SEAFOOD RETAIL AND RESTAURANT SURVEY

North Carolina's Wild Caught Fishing Industry

Economic Impact Assessment

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I. Introduction

In 2019 N.C. commercial fishermen landed just under $90 million in oysters, crab, finfish, and shrimp. Beyond this, economic value is created at each step of supply chain: processing and distribution by N.C. fish dealers; sales via specialty N.C. markets and grocery store chains; and preparation and sale in a N.C. restaurant serving N.C. seafood.

Because there are many N.C. fishers, ways North Carolinians consume N.C. seafood, and pathways for the food to move from fisher to consumer, there is no single existing data source on demand and supply. To fill this data gap and provide insight into the businesses that serve N.C. seafood to N.C. consumers, we conducted a combined phone and mail survey of retail seafood establishments and restaurants in North Carolina.

Section II of this report details the survey approach. We were generally interested in finding the total amount of seafood sold; its wholesale cost (providing estimates of margins and "value-added" by these establishments); and in gauging the variety, popularity, and barriers to selling N.C. seafood as perceived by restaurants and retailers.

In section III, we provide aggregate results at the restaurant and retail level. N.C. seafood is a specialty product sold by a small portion of the over 20,000 restaurants in the state and a select group of seafood retailers. However, N.C. seafood is critically important to the businesses that sell it. For restaurants that sell N.C. seafood, on average 62% of seafood sales are from N.C. For seafood retailers that sell N.C. seafood, 75% of seafood sales are N.C. products.

In section IV we break down our results on a more granular level, by species and geography. Restaurants and retailers differ in their key products. Aggregate sales numbers indicate restaurants sell mostly finfish and oysters, while the most popular retail item is shrimp. These differences indicate that although consumers value N.C. seafood in both settings, their preferences for type differ based on whether they are preparing it themselves.

In section V, we document the key products, consumer preferences, and barriers to N.C. seafood sales in the state. While both types of establishment receive direct consumer requests for N.C. seafood, the frequency and consistency of these requests is higher for retailers. Because of this, the key barrier perceived by retailers is their ability to receive a consistent volume of fish from their suppliers and under current state regulations. Restaurants, having less of a "pull" for N.C. product from consumers, worry more about the cost of N.C. seafood.

Finally, a word of caution in the interpretation of our results. We began conducting our survey in early March of 2020, just as the COVID pandemic led to in-person dining restrictions and closures. In general, our survey asked about past, rather than present conditions because it was aimed at determining the economic impact for the prior year (2019).

The COVID crisis affected our results in two ways. First, it increased the difficulty of contacting restaurants and limited their willingness to participate. Second, going forward it means that our estimates are a snapshot of the way things were. As of December 2020, one in six restaurants have closed down as a result of the pandemic and related dining restrictions.[1] According to a survey administered by the National Restaurant Association, approximately 80% of restaurants report losing revenue over the past year and expect conditions to worsen during the first months of 2021,[2] suggesting the conclusions we draw from the results may not hold going forward, especially in the near-term.

II. Survey Approach

The seafood restaurant and retail samples were identified from a U.S. Businesses Database maintained by DataAxle.[3] We began with a full sample of North Carolina restaurants associated with the NAICS codes: 722511 (full-service restaurants), 722513 (limited service restaurants), 722515 (snacks & non-alcoholic bars), and 722514 (cafeterias, grill buffets & buffets). We identified seafood restaurants by searching for restaurants with the following key words in the name: "seafood," "fish," "shrimp," "crab," and "oyster". The seafood restaurant list was augmented by restaurants known to sell N.C. seafood by the research team as well as those on a list of N.C. seafood sellers provided by the N.C. Department of Agriculture. This list consisted of 374 North Carolina restaurants.

From the base list of restaurants, we contacted restaurants in 5 key markets: North Coast (Dare County), Central Coast (Carteret County), South Coast (New Hanover and Brunswick Counties), the Triangle (Wake and Durham Counties), and the Triad (Guilford and Forsyth Counties). The research team had limited success in receiving survey responses from the Charlotte Metro Area and western North Carolina, although businesses in these areas were contacted. Overall, the research team contacted 207 restaurants.

For seafood markets, we searched DataAxle database for NAICS code 542101 (seafood-retail). Using this information as well as research team knowledge of retailer names and locations and the N.C. Department of Agriculture list, we created a base list of 194 markets. Our survey team contacted 113 fish markets in the five key regions, again having difficulty receiving responses from Charlotte and western North Carolina. We also contacted five major grocery store chains known to purchase N.C. seafood.

In aggregate, we received responses from one (of five) grocery store chain, 18 (of 113) seafood markets, and 14 (of 207) restaurants. Each of the establishments was contacted via phone (at least once and as many as six times) and email. They were also contacted via Facebook, or Instagram, if available. After initial contact, each business that had not yet filled out a survey was mailed a paper survey to fill out. Contacts and responses are shown in table 1 by market area.

[1] The Hill. https://thehill.com/business-a-lobbying/529097-one-in-6-us-restaurants-have-permanently-closed-amid-pandemic

[2] December 2020. National Restaurant Association. Restaurant Industry Tracking Survey. https://restaurant.org/downloads/pdfs/advocacy/covid-19-restaurant-impact-survey-v-state-results

[3] https://www.data-axle.com/

Table 1: Retail/Restaurant Contacts and Responses

	Contacts		Responses	
	Markets	**Restaurants**	**Markets**	**Restaurants**
North Coast	19	17	5	3
Central Coast	18	26	5	3
South Coast	20	43	3	2
Triangle	20	67	4	4
Triad	5	30	1	2
Charlotte Metro	27	19	0	0
West	4	5	0	0
Total	113	207	18	14

III. Aggregate Results

Table 2 shows results for the 18 retailers that responded to our survey, although not all retailers answered all questions. The average by retailer indicated that 75% of the seafood sold was harvested in N.C. waters, with this amount varying from 4% to 100%. On average, retailers responding to our survey sold nearly 80,000 lbs of fish for close to $700,000 in sales per year.

Table 2: Overall Retail Survey Data (questions 2-4)

Variable	**Obs**[4]	**Mean**	**Std. Dev.**	**Min**	**Max**
Total volume of seafood sold (lbs.)	17	77,940	100,908	7,000	444,800
% of seafood volume from N.C.	18	75%	29%	10%	100%
Total Retail Sales ($)	18	678,338	1,184,841	26,270	5,265,160
% of total sales from N.C.	16	77%	30%	4%	100%

Similarly, table 3 shows the overall restaurant data. Although 14 restaurants responded to our survey, only 13 provided answers to general sales questions, and only 11 answered all questions. For the respondents, about 60% of total seafood sales are N.C. harvested, although this is highly variable. Our sample was heavily skewed towards restaurants that specialize in N.C. seafood and should not be extrapolated to other restaurant types in the state. The average responding restaurant sells about a half million dollars in N.C. seafood each year, with the largest respondent selling over $1 million.

[4] "Obs" is the number of restaurants that gave an answer for that specific question

Table 3: Overall Restaurant Survey Data (questions 1-8)

Variable	Obs	Mean	Std. Dev.	Min	Max
Total Sales	13	$2,127,364	$1,966,159	$358,000	$7,700,000
Sales from seafood	13	$1,116,660	$1,575,677	$43,901	$5,000,000
% of seafood from N.C.	13	60%	35%	2%	100%
Total wholesale seafood cost	12	$338,169	$431,607	$13,569	$1,361,150
N.C. Sales (Seafood)	13	$307,514	$309,844	$4,000	$1,050,000
N.C. Wholesale costs (Seafood)	11	$87,017	$162,547	$660	$585,295
Employees	13	51	38	8	140

Our data also provide insight into the business model behind restaurants and retailers that sell N.C. seafood. Gross margins on N.C. seafood are high, 74% for restaurants and 67% for retailers. This suggests that a subset of N.C. consumers have a high willingness to pay for N.C. seafood, providing a high price point to allow specialty retailers and restaurants to offset the costs associated with marketing and selling a unique product.

Based on the survey results, we directly document $6.6 million in N.C. seafood sales from retailers and $4.0 million for restaurants. However, these numbers are not directly comparable, and represent only a fraction of N.C. seafood sales by these types of establishments within the state. Our study received a higher proportion of responses from retailers--18 out of an estimated 194 N.C. seafood retailers in the state--relative to restaurants--14 out of a possible 374 estimated seafood restaurants in the state.

Table 4: Total Seafood Sales and Costs (Retail/Restaurants)

Category	Retail	Restaurant
Aggregate Sales	$7,936,930	$27,717,017
Wholesale Costs	$3,419,687	$4,096,876
N.C. Sales	$6,613,798	$4,047,677
N.C. Wholesale Costs	$2,192,125	$1,044,205

IV. Results by Species and Region

Our survey instrument also allows us to partition the data into four fish types: finfish, shrimp, crabs, and other shellfish, as shown in Table 5. Note these numbers may not add up to the totals provided in Table 4 because the data come from distinct question answers on the survey.

Finfish represent the largest category of N.C. restaurant sales of N.C. seafood, and N.C. shrimp the highest sales for N.C. retail establishments. Gross margins vary across fish type, and within type between retail and restaurants. Restaurant gross margins are higher across all categories, with crab and shellfish margins significantly higher compared to retail, while shrimp and finfish margins are more similar to retail margins. Table 6 provides establishment level average sales and costs by region.

Table 5: Aggregate Survey Sales and Wholesale Cost Data by Species

	Retail	Restaurant
N.C. Finfish Sales	$2,707,360	$927,950
N.C. Finfish Costs	$928,406	$295,889
Margin	66%	68%
N.C. Shrimp Sales	$2,996,832	$189,750
N.C. Shrimp Costs	$861,682	$46,150
Margin	71%	76%
N.C. Crab Sales	$638,930	$98,525
N.C. Crab Costs	$274,825	$19,899
Margin	57%	80%
N.C. Shellfish Sales	$270,676	$393,110
N.C. Shellfish Costs	$127,213	$106,068
Margin	53%	73%

Table 6: Average Sales and Wholesale Cost for N.C. Seafood by Region.

	Retail	Restaurants
North Coast	$113,470	$229,369
Costs	$63,474	$22,000
Margin	44%	90%
Number	5	2
Central Coast	$72,767	$281,233
Costs	$23,759	$213,408
Margin	67%	24%
Number	5	2
South Coast	$182,932	$377,000
Costs	$23,198	$74,655
Margin	87%	80%
Number	3	2
Triangle/Triad	$66,456	$323,540
Costs	$25,437	$38,778
Margin	61%	88%
Number	5	6

V. Qualitative Results

We also surveyed restaurants and retailers about the frequency with which they receive requests for N.C. seafood, barriers to selling N.C. seafood, and participation in N.C. Seafood programs.

Table 7 shows the responses to the question: “How often do customers request North Carolina seafood?” While both types of establishment receive direct consumer requests for N.C. seafood, the frequency and consistency of these requests is higher for retailers.

Table 7: How Often Customers Request N.C. Seafood

	Retailers	Restaurants
Never	1	3
Once a month	0	0
Once a week	2	0
Few times a week	0	6
Everyday	14	4
Total respondents	17	13

This response appears to be consistent with results to the question asking establishments to identify key barriers to selling more N.C. seafood. Retailers most commonly (6 of 16 respondents) stated political regulations/rules were the greatest barrier to receiving a consistent volume of fish. Retailers identified inconsistent volume (13 of 17) and species availability (11 of 17) as secondary limiting factors. However, there was no consensus about what species were provided inconsistently.

For restaurants, the most commonly identified limiting factor was the price/cost of N.C. seafood (6 of 12 respondents). However, inconsistent volume was also identified as a secondary barrier (9 of 13). Similar to the retailers, although many restaurants agreed inconsistent volume and species availability were barriers, there was no consensus on which species was difficult to obtain.

Finally, we asked retailers and restaurants about participation in N.C. seafood marketing and promotion programs, with results shown in Table 8. Nearly all respondents were aware of all of the programs (only one retailer of the 31 total was not aware of any programs). Seven retailers and four restaurants surveyed did not participate in any N.C. seafood program.

Retailers and restaurants surveyed generally participate in one or two seafood marketing programs. This suggests the programs are viewed as substitutes. For instance, three of five retailers and two of three restaurants on the Central Coast participated in Carteret Catch, which is focused exclusively on fish landed within that region, while businesses in other areas choose other programs.

Table 8: Awareness and Participation in N.C. Seafood Programs

	Retail		Restaurant	
	Aware	Participant	Aware	Participant
Freshness from N.C. Waters	6	1	6	1
Gotta be N.C.	14	3	11	4
N.C. Catch	13	5	11	2
Outer Banks Catch	11	2	9	3
Carteret Catch	11	3	9	3
Brunswick Catch	10	1	10	2
None	1	7	0	4
Respondents	17		14	