



export to multiple destinations as well, and their exports represent the bulk of total export values. In 2000, manufacturing firms that exported more than one product represented about 58 percent of exporting firms and accounted for more than 99 percent of total manufacturing export value. Similarly, firms that exported to five or more countries—13.7 percent of all exporting manufacturing firms—accounted for about 93 percent of total manufacturing export value.

### **Export Concentration in the Eighth District**

The table presents an analysis of the distribution of manufacturing exports in 21 manufacturing industries for each of the Eighth District states, plus the sum for the seven states and the United States as a whole. A similar analysis is presented for manufacturing export destinations among six specific world regions (Africa; Asia; Eastern Europe; Western Europe; Central and South America, along with the Caribbean; and “the rest of the world”).<sup>6</sup>

The analysis measures the concentration of the distribution of export industries and destinations using the Gini index. This measure, often used by economists to analyze income inequality, ranges between 0 and 100 and indicates how unequal a distribution is relative to a distribution that is perfectly even. A larger index value indicates higher inequality or higher share concentration.

For industry classifications, a Gini index value of 0 would indicate that the share of export values in all manufacturing industries is the same, while a value of 100 would indicate that one manufacturing industry accounts for all exports. Likewise, a Gini index value of 0 in the analysis of export destinations would indicate that the share of exports is the same for all destinations, while a value of 100 would indicate that one destination received all exports.

Every District state except Mississippi showed higher concentration in the distribution of manufacturing export industries than the nation as a whole. This is not surprising because the nation’s economy is more diversified than the Eighth District economy. Additionally, the concentration of manufacturing exports increased from 1999 to 2006 in all District states except Illinois. In contrast, concentration in the nation declined over the same period.

Arkansas, Mississippi and Missouri showed the largest increase in

## **U.S. Exporters:** Rare but Beneficial

By Rubén Hernández-Murillo and Christopher J. Martinek

The United States stands out as one of the world’s leading exporters, but few firms actually export. In 2000, only about 4 percent of the nation’s 5.5 million firms were exporters. Even among manufacturing firms, which often send products abroad, only about 18 percent of firms exported goods. Exporting also is dominated by a relatively small number of firms. In 2000, the top 10 percent of exporters accounted for 96 percent of total U.S. exports.<sup>1</sup> Finally, exporting firms also differ in several ways from nonexporting firms.

### **Rare in the Eighth District**

From 2000 through 2006, total exports from the United States as a share of gross domestic product averaged about 10.4 percent. Not surprisingly, goods-producing industries accounted for the majority of exports, representing 7.3 percentage points of this share.<sup>2</sup> The table illustrates that in 2003, according to the most recent Census of Manufactures, the total value of U.S. manufacturing export shipments represented about 17.4 percent of total shipments.<sup>3</sup>

Exporting by manufacturers is even rarer among the Eighth District states. The table illustrates that, on average in 2003, manufacturing exports represented about 13.7 percent of total manufacturing shipments across the District states. The table shows that

the number varied widely among the District states. Manufacturing exports as a percent of total shipments range from a low of 9.7 percent in Mississippi to 16.8 percent in Illinois.

### **Highly Concentrated Markets**

Recent studies, notably by economists Andrew Bernard, J. Bradford Jensen, Stephen Redding and Peter Schott, have used transaction-level data on U.S. firms’ trade activity to characterize the patterns of exporting activity in terms of the number of products that firms export and the countries to which they sell their products.<sup>4</sup> Bernard and his colleagues illustrate how most exporting firms export only a few products to a few countries, but most exporting activity is highly concentrated among a small number of firms that export several products to several destinations.

The authors identify, for example, that about 42 percent of exporting manufacturing firms in 2000 exported only one product, but these exports represented only about 0.4 percent of total export value in the manufacturing sector. Similarly, about 64 percent of exporting firms in manufacturing exported to only one country, but these exports represented only about 3.3 percent of total export value in the manufacturing sector.<sup>5</sup>

In contrast, manufacturing firms that export multiple products often

concentration since 1999. The higher degree of concentration in these states reflects an increase in exports of transportation equipment during this period. From 1999 to 2006, the value of export shipments in the transportation equipment industry increased from \$207 million to \$1.2 billion in Arkansas, from \$121 million to \$791 million in Mississippi and from \$1.64 billion to \$4.99 billion in Missouri. Transportation equipment now accounts for 30 percent of all manufacturing exports in Arkansas, 19 percent in Mississippi and 43 percent in Missouri. In Tennessee, next on this list, the change in concentration across manufacturing industries is attributable to a sizable increase in miscellaneous manufactures; they jumped from \$353 million in 1999 to \$2 billion in 2006.

Just two District states—Kentucky and Mississippi—experienced an increase in the Gini index for manufacturing export destination between 1999 and 2006. The pattern in each is similar: The share of exports going to “the rest of the world,” a category that includes Canada and Mexico and that receives the greatest portion of exports, increased.<sup>7</sup> In contrast, for Arkansas and Indiana, two of the states where the Gini index declined, the share of manufacturing exports shipped to the rest of the world decreased, while exports to Western Europe now receive a greater portion of the share of total exports.<sup>8</sup> In Illinois, which experienced the largest decline in concentration, the decrease in the share of exports going to the rest of the world category and an increase in the share of exports to all other destinations.<sup>9</sup>

### Exporters, Nonexporters Differ

Bernard, Jensen and their co-authors also have documented that exporting

firms stand out in more than a few ways from nonexporting firms.<sup>10</sup> Exporting firms are more productive than nonexporting firms in terms of value added per worker. Exporting firms make more shipments. Exporters use more sophisticated technology that employs more skilled workers—and more workers in general. Exporters use more machinery and pay higher wages than do nonexporting firms. Additionally, other studies show that after entering export markets, exporters exhibit faster employment growth than other companies do. The former also experience faster output growth—both in foreign and domestic shipments.

### Exporting Isn't Cheap

On the surface, exporting seems beneficial. So, why don't more firms export? One important distinction between exporters and nonexporters may offer a clue: Although exporting firms are more productive than other firms even before the former become exporters, studies also find that their productivity *growth* is not higher. In other words, high productivity is a requirement for, and not a consequence of, becoming an exporter. The reason is that high entry costs for exporting may be a barrier to all but the most efficient firms.

Although the higher concentration in export products and destinations among the Eighth District states relative to the nation reflects, in part, that the national economy is more diversified, the increase in concentration over time illustrates the increasingly important role of some manufacturing industries and destinations in shaping the export pattern of the region.

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### ENDNOTES

- See Bernard, Jensen, Redding and Schott (forthcoming).
- Source: National Income and Product Accounts.
- See [www.census.gov/mcd/exports/](http://www.census.gov/mcd/exports/).
- See Bernard, Jensen, Redding and Schott (forthcoming).
- Products are defined as 10-digit Harmonized System (HS) product categories. The HS coding system is used internationally for tariff purposes.
- Although we don't have access to the finer data used by Bernard and co-authors, we reach similar conclusions for the Eighth District states by using aggregate export data.
- In Kentucky, exports to the “rest of the world” category increased from \$3.5 billion in 1999 to \$8 billion in 2006. Mississippi's exports to the rest of the world, in turn, grew from \$776 million to \$1.65 billion.
- The value of shipments from Arkansas to Western Europe increased from \$344 million in 1999 to \$1.3 billion in 2006. For Indiana, shipments to Western Europe increased from \$2.66 billion to \$5.85 billion.
- Although exports from Illinois to the “rest of the world” category, which is comprised predominantly of exports to Mexico and Canada, did increase from \$14.41 billion to \$18.12 billion from 1999 to 2006, the share of these exports as a percentage of the total decreased from 50 percent to 45 percent. In turn, all other destination categories included in the analysis received a greater share of total exports in 2006 than in 1999.
- See, for example, Bernard and Jensen (1995) and Bernard and Jensen (2004), among others.

### REFERENCES

- Bernard, Andrew B.; Jensen, J. Bradford; Redding, Stephen J.; and Schott, Peter K. “Firms in International Trade.” *Journal of Economic Perspectives*, forthcoming.
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## Changes in Concentration among Manufacturing Export Industries and Destinations

	Arkansas	Illinois	Indiana	Kentucky	Mississippi	Missouri	Tennessee	8th District States	United States
Manufacturing Exports as Percent of Total Shipments <sup>1</sup>	10.7	16.8	15.3	16	9.7	11.8	15.8	13.7	17.4
Gini Coefficient for Manufacturing Export Industries 2006 <sup>2</sup>	64.4	67.7	70.9	69.8	60.3	72	75.7	63.7	62
Change in Gini Coefficient for Manufacturing Export Industries 1999-2006 <sup>2</sup>	8.8	-1.5	1.1	1.1	4.7	7.1	2.5	0.5	-1.1
Gini Coefficient for Manufacturing Export Destinations 2006 <sup>2</sup>	49.9	49.5	61.6	55	37.4	57.7	55.6	47.4	47.2
Change in Gini Coefficient for Manufacturing Export Destinations 1999-2006 <sup>2</sup>	-1.2	-4.4	-2.1	2.6	10.6	-1.5	-0.1	-2.1	-1.2

<sup>1</sup> Exports From Manufacturing Establishments: 2003, U.S. Census Bureau  
<sup>2</sup> <http://tse.export.gov/> with data from the U.S. Department of Commerce