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Prepared by Dr. Raymond J. Brady, Systems Solutions Consulting

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LOUISIANA'S ECONOMIC INDICATORS ON PRODUCTIVITY, UNIT LABOR COST, AND INFLATION ADJUSTED OUTPUT SHOWS DECREASED RELATIVE COMPETITIVENESS WITH OTHER SOUTHERN STATES

DEFINITIONS:

- **Labor productivity** - measures the hourly output of an economy. Specifically, it charts the amount of real gross domestic product (GDP) produced by an hour of labor. Growth in labor productivity depends on three main factors: saving and investment in physical capital, new technology, and human capital. In simpler terms, labor productivity = monetary value of good and services produced divided by total hours worked.
- **Output Per Worker**- A measure of productivity calculated by dividing the total output by the number of workers.
- **Real value-added output** - removing the effect of price level changes from the nominal value of a good, service, or time-series data, to obtain a truer picture of economic trends.
- **Value added output**- The current dollar value of output that has been adjusted for changes in inventory (gross output) and the removal of intermediate inputs (energy, material, and services).
- **Unit Labor Costs** – ratio of labor compensation per hour divided by product output per hour expressed in dollars.

OVERVIEW

The most current data for the period 2007 to 2024 from the **Office of Productivity and Technology, Bureau of Labor Statistics** (released May 29, 2025) paints a bleak picture of Louisiana's economic competitiveness. Because these statistics are summary data, they raise several research questions that focus on the "why" of the problem. As this paper will point out, Louisiana's competitive position has eroded across the board over the period of this data series. Data will be presented in two formats to minimize potential data bias. First, data will be presented as points- in- time, for example, 2007 to 2012 and 2012 to 2024. Data are presented over time to provide a context of change in the direction of the data (going up, down or stationary).

The first series of graphs focus on comparing economy statistics between Louisiana and ten other Southern states and summary of the South. Much of the data series uses a scalar (index) allowing Louisiana to be compared against other states. Consistent with other data series produced by the Bureau of Labor Statistics, the year 2017 is set at 100 which is a starting point to create a common scalar when comparing data at different levels by state and over time.

DATA PRESENTATION

Table 1 compares labor productivity in Louisiana against the other Southern states for the year 2024. Although Table 1 is a point in time measure, it provides a comparative measure of Louisiana’s productivity position relative to the sample states. Table 2 provides trend data between Louisiana and the South illustrating Louisiana’s deteriorating position with respect to the productivity measure over time from 2007 to 2024.

Table 1

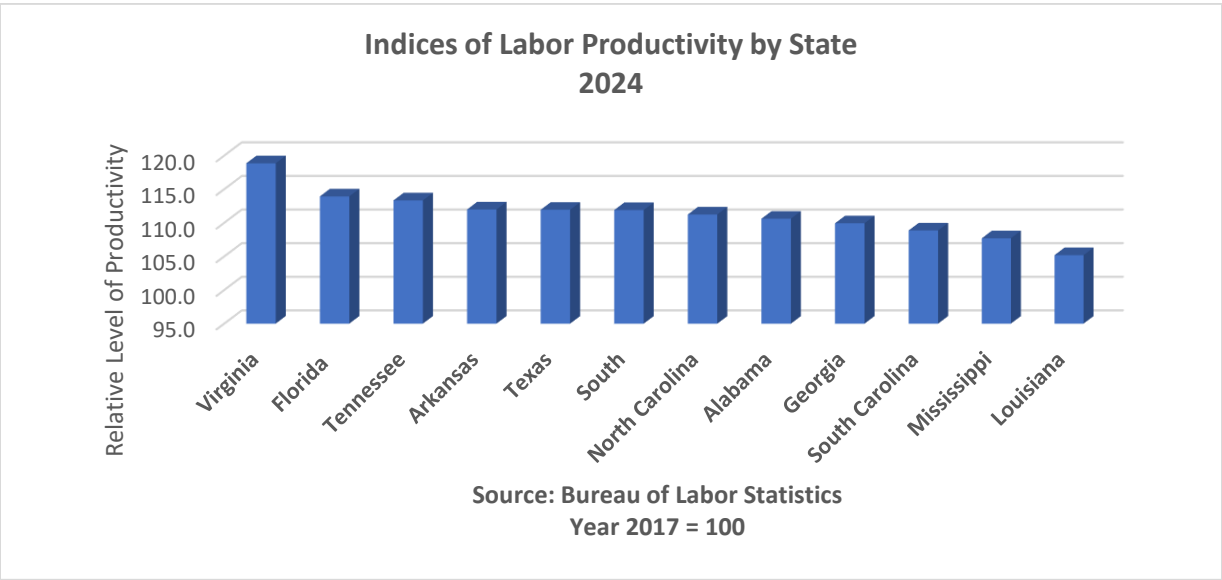
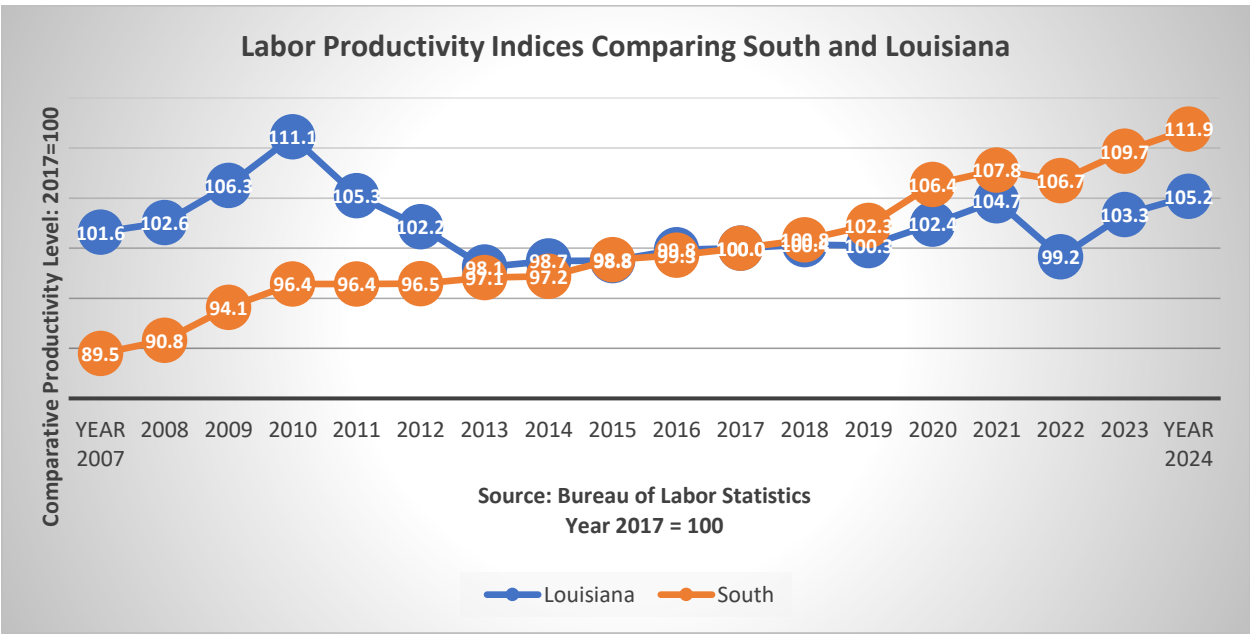


Table 2



As table 2 illustrates, Louisiana’s labor productivity performance between the base year and up to 2010 showed an economy dominated by industries that generated high labor productivity. Data shows that 2010 was an inflection point. What might have caused this labor productivity weakness relative to other states in the sample? Clearly, **structural changes** in Louisiana’s economy, as illustrated in Table 2, begin

to occur around the year 2010. One indicator of structural changes in an economy is real output per worker.

Table 3 breaks the time frame of these changes into three sets: 2007 to 2024; 2007 to 2014 and 2012 to 2024. This gives the reader a context of narrowing the time frame of changes occurring in Louisiana's economic structure. Again, the data set is far too aggregated to provide any understanding of the depth of changes affecting the productivity measure for Louisiana. However, the table presents a comparison of the percentage change in real output per worker over time and shows the relative (to its southern neighbors) lack of growth in real output per worker in Louisiana. One might hypothesize that structural change in Louisiana's economy would be picked by the productivity statistics reported by the Bureau of Labor Statistics (labor productivity, output per worker) and *reflect growth* in either high or low value-added industries in the period. **For example, between 2012 and 2024 (a relatively short period in economic time) combined inflation adjusted support activities in mining and manufacturing GDP in Louisiana fell by 22%.**

Table 3
PERCENTAGE CHANGE IN REAL OUTPUT PER WORKERS

	Change 2007- 2024	Change 2007-2012	Change 2012-2024
Alabama	97.0%	22.0%	65.7%
Arkansas	106.1%	24.7%	75.3%
Florida	142.9%	6.9%	135.9%
Georgia	120.3%	18.1%	98.2%
Louisiana	47.1%	7.2%	26.1%
Mississippi	68.7%	18.6%	38.7%
North Carolina	120.3%	21.0%	90.8%
South Carolina	121.4%	18.0%	94.1%
Tennessee	164.2%	28.9%	108.0%
Texas	150.6%	38.2%	98.9%
Virginia	124.7%	25.3%	85.4%
South	129.1%	24.9%	91.8%

Source: Productivity Statistics, Bureau of Labor Statistics

Table 4 presents inflation adjusted GDP data comparing Louisiana to a similar state over the study period.

Table 4

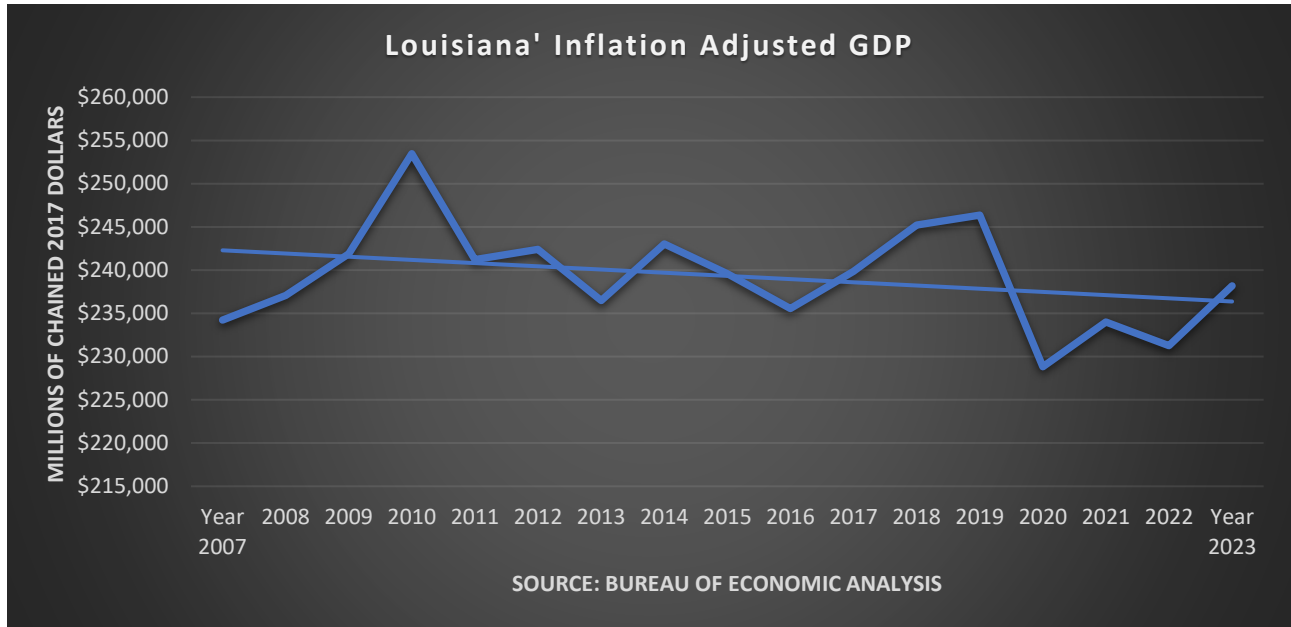
State Gross Domestic Product Growth in Inflation Adjusted \$				
	(Millions of Chained 2017 \$)			
	% CHANGE		REAL GDP (IN BILLIONS) CHANGE	
Industry	2012-2023		2012-2023	
	Louisiana	South Carolina	Louisiana	South Carolina
Mining	-28.3%	242.1%	-\$3,663	\$489
Manufacturing	-20.5%	14.3%	-\$9,413	\$5,925
Wholesale Trade	-5.3%	33.1%	-\$647	\$4,339
Retail Trade	17.6%	51.4%	\$2,525	\$3,168
Information	29.9%	132.0%	\$1,217	\$6,760
Professional and Business Services	17.7%	60.4%	\$3,538	\$9,319
Healthcare and Social Assistance	39.8%	52.1%	\$6,333	\$3,866
Leisure and Hospitality	4.7%	40.2%	\$476	\$1,846

Source: Bureau of Economic Analysis (BEA)

Table 4 simply confirms why Louisiana performed so poorly in real output per worker (Table 3). In one phrase: *the collapse of real GDP growth between 2012 and 2023*. In industry sectors, such as Information and Professional and Business Services, the difference in GDP growth between South Carolina and Louisiana is striking. In the sector “Information,” real GDP increased by five times greater in South Carolina than in Louisiana. In Professional and Business Services, the increase difference is over three times greater in South Carolina than in Louisiana. Even in Leisure and Hospitality, the difference is stark! The huge decline in Manufacturing in Louisiana is most attributable to the decline in value of petroleum and coal products (NAICS 31) and Chemical Manufacturing (NAICS 32). One might ask the question, “how”? Louisiana’s Manufacturing is heavily concentrated in input products, rather than output or secondary input industries, such as auto manufacturing. And looking critically at the broad spectrum of manufacturing, one sees poor performance across the board.

Table 5 presents the most recent Louisiana’s Gross Domestic Product (GDP) over the period 2007 to 2023. Louisiana’s inflation adjusted GDP peaked in 2010 at \$253 billion in inflation adjusted \$ (2017 value =100). The value for 2023 was \$238 billion. The 2019 level (pre-Covid Pandemic level) was \$246 billion..

Table 5



Another factor that feeds into the poor productivity indicator for Louisiana is the value-added per worker in current \$. Table 6 ranks growth both in terms of percentage change and value-added per worker level change in current \$ over the period 2007 to 2023. Why would both the percentage change and value-added growth for Louisiana again be at the bottom of the rank order? The GDP data found in Table 4 gives a hint. The GDP of high valued-added industries, such as mining and mining services, collapsed between 2012 and 2023, going from \$13 billion in 2012 to \$9.3 billion in 2023 in real 2017\$. Real GDP output in Manufacturing also stagnated during this period, going from \$45.9 billion in 2012 to \$36 billion in 2023. Real dollar increases in the GDP of those industries with growth were unable to strongly affect the overall weakness in the real Louisiana GDP. For example, Professional and Business Service, Health Care and Social Services and Leisure and Hospitality added \$8.4 billion real inflation adjusted dollars. At the same time, Mining and Manufacturing real GDP fell by \$13.1 billion over this period.

Industry losses in high value-added output far outweigh the gains in other industries. As Table 6 illustrates, **Louisiana's percentage growth** in value-added per worker was dismal relative to other Southern states. **The level of growth was not quite as poor.** Part of the reason for the better showing has to do with the fact that Louisiana's value-added base level was second only to Texas in 2007. By 2024, it had slipped to fifth, but still relatively high. In practical terms and because of the number of capital-intensive manufacturing industries in Louisiana, the **level increase rank** position **overstates the issue of level change** in value-added per worker.

Table 6

2007-2024			
	Value-Added per Worker in Current \$		
	Level Growth		Percentage Growth
Tennessee	\$63,497	Tennessee	83.2%
Texas	\$60,491	Virginia	69.3%
Virginia	\$59,177	Florida	68.9%
South	\$56,575	Alabama	65.7%
Florida	\$55,723	South	64.9%
Georgia	\$55,444	North Carolina	64.4%
North Carolina	\$53,178	Arkansas	64.3%
Alabama	\$48,064	South Carolina	64.1%
South Carolina	\$45,765	Georgia	61.9%
Louisiana	\$45,606	Mississippi	59.1%
Arkansas	\$45,188	Texas	57.4%
Mississippi	\$40,117	Louisiana	46.9%

Source: Bureau of Labor Statistics; *Systems Solutions Consulting*

Table 7 illustrates the advantage that Louisiana had in 2007 relative to the value-added per worker in current dollars, and the relative position in 2024. In 2007, Louisiana's rank position, as noted earlier, was 2nd to that of Texas, and had slipped to 5th in the ranking by 2024. Although some might suggest that the slide from 2nd to 5th place over time "is not so bad," a closer look suggests the situation might not be so favorable. For example, the ratio of value-added per worker in Louisiana to that of Alabama was 1.3 in 2007. That ratio fell to 1.2 in 2024. What might this gross number tell you? First, as Table 7 illustrates and in Alabama, value added per worker increased (percentage wise) by 65.7%. In Louisiana, that value increase was 46.9%. This suggests that (potentially) the diversity of capital-intensive industries in Alabama grew 1.4 times faster than in Louisiana. In Louisiana, capital-intensive industries continue to be focused on petrochemicals. Industries such as ship building and mining have shrunk and not being replaced by such industries as auto and high-tech manufacturing. Again, the competitive advantage of Louisiana's economy relative to other states in the South has shrunk.

Table 7
Rank Order Growth in Value-Added per Worker in Current \$ in Each State GDP

Value-Added per Worker in Current \$			
	2007		2024
Texas	\$105,455	Texas	\$165,946
Louisiana	\$97,193	Georgia	\$145,035
Georgia	\$89,591	Virginia	\$144,520
South	\$87,141	South	\$143,716
Virginia	\$85,343	Louisiana	\$142,799
North Carolina	\$82,598	Tennessee	\$139,823
Florida	\$80,890	Florida	\$136,613
Tennessee	\$76,326	North Carolina	\$135,776
Alabama	\$73,209	Alabama	\$121,273
South Carolina	\$71,402	South Carolina	\$117,167
Arkansas	\$70,265	Arkansas	\$115,453
Mississippi	\$67,905	Mississippi	\$108,023

Source: Bureau of Labor Statistics; Systems Solutions Consulting

Table 8 presents the rank order of unit labor costs growth (*recall the definition Unit Labor Costs – ratio of labor compensation per hour divided by product output per hour expressed in dollars.*) over the period 2007 and 2024. Again, labor cost increase in Louisiana was highest among the sample states. This would be less of a problem had Louisiana ranked higher in productivity, real output per worker and real GDP growth. However, given the dismissal results identified in the above tables, the final table screams out for an analysis to ask the simple questions: “Why?” or the “How?”

Table 7
Change in Factors Affecting Louisiana Competitiveness in the South

	Unit Labor Costs		Real Output Per Worker	
	2007- 2024	2012-2024	2007-2014	2012-2024
Alabama	43.3%	40.5%	108.1%	75.0%
Arkansas	41.7%	31.2%	112.5%	80.7%
Florida	48.2%	38.1%	145.0%	137.9%
Georgia	42.9%	34.3%	136.2%	112.5%
Louisiana	50.9%	36.1%	57.5%	35.0%
Mississippi	42.2%	38.0%	82.6%	50.1%
North Carolina	47.1%	39.0%	130.5%	99.7%
South Carolina	47.3%	32.5%	125.9%	98.0%
Tennessee	35.0%	39.8%	162.7%	106.8%
Texas	34.9%	34.3%	159.1%	105.6%
Virginia	32.5%	26.3%	133.4%	92.6%
South	39.5%	28.0%	136.8%	98.2%

Source: Bureau of Labor Statistics

Table 8 presents unit labor costs and real output per worker (inflation adjusted in 2017\$) for Louisiana and comparative Southern states. Although a detail of industry analysis is required to assess what is causing Louisiana's poor performance relative to its competitors, this simple presentation serves to raise preliminary concern. Let's focus. The long-term ratio (2007-2024) shows that for Louisiana a ratio of 1.1 of real output per worker to unit labor cost (see definition on first page) of 1.1. or illustrating that the churning of industry mix was toward low productivity, low value added from high productivity and high valued added industries. Over the same period, states like Virginia, Tennessee or Texas ratios were between 4.1 and 4.6. in short real output per worker grew by over four times faster than unit labor costs. The answer requires greater analysis, but the data shows an economic weakness reflected in a large educated out-migration population, slow recovery from economic disruptions, etc. *In short, a caution light turning red.* The scenario shows little improvement in the most current 2012-2024 term. Although productivity cracks are appearing in the other states, the gap has not improved. THE PROBLEM IS: LOUISIANA IS AN OUTLIER IN A FAST-GROWING REGION.

CONCLUSION

Why are the data presented in the above tables essential to Louisiana's economic future? Obviously directly and indirectly, the data reflects the potential for income growth of the resident population and future economic opportunities.

The results, from the above tables, are quite distressful. All the *identified* principal Louisiana economic indicators over the study period 2007 to 2024, *but especially the 2012 to 2024 period*, suggest deficiency in either (a) labor force development, (b) policy failures in attracting high value-added industries or new technology industries or (c) negative structural changes in current industries or developing industries (d) a combination of all the above. The data, as noted in the introduction, is an initial step for further analysis to better understand the "why" or "how" this poor showing in Louisiana's key economic indicators relative to other states in the sample. In short, the paper can best be defined as the "canary in the coal mine problem" that should not be ignored.