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AN ANALYSIS OF EMPLOYMENT AND WAGES IN SELECT INDUSTRY GROUPS IN THE CITY OF NEW ORLEANS (2004-2025)

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.

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

PRIVATE INDUSTRIES SELECTED FOR ANALYSIS

A. Software Publishers (NAICS 5132) Note: revised from 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, 2019, 2021,2024 and 2025. The year 2004 was selected as the base because it was the last year in which the data series was not affected by Hurricane Katrina. Data for 2019 represents the pre-Covid era.

INDUSTRY ANALYSIS

Table 1 below looks at the percentage change in the annual average number of establishments between 2004 and 2025 for Orleans Parish. As illustrated in Table 1, the top four sectors among the select sectors for establishment growth were in the following order: Software Publishers, Motion Picture and Video Industries, Computer Systems Design and Scientific Research and Development Services. The sum share of all establishments in the parish was 18.9% in 2025. Within the eight-industry cluster, the share of the Leisure and Hospitality (NAICS 7211, 7224 and 7225) establishments fell from 81% in 2004 to 59% in 2025. Twenty-four percent (24%) of the fractional increase (last column) in the selected sectors as a fraction of ***all establishments*** was concentrated in Full-Service Restaurants (NAICS 7225) and Computer Systems Design and Related Services (NAICS 5415). Traveler Accommodations (NAICS 7211) establishments are down by two in 2025 over the 2024 period.

Table 1

		Average Annual QCEW Establishments				Percentage Change 2004-2025	Absolute Change 2004-2025
NAICS		YEAR					
	Orleans Parish						
	Industry Title	2004	2019	2021	2025		
5132	Software Publishers	3	55	121	274	**9033%**	**271**
5121	Motion picture and video industries	39	82	89	102	**162%**	**63**
5414	Specialized design services	51	72	90	110	**116%**	**59**
5415	Computer systems design and related services	163	389	529	735	**351%**	**572**
5417	Scientific research and development services	30	59	91	124	**313%**	**94**
7211	Traveler accommodation	172	204	231	229	**33%**	**57**
7225	Full-service restaurants	822	1,173	1,258	1,435	**75%**	**613**
7224	Drinking places, alcoholic beverages	210	265	271	309	**47%**	**99**
	TOTAL ESTABLISHMENTS IN SELECTED SECTORS	**1,487**	**2,299**	**2,680**	**3,318**	**123%**	**1,831**
	TOTAL PARISH ESTABLISHMENTS	**12,496**	**13,466**	**15,188**	**17,524**	**40%**	**5,028**

Note: NAICS 7725 was NAICS 7721 up until 2009. Software Publishers NAICS changed from 5112 to 5132.

Source: Quarterly Census of Employment and Wages; Systems Solutions Consulting

Table 2 focuses on the annual average employment in the identified industries over the period 2004-2025. Motion picture production, with historically dependent on heavy public subsidies, declined between 2004 and 2025. Industry jobs over most of this period ranged in the 2,000-3,000 range. At the state level, the range was between 3,000 and 9,000 QCEW level. (Maybe) one can see what happens when policy makers realize that simple cost-benefit analysis suggests that costs exceed benefits. Financial state subsidies began to shrink in 2023, and that shows in the employment level overtime in the average number of employees for that year. Computer systems design and related industries and Software Publishers QCEW job growth stagnated or declined between 2019 and 2025. Over the long run, the percentage of "high tech" jobs (NAICS 5132, 5414, 5415, 5417) as a fraction of the total jobs in the **selected industries** increased from 4.2% (1,570 jobs) in 2004 to 7.6% (2,852 jobs) in 2025. But importantly, all that job growth took place up to 2019. In fact, t*his large increase in share of "high tech" industries was only due to the collapse of Leisure and Hospitality (due to Covid-19) in 2020.* In 2019, the "high tech" share was 6.0%, not significantly different from 2004. (In 2004, the

fraction was 4.2%) Further, this increase in these select sectors can almost totally be attributed to the growth in QCEW jobs in Full-service restaurants.

Table 2

		Average Annual QCEW Employment				Percentage Change 2004-2025	Absolute Change 2004-2025
NAICS		YEAR					
	Orleans Parish						
	Industry Title	2004	2019	2021	2025		
5132	Software Publishers	8	115	334	395	4,838%	387
5121	Motion picture and video industries	1,851	2,904	2,702	996	-46%	-855
5414	Specialized design services	222	273	227	271	22%	49
5415	Computer systems design and related services	1,072	2,064	2,050	1,836	71%	764
5417	Scientific research and development services	268	205	297	350	31%	82
7211	Traveler accommodation	12,438	11,738	5,956	9,618	-23%	-2,820
7225	Full-service restaurants	18,299	23,687	16,375	20,710	13%	2411
7224	Drinking places, alcoholic beverages	3,028	3,286	2,213	3,183	5%	155
	TOTAL EMPLOYMENT IN SELECTED SECTORS	**37,186**	**44,272**	**30,154**	**37,359**	**0%**	173
	TOTAL AVERAGE ANNUAL PARISH EMPLOYMENT	**247,260**	**200,514**	**174,200**	**187,337**	**-24%**	-59,923

Note: NAICS 7725 was NAICS 7721 up until 2009. Software Publishers NAICS changed from 5112 to 5132.

Source: Quarterly Census of Employment and Wages; *Systems* Solutions Consulting

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

		Average Employees per Establishment		
		2025		
		Orleans	Louisiana	U.S.
5132	Software Publishers	1.4	1.7	6.3
5121	Motion picture and video industries	9.8	10.0	9.8
5414	Specialized design services	2.5	2.4	3.0
5415	Computer systems design and related services	2.5	3.4	5.6
5417	Scientific research and development services	2.8	2.8	15.2
7211	Traveler accommodation	42.0	22.3	27.1
7225	Restaurants	14.4	15.4	17.5
7224	Drinking places, alcoholic beverages	10.3	6.5	9.6
	Total Average	10.7	12.2	12.7

Note: NAICS 7725 was NAICS 7721 up until 2009. Average is unweighted

Source: Quarterly Census of Employment and Wages; Systems Solutions Consulting

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), Scientific Research and Development Services (NAICS 5417) and Traveler Accommodations (NAICS 7211). Travelers Accommodations in Orleans Parish is still digging out of the economic hole of Covid-19. ***As an illustration, Travelers Accommodations (NAICS 7211) had 57.5 employees per traveler's establishment in Orleans Parish in 2019. That number was 42.0 employees per establishment in 2025. In 2019, the U.S. level was 22.2 employees per establishment.*** **In 2025, the national level of employee per establishment was 27 employees per establishment.**

The jobs in the technology and scientific private establishments remain small on the average when measured relative to the U.S. **Of critical concern is the fact, illustrated in Tables 2, and 3, that the Scientific Research and Development Private Industry Employment has slightly increased over the 2004 to 2025 period in Orleans Parish.** With two medical schools located in the parish, it points to the problem of diversifying 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 2024 $336 million in NIH funds. In New Orleans, academic and non-academic research centers received $131 million in NIH funding in 2024. In the Houston-Galveston area, academic and non-academic research centers received $644 million in NIH funding in 2024. Table 4 identifies the number of employees per establishment for a larger number of select years between 2004 and 2025 in Orleans Parish. ***Note of caution: using employees per establishment tends to slightly distort the data series because the number is a ratio. Hence, Table 4 data should be evaluated in the context of Table 1 and 2.***

Table 4

		Average Number of Employees Per Establishment				Percentage Change 2004-2025	Absolute Change 2004-2025
NAICS		YEAR					
	Orleans Parish						
	Industry Title	**2004**	**2019**	**2021**	**2025**		
5132	Software Publishers	**2.7**	2.1	2.8	1.4	-126%	-1.3
5121	Motion picture and video industries	47.5	35.4	30.4	9.8	-3774%	-37.7
5414	Specialized design services	4.4	3.8	2.5	2.5	-194%	-1.9
5415	Computer systems design and related services	6.6	5.3	3.9	2.5	-410%	-4.1
5417	Scientific research and development services	8.9	3.5	3.3	2.8	-608%	-6.1
7211	Traveler accommodation	72.3	57.5	25.8	42	-3030%	-30.3
7225	Full-service restaurants	22.3	20.2	13	14.4	-787%	-7.9
7224	Drinking places, alcoholic beverages	14.4	12.4	8.2	10.3	-410%	-4.1
	TOTAL UNWEIGHTED AVERAGE EMPLOYEES PER ESTABLISHMENT IN SELECTED SECTORS	**22.4**	**17.5**	**11.2**	**10.7**	**-1170%**	**-11.7**
	TOTAL PARISHWIDE AVERAGE EMPLOYEES PER ESTABLISHMENT	**19.8**	**14.9**	**11.5**	**10.7**	**-910%**	**-9.1**

Note: NAICS 7725 was NAICS 7721 up until 2009. Software Publishers NAICS changed from 5112 to 5132. Source: Quarterly Census of Employment; Systems Solutions Consulting and Wages

Critically, NAICS 7211 (Traveler Accommodations) has been hit hard by the Covid-19 Pandemic. Even with the impact of the Covid-19 Pandemic on Leisure and Hospitality, there are two fundamental questions that should be asked. First and looking only at the establishment and job levels for 2004 and 2019, the ratio shows a steep decline in the number of employees per establishment, going from 72.3 employees per establishment in 2004 to 57.5 employees per establishment in 2019. ***The question is: could structural and technological changes, prior to Covid-19 Pandemic in this industry, be the cause of or contribute to this decline by altering the demand for labor?*** Table 1 shows between 2004 and 2019 the number of establishments in this NAICS increased by 18.6%. Correspondingly, Table 2 shows that employment fell by 5.6%, suggesting structural changes in this industry occurring prior to the Covid Pandemic. Second, from the data identified in Tables 1 and 2, could the economic consequences of Covid-19 have *accelerated structural changes* in the Traveler Accommodation industry by reducing the demand for labor. Hence, Table 1 shows that between 2021 and 2025, the number of establishments in Traveler Accommodation decreased by about 1%, suggesting establishment consolidation in "the post-Covid-19 world." QCEW jobs plummeted by about 18% between 2019 and 2025. There are several (non-inclusive) potential answers: (a) establishments are not filling job-openings, (b) ***this inability to fill positions accelerates capital-labor substitution and/or(c) job functions of employees are becoming multi-occupational.*** The data at this stage is too "grainy" to provide an assessment but opens important questions remaining for answers with greater detail.

Looking across all the select sectors in Table 4 points to long-term trend in fewer employees per establishment. Disaggregating the total change by the incremental change in each NAICS employment and establishment categories yields some interesting observations. For example, new software establishments (NAICS 5132) yield 1.4 *new jobs per **new** establishment* (387 new jobs divided by 271 new establishments) between 2004 and 2025. At the national level, the ratio of new jobs per new establishment over this period was 5.2 or almost four times greater**.** For the Motion Picture industry and between 2004 and 2025 in Orleans Parish ***new establishments*** yield a decline in size of 13.6 employees per establishment. In short, total employees in the industry went from 1,851 in 2004 to 996 in 2025. At the national level, the employment base also shrunk, going from 358,871 jobs to 341,564 in 2025 or a slight decline in the average number of new jobs per new establishment. **An increase in establishments relative to a decline in employment broadly suggests that industry-wide technology substitution is driving the industry employment base and is a factor seen across many industries. Even with the loss of jobs in the Orleans Parish motion picture industry picture, the specialization quotient (location quotient (LQ)) shows a concentration of Motion Picture *establishment*s which was in 2025 two times greater relative to the overall national concentration of this industry relative to all industries.** The *concentration of jobs* in the parish relative to the nation was more than two times more concentrated in 2025. This job concentration ratio increased from 2.7 in 2004 to 2.4 in 2024. *(An explanation of the concentration or specialization ratio is explained at the end of this paper.)* The ***type of jobs*** in the Orleans Parish industry appears to be more on the lower end of the pay scale relative to the U.S. QCEW data showed that the average pay in 2025 Orleans Parish was $48,500. Whereas average pay in this industry at the national level was $87,600. Average pay in Orleans Parish across all the select sectors except for Traveler Accommodation (NAICS 7211), Restaurants (NAICS 7225) and Drinking Places (NAICS 7224) were all below the national average. In the **technology and scientific sectors and in 2025, the range difference was $185,600 at the national level to $109,400 at the Orleans Parish level.**

As noted earlier on, the local Traveler Accommodations (NAICS 7211) industry was hit hard by the collapse of the overall Leisure and Hospitality industry during the peak of the Covid-19 Pandemic. Between 2019 and 2025, the national industry increased by was down by 146,000 QCEW jobs or 7.4% between these periods. In Orleans Parish, industry QCEW jobs went from 11,738 in 2019 to 9,618 QCEW jobs in 2025 or a 18.1% decrease over this period. The industry employment base went from 57.5 jobs per establishment in 2019 to 42 QCEW jobs in 2024. Even with the dramatic decline of jobs in this (NAICS 7211) industry, the establishment, jobs, and salary concentration ratios relative to the local economy, points to its importance to the Orleans Parish economy. For example, relative to the national economy and in 2025, the concentration ratio for establishments was 2.4 times greater in Orleans parish than the nation. Relative to jobs, the industry concentration ratio was 4.4 greater in Orleans Parish than in the nation.

The specialization or concentration ratios for the combined technology and science private sector industries, Software Publishers (NAICS 5132), Specialized Design Services (NAICS 5414), Computer Systems Design and Related Services (NAICS 5415) and Scientific Research and Development Services (NAICS 5417) are shown in Table 5. Only Orleans Parish establishments growth relative to U.S. establishment growth is the ratio equal to 1 or greater. This implies that either the local industry has a concentration equal to the U.S. (in the case of 1), or if the ratio is > than 1, the concentration is greater than the U.S with respect to that industry. Hence, between 2004 and 2025, establishment growth was more, relative to the entire U.S. However, with respect to jobs in the select industry or specifically their average annual pay, the **relative position of Orleans Parish select technology industries has shown little change from the U.S. relative position in 2004.** In practical terms, Orleans Parish remains a backwater in the technology industries.

Table 5

Orleans Parish Specialization Ratios Relative to the U.S. Industries

NAICS	Industry	annual_avg_estabs		annual_avg_emplvl		avg_annual_pay	
		2004	2025	2004	2025	2004	2025
5132	Software publishers	0.3	1.9	0	0.5	0.6	0.7
5414	Specialized design services	1.3	1.6	1.4	1.5	0.7	0.5
5415	Computer systems design and related services	0.9	1.2	0.7	0.6	0.9	0.7
5417	Scientific research and development services	1.2	1.4	0.4	0.3	0.6	0.7

Source: Primary data are the Quarterly Census of Employment and Wages, BLS; Specialization ratios were calculated by Systems Solutions Consulting

Note: Each column cell simply represents a ratio of an activity. For example, each value in this case represents the concentration of an activity in a smaller geographical area relative to a larger geographic area. As an example, the numerator of this value is a ratio of a specific industry relative to all industries in the smaller geography, in this case Orleans Parish. The denominator would be the same ratio relative to the specific industry divided by all industries in the larger geographical area, in this case the United States. If the ratio of the numerator is the same as the ratio of the denominator, the specialization value would be 1. If the specialization ratio was greater in the numerator relative to the denominator (>1), this implies the specific industry activity in the smaller geography is more concentrated in the smaller area relative to the larger geography. Hence, in Orleans Parish and in 2025, the number of software establishments relative to all establishments was one point nine times (1.9) as concentrated than for the United States. However, when looking at the actual employment per establishment, the advantage falls off. In short, the Orleans parish number of employees per establishment in 2025 was 1.4. In the United States, that value was 6.3. With this, the ratio yields only 0.5 or <1 for annual average employment. This suggests the survival rate for New Orleans establishment is a low number. Looking at the data over time of these establishments suggest that a critical mass simply is not met for survival.

Table 6 identifies average annual pay in the selected establishments and across all establishments in Orleans Parish over the study period. With respect to annual average pay, jobs in Software Publishers and Scientific Research and Development Services lead the pack with Full-Service Restaurants and Drinking Place coming in the bottom. (note: calculated in average pay includes tips) 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 a "boutique industry." And unfortunately, the private sector jobs in Scientific Research and Development services are so minuscule (see Table 2) that a few high paying jobs in the industry could seriously affect the average in that industry.

Table 6

		Orleans Parish Annual Average Salary				Percentage Change 2004-2025 (current $)	Absolute Change 2004-2025 (current $)
		YEAR					
NAICS	**Industry Title**	**2004**	**2019**	**2021**	**2025**		
	Orleans Parish	**CURRENT $**					
5132	Software Publishers	$56,441	$95,763	$81,464	$147,976	162%	$91,535
5121	Motion picture and video industries	$17,490	$49,320	$60,867	$48,522	177%	$31,032
5414	Specialized design services	$30,030	$42,660	$59,446	$40,589	35%	$10,559
5415	Computer systems design and related services	$62,069	$89,570	$97,051	$110,115	77%	$48,046
5417	Scientific research and development services	$46,374	$74,594	$94,906	$109,352	136%	$62,978
7211	Traveler accommodation	$21,607	$36,656	$41,237	$46,894	117%	$25,287
7221	Full-service restaurants	$14,173	$24,461	$27,542	$32,478	129%	$18,305
7224	Drinking places, alcoholic beverages	$15,433	$24,764	$29,993	$30,237	96%	$14,804
	TOTAL AVERAGE WAGES IN SELECTED SECTORS (weighted average)	**$18,644**	**$30,881**	**$39,679**	**$42,242**	**127%**	**$23,598**
	TOTAL ORLEANS AVERAGE SALARY	**$36,877**	**$53,691**	**$60,492**	**$70,543**	**91%**	**$33,666**

Note: NAICS 7725 was NAICS 7721 up until 2009. (Software Publishers) NAICS 5112 changed to NAICS 5132

Source: Quarterly Census of Employment and Wages; sum average for selected sectors is weighted by employment in each sector resulting in a weighted average.

Table 7 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 cover the years between 2004 to 2025. In 2025, seventy-five percent (75%) of the total wage bill for the *select sectors* was concentrated in the three Leisure and Hospitality sectors (NAICS 7211, 7221 and 7224). This was like the pre-COVIDs 2019 wage bill for the selected Leisure and Hospitality sectors. The total wage bill was also seventy-five (75%) of the total in 2019.

Table 7

		Orleans Parish Total Annual Wage Bill for All Establishments in NAICS (current $)			Percentage Change 2004-2025	Absolute Change 2004-2025
		YEAR				
NAICS	Industry Title	2004	2019	2025		
	CURRENT $					
5132	Software Publishers	$451,528	$10,996,788	$58,487,361	12853%	$58,035,833
5121	Motion picture and video industries	$32,373,990	$143,216,539	$48,336,323	49%	$15,962,333
5414	Specialized design services	$6,666,660	$11,649,711	$14,267,322	114%	$7,600,662
5415	Computer systems design and related services	$66,537,968	$184,858,511	$202,125,483	204%	$135,587,515
5417	Scientific research and development services	$12,428,232	$15,291,732	$38,327,796	208%	$25,899,564
7211	Traveler accommodation	$268,747,866	$430,262,456	$451,039,175	68%	$182,291,309
7225	Full-service restaurants	$259,351,727	$579,400,786	$672,637,141	159%	$413,285,414
7224	Drinking places, alcoholic beverages	$46,731,124	$81,377,505	$96,238,477	106%	$49,507,353
	ANNUAL WAGE COSTS IN SELECTED NAICS	**$693,289,095**	**$1,457,054,028**	**$1,581,459,078**	**128%**	**$888,169,983**
	ORLEANS ANNUAL TOTAL WAGE COSTS PER ESTABLISHMENT	**$8,644,752,732**	**$10,765,828,962**	**$13,215,213,535**	**53%**	**$4,570,460,803**

Note: NAICS 7725 was NAICS 7721 up until 2009. Software Publishers (NAICS 5112) changed to NAICS 5132

Source: Quarterly Census of Employment and Wages

Table 8 provides insight into the 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 8) in each NAICS category by the annual average number of establishments (Table 1) in each year within the category. In 2024, the weighted annual ***average*** wage bill for the select seven industries in this study was $521,434. An important observation is that software publishers, a critical industry relative to high tech development, simply are not producing any growth at the employment level (NAICS 5131). Although Table 1 shows growth in establishments, employment in this industry simply is stagnating and this is reflected in Tables 2-5. **Millions in public resources have been spent to stimulate this industry with little success.** Table 8 points out that across the high-tech industries in Orleans Parish, (NAICS 5132, NAICS 5414, NAIC S5415, NAICS 5417), the job growth picture is dismal when comparing 2019 to 2025.

Table 8

		Annual Wage Cost Per Establishment				Percentage Change 2004-2025 (current $)	Absolute Change 2004-2025 (current $)
			YEAR				
NAICS	Industry Title	2004	2019	2022	2025		
		CURRENT $					
5132	Software Publishers	$148,941	$199,942	$231,613	$213,458	43%	$64,517
5121	Motion picture and video industries	$830,106	$1,746,543	$1,016,618	$473,886	-43%	($356,220)
5414	Specialized design services	$130,916	$161,802	$129,329	$129,703	-1%	($1,213)
5415	Computer systems design and related services	$408,177	$475,215	$441,652	$275,001	-33%	($133,176)
5417	Scientific research and development services	$413,762	$259,182	$315,910	$309,095	-25%	($104,667)
7211	Traveler accommodation	$1,562,464	$2,109,130	$1,086,894	$1,969,603	26%	$407,139
7225	Full-service restaurants	$330,878	$493,948	$306,777	$468,737	42%	$137,859
7224	Drinking places, alcoholic beverages	$222,504	$307,085	$171,688	$311,451	40%	$88,947
	ANNUAL WEIGHTED AVERAGE WAGE COSTS IN SELECTED NAICS	**$474,410**	**$633,777**	**$401,096**	**$825,693**	**74%**	**$351,283**
	ORLEANS ANNUAL AVERAGE WAGE COSTS PER ESTABLISHMENT	**$729,697**	**$799,482**	**$729,485**	**$754,121**	3%	$24,424

Note: 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; Systems Solutions Consulting

LOCATIONAL SPECIALIZATION ANALYSIS

Since this analysis is based upon the relative concentration in each select industry (NACIS), the problem of calculating averages is minimized over the data sets (Orleans, Louisiana and U.S.)

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:

$$\text{Location Quotient} = \frac{\dfrac{\text{Orleans Employment in Industry I in Year T}}{\text{Total Orleans Employment in Year T}}}{\dfrac{\text{National Employment in Industry I in Year T}}{\text{Total National Employment in Year T}}}$$

Table 9 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 2025. Relative to Louisiana, **all the selected industries in Orleans Parish reflect a higher concentration of establishments.** As an example, establishments engaged in motion picture and video production are 2.6 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 1.2 with NAICS 5415) suggest that these (establishments) industries in Orleans Parish are (generally) not oriented toward the *national marketplace and (generally) serve local markets.* Scientific Research and Development Industries (NAICS 5417) has a higher concentration of industries in Orleans Parish than the United States but as Table 10 illustrates, the 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 5.1 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 9

Concentration (LQ) Index for Annual Average Number of Establishments in Orleans Parish		
	2025	
Relative to:	Louisiana	U.S.
Industry		
Software Publishers	3.2	1.9
Motion picture and video industries	2.6	2.0
Specialized design services	1.9	1.6
Computer systems design and related services	2.7	1.2
Scientific research and development services	1.8	1.4
Traveler accommodation	1.3	2.4
Full-service restaurants	2.6	1.6
Drinking places, alcoholic beverages	1.0	5.1
Source: Quarterly Census of Employment and Wages; Systems Solutions Consulting		

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) Orleans Parish restaurant establishments and the post-Katrina value has not changed between 2004 and 2025 (1.6 vs 1.6). Finally, as would be expected, traveler accommodations (NAICS 7211) show value of 2.4 times or more concentration (see Table 9) in Orleans Parish than the nation in 2025. New Orleans clearly is a top tourist destination that will recover from the 2020 Covid-19 Pandemic disaster.

Table 10 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 10 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 10 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, computer systems design and scientific research, the employment LQ suggests that the concentration of establishments relative to the U.S. have not yielded nothing more than a smaller local serving employment base (see Table 5). Relative to Louisiana, the concentration ratio for these industries looks favorable. However, for software publishers, computer systems design and related services and research and development services, the employment concentration index (Table 4) industries which are highly underdeveloped relative to the concentration 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 demand for this service at the local level. It simply shows that these *industries* (generally) *are not oriented to the national market* and depends heavily on the health of local industries for their business. The word "generally" is used because there are outlier firms in the New Orleans that are oriented toward national or international markets.

Table 10

Concentration (LQ) Index for Average Annual Employment for Orleans Parish		
	2025	
Relative to:	**Louisiana**	**U.S.**
Industry		
Software Publishers	2.8	0.5
Motion picture and video industries	3.5	2.4
Specialized design services	3.0	1.5
Computer systems design and related services	1.5	0.6
Scientific research and development services	3.0	0.3
Traveler accommodation	3.8	4.4
Full-service restaurants	1.4	1.6
Drinking places, alcoholic beverages	4.6	6.5
Source: Quarterly Census of Employment and Wages; Systems Solutions Consulting		

Table 11 focuses specifically on the competitive relationship *over time* between the select industries in Orleans verses those in the entire U.S. This table uses a concentration ratio for two data points (2004 and 2025) to better assess whether change has occurred over time. ***You can see little change in employment concentration relative to the U.S. in the technology and information industries in Orleans Parish.*** Overall, it appears that technology employment growth in Orleans Parish is driven by growth in the United States information and technology industries as a whole and probably lack locational advantages. 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 11

Concentration (LQ) Index for Average Annual Employment for Orleans Parish		
	2004	**2025**
Relative to:	**United States**	
Software Publishers	0	0.5
Motion picture and video industries	3.8	3.9
Specialized design services	1.4	1.5
Computer systems design and related services	0.7	0.6
Scientific research and development services	0.4	0.3
Traveler accommodation	5.4	4.3
Full-service restaurants	1.7	1.5
Drinking places, alcoholic beverages	6.2	6.4
TOTAL AVERAGE ANNUAL EMPLOYMENT in ORLEANS PARISH	**247,260**	**187,337**

Motion picture and video industries have shown a high concentration index for both the number of establishments and employment in previous tables for Orleans Parish. Further, Table 6 shows average pay in motion picture and video production has increased over the study period. However, the relative level of pay concentration index measured against the national concentration quotient yields a picture not as healthy as the absolute pay table shows. (Table 6). The salary concentration (Table 12) index comes in at 0.8 for 2025 relative to the U.S. concentration index. The employment concentration index for this industry (2.4, see Table 10), along with the establishment concentration index (2.0 see Table 9), gives insight into the structure of the industry locally. Average Motion Picture and Video Industries private sector pay ($48,522 in 2025) best reflects the mid-range skill profile of the Orleans Parish labor force in this industry relative to the *national level* ($87,629 in 2025). Looking at the comparative change in percentage terms rather than absolute terms, the pay level in the motion picture and video industries increased less relative to the United States. *Between 2004 and 2025, motion picture and video industries' annual average pay increased by 77% at the national level. In Orleans Parish, average pay increased by 177% (see Table 6) between 2004 and 2025.* **Caution should be used when using this percentage change because the base year salary (2004) was only 35% of the national level.** The gap between the national average and the local average has narrowed, with the local pay level increasing to 55% of the national level. **Although the gap narrowed over the twenty-one-year period of data, the gap between the Orleans Parish level and the U.S. level suggests that the Orleans Parish skill level not likely being on the high-end technical skills level. In short, the local industry skill structure is in the mid-level technical skills.**

Table 12

Concentration (LQ) Index for Average Annual Pay for Orleans Parish		
	2024	
Relative to:	Louisiana	U.S.
Industry		
Software Publishers	1.0	0.7
Motion picture and video industries	1.3	0.6
Specialized design services	0.6	0.5
Computer systems design and related services	1.0	0.7
Scientific research and development services	0.9	0.7
Traveler accommodation	1.1	1.1
Full-service restaurants	1.3	1.3
Drinking places, alcoholic beverages	1.1	1.2
Source: Quarterly Census of Employment and Wages; Systems Solutions Consulting.		

It is worrisome that in key indices, of employment and salary for software publishers, specialized design services, computer system design and scientific research and development, have not 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. Looking at this concentration ratio over time between 2004 and 2025 disappointingly show little or no narrowing the gap. That would suggest that these industries have not matured to the level of 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 8, 9 and 10. Correspondingly, the downside of this cluster is that salaries generated in these industries are quite low relation to the average for the parish (Table 6), ranging from 43% (Drinking Places, Alcoholic Beverages) of the average to 66% (Traveler Accommodation) of the average in 2025. These fractional values have, on average, changed little between 2004 and 2025.

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 employment generated. However, the data suggests that ***average pay is well below that of the U.S. average $87,629 vs. $48,522 in 2025*** This is disappointing since the industry in the city of New Orleans is 2 times more concentrated in employment (as shown in Table 10) than the nation in 2025. 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 2025 was 62% ($147,976 vs $239,896) of the national average; average pay in computer systems design and related services was 62% ($110,115 vs $176,369) of the national average, and average pay in scientific research and development services was 59% ($109,352 vs $185,646) 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 = <u>Some</u> 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