

# *City Sales as Indicated by Sales Tax*

## *Duncan, MS*

*December 2021 - November 2022*

*extension.msstate.edu/economic-profiles*



These profiles are designed to provide a sense of the changes in sales subject to sales and use tax in Mississippi counties and municipalities during the COVID 19 pandemic. In addition, we estimate the fiscal effects for state and local tax revenues, sales tax diversion effects for Mississippi municipalities, and the fiscal effects of federal tax revenues as a result of changes in sales subject to sales and use tax for two selected sectors.

Data to estimate these changes in sales were obtained from the Mississippi Department of Revenue's Sales Indicated by Gross Sales Tax Collections, reported by County, City and Industry Group monthly statistics reports (<https://www.dor.ms.gov/Statistics/Pages/Monthly-Statistics.aspx>). It should be noted that these data have not been reconciled by the Department of Revenue, but are aggregated from reports submitted by organizations that collect sales tax from across the state on an "as is" basis. As such, the data contained in these monthly reports will likely not sum to the annual report provided by the Department of Revenue.

Even though these are not final data, we feel that the identification of trends in sales and the collection of sales could be valuable to the leaders of Mississippi's counties and municipalities. This Report uses data from December 2021 through November 2022 (the most current data available).

These profiles are organized in the following manner:

- The first set of graphs and tables provide the levels of sales and sales tax collected for the total sales subject to sales tax, as well as the levels of sales and sales tax collected for the retail sector and the accommodation and food services sector. Statistics for these sectors were provided due to their importance to the level of sales tax collected and the level of sales tax diversions remitted to Mississippi municipalities.
- The economic impact of the change in sales in the combined retail sales and accommodation and food services sectors is then estimated to provide community leaders with an estimate of the "spillover costs" or, in some cases, "spillover benefits" that occur as a result of the pandemic.
  - The change in sales is estimated by subtracting the average sales of a particular month(s) for the past three years from the current month(s). For example, the estimate for the change in the level of sales in November 2022 is the sales for these sectors in November 2022 minus the average of sales for these sectors in November 2019, November 2020, and November 2021.
  - The change in sales estimates are used in county-specific IMPLAN® models (see the Data Key at the end of this publication for an explanation) to estimate direct, indirect, and induced spillover effects resulting from this shock to the economy. In addition, the state and local, as well as the federal, fiscal effects of the change in sales will be presented.
  - An estimate of the change in the level of diversions provided to Mississippi municipalities will also be presented as a part of the municipalities' profiles. These estimated diversions are calculated by multiplying the change in sales tax by 18.5 percent (the level of sales tax diversion provided to municipalities).

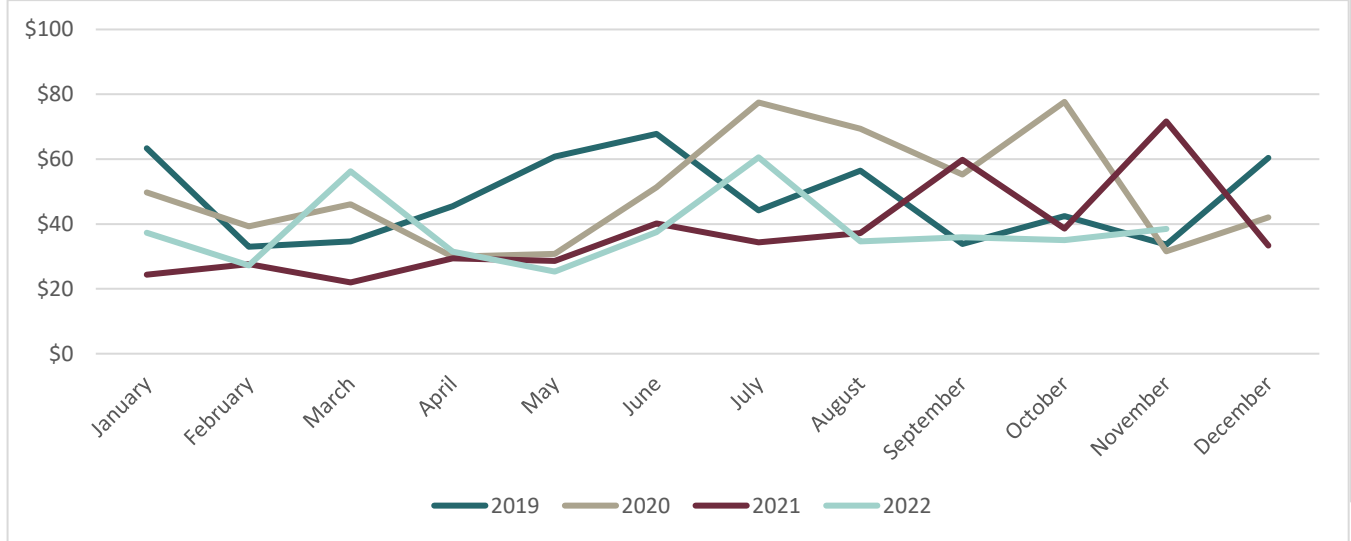
**Total Sales as Indicated by Sales Tax (\$000s)**

Month	2019	2020	2021	2022
January	\$63	\$50	\$24	\$37
February	\$33	\$39	\$28	\$27
March	\$35	\$46	\$22	\$56
April	\$45	\$30	\$29	\$32
May	\$61	\$31	\$29	\$25
June	\$68	\$51	\$40	\$37
July	\$44	\$77	\$34	\$61
August	\$56	\$69	\$37	\$35
September	\$34	\$55	\$60	\$36
October	\$42	\$78	\$39	\$35
November	\$34	\$32	\$72	\$38
December	\$60	\$42	\$33	

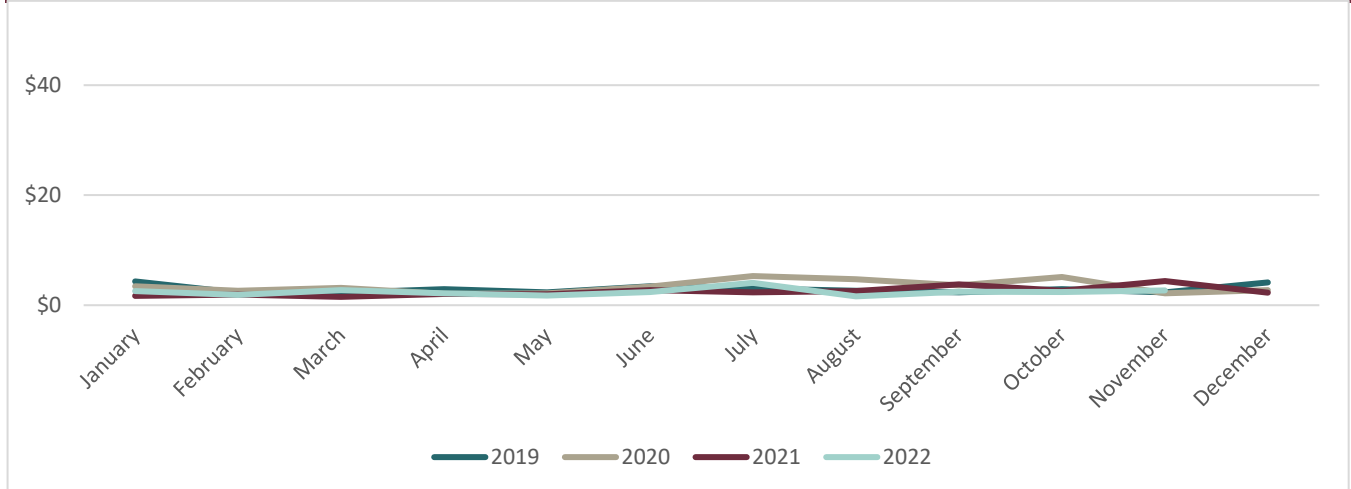
**Total Sales Tax Collected (\$000s)**

Month	2019	2020	2021	2022
January	\$4	\$3	\$2	\$3
February	\$2	\$3	\$2	\$2
March	\$2	\$3	\$2	\$3
April	\$3	\$2	\$2	\$2
May	\$2	\$2	\$2	\$2
June	\$3	\$3	\$3	\$2
July	\$3	\$5	\$2	\$4
August	\$3	\$5	\$3	\$2
September	\$2	\$4	\$4	\$2
October	\$3	\$5	\$3	\$2
November	\$2	\$2	\$4	\$3
December	\$4	\$3	\$2	

**Duncan Total Sales (\$000s)**



**Duncan Total Sales Tax (\$000s)**



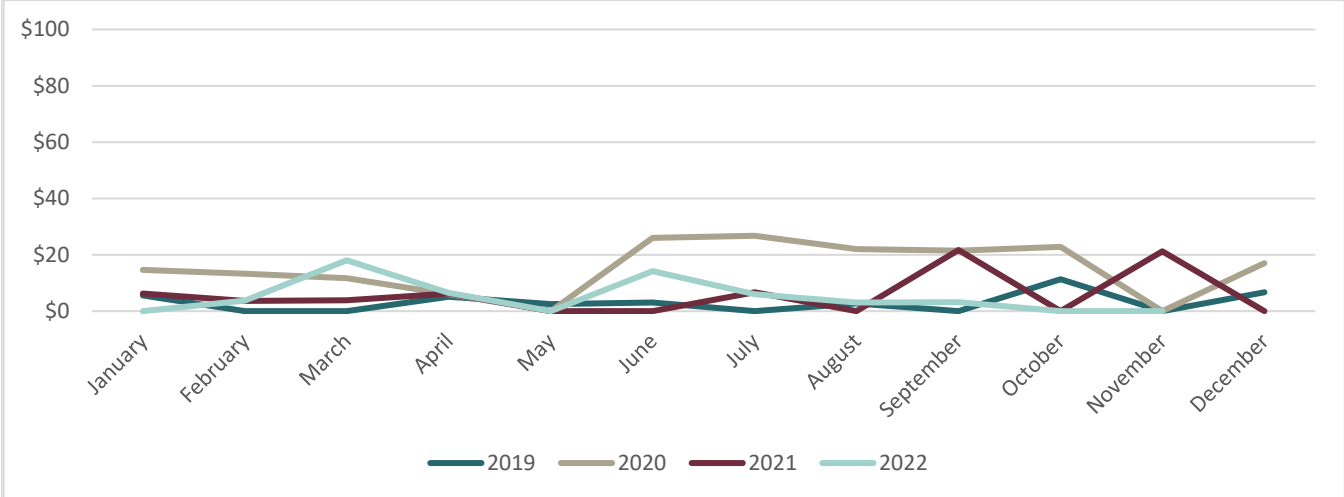
**Retail Sector Sales as Indicated by Sales Tax (\$000s)**

Month	2019	2020	2021	2022
January	\$6	\$15	\$6	\$0
February	\$0	\$13	\$4	\$4
March	\$0	\$12	\$4	\$18
April	\$5	\$6	\$6	\$7
May	\$2	\$0	\$0	\$0
June	\$3	\$26	\$0	\$14
July	\$0	\$27	\$7	\$6
August	\$3	\$22	\$0	\$3
September	\$0	\$21	\$22	\$3
October	\$11	\$23	\$0	\$0
November	\$0	\$0	\$21	\$0
December	\$7	\$17	\$0	

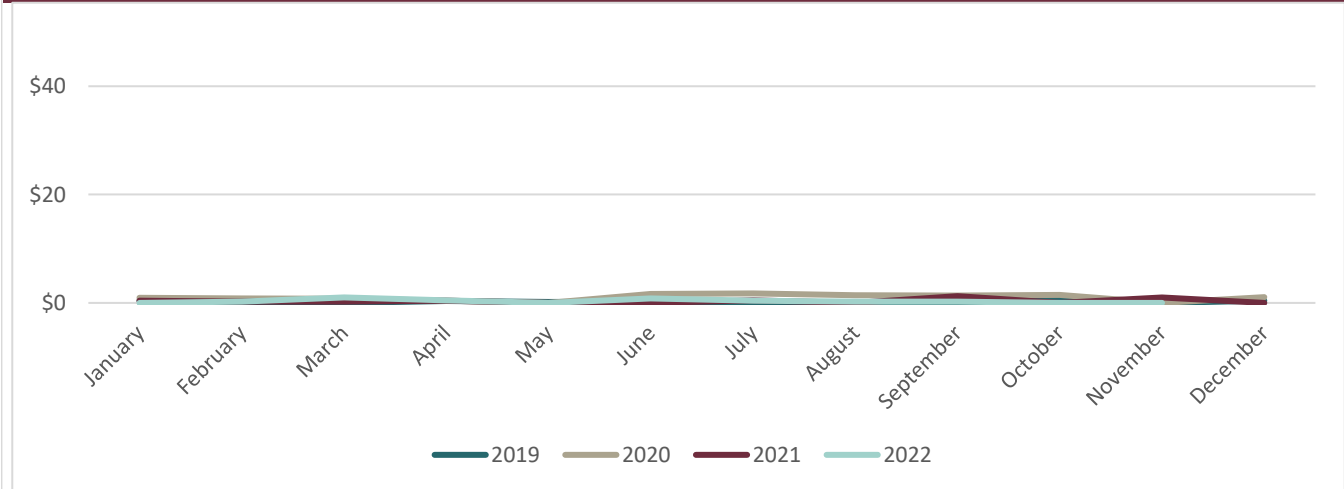
**Retail Sector Sales Tax Collected (\$000s)**

Month	2019	2020	2021	2022
January	\$0	\$1	\$0	\$0
February	\$0	\$1	\$0	\$0
March	\$0	\$1	\$0	\$1
April	\$0	\$0	\$0	\$0
May	\$0	\$0	\$0	\$0
June	\$0	\$2	\$0	\$1
July	\$0	\$2	\$0	\$0
August	\$0	\$1	\$0	\$0
September	\$0	\$1	\$1	\$0
October	\$1	\$1	\$0	\$0
November	\$0	\$0	\$1	\$0
December	\$0	\$1	\$0	

**Duncan Retail Sector Sales (\$000s)**



**Duncan Retail Sector Sales Tax (\$000s)**





### Estimated Change in Sales

	Sales DEC21 - NOV22	Average Sales* DEC - NOV	Change in Sales
Agriculture, Forestry, Fishing and Hunting	\$0	\$0	\$0
Mining, Quarrying, and Oil and Gas Extraction	\$0	\$0	\$0
Utilities	\$0	\$15,830	(\$15,830)
Construction	\$0	\$0	\$0
Manufacturing	\$0	\$0	\$0
Wholesale Trade	\$0	\$0	\$0
Retail Trade	\$54,856	\$96,117	(\$41,261)
Transportation and Warehousing	\$0	\$0	\$0
Information	\$135,223	\$204,482	(\$69,259)
Finance and Insurance	\$0	\$0	\$0
Real Estate and Rental and Leasing	\$0	\$0	\$0
Professional, Scientific, and Technical Services	\$0	\$0	\$0
Management of Companies and Enterprises	\$0	\$0	\$0
Admin/Support/Waste Mgt & Remediation Svcs	\$0	\$0	\$0
Educational Services	\$0	\$0	\$0
Health Care and Social Assistance	\$0	\$0	\$0
Arts, Entertainment, and Recreation	\$0	\$0	\$0
Accommodation and Food Services	\$0	\$0	\$0
Other Services (except Public Administration)	\$0	\$0	\$0
Public Administration	\$0	\$0	\$0
<b>Change in Total of Sector Sales</b>	<b>\$190,079</b>	<b>\$316,428</b>	<b>(\$126,350)</b>

\*Average Sales is calculated as the sum of average monthly sales for the three previous years.

### Economic Impact Summary from Change in Total of Sector Sales (IMPLAN)

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	(0.5)	(\$21,486)	(\$54,657)	(\$126,350)
Indirect Effect	(0.2)	(\$6,591)	(\$12,069)	(\$26,519)
Induced Effect	(0.1)	(\$2,292)	(\$3,926)	(\$7,360)
<b>Total Effect</b>	<b>(0.7)</b>	<b>(\$30,368)</b>	<b>(\$70,652)</b>	<b>(\$160,229)</b>

Estimated Change in Municipal Sales Tax Diversions (18.5%) **\$0**

See explanation of Municipal Sales Tax Diversions in the Data Key.

### Estimated Change in Local Tax from Change in Total of Sector Sales (IMPLAN)

Description	Taxes on			
	Employment Compensation	Production and Imports	Households	Corporations
Social Insurance	\$0	\$0	\$0	\$0
TOPI: Sales Tax	\$0	\$0	\$0	\$0
TOPI: Property Tax	\$0	(\$2,523)	\$0	\$0
TOPI: Other Tax	\$0	(\$6)	\$0	\$0
Corporate Profits Tax	\$0	\$0	\$0	\$0
Personal Taxes	\$0	\$0	(\$10)	\$0
<b>Total Local Taxes</b>	<b>\$0</b>	<b>(\$2,529)</b>	<b>(\$10)</b>	<b>\$0</b>

## Sales Tax Diversions and Special Levies

### Duncan Diversions

Month	2019	2020	2021	2022
January	\$809	\$1,005	\$383	\$467
February	\$439	\$714	\$417	\$845
March	\$417	\$707	\$295	\$469
April	\$694	\$603	\$390	\$398
May	\$452	\$614	\$859	\$323
June	\$662	\$824	\$514	\$725
July	\$0	\$1,254	\$444	\$742
August	\$0	\$811	\$475	\$381
September	\$0	\$627	\$1,446	\$391
October	\$0	\$748	\$483	\$445
November	\$84	\$556	\$959	\$977
December	\$879	\$581	\$464	

### No Special Levy

Month	2019	2020	2021	2022
January				
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				

### No Special Levy

Month	2019	2020	2021	2022
January				
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				

### No Special Levy

Month	2019	2020	2021	2022
January				
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				

### No Special Levy

Month	2019	2020	2021	2022
January				
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				

## Estimated Change in State Tax from Change in Total of Sector Sales (IMPLAN)

Description	Taxes on			
	Employment Compensation	Production and Imports	Households	Corporations
Social Insurance	(\$2)	\$0	\$0	\$0
TOPI: Sales Tax	\$0	(\$10,332)	\$0	\$0
TOPI: Property Tax	\$0	(\$45)	\$0	\$0
TOPI: Other Tax	\$0	(\$687)	\$0	\$0
Corporate Profits Tax	\$0	\$0	\$0	(\$339)
Personal Taxes	\$0	\$0	(\$521)	\$0
<b>Total State Taxes</b>	<b>(\$2)</b>	<b>(\$11,065)</b>	<b>(\$540)</b>	<b>(\$339)</b>

## DATA Key

### Total Sales as Indicated by Sales Tax

North American Industrial Classification Sectors (NAICS) sectors included in the “Total Sales as Indicated by Sales Tax” statistics include: Sector 11 – Agriculture, Forestry, Fishing and Hunting ; Sector 21 – Mining, Quarrying, and Oil and Gas Extraction ; Sector 22 – Utilities ; Sector 23 – Construction ; Sector 31-33 – Manufacturing ; Sector 42 – Wholesale Trade ; Sector 44-45 – Retail Trade ; Sector 48-49 – Transportation and Warehousing ; Sector 51 – Information ; Sector 52 – Finance and Insurance ; Sector 53 – Real Estate and Rental and Leasing ; Sector 54 – Professional, Scientific, and Technical Services ; Sector 55 – Management of Companies and Enterprises ; Sector 56 – Administrative and Support and Waste Management and Remediation Services ; Sector 61 – Educational Services ; Sector 62 – Health Care and Social Assistance ; Sector 71 – Arts, Entertainment, and Recreation ; Sector 72 – Accommodation and Food Services ; Sector 81 – Other Services (Except Public Administration) ; and Sector 92 – Public Administration .

### Retail Sector Sales

Retail Sector Sales includes NAICS Sector 44-45 – Retail Trade.

### Accommodation and Food Service Sector Sales

Accommodation and Food Services Sector Sales includes NAICS Sector 72 – Accommodation and Food Services.

### Estimated Change in Sales

To determine the economic impact of changes in specific sector sales, the average monthly sales by sector (using sales from the thirty-six months prior to the study time frame) was subtracted from the sales for that sector in the study time frame. For this publication, each month’s sector sales from November 2019 through October 2021 were averaged and subtracted from sector sales occurring in the November 2021 through October 2022 time period to obtain the Change in Sales estimate. The estimated changes in sales for all sectors were summed to obtain the estimate for the change in Total of Sector Sales.

Municipalities are assigned to the county in which the largest proportion of the municipality’s population resides (e.g., while the city of Jackson lies in Hinds, Madison, and Rankin Counties, Jackson was “assigned” to Hinds County because the majority of its population resides in Hinds County).

If the change in sales is negative, this indicates that the sales for the specific geographic area fall below expected values when using the previous three years as a benchmark. If the change in sales is positive, then the sales for the specific geographic area is greater than what would have been expected when using the three previous years as a benchmark.

### Estimated Change in Municipal Sales Tax Diversions

Municipalities receive 18.5 percent of sales tax collected within their boundaries from the Mississippi Department of Revenue that can be used in the general budget(counties are not eligible for this allocation). The estimated change in the municipal sales tax diversion is calculated as 18.5 percent of the change in Taxes on Production and Imports: Sales Tax estimated in the Estimated Change in State and Local Tax from Change in Total of Sector Sales table.

### **Economic Impact Summary from Change in Total of Sector Sales**

The estimated changes in specific sectors (Retail Sector, Food Services Sector, and Accommodation Services Sector) was applied to a county-specific IMPLAN® input-output model to estimate the economic impacts and fiscal (tax) effects that result from the change in retail sales for the retail sector and accommodation and food services sector. The input-output model estimates direct, indirect, and induced effects for employment, labor income, total value added, and output. These terms are defined below:

**Direct Effects** — represent the initial change to industries considered relevant to the VA dataset. Industries used include *Retail – Miscellaneous store retailers* (IMPLAN® Sector 412), *Hotels and motels, including casino hotels* (IMPLAN® Sector 507), and *Limited-service restaurants* (IMPLAN® Sector 510).

**Indirect Effects** — represent changes in inter-industry transactions when supplying industries respond to demand changes from directly affected industries (the direct effects above).

**Induced Effects** — represent changes in local spending that result from income changes to employees in the directly and indirectly affected industry sectors.

**Employment** — annual average of monthly jobs in the industry. A job can be either part-time or full-time, and a person can hold more than one job (the employment or job count is not necessarily the same as the count of employed persons).

**Labor Income** — all forms of employment income, including employee compensation (wages and benefits) and proprietor income.

**Value Added** — represents the difference between an industry's total output and the cost of its intermediate inputs (gross outputs (sales or receipts plus other operating income plus inventory change) minus intermediate inputs (consumption of goods and services purchased from other industries or imported).

**Output** — represents the value of production by an industry in a calendar year.

It should be noted that if the total estimated change in sector sales is negative, then the economic impacts of this shock to the local economy will be negative as well.

### **Estimated Change in State and Local Tax from Change in Total of Sector Sales**

IMPLAN® provides estimates of the fiscal (tax) effects for state and local taxes as well as federal taxes (federal taxes aren't shown in this report) that result from a shock to the local economy. Summaries of these fiscal effects are presented by tax type (*Social Insurance, Taxes on Production and Imports (TOPI): Sales Tax, TOPI: Property Tax, TOPI: Other Tax, Corporate Profits Tax, and Personal Taxes by taxpayer (Employee Compensation, Proprietor Income, TOPI, Households, and Corporations)*).

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