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The Economic and Fiscal Impacts of the Culinary Industry in San Antonio: 2017

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I.   Executive Summary

In 2017, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) designated San Antonio as a Creative City of Gastronomy. This is a unique and distinguished designation as there are only twenty-six around the world that have received such a designation with only two cities in the United State having receive it, including San Antonio. The designation highlights the unique culinary heritage of San Antonio, as well as the quality and growth of the culinary industry in San Antonio. The purpose of this study is to measure the economic and fiscal impacts of the culinary industry in the San Antonio metropolitan area in 2017. The results of this study will illustrate the impacts of this growth and serve as a baseline against which to document future growth of the industry as the community seizes upon the opportunities of being designated a Creative City of Gastronomy.

As of 2017, the culinary industry in the San Antonio metropolitan statistical area employed a large number of people in 120,416 jobs, accounting for about 14% of all jobs in the San Antonio regional economy. These workers earned total wages and benefits of $3.9 billion. The direct economic impacts of this industry on the regional economy amounted to a contribution to gross regional product[1] of about $6.4 billion and output[2] produced of $12.7 billion.

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[1] Contribution to GRP (Gross Regional Product) is a measure of the impact the economic activity has on the gross domestic product, or value-added, of the local economy. It is the value of the output produced less the value of the intermediate inputs used in the production of the goods and services.

[2] Output is a measure of the total value of the goods and services produced by this economic activity.

Once multiplier effects are taken into account, the industry supports overall employment in the region of 199,645 with incomes, including benefits, to these workers of over $6.9 billion. The total impacts to the gross regional product of the local economy amounted to over $11.6 billion, and the output produced topped $22.4 billion. The largest impacts are derived from the restaurant and food services sector. The scale of the impacts registered by the food and drink manufacturers are the second largest followed by the food wholesalers, food markets and stores, agriculture, and culinary education.

The fiscal impacts to the various federal, state, and local government agencies were also quite substantial. The economic activity related to the culinary industry generated over $3.1 billion to these various government agencies in 2017. The federal government received about $1.8 billion of those revenues, while the state saw over $729 million flow into their coffers. The various county, city, school districts, and other special districts within the metropolitan area saw their revenues increased by $611.1 million.

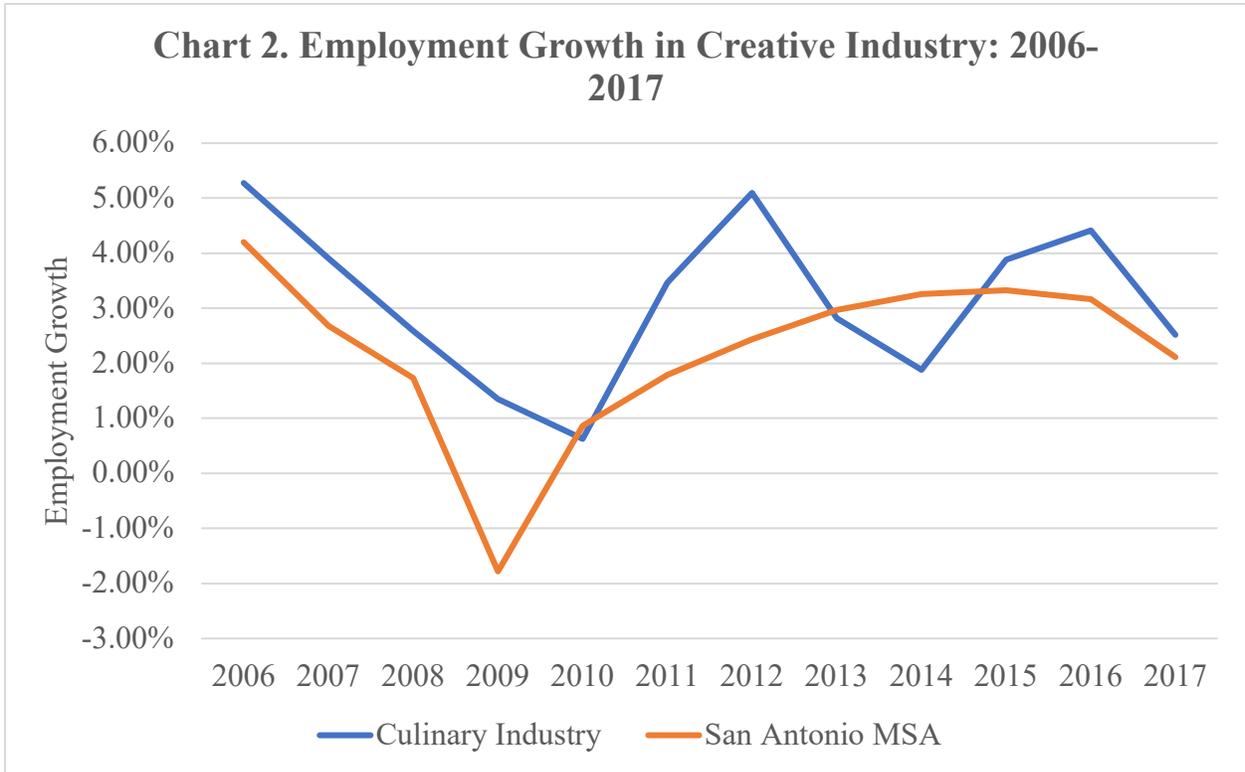## II.   The Culinary Industry in San Antonio

For purposes of this study, the culinary industry was defined to include some agriculture sectors, food and drink manufacturers, food wholesalers, select food markets and stores, and restaurants and food services businesses. The detailed definition of the industry is provided in Table 1 in the following section. As will be discussed in more detail below, the largest sector in the industry is the restaurants and food services sector. This sector alone accounts for 84% of the direct employment in the industry.

The industry has experienced strong growth since 2005. As shown in Chart 1,[3] the culinary industry has at least kept pace with growth in the overall San Antonio economy, and by some indicators, the industry has grown at a more rapid clip. The number of firms in the culinary industry grew by 2.4% on average each year from 2005 through 2017, matching the pace of growth in the overall economy. The number of establishments in the culinary industry grew by 2.8% each year on average, and the employment at these establishments grew by 3.2% on average each year, which outpaced the growth in the regional economy by a full percentage point. Total wages in the culinary industry also grew faster than wages of all workers across the economy with average annual increases of 5.8% and 5.0%, respectively.

Chart 1. Growth in the Culinary Industry Compared to Growth of the San Antonio Economy: 2005-2017

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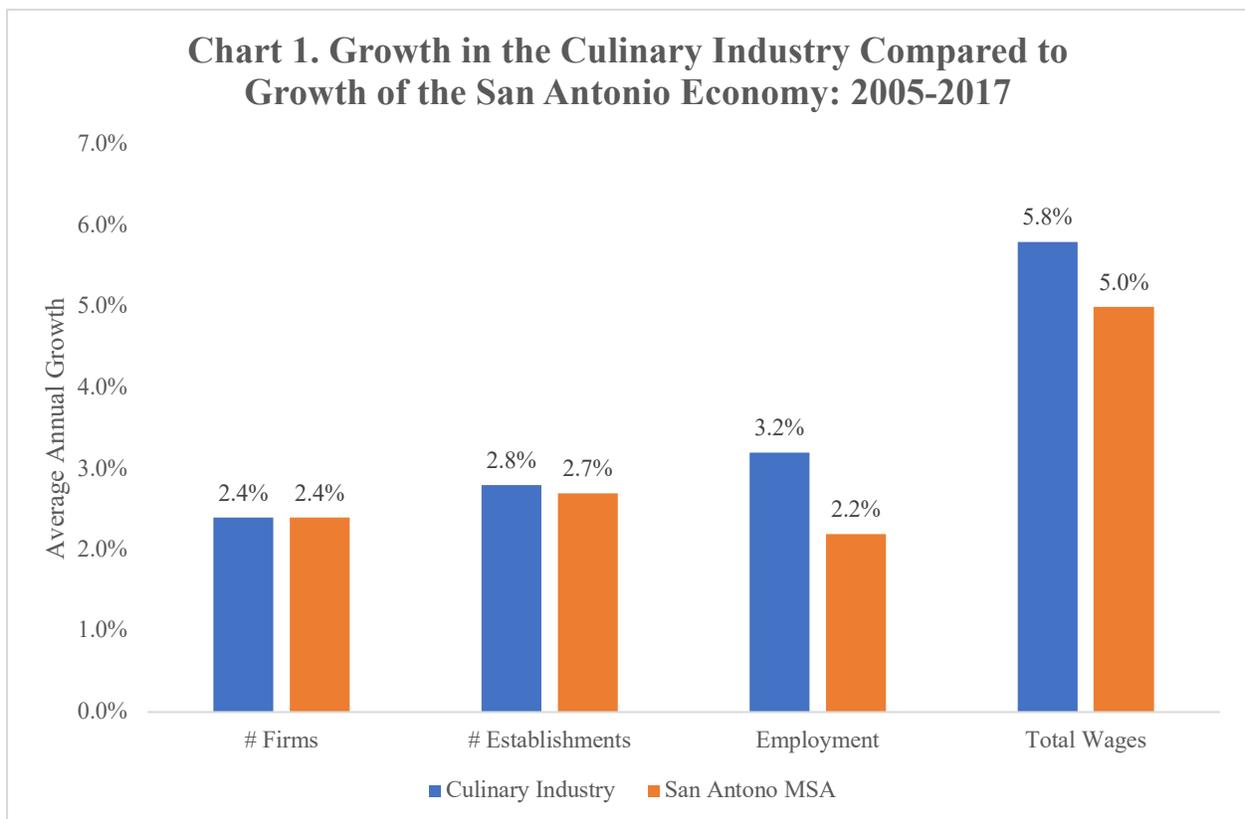
[3] The growth rates in Chart 1 do not include the culinary education institutions due to lack of data.

It is also interesting to compare the trend in growth in the culinary industry compared to the growth trends in the overall San Antonio economy. Looking at the trend in employment growth in the culinary industry relative to employment in the San Antonio, as shown in Chart 2, it is clear the industry declined during the Great Recession of 2007 through 2009, but the growth rate stayed positive, while employment growth in the overall economy turned negative in 2009. The culinary industry then bounced back with a bit of a lag but showed strong growth in 2011 and 2012 helping to propel the San Antonio economy out of the recession. The industry then experienced a slowing in growth in 2013 and 2014 that exceed the slowdown in the overall economy. However, since 2015, the growth rate in the culinary industry has exceeded the growth across the economy. While caution is prudent in trying to draw too much from these trends, they seem to provide somewhat of an indication that the culinary industry provides a bit of a buffer for the regional economy against recessions and has helped to propel the economy into a healthy growth phase.

Chart 2. Employment Growth in Creative Industry: 2006-2017

Another important impact of the culinary industry has been the attention it brings to San Antonio. As the culinary industry has continued to grow, the attention it garners from around Texas, the U.S., and the rest of the world has also likely continued to grow. This could range from mention on various social media outlets and websites to articles about local culinary establishments in leading food publications to local chefs and restaurants being highlighted on popular Food Network, The Cooking Channel, and other television networks. The designation received by San Antonio as a City of Gastronomy by UNESCO will surely drive more exposure

for the industry and San Antonio overall. In fact, the designation lead to almost 370 million

media impressions and an earned media value of $3.5 million in 2018.[4]

III.   Methodology

III.1. Definition of the Creative Industry

In order to conduct the economic impact analysis, it was first necessary to define the

creative industry. This was done in collaboration with the members of the advisory committee

using the North American Industry Classification System (NAICS). The NAICS is a commonly

used classification system for defining industries, such as the culinary industry, published by the

U.S. Census Bureau.[5] The definition of the culinary industry in San Antonio is shown in Table 1.

The education sector does not have a NAICS code associated with it because the codes do not

get to the level of detail that allows for the isolation of only educational institutions with a

singular focus on culinary and hospitality education. The data for these institutions was collected

from the respective organizations via direct contact or their websites.

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[4] Source: Visit San Antonio
[5] For more detailed information about the NAICS, see https://www.census.gov/eos/www/naics/.

Table 1. Definition of the Culinary in San Antonio

NAICS	Sector
	AGRICULTURE
111	Crop Production
112	Animal Production and Aquaculture
	FOOD AND DRINK MANUFACTURING
3113	Sugar and confectionary product mfg
3114	Fruit and vegetable preserving and specialty food mfg
3115	Dairy product mfg
3116	Animal slaughtering and processing
3117	Seafood product preparation and packaging
3118	Bakeries and tortilla mfg
3119	Other food mfg
31211	Soft drink and ice manufacturing
31212	Breweries
31213	Wineries
31214	Distilleries
	FOOD WHOLESALERS
42441	General line grocery merchant wholesalers
42442	Packaged frozen food merchant wholesalers
42443	Dairy product merchant wholesalers
42444	Poultry product merchant wholesalers
42445	Confectionery merchant wholesalers
42446	Fish and seafood merchant wholesalers
42447	Meat and meat product merchant wholesalers
42448	Fruit and vegetable merchant wholesalers
42449	Other grocery product merchant wholesalers
42481	Beer and ale merchant wholesalers
42482	Wine and spirit merchant wholesalers
	FOOD MARKETS AND STORES
44521	Meat markets
44523	Fruit and vegetable markets
445291	Baked goods stores
445292	Confectionary and nut stores
445299	All other specialty food stores
44531	Beer, wine, and liquor stores

<div align="center">RESTAURANTS AND FOOD SERVICES</div>

72231	Food service contractors
72232	Caterers
72233	Mobile food services
72241	Drinking places (alcoholic beverages)
722511	Full-service restaurants
722513	Limited-service restaurants
722514	Cafeterias, grill buffets, and buffets
722515	Snack and nonalcoholic beverage bars

<div align="center">EDUCATION</div>

N/A	Higher education institutions providing degrees in culinary arts

III.2. Data

The data on the employment and wages used to calculate the economic impacts on the culinary industry were pulled from the Quarterly Census of Employment and Wages (QCEW). The QCEW database is widely used for such analyses and includes "data on the number of establishments, monthly employment and quarterly wages for workers covered by State unemployment insurance laws and Federal workers covered by the Unemployment Compensation for Federal Employees (UCFE) program."[6] The QCEW database excludes:

- National security agencies

- Proprietors

- Unincorporated self-employed

- Unpaid family members

- Farm and domestic workers who do not report employment data

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[6] Source: https://www.bls.gov/cew/cewover.htm#Data_Available

- Railroad workers covered by the railroad unemployment insurance system

- Elected officials in the federal executive and legislative branches

- Members of the armed forces or the Commissioned Corps of the National Oceanic and Atmospheric Administration[7]

Those workers excluded from the database amount to about 5% of all employment, so the QCEW database includes about 95% of all employment.[8] This does mean that those businesses within the culinary industry that are run by self-employed sole proprietors, for example, will not be captured in the data.

Defining the industry by NAICS code means that all businesses captured in the database (see following section for description of the database used) for that industry code will be included in the data. The NAICS codes allow for some delineation to provide some measure of precision by moving from the most general codes at the two-digit level to the most precise definition of an industry at the six-digit level of the codes. However, in some instances, even using the six-digit codes does not provide enough specificity.

One case for this particular study is that of culinary education. For example, St. Philips College offers a culinary arts associates degree and certificate program, so one could use the NAICS code 611210 for Junior Colleges to capture this program. The problem is that the data will include all employees and other data across all junior colleges in the San Antonio metropolitan area. It is not specific to the culinary program at St. Philips College. This would clearly give a large over-representation of the impact of the culinary program on the local economy. A similar issue arises when trying to capture the data for the Culinary Institute of

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[7] Source: ibid
[8] Source: ibid

America, the University of Houston Conrad N. Hilton College of Hotel and Restaurant Management in San Antonio, and the Art Institute of San Antonio. In order to include these in the analysis, data were pulled from the websites and/or directly contacting these institutions. Many of the local school districts also offer culinary programs in their high schools, but it is not possible to capture those to the specificity necessary for this analysis.

There are numerous food festivals in the San Antonio region and at least 34 farmers markets[9] in the San Antonio area, but unless these festivals and farmers markets are registered as businesses and fit the criteria to be included in the QCEW database, their economic activity will not be captured in the analysis. Some of the sellers at the farmers markets may also be captured in the data used in the analysis if they are sole proprietors, for example. Like many cities, San Antonio has seen strong growth in the number of food trucks operating in the community, but again, while some of these food trucks are likely captured in the data, those that are sole proprietors will not be included, as is the case with any sole proprietorship as previously indicated. This means that the impacts documented below are somewhat conservative.

III.3. Economic Impact Methodology

The economic impact to the community was calculated using the IMPLAN input-output model for the San Antonio metropolitan area. The model provides a more complete picture of the economic impact beyond direct spending of the various local culinary businesses. It also captures the multiplier effects and leakages that might occur as this economic activity reverberates through the local economy.

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[9] Source: *edible San Antonio*

For instance, the direct economic impact is derived from the production activity of the local businesses within the culinary industry as previously defined and the salaries and benefits they are then able to pay their workers. As already alluded to, this generates additional economic activity often times referred to as the multiplier effects. The multiplier effects can be separated into two effects: the indirect effect and the induced effect. The indirect effect results from the company purchasing goods or services from its local suppliers. For instance, once a restaurant provides dinner service for an evening, they will need to restock their food supplies for service the next day, so they place an order from their wholesaler. This then sets off additional spending by the supplier as it then purchases food from the farmers within its supply chain and so on. The induced effect is derived from the consumer spending of the employees of the restaurant and its suppliers resulting from the incomes they receive.

All of this economic activity also benefits the government at various levels as the spending by businesses and their employees generates tax revenues and fees. For instance, these activities will generate excise, income, and property tax revenues; social security contributions; and various license fees.

Of course, not all of this economic activity is captured within the local economy. There are leakages as businesses and individual consumers purchase goods and services outside of the local economy causing some money to leak or flow out of the local economy. This is also the case as federal and state taxes and fees are paid resulting from these activities. These leakages are accounted for in the model and are not counted as part of the economic impact. In fact, they reduce the impact of these activities.

In order to estimate these impacts, the IMPLAN input-output model for the San Antonio metropolitan area was used. This model is based off data specific to the region, much of it

provided by federal government data collection agencies.[10] The IMPLAN model measures the interactions across 536 industries.

Input-output analysis was introduced by Wassily Leontief for which he later received the Nobel Prize in economics in 1973.[11] An input-output model describes the economic interactions or trade flows among businesses, households, and governments and shows how changes in one area of the economy impact other areas. The multipliers that result from these models are the expressions of these interactions.

IV.   Economic and Fiscal Impacts of the Culinary Industry in San Antonio

IV.1. Economic Impacts

The direct economic impacts of the culinary industry in San Antonio are shown in Table 2. The industry supported 120,416 jobs in the local economy in 2017 with the workers earning wages and benefits of about $3.9 billion. The overall direct economic impacts contributed $6.4 billion to the San Antonio economy, and the businesses in the culinary industry generated output valued at $12.7 billion. When multiplier effects are included, we can see the full picture of the impact of the industry on the local economy (see Table 3). The economic activity generated by the industry supported 199,465 jobs. The workers in these various jobs throughout the economy earned wages and benefits exceeding $6.9 billion in 2017. The total contribution to GRP was over $11.6 billion. Output across the economy generated by the economic activity of the culinary

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[10] Source: http://implan.com/index.php?option=com_content&view=article&id=238
[11] For an example of his seminal work, see: Leontief, Wassily et al., *Studies in the Structure of the American Economy: Theoretical and Empirical Explorations in Input-Output Analysis,* New York: Oxford University Press, 1953.

industry was over $22.4 billion in 2017. By these measures, the culinary industry is one of the largest in San Antonio.

The restaurants and food services sector registers the largest impacts on the local economy by far. Including multiplier effects, that one sector accounts for 68% of the total impacts on employment, 60% of the impacts on income, 57% of the impacts on GRP, and 50% of the impacts on output. The food and drink manufacturers provide the second largest impacts followed by the food wholesalers.

Table 2. Direct Economic Impacts of the Culinary Industry in San Antonio: 2017

Impact Type	Employment	Labor Income (2017 $)
Culinary Education	34	$900,902
Agriculture	1,496	$68,306,354
Food and Drink Manufacturing	8,668	$541,375,551
Food Wholesalers	7,742	$642,605,091
Food Markets and Stores	1,644	$66,315,560
Restaurants and Food Services	100,832	$2,567,416,915
Industry	120,416	$3,886,920,373

Impact Type	Contributions to GRP (2017 $)	Output (2017 $)
Culinary Education	$898,063	$1,440,399
Agriculture	$109,081,879	$101,125,315
Food and Drink Manufacturing	$933,516,079	$4,095,022,881
Food Wholesalers	$1,322,337,873	$2,005,362,320
Food Markets and Stores	$96,767,833	$127,551,742
Restaurants and Food Services	$3,914,176,014	$6,342,631,792
Industry	$6,376,777,741	$12,673,134,449

Table 3. Total Economic Impacts of the Culinary Industry in San Antonio: 2017
(Includes Multiplier Effects)

Impact Type	Employment	Labor Income (2017 $)
Culinary Education	45	$1,366,602
Agriculture	2,406	$101,536,444
Food and Drink Manufacturing	40,424	$1,364,261,236
Food Wholesalers	19,349	$1,196,991,291
Food Markets and Stores	2,438	$101,997,158
Restaurants and Food Services	134,804	$4,159,382,454
Industry	199,465	$6,925,535,185

Impact Type	Contributions to GRP (2017 $)	Output (2017 $)
Culinary Education	$1,680,508	$2,829,309
Agriculture	$165,715,417	$203,303,005
Food and Drink Manufacturing	$2,463,409,617	$7,142,938,089
Food Wholesalers	$2,225,930,570	$3,600,646,694
Food Markets and Stores	$158,153,502	$236,450,576
Restaurants and Food Services	$6,631,452,353	$11,221,289,812
Industry	$11,646,341,967	$22,407,457,485

As already noted, the impacts of the culinary industry extend well beyond the industry itself, and to give a sense of the effects of the economic activity generated by the culinary industry on other industries within the local economy, Table 4 shows the top twenty-five industries impacted as measured by employment. In other words, the table shows the industries outside of the culinary industry that most had their employment levels impacted by the economic activity of the culinary industry. Technically, these are the industries outside the culinary industry that experienced the largest indirect and induced multiplier effects. The economic activity of the culinary industry impacts many more industries, but the table shows only those that experienced the largest impacts on their employment in 2017. As can be seen in the table, the culinary industry supports employment in a broad array of other industries, such as real estate, health care, business and professional services, logistics and transportations, among

others. This is one indication of the reach of the culinary industry throughout the San Antonio economy.

Table 4. Culinary Industry Impacts on Employment Across Industries in 2017: Top 25

Industry	Total Employment
Real estate	4,677
Management of companies and enterprises	2,270
Employment services	2,151
Services to buildings	1,708
Truck transportation	1,587
Hospitals	1,354
Animal production, except cattle and poultry and eggs	1,320
Monetary authorities and depository credit intermediation	1,305
Other financial investment activities	1,257
Retail - General merchandise stores	1,194
Offices of physicians	1,112
Home health care services	991
Business support services	941
Accounting, tax preparation, bookkeeping, and payroll services	889
Individual and family services	826
Maintenance and repair construction of nonresidential structures	781
Automotive repair and maintenance, except car washes	773
Management consulting services	766
Warehousing and storage	676
Personal care services	667
Investigation and security services	657
Insurance carriers	590
Other personal services	587
Retail - Miscellaneous store retailers	586
Nursing and community care facilities	585

IV.2. Fiscal Impacts

This large amount of economic activity also generated a substantial amount of revenues to various government agencies (see Table 5). In total, the economic activity created by the culinary industry generated over $3.1 billion in revenues to federal, state, and local public agencies. About $1.8 billion of this revenue flowed to the federal government while the State of Texas received over $729 million. All of the county government within the San Antonio MSA received about $127.6 million, and the city governments (including villages and townships) received $164.1 million. All of the school districts and other special taxing districts within the metropolitan area saw their revenues increase by about $319.4 million.

Table 5. Revenues to Government Agencies: 2017

	Revenues (2017 $)
Federal Government	$1,765,538,085
State Government	$729,080,100
County Governments	$127,615,546
City Governments	$164,079,486
School Districts and Special Districts	$319,367,034
Total Revenues	$3,105,680,251

IV.3. Relative Concentration of the Industry Sectors

To give some sense of the scale of the various sectors within the industry, Table 6 shows the relative concentrations of each sector in the industry as measured by the location quotient. The location quotient measures the local concentration of a sector in a region (in this case, the

17

San Antonio region) compared to the concentration in the United States. If a sector has a location

quotient greater than one, it indicates that the sector is more highly concentrated in the region

than it is across the entire country. A location quotient less than one indicates that the sector has

a smaller level of concentration than exists across the U.S. The soft drink and ice manufacturing

sector has the highest concentration of employment relative to the employment in the sector

across the U.S. The San Antonio region has a relative strong concentration of wholesalers of

various culinary products. This may be driven by the large number of restaurants of various types

within the region, as indicated by the high concentration levels of cafeterias, grill buffets, and

buffets; drinking places; limited-service restaurants; mobile food services; caterers; and full-

service restaurants.

Table 5. Location Quotients of Culinary Industry in San Antonio: 2017

Sector	Location Quotient
Soft drink and ice manufacturing	2.38
Meat and meat product merchant wholesalers	2.21
Fruit and vegetable merchant wholesalers	1.98
Cafeterias, grill buffets, and buffets	1.88
Confectionery merchant wholesalers	1.61
Beer and ale merchant wholesalers	1.61
Bakeries and tortilla mfg	1.55
Drinking places (alcoholic beverages)	1.49
Limited-service restaurants	1.45
Meat markets	1.39
Dairy product merchant wholesalers	1.38
Mobile food services	1.32
Wine and spirit merchant wholesalers	1.31
Food service contractors	1.17
Caterers	1.15
Full-service restaurants	1.12
Fruit and vegetable markets	1.00
General line grocery merchant wholesalers	0.99
Fish and seafood merchant wholesalers	0.80

Snack and nonalcoholic beverage bars	0.80
Confectionary and nut stores	0.61
Packaged frozen food merchant wholesalers	0.56
Other food mfg	0.55
Breweries	0.54
Other grocery product merchant wholesalers	0.50
Animal slaughtering and processing	0.49
Distilleries	0.49
All other specialty food stores	0.45
Beer, wine, and liquor stores	0.40
Poultry product merchant wholesalers	0.38
Animal Production and Aquaculture	0.37
Fruit and vegetable preserving and specialty food mfg	0.33
Baked goods stores	0.32
Crop Production	0.21
Sugar and confectionary product mfg	0.21
Dairy product mfg	0.15
Wineries	0.10
Seafood product preparation and packaging	0.04

IV.4. Media Value

As the culinary industry has grown over the past decade, it appears anecdotally that the industry has also seen its exposure on various media outlets increase. As local chefs and their restaurants have been highlighted on national cooking shows, for example, this has raised awareness that San Antonio is a culinary destination. This awareness has been further enhanced by the designation as a Creative City of Gastronomy. According to statistics provided by Visit San Antonio, the designation has generated 77 media clips; 262,949,105 impressions in the media, and 369,809,217 impact impressions. The overall media value was $3,507,586 in FY2018.

While these impacts are not isolated as part of the economic impacts in the analysis, the increasing media exposure has surely played some role in the growth of the culinary industry.

The increased exposure provided by the UNESCO designation is likely to catalyze this growth as more culinary tourists are attracted to the region, but the impacts will likely extend beyond just attracting more culinary tourists. As awareness of San Antonio as a culinary destination continues to increase, this will help attract more skilled workers, as well as retain and attract more companies to the region, because it will be yet another indication of the great quality of life San Antonio offers. The culinary industry has played and will continue to play a key role in providing that unique and attractive quality of life, which will serve as an engine to growth across the economy.

<p style="text-align: center;">V.   **Conclusion**</p>

As one of the largest industries in the San Antonio metropolitan economy, the culinary industry registered substantial economic impacts on the San Antonio metropolitan economy in 2017. These impacts are driven by the strong growth the industry has experienced over the past decade. This growth has also served as part of a buffer as the regional economy went into the Great Recession and helped propel the local economy out of the recession. With the designation as a Creative City of Gastronomy, it is likely that the growth of the culinary industry in San Antonio will accelerate as awareness of the unique culinary offerings in the region spread around the world. The future growth will enhance the importance of the culinary industry as a key driver of overall economic growth in the San Antonio the local economy, not only through its direct impact but also as an important cultural asset that helps to attract and retain a skilled workforce and expand the industry base in the region.