A Business and Economic Profile of Seafood Dealers In North Carolina: Decadal Comparison

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For the

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Introduction

North Carolina's marine fisheries support a wide range of commercial and recreational activities that strongly contribute to the state economy, and have created a robust supply chain with many industries reliant on these resources. The North Carolina Division of Marine Fisheries (NCDMF) 2019 Annual Report estimated the statewide sales impact of commercial fishing was over $300 million dollars (NCDMF, 2019) which is the cumulative output impact generated from roughly $78 million in fishery products landed. A significant contribution to this impact is from seafood dealers in North Carolina. A seafood dealer's license is required in the state to buy seafood from commercial fishermen (who also need to be properly licensed) and requires a physical address to be obtained. As such, NCDMF seeks to better understand the socioeconomic condition and opinion of the state's licensed seafood dealers.

This document reports the results of a socioeconomic survey of the state's seafood dealers, which was distributed to all dealer license-holders in the fall of 2019. The study is a decadal follow-on from a previous NCDMF Dealer's study, which was conducted in 2009, which only interviewed dealers with sales exceeding $10,000 in 2008 (Hadley and Crosson, 2010). Portions of the survey text were kept identical to the previous study in order to compare trends, which can be modified to fit the same sales criteria. However, some of this data will be novel, as survey design was updated as necessary to reflect any industry shifts over time.

Study Objectives

The primary goal of this study is to understand the socioeconomic condition of seafood dealers in the state. This concept covers a variety of components to dealership operations but is principally focused on quantifying the various inputs and outputs to the business. Specifically, the study seeks to capture the fixed and variable costs necessary to operate a seafood dealership, as well as a typical revenue stream and the economic constraints that outside factors, such as regulation, supply chains, and environmental changes can have on the business. Additionally, this information will help profile the general size, scope, and operational profile of seafood dealers in the state, as they tend to vary considerably. In all, this collection of economic data will help to better understand the cash flow-level logistics of operating a seafood dealership in North Carolina.

Beyond this direct economic analysis, this study also seeks to better gauge the perspectives and challenges faced by dealers more broadly. By using target questioning around key barriers of success, business conditions, and regulations, this will seek to craft a deeper characterization of seafood dealers in the state, to see what strongly impacts their business the most, and how NCDMF can better craft management strategies that aid this critical group of stakeholders in the seafood supply chain.

Methods

Study Population

Survey materials were sent to all seafood dealers in North Carolina that purchased a dealer's license for either the 2019 or 2020 license year. A license year covers from July 1st to June 30th each year, so the 2019 license year is defined as July 1, 2018 to June 30, 2019, etc. The 2019 license year holders were included in this sample population given the timing of the survey, as many had not yet renewed their licenses for 2020. This ensured NCDMF sampled all acting seafood dealerships in the state. In all, this list comprised 727 licensed seafood dealers, spread across 46 of North Carolina's 100

counties. NCDMF used license and Trip Ticket Program data to collect this sample file and requisite contact information, which includes mailing addresses, phone numbers, and email addresses.

Survey Design

The overarching goal of the survey instrument was to repeat questions from the 2010 study, where possible, in order to compare over time, as well as add in components to further illuminate dealers' business conditions and opinions on management in North Carolina. With this, any questions from the previous iteration that were deemed fit to ask in 2020 were repeated verbatim, while the remaining questions from the 2010 survey were then revised or removed. Following this process, additional questioning was added to the survey to cover specific topics of interest. Examples of new subject matter included updated technology, aquaculture, and supply chain logistics. Overall, the survey instrument contained twenty individual questions across five categories: Introduction, Dealership Business Background and Operations, Expenses, Supply Chain & Logistics, and Closing Thoughts. A copy of the survey instrument can be found in Appendix I.

Implementation

Survey fielding was conducted across multiple phases and modes in order to maximize participation. In terms of design, the instrument was made available in three different modes to accommodate respondents. The survey was created as a paper hardcopy, which was sent directly to the entire sample population, coded online into SurveyMonkey®, and designed into a telephone interview script. Following this process, survey materials and outreach was released in phases to elongate the fielding process and boost response rates.

A mailing packet was distributed to every holder of a seafood dealer license in North Carolina on October 2, 2019, which totaled 727 license-holders. A press release was also distributed to the public on this day informing of the launch of the study, the goals of the research, and who can expect to receive survey materials (Appendix III). The packet contained a paper copy of the survey that could be filled in directly, a pre-paid business reply envelope to mail the paper survey back, a letter which contained an explanation of the nature and goals of the study, a unique participant ID to track their responses, and a link to the online survey (Appendix II).

Following roughly six weeks of response collection after the initial mailout, a second mailing was prepared and distributed to all seafood dealer license-holders that had not yet responded to the survey, which totaled 574 license-holders at the time (79% of dealer population). This letter served to remind the remaining sample population of the study and encourage them to take the survey online or complete the hard copy provided in the first mailout. Additionally, this letter served to notify potential respondents about the phone component being added to the study. Specifically, recipients were notified they may soon receive a call directly from NCDMF to complete the survey over the phone and were also informed they could call NCDMF directly themselves if they prefer. NCDMF prepared a team of four interviewers to assist with this phase. This reminder letter was distributed on November 21, 2019. The first phone calls began on December 10, 2019 and concluded when the entire sample population had been contacted. Fielding concluded on March 25, 2020.

Analysis

Overall, results from this survey were analyzed using descriptive statistics (primarily mean, distribution analysis, and mode), decadal trending, and subpopulation analysis. However, specific facets of this study require updated methods and carry limitations. The study received 199 total responses, respondents were not required to complete each question, and were asked to voluntarily share details of their business. This allowed dealers to selectively respond to survey questions, which not only reduced number of responses ("N values") for individual questions, but also led to varying N values based on the question of focus. These factors led to a descriptive analysis approach rather than any econometric modeling, as potential bias in response choice would impact results.

Many questions were repeated verbatim from 2010 for analytical purposes, although there was a notable methodological difference. Specifically, in the previous study, only dealers that reported $10,000 in sales or more in 2008 were selected as the sample population. In this study, all seafood dealer license-holders were in the sample population. In order to accurately track trends over time, all data being compared to the 2010 study will be filtered to only include 2019 respondents with a price-adjusted revenue equal to $10,000 in 2008 dollars. Specifically, $10,000 was adjusted from 2008 prices to 2019 prices using the St. Louis Federal Reserve Bank Producer Price Index for Unprocessed and Packaged Fish, which equates to $13,637 (U.S. Bureau of Labor Statistics). This represents the cutoff bin for price-adjusted analysis, so responses from those with annual sales of $13,637 or more were compared to the previous survey.

Results

Participation and Demographics

In all, 199 total responses were collected, representing roughly 27% of the state's licensed seafood dealerships. Based on responses of business locations, dealers were predominately distributed across the coastal regions of North Carolina. The most common business locations were Wilmington (12), Beaufort (12), Snead's Ferry (8), Ocracoke (6), Hampstead (6), and Morehead City (5). Given the voluntary nature of this study, participants were not required to provide responses to each question, resulting in varying base sizes across questions. Overall, response totals ranged from 199 to 133, meaning no question had less than 67% of the survey population answering. However, most questions displayed a base range between 152 and 192 (76% - 96% of total respondents).

Operations and Logistics

Employment

From an operational standpoint, most seafood dealers operate their business out of a separate location than their household (Figure 1). However, a large proportion (41%) also operate their dealership from their home, underscoring the smaller scale at which many of these businesses operate.

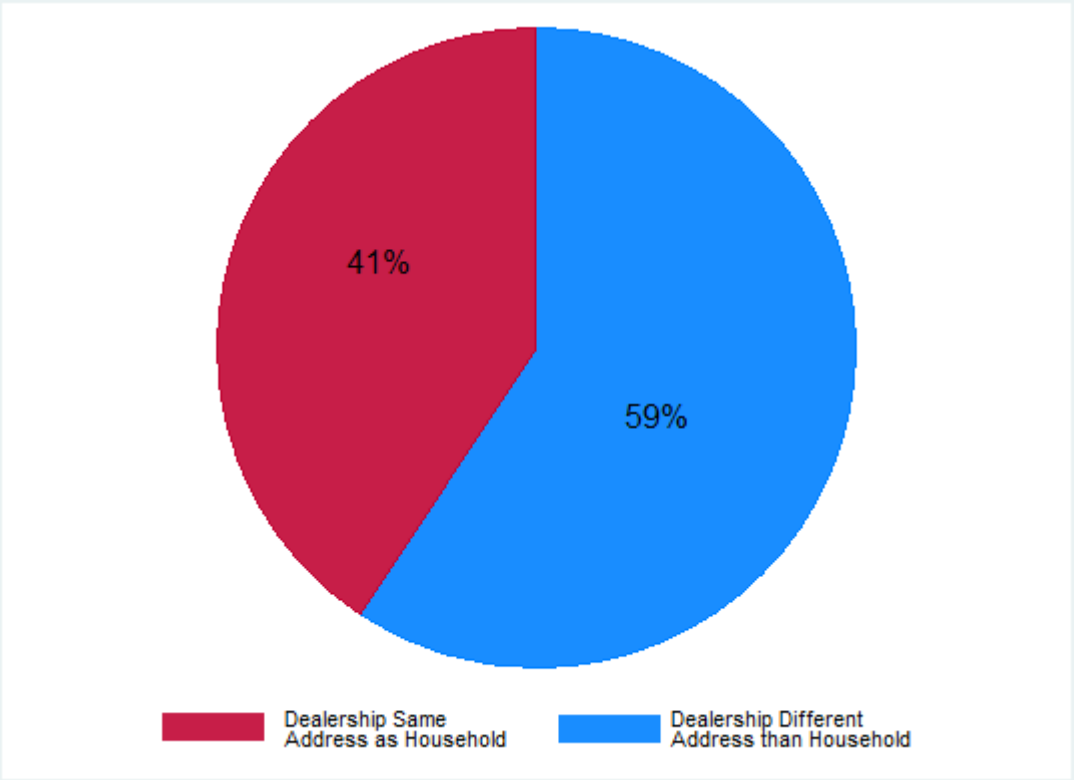


Figure 1: Proportion of Dealers Operating Out of Their Household (N=199).

In terms of employment, most (65%) seafood dealers operate with no additional year-round employees (Table 1). Roughly one-quarter of dealers reported employing between 1 and 5 full-time employees. A small proportion (5%) of dealers reported employing more than 10 full-time employees. The average number of full-time employees for seafood dealers is 2.81, though this value is impacted by significant outliers of 85 and 125 employees (Table 2). When these outliers are removed, the average number of year-round employees drops to 1.7, further underscoring the low overall employment utilization in this industry.

Additionally, while the usage of seasonal employees follows similar trends overall, there is a slightly higher usage of this type of labor compared to full-time employment. Specifically, roughly one-third of dealers use between 1 and 5 seasonal employees, compared to just one-quarter for full-time (Table 3). However, most dealers (57%) still report employing zero seasonal employees, and 5% employ more than 10. The mean number of seasonal employees is 2.36, aided by less intensive outliers, as the maximum value came from two dealers reporting the use of 40 seasonal employees (Table 2).

Seasonal employee usage appears highly correlated to peak tourism and harvest seasons. The largest number of seafood dealers report using seasonal employees between the months of June and October, with usage lowest in the winter months of December, January, and February (Figure 2). The number of dealers employing seasonal labor peaks in July and August, and is lowest in February. While this question did not specifically mention the usage of migrant labor, there is a flow of these workers during peak harvest season, and may be contributing to some of the higher reported values of seasonal employee usage.

Table 1: Number of year-round employees on staff per seafood dealership (N=191).

Number of Year-Round Employees	Number of Dealers Reporting	Percentage of Total
0	124	65%
1-2	25	13%
3-5	25	13%
6-10	7	4%
11-20	6	3%
20+	4	2%
TOTAL	191	100%

Table 2: Usage of year-round and seasonal employees across seafood dealerships surveyed (N=191).

Average Number of Year-Round Employees	2.81
Minimum Number of Year-Round Employees	0 (N=125)
Maximum Number of Year-Round Employees	125 (N=1)
Average Number of Seasonal Employees	2.36
Minimum Number of Seasonal Employees	0 (N=108)
Maximum Number of Seasonal Employees	40 (N=2)

Table 3: Number of seasonal employees on staff per seafood dealership (N=191).

Number of Seasonal Employees	Number of Dealers Reporting	Percentage of Total
0	108	57%
1-2	50	26%
3-5	13	7%
6-10	9	5%
11-20	5	2%
20+	6	3%
TOTAL	191	100%

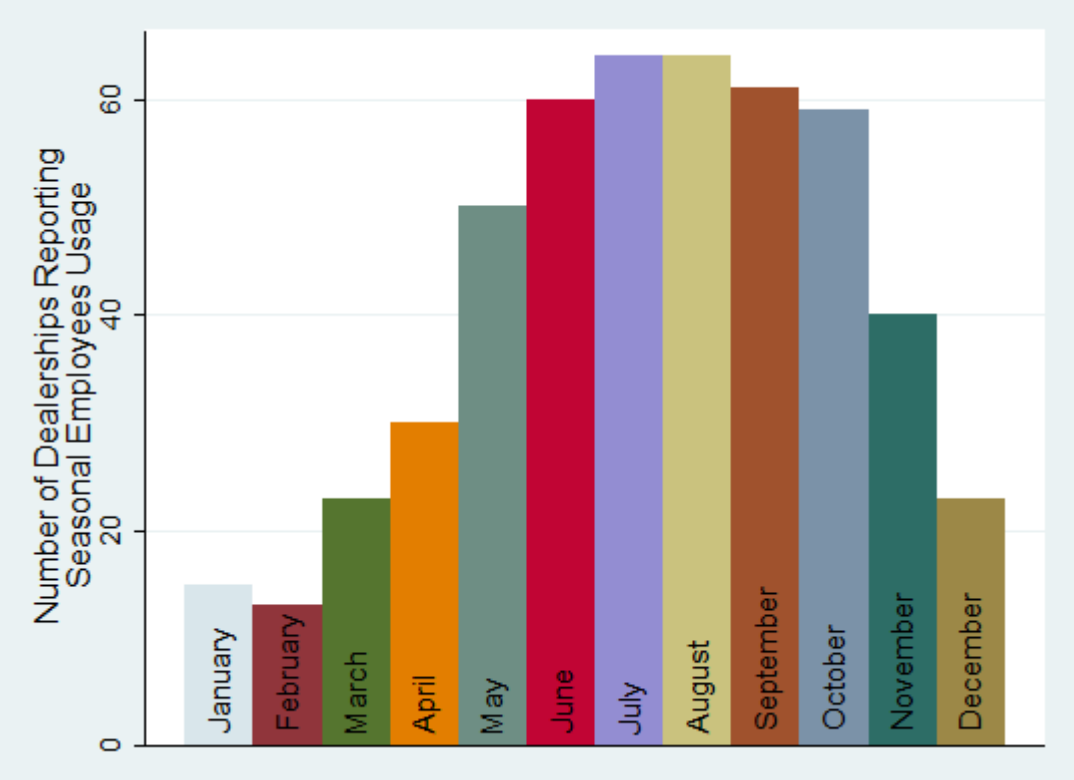


Figure 2: Seafood dealerships utilizing seasonal employees by month in the previous year (N=199).

Processing

When asked specifically about employee usage for seafood processing, similar trends emerged. Two-thirds of respondents claim that no seafood processing is done at their dealership (Figure 3), while 84% of respondents claim to keep no employees on staff for seafood processing work as well (Table 4). While 12% of seafood dealers use 1-5 employees, very few seafood dealers (5%) employee more than 5 employees for processing purposes (Table 4). Broadly, this may suggest that larger seafood dealers prefer to outsource processing as a means of efficiency.

Of the 25 respondents that discussed the types of seafood they process; the most common practices were filleting of finfish and cleaning shrimp. While some seafood dealers discussed picking crab and shucking mollusks, these practices were also commonly cited as things certain dealers avoid. Lastly, cooking was most consistently cited as a processing practice to avoid. Of those that do not participate in seafood processing, 48 respondents provided insight into where that is done for their products. There are few clear trends in processing outside of dealerships, with respondents citing retail consumers, restaurants, wholesalers, out-of-state dealers, or fishermen as responsible for processing. While this may not provide much insight into the state's processing industry, it may actually underscore the disjointed nature of seafood processing in North Carolina, as there is no clear mandate for who, or how, seafood should be processed.

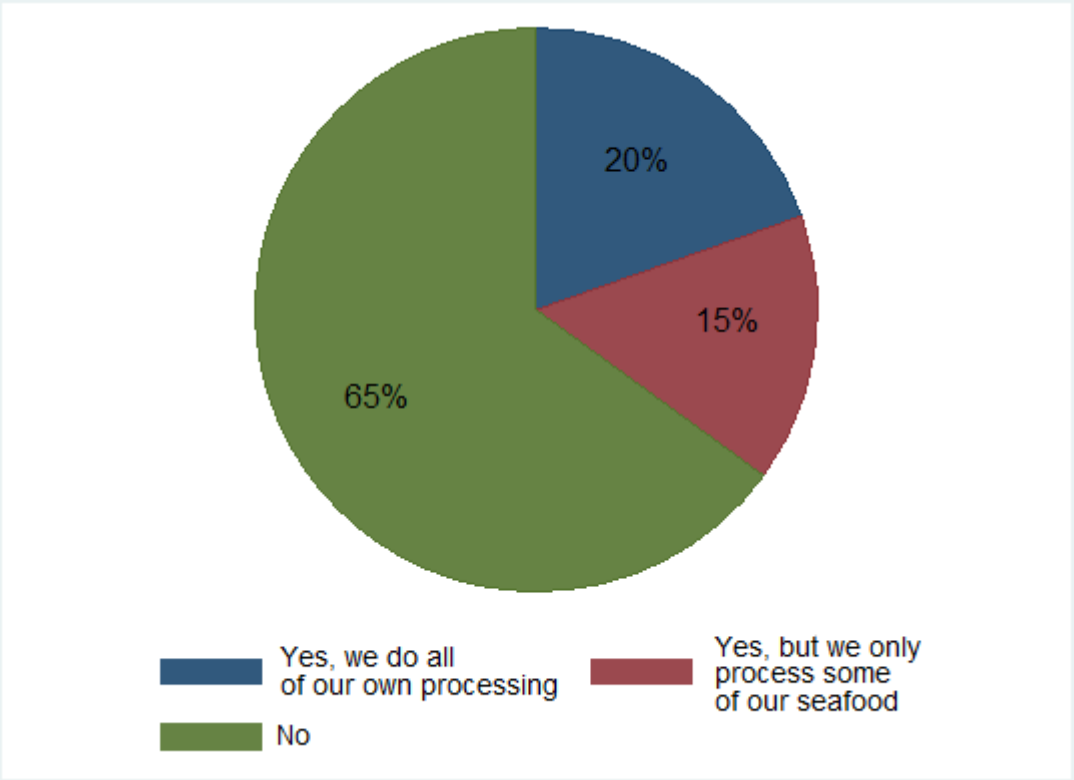


Figure 3: Proportion of seafood dealers by processing type (all, some, or none) (N=163).

Table 4: Number of employees on staff to do seafood processing per seafood dealership (N=199).

Employees on staff for seafood processing	Number of Dealers Reporting	Percentage of Total
0	167	84%
1-5	24	12%
6-10	3	2%
11-20	3	2%
21+	2	1%
TOTAL	199	100%

Transport and Logistics

When asked about the supply chain of products to and from their dealership, 84 respondents discussed whether certain species or products were more difficult than others to transport. Of those, most did not believe that certain species or products were more difficult, suggesting that the supply chain is not significantly altered based on species. A consistent theme of those that see differences across species and products was that transporting crustacea and shellfish is more difficult logistically. This specifically related to different regulations regarding live products, refrigeration, and different packaging requirements.

Following this, considering if certain types of seafood buyers are more difficult to ship product to, 77 dealers provided feedback. Again, most dealers felt there was no difference across buyers in terms of transportation logistics. Among those that do see differences among buyers, the consistent themes were transportation out of state or transporting live products. With this, it is important to highlight that no dealers cited specific types of buyers as more difficult. Rather, supply chain logistics are merely impacted by distance and product type, not end-user.

Lastly, when asked to reflect on their one largest concern about transporting seafood products to and from their dealership, the most common concerns were temperature control and rising prices of fuel and labor, as well as a greater economic burden from licensing and updated compliance regulations (N=88). In short, it appears concerns around transportation are relatively straightforward, as they all reflect notions of maintaining quality, compliance, and margins.

Sales and Expenses

Sales

Overall, licensed seafood dealers in North Carolina operate in a diverse market, managing both a range of products, as well as buyers. In a high-level examination of sales, seafood dealers were asked to estimate what percentage of their annual revenue was a result of sales across five specific channels. In an aggregation of these estimates, 49% of all sales go directly to consumers, underscoring the importance of a retail supply chain (Figure 4). Following this, 22% of sales are to other dealers in North Carolina, followed by restaurants (12%) and out of state dealers (11%).

However, while these estimates outline how the seafood dealer population distributes seafood broadly, it does not take into account the varying revenues across respondents, and how that may impact the true proportion of sales. When individuals' sales distributions were weighted by their total revenue, interesting patterns emerge (Figure 5). Firstly, while direct to consumer is still the dominant channel, its total proportion dropped by 10%, underscoring how larger seafood dealerships rely less on this outlet as a revenue stream. Additionally, while the proportion of sales to restaurants remains relatively steady, the total percentages of sales to in-state and out of state dealers flipped. This provides an interesting insight into the differences in business practices among dealers, as it demonstrates that the state's higher-revenue operations rely much more on export business, while smaller dealers tend to stay more in state.

Additionally, seafood dealers were asked to specify which species or products are most important to their business' success (Table 5). Unsurprisingly, the products identified as most important are also those that annually boast the highest ex-vessel sales, such as shrimp, crab, and flounder. This merely suggests that dealers, like most businesses, are most reliant on volume, rather than value, and are most reliant on those products that move in the greatest quantities through the state's seafood supply chain annually.

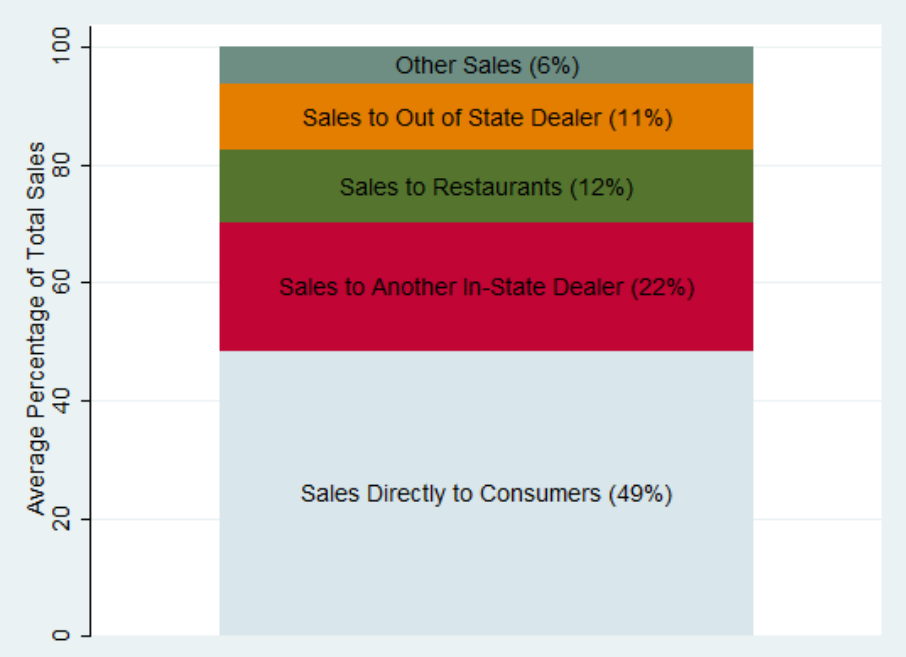


Figure 4: Average proportion of sales from seafood dealers broken down by buyer. Values listed reflect an average of the estimates from each seafood dealer surveyed, not weighted from individual revenue (N=163).

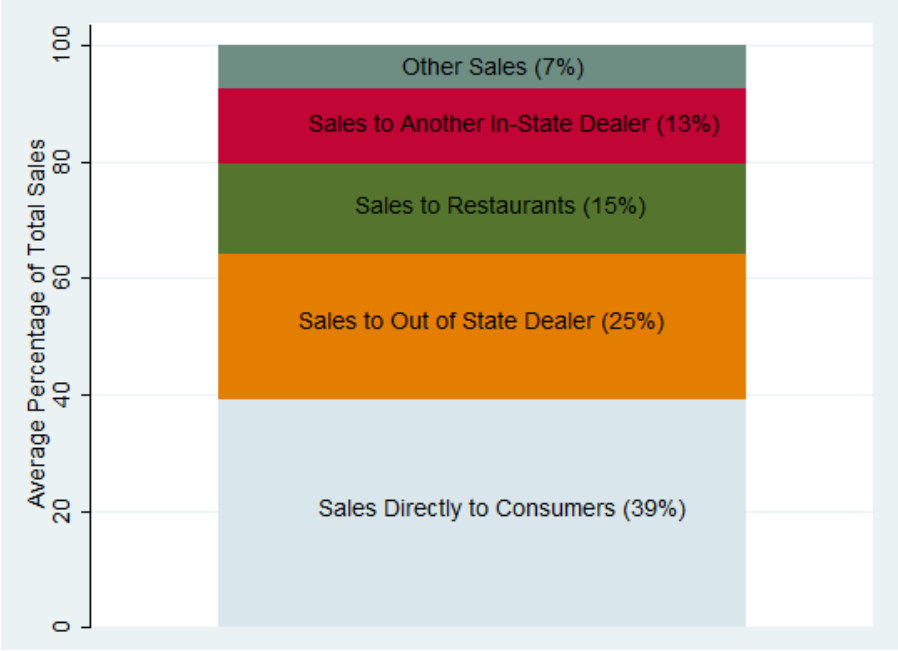


Figure 5: Weighted average proportion of sales from seafood dealers broken down by buyer category. Values listed reflect the weighted distribution of sales using respondents' reported revenue and estimated sales percentage by buyer category. Note, number of responses is limited to those that reported revenue and estimated sales by category (N=133).

Table 5: Fish or Shellfish species most frequently cited by seafood dealers as most important to their business (N=199).

Product	Total Mentions (N=199)
1. Shrimp	61
2. Crab	47
3. Flounder	35
4. Oyster	30
5. Mullet	21

Looking towards the financial performance of the state's seafood dealers, most operations generate low revenues, keeping in line with trends of low employment. Of the 152 dealers that reported their gross revenue from the year prior, 61% reported annual revenue of $50,000 or less (Table 6). However, the total earnings from this group represents less than 2% of the total survey population, underscoring the concentration of wealth among a small number of larger operations. Specifically, while just 11% of respondents indicated an annual revenue of greater than $1 million, the total earnings of this group comprised over 80% of the revenue from all seafood dealers surveyed. While 28% of seafood dealers that reported revenues fell in between these two extremes, the overall landscape shows most individuals manage small dealerships that are likely seasonal, part-time, or owned in combination with a commercial fishing license, while the large majority of earnings are concentrated within a few large businesses within the state.

Lastly, seafood dealers were asked to conclude their discussion of sales by providing the typical mark-up they apply to seafood prices based on species. Interestingly, the species that were considered the most important for business success (Table 5), were also the species that had the highest average mark-up across respondents (Table 7). Shrimp led among these rankings, with an average price mark-up of 22%. This suggests that dealership success in North Carolina is strongly correlated to profit margin, rather than volume. A large proportion of respondents provided a markup of 0% to each species listed, which is important to note, and most likely untrue as that would imply operating at a loss when considering overhead. With this, the proportion of respondents that provided a 0% mark-up increases steadily from 60% to 95% as the average price mark-up decreases. This makes it difficult to provide any meaningful observations to this data, as mark-up results seem to be mostly correlated to the number of 0% responses given.

Table 6: Total gross revenue per seafood dealership, USD (N=152).

Gross Sales	Number of Dealers Reporting	Percentage of Total	Total Revenue	Average Revenue
$0 - $50,000	93	61%	$1,125,834	$12,237
$50,001 to $200,000	19	13%	$2,107,307	$110,911
$200,001 to $500,000	13	8%	$3,864,503	$335,731
$500,001 to $1,000,000	11	7%	$6,473,398	$747,309
>$1,000,000	16	11%	$57,339,533	$3,583,721
Total	152	100%	$70,910,575	$466,517

Table 7: Average retail price mark-up across all seafood dealers surveyed by product (N=148-163).

Species Group	Average Markup	Total Responses	Percentage Reporting No Markup
Shrimp (white, brown, pink)	22.20%	162	60%
Oysters	15.50%	163	74%
Mullet/Trout	11.30%	162	72%
Blue Crabs (hard)	9.80%	162	76%
Flounder	8.90%	162	73%
Other Finfish	8.70%	156	79%
Blue Crabs (soft)	8.20%	162	80%
Hard Clams	5.70%	162	84%
Scallops	5.40%	163	83%
King/Spanish Mackerel	4.50%	161	88%
Sea Bass/Drum	3.80%	161	86%
Tuna/Swordfish	3.70%	161	88%
Grouper	2.70%	161	91%
Other Shellfish	2.40%	148	95%

Purchasing and Expenses

When considering the expense side of the seafood dealership business in North Carolina, operators were first asked to estimate what proportion of their seafood purchasing occurred across five broad categories: wild or farmed finfish, wild or farmed shellfish and crustaceans, or other. Overall, when examining the average of all dealers reporting, wild finfish and shellfish dominate, constituting over 80% of all purchasing (Figure 6). Interestingly, when respondents' estimates were weighted by their annual revenues, the contribution of these categories swelled to 92% of all purchasing, driven by a large growth in the proportion of wild finfish (Figure 7). These two figures present two takeaways about the North Carolina seafood market. Firstly, wild finfish appears to be a strong market for larger dealers in the state, given the bump in its overall contribution to purchasing once weighted for revenue. Secondly, while the market for farmed oysters is growing rapidly in North Carolina, farmed shellfish still maintains only a small proportion of seafood purchased among dealers, which highlights the ongoing value of wild shellfish and crustacean, likely in the form of blue crab and shrimp.

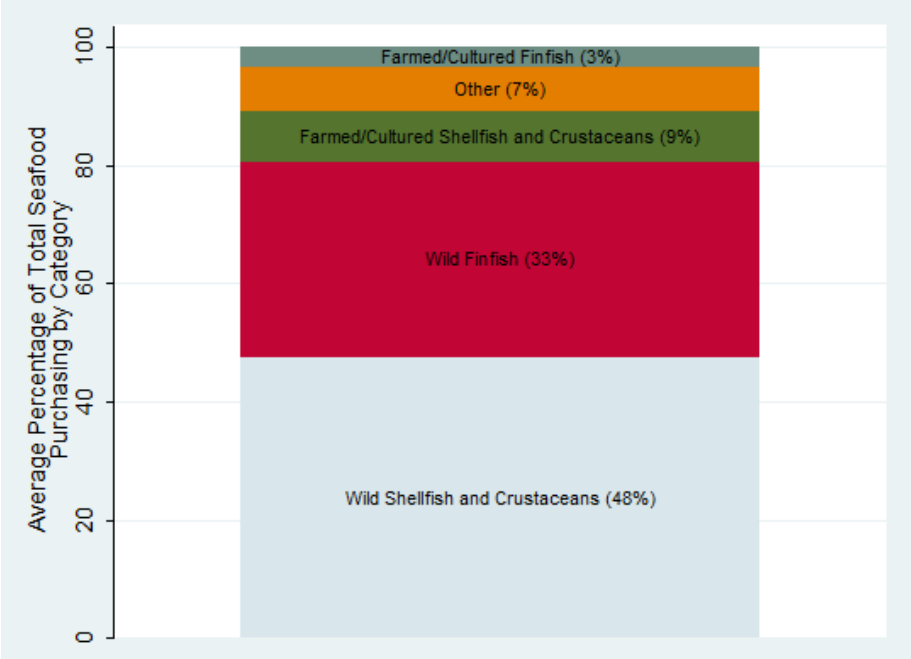


Figure 6: Average proportion of seafood purchases by seafood dealers broken down by product type. Values listed reflect an average of the estimates from each seafood dealer surveyed, not weighted from individual revenue (N=163).

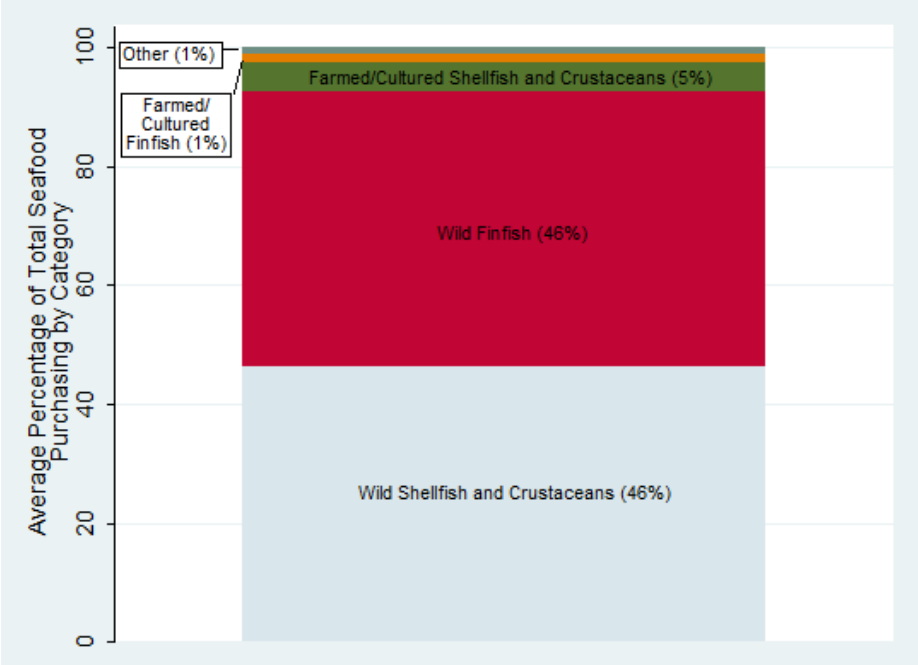


Figure 7: Weighted average proportion of seafood purchases by seafood dealers broken down by product type. Values listed reflect the weighted distribution of seafood purchases using respondents' reported revenue and estimated purchasing percentage by product category. Note, number of responses is limited to those that reported revenue and estimated purchases by category (N=133).

Following an examination of the types of seafood purchased by North Carolina dealers, these operators were then asked to estimate their annual costs across a range of typical expense categories (Table 8). Unsurprisingly, purchasing seafood (both from fishermen and other dealers) carried the highest average annual cost among respondents. Wages, purchasing of other goods for sale, and building maintenance led as the other major cost categories, outlining how many of the peripheral expenses, such as utilities, transportation, and business supplies present a lower financial burden to the seafood dealership business. The cost of business property taxes was assessed separately, with 60% of dealers estimating an annual expense between $500 and $5,000 (Table 9). With this, nearly one-quarter of respondents claimed to pay nothing in business property tax annually, highlighting how many dealers do not own a physical retail space, or operate out of their residential address.

Additionally, costs related to product spoilage in 2019 were assessed to understand how impactful this factor can be to seafood dealerships' overhead costs. Overall, operators demonstrate a strong ability to maintain product integrity, as 60% claim no loss from spoilage in 2019 (Table 10). The remaining 40% of responses were distributed across a range of loss values, though only 4% claimed losses from spoilage greater than $10,000. Lastly, as this survey was implemented in the year following Hurricane Florence, those that experienced losses from spoilage were asked to estimate what percentage of these losses were directly because of that storm. With this, 36% of respondents claimed none of their losses were due to Florence, while an additional 36% claimed Florence was fully responsible for all of their losses to spoilage (Table 11). This shows the highly variable effects of Florence across the state, and how future hurricanes cannot be expected to impact the seafood dealership industry equally. Interestingly, the only significant correlation with the proportion of spoilage due to Hurricane Florence is the amount spent on building repairs and maintenance annually, in which there is a positive correlation ($p<.001$). While this may seem counter-intuitive, it likely suggests that dealerships which invest more in ongoing maintenance are less susceptible to spoilage throughout the year, making their losses from storm events a more significant portion of annual spoilage. Overall, this shows that random spoilage may be more preventable than disaster-related losses at this time, and provides a focus point for future preparedness.

Table 8: Average and maximum annual costs for seafood dealerships across select business categories (N= 174-180).

Business Expense	Average Annual Cost	Maximum Value Reported	Number of Dealers Reporting
Purchases of seafood from NC fishermen	120,246	$4,000,000	180
Purchases of seafood from other NC fish dealers	68,615	$4,000,000	179
Wages and Payroll	53,893	$1,300,000	177
Purchases of seafood from out-of-state	46,765	$2,100,000	177
Non-seafood products that you sell (seasonings, cookbooks, etc.) in this business	27,041	$2,000,000	175
Building repair and other maintenance costs	16,415	$685,000	177
Transportation costs	12,086	$700,000	175
Shipping containers	8,302	$600,000	174
Insurance (including health)	8,164	$186,000	179
Business property rent	7,946	$625,000	178
Electricity	7,011	$188,000	179
Other loans and banking costs	3,821	$216,000	173
Business property mortgage	2,789	$260,000	176
Telephones (including business cell phones	1,485	$18,000	178
Point-of-sale (POS) technologies	1,438	$150,000	177
Office supplies, computers, etc.	1,207	$32,000	179
Water bills	1,020	$20,000	174
Marketing and outreach for your business	984	$25,000	178
Business internet	498	$12,000	172

Table 9: Value of annual business property taxes per seafood dealership (N=130).

Total Annual Value of Business Property Taxes	Number of Dealers Reporting	Percentage of Total
$0	28	22%
$1-$500	8	6%
$501-$1000	25	19%
$1,001-$5,000	53	41%
$5,001-$10,000	8	6%
$10,001+	8	6%
TOTAL	130	100%

Table 10: Value of annual losses due to product spoilage per seafood dealership in 2019 (N=140).

Total Annual Value Lost Due to Spoilage	Number of Dealers Reporting	Percentage of Total
$0	84	60%
$1-$500	13	9%
$501-$1000	8	6%
$1,001-$5,000	19	14%
$5,001-$10,000	11	7%
$10,001+	5	4%
TOTAL	140	100%

Table 11: Proportion of losses from product spoilage that was a direct result of Hurricane Florence (N=55)[1].

Percentage of Spoilage Loss Due to Hurricane Florence	Number of Dealers Reporting	Percentage of Total
0%	20	36%
1%-25%	4	7%
26%-50%	3	5%
51%-75%	5	9%
76%-99%	3	5%
100%	20	36%
TOTAL	55	100%

[1]Responses among those that indicated losses from spoilage greater than $0 in 2019. All proportions greater than 100% omitted from this analysis.

Business Perspectives

Overall, seafood dealers are split in the belief that business conditions in the past 10 years have worsened or remained the same (Figure 8). Nearly half of all respondents believe conditions have worsened (49%), while a similar proportion believe conditions are the same (46%). Interestingly, only 4% believe business conditions have improved for seafood dealers.

Of the eight dealers that believed conditions have improved, justifications for this trend varied across individuals. Generally, the rationale for this improvement centered around helpful regulation leading to good availability, or a robust retail economy that aids spending on high-value, local, sustainable seafood. Conversely, the 94 dealers that claim conditions have worsened largely believe this be due to increasingly stringent regulations and area closures, limiting supply, and the ability to operate overall. Additionally, hurricanes were repeatedly mentioned as a factor for worsening conditions. While this is predominately fueled by the lingering impacts of Florence, it does provide a snapshot of how the commercial fishing industry will face continuing financial hurdles in the face of increased storm frequency and intensity moving forward. Individuals occasionally mentioned issues of seafood prices, increasing operational costs, and water quality as contributing factors, underscoring the myriad of ways seafood dealers can face hardship in this industry.

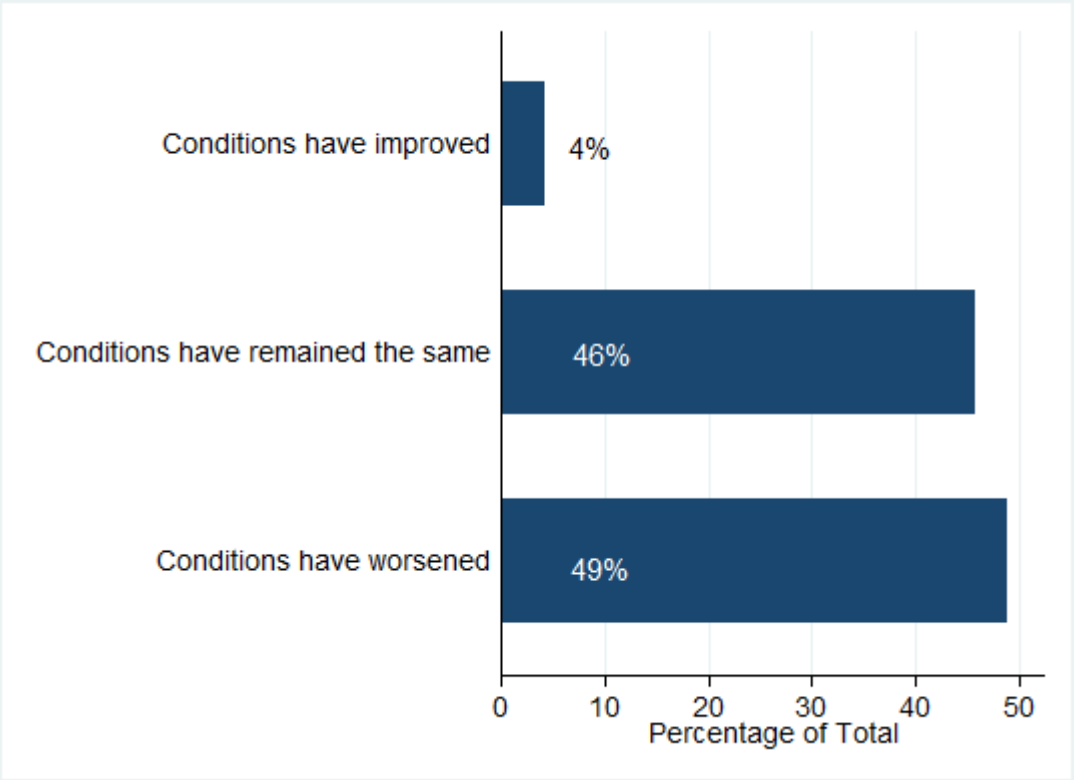


Figure 8: Perspective on how conditions for operating a seafood dealership have changed in the past 10 years (N=199).

In an examination of the factors that determine business success for seafood dealers in the state, respondents largely agree that they are most impacted by two key concepts: regulations imposed on them and access to suitable product. While seafood quality had the highest average importance ranking as a business success factor, regulations and closures quickly followed in ranking, followed by seafood availability and uncertainty of regulations (Figure 9). Overall, this strongly suggests that seafood dealers believe their success is predicated on two key tentpoles: having high-quality product that consumers will demand and coping with a regulatory structure that isn't directly imposed on dealers, but rather on the fishermen that supply their product. Conversely, competition was consistently ranked as the least important success factor, regardless of whether the competition was in-state, out of state, or foreign. In all, this demonstrates that dealers believe their individual success is largely unrelated to leading in their industry or beating competition and is rather much more reliant on overcoming fisheries regulations and maintaining a steady flow of quality seafood product.

In general, this concept is reinforced in the qualitative responses from dealers. When asked to discuss which success factor is singularly most important, regulations and closures dominated as the most-mentioned issues (Table 12). Additionally, as pressure from environmental and conservation groups was ranked as an important success factor, this was also mentioned frequently in the open-ended responses as a difficult hurdle for seafood dealers. This appears highly connected to concerns over regulation, as environmental stakeholder groups tend to advocate for management that is more restrictive on the commercial fishing industry. This relationship to regulation also pertains to the third-most mentioned success factor, seafood availability, which is highly tied to commercial fishing quota,

closures, and other effort-reducing management measures. In short, regulation of fisheries, and all of the components of operating a seafood dealership that are affected by it, dominates as the principle concern among seafood dealers, and is viewed as the most critical component for their success as a business.

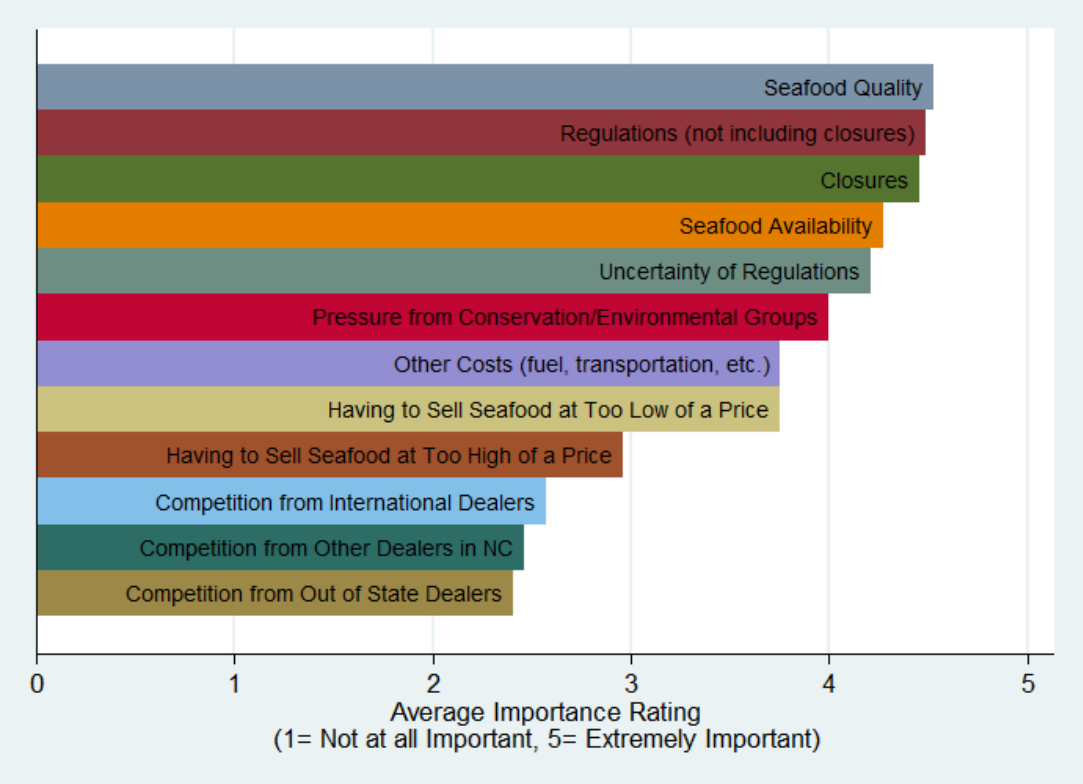


Figure 9: Average ranking of importance to business success across seafood dealers (N=192).

Table 12: Issues most commonly referenced as most important to a seafood dealers' business (N=192).

Issue	Total Mentions (N=192)
1. Regulations	74
2. Closures	63
3. Seafood Availability	30
4. Pressure from conservation/ environmental groups	25
5. Seafood Quality	15

Decadal Comparison

As discussed in the introduction, when question text is identical to the previous iteration of this study in 2009, data from this survey instrument can be compared to understand trends in the industry. However, certain modifications need to be made in order to accommodate the historical data.

Specifically, as the previous study only profiled seafood dealers with greater than $10,000 in sales the previous year, comparative data will only consider respondents with an inflation-adjusted revenue equal to $10,000 in 2009. For context, the value, using the St. Louis Federal Reserve Bank Producer Price Index for Unprocessed and Packaged Fish, is $13,637 in 2019. While this will lead to a biased analysis, as it significantly limits the perspective of small-scale seafood dealers in the state, trending would not present a realistic comparison otherwise. Additionally, it's important to note that only 72 seafood dealers responded to the survey instrument in 2009. This lowers the statistical significance of this overall dataset, and therefore any trended comparisons should be made with a recognition of this low base size.

Employment

Regarding year-round employment, seafood dealers have exhibited similar trends over time, with the large majority of operators keeping 5 or fewer full-time employees on staff (Table 13). However, the proportion of dealers keeping no year-round employees on staff increased in 2019, while the proportion of those using 1-5 employees dropped at the expense of it. This may be reflective of an increasing proportion of commercial fishermen that also maintain a dealer's license, or simply more operators seeking to cut overhead and oversee all operations themselves.

The usage of seasonal employees over time follows nearly the exact same trend as for year-round employees; the overarching pattern has stayed the same, but the proportion of dealers using zero seasonal labor has increased (Table 14). Additionally, a greater proportion of dealers in 2009 used a large number of seasonal employees (6 or more) comparatively. All of these trends combined to point towards an overall reduction in the labor usage and expenses by seafood dealers in the state from 2009 and 2019. While the exact cause of this is unknown, there are many factors that could explain this shift, such as increased efficiencies in processing, lower margins in the dealer industry, or even increased economic burden on employers from regulatory changes to increase employee benefit protections.

Table 13: Decadal comparison of the number of year-round employees on staff per seafood dealership.

	2019		2009	
Number of Year-Round Employees	Number of Dealers Reporting	Percentage of Total	Number of Dealers Reporting	Percentage of Total
0	76	54%	22	39%
1-2	20	14%	14	25%
3-5	21	15%	13	23%
6-10	7	5%	2	4%
11-20	6	4%	4	7%
20+	4	3%	1	2%
TOTAL	141	100%	56	100%

Table 14: Decadal comparison of the number of seasonal employees on staff per seafood dealership.

	2019		2009	
Number of Seasonal Employees	Number of Dealers Reporting	Percentage of Total	Number of Dealers Reporting	Percentage of Total
0	65	49%	21	38%
1-2	40	30%	15	27%
3-5	10	8%	7	13%
6-10	8	6%	6	11%
11-20	5	4%	3	5%
20+	6	4%	4	7%
TOTAL	134	100%	56	100%

Sales

From 2009 to 2019, the seafood supply chain has not shifted greatly, as many of the same species are still considered the most critical for seafood dealership success (Table 15). Shrimp is still the top product to dealers, though the importance of flounder dropped over time, likely due to changes in stock status and corresponding management requirements. Beyond this, blue crab and oysters are still critical species for seafood dealers, while grouper and tuna have been replaced by mullet as the second-most important finfish in the state for dealers.

In a comparison of where dealers are selling their seafood, the supply chain appears to have become more streamlined over time. Specifically, the proportion of sales to other seafood dealers (both in-state and out of state) dropped from 2009 to 2019, while sales to restaurants and direct-to-consumer rose (Table 16). In all, it appears dealers have become less reliant on other businesses to sell product and have established more independent trade channels over time.

A comparison of seafood dealers' revenues shows the distribution of scale is largely the same over time (Table 17). When comparing the proportion of dealers by revenue, accounting for the inflation-adjusted $10,000 threshold, the distribution is largely unchanged. This, along with the other trended sales data presented, helps to show that the seafood dealership industry in North Carolina has been consistent in its operations and stakeholder profile from 2009 to 2019, as there are the same patterns of species utilization, sales channels, and revenues.

Table 15: Decadal comparison of the Fish or Shellfish species most frequently cited by seafood dealers as most important to their business.

2019		2009	
Product	Total Mentions (N=199)	Product	Total Mentions (N=67)
1. Shrimp	61	1. Shrimp	25
2. Crab	47	2. Flounder	24
3. Flounder	35	3. Crab	16
4. Oyster	30	4. Oyster	10
5. Mullet	21	5. Grouper/Tuna	5

Table 16: Decadal comparison of average proportion of sales from seafood dealers broken down by buyer. Values listed reflect an average of the estimates from each seafood dealer surveyed. Note: due to limitations in the data, these results cannot be weighted by revenue.

	2019 (N=93)	2009 (N=69)
Proportion of Sales	Response Percent	Response Percent
% sold directly to customers from my shop	43%	26%
% sold to restaurants	16%	11%
% sold to another dealer (in-state)	23%	34%
% shipped to an out-of-state dealer	16%	26%
% other	3%	2%

Table 17: Decadal comparison of total gross revenue per seafood dealership.

	2019		2009	
Gross Sales	Number of Dealers Reporting	Percentage of Total	Number of Dealers Reporting	Percentage of Total
$0 - $50,000	24	29%	21	32%
$50,001 to $200,000	19	23%	15	23%
$200,001 to $500,000	13	16%	6	9%
$500,001 to $1,000,000	11	13%	7	11%
>$1,000,000	16	19%	16	25%
Total	83	100%	65	100%

Expenses

While seafood dealers' sales have shown relatively consistent patterns from 2009 to 2019, there are components of the expense-side of this industry that have shifted over time. Specifically, when comparing average annual businesses expenses per category, it becomes clear that seafood dealers in 2009 were spending much more on their seafood purchasing from NC fishermen, as well as their product transportation (Table 18). When adjusted for inflation, the average annual costs of seafood purchases from NC fishermen, shipping containers, and transportation was halved from 2009 to 2019. While the reduction in transportation costs may be due to growing efficiencies in logistics, refrigerating technology, and supply chains, the reduction in NC seafood costs is more difficult to explain, as there was no offsetting increase in purchases from out of state fishermen. A likely explanation may be the selection bias of which 2019 respondents answered that question, in that smaller-scale dealers were more willing to estimate annual seafood expenditures, or that dealers in 2019 are simply moving less volume in a year. Conversely, the only expenditures to increase notably from 2009 to 2019 are purchases of non-seafood items for sale, rent, and building repairs. Increases in non-seafood purchasing suggests a diversification of business for dealers in this time, while building repairs may be a result of increase storm and hurricane presence, especially as the 2019 survey was fielded right after the effects of Hurricane Florence. Increased rent is likely reflective of increasing demand for coastal property over

time. Lastly, the distributions of costs from business property taxes and product spoilage are highly similar between 2009 and 2019 (Tables 19 and 20).

Table 18: Decadal comparison of average annual costs for seafood dealerships across select business categories. 2009 data is presented in both nominal and real dollars compared to 2019.

	2019	2009	
Business Expense	Average Annual Cost	Average Annual cost	Average Annual Cost, Adjusted to 2019 Prices[1]
Purchases of seafood from NC fishermen	195,434	322,692	384,542
Purchases of seafood from other NC fish dealers	113,533	103,555	123,403
Wages and Payroll	87,005	69,481	82,798
Purchases of seafood from out-of-state	78,523	72,909	86,883
Non-seafood products that you sell (seasonings, cookbooks, etc.) in this business	46,273	11,649	13,882
Building repair and other maintenance costs	26,617	13,385	15,950
Transportation costs	20,385	30,881	36,800
Shipping containers	13,752	26,275	31,311
Insurance (including health)	12,654	11,816	14,081
Business property rent	12,437	6,587	7,850
Electricity	10,976	11,504	13,709
Telephones (including business cell phones	1,971	2,944	3,508
Office supplies, computers, etc.	1,876	1,952	2,326
Water bills	1,550	1,152	1,373

[1]Inflation values calculated using U.S. Bureau of Labor Statistics Consumer Price Index

Table 19: Decadal comparison of value of annual business property taxes per seafood dealership.

	2019		2009	
Total Annual Value of Business Property Taxes	Number of Dealers Reporting	Percentage of Total	Number of Dealers Reporting	Percentage of Total
$0	8	10%	5	8%
$1-$500	7	8%	6	10%
$501-$1000	12	14%	11	18%
$1,001-$5,000	40	48%	29	48%
$5,001-$10,000	8	10%	6	10%
$10,001+	8	10%	3	5%
TOTAL	83	100%	60	100%

Table 20: Decadal comparison of value of annual losses due to product spoilage per seafood dealership in 2019 and 2009.

	2019		2009	
Total Annual Value Lost Due to Spoilage	Number of Dealers Reporting	Percentage of Total	Number of Dealers Reporting	Percentage of Total
$0	45	53%	29	47%
$1-$500	10	12%	5	8%
$501-$1000	3	3%	5	8%
$1,001-$5,000	15	18%	14	23%
$5,001-$10,000	9	11%	4	6%
$10,001+	3	3%	5	8%
TOTAL	85	100%	62	100%

Discussion

State of the Dealership Industry

Overall, the North Carolina seafood dealership industry represents a diverse set of stakeholders, in which a dealer's license is used in a variety of ways to suit the individual's needs. Dominating the participation in this industry are small-scale seafood dealers that tend to work alone, without a formal storefront or processing unit. Overall, roughly 6 in 10 dealers surveyed do not employee any year-round or seasonal employee, and also operate their business out of their home address. On top of this, more than half of all dealer's surveyed claimed less than $50,000 in gross revenue in 2019. In all, this shows that while many individuals in the state own and operate a seafood dealer's license, many of them are using these licenses on a very small scale, and are not running complex enterprises that provide large contributions to the seafood supply chain overall. With this, it's likely some of these dealers own these licenses in tandem with a commercial fishing license or aquaculture permit and are participating in multiple levels of the fishing industry. Moving forward, it would be helpful to understand not just how

many of these stakeholders own a commercial fishing license or aquaculture permit, but also whether they consider themselves primarily to be a dealer and harvester in the state.

Conversely, while the rest of the dealers surveyed do claim gross revenues across a range of values, it's clear that a small collection of operators controls a large majority of the value of this industry. Of the licensed dealers that provided gross revenue estimates, it was found that 11% of respondents controlled 80% of all revenues for 2019. This subset clearly has a massive influence on the industry, supply chain, and regulatory structure, and should be recognized as the engine that drives the state's seafood economy. However, looking forward, it's important to ensure that regulations not only support these large players, but also keep most outside of this revenue bracket in business and successful to ensure smaller fisheries and communities can participate fully in the industry.

Looking beyond the raw financials, clear trends emerge on the products and supply chains that are most important for supporting the industry overall. Firstly, shellfish products are largely responsible for driving sales and are a strong foundation for most seafood dealership business in the state. Specifically, shrimp, blue crab, and oysters stand out as some of the most important and heavily trafficked seafood products and are consistently cited as the species that support most seafood dealerships, likely due to attractive price mark-ups and volume. However, this focus on shellfish seems to come in the face of multiple barriers specific to these goods. For example, dealers consistently cited the logistics of transporting live product and maintaining the right temperature requirements for shellfish as a major obstacle for their business. The focus on selling these products in the face of these unique concerns underscores their importance to the dealership business overall. Additionally, it's interesting to note that despite the state of North Carolina's strong and deliberate push to expand its shellfish mariculture industry overall, nearly all seafood purchases from seafood dealers are for wild finfish, shellfish, and crustacean products. While regulations and institutions are being put in place to expand this industry, it's clear that the state's purchasers have not yet felt these effects. This provides a strong insight to lawmakers in the state that an effort to boost shellfish mariculture should also take into account the supply chain beyond sheer production to ensure this industry succeeds.

While the impact of product spoilage on businesses in the state was not overly burdensome, it's particularly interesting to note that over a third of dealers that experienced product spoilage in the year prior attributed it entirely to Hurricane Florence. Firstly, this implies that spoilage as a part of normal dealership operations is not a significant concern. Secondly, in the face of increasing storm frequency and intensity, the likelihood of acute product loss from spoilage will be a concern into the future. By preparing dealers with infrastructure to prevent these losses and taking a broader look at increasing community resiliency in the face of storms, the state of North Carolina can better prevent loss of seafood product moving forward.

Lastly, the portion of this study dedicated to dealer's views on the industry provided one key, consistent theme: regulation is the primary concern among this population. When asked a suite a question about success factors, business conditions, and overall concerns, fisheries regulations and issues around area closures were the top issues cited. As purveyors of North Carolina's seafood products, dealers in the state seem primarily focused on being able to maintain a consistent, predictable flow of quality seafood products, which is most affected by regulations on fishing and area closures. Not only do fisheries regulations stand out as the principle success factor, they also seem to be the primary driver of dealer satisfaction and sentiment in the industry. Overall, nearly half of all dealers felt business

conditions have worsened in the past 10 years, with another half felt as though they have remained the same. Given the strong focus on regulation, these differences of opinion likely relate to each dealer's relationship with regulations, both in terms of region, primary species bought and sold, and scale. Overall, while licensed seafood dealers seem most concerned and influenced by regulations that aren't directly imposed on their businesses, it's critical to understand how intrinsically linked commercial fishing and seafood dealing are. In order to maintain the success of seafood dealers moving forward, fisheries management needs to internalize the need to provide a steady, stable, and reliable flow of seafood products throughout the year, as these businesses rely on supply chains out of their control to survive.

Evolution Over Time

The ability to track dealers' sentiments over the past 10 years provides useful insight into the state of the industry, but also demonstrates how much of it has been largely unchanged over time. Overall, the general profile of seafood dealers in the state appears extremely similar to 2009, as the distribution of revenues is extremely similar. Additionally, aside from flounder (which has been the focus of increasing management measures), dealers still find the same species to be the most important to their businesses over time, specifically shrimp, blue crab, and oysters, likely due to a combination of high supply, demand, and margin for dealers. All this suggests that the high-value products will continue to determine the success of this industry in North Carolina, and that the industry will still largely be defined by a high concentration of small-scale stakeholders coupled against a small, dominant group of high-revenue dealers.

However, there are some key changes over the past decades which do explain some shifts in the seafood dealership landscape. Firstly, there has been a decline in overall employment within the sector, with more dealers either unable or choosing to keep no year-round or seasonal employees on staff. Coupled with a revenue distribution that is largely unchanged, this does suggest that many small-scale operators are becoming leaner and more efficient and may see higher individual returns because of this. This is also reinforced by the finding that a much larger percentage of sales are going straight to consumer in 2019 compared to 2009, largely at the expense of sales going to other dealers. Again, this highlights more efficiencies in the supply chain, as dealers have figured out how to move product directly into consumers hands and are less reliant on other dealers to help sell product. In all, this does suggest that seafood dealers in the state are either seeing higher individual returns on their business by reducing overhead and increasing margins with more direct sales, or are simply finding strategies to keep margins even amidst a challenging business environment.

Lastly, it's important to highlight the dramatic reduction in seafood purchasing costs over the past 10 years. Specifically, dealers spent roughly half as much on purchases of seafood from North Carolina fishermen. This is a difficult outcome to explain, as the prices of seafood have not decreased over time, and volume has not shifted by half. Likely the most reasonable explanation is simply a lack of supply in the previous year due to the dramatic effects of Hurricane Florence. However, this may not explain all of this reduction, and should be further explored in the future.

Conclusion

While the seafood dealership landscape in North Carolina is highly varied in terms of the size and complexity of its stakeholders' businesses, they all share similar views on the business and its viability in the future. The industry is extremely reliant on the state's premier shellfish products and believes regulation and closures of fisheries are the key determinants of success, regardless of the scale that a dealer operates at. While little has changed over the past 10 years except signals of increased efficiency at the user-level, this study reinforces the need to incorporate seafood dealers into management decisions at all levels to ensure a healthy, stable, and sustainable supply into the future.

References:

Hadley, J. and Crosson, S. December 2010. “A Business and Economic Profile of Seafood Dealers in North Carolina.” North Carolina Division of Marine Fisheries, License and Statistics Section.

NCDMF. 2019. 2019 Annual Report. North Carolina Department of Environment Quality. North Carolina Division of Marine Fisheries. License and Statistics Section. Morehead City, NC.

U.S. Bureau of Labor Statistics, Producer Price Index by Commodity: Processed Foods and Feeds: Unprocessed and Prepared Seafood [WPU0223], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/WPU0223, September 15, 2020.

Appendix:

Appendix I: Survey Instrument

North Carolina Division of Marine Fisheries

2019 Seafood Dealer Socioeconomic Survey

This survey is for all North Carolina licensed seafood dealers to better understand the operational and financial aspects of their business, and how the North Carolina Division of Marine Fisheries can better support its dealers.

Please answer the following information completely and honestly about your seafood dealership. If you operate more than one location under the SAME business name, please combine your sales and cost estimates across all locations.

If you own multiple dealerships with DIFFERENT names, please only consider one of these businesses in this survey. You may complete this survey multiple times for each business using the same ID number, if applicable. To re-take the survey, please use the web address provided.

1. Please enter your last name: _____
2. Please enter the identification number on the letter you received: _____
3. Please provide your email address: _____
4. What is the name of your dealership business? _____
5. What town is your business located in? _____
6. Is your business located at a different address than your household? Circle one option.
    a) Yes
    b) No
7. What would you consider to be the most important fish or shellfish for your business?

8. On a scale of 1 to 5, please rate how important each of these factors are to the success of your business, with 1 being “Not at all important” and 5 being “Extremely important”. Please mark one response per each factor below.

	1	2	3	4	5
	Not at all Important				Extremely Important
a. Regulations (not including closures)	◯	◯	◯	◯	◯
b. Closures	◯	◯	◯	◯	◯
c. Uncertainty of regulations	◯	◯	◯	◯	◯
d. Seafood availability	◯	◯	◯	◯	◯
e. Seafood quality	◯	◯	◯	◯	◯
f. Having to sell seafood at too high of a price	◯	◯	◯	◯	◯
g. Having to sell seafood at too low of a price	◯	◯	◯	◯	◯
h. Competition from other dealers in NC	◯	◯	◯	◯	◯
i. Competition from out of state dealers	◯	◯	◯	◯	◯
j. Competition from international dealers	◯	◯	◯	◯	◯
k. Other costs (fuel, transportation, etc.)	◯	◯	◯	◯	◯
l. Pressure from conservation/ environmental groups	◯	◯	◯	◯	◯

9. From the issues listed in the previous question please briefly state which you find MOST impactful to your business, and explain why.

10. NOT including yourself, how many year-round employees did you have on staff last year?

11. NOT including yourself, how many seasonal employees did you have on staff last year?

12. What months did you use seasonal employees? Circle all months that apply.

January	February	March	April
May	June	July	August
September	October	November	December

13. Thinking about the last 10 years (or since your business opened if less than 10 years ago), how do you think business conditions have changed for licensed dealers? Circle one answer below:

    a) Conditions have improved

    b) Conditions have remained the same

    c) Conditions have worsened.

14. Based on your previous response, what factors have caused your business conditions to worsen or improve? If you believe conditions remain the same, you can skip this question.

15. In DOLLAR terms (not weight), what percentage of your sales last year were in the following categories. Please ensure the sum of your responses is equal to 100.

    a. % sold directly to customers from your shop: _____

    b. % sold to restaurants: _____

    c. % sold to another dealer (in-state): _____

    d. % shipped to an out-of-state dealer: _____

    e. % other (please specify if there was one dominant channel)

    _____

16. In DOLLAR terms (not weight), what percentage of your seafood purchases last year were in each of the following categories? Please ensure the sum of your responses is equal to 100.

    a. % Farmed/cultured finfish: _____

    b. % Wild finfish: _____

    c. % Farmed/cultured shellfish and crustaceans: _____

    d. % Wild shellfish and crustaceans: _____

    e. % Other (please specify)

    _____

17. How much would you estimate that your dealer business spent LAST YEAR on…

    a) $ spent on purchases from NC fishermen: _____

b) $ spent on purchases of seafood from out-of-state: _____

c) $ spent on purchases from other NC fish dealers: _____

d) $ spent on electricity: _____

e) $ spent on water bills: _____

f) $ spent on telephones (including business cell phones: _____

g) $ spent on business internet: _____

h) $ spent on building repair and other maintenance costs: _____

i) $ spent on insurance (including health): _____

j) $ spent on office supplies, computers, etc.: _____

k) $ spent on business property rent (if property is owned, please mark "0"):

_____

l) $ spent on business property mortgage (if property is rented or fully paid-off, please mark "0"): _____

m) $ spent on other loans and banking costs: _____

n) $ spent on wages and payroll: _____

o) $ spent on shipping containers: _____

p) $ spent on transportation costs: _____

q) $ spent on non-seafood products that you sell (seasonings, cookbooks, etc.) in this business: _____

r) $ spent on marketing and outreach for your business: _____

s) $ spent of point-of-sale (POS) technologies: _____

18. How much (in dollars) are your property taxes where the business operates? _____

19. What was the TOTAL dollar value of your sales last year? _____

20. How much (in dollars) did your business lose to spoilage of the product last year? _____

21. Of this loss to spoilage, what percentage (%) of that dollar value would you attribute to the effects of Hurricane Florence, rather than "typical" loss throughout the year? _____

22. Over the course of last year, what was your average percentage (%) markup for products across each of these categories? In other words, how much higher were your sale prices than your purchase prices (in percentage) for each of these items? If you did not sell any of these products, please mark that answer with a "0"

    a. Clams: _____

    b. Crabs (hard): _____

    c. Crabs (soft): _____

    d. Oysters: _____

    e. Shrimp: _____

    f. Scallops: _____

    g. Flounder: _____

    h. Tuna/Swordfish: _____

    i. Sea Bass/Drum: _____

    j. Grouper: _____

    k. King/Spanish Mackerel: _____

    l. Mullet/Trout: _____

    m. Other finfish (Please specify): _____

    n. OTHER SHELLFISH

23. Do you process seafood products at your business? For this study, processing means any conversion of whole fish or shellfish into products sold to individuals, retailers, and restaurants. Circle one answer below.

    a. Yes, we do all of our own processing

    b. Yes, but we only process some of our seafood

    c. No

24. If you indicated that you process seafood at your business, what kinds of processing are done there? What do you avoid? If you do not process seafood, you may leave this answer blank.

25. Over the course of last year, how many employees did you typically have on staff to do seafood processing? If you do not process seafood, please mark zero.

26. For the seafood that you do not process, where is that typically done? If you do all of your own processing, you may leave this answer blank.

27. Are there certain products that are more difficult or expensive to transport (both to and from your dealership)? If so, why?

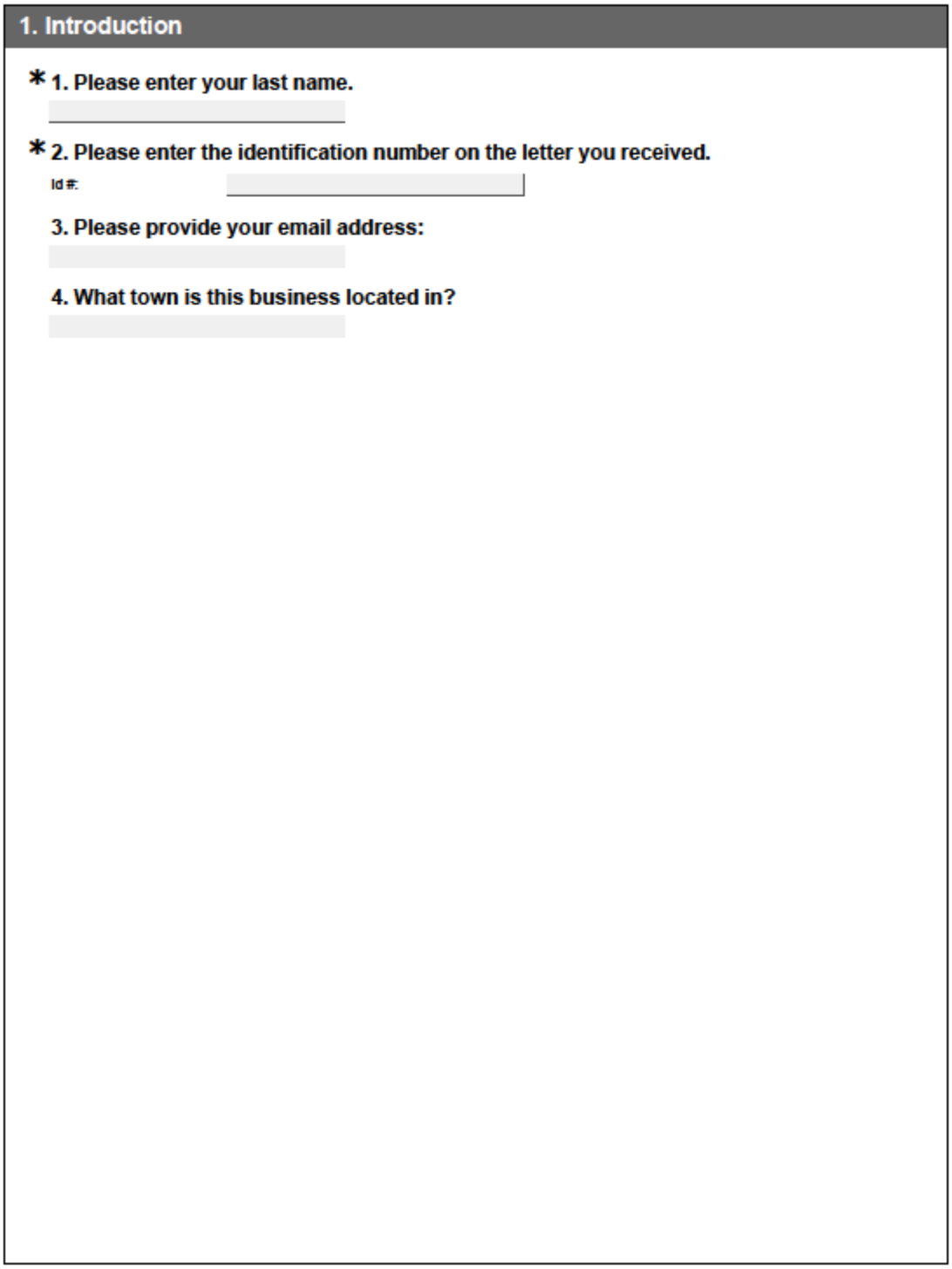
28. Are there certain types of buyers that are more difficult or expensive to ship product to? If so, why?

29. What is your ONE largest concern about transporting seafood to and from your dealership at this time, as it relates to cost, efficiency, and quality?

30. Thank you for taking the time to help us better understand our local seafood dealers!

    At this time, we welcome you to share any final thoughts, both on the structure/substance of this survey, or any additional thoughts on being a licensed seafood dealer in North Carolina.

Appendix II: 2009 Survey Instrument



1. Introduction

* **1. Please enter your last name.**

* **2. Please enter the identification number on the letter you received.**

Id #:

3. Please provide your email address:

4. What town is this business located in?

2. background questions

5. What would you consider to be the most important fish or shellfish for your business?

6. What would you consider to be the single biggest challenge to your dealer business at this time?

7. NOT including yourself, how many year-round employees did you have last year?

8. NOT including yourself, how many seasonal employees did you have last year?

9. What months did you use seasonal employees?

	January	February	March	April	May	June	July	August	September	October	November	December
Month	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

3. Expenses

10. In DOLLAR terms (not pounds), what percentage of your sales last year were...

% sold directly to customers from my shop	
% sold to restaurants	
% sold to another dealer (in-state)	
% shipped to an out-of-state dealer	
% other	

11. How much would you estimate that your dealer business spent last year on...

$ spent on purchases from NC fishermen	
$ spent on purchases from other NC fish dealers	
$ spent on purchases of fish from out of state	
$ spent on electricity	
$ spent on water bills	
$ spent on telephones (including business cell phones)	
$ spent on building repair and other maintenance costs	
$ spent on insurance (including health)	
$ spent on office supplies, computers etc	
$ spent on rent (if you do not own the property where the business operates)	
$ spent on business mortgage, loan payments or other banking costs	
$ spent on wages and payroll	
$ spent on shipping containers	
$ spent on transportation costs	
$ spent on non-seafood products that you sell (seasonings, cookbooks, etc) in this business	
$ spent on other costs	

12. How much are your property taxes where the business operates?

13. What was the total dollar value of your sales last year?

14. How much (in dollar terms) did you lose to spoilage of the product?

Appendix III: Survey Invite Letter

ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

STEPHEN W. MURPHEY
Director

«LetterName»

«MailAddress1» «MailCity», «MailState» «MailZip»

Dear Seafood Dealer,

As a commercial dealer, you know that the rules and regulations routinely enacted affect landings and, as a result, how much money you can make. These regulatory decisions are made based on the best fishing-related information available at the time. To improve the quality of this information, the North Carolina Division of Marine Fisheries (NC DMF) has been conducting economic surveys of commercial fishermen for years. This provides some idea of the economic impact of commercial fishermen. However, this information does not fully capture the economic impact of our state's fisheries, and surveying licensed seafood dealers helps fill that gap. The NC DMF last conducted a socioeconomic profiling of its dealers in 2010, and is now ready to update that data with a new study. That is where you come in!

Your name was chosen from the confidential records of the NC DMF license and trip ticket program as a licensed North Carolina seafood dealer in 2019. I understand that information about your business is sensitive. *This survey is strictly confidential, just as are your trip tickets.* Your answers will be combined with the answers of everyone who participates. At no time will your name ever be linked to any of your individual answers in our reporting.

Enclosed is a hard-copy of the survey for you to fill out and return in the pre-paid envelope. You also have the option of taking the survey online. Your cooperation and input are greatly appreciated. The URL located below will link you to the dealer survey:

https://www.surveymonkey.com/r/CLYKYLW

Your personal ID number is: «ParticipantID»

In the event that we don't receive a mail or online response from you, a representative from NC DMF may call you directly to complete the survey via telephone. This person will have more complete details about your participation. However, as the person in charge, I will always be most happy to answer any questions you may have. My telephone number is (919) 707-8573. My email is david.dietz@ncdenr.gov.

Sincerely,

David Dietz, MEM

Fisheries Economics Program Manager

NC Division of Marine Fisheries

Appendix IV: NCDMF Press Release

Release: Immediate	Contact: Patricia Smith
Date:	Phone: 252-726-7021

North Carolina seafood dealers may receive Division of Marine Fisheries survey

MOREHEAD CITY – North Carolina commercial seafood dealers should expect to receive a survey conducted by the N.C. Division of Marine Fisheries in the following weeks.

The survey is a follow up to previously conducted data collection in 2010, and seeks information on
the economic and social status of North Carolina's commercial seafood dealers, as well as factors that affect their business operations.

Dealers will be asked to estimate their revenues and expenses by category, discuss the most important factors to their business' success, and evaluate other operational and financial components of running a seafood dealership in North Carolina

All registered dealers will receive a packet in the mail containing an invitation to complete the survey, an enclosed paper survey, a pre-paid envelope to mail it back in, and a link to take the survey online if
they prefer. The packets will be mailed this fall.

Individual answers to questions will be kept confidential; however, aggregate results from participants will be included in a written report that will be made available to the public.

Non-respondents will receive a reminder phone call from division staff. Dealers who receive such a call can verify that the person calling is a division employee by asking the caller to confirm any of his or her dealer's contact information, dealer's license number, or the unique ID number provided on their survey invitation letter.

For the survey results to be truly representative of North Carolina seafood dealers, it is very important that dealers participate in the survey and answer as many questions as possible.

The survey is funded by the Atlantic Coastal Cooperative Statistics Program, which is a partnership of state, regional, and federal fisheries agencies collecting dependent data information. This information will be used to better understand the socioeconomic status of our state's seafood dealers, how that has changed in the past 10 years and how the division can better support North Carolina's dealers and fisheries into the future.

For more information, contact David Dietz, Fisheries Economics Program manager with the Division of Marine Fisheries at 919-808-8573, or by email at David.Dietz@ncdenr.gov.

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