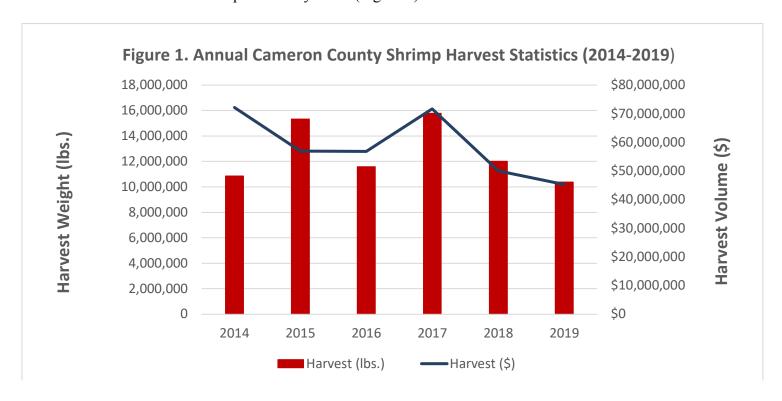




Economic Impacts of the Cameron County Shrimp Fishery

Rebekka Dudensing¹, Laura Picariello², Tony Resinger³, and Daniel Hanselka⁴

The Cameron County shrimp fishery is an important part of the Cameron County economy and the Texas shrimp industry. Shrimp harvesting and processing an important part of the Texas marine economy. Between 2014 and 2019, Cameron County's shrimp harvest accounted for 30.2% of the total Texas shrimp harvest by weight and 33.4% of the total Texas shrimp harvest by value (Figure 1).



Economic impacts of dockside and processing revenues were calculated for three scenarios: 1) the best year, 2) an average year (average of the six years), and 3) the worst year. These scenarios account for the substantial variability in annual harvests and revenues (see Figure 1).

Four types of impacts are estimated: employment (number of jobs due to the shrimp fishery), labor income (combined income of those employed as a result of the shrimp fishery), value added (the shrimp fishery's contribution to GDP), and output (the effect of shrimp fishery direct spending on overall economic activity).

In an average year the Cameron County shrimp fishery contributes approximately \$80.9 million to the county economy and 1,668.6 part- and full-time jobs (Table 1). In an average year, the county's shrimp processing sector contributes \$13.8 million and 55.8 part- and full-time jobs to the local economy (Table 2). Labor income is a component of value added, which is a component of output, so these figures cannot be summed. Average employment is greater than employment in the best year because jobs are calculated based on the number of

¹ Associate Professor and Extension Economist, Texas A&M AgriLife Extension Service, College Station, TX

² Fisheries Specialist, Texas Sea Grant, College Station, TX

³ Cameron County Extension Agent, Texas A&M AgriLife Extension Service, San Benito, TX

⁴Extension Associate, Texas A&M AgriLife Extension Service, College Station, TX

shrimping vessels and dockside pounds. The best year based on dockside value was not year with the largest harvest by weight due to variations in price.

Table 1. Dockside Impacts for Cameron County

Best Year Impacts							
Impact Type	Employment	Labor Income	Value Added	Output			
Direct Effect	1234.2	\$25,937,100	\$72,026,700	\$72,168,800			
Total Effect	1396.2	\$31,524,400	\$81,731,100	\$90,677,200			
Average Year Impacts							
Impact Type	Employment	Labor Income	Value Added	Output			
Direct Effect	1475.2	\$31,002,200	\$58,714,000	\$58,829,900			
Total Effect	1668.6	\$37,669,200	\$70,296,300	\$80,906,900			
Poorest Year Impacts							
Impact Type	Employment	Labor Income	Value Added	Output			
Direct Effect	1,199.6	\$25,210,500	\$45,201,500	\$45,290,800			
Total Effect	1,356.8	\$30,630,900	\$54,618,400	\$63,239,200			
Economic impact values are not additive across measures (employment, labor income, value added, and output).							

Table 2. Processing Impacts for Cameron County

		Best Year	Impacts			
Impact Type	Employment	Labor Income	Value Added	Output		
Direct Effect	29.1	\$1,603,200	\$2,944,500	\$11,870,400		
Total Effect	69.5	\$2,968,500	\$5,787,700	\$17,207,800		
Average Year Impacts						
Impact Type	Employment	Labor Income	Value Added	Output		
Direct Effect	23.4	\$1,286,300	\$2,362,400	\$9,523,700		
Total Effect	55.8	\$2,381,600	\$4,643,500	\$13,805,900		
		Poorest Yea	r Impacts			
Impact Type	Employment	Labor Income	Value Added	Output		
Direct Effect	19.2	\$1,055,100	\$1,937,700	\$7,811,800		
Total Effect	45.7	\$1,953,500	\$3,808,800	\$11,324,300		
Economic impact	t values are not additive	e across measures (employs	ment, labor income, value added,	and output).		

Analysis Notes

- Annual shrimp landings data (amount and value) were provided by NOAA Fisheries; landings (weight) are measured in headless pounds.
- Statewide direct employment was calculated by assuming five workers per federally permitted vessel and three workers per state permitted vessel (NOAA, 2020b), and county jobs were estimated based on the county's share of Texas harvest by weight.
- Direct labor income is based on 2015-2019 average Texas wages for "Forestry, fishing, and related activities" reported by the Bureau of Economic Analysis.
- Economic impacts were calculated using IMPLAN (2019), a software program that calculates economic impacts using classic input-output analysis.
- Fishing impacts were calculated using 2017 IMPLAN sector 17 and wage compensation (sector 5001) multipliers using the analysis-by-parts method.
- Processing impacts were calculated using 2017 IMPLAN sector 93 multipliers

References

Bureau of Economic Analysis. 2021. 2015-2019 Compensation of Employees by NAICS Industry, Table CAINC6N. https://www.bea.gov/data

Bureau of Economic Analysis. 2021. 2015-2019 Total Full-Time and Part-Time Employment by NAICS Industry, Table CAEMP25N. https://www.bea.gov/data

IMPLAN Group, LLC. 2019. 2017 data and software, http://www.implan.com/.

NOAA, National Marine Fisheries Service. 2020a. Landings data.

NOAA, National Marine Fisheries Service. 2020b. Federally permitted vessels data.

Publication supported in part by an Institutional Grant (NA18OAR4170088) to the Texas Sea Grant College Program from the National Sea Grant Office, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.

TAMU-SG-21-506 April 2021