

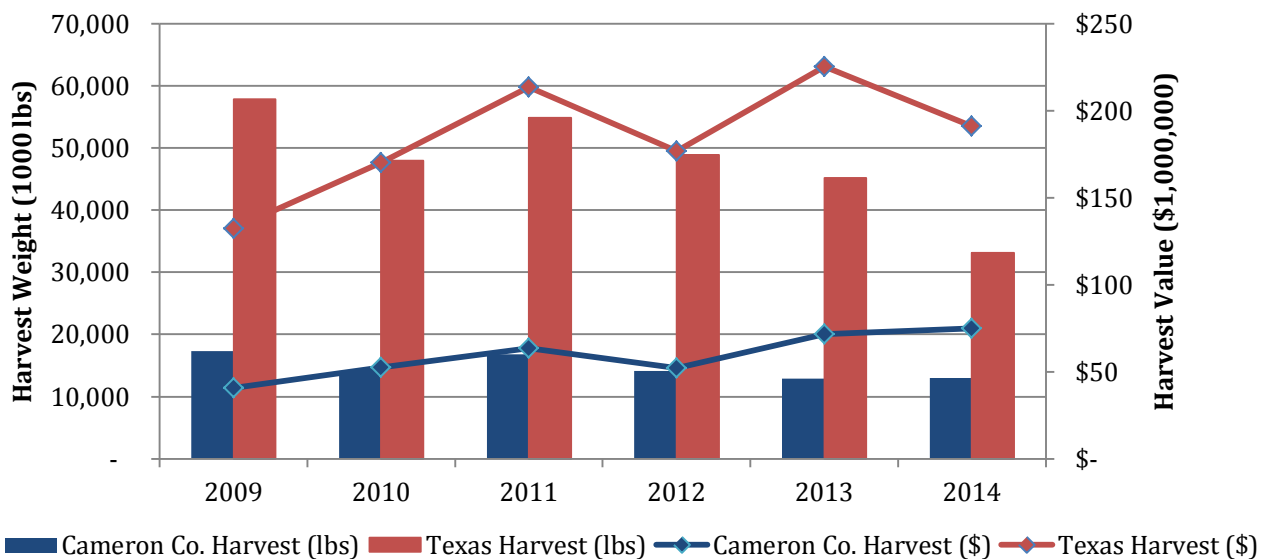
Making a Difference

Economic Impacts of the Cameron County Shrimp Industry

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The Cameron County shrimp industry is a vital part of both the Cameron County economy and the Texas shrimp industry. Between 2009 and 2014, Cameron County's shrimp harvest accounted for 31% of the total Texas shrimp harvest by weight and 33% of the total Texas shrimp harvest by value (Figure 1). In addition to the economic impacts associate with Cameron County shrimp fishing, shrimp processing operations in the county also positively impact the Cameron County and State of Texas economies.

Figure 1. Annual Shrimp Harvest Statistics (2009-2014)



Data provided by NOAA Fisheries.

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Shrimp Harvesting Economic Impacts

The Cameron County shrimp harvesting sector's (shrimp fishing) economic impacts at both the county (Table 1) and state (Table 2) levels are shown below (estimates are in 2014 dollars). Based on data from 2009 to 2014, impacts were estimated for three different cases based on dockside revenues: 1) the best year (2014), 2) an average year (average of all years), and 3) the worst year (2009); different scenarios were analyzed to account for the wide variability in annual harvest revenues (see Figure 1). In addition to direct effects directly attributed to the shrimp harvesting sector, estimates of indirect and induced impacts are also included. Indirect effects are economic impacts due to purchases of goods and services by the shrimp harvesting sector from other local industries, and induced effects are due to expenditures of those benefiting from increased local business activity (individuals employed due to the industry and government). Four different types of impacts are estimated: employment (number of jobs due to the shrimp harvesting sector), labor income (combined income of those employed as a result of the shrimp harvesting sector), value added (the shrimp harvesting sector's contribution to GDP), and output (the effect of direct spending on overall economic activity). The indirect and induced impacts are larger for the State of Texas relative to Cameron County because some of these effects are realized in other counties in the State of Texas. As the estimates show, the shrimp harvesting sector's economic impacts vary greatly between years due to large shifts in shrimp harvest value; however it is worth noting that even in poor years the Cameron County shrimp harvesting sector still contributes approximately \$31 million dollars to the Cameron County economy and \$40 million to the Texas economy.

Table 1. Shrimp Harvesting Economic Impacts on Cameron

Best Year Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	1,756	\$22,686,815	\$31,122,136	\$74,758,017
Indirect Effect	215	\$7,046,840	\$9,643,037	\$24,660,203
Induced Effect	200	\$5,915,079	\$11,193,667	\$20,265,478
Total Effect	<u>2,171</u>	<u>\$35,648,734</u>	<u>\$51,958,840</u>	<u>\$119,683,698</u>
Average Year Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	1,448	\$18,699,747	\$25,652,612	\$61,619,754
Indirect Effect	177	\$5,808,401	\$7,948,332	\$20,326,323
Induced Effect	165	\$4,875,540	\$9,226,449	\$16,703,945
Total Effect	<u>1,789</u>	<u>\$29,383,688</u>	<u>\$42,827,392</u>	<u>\$98,650,022</u>
Poorest Year Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	1,058	\$13,665,075	\$18,745,968	\$45,029,409
Indirect Effect	129	\$4,244,562	\$5,808,343	\$14,853,716
Induced Effect	120	\$3,562,862	\$6,742,343	\$12,206,617
Total Effect	<u>1,308</u>	<u>\$21,472,499</u>	<u>\$31,296,655</u>	<u>\$72,089,742</u>
*Economic impact values are additive across effects (direct, indirect, and induced), but not across measures (employment, labor income, value added, and output).				

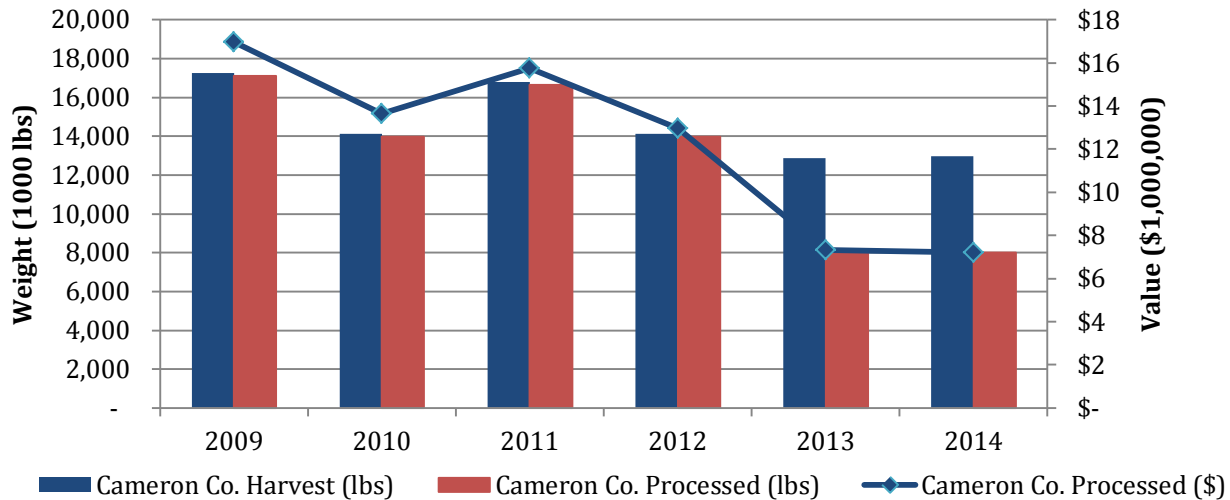
Table 2. Shrimp Harvesting Economic Impacts on State of Texas

Best Year Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	1,756	\$22,701,318	\$31,133,798	\$74,758,017
Indirect Effect	165	\$11,743,737	\$17,571,124	\$41,330,343
Induced Effect	223	\$9,951,264	\$16,931,719	\$29,912,701
Total Effect	2,144	\$44,396,319	\$65,636,642	\$146,001,062
Average Year Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	1,447	\$18,711,701	\$25,662,224	\$61,619,754
Indirect Effect	136	\$9,679,847	\$14,483,107	\$34,066,789
Induced Effect	184	\$8,202,390	\$13,956,073	\$24,655,727
Total Effect	1,767	\$36,593,938	\$54,101,404	\$120,342,270
Poorest Year Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	1,058	\$13,673,811	\$18,752,993	\$45,029,409
Indirect Effect	100	\$7,073,670	\$10,583,712	\$24,894,734
Induced Effect	134	\$5,994,000	\$10,198,576	\$18,017,482
Total Effect	1,291	\$26,741,480	\$39,535,281	\$87,941,625
*Economic impact values are additive across effects (direct, indirect, and induced), but not across measures (employment, labor income, value added, and output).				

Shrimp Processing Economic Impacts

Although the majority of the economic impacts associated with the Cameron County shrimp industry are due to shrimp harvesting, the processing sector (sorting, grading, packing, and shipping) also provides valuable economic benefits to Cameron County and the state of Texas. Shrimp processing employment numbers and estimated revenues were estimated using data provided by the Texas Shrimp Association and one of the local processing firms. The economic impacts of the Cameron County shrimp processing sector have declined in recent years as some local processors have gone out of business and more of the Cameron County shrimp harvest has been shipped to non-local processors (see Figure 2).

Figure 2. Annual Shrimp Processing Statistics (2009-2014)



Processing data provided by Texas Shrimp Association and local processors.

Based on data from 2009 to 2014, the economic impacts of the Cameron County shrimp processing sector were calculated for three different scenarios: 2009 (best year), 2012 (median year), and 2014 (poorest year). The results are presented in Tables 3 and 4.

Table 3. Shrimp Processing Economic Impacts on Cameron

Best Year Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	511	\$2,106,072	\$2,212,305	\$16,978,292
Indirect Effect	68	\$1,595,501	\$2,854,136	\$6,467,676.60
Induced Effect	25	\$735,024	\$1,390,964	\$2,518,220.27
Total Effect	603	\$4,436,597	\$6,457,405	\$25,964,189
Average Year Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	418	\$1,609,097	\$1,690,262	\$12,971,878
Indirect Effect	52	\$1,219,006	\$2,180,638	\$4,941,481.24
Induced Effect	19	\$561,579	\$1,062,734	\$1,923,988.94
Total Effect	489	\$3,389,681	\$4,933,633	\$19,837,348
Poorest Year Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	239	\$893,124	\$938,174	\$7,200,000
Indirect Effect	29	\$676,606	\$1,210,356	\$2,742,753.60
Induced Effect	11	\$311,702	\$589,867	\$1,067,904
Total Effect	278	\$1,881,432	\$2,738,398	\$11,010,658

*Economic impact values are additive across effects (direct, indirect, and induced), **but not** across measures (employment, labor income, value added, and output).

Table 4. Shrimp Processing Economic Impacts on State of Texas

Best Year Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	511	\$2,127,380	\$2,233,460	\$16,978,292
Indirect Effect	68	\$2,469,560	\$3,821,525	\$7,200,595.51
Induced Effect	25	\$1,326,921	\$2,258,724	\$3,990,102.36
Total Effect	603	\$5,923,862	\$8,313,709	\$28,168,990
Average Year Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	418	\$1,625,376	\$1,706,425	\$12,971,878
Indirect Effect	52	\$1,886,812	\$2,919,749	\$5,501,451.27
Induced Effect	19	\$1,013,804	\$1,725,727	\$3,048,546.98
Total Effect	489	\$4,525,992	\$6,351,901	\$21,521,876
Poorest Year Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	239	\$902,160	\$947,146	\$7,200,000
Indirect Effect	29	\$1,047,269	\$1,620,598	\$3,053,563.20
Induced Effect	11	\$562,709	\$957,859	\$1,692,086.40
Total Effect	278	\$2,512,138	\$3,525,602	\$11,945,650
*Economic impact values are additive across effects (direct, indirect, and induced), but not across measures (employment, labor income, value added, and output).				

Analysis Notes

- Annual shrimp landings data (amount and value) were provided by NOAA Fisheries.
- Annual estimates of shrimp processing direct employment, shrimp processed in Cameron County (lbs), and shrimp processing revenues were generated based on input provided by the Texas Shrimp Association and personnel at Cameron County shrimp processing firms.
- Economic impacts were calculated using IMPLAN (Impact analysis for PLANning) a software program that calculates economic impacts using classic input-output analysis.
- Harvesting impacts were calculated using IMPLAN sector 17 (Commercial Fishing), processing impacts were calculated using IMPLAN sector 93 (Seafood Production, Preparation, and Packaging).

References

Adams, C., D. Mulkey, and A. Hodges. 2002. Economic importance of the San Carlos Island shrimp processing industry to the Lee County economy. *In* D. Letson, and J.W. Milon (Editors), Florida coastal environmental resources: a guide to economic valuation and impact analysis, p. 131-144. Fla. Sea Grant Rep. SGR-124.

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