

## WORKING PAPER SERIES

### NEW ORLEANS REGIONAL COUNCIL FOR BUSINESS ECONOMICS

*“This report is the property of the New Orleans Regional Council for Business Economics and may be reproduced and/or distributed only with permission of the Council.”*

#### Working Paper #1 (September 2020)

### AN ANALYSIS OF EMPLOYMENT AND WAGES IN SELECT INDUSTRY GROUPS IN THE CITY OF NEW ORLEANS (2004-2019)

#### DATA SOURCE

Quarterly Census of Employment and Wages (QCEW), Bureau of Labor Statistics, U.S. Department of Labor

#### DEFINITIONS

Quarterly Census of Employment and Wages- The primary economic product is the tabulation of employment and wages of establishments which report to the Unemployment Insurance (UI) programs of the United States. Employment covered by these UI programs represents about 99.7% of all wage and salary civilian employment in the country. It counts only filled jobs, whether full or part-time, temporary or permanent, by place of work. Wages include bonuses, stock options, severance pay, profit distributions, cash value of meals and lodging, tips and other gratuities, and, in some States, employer contributions to certain deferred compensation plans such as 401(k) plans.

Seven-Digit NAICS-The four-digit value consists of industry groups. Data are by private establishment.

#### PRIVATE INDUSTRIES SELECTED FOR ANALYSIS

- A. Software Publishers (NAICS 5112)
- B. Motion picture and video industries (NAICS 5121)
- C. Specialized Design Services (NAICS 5414)
- D. Computer Systems Design and Related Services (NAICS 5415)
- E. Scientific Research and Development Services (NAICS 5417)
- F. Travel Accommodations (NAICS 7221)
- G. Restaurants (NAICS 7225)
- H. Drinking places, alcoholic beverages (NAICS 7224)

The above industry groups were selected because they represent both industries driving current job growth (Travel Accommodations, Restaurants and Drinking Places) and industries that have become high profile (Software Publisher, Motion Picture and Video Industries, Specialized Design Services, Computer Systems Design and Scientific Research and Development Services) industries that are expected to increase their share of the City of New Orleans economy.

The data series covers the periods 2004, 2017, 2018 and 2019. The year 2004 was selected because it was the last year in which the data series was not affected by Hurricane Katrina.

## INDUSTRY ANALYSIS

**Table 1 below looks at the percentage change in the annual average number of establishments between 2004 and 2019 for Orleans Parish.** As illustrated in the table, Software Publishers and Computer Systems Designs and Related Services (NAICS 5414) Video Industries experienced the greatest percentage increase in establishments within the selected industries. With respect to Software Publishers, the number of establishments began to take off in 2012, doubling until 2014 and increasing by sixteen establishment between 2017 and 2019. Although tiny with respect to employment (annual average of 115 jobs in 2019), it represents a new start-up industry in the technology sector cluster. The other establishment growth sectors are: Computer System Design and Related Industries and Motion Pictures and Video Industries. However, seventy-one percent (71%) of the total selected establishments in 2019 was dominated by Leisure and Hospitality industries (Travel Accommodation, Full-Service Restaurants and Drinking Places.) Fundamental, however, the establishment landscape of the city of New Orleans is totally dominated by Leisure and Hospitality.

**Table 1**

NAICS	Orleans Parish Industry Title	Average Annual QCEW Establishments				Percentage Change 2004-2019	Absolute Change 2004-2019
		YEAR					
		2004	2017	2018	2019		
5112	Software Publishers	3	39	45	55	1733%	52
5121	Motion picture and video industries	39	70	74	82	110%	43
5414	Specialized design services	51	71	68	72	41%	21
5415	Computer systems design and related services	163	347	356	389	139%	226
5417	Scientific research and development services	30	51	55	59	97%	29
7211	Traveler accommodation	172	190	197	204	19%	32
7225	Full-service restaurants	822	1,072	1,112	1,173	43%	351
7224	Drinking places, alcoholic beverages	210	251	263	265	26%	55
	<b>TOTAL ESTABLISHMENTS IN SELECTED SECTORS</b>	<b>1,487</b>	<b>2,091</b>	<b>2,170</b>	<b>2,299</b>	55%	812
	<b>TOTAL PARISH ESTABLISHMENTS</b>	<b>12,496</b>	<b>12,636</b>	<b>12,998</b>	<b>13,466</b>	8%	970

Note: NAICS 7725 was NAICS 7721 up until 2009.

Source: Quarterly Census of Employment and Wages

**Table 2 focuses on the annual average employment in the identified industries over the period 2004-2019.** The table suggests that strong job growth still eludes these critical sectors in the New Orleans economy. Motion picture production, with its heavy public subsidy, employed only added a thousand or so employees over the fifteen-year period between 2004 and 2019. Computer systems design and related industries managed to add 992 more jobs between 2004 and 2019. The percentage of “high tech” jobs (NAICS 5112, 5414, 5415, 5417) as a fraction of the total jobs in the selected industries increased from 4.2% (1,570 jobs) in 2004 to 6.0% (2,657 jobs) in 2019. Traveler Accommodations seems to be doing “more with less” relative to the year 2004-time frame. *The industry (Traveler Accommodation) employment in 2019*

still had had 700 fewer jobs in 2019 than in 2004. At the same time, the share of sectors sum as a fraction of total QCEW employment in Orleans Parish rose from 15% in 2004 to 22% in 2019. Further, Leisure and Hospitality jobs share of “selected sectors” total employment fell slightly from 91% in 2004 to 87% in 2019. Between 2004 and 2019, all of the job growth the Leisure and Hospitality sector is concentrated in Full-Service Restaurants.

**Table 2**

NAICS	Orleans Parish Industry Title	Average Annual QCEW Employment				Percentage Change 2004-2019	Absolute Change 2004- 2019
		YEAR					
		2004	2017	2018	2019		
5112	Software Publishers	8	125	115	115	1338%	107
5121	Motion picture and video industries	1,851	2,296	2,643	2,904	57%	1,053
5414	Specialized design services	222	266	257	273	23%	51
5415	Computer systems design and related services	1,072	2,044	1,836	2,064	93%	992
5417	Scientific research and development services	268	145	145	205	-24%	-63
7211	Traveler accommodation	12,438	11,731	11,943	11,738	-6%	-700
7225	Full-service restaurants	18,299	21,779	22,934	23,687	29%	5,388
7224	Drinking places, alcoholic beverages	3,028	3,274	3,277	3,286	9%	258
	<b>TOTAL EMPLOYMENT IN SELECTED SECTORS</b>	<b>37,186</b>	<b>41,660</b>	<b>43,150</b>	<b>44,272</b>	<b>19%</b>	<b>7,086</b>
	<b>TOTAL ANNUAL PARISH EMPLOYMENT</b>	<b>247,260</b>	<b>193,841</b>	<b>196,901</b>	<b>200,514</b>	<b>-19%</b>	<b>-46,746</b>
Note: NAICS 7725 was NAICS 7721 up until 2009.							
Source: Quarterly Census of Employment and Wages							

Table 3 below compares the number of employees per establishment for the select sectors in Orleans, the State of Louisiana and U.S.

**Table 3**

NAICS		Employees per Establishment		
		Orleans	Louisiana	U.S.
		2019		
5112	Software Publishers	2.1	5.2	13.2
5121	<b>Motion picture and video industries</b>	<b>35.4</b>	<b>23.9</b>	<b>14.2</b>
5414	Specialized design services	3.8	2.7	3.7
5415	Computer systems design and related services	5.3	5.1	7.7
5417	Scientific research and development services	3.5	3.5	22.2
7211	<b>Traveler accommodation</b>	<b>57.5</b>	<b>29.3</b>	<b>31.6</b>
7225	Restaurants	20.2	18.9	19.0
7224	Drinking places, alcoholic beverages	12.4	7.3	9.3
	<b>Average</b>	<b>19.3</b>	<b>16.0</b>	<b>15.7</b>
Note: NAICS 7725 was NAICS 7721 up until 2009.				
Source: Quarterly Census of Employment and Wages				

Table 3 magnifies the difference between the average number of employees per establishment between Orleans Parish and U.S. with respect to four of the select sectors: Software Publishers (NAICS 5112), Motion Picture and Video Industries (NAICS 5121), Scientific Research and Development Services (NAICS 5417) and Traveler Accommodations (NAICS 7211). First, it points out that relative to the U.S., **Orleans Parish is a film center**, having more than twice as many employees per establishment in 2019 than the U.S. average. **The same is true with respect to Travelers Accommodations.** Risking generalization, it suggests that in 2019 these industries were well established in Orleans Parish. Correspondingly, Software Publishers in Orleans Parish are generally small businesses either in the context market share or where they are in the development cycle. **Of critical concern is the fact, illustrated in Tables 2, and 3, that the Scientific Research and Development Industry has atrophied in the parish.** With two medical schools located in the parish, it points to the problem of diversify the economy. *The private sector weakness of Scientific Research and Development Services (NAICS 5417) in New Orleans is pointed out by the level of NIH funding for both public and private scientific research establishments.* In Birmingham, academic and non-academic research centers received in 2019 \$299 million in NIH funds. In New Orleans, academic and non-academic research centers received \$122 million in NIH funding in 2019, with 66% going to Tulane University researchers. In Houston-Galveston area, academic and non-academic research centers received \$716 million in NIH funding in 2019.

**Table 4 identifies the number of employees per establishment for select years between 2004 and 2019 in Orleans Parish.**

**Table 4**

NAICS	Orleans Parish	Average Number of Employees Per Establishment				Percentage Change 2004-2019	Absolute Change 2004-2019
		YEAR					
	Industry Title	2004	2017	2018	2019		
5112	Software Publishers	2.7	3.2	2.6	2.1	-22%	-0.6
5121	Motion picture and video industries	47.5	32.8	35.7	35.4	-25%	-12.0
5414	Specialized design services	4.4	3.7	3.8	3.8	-13%	-0.6
5415	Computer systems design and related services	6.6	5.9	5.2	5.3	-19%	-1.3
5417	Scientific research and development services	8.9	2.8	2.6	3.5	-61%	-5.5
7211	Traveler accommodation	72.3	61.7	60.6	57.5	-20%	-14.8
7225	Full-service restaurants	22.3	20.3	20.6	20.2	-9%	-2.1
7224	Drinking places, alcoholic beverages	14.4	13.0	12.5	12.4	-14%	-2.0
	<b>TOTAL AVERAGE EMPLOYEES PER ESTABLISHMENT IN SELECTED SECTORS</b>	<b>22.4</b>	<b>17.9</b>	17.9	17.5	-22%	-4.8
	<b>TOTAL PARISHWIDE AVERAGE EMPLOYEES PER ESTABLISHMENT</b>	<b>19.8</b>	<b>15.3</b>	<b>15.1</b>	14.9	-25%	-4.9

Note: NAICS 7725 was NAICS 7721 up until 2009.

Source: Quarterly Census of Employment and Wages

One simple identifiable pattern observed in Table 4 is a consistent decline in the number of employees per establishment. One possible generalization for the decline in many of the select sectors might rest in the increased efficiency in labor utilization. This appears to be true for the industries in Leisure and Hospitality (Traveler Accommodations, Full-Service Restaurants and Drinking Places). For Scientific Research and Development, the decline could be associated with the atrophy of the industry. For the Motion Picture and Video Industries group, the decline could be associated with several factors, such as increase in labor utilization, or change in the type of films produced in the market. The point being is that each select sector needs to be analyzed distinctly to assess the reasons for change. The details are beyond the scope of this working paper.

**Table 5 identifies average annual pay in the selected establishments and across all establishments in Orleans Parish over the study period.**

**Table 5**

NAICS	Industry Title	Annual Average Salary				Percentage Change 2004-2019 (current \$)	Absolute Change 2004-2019 (current \$)
		YEAR					
		2004	2017	2018	2019		
		CURRENT \$					
5112	Software Publishers	\$56,441	\$73,257	\$88,718	\$95,763	70%	\$39,322
5121	Motion picture and video industries	\$17,490	\$44,964	\$49,962	\$49,320	182%	\$31,830
5414	Specialized design services	\$30,030	\$42,680	\$43,736	\$42,660	42%	\$12,630
5415	Computer systems design and related services	\$62,069	\$83,590	\$85,748	\$89,570	44%	\$27,501
5417	Scientific research and development services	\$46,374	\$60,227	\$69,625	\$74,594	61%	\$28,220
7211	Traveler accommodation	\$21,607	\$35,410	\$35,508	\$36,656	70%	\$15,049
7221	Full-service restaurants	\$14,173	\$22,864	\$24,013	\$24,461	73%	\$10,288
7224	Drinking places, alcoholic beverages	\$15,433	\$22,640	\$23,533	\$24,764	60%	\$9,331
	<b>TOTAL WEIGHTED AVERAGE FOR SELECT SECTORS</b>	<b>\$18,644</b>	<b>\$29,913</b>	<b>\$28,613</b>	<b>\$30,881</b>	66%	\$12,237
	<b>TOTAL ORLEANS AVERAGE SALARY</b>	<b>\$36,877</b>	<b>\$51,018</b>	<b>\$52,222</b>	<b>\$53,691</b>	46%	\$16,814

**Source: Quarterly Census of Employment and Wages; note: average pay includes reported tips**

With respect to annual average pay Software Publishers and Computer Systems Design lead the pack with Full-Service Restaurants and Drinking Place coming in the bottom. Hopefully, employment in Software Publishers will expand in time and better represent “an emerging industry” in the city of New Orleans. At this stage, it remains more or less a “boutique industry.” Average pay earned in the Motion Picture and Video Industries remains unstable going up or down on a yearly basis. This fluctuation appears to occur because labor force skills vary from motion picture to motion picture. This implies that the mix of the workforce demand in the industry is increasingly shifting between skills demanding very different pay levels and possibly shifting between part-time and full-time jobs. This shift affects the “average.” For example, in 2010 average annual pay for this industry was \$58,130 with an employment level of 1,418.

In 2011, average annual pay fell to \$55,982, with an average annual employment level measured at 1,347 jobs. The downward trend continued into 2012 and 2013, showing recovery between 2014 and 2016 and a continued increase into 2018 with slight decline in average pay in 2019. Average QCEW jobs in Motion Picture and Video Industries showed an increase of 608 jobs between 2017 and 2019. Post-Production industries (NAICS 51219) have not gained much of a foothold in Orleans Parish. Average annual QCEW employment has ranges from 725 jobs in 2004 with eight establishments to about 1,200 jobs in 2019 with twelve establishments. It is clear that Post-Production employment (which is where you see technology gains) still remains minimal in the film production and video industry in Orleans Parish. Site location for filming still drives the local industry. Post-production activities are done elsewhere. Finally, although tourism related industries (traveler accommodations, full-service restaurants and drinking places) reflected 87% of the total employment in 2019, weighted average annual salaries, as illustrated in Table 5, in these select industries was only about 58% the city-wide average. Although the Leisure and Hospitality industry is a job creator, average annual salaries reflect an industry dominated by low skill needs.

Table 6 shows the total annual wage bill in current dollars for each of the selected sectors; the summed total of the selected NAICS industries, and the annual average wage costs for all establishments in Orleans Parish over select years between 2004 to 2019.

**Table 6**

		Total Annual Wage Bill Per Establishment			
		YEAR			
NAICS	Industry Title	2004	2017	2018	2019
<b>CURRENT \$</b>					
5112	Software Publishers	\$451,528	\$9,187,691	\$10,180,427	\$10,996,788
5121	Motion picture and video industries	\$32,373,990	\$103,244,375	\$132,049,324	\$143,216,539
5414	Specialized design services	\$6,666,660	\$11,352,776	\$11,258,341	\$11,649,711
5415	Computer systems design and related services	\$66,537,968	\$170,816,992	\$157,404,623	\$184,858,511
5417	Scientific research and development services	\$12,428,232	\$8,758,074	\$10,107,175	\$15,291,732
7211	Traveler accommodation	\$268,747,866	\$415,400,475	\$424,060,552	\$430,262,456
7225	Full-service restaurants	\$259,351,727	\$497,971,635	\$550,697,884	\$579,400,786
7224	Drinking places, alcoholic beverages	\$46,731,124	\$74,122,806	\$77,116,758	\$81,377,505
<b>ANNUAL WAGE COSTS IN SELECTED NAICS</b>		<b>\$693,289,095</b>	<b>\$1,290,854,824</b>	<b>\$1,372,875,084</b>	<b>\$1,457,054,028</b>
<b>ORLEANS ANNUAL AVERAGE WAGE COSTS PER ESTABLISHMENT</b>		<b>\$8,644,752,732</b>	<b>\$9,889,472,332</b>	<b>\$10,282,609,875</b>	<b>\$10,765,828,962</b>
<b>Source: Quarterly Census of Employment and Wages</b>					

In 2019, seventy-six percent (76%) of the total wage bill for the select sectors was concentrated in the three Leisure and Hospitality sectors (NAICS 7211, 7225 and 7224). This was a decline from the 2004 in which the selected Leisure and Hospitality accounted for eighty-three (83%) of the total. However, with respect to the total wage and salary cost for the entire parish, Leisure and Hospitality only accounts for ten percent (10%) of the total. Whereas and in 2019, Leisure and Hospitality jobs (Table 2) accounted for about nineteen percent (19%). As noted earlier, average pay in Leisure and Hospitality is well below the overall parish average.

**Table 7 provides insight into level of development of industries over time within the cluster of selected industries. The most significant statistic to review is the change in the average wage cost per establishment.** The table was developed by dividing the total annual wage cost (Table 6) in each NAICS category by the annual average number of establishments (Table 1) in each year within the category. In 2019, the weighted annual **average** wage bill for the select seven industries in this study was \$1,173,541 in 2019, with Motion Pictures and Travel Accommodations having the highest annual averages per establishment. For all establishments in the City of New Orleans, total annual wage costs per establishment was \$799,482. This suggests a predominance of small businesses in the local economy, and hence, greater vulnerability to economic shocks to the local economy.

**Table 7**

NAICS	Industry Title	Annual Wage Cost Per Establishment				Percentage Change 2004-2019 (current \$)	Absolute Change 2004-2019 (Current \$)
		YEAR					
		2004	2017	2018	2019		
		CURRENT \$					
5112	Software Publishers	\$205,928	\$235,582	\$226,232	\$199,942	-3%	-\$5,986
5121	Motion picture and video industries	\$761,378	\$1,474,920	\$1,784,450	\$1,746,543	129%	\$985,165
5414	Specialized design services	\$180,301	\$159,898	\$165,564	\$161,802	-10%	-\$18,499
5415	Computer systems design and related services	\$499,135	\$492,268	\$442,148	\$475,215	-5%	-\$23,920
5417	Scientific research and development services	\$387,839	\$171,727	\$183,767	\$259,182	-33%	-\$128,657
7211	Traveler accommodation	\$2,224,696	\$2,186,318	\$2,152,592	\$2,109,130	-5%	-\$115,566
7225	Full-service restaurants	\$446,366	\$464,526	\$495,232	\$493,948	11%	\$47,582
7224	Drinking places, alcoholic beverages	\$283,855	\$295,310	\$293,220	\$307,085	8%	\$23,,230
	<b>ANNUAL AVERAGE WAGE COSTS IN SELECTED NAICS</b>	<b>\$1,043,090</b>	<b>\$1,108,507</b>	<b>\$1,173,835</b>	<b>\$1,173,541</b>	13%	\$130,451
	<b>ORLEANS ANNUAL AVERAGE WAGE COSTS PER ESTABLISHMENT</b>	<b>\$821,990</b>	<b>\$782,643</b>	<b>\$791,092</b>	<b>\$799,482</b>	-3%	-\$22,508
<b>Note:</b> Total annual average for selected sectors is a weighted average determined by multiplying average employment per establishment by average wage and salary cost per establishment.							
Source: Quarterly Census of Employment and Wages							

## LOCATIONAL SPECIALIZATION ANALYSIS

Location quotient analysis is a good preliminary tool to assess *the relative* (in this case) *competitiveness* of a local industry as measured against the same industry at a larger geographical area. *From an economic development perspective, it provides one preliminary measure of how “successful” a local industry is relative to another area.* In this study, the location quotient technique is used to identify the concentration of the select industries in Orleans Parish relative to the United States and Louisiana. Location quotients are *ratios measuring the concentration* of a specific industry measure (number of establishments, employment, salaries, etc.) relative to the same measure for all industries in that area. This ratio is divided by a similar ratio for the same industries at a larger spatial area (nation, state and region). *The larger (>1.0) the numerical value of the ratio, the greater is the concentration of the specific industry in an area relative to the larger spatial area being measured against. The smaller (<1.0) the ratio, the more likely the industry is locality specific and competes less in the national or larger market area.* In this analysis, the numerator is Orleans Parish. The dominator is the United States or Louisiana. The following is the location quotient formula used to identify the concentration of employment in a specific sector relative to the United States.

Concentration Location Quotients (LQ) is as follows:

Location Quotient=	Orleans Employment in <u>Industry I in Year T</u>	/	National Employment in <u>Industry I in Year T</u>
	Total Orleans Employment in Year T		Total National Employment in Year T

**Table 8 measures the concentration of the average number of establishments in the identified industries for Orleans Parish relative to Louisiana and the United States in the year 2019.** Relative to Louisiana, all of the selected industries in Orleans Parish reflect a higher concentration of establishments. As an example, establishments engaged in motion picture and video production are 3.2 times more concentrated in Orleans Parish than the state. With a LQ at 1 or near 1 relative to the U.S., the number of establishments in computer systems design (LQ 1.1 with NAICS 5415) suggest that these (establishments) industries in Orleans Parish are not oriented toward the *national marketplace and serve more or less the local market.* Scientific Research and Development Industries (NAICS 5417) has a higher concentration of industries in Orleans Parish than the United States but has Table 9 illustrates employment concentration ratio is almost negligible relative to the United States. *Drinking places and alcoholic beverage establishments (NAICS 7224) stand out as being highly concentrated in Orleans Parish, having a LQ that is 4.7 times more concentrated than the United States.* This confirms that a large fraction of these establishments’ service customers who are not from Orleans Parish, and are heavily oriented toward non-resident visits.



**Table 8**

Relative Concentration (LQ) Index for Annual Average Number of Establishments in Orleans Parish		
	2019	
Relative to:	Louisiana	U.S.
Industry		
Software Publishers	2.6	1.2
Motion picture and video industries	3.2	2.1
Specialized design services	2.5	1.4
Computer systems design and related services	1.8	1.0
Scientific research and development services	2.7	1.4
Traveler accommodation	1.8	2.5
Full-service restaurants	1.4	1.6
Drinking places, alcoholic beverages	2.7	4.7
<b>Source: Quarterly Census of Employment and Wages</b>		

The concentration ratio of full-service restaurants (NAICS 7225) establishments surprisingly is less concentrated in Orleans Parish relative to the United States than might be thought. *This might be a function of a high level of competition, and hence a lower survival rate for restaurant establishments.* The LQ for pre-Katrina (2004) restaurant establishment and the post-Katrina 2019 value is not very different (1.3 vs. 1.6). Finally, as would be expected, traveler accommodations (NAICS 7211) shows 2.5 times or more concentration in Orleans Parish than in the state or nation in 2019. New Orleans clearly is a top tourist destination.

**Table 9 identifies the average annual employment concentration in the select industries in Orleans as measured against Louisiana and the United States as a whole.** What does Table 9 tell us? Early on in this paper, it was noted that one economic development strategy for New Orleans was to further develop tourism-related economic activity and to develop industries in science and technology that would balance growth in the parish. *Table 9 tells us that in the areas of motion picture and video industries, traveler accommodation and drinking places, this objective has been met.* However, in the areas of software publishers, specialized design services, computer systems design and scientific research, employment picture is mixed relative to the U.S. Relative to Louisiana, the concentration ratio for these industries looks more favorable. For software publishers, computer systems design and related services and research and development services, the employment concentration index shows that these industries are highly underdeveloped relative to average for their counterparts in the U.S. In the language of the location quotient, these industries are local serving and are more likely to grow based upon the growth through the growth in local industries that require their services. It simply shows that these *industries are not oriented to the national market* and likely depend heavily on the health of local industries for their business.

**Table 9**

Relative Concentration (LQ) Index for Average Annual Employment for Orleans Parish		
	2019	
Relative to:	Louisiana	U.S.
Industry		
Software Publishers	1.0	0.2
Motion picture and video industries	4.6	5.1
Specialized design services	3.5	1.4
Computer systems design and related services	1.8	0.7
Scientific research and development services	2.6	0.2
Traveler accommodation	3.5	4.3
Full-service restaurants	1.4	1.6
Drinking places, alcoholic beverages	4.4	6.0
<b>Source: Quarterly Census of Employment and Wages</b>		

This is reinforced when viewing Table 10 looking at the employment concentration index overtime between 2004 and 2019. **You can see little change in employment concentration relative to the U.S. in the technology and information industries in Orleans Parish.** Overall, employment growth in Orleans Parish is driven by growth in the United States information and technology industries as a whole and not from any locational advantage. The picture looks more favorable when reviewing the employment concentration indexes for motion pictures, traveler accommodation, full-service restaurants and drinking places industries. **These industries are clearly driven by locational advantages** and are oriented toward the capturing a national tourism market.

**Table 10**

Relative Concentration (LQ) Index for Average Annual Employment for Orleans Parish		
	2004	2019
Relative to:	United States	
Software Publishers	0.0	0.2
Motion picture and video industries	3.8	5.1
Specialized design services	1.4	1.4
Computer systems design and related services	0.7	0.7
Scientific research and development services	0.4	0.2
Traveler accommodation	5.4	4.3
Full-service restaurants	1.7	1.6
Drinking places, alcoholic beverages	6.2	6.0
<b>TOTAL AVERAGE ANNUAL EMPLOYMENT</b>	<b>247,260</b>	<b>200,514</b>
<b>Source: Quarterly Census of Employment and Wages;</b>		

**Table 11 reports the concentration index for salaries relative to Louisiana and the United States.** Motion picture and video industries have showed high concentration indexes for both number of establishments and employment in previous tables for Orleans Parish. *However, the LQ for average annual pay relative to both Louisiana and the United States suggests that the high-end technical workforce in film production is minimal in this area and insufficient to affect average pay level data.* Further, Table 5 shows that average pay in motion picture and video production has not significantly changed in the recent years. One possible reason is that the job mix increasingly is concentrated on part-time and low skill positions. However, when the salary concentration index (0.7), in comparison to the *national pay level*, for 2019 is measured against the employment concentration index (5.1) against the national level, and the establishment concentration index (2.1), average private sector pay (\$49,320 in 2019) best reflects the lower to mid-range skill profile of the Orleans Parish labor force in comparison to the *national level* (\$73,235 in 2019) within this industry. Looking at the comparative change in percentage terms rather than absolute terms, the pay level in the motion picture and video industries increased substantially relative to the United States. *Between 2014 and 2019, motion picture and video industries annual average pay increased by 10.3% at the national level. In Orleans Parish, average pay increased by 32.4%.* Given the relative change in the growth in annual average pay between 2014 and 2019, one can only say that the *gap* between the two levels of average pay has narrowed. However, the difference between these two number is so great (\$24,005), it would require a sustained growth rate experience between 2014 and 2019 which is highly unlikely. The problem is that looking at the trend between 2014 and 2019 in the relative increase in the average pay suggests no substantive improvement in the average pay ratio (even though the rate of change was substantially greater than the U.S. as a whole) relative to the U.S. In 2014, it was 0.6; in 2016, it was 0.8; in 2017, it was 0.7; in 2018, it was 0.8 and as shown in Table 11 in 2019, it was back down to 0.7. This suggests that demand for high end technical skills, which would command higher than national average salaries in motion picture and video production industry in Orleans Parish, has not sufficiently developed as of 2019.

**Table 11**

Concentration (LQ) Index for Average Annual Pay for Orleans Parish		
	2019	
Relative to:	Louisiana	U.S.
Industry		
Software Publishers	1.1	0.6
Motion picture and video industries	1.0	0.7
Specialized design services	0.9	0.6
Computer systems design and related services	1.1	0.8
Scientific research and development services	0.9	0.6
Traveler accommodation	1.2	1.2
Full-service restaurants	1.3	1.3
Drinking places, alcoholic beverages	1.2	1.3
<b>Source: Quarterly Census of Employment and Wages</b>		

*It is slightly worrisome that in key indices, of employment and salary for software publishers, specialized design services, computer system design and scientific research and development, have reached a level of agglomeration that would suggest an increase in comparative advantage for these select industries relative to the United States as a whole.*

In fact, the indices indicate that these sectors are local serving, mainly functioning to support other industries in the region. That would suggest that these industries have not matured to the level which would suggest greater concentration of employment and the associated skill levels that would command higher salaries.

## **CONCLUSION**

This paper examined a select group of industries that currently drive a large part of the job growth (traveler accommodations, full-service restaurants and drinking places) in Orleans Parish. Also selected were those industries that many suggest will be needed to expand the potential of the New Orleans economy (software publishers, motion picture and video production, specialized design services, computer systems design and scientific research services) in the future.

This analysis clearly shows the importance of tourism related industries in the local economy as shown by Tables 7, 8 and 9. Correspondingly, the down side of this cluster is that salaries generated in these industries are quite low relation to the average for the parish (Table 5), ranging from 46% (Drinking Places, Alcoholic Beverages) of the average to 68% (Traveler Accommodation) of the average in 2019. These fractional values have, on the average, changed little between 2004 and 2019.

The “emerging” industries that are expected to broaden the economic base of the city reflect a mixed bag. Motion picture and video industries have shown success over the study period, particularly in the area of employment generated. However, the data suggests that **average pay is well below that of the U.S. average \$49,320 vs. \$73,325 in 2019.** This is disappointing since the industry in the city of New Orleans is more than 5 times more concentrated in employment (as shown in Table 10) than the nation in 2019. This suggests that high end technology work in motion picture and video production is (on the average) somewhere else.

*Finally, the remaining sectors (software publishers, specialized design service, computer systems design and scientific research services) in the “emerging” industries and relative to employment concentration simply are still at the stage of local serving, as illustrated in table 10. Average pay in the software publishers’ sector in 2019 was 56% of the national average; average pay computer systems design and related services was 73% of the national average, and average pay in scientific research and development services was 48% of the national average. Some might argue that this disparity might reflect a comparative advantage for these industries in Orleans Parish to attract economic activity. Conversely, this pay differential could reflect a far less diversified skill set of the local labor force in these sectors, relative to the national market. Hence, the ability to attract national companies, without substantial public subsidies, is less attractive.*

## APPENDIX

Interpreting the Location Quotient is very simple. Only three general outcomes are possible when calculating location quotients. These outcomes are as follows:

LQ < 1.0	LQ = 1.0	LQ > 1.0
----------	----------	----------

***LQ < 1.0 = All Employment is Non-Basic***

A LQ that is less than zero suggests that local employment is less than was expected for a given industry. Therefore, that industry is not even meeting local demand for a given good or service. Therefore, all of this employment is considered non-basic by definition.

***A LQ = 1.0 = All Employment is Non-Basic***

A LQ that is equal to zero suggests that the local employment is exactly sufficient to meet the local demand for a given good or service. Therefore, all of this employment is also considered non-basic because none of these goods or services are exported to non-local areas.

***A LQ > 1.0 = Some Employment is Basic***

A LQ that is greater than zero provides evidence of basic employment for a given industry. When an LQ > 1.0, the analyst concludes that local employment is greater than expected and it is therefore assumed that this "extra" employment is basic. These extra jobs then must export their goods and services to non-local areas which, by definition, makes them Basic sector employment.

***Source: Florida State University  
Department of Urban and Regional  
Planning, Planning Methods III:  
Forecasting***