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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.
- **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.
- **Unit Labor Costs** – ratio of labor compensation per hour divided by product output per hour express in dollars.

OVERVIEW

The most current data for the period 2007 to 2021 from the Office of Productivity and Technology, Bureau of Labor Statistics (released May 22, 2022) 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, that is 2007 and 2021. Next data will be presented as a 2007 to 2021 time series. The reader can draw their own conclusions. 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 allowing Louisiana to be compared against other states. Other data series simply looks at growth over time. Consistent with other data series produced by the Bureau of Labor Statistics, the year 2012 is set at 100 which is a starting point to create a common scaler when comparing data at different levels by state.

DATA PRESENTATION

Table 1 compares labor productivity in Louisiana against the other Southern states for the year 2021. Although Table 1 is a point in time measure, it provides a comparative measure of Louisiana's productivity position relative to the sample states. However, trend data are presented showing Louisiana's deteriorating position with respect to the productivity measure over time from 2007 to 2021.

Table 1

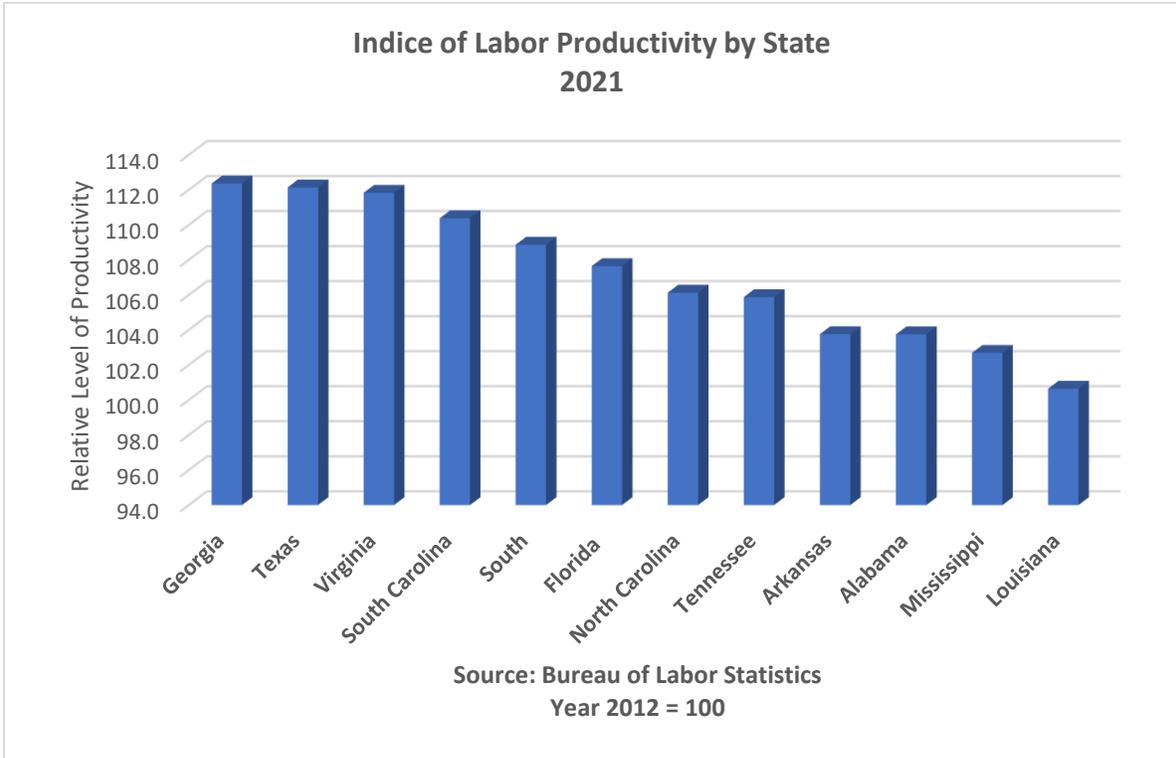
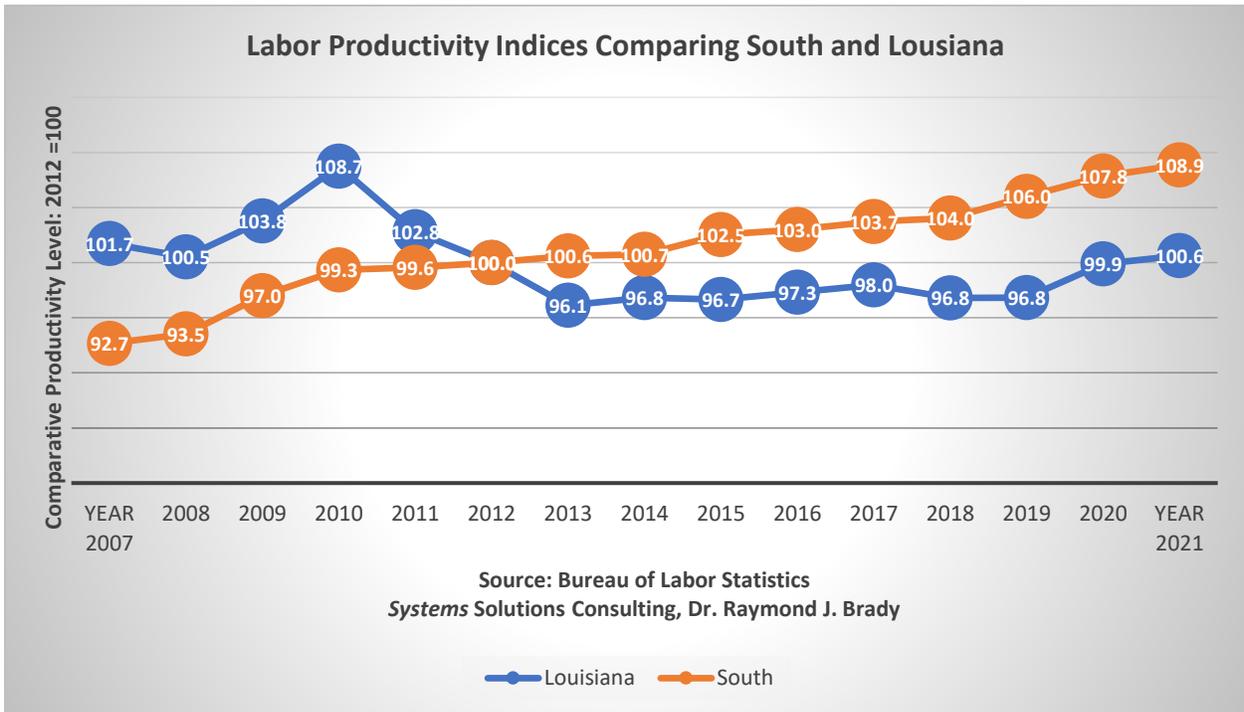


Table 2 specifically focuses on the trend in productivity over time in Louisiana and the South over the 2007 to 2021 period.

Table 2



What might have caused this labor productivity weakness relative to other states in the sample? Clearly, structural changes in Louisiana’s economy relative position have occurred starting in the last decade. 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 2021; 2007 to 2012 and 2012 to 2021. This gives the reader a fundamental context narrowing the time frame of changes occurring in the 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. Table 3 compares the percentage change in real output per worker over time, and shows the relative lack of growth in real output per worker in Louisiana.

Table 3
PERCENTAGE CHANGE IN REAL OUTPUT PER WORKERS

	Change 2007- 2021	Change 2007-2012	Change 2012-2021
Alabama	60.2%	18.9%	34.8%
Arkansas	64.6%	17.2%	40.5%
Florida	78.2%	0.7%	76.9%
Georgia	93.9%	10.8%	75.0%
Louisiana	15.4%	10.8%	4.2%
Mississippi	33.9%	17.6%	13.9%
North Carolina	88.1%	16.8%	61.1%
South Carolina	91.5%	14.3%	67.5%
Tennessee	100.8%	27.0%	58.0%
Texas	92.5%	26.6%	52.0%
Virginia	80.4%	22.5%	47.3%
South	82.0%	19.0%	52.9%

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

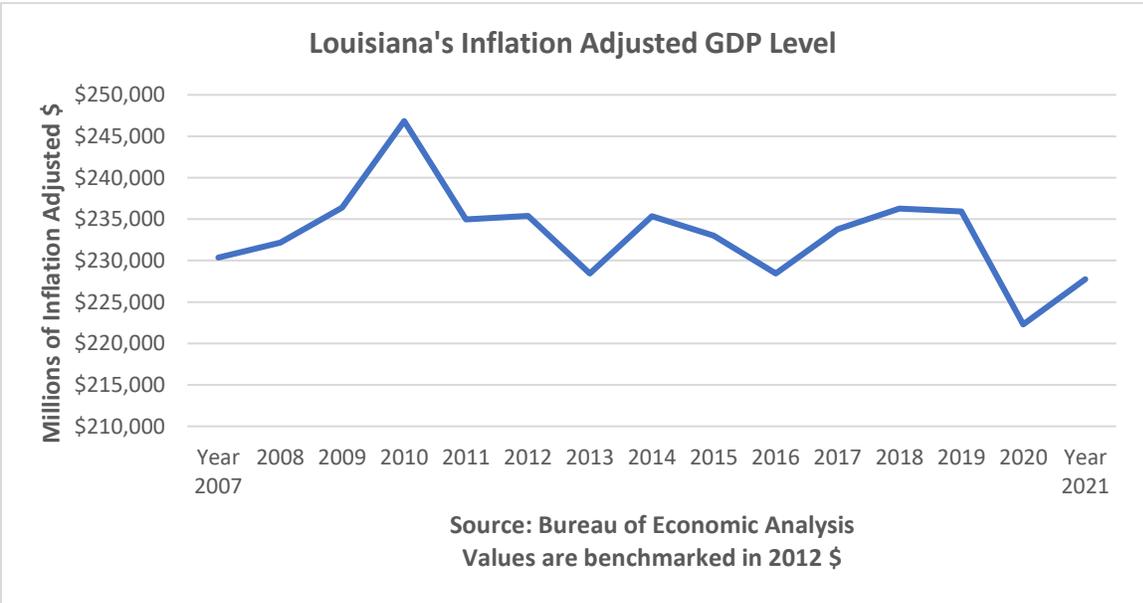
State GDP Growth in Inflation Adjusted \$				
Industry	% Change		Real GDP (in Billions) Change	
	2012-2021		2012-2021	
	Louisiana	South Carolina	Louisiana	South Carolina
Mining	-45.8%	nil	-\$8.5	nil
Manufacturing	-6.1%	20%	-\$2.5	\$5.8
Wholesale Trade	-1.4%	31.5%	-\$0.2	\$3.2
Retail Trade	4.9%	24.8%	\$0.7	\$3.0
Information	18.0%	127.9%	\$0.8	\$5.7
Professional and Business Services	7.2%	40.5%	\$1.3	\$7.4
Healthcare and Social Assistance	20.2%	28.1%	\$3.0	\$3.3
Leisure and Hospitality	15.8%	12.7%	-\$1.4	\$1.0

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 2021*. In industry sectors, such as Information and Professional and Business Services, the difference in GDP growth between South Carolina and Louisiana are striking. In the sector “Information,” real GDP increased by seven times greater in South Carolina than in Louisiana. In Professional and Business Services, the increase difference is over five times greater in South Carolina than Louisiana. Even in Leisure and Hospitality, the difference is stark!

Table 5 presents Louisiana’s Gross Domestic Product (GDP) over the period 2007 to 2021. Louisiana’s inflation adjusted GDP peaked in 2010 at \$246.8 billion in inflation adjusted \$ (2012 value =100). The 2021 was \$227.7 billion. The 2019 level (pre-Covid Pandemic level) was \$235.9 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 2021. 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 2021, going from \$18.5 billion to \$10 billion in 2021 in real 2012\$. Real GDP output in Manufacturing value-added output stagnated during this period, going from \$52 billion in 2012 to \$49 billion in 2021. Industries where real GDP increased had increases that were insignificant to overcome the contraction in high-valued industries. For example, Professional and Business Service value-added output increase by 7.2% between 2021 and 2022 or from \$18.5 billion to \$19.8 billion. Or Health Care and Social Assistance increased by 20.2 % or by \$3 billion over this period. Leisure and Hospitality, data was distorted by the Covid-19 pandemic so the endpoint for measuring the increased value-added output is 2019. Data shows virtually no increase.

Hence, the industry losses in high value-added output far outweigh the gains in other industries. Hence, Louisiana’s ranking at the bottom of other Southern states with value-added per worker over the period 2007 to 2021. Most disturbing is the fact, observed in Table 6, that the percentage increase and the value-added per worker level show Louisiana far behind.

Table 6
Rank Order of Growth in Value-Added per Worker in Current \$
2007-2021

Georgia	49.5%	\$43,908
Texas	32.9%	\$43,271
South Carolina	50.7%	\$42,505
North Carolina	49.8%	\$41,877
Virginia	50.6%	\$37,687
South	43.1%	\$36,447
Tennessee	55.5%	\$34,568
Florida	42.6%	\$34,262
Alabama	44.8%	\$33,188
Arkansas	42.0%	\$29,618
Mississippi	39.2%	\$27,135
Louisiana	20.6%	\$20,957

Source: Bureau of Labor Statistics; Systems Solutions Consulting

Finally, Table 7 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 2021. 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
Unit Labor Costs Growth 2007-2021

Louisiana	47.1%
Florida	40.0%
North Carolina	36.2%
Arkansas	34.3%
Alabama	33.0%
Mississippi	32.7%
South Carolina	31.8%
South	30.6%
Georgia	29.3%
Tennessee	26.8%
Texas	26.8%
Virginia	26.0%

Source: Bureau of Labor Statistics

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 residence 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 2021, *but especially the 2012 to 2021 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.