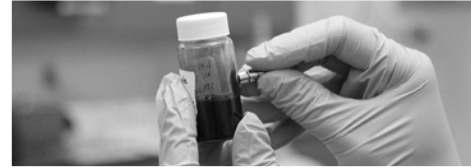




Center for Economic & Management Research



# OKLAHOMA BUSINESS BULLETIN



2019  
2nd Quarter  
Select  
Economic  
Indicators

The *Oklahoma Business Bulletin*

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### **OVERVIEW**

Created by the Oklahoma Territorial Legislature in 1890, the University of Oklahoma is a doctoral degree granting research university serving the educational, cultural, economic and health-care needs of the state, region and nation. The Norman campus serves as home to all of the university's academic programs except health-related fields. Both the Norman and Health Sciences Center colleges offer programs at the Schusterman Center, the site of OU-Tulsa. The OU Health Sciences Center, which is located in Oklahoma City, is one of only four comprehensive academic health centers in the nation with seven professional colleges. OU enrolls more than 30,000 students, has more than 2,400 full-time faculty members, and has 21 colleges offering 163 majors at the baccalaureate level, 166 majors at the master's level, 81 majors at the doctoral level, 27 majors at the doctoral professional level, and 26 graduate certificates. The university's annual operating budget is \$1.5 billion. The University of Oklahoma is an equal opportunity institution.

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# OU OBB Business Briefs

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An Analysis of Oklahoma's Trends in State Gross Tax Collections

[Scroll down past the 2nd Quarter Economic Indicator Tables](#)

*Note: Compendium by Dr. Dauffenbach, OU Price College*

Major Economic Indicators

[U.S. Bureau of Labor Statistics](#)

Survey of Current Business

[Bureau of Econ Analysis](#)

The Oklahoma Economist

[Federal Reserve Bank of Kansas City](#)

Oklahoma Economic Indicators

[Oklahoma Employment Security Commission](#)

Oklahoma Economic Report Monthly Newsletter

[Oklahoma Office of State Treasurer](#)

Oklahoma OMES Media Releases

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Oklahoma's Business Conditions Index

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**SELECTED INDICATORS FOR OKLAHOMA**

|  | 2nd Qtr '19 | 1st Qtr '19 | 2nd Qtr '18 | Percentage Change  |                            |
|--|-------------|-------------|-------------|--------------------|----------------------------|
|  |             |             |             | '19/'18<br>2nd Qtr | 2nd Qtr '19<br>1st Qtr '19 |
| Crude Oil Production (000 bbl) a               | 55,226      | 51,985      | 47,953      | 15.2               | 6.2                        |
| Natural Gas Production (000 mcf) a             | 788,274     | 767,856     | 720,629     | 9.4                | 2.7                        |
| Rig Count                                      | 103         | 121         | 136         | -24.3              | -14.9                      |
| <b>Permit-Authorized Construction</b>          |             |             |             |                    |                            |
| Residential Single Family                      |             |             |             |                    |                            |
| Dollar Value (\$000)                           | 492,403     | 482,768     | 535,977     | -8.1               | 2.0                        |
| Number of Units                                | 2,236       | 2,087       | 2,345       | -4.6               | 7.1                        |
| Residential-Multi Family                       |             |             |             |                    |                            |
| Dollar Value (\$000)                           | 12,423      | 99,642      | 37,434      | -66.8              | -87.5                      |
| Number of Units                                | 170         | 780         | 267         | -36.3              | -78.2                      |
| Total Construction (\$000)                     | 504,826     | 582,410     | 573,411     | -12.0              | -13.3                      |
| <b>Employment</b>                              |             |             |             |                    |                            |
| Total Labor Force (000) b                      | 1,835       | 1,820       | 1,863       | -1.5               | 0.8                        |
| Total Employment (000)                         | 1,779       | 1,756       | 1,791       | -0.7               | 1.3                        |
| Unemployment Rate (%)                          | 3.1         | 3.5         | 3.9         | --                 | --                         |
| Wage and Salary Employment (000)               | 1,699       | 1,681       | 1,692       | 0.4                | 1.1                        |
| Manufacturing                                  | 135,600     | 136,367     | 131,067     | 3.5                | -0.6                       |
| Mining   | 52,733      | 54,267      | 52,967      | -0.4               | -2.8                       |
| Construction                                   | 84,333      | 81,667      | 77,400      | 9.0                | 3.3                        |
| Retail Trade                                   | 176,833     | 175,967     | 179,900     | -1.7               | 0.5                        |
| Government                                     | 348,933     | 349,400     | 353,167     | -1.2               | -0.1                       |
| <b>Average Weekly Hours (Per Worker)</b>       |             |             |             |                    |                            |
| Manufacturing                                  | 44.2        | 44.6        | 42.1        | 5.0                | -0.9                       |
| <b>Average Weekly Earnings (\$ Per Worker)</b> |             |             |             |                    |                            |
| Manufacturing                                  | 840.27      | 837.55      | 764.94      | 9.8                | 0.3                        |

Note: Includes revisions in some previous months.

(a) Oil and Natural Gas data source (EIA)

(b) Employment Data source (BLS)

E=Exceeds 100%

Labor Force refers to place of residence, non-agricultural wage and salary employment refers to place of work.

**SELECTED INDICATORS FOR OKLAHOMA CITY MSA**

|                                       | 2nd Qtr '19 | 1st Qtr '19 | 2nd Qtr '18 | Percentage Change  |                            |
|---------------------------------------|-------------|-------------|-------------|--------------------|----------------------------|
|                                       |             |             |             | '19/'18<br>2nd Qtr | 2nd Qtr '19<br>1st Qtr '19 |
| <b>Employment (Number)</b>            |             |             |             |                    |                            |
| Labor Force <sup>(a)</sup>            | 684,360     | 673,827     | 687,531     | -0.5               | 1.6                        |
| Total Employment                      | 664,727     | 651,815     | 662,968     | 0.3                | 2.0                        |
| Unemployment Rate (%)                 | 2.9         | 3.3         | 3.6         | --                 | --                         |
| Wage and Salary Employment            | 658,667     | 646,033     | 638,400     | 3.2                | 2.0                        |
| Manufacturing                         | 33,633      | 33,100      | 34,433      | -2.3               | 1.6                        |
| Mining                                | 21,533      | 22,067      | 20,633      | 4.4                | -2.4                       |
| Construction                          | 32,467      | 30,900      | 30,333      | 7.0                | 5.1                        |
| Wholesale and Retail Trade            | 90,033      | 89,400      | 89,367      | 0.7                | 0.7                        |
| Government                            | 131,100     | 130,667     | 130,467     | 0.5                | 0.3                        |
| <b>Air Transportation</b>             |             |             |             |                    |                            |
| Passengers Enplaning (Number)         | 596,402     | 462,647     | 578,716     | 3.1                | 28.9                       |
| Passengers Deplaning (Number)         | 583,396     | 472,070     | 564,378     | 3.4                | 23.6                       |
| Freight Enplaned (Tons)               | 2,438       | 1,902       | 2,860       | -14.8              | 28.2                       |
| Freight Deplaned (Tons)               | 5,425       | 4,895       | 4,915       | 10.4               | 10.8                       |
| <b>Permit-Authorized Construction</b> |             |             |             |                    |                            |
| Residential-Single Family             |             |             |             |                    |                            |
| Dollar Value (\$000)                  | 307,452     | 320,360     | 353,050     | -12.9              | -4.0                       |
| Number of Units                       | 1,341       | 1,344       | 1,537       | -12.8              | -0.2                       |
| Residential-Multi Family              |             |             |             |                    |                            |
| Dollar Value (\$000)                  | 7,407       | 43,085      | 5,527       | 34.0               | -82.8                      |
| Number of Units                       | 92          | 302         | 62          | 48.4               | -69.5                      |
| Total Construction (\$000)            | 314,859     | 363,445     | 358,577     | -12.2              | -13.4                      |

Note: Includes revisions.

(a) Civilian Labor Force.

E=Exceeds 100%

**SELECTED INDICATORS FOR THE TULSA MSA**

|                                       | 2nd Qtr '19 | 1st Qtr '19 | 2nd Qtr '18 | Percentage Change  |                            |
|---------------------------------------|-------------|-------------|-------------|--------------------|----------------------------|
|                                       |             |             |             | '19/'18<br>2nd Qtr | 2nd Qtr '19<br>1st Qtr '19 |
| <b>Employment (Number)</b>            |             |             |             |                    |                            |
| Labor Force <sup>(a)</sup>            | 476,013     | 473,804     | 481,428     | -1.1               | 0.5                        |
| Total Employment                      | 461,149     | 457,075     | 469,464     | -1.8               | 0.9                        |
| Unemployment Rate (%)                 | 3.1         | 3.6         | 3.9         | --                 | --                         |
| Wage and Salary Employment            | 455,367     | 452,000     | 459,133     | -0.8               | 0.7                        |
| Manufacturing                         | 54,533      | 55,200      | 48,433      | 12.6               | -1.2                       |
| Mining                                | 7,200       | 7,167       | 6,833       | 5.4                | 0.5                        |
| Construction                          | 25,433      | 25,000      | 23,533      | 8.1                | 1.7                        |
| Wholesale and Retail Trade            | 64,767      | 64,367      | 66,700      | -2.9               | 0.6                        |
| Government                            | 56,267      | 56,233      | 59,567      | -5.5               | 0.1                        |
| <b>Air Transportation</b>             |             |             |             |                    |                            |
| Passengers Enplaning (Number)         | 406,377     | 325,370     | 403,542     | 0.7                | 24.9                       |
| Passengers Deplaning (Number)         | 397,263     | 339,987     | 419,748     | -5.4               | 16.8                       |
| Freight (Tons) Enplaned/Deplaned      | 33,426      | 15,238      | 15,238      | 119.4              | 119.4                      |
| <b>Water Transportation</b>           |             |             |             |                    |                            |
| Tulsa Port of Catoosa                 |             |             |             |                    |                            |
| Tons In                               | 129,020     | 192,752     | 235,474     | -45.2              | -33.1                      |
| Tons Out                              | 266,754     | 317,326     | 470,622     | -43.3              | -15.9                      |
| <b>Permit-Authorized Construction</b> |             |             |             |                    |                            |
| Residential-Single Family             |             |             |             |                    |                            |
| Dollar Value (\$000)                  | 166,173     | 150,282     | 162,743     | 2.1                | 10.6                       |
| Number of Units                       | 768         | 667         | 695         | 10.5               | 15.1                       |
| Residential-Multi Family              |             |             |             |                    |                            |
| Dollar Value (\$000)                  | 3,282       | 50,793      | 14,061      | -76.7              | -93.5                      |
| Number of Units                       | 43          | 383         | 178         | -75.8              | -88.8                      |
| Total Construction                    | 169,455     | 201,075     | 176,804     | -4.2               | -15.7                      |

Note: Includes revisions.

(a) Civilian Labor Force.

E = Exceeds 100 percent.

PNC = Percentage Not Computable (Divide by Zero)

**Note2: Beginning April 2019 Air Freight will combine Enplaned/Deplaned amounts in Tons**

**Note3: Port of Catoosa experienced lower numbers for 2nd Qtr 2019 due to flooding in the area**

**SELECTED INDICATORS FOR THE LAWTON MSA AND ENID AND MUSKOGEE MICROSA'S**

|                                       | 2nd Qtr '19 | 1st Qtr '19 | 2nd Qtr '18 | Percentage Change |             |
|---------------------------------------|-------------|-------------|-------------|-------------------|-------------|
|                                       |             |             |             | '19/'18           | 2nd Qtr '19 |
|                                       | 2nd Qtr     | 1st Qtr '19 |             | 2nd Qtr           | 1st Qtr '19 |
| <b>ENID MicroSA</b>                   |             |             |             |                   |             |
| <b>Employment (Number)</b>            |             |             |             |                   |             |
| Labor Force (a)                       | 26,796      | 26,880      | 27,770      | -3.5              | -0.3        |
| Total Employment                      | 26,027      | 26,015      | 26,793      | -2.9              | 0.0         |
| Unemployment Rate (%)                 | 2.9         | 3.2         | 3.5         | --                | --          |
| <b>LAWTON MSA</b>                     |             |             |             |                   |             |
| <b>Employment (Number)</b>            |             |             |             |                   |             |
| Labor Forcea                          | 51,268      | 50,817      | 52,231      | -1.8              | 0.9         |
| Total Employment                      | 49,532      | 48,852      | 50,427      | -1.8              | 1.4         |
| Unemployment Rate (%)                 | 3.4         | 3.9         | 4.3         | --                | --          |
| <b>Permit-Authorized Construction</b> |             |             |             |                   |             |
| Residential-Single Family             |             |             |             |                   |             |
| Dollar Value (\$000)                  | 1,794       | 1,334       | 3,065       | -41.5             | 34.5        |
| Number of Units                       | 7           | 6           | 16          | -56.3             | 16.7        |
| Residential-Multi Family              |             |             |             |                   |             |
| Dollar Value (\$000)                  | 0           | 0           | 0           | PNC               | PNC         |
| Number of Units                       | 0           | 0           | 0           | PNC               | PNC         |
| Total Construction (\$000)            | 1,794       | 1,334       | 3,065       | -41.5             | 34.5        |
| <b>MUSKOGEE MA</b>                    |             |             |             |                   |             |
| <b>Employment (Number)</b>            |             |             |             |                   |             |
| Labor Forcea                          | 29,335      | 28,754      | 29,757      | -1.4              | 2.0         |
| Total Employment                      | 28,243      | 27,597      | 28,379      | -0.5              | 2.3         |
| Unemployment Rate (%)                 | 3.5         | 3.5         | 4.6         | --                | --          |
| <b>Water Transportation</b>           |             |             |             |                   |             |
| Port of Muskogee                      |             |             |             |                   |             |
| Tons In                               | 85,561      | 199,903     | 214,753     | -60.2             | -57.2       |
| Tons Out                              | 4,445       | 18,533      | 27,425      | -83.8             | -76.0       |

Note: Includes revisions.

(a) Civilian Labor Force.

PNC = Percentage Not Computable (Divide by Zero)

E = Exceeds 100%

Note: Residential-Multi Family figures for LAWTON MSA status as of 3rd Qtr 2012: "Not Always Available" via US Census Bureau

**Note: Port of Muskogee experienced lower numbers for 2nd Qtr 2019 due to flooding in the area**

**An Analysis of Oklahoma's Trends in State Gross Tax Collections: July 1990 – March 2019**  
**An Annotated, Graphical Compendium**

by

Robert C. Dauffenbach  
Senior Associate Dean for  
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OU Price College of Business

May 2019

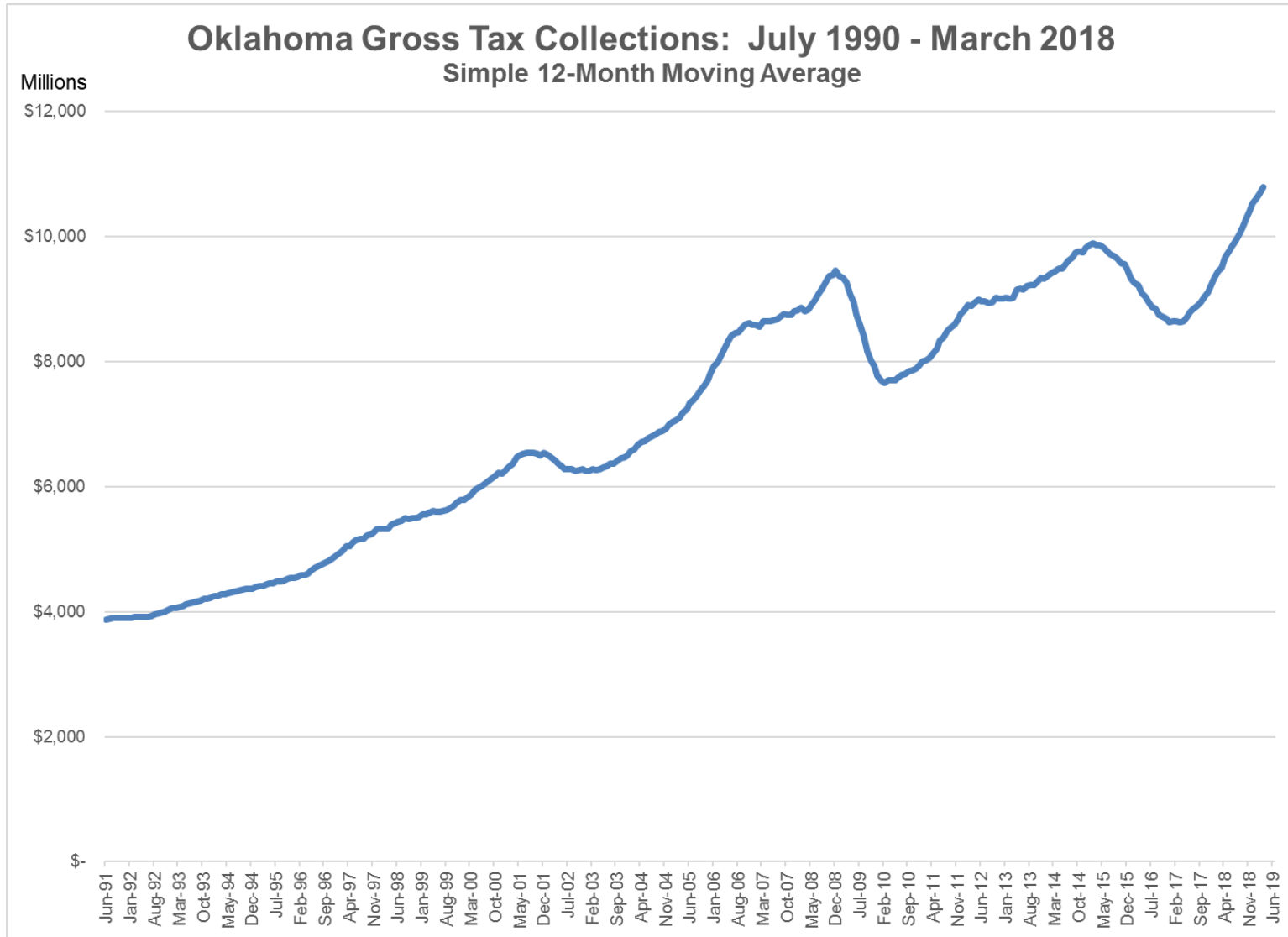


## Abstract

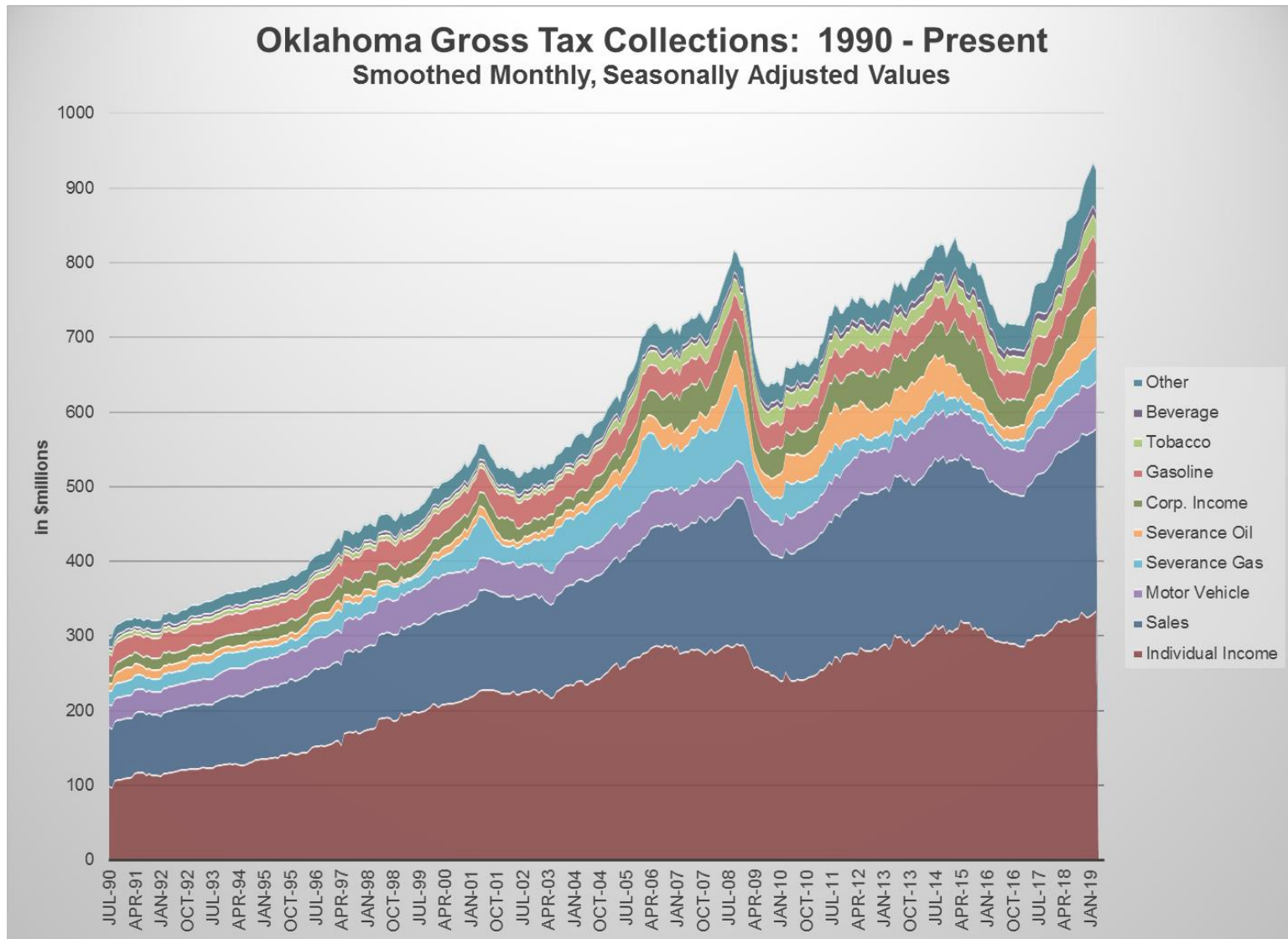
Presented are graphical analyzes of Oklahoma trends in state gross tax collections over a period of almost 30 years. Nominal (not-adjusted for inflation) trends for several specific components of gross tax collections are presented. Smoothed, seasonality-adjusted data provide clearer pictures of trends. Inflation and per capita adjustments correct for purchasing power and population changes and reveal significant differences in current versus peak attainments.

Principal findings are:

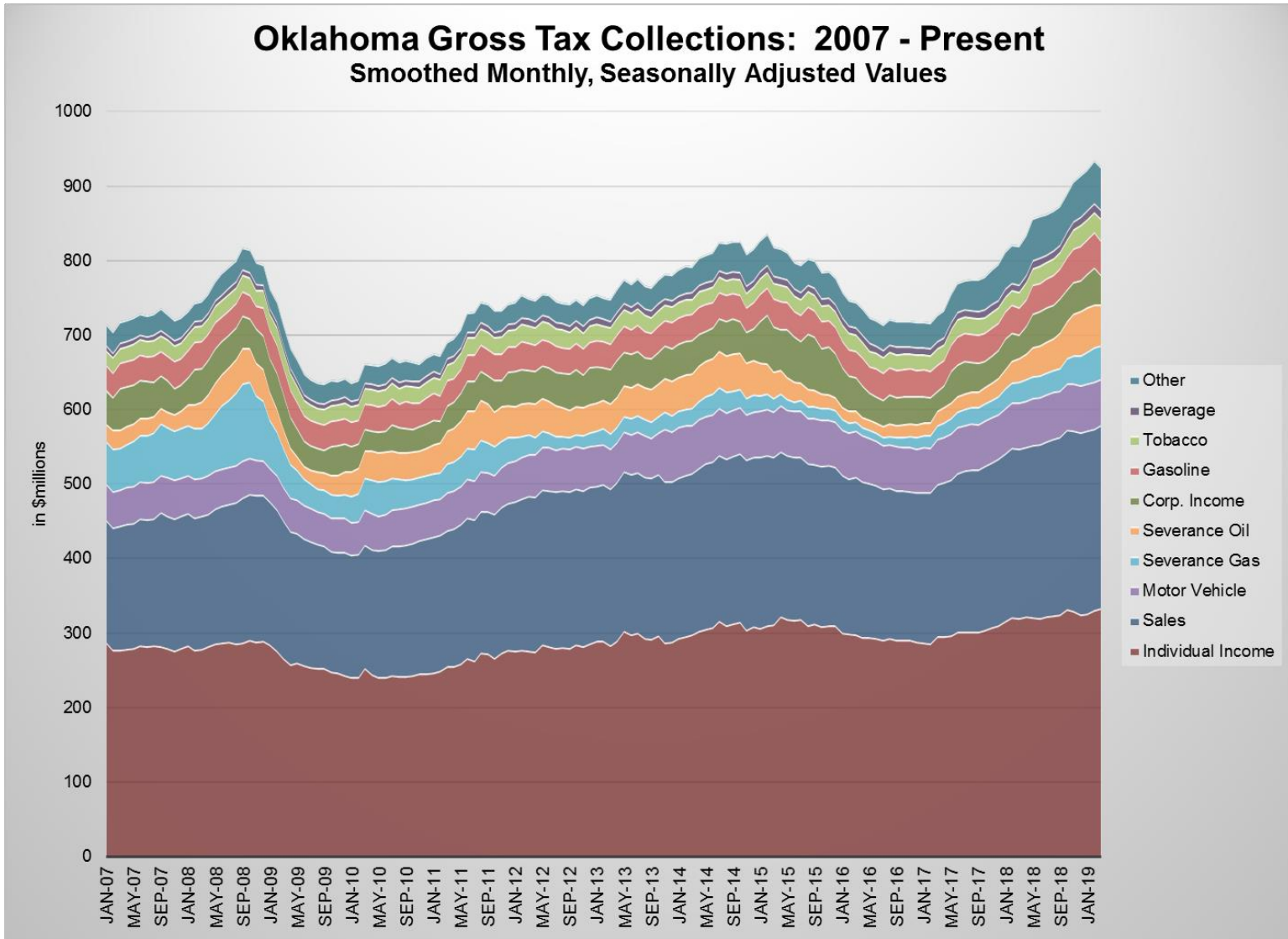
- Fluctuations in total collections can be quite volatile, exceeding \$1 B in times of recession or energy price collapses;
- Current trends are quite favorable, growing at about the 7.5% rate, year-over-year;
- Adjustments for Inflation reveal recent gains in real purchasing power of total gross collections, but less than prior attainments;
- Adjustments for population, in addition to inflation adjustments
  - show that current levels match 1990 per capita levels,
  - show recent gains,
  - are significantly below historic attainments;
- The “Big Four” state tax sources account for a steady 80 percent of total state gross tax collections;
- Current real, per capita gross state collections are
  - about \$2750,
  - up from a recent low of \$2500,
  - still below the \$ 3270 peak in 2006;
- In relation to state personal income, the “effective tax rate” has fallen from 7% to a low of 5%, recovering to 6%;
- A 1% variation in the state’s effective tax rate represents about \$1.86 B in gross tax collections;
- State gross collections closely tracked state personal income trends for the period 1990 – 2001;
- Had that close tracking continued, state gross tax collections would be about \$2.8 B higher;
- About 46% of this differential is associated with reduced individual income tax rates;
- Not unsurprisingly, energy price volatility remains a principal source of state gross collections changes.



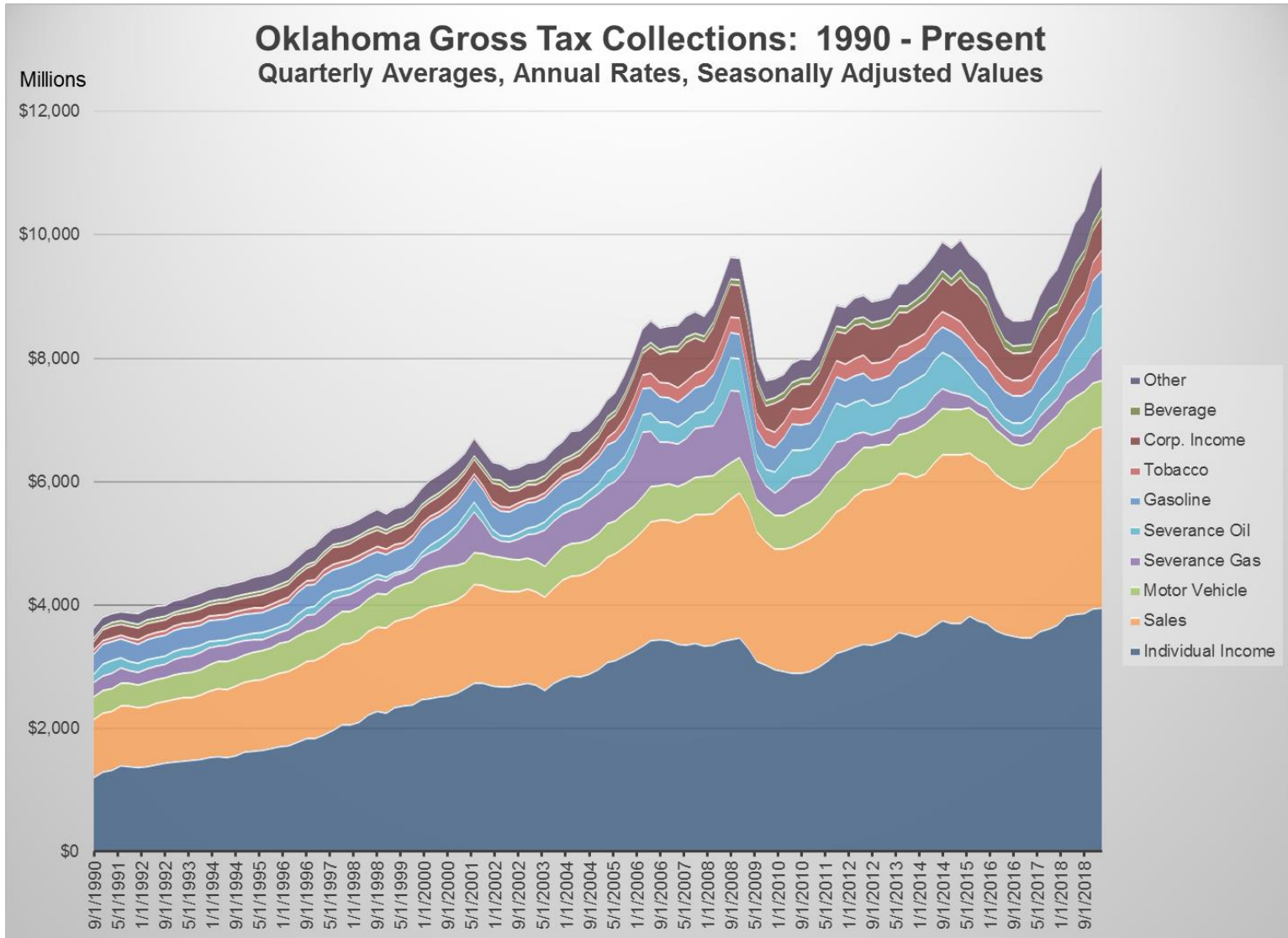
This chart graphs a simple 12-month moving average of monthly total Oklahoma state gross tax collections. As a 12-month moving average, it reflects aggregate annual values and illustrates recent trends. Fluctuations can be quite large. In the Great Financial Crisis beginning in December 2007, total collections fell from about \$9.3 B to \$7.7 B or by \$1.6 B. Weaker oil prices and other factors led to a \$1.1 B decline, peak to trough, beginning in late 2014. Recent trends are quite positive, owing to an improving economy, rising oil prices, and tax law changes.



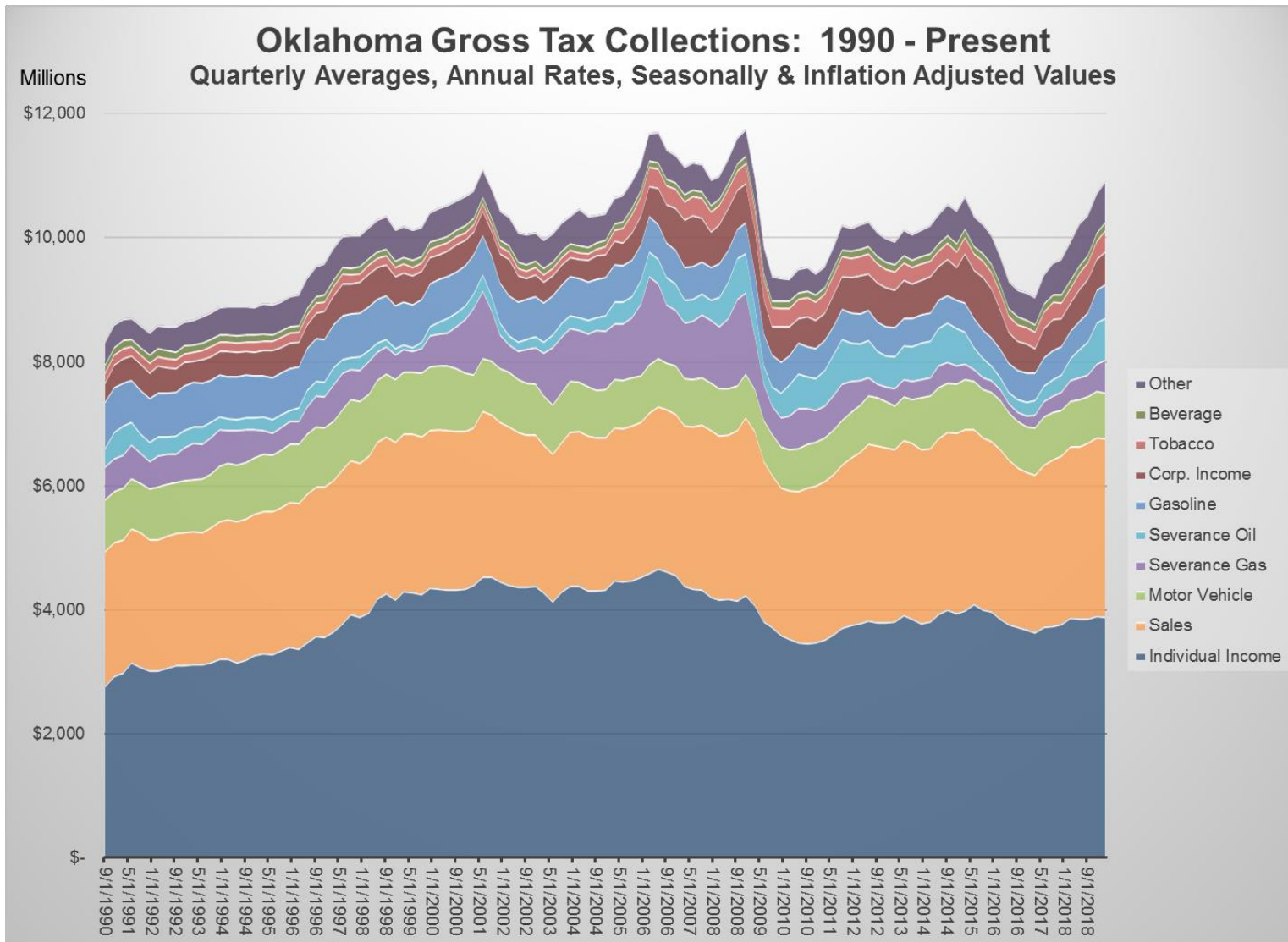
Corrections for seasonal adjustments and use of 6-month average smoothing techniques isolate trends in several components of state tax receipts. Individual Income and Sales and Use tax sources are principal components in these totals, comprising about 62% of the total collections. There is no adjustment for inflation or increases in the population in this graphic. Such adjustments are necessary to evaluate the real purchasing power of revenues and per-person impacts.



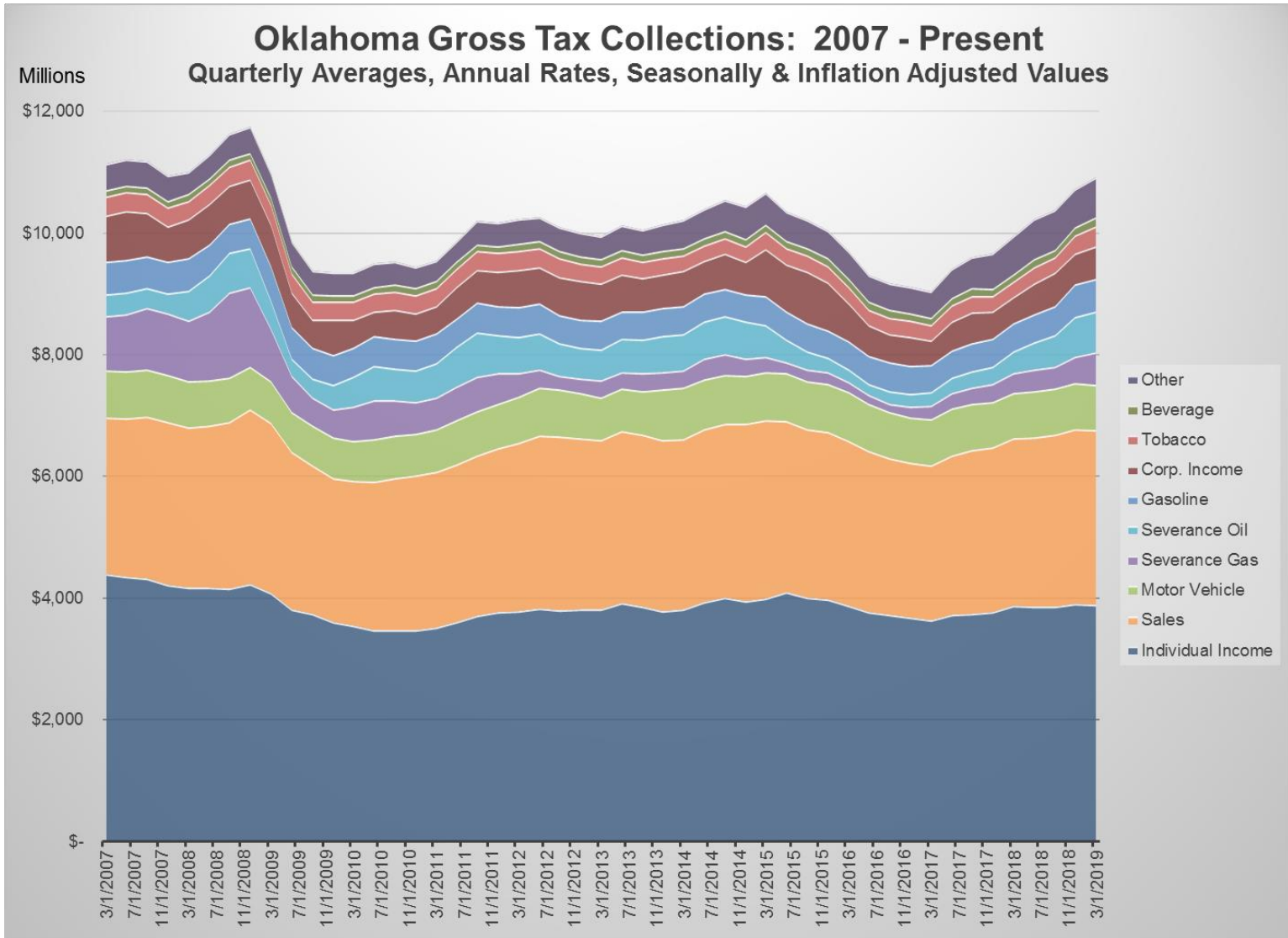
A close look at recent history is provided here. These are smoothed monthly, seasonally adjusted values. Totals need to be multiplied by 12 to obtain annual rates. Strong positive trends are shown since the trough of mid-to-late 2016.



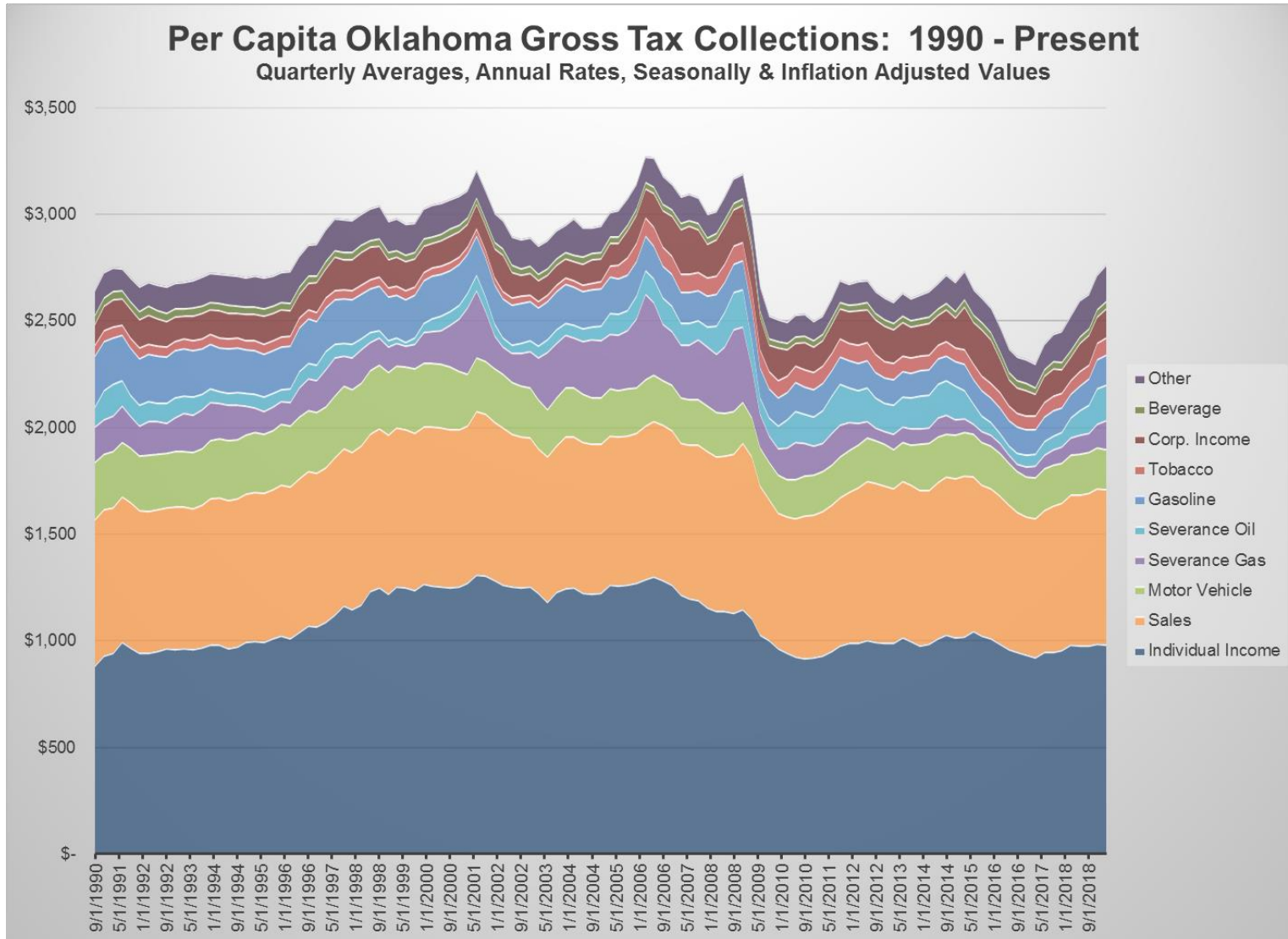
This chart present quarterly averages of seasonally-adjusted, nominal (non-inflation adjusted) collections. Recent values are approaching \$11 B.



Inflation adjustments allow us to compare periods based on common purchasing power of collections. The GDP deflator for State and Local expenditures, provided by the U.S. Bureau of Economic Analysis, is used for the inflation adjustment. By this index, it takes \$2.33 to buy today what \$1.00 bought in mid-1990. It is noteworthy that Oklahoma has not surpassed inflation-adjusted totals achieved in 2005-2007, but are presently substantially higher than values associated with the early 1990's.

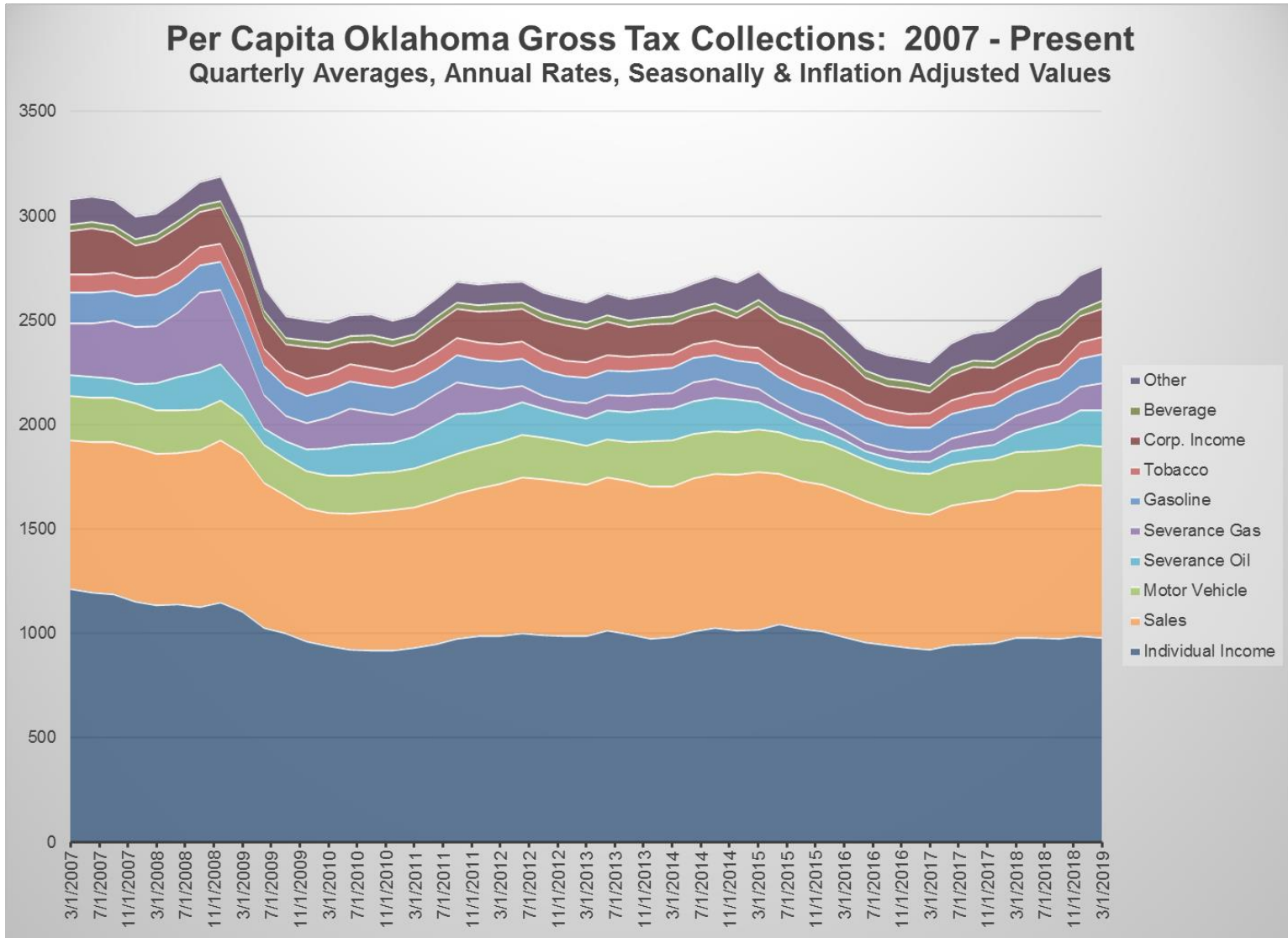


This graphic simply details more recent history of quarterly, seasonally and inflation adjusted series at annual rates.

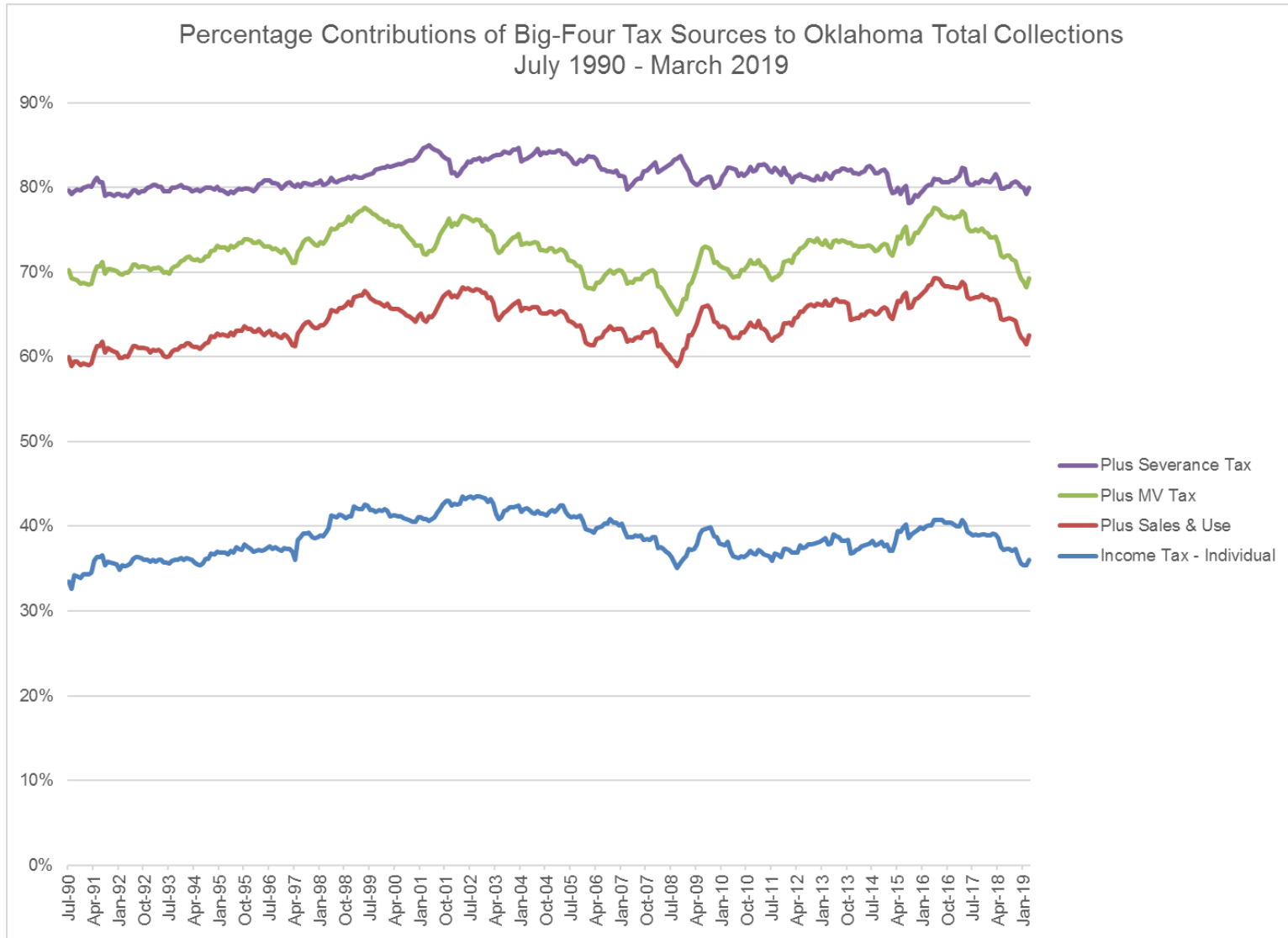


Per capita calculations, in addition to seasonal and inflation adjustments, are considered in this graphic. Current values are in line with values from 1990 through mid 1995, but substantially below levels achieved in 2005-2007 of about \$3,100 per person. Real, per capita total collections fell to about \$2,500 in late 2010 and have since recovered to about \$2750. A gain of \$250 real, per capita, with a population nearing the 4 million level represents almost a one-billion-dollar gain.

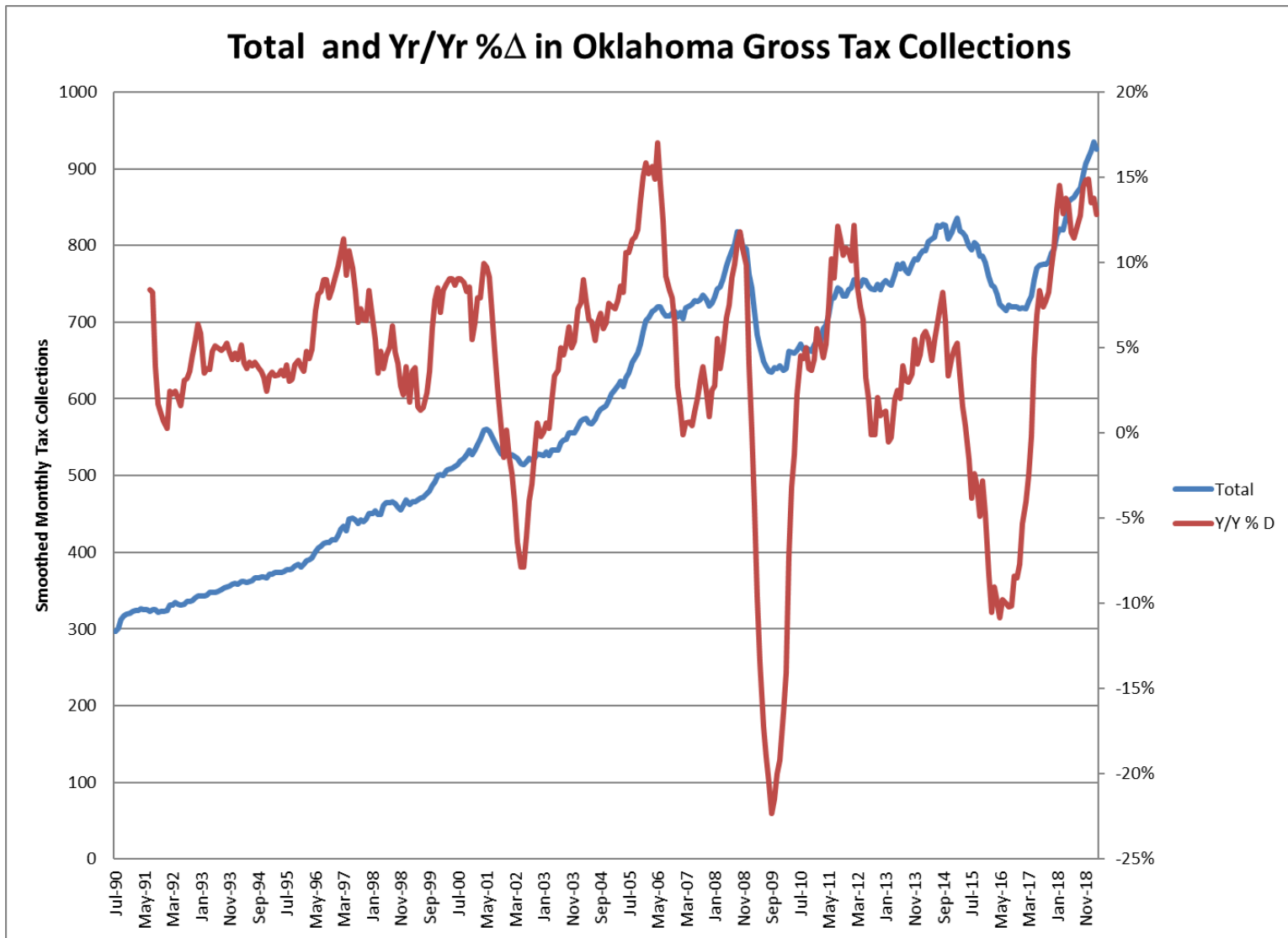




This graphic simply presents the more recent experience in per capita, seasonally and inflation adjusted values at annual rates. Levels from 2011-14 have been recovered, but we are still below the pre-Great Financial Crisis recessionary levels of about \$3,100.

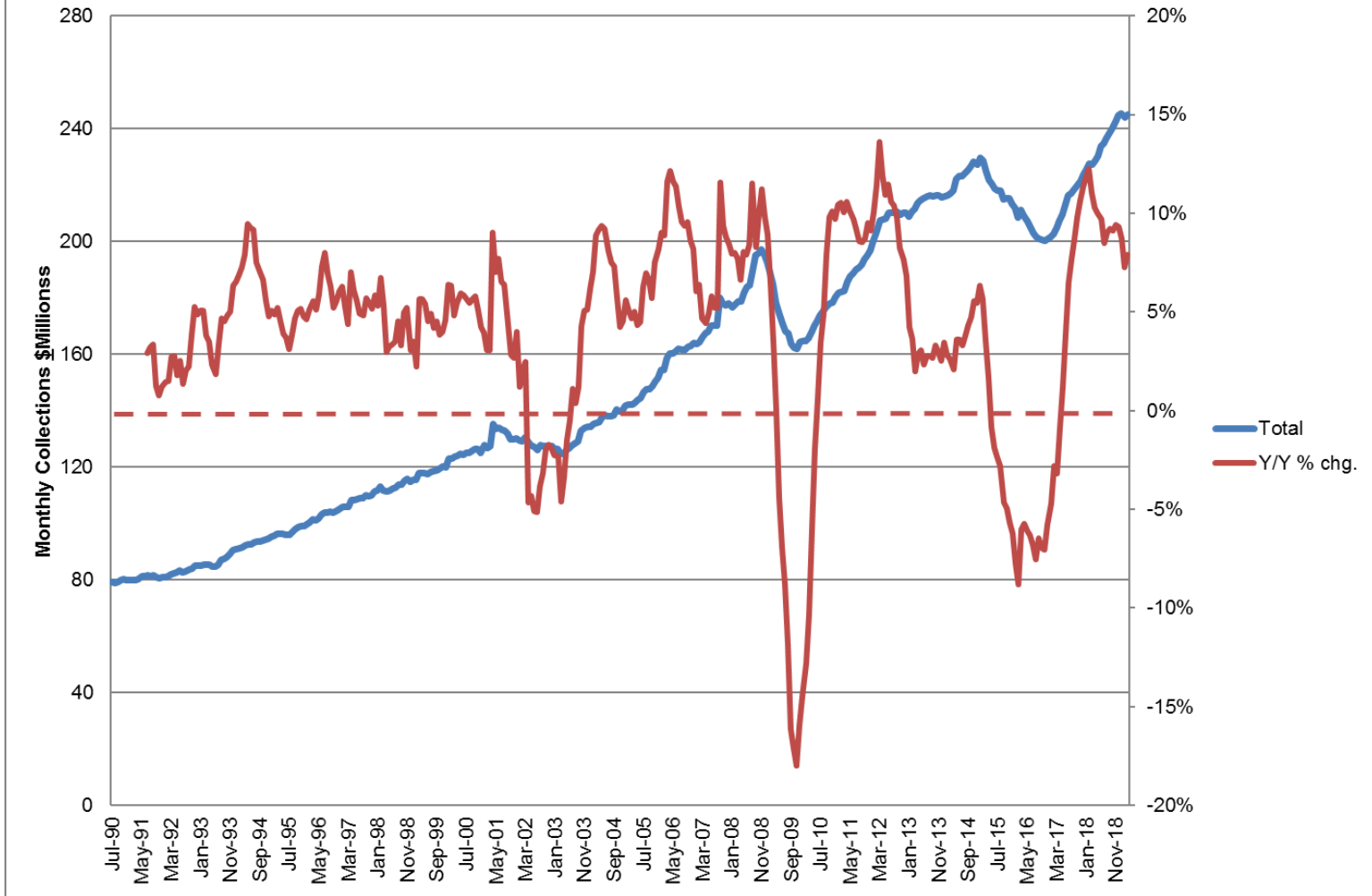


The share of total collections by the four major sources of state revenue have been quite constant over the years. Recent declines in MV tax, Sales and Use, and Individual Income Tax are in part a consequence of new tax sources such as marijuana and sales tax on automobiles.



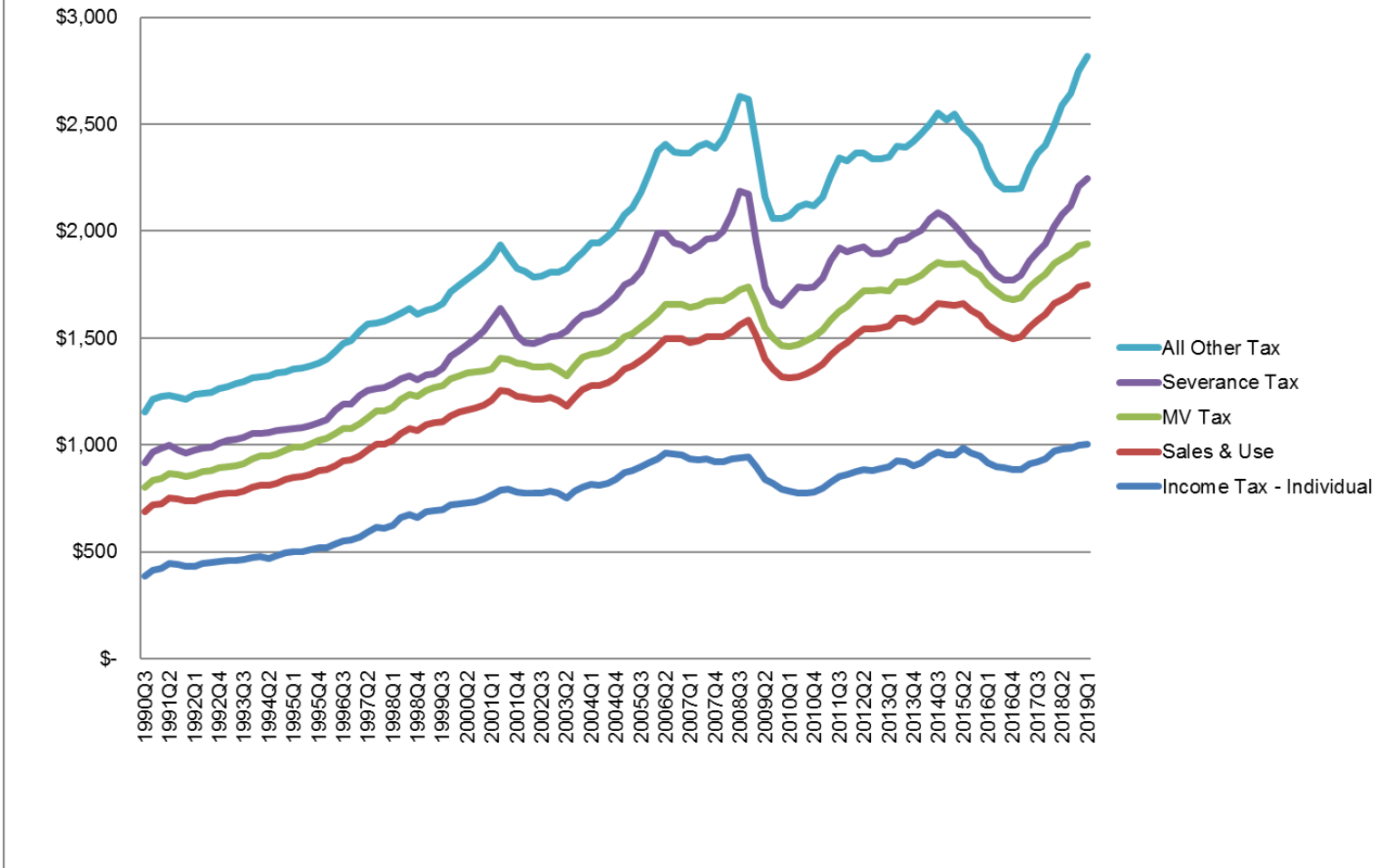
Monthly total collections are increasing, presently, at about a 12.5% rate, having substantially increased from the 2015-16 decline in energy prices and tax rate changes.

## Oklahoma Monthly State Sales and Use Tax Collections \$Millions and Year-to-Year Percentage Change

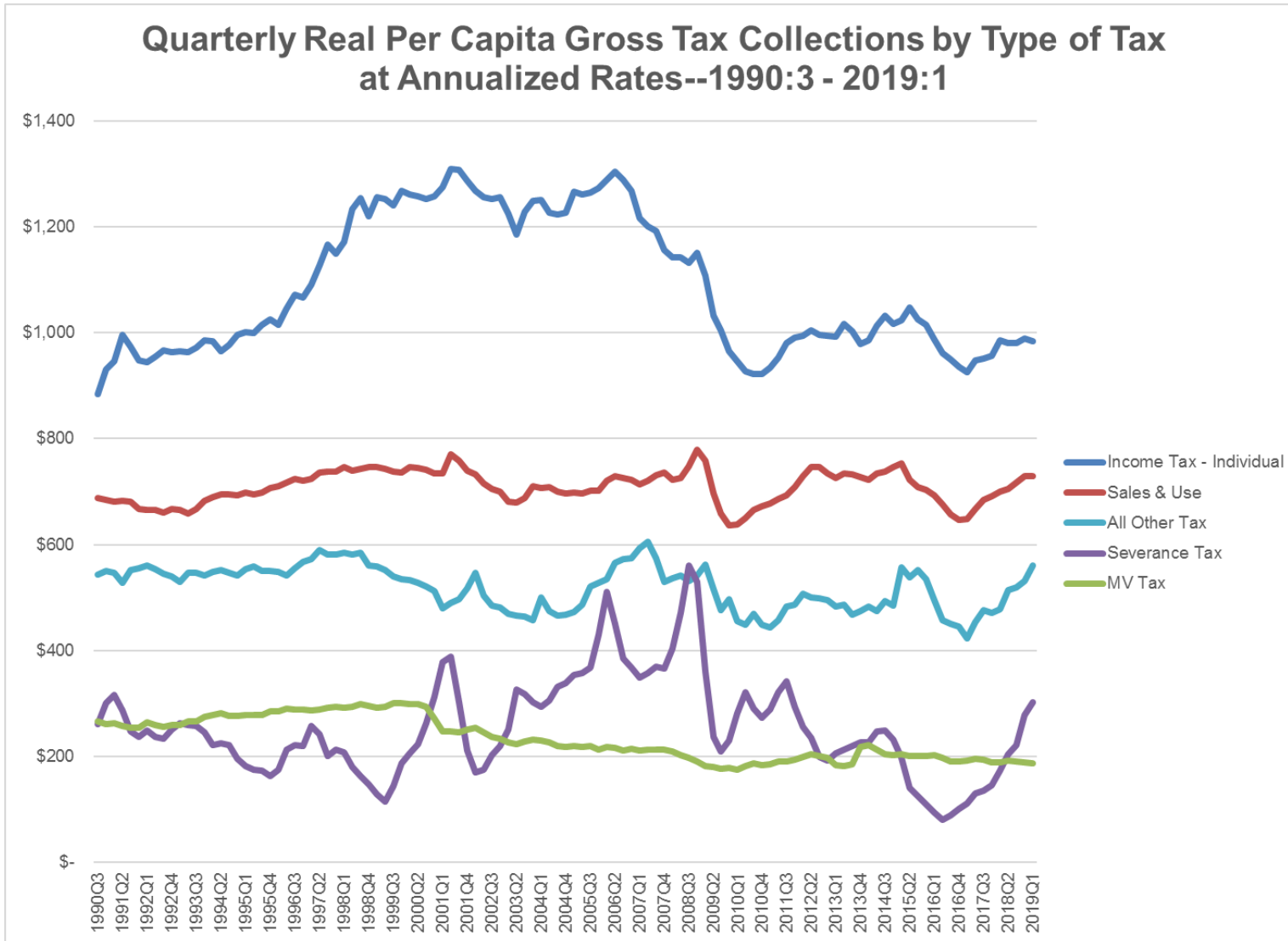


State sales and use taxes are up substantially, in part in consequence of on-line sales tax collections.

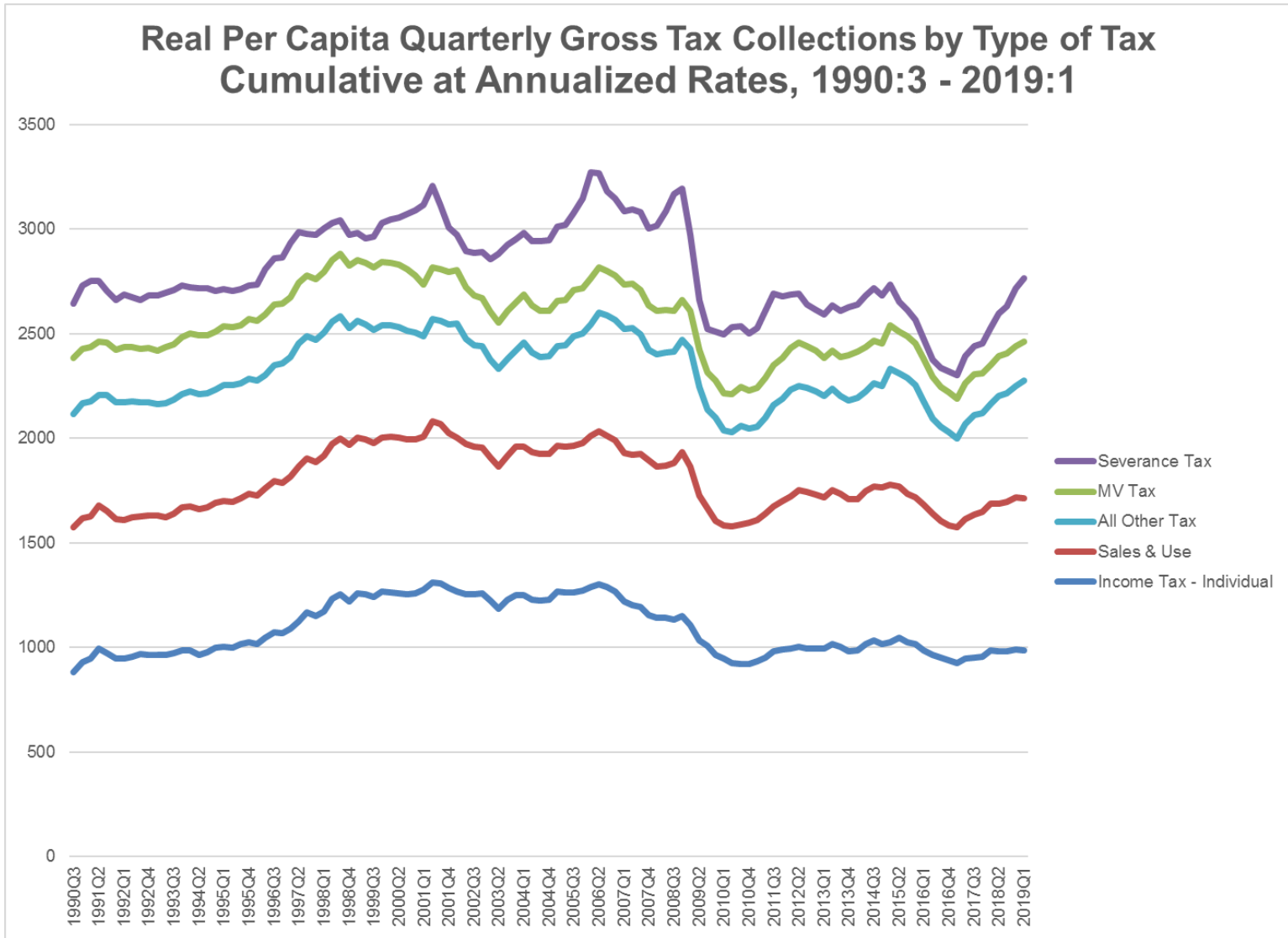
### Cumulative Per Capita Collections for Major State Gross Tax Collections at Annual Rates, Not Inflation Adjusted



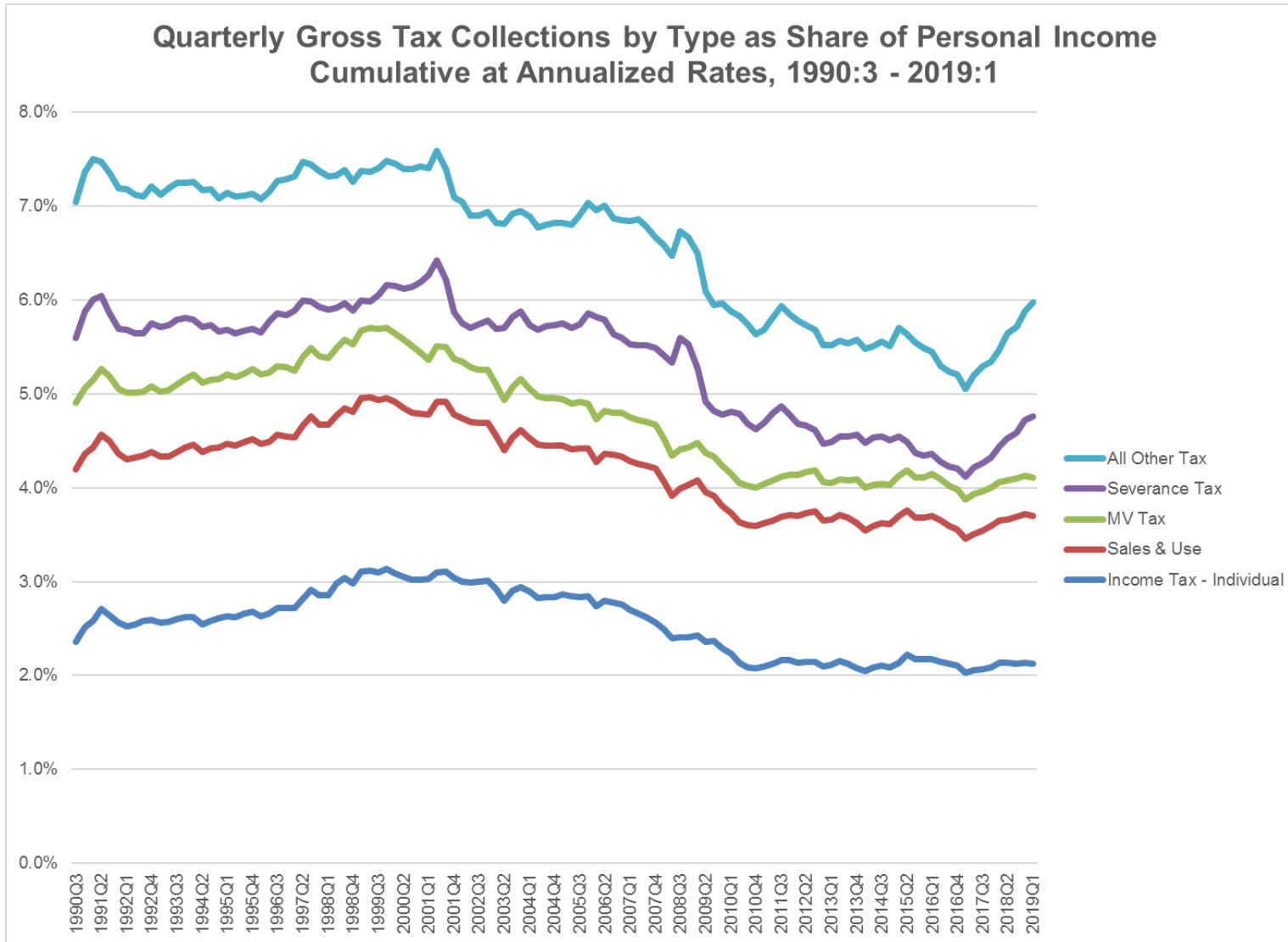
Cumulative, quarterly, per capita tax collections from major sources are shown in this graphic. These data are not adjusted for inflation.



This graphic shows that based on real, per capita adjustments, Sales and Use, All Other, and Motor Vehicle taxes have been comparatively steady, while Severance and Individual Income taxes have been volatile contributors to total collections. Indeed, Individual Income taxes rose from about \$1,000 to \$1300 in the mid-to-late 1990's, and subsequently fell back to about the \$1,000 level.

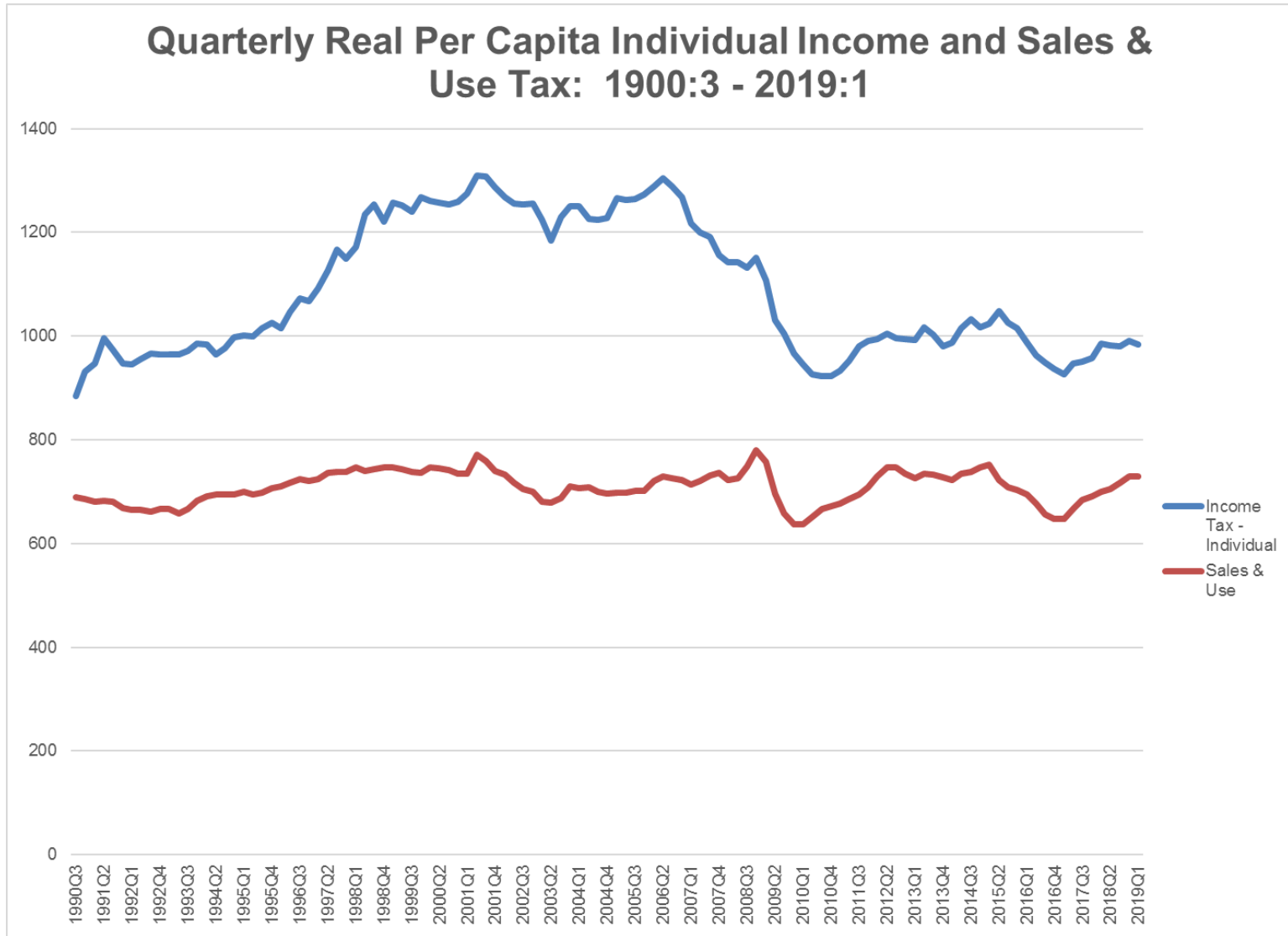


This graphic accumulates the various major sources of state gross tax collections, revealing recent positive trends.

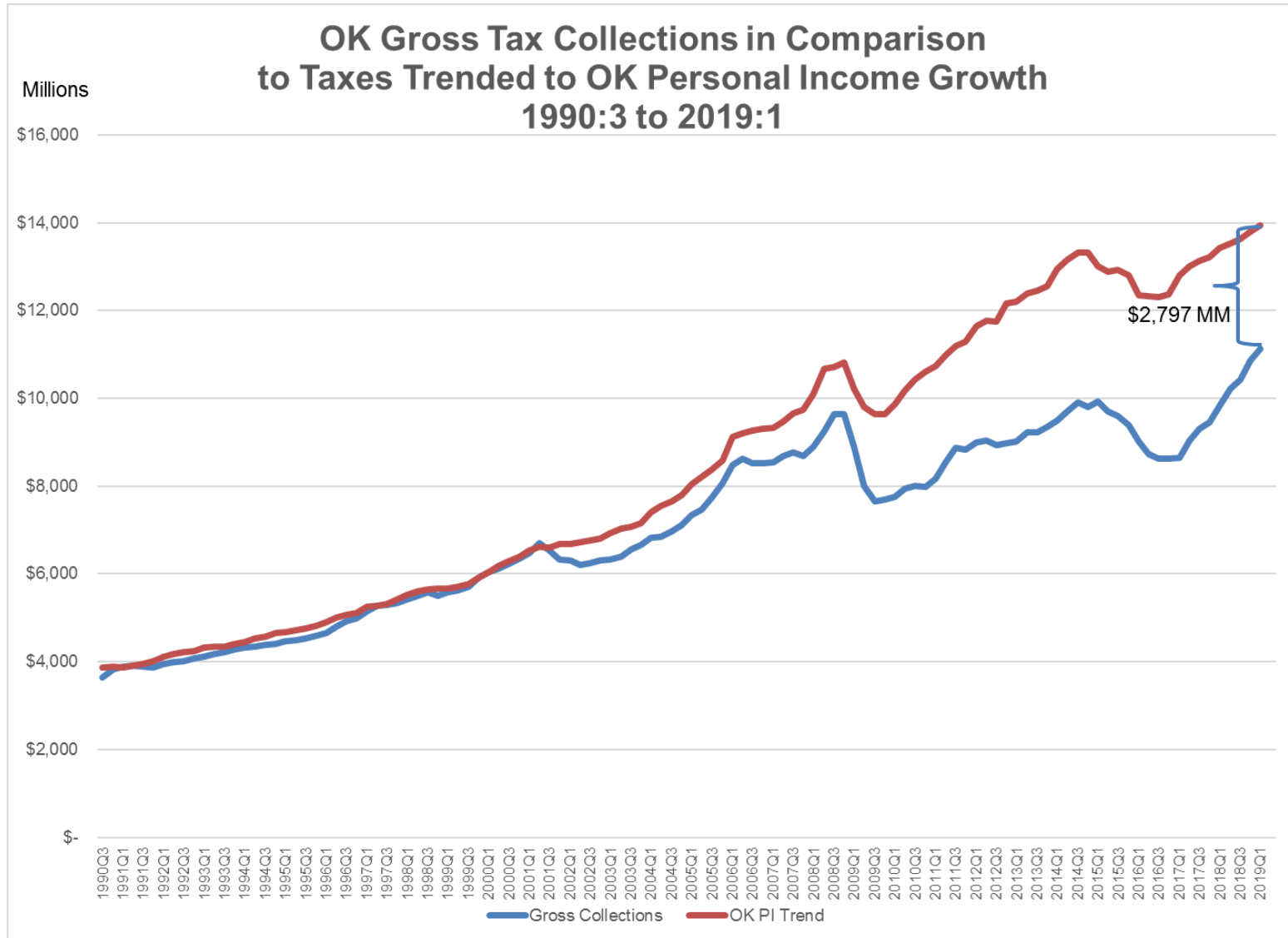


The ratio of taxes to personal income is known among economists as the “effective” tax rate. We see in this graphic that the effective tax rate has fallen precipitously since 2000, from better than the 7% level, down to 5% and then recovering to 6%. Given Oklahoma’s present personal income level of approximately \$186 B, a one percent difference represents \$1.86 B in collections.



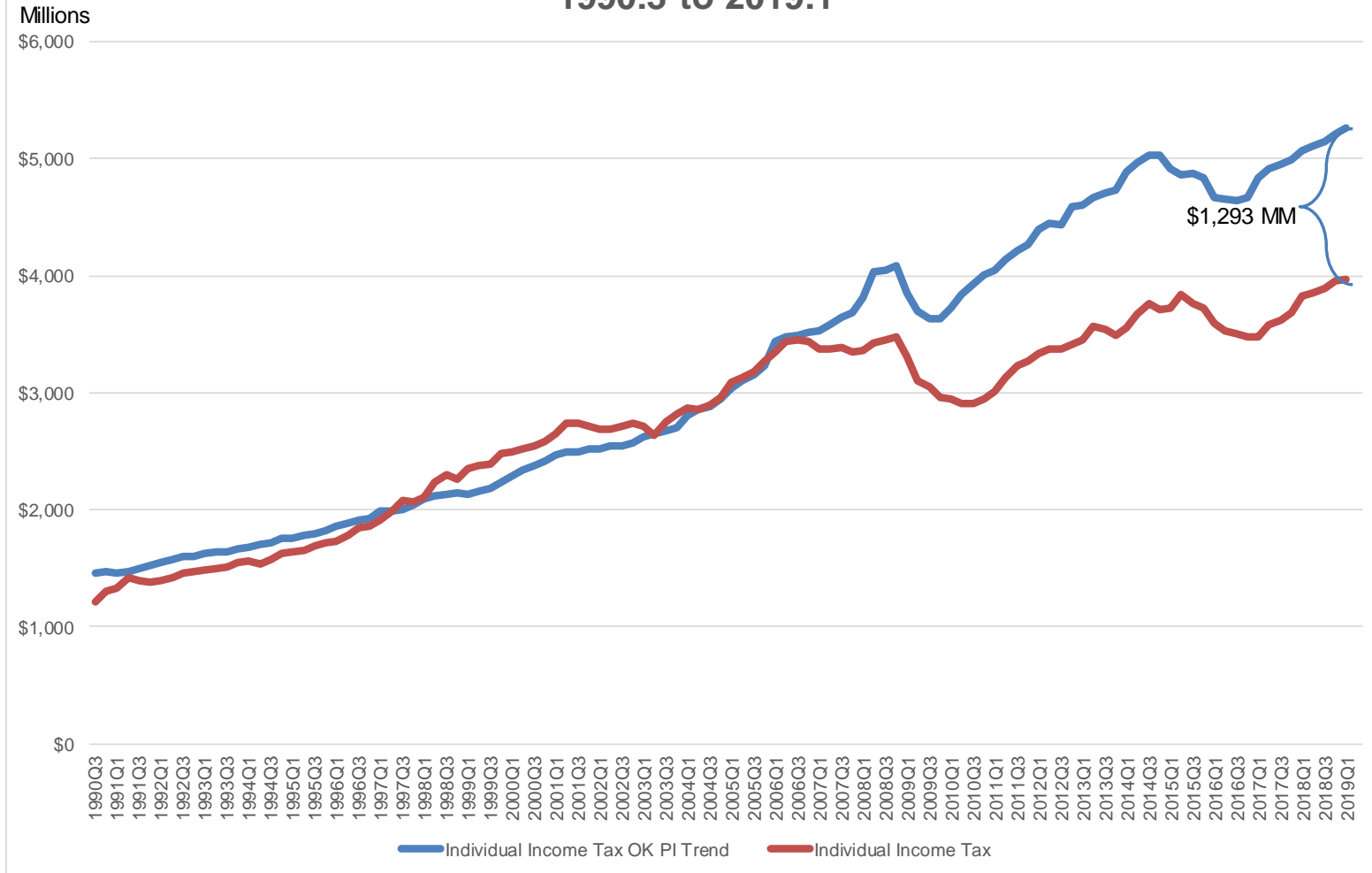


In this graphic, we see once again relative stability in Sales and Use taxes, and significant declines in real, per capita individual income receipts.

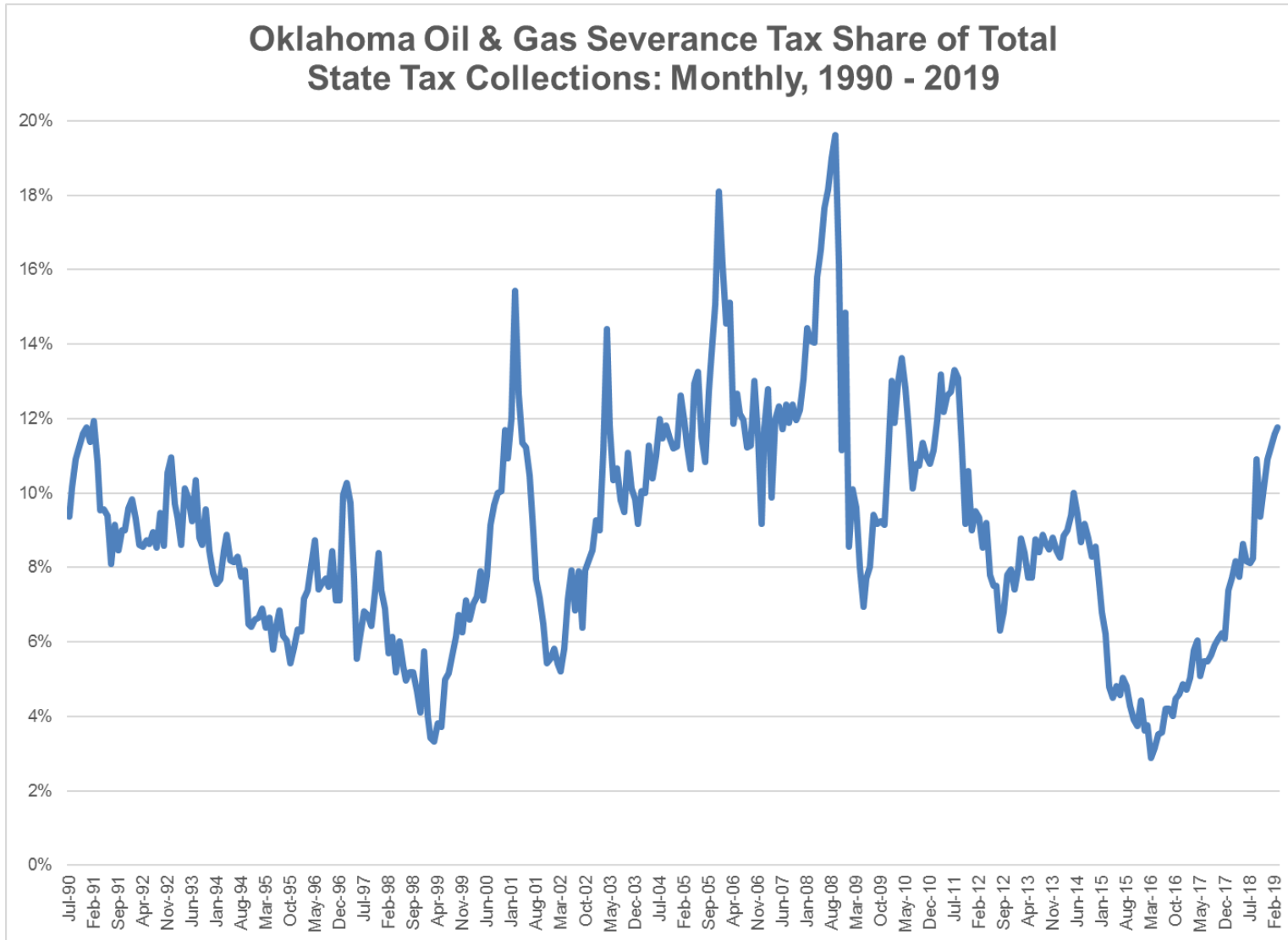


This graph answers the question of “What would current collections be if Oklahoma retained to the present day earlier ‘effective’ tax rates?” For example, if the “effective” rate was seven percent in earlier years, what would tax collections be today if the share of personal income remained the same as in earlier times. These values are then compared to actual collections. We see a close tracking of actual and effective rates until 2001. The current gap is about \$2.8 B.

## OK Individual Income Tax Collections in Comparison to Taxes Trended to OK Personal Income Growth 1990:3 to 2019:1



Reductions in income tax rates are shown to be a principal factor in differential collections, representing about 46% of the \$2.8 B total differential in total versus OK Personal Income trend. Note the close tracking of actual and constant share rates until about 2006 when significant changes in tax rates and exemptions began to occur.



Volatility in the energy sector is ubiquitous in Oklahoma’s economy. Here we see that the share of oil and gas severance taxes has ranged from low of less than four percent to highs nearing 20 percent.

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Front cover photo of oil well on the state capitol grounds, courtesy of Fred Marvel, Oklahoma Department of Tourism.