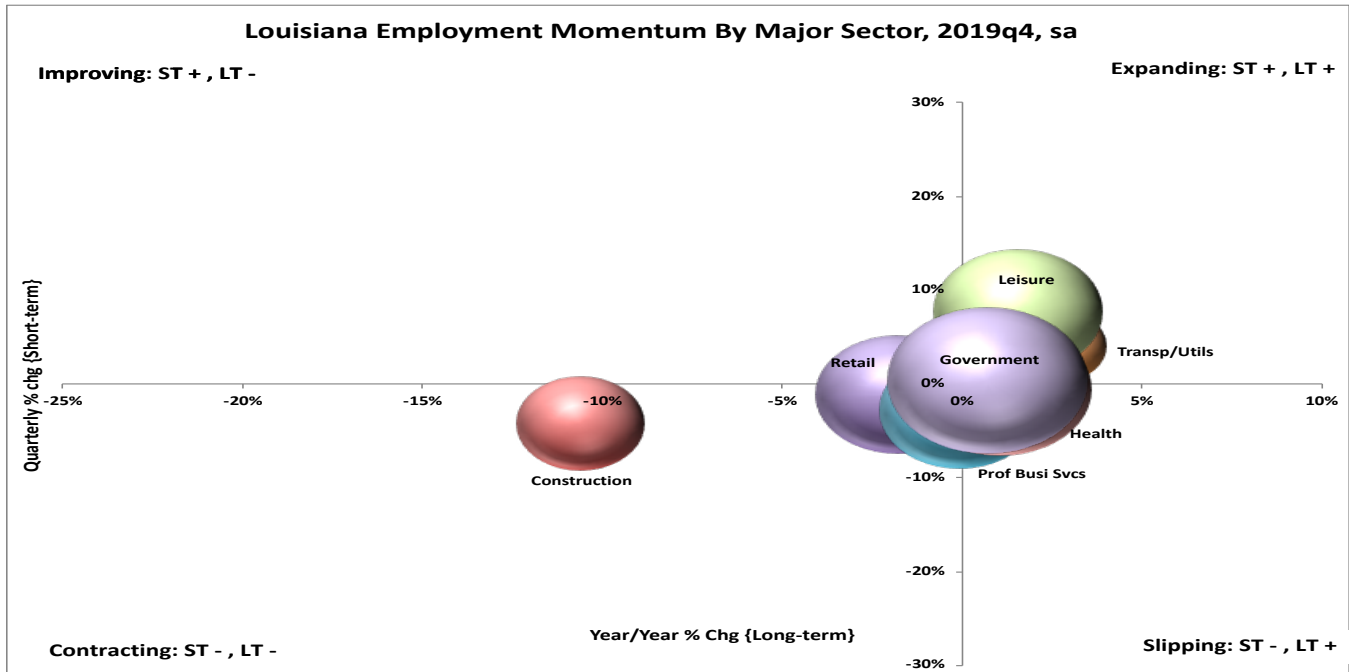


Employment Growth Momentum 2019 Fourth Quarter (Pre-Covid) to 2020 Third Quarter (Covid-Recovery)



The graph above is called a momentum graph, and is an interesting way to depict the short-term (3-month annualized growth rate) relative to the long-term (year-over-year growth rate) of ten major employment sectors (bubbles). Each sector's location in the graph is centered on coordinates of its short-term and long-term growth rates. Another feature of the graph is that the sizes of the bubbles reflect each sector's share of total employment. For example, the construction sector, comprising 7.9% of total employment, has exhibited a 10.6% decline over the latest annual period, and a 4.2% decline in the latest quarter, placing it in the contracting quadrant with the most negative long-term and short-term growth coordinates of the tens major sectors plotted. The calculation results underlying the graph above are displayed in the table below.

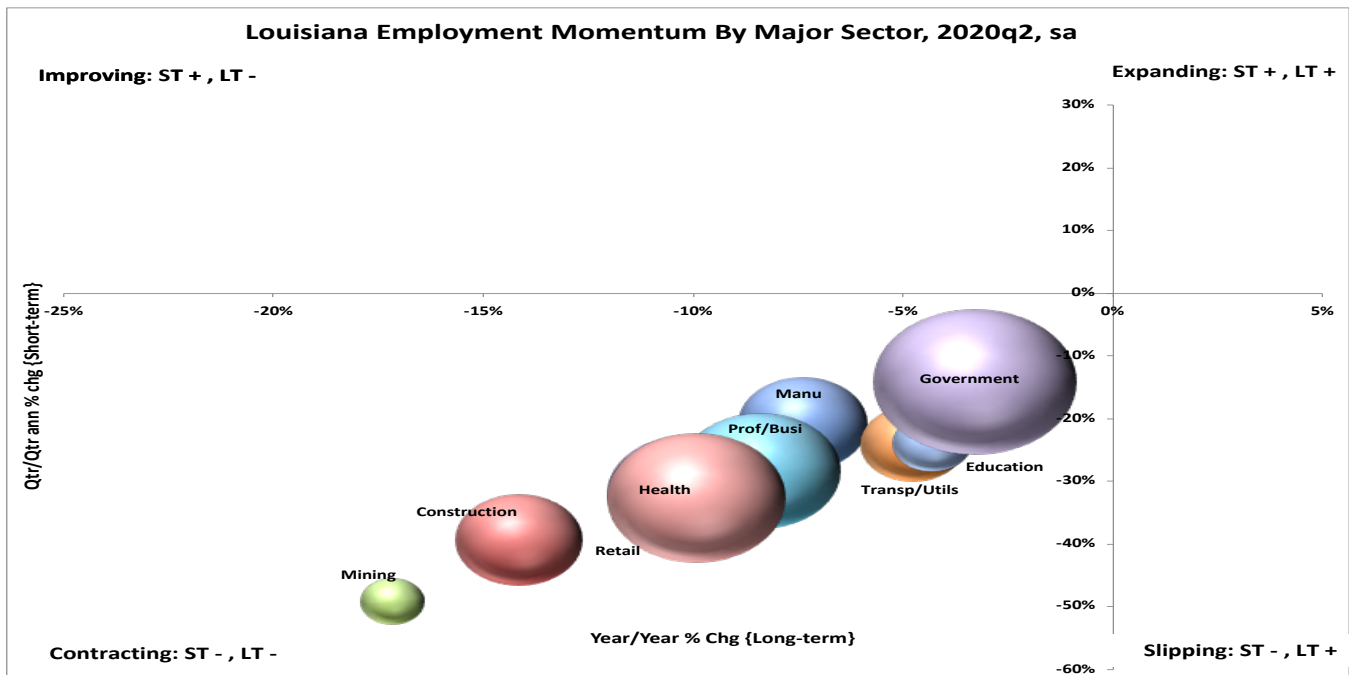
<u>Louisiana Employment Momentum By Major Sector, 2019q4, sa</u>					
Quadrant	SuperSector	Year/Year % Chg {Long-term}	Qtr/Qtr Ann % chg {Short-term}		Relative Sector Size
SLIPPING	Manufacturing	0.0%	-1.4%		7.9%
CONTRACTING	Construction	-10.6%	-4.2%		7.9%
CONTRACTING	Mining	-0.9%	-1.1%		2.1%
CONTRACTING	Retail	-1.8%	-1.1%		12.8%
CONTRACTING	Prof & Busi Svcs	-0.1%	-2.7%		12.4%
EXPANDING	Transp & Utilities	2.6%	4.0%		5.1%
EXPANDING	Education	2.7%	7.4%		2.8%
SLIPPING	Health	1.1%	-0.6%		15.8%
EXPANDING	Leisure	1.5%	7.7%		13.9%
EXPANDING	Government	0.7%	0.4%		19.2%

The 2019 4th quarter above, reflects the state economy prior to any material pandemic effect on employment. Employment sectors that were centered in the expanding quadrant (upper right), exhibited the conditions of both positive long-term and short-term growth, and included transportation & utilities, education, leisure, and government; as a group comprising 41% of total employment. As of 2019q4, the two sectors of manufacturing and health & social services were in the slipping quadrant (lower right), exhibiting positive year-over-year growth but negative growth in the latest quarter. There were no sectors in the improving quadrant (upper left), exhibiting negative year-over-year growth but positive growth in the latest quarter. Finally, the four sectors of construction, mining, retail trade, and professional/technical business services were all in the contracting sector, exhibiting both negative year-over-year and latest quarter growth.

While expanding and improving sectors comprised 41% of employment in 2019q4, sectors in the contracting and slipping quadrants combined comprised 59% of employment. This was an overall negative position for the

Employment Growth Momentum 2019 Fourth Quarter (Pre-Covid) to 2020 Third Quarter (Covid-Recovery)

employment outlook, with the economy, on net, exhibiting slightly negative momentum. A visual indicator of the lack of momentum for the economy at that time was the clustering of most sectors closely around the graph's origin, indicating that only small positive or negative values were being exhibited for the growth coordinates of most sectors. This can suggest an economy poised for more robust growth, but also indicates heightened vulnerability to adverse shocks to the economy. Those adverse shocks began to be realized late in 2019 and early 2020 as oil prices weakened from the OPEC+ market share dispute, and then near the end of the first quarter of 2020 as consumers began to stay at home to avoid the coronavirus, followed by stay-at-home orders and mandatory business closure policies. The effects of those behaviors and actions resulted in the 2020 2nd quarter recession depicted in the momentum graph below.

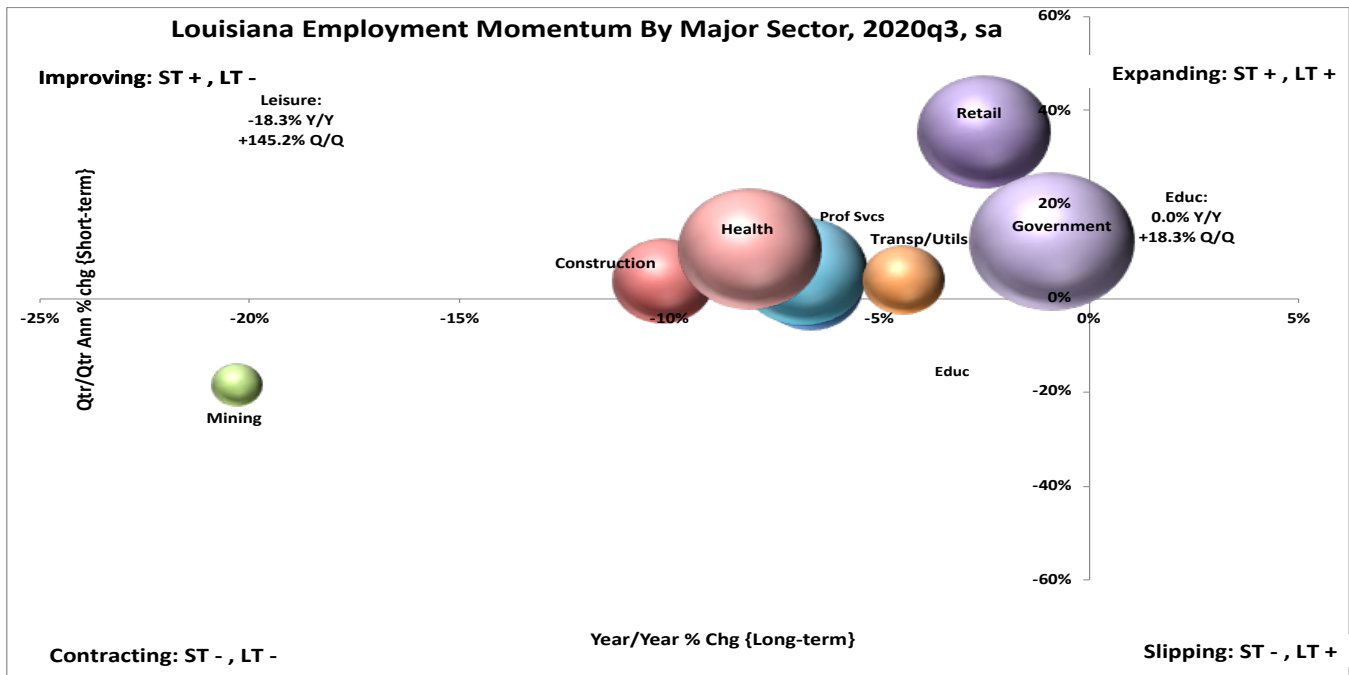


Louisiana Employment Momentum By Major Sector, 2020q2, sa					
Quadrant	SuperSector	Year/Year % Chg {Long-term}	Qtr/Qtr ann % chg {Short-term}	Relative Sector Size	
CONTRACTING	Manufacturing	-7.4%	-20.9%	8.4%	
CONTRACTING	Construction	-14.1%	-39.4%	8.0%	
CONTRACTING	Mining	-17.2%	-49.2%	2.0%	
CONTRACTING	Retail	-10.1%	-31.8%	13.2%	
CONTRACTING	Prof & Busi Svcs	-8.4%	-28.3%	13.0%	
CONTRACTING	Transp & Utilities	-4.8%	-24.2%	5.4%	
CONTRACTING	Education	-4.3%	-24.0%	3.0%	
CONTRACTING	Health	-9.9%	-32.7%	16.0%	
CONTRACTING	Leisure	-34.9%	-82.1%	10.1%	
CONTRACTING	Government	-3.3%	-14.2%	20.9%	

As depicted and quantified above, all of the ten sectors plotted are centered within the contracting quadrant, reflecting a broad-based recession being experienced by the state as a result of the coronavirus pandemic. Dramatic employment losses occurred in March and April; 273,000 jobs lost in those two months from the February 2020 job count. While 95,000 jobs or 35% of the job loss had been added back in the months of May and June, as of the end of the 2nd quarter of the year, all major sectors still lie in the contracting quadrant (lower left) with both negative annual growth and latest-quarter growth.

As depicted in the graph below of the 2020 3rd quarter, the bounce-back from the recession spike has been significant. While all the sectors are still smaller than they were a year earlier (negative year/year % change), almost all of the sectors are now exhibiting positive momentum in the latest quarter (2020q3) relative to the prior quarter (2020q2). The mining sector continues to suffer from low oil prices, and is the only sector solidly in the contracting quadrant.

Employment Growth Momentum 2019 Fourth Quarter (Pre-Covid) to 2020 Third Quarter (Covid-Recovery)



<u>Louisiana Employment Momentum By Major Sector, 2020q3, sa</u>					
Quadrant	SuperSector	Year/Year % Chg (Long-term)	Qtr/Qtr Ann % chg (Short-term)	Relative Sector Size	
IMPROVING	Manufacturing	-6.6%	2.4%	8.0%	
IMPROVING	Construction	-10.1%	3.6%	7.7%	
CONTRACTING	Mining	-20.3%	-18.5%	1.8%	
IMPROVING	Retail	-2.5%	35.3%	13.5%	
IMPROVING	Prof & Busi Svcs	-6.8%	5.8%	12.5%	
IMPROVING	Transp & Utilities	-4.4%	3.9%	5.2%	
EXPANDING	Education	0.0%	18.3%	3.0%	
IMPROVING	Health	-8.1%	10.5%	15.7%	
IMPROVING	Leisure	-18.3%	145.2%	12.0%	
IMPROVING	Government	-0.9%	12.1%	20.5%	

As quantified in the table above, underlying the momentum graph, all sectors other than mining are exhibiting short-term (quarter-over-quarter) annualized growth. Note that the leisure & hospitality sector is still nearly as far behind its last annual period as the mining sector, but has bounced back so significantly from its last quarter trough that its bubble is not even shown on the graph, but its coordinates are noted in the graph (18.3% Y/Y: +145.2% Q/Q). Also noted in the graph is the private education sector, whose relatively small bubble is hidden behind the relatively large government sector bubble (state, local, federal).

To be clear, this third quarter positive momentum is more a result of the recession % trough of the second quarter than it is of any underlying strength of the respective sectors. Any improvement from the bottom can result in significant percentage growth. Note that through the five month period of May to September 2020, the economy has added back only 49% of the total jobs lost in the two month period of March and April. Positive momentum will be more difficult to maintain in the future, and a considerable distance is still in front of the economy to fully recover from the effects of the pandemic.