Motor Vehicle Parts	\$753,943,383	1.4%	1.7%
Basic Chemicals	\$539,811,302	-2.3%	2.3%
Computer Equipment	\$494,693,342	-13.4%	-9.4%
Motor Vehicles	\$400,508,007	-3.3%	-33.0%
Synthetic Fibers & Filament	\$518,369,673	14.5%	22.5%
Instruments for Guidance, Control, etc.	\$388,512,880	0.4%	2.9%

2nd Quarter 2013



What's Hot and What's Not*

	Value of Exports	Growth	Decline
SECTORS WITH THE GREATEST GROWTH			
Photosensitive Semiconductor Devices	\$29,162,563	1,814.7%	
Air Conditioning Motors > 75kw	\$20,832,831	1,092.3%	
Nonwovens between 70 & 150 g/square meter	\$50,775,247	417.0%	
Nonwovens between 25 & 70 g/square meter	\$27,168,791	178.0%	
Artificial Body Parts (excluding Joints)	\$22,360,488	141.0%	
SECTORS WITH THE GREATEST DECLINE			
Precious Metal Scrap & Waste	\$4,613,014		-85.5%
Fructose	\$5,377,802		-68.3%
Computer Accessories	\$30,727,668		-64.7%
Video Game Consoles	\$10,361,965		-64.2%
Polymer Propylene Sheets	\$6,911,832		-57.2%

*Among Tennessee's top 100 exported goods

2nd Quarter 2013



Fastest-Changing Export Destinations*

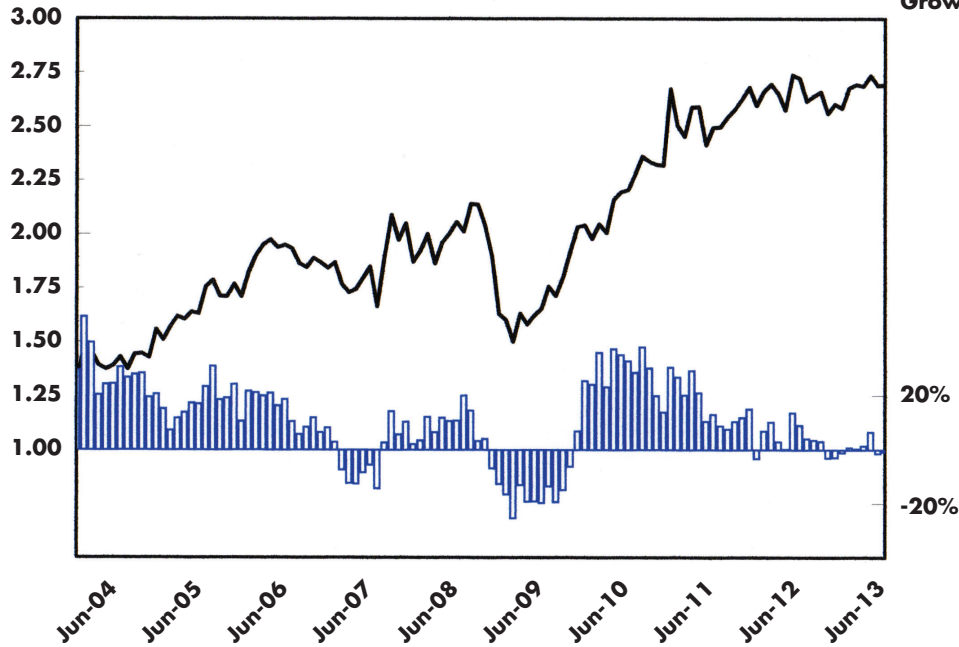
	Value of Exports	Gain	Decline
COUNTRIES WITH THE GREATEST GROWTH			
Luxembourg	\$14,098,531	2,435.8%	
Portugal	\$11,480,791	165.5%	
Turkey	\$80,014,856	98.5%	
Poland	\$23,233,035	88.3%	
Egypt	\$12,956,973	86.3%	
COUNTRIES WITH THE GREATEST DECLINE			
Iraq	\$2,435,308		-67.5%
Ukraine	\$5,136,072		-64.5%
Bahrain	\$7,991,929		-46.8%
Venezuela	\$12,966,910		-44.4%
Qatar	\$11,962,743		-37.1%

*Among countries averaging more than \$5 million in sales per quarter

Tennessee Monthly Exports

Exports in \$ Billions

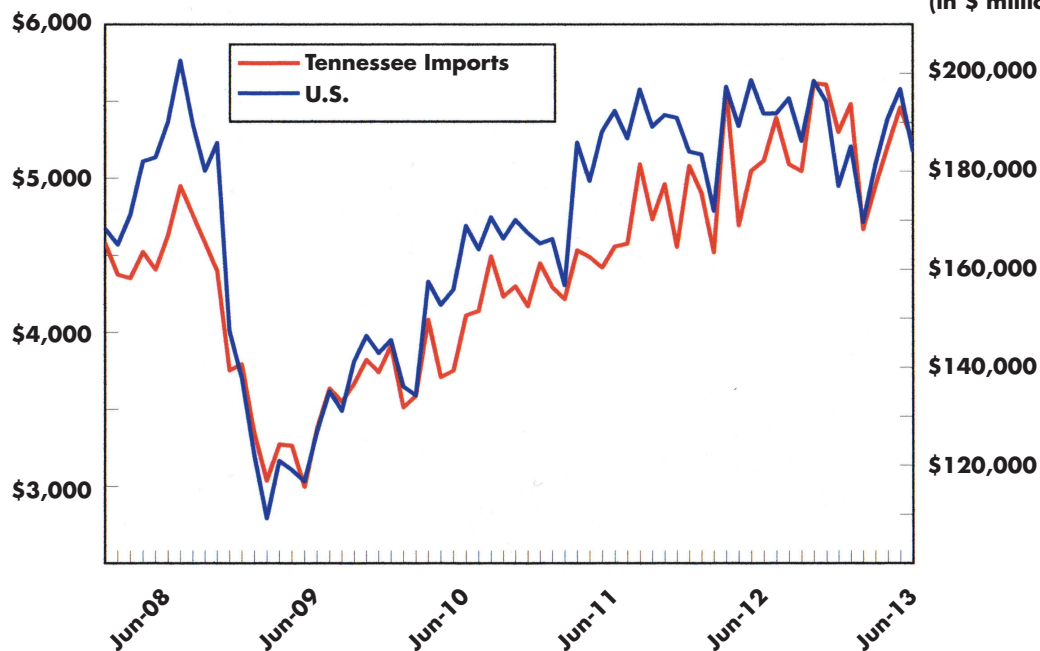
Nominal
Growth Rate (%)



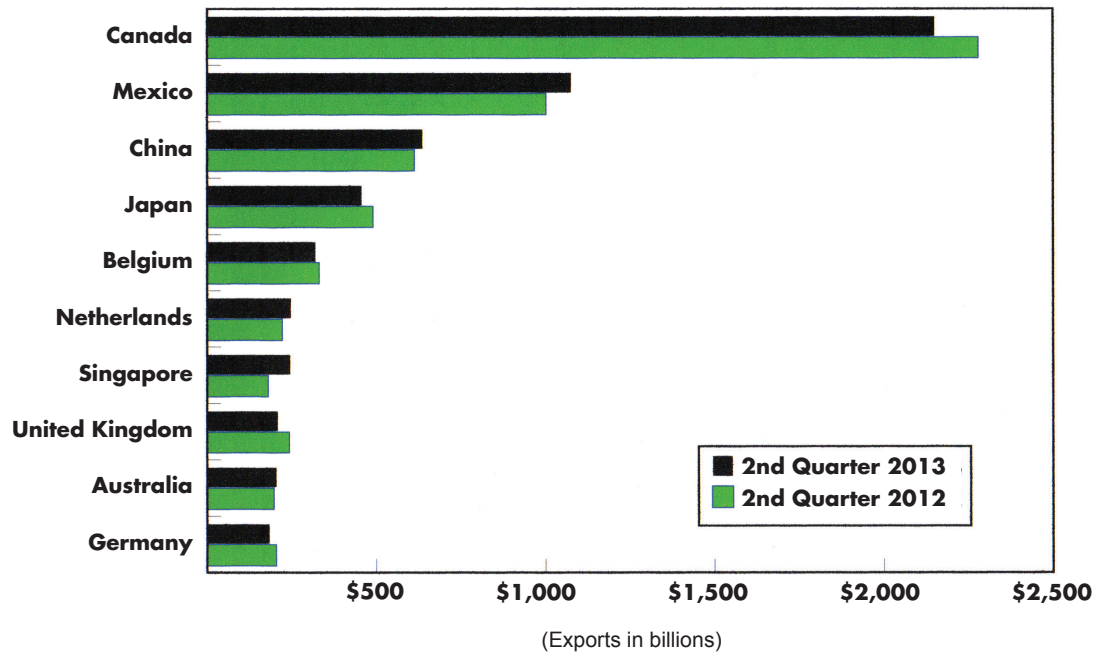
Tennessee Monthly Imports

(in \$ millions)

U.S. Imports
(in \$ millions)

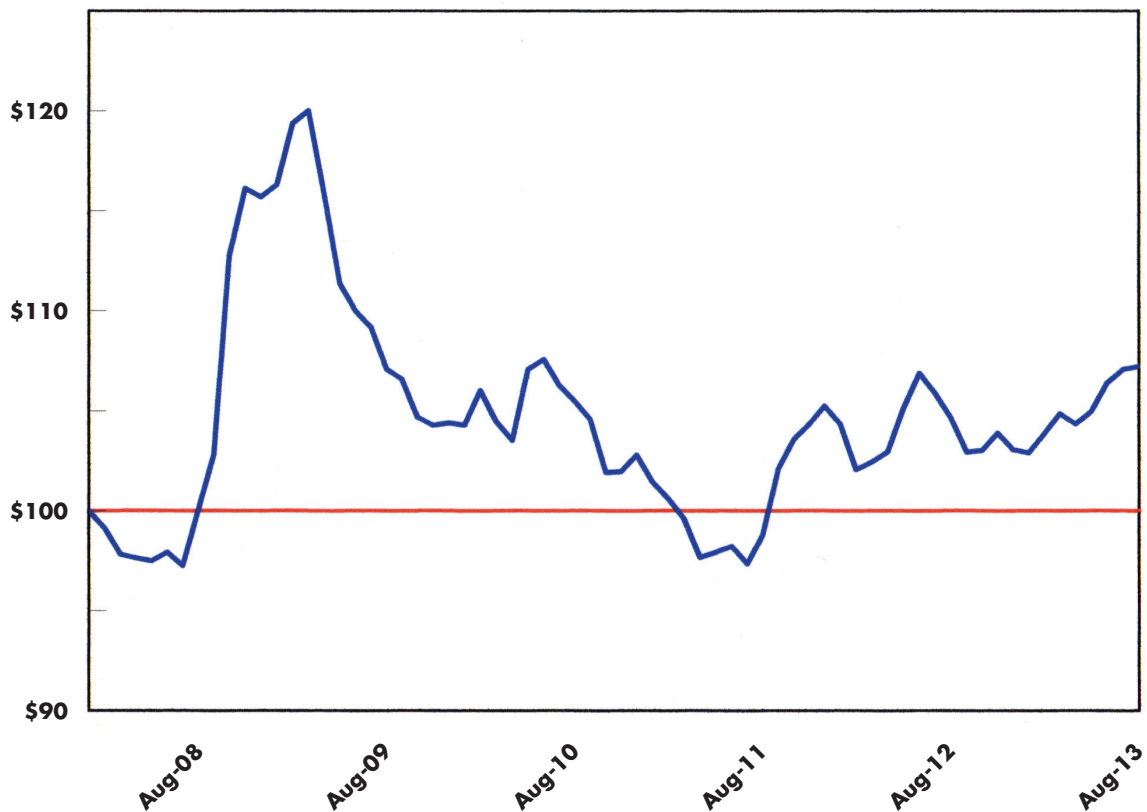


Tennessee's Leading Trade Partners



Tennessee Trade-Weighted Dollar Index

January 2008 = 100



TENNESSEE INTERNATIONAL TRADE REPORT

2nd Quarter 2013



STATE EXPORTS GREW 1.3% OVER THE YEAR AND TOPPED \$8 BILLION FOR THE FIRST TIME.

The second quarter was a quiet one. Tennessee's global shipments increased by \$106 million, an anemic 1.3% gain from a year ago, but this sluggish performance was not unique. Total American exports grew just 1.6% over this same period. Though it was the first quarter in which state exports exceeded \$8 billion, there was actually very little change in their composition or destination.

A disproportionate amount of what action there was involved China. Overall, state exports to China rose only a modest 4% (to \$641 million), but this hides several large gains and losses. Cotton shipments to China dropped by more than \$100 million (from \$148 to \$43 million), enough to make cotton one of the state's poorest-performing goods for the quarter. However, at the same time, other textile and apparel related exports soared. Exports of nonwoven textiles increased by nearly 500%, sales of polyesters doubled, and artificial filament tow was up by a fifth. These gains clawed back half the losses from cotton. To them the state added significantly increased sales of orthopedic goods, chemicals, pharmaceuticals, and motor vehicles—enough to push the quarter's total into the black.

China's purchases of nonwoven textiles powered that product to the strongest global growth of any of Tennessee's larger exporting sectors. Total nonwoven exports nearly doubled for the quarter (from \$53 to \$103 million). Other strong sectors included the aluminum industry, which also crossed the \$100 million mark for the second quarter (a 64% gain) thanks to increased shipments to Canada and Mexico. Orthopedic goods also turned in very good numbers, mostly due to a huge increase in sales to Japan. Japan purchases surged more than \$35 million, accounting for 40% of the industry's global increase in sales. China, Australia, and India were other strong markets for the state's orthopedics industry.

The automotive sector did well this past quarter, if not spectacularly so. Car exports grew from \$376 to \$395 million in the second quarter. The Netherlands and South Korea joined China in accounting for most of this growth. However, Tennessee's two largest automotive destinations, Canada and the Gulf states, were both down a bit for the quarter, dampening the global gain. Shipments of car

engines were up about 10%, but those of most other auto or engine parts fell slightly or were flat.

Most other top export sectors saw very little change, though a few experienced a rough ride. The worst was that of computer peripherals and parts. Shipments of laptops and computers were off slightly, but those of computer parts fell by 60% (to \$36 million). Its \$56 million loss was the largest suffered by any Tennessee export sector. The silver lining, if that's what we wish to call it, is that almost all of this loss occurred in one country: Japan. Exports of computer parts to Japan dropped from \$40 to under \$1 million. A similarly remarkable drop in one country, this time Canada, played the same role in depressing the state's sales of human blood and antisera (from \$46 to \$29 million). Canada was also the culprit in the large export loss suffered by the state's DVD/gaming industry. Computer game sales dropped by more than a third (to \$59 million) in the second quarter. And Canada accounted for a third tough performance, that of the mechanical excavator industry. A \$15 million drop in sales north of the border accounted for more than half of its global decline to \$30 million from \$57 million a year ago.

PROBLEMS IN CANADA CONTINUE TO BE A BIG PART OF THE STATE'S SLOWED EXPORT GROWTH.



As these losses might suggest, problems in Canada continue to be a big part of the state's slowed export growth. Tennessee shipments to Canada fell from \$2.291 to \$2.154 billion last quarter. Some of that loss was recovered in Mexico, where exports grew from \$1.002 to \$1.079 billion. Elsewhere, with one exception, it was a hard slog. Sales to the Middle East were unchanged, as they were to the total Chinese economic area. Losses in Taiwan and Hong Kong ate away the modest gains in China itself. Exports to Japan fell by about \$30 million (to \$459.3 million), reversing the gains of recent quarters. In Europe, austerity continued to bite. Total Tennessee shipments to the E.U. dropped around \$30 million (to \$1.316 billion). Sales to both Germany and the U.K. were down. In Latin America sales were off by \$30 million also, though the smaller Central American and Caribbean markets performed better.

The one exception was Southeast Asia, in particular Singapore. Thanks to large increases in aircraft and medical sales, state exports to Singapore were up by nearly \$100

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basically a quarter or more of all exports. Note the high correlation between the intensity of service exporting with the overall level of exporting for a metro area.

The two sets of metro export data starkly illustrate how difficult it is to obtain accurate export data. Take a look at the differences in the two sets of numbers. For a few areas, such as the Nashville metro area, they are relatively close; for others they are quite far apart. What's going on? Government data is largely taken from Shipper's Declaration Forms (augmented by other sources for NAFTA). The forms provide lots of detailed information but suffer from some problems. If the form is filled out incorrectly, the data taken is obviously going to be incorrect. If the form is filled out by company headquarters, listing the HQ rather than the branch plant as the export location, that's a problem. If the form is filled out by a broker, freight forwarder, or some other agent who is unsure of the location of the export, is aggregating exports from different places, or is simply a bit lazy and filling in the agent's address, that is going to be a problem, too. The general thinking is that these errors bias exports toward port areas, where most form filling is going on. In the case of Tennessee, that would tend to bias the allocation of exports toward Memphis, and you can see the much larger export figure for Memphis exports in the Census Bureau numbers than in the Brookings numbers.

Many analysts attempt to get around this issue by estimating exports based on where productive activity is located. If a community produces 10% of America's fabricated metals, then it should also produce 10% of America's fabricated metal exports, and so forth. This sounds reasonable, but it might also be misleading. Companies matter: some are export powerhouses; others are not. Take Kingsport-Bristol: the Brookings export estimate, based on production, is much lower than the information taken from Shipper's Declaration Forms. What's going on there? What's going on is Eastman Chemical, one of America's largest and most competitive exporters. The Brookings number is almost certainly too low because it isn't able to take the competitiveness of Eastman Chemical into account in compiling its estimates.

Two Estimates of Metro Exports

(in \$ millions)	Census	Brookings
Chattanooga	\$1,849	\$2,662
Clarksville	\$326	\$1,200
Cleveland	\$204	\$884
Jackson	\$397	\$934
Johnson City	\$134	\$744
Kingsport-Bristol	\$4,092	\$3,291
Knoxville	\$2,657	\$3,119
Memphis	\$11,360	\$4,683
Morristown	\$345	\$865
Nashville	\$6,402	\$6,599

These export differences become less acute at higher levels of aggregation. Tennessee-level exports turn out roughly the same no matter how they are estimated, but as one drills down, the problem gets larger. A truly accurate picture of metro exporting involves triangulating across different export numbers to get a feel for what's going on.

The good news is no matter who is doing the accounting, the past five years have looked pretty good for most of the state's metro areas, in particular its larger communities. ■



million, a 58% gain (to \$249 million). This was by far the best performing of any of the state's significant markets. The other Southeast Asian markets, though much smaller, also did well. A big boost in cell phone shipments led to a sizable gain in the Philippines, while Thailand, Malaysia, and Indonesia increased their imports of Tennessee goods.

With this one regional exception, state exporters found themselves in the unusual situation of having nowhere to turn. Pretty much across the globe, exports were not growing. Most seriously, the value of the state's shipments to Canada, by far the state's largest market, continued to drop. Though the state is continuing to eke out small quarterly export gains, Tennessee exporters badly need more global growth. Without it exporting, and the economic growth that goes with it, seems to have plateaued. ■