The Economics of Independent Marine Recreational Fishing Bait and Tackle Retail Stores in the United States, 2013

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U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service

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An earlier version of this report, F/SPO-151, contained an error in the economic impact estimates in Tables GM_4, GM_5, and GM_6. This version corrects those previous errors.

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ABSTRACT

In 2014, the National Marine Fisheries Service (NOAA Fisheries) conducted the Marine Recreational Bait and Tackle Economic Survey (RBTES) to better understand the economic condition and contributions to the regional and national economy of retail stores that sell marine fishing bait and tackle. This study focused on retail stores that sell bait and tackle to saltwater anglers in coastal and near coastal communities located in 23 U.S. states on the Atlantic, Gulf of Mexico, and Pacific coasts, including Alaska and Hawaii. The RBTES was designed to provide NOAA Fisheries' first baseline economic assessment of the retail marine bait and tackle industry, and collected data on the 2013 costs and earnings of independently owned businesses. Efforts were made to collect data on national chains (e.g., Bass Pro Shops, Walmart) that sell bait and tackle, but they are not included in this report due to limited participation in the study. Independent stores receiving the survey came from an exhaustive list of businesses compiled by NOAA Fisheries with the assistance of state marine fisheries agencies, and two major industry wholesalers. NOAA Fisheries received surveys from 944 stores out of 3,514 businesses that were sent surveys and were not otherwise identified as being ineligible to participate (i.e., did not have retail sales of bait and tackle; non-deliverable address; no longer in business) for a national response rate of 27 percent. A little over one-third (35.1%) of responding stores classified themselves as "Bait & Tackle" stores that catered almost exclusively to recreational anglers. These retail stores averaged $426 thousand in saltwater fishing related sales, representing 53.6 percent of their total gross sales in 2013. Conversely, stores that classified themselves as "Other Stores" averaged $141 thousand in saltwater fishing bait and tackle sales, representing only 8.4 percent of their total gross sales. These averages were extrapolated to an estimated combined total of $854 million in sales of saltwater fishing bait, tackle, and related equipment. Next, regional input-output analysis of the operating costs and net returns supported by saltwater recreational fishing sales was conducted to estimate their economic contributions. Nationally, independently owned retailers that sell marine bait and tackle were estimated to contribute $2.3 billion in total economic output, including $796 million in income supporting more than 16 thousand jobs in the United States.

INTRODUCTION

In 2014, NOAA Fisheries conducted the Marine Recreational Bait and Tackle Economic Survey (RBTES) to better understand the economic condition and contributions of retail stores that sell marine recreational fishing bait, tackle, and related equipment (excluding boats). For the purposes of this study, marine recreational fishing was defined as fishing for finfish or shellfish in the open ocean or inshore waters, or for spawning runs of anadromous species such as striped bass or ocean-run salmon for sport or pleasure. The RBTES was designed to provide NOAA Fisheries' first baseline economic assessment of the marine retail bait and tackle industry.

This study focused on retail stores that are independently owned small businesses that sell bait and tackle to saltwater anglers in coastal and near coastal communities located in 23 U.S. states on the Atlantic, Gulf of Mexico, Pacific coasts, Alaska, and Hawaii (Figures 1 and 2). Small businesses were targeted as they may be more disproportionately affected by regional fisheries management actions due to their greater dependence on local fisheries, and information on them in national reports is largely masked by data on larger national and regional chains.

Across the United States, anglers took just over 72 million marine recreational fishing trips in 2014 and generated significant economic impacts to both local coastal economies and to the nation as a whole. Stores that sell bait, tackle, and other fishing-related equipment can be significantly impacted by spatial and temporal changes in marine recreational fishing participation caused by regulatory actions, such as fishery closures. When NOAA Fisheries proposes new fisheries regulations, the Magnuson-Stevens Fishery Conservation and Management Act of 1996 (and as reauthorized in 2007) requires the agency to enumerate the economic impacts of the policies it implements on fishing participants and coastal communities. The primary objective of the RBTES was to collect data on the annual costs and earnings of stores that sell bait, tackle, and other equipment for marine recreational fishing to facilitate assessment of the economic contributions to their local and national economy. Secondary objectives included obtaining data required to profile and categorize the different types of businesses that sell bait and tackle, and receiving feedback from business operators on how various factors affect their sales of marine bait and tackle.

Prior to the RBTES, baseline economic data on retail stores that sell marine recreational fishing bait and tackle was limited. Regular surveys of marine recreational anglers conducted by NOAA Fisheries provide estimates of total sales of marine bait and tackle in the United States (Lovell et al., 2013), but these surveys do not distinguish between sales by large national chains and small, locally owned businesses. Furthermore, such surveys do not provide data on the operational expenses of bait and tackle stores, which are needed in addition to sales figures, to estimate net revenues and assess business conditions. Additionally, in national surveys of retail businesses, stores that sell bait and tackle are lumped into the broader sporting goods sector, or, depending on what else they sell, may also be classified as convenience, hardware, or general merchandise retail stores (U.S. Census, 2015). These issues make it difficult to assess the economic importance and health of locally owned and operated bait and tackle stores to coastal communities, thus necessitating the need for a targeted economic survey like the RBTES.

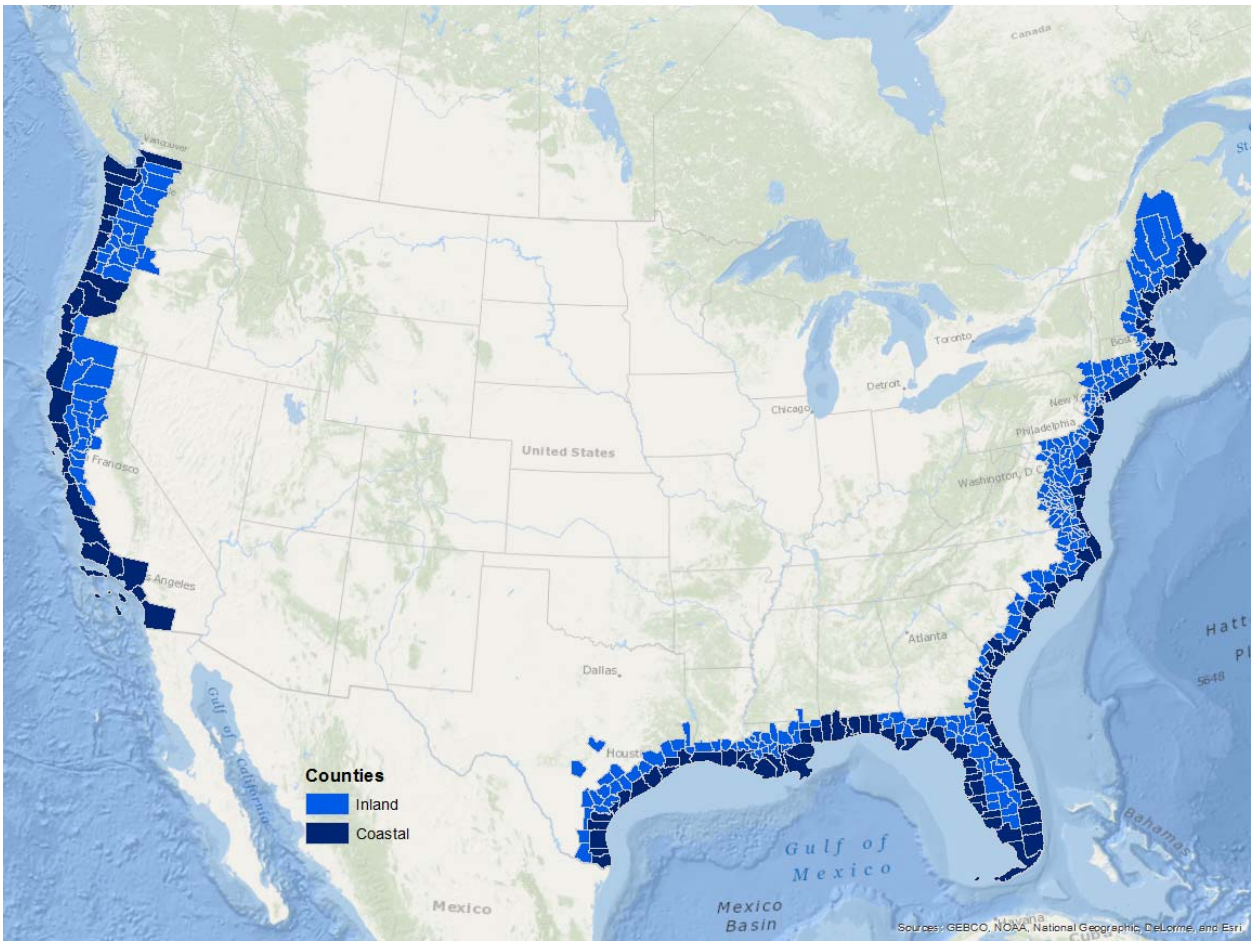


Figure 1. Coastal and inland counties of the contiguous United States in which retail stores that sell saltwater recreational fishing bait and tackle were targeted for the RBTES.

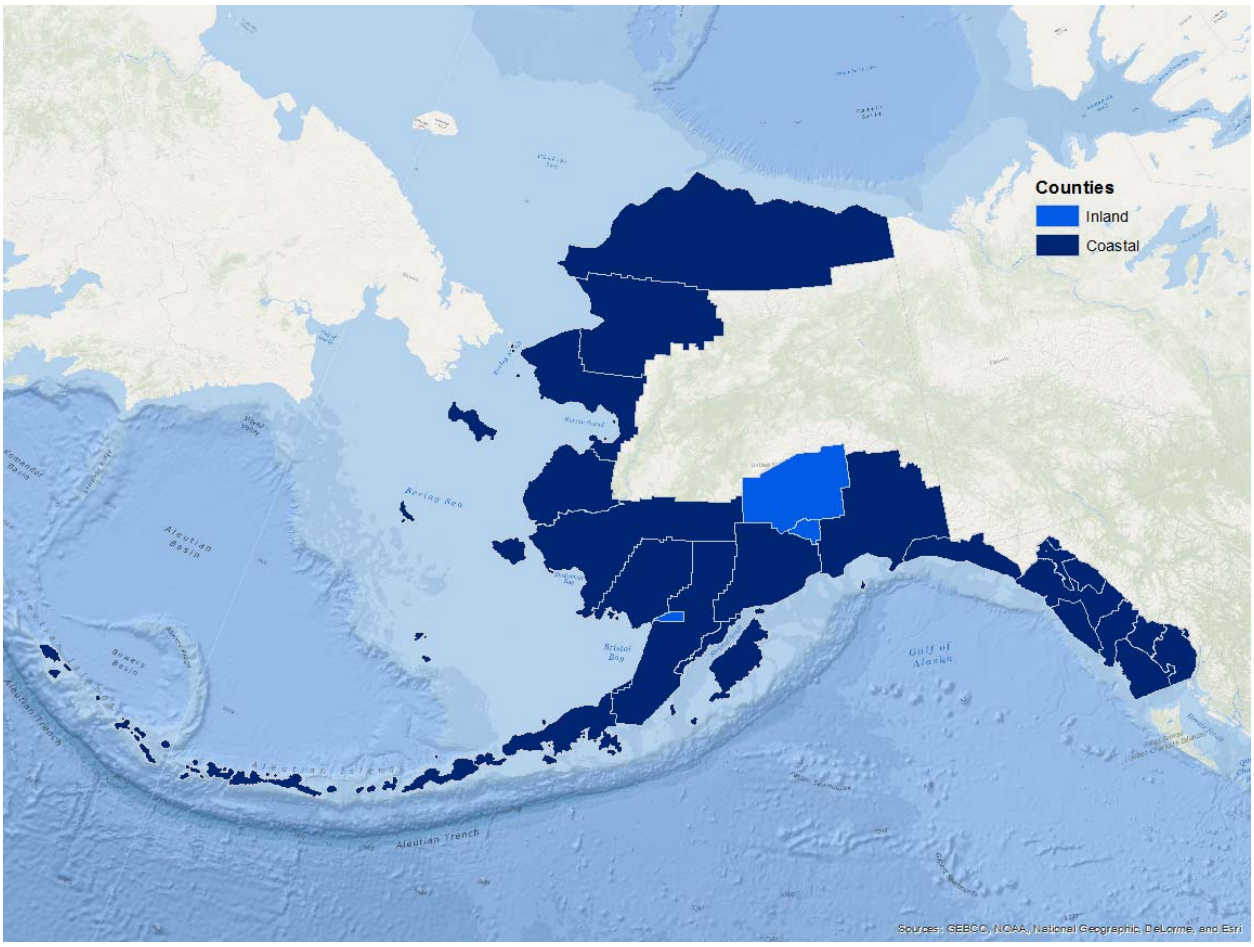


Figure 2. Coastal and inland boroughs of Alaska in which retail stores that sell saltwater recreational fishing bait and tackle were targeted for the RBTES.

METHODS

Sample Frame and Procedures

The target population for the RBTES was retail stores that sell marine recreational fishing bait and tackle in coastal and near coastal counties of the United States. To assemble a sampling frame for this population, counties intended to be targeted were first identified (Figures 1 and 2). In most states, the minimum base set of targeted counties included those located on the coast, and the line of counties immediately inland of those. These inland counties were included as it seemed reasonable that bait and tackle stores in these counties, especially in larger population centers, would include saltwater fishing bait and tackle among their merchandise. Additional counties further inland were included in several states based on discussions with local fisheries managers, or to capture data on stores that cater to anglers targeting the spawning runs of anadromous species and fisheries in large coastal estuaries. Specifically, several inland counties were included in western states to capture bait and tackle sales associated with salmon runs, and numerous inland counties were included in the North and Mid-Atlantic to capture sales supported by striped bass runs, especially around the Chesapeake Bay region of Maryland and Virginia, and New York's Hudson River Valley. In some cases the entire state was included due to the relatively close proximity of all counties to the coast. These included Maine, Rhode Island, Connecticut, Delaware, Florida, and Hawaii.

Once an initial list of target counties was assembled, state fisheries agencies were contacted to acquire lists of stores that likely sold bait and tackle. In most cases, potential stores were identified from lists of authorized state fishing license vendors. Several state agencies augmented the list to include stores with permits to sell live bait and those stores that received dissemination of state informational materials such as regulations booklets. The list of stores was supplemented with sample frames that had been generated for previous studies for the states of North Carolina, New Jersey, and New York. In some cases, state agencies were provided with lists of the counties of interest, and returned lists of retailers only located in those counties. In other cases the state provided a list for the entire state, and it was left to NOAA Fisheries to pare the list down to retailers in the targeted counties. Customer lists were also acquired from two major wholesalers of recreational fishing bait and tackle to supplement the license vendor lists obtained by state agencies and to fill any potential gaps. Due to spatial overlaps in the state agency and wholesaler lists, it was necessary to review the final list to remove duplicate records. This was done by ICF International, the survey research firm contracted to execute the survey.

At the same time, store mailing addresses were compared to postal records to identify stores with incorrect or incomplete addresses, and they were corrected where possible to reduce the number of mailings to undeliverable addresses. This effort also identified and removed records that were clearly not for retail businesses, as fishing license vendors in many states also included county clerks, national chain stores, and other government offices. Removal of duplicates and records that were clearly not for retail businesses resulted in a sample frame of 5,290 potential bait and tackle stores.

Given the busy and sometimes unpredictable nature of working at and managing a retail establishment, it was decided that a mail survey would be the best way of collecting the needed data for the RBTES. A mail survey would provide store owners the opportunity to complete the survey when their work schedule allowed, and reference the store's records if necessary. Given the relatively small sample, and the desire to achieve adequate sample sizes to conduct separate regional analyses, it was decided to send initial mailings to all of the 5,290 identified stores in the sample frame. Mail surveys were conducted using a modified Dillman et al. (2009) method. In the final week of June 2014, store owners were first sent a pre-letter to inform them of the study, that they had been selected for participation, and would be receiving a survey in the mail in a couple weeks. The initial mailing also included a postage-paid return postcard that business owners could return if their stores did not sell bait and tackle so that they might avoid future mailings. This information also improved the quality of the sample frame by enabling inappropriate firms to be purged from the list. These businesses included retailers that specialized in hunting equipment and firearms, hunting and fishing lodges, guides and outfitters, other retail stores (e.g., grocery, convenience, hardware) that sold fishing licenses but not bait and tackle, and non-retail firms.

Three weeks following the pre-letter, stores that did not return the postcard were sent a survey packet including a cover letter, a survey questionnaire, and a business reply envelope. One week later, all stores were sent a postcard that thanked the store owner for participating in the survey and included a reminder to return the survey. Three weeks after the first survey mailing, stores that had not yet responded were sent a modified cover letter and second copy of the survey questionnaire. The second mailing was followed by 2 weeks of reminder calls to stores that had yet to respond in an effort to recruit them into participating in the mail survey, and identify additional firms that were ineligible to participate in the study (e.g., did not sell bait and tackle, out of business, wholesalers, etc.). A brief phone survey of a sub-sample of non-respondents was conducted the week following the end of the reminder calls to assess the potential for non-response bias. Finally, in an effort to boost the final response rate, a third mailing of the survey questionnaire was sent to any remaining non-respondents in October 2014 after the busy summer season when store owners would likely have more time to complete the survey. This proved successful as the overall response rate increased from 20 to 27 percent.

Survey Instrument

Store owners were sent one of seven regionally tailored versions of the survey questionnaire based on their stores' location. The seven regions were:

- North Atlantic – Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut
- Mid-Atlantic – New York, New Jersey, Delaware, Maryland, Virginia
- South Atlantic – North Carolina, South Carolina, Georgia, East Florida
- Gulf of Mexico – West Florida, Alabama, Mississippi, Louisiana, Texas
- West Coast – California, Oregon, Washington
- Alaska
- Hawaii

The survey questionnaires asked store owners or managers to provide financial data on their sales and operational costs in calendar year 2013, or the fiscal year most closely matching the calendar year. Store owners were asked to indicate their 2013 total gross sales by selecting from a list of 12 sales ranges (Table 1). The use of bin ranges to collect gross sales figures was adopted based on feedback from representatives within the bait and tackle industry who expressed strong concerns about store owner willingness to provide exact sales figures. Industry experts and members provided consistent feedback that store owners would be extremely reluctant to provide exact sales and costs figures, and asking for such figures would significantly reduce final response rates. Based on this feedback, it was decided to use sales bin ranges in the survey questionnaire and assign each store the mid-point of the selected bin range as their estimated total gross sales figure for all data analyses.

Table 1. Total gross sales bin ranges used in RBTES questionnaires, and their corresponding mid-point values that were used as estimates of a store's total gross sales for analysis purposes.

Total gross sales bin ranges used in survey	Mid-point value used in analyses
$0 - $49,999	$25,000
$50,000 - $99,999	$75,000
$100,000 - $199,999	$150,000
$200,000 - $399,999	$300,000
$400,000 - $599,999	$500,000
$600,000 - $799,999	$700,000
$800,000 - $999,999	$900,000
$1,000,000 - $2,499,999	$1,750,000
$2,500,000 - $4,999,999	$3,750,000
$5,000,000 - $7,499,999	$6,250,000
$7,500,000 - $9,999,999	$8,750,000
$10,000,000 or more	$12,500,000

Consistent with the feedback received from industry members, store owners were asked to estimate the percentage of their total gross sales represented by sales of recreational fishing bait, tackle, and other related equipment, including both freshwater and saltwater fishing–related sales. Store owners were then asked to allocate their gross fishing sales across several categories (bait, fishing tackle including rods and reels, fishing line and nets, tool accessories such as pliers and knives, special fishing-related apparel such as waders, boat accessories and electronics, and spearfishing gear in Hawaii only) by percentage of sales. Next, store owners were asked to estimate what percentage of their fishing-related sales were for items used primarily in saltwater or anadromous fisheries. Other sales-related questions included whether or not the store sold live bait and, if so, what percentage of bait sales were for live bait; whether the store had internet

sales and, if so, the percentage of sales garnered there; and the distribution of fishing-related sales by season. Store owners were then asked to estimate their inventory and operating costs as a percentage of their total gross sales, and were asked to provide a percentage breakdown of their costs across 11 categories (e.g., inventory, employee pay, utilities, etc,).

The survey also asked store owners to provide descriptive data on their businesses such as the type of business (bait and tackle, sporting goods, general retail, convenience, hardware, marina) they ran, total number of stores they owned (although they were instructed to only provide data on the store addressed in their cover letter), number of full- and part-time employees, which regional fisheries they believed generated the most sales, and their opinions on how several outside factors affected their sales in 2013.

Data Cleaning

Responses provided by store owners were examined in Microsoft Excel and Statistical Analysis Software (SAS, 2011) for errors and internal consistency. Outliers (greater than the 99th percentile) and inconsistent observations for individual variables were set to "missing" for data analysis purposes without removing the entire record so as to avoid undue reductions in overall sample size. Three multi-part questions in the survey asked store owners to report their sales or costs across several categories with the final percentages totaling 100. A significant number of respondents provided answers that did not add up to exactly 100 percent. In many cases, the percentages provided when totaled were off by less than 5 percent, in which cases no adjustment was made to the data. In other cases, respondents misunderstood the survey questionnaires' directions and provided responses that added up to the reported percentage of their total sales that were for recreational fishing–related merchandise (i.e., if they reported 80% of their sales were fishing-related, then their breakdown of sales by category added to 80% instead of 100% as instructed). In these cases, responses were recalculated to add up to 100 percent to ensure data consistency across respondents. Similar response errors were found with responses to the operating costs breakdown question, which was preceded by a question asking store owners to estimate their overall operating costs as a percentage of their gross sales. These reporting errors were corrected in the same manner as erroneous responses to the sales breakdown question. Next, cases where respondents did not provide any data for sales and costs breakdown questions (i.e., sales and costs by category) were addressed by replacing missing values with the average values of respondents. In cases where respondents provided data for some sales and cost items but not others (e.g., reported sales of fishing tackle but not boat accessories) it was assumed that the missing values were zero. Finally, returned surveys that did not include responses to any financial data, or provided financial data for a time period other than the 2013 calendar or fiscal year, were classified as partial responses and excluded from analysis.

Cash Flow Analysis

For analysis purposes, stores were divided into one of two business categories, which are labeled in this report as either: 1) **Bait & Tackle** stores that carried fishing-related merchandise only, and 2) **Other Stores** that sold fishing-related merchandise in addition to other non-fishing

merchandise (e.g., sporting goods, general retail, convenience, and hardware stores, and marinas). The vast majority of stores reporting were assigned to each of the above categories based on their responses to a question asking them to self-assign to a category that best described their business. However, several stores that did not select the Bait & Tackle category were reassigned to that category because they indicated that recreational fishing bait and tackle made up 100 percent of their overall sales.

Cash flow analyses were conducted by estimating average saltwater fishing–related costs and earnings by business category and region for 2013. Cash flow represents the movement of money into and out of a business via its operating activities (Steinback and Brinson, 2013). For the purposes of this study, inflows represent business sales of saltwater fishing–related bait and tackle, and outflows represent the proportion of business expenses supported by saltwater fishing–related sales. The difference in inflows and outflows represented the net revenue associated with saltwater bait and tackle sales. Due to sample size limitations, Bait & Tackle and Other stores were not separated for regional analyses in Hawaii and Alaska, although stores in these regions were separated by business category for the overall national analysis.

As this study was primarily focused on the impacts of saltwater fishing–related bait and tackle sales, all cash flow analyses focused on the portion of business sales and operating costs that related to saltwater fishing. As mentioned previously, store owners were asked to indicate their total gross sales for 2013 by selecting one of 12 bin ranges, and assigned the corresponding mid-point to serve as an estimate of their gross sales (Table 1). Stores were further asked to indicate the percentage of their total sales that were for recreational fishing bait, tackle, and related equipment (both freshwater and saltwater), and the percentage of their fishing-related sales that were for items they believed were used primarily for saltwater fishing. These two percentages were multiplied for each store to estimate the percentage of their total sales for saltwater-related bait and tackle. This percentage was then multiplied by the mid-point of the total gross sales bin range they selected to estimate the value of each store's saltwater bait and tackle sales. Stores were also asked to estimate the percentage of their bait and tackle sales across six merchandise categories (i.e., bait, fishing tackle including rods and reels, fishing line and nets, tool accessories, fishing apparel, boat accessories and electronics). A seventh merchandise category, spearfishing equipment, was added to the Hawaii version of the survey. For each store, these percentages were multiplied by their estimate of saltwater fishing sales to estimate the value of their sales for each inventory category.

The next step in cash flow analysis is to estimate a business' cash outflows or costs. In keeping with the decision to not ask for exact dollar figures, store owners were asked to estimate their total operating and inventory costs as a percentage of their total gross sales. This percentage was multiplied by each store's estimated total gross sales to estimate their total costs. Store owners were also asked to estimate their expenses across 11 expense categories as a percentage of their total business expenses (i.e., inventory, employee pay, building rent/mortgage, facility and equipment maintenance, marketing/advertising, professional services, insurance, shipping fees, taxes, and other costs). These percentages were then multiplied by the estimate of each store's total expenses to estimate costs per expense category. All expense-related estimates were then

multiplied by the percentage of the store's sales for saltwater fishing bait and tackle to estimate the value of expenses that supported that portion of the business. Of the 11 expense categories presented to store owners, the first was inventory expenses, or costs of goods sold. To estimate the inventory expenses associated with each merchandise category, each store's estimated saltwater inventory expense was divided across the six to seven merchandise categories based on the reported percentage of the store's fishing sales per category. For example, if 10 percent of a store's fishing-related sales were for bait, it was assumed that bait accounted for 10 percent of the store's inventory expenses.

Once saltwater fishing–related sales and expense figures were estimated for each store, average estimates were calculated for both Bait & Tackle and Other stores nationally and in each region (except for Alaska and Hawaii, where limited sample sizes dictated the need for combined models). Average net revenues were calculated by subtracting total average saltwater fishing–related expenses from average saltwater fishing bait and tackle sales. Finally, average cost and earnings figures were extrapolated to total costs and earnings nationally and for each region by estimates of the total number of Bait & Tackle and Other stores within the respective study area. The national and regional estimates of the total number of retail stores selling marine recreational fishing bait and tackle were generated by reducing the number of stores in the initial sample frame by the number of stores that were determined to be ineligible (i.e., did not sell bait and tackle, determined to be closed, determined to not be a retail business, or had an undeliverable address suggesting they were also out of business). The number of stores that were Bait & Tackle or Other Stores per region and nationally was determined by extrapolating from the percentage of responding stores reporting to be in each category per region (i.e., if 50% of stores responding within a region reported being Bait & Tackle stores, it was assumed 50% of all stores within the region were Bait & Tackle stores).

Economic Contribution Analysis

The results of the cash flow analyses were used to design input-output models in IMPLAN (Minnesota IMPLAN Group, Inc., 2010) to estimate the economic contributions of retail Bait & Tackle and Other Stores that sold marine bait and tackle at the national and regional level in 2013. Input-output models estimate economic contributions, or impacts, of monetary expenditures by consumers and businesses by tracking a regional economy's ability to absorb and circulate their expenses using economic multipliers (Miller and Blair, 1985). Multipliers represent the ratio between total impacts and final expenditures, and serve as a measure of circulation of expended dollars throughout the regional economy being modeled (Archer, 1984). In laymen's terms, this means input-output models track how sales generated by the businesses of interest (in this case, stores that sell marine recreational fishing bait and tackle) support not only their own employees, but also sales and employment for the businesses that directly and indirectly support the operations of the bait and tackle stores (Minnesota IMPLAN Group, Inc., 2010). Furthermore, input-output models also assess induced impacts generated by household expenditures of employees and business proprietors whose income is supported by sales of bait and tackle.

Economic impacts were estimated by business category (Bait & Tackle Stores and Other Stores) for each region (excluding Alaska and Hawaii, where all stores were combined for analysis due to sample size limitations) and nationally. A "sum-of-parts" approach was used to quantify the full economic impacts of sales of saltwater fishing bait, tackle, and related equipment (Steinback and Brinson, 2013). The results of the RBTES were used to quantify the direct sales, income, and employment impacts associated with retail sales of marine bait and tackle in coastal communities. Input-output models were assembled in IMPLAN to estimate the indirect impacts of retail store operating expenditures, and the induced impacts of the household expenditures of employees and store owners. The input-output models used in this report generated three different metrics, referred to as impacts, for assessing the contributions to a region's economy from business expenditures supported by sales of marine recreational fishing bait, tackle, and related equipment. The different measures of impacts are:

- **Sales** are the gross value of sales by businesses within the economic region. In the rest of this document, the terms "sales impacts" and "output impacts" are used interchangeably.
- **Income** includes personal income (wages and salaries) and proprietors' income (income from self-employment).
- **Employment** is specified on the basis of full- and part-time jobs. There is significant part-time and seasonal employment in the retail service, recreational fishing, and many other industries.

The first two types of impacts are measured in terms of dollars, whereas employment impacts are measured in terms of number of jobs. Additionally, the three categories of impacts are not independent, and it is important to note that adding them together would result in some double counting of impacts.

IMPLAN models were assembled for each aggregated region using 2012 state-level data provided in the software package, and assigning retail store cost expenditures to the appropriate industrial or commodity sectors (Table 2). Several expenditure categories presented in the survey questionnaire included more than one IMPLAN sector. This was done to match up with typical bookkeeping records and to keep the number of questions in the survey to a minimum. Among inventory expenses, categories with multiple IMPLAN sectors included accessories (i.e., tools, knives), fishing apparel, and boat accessories (wireless communication devices, navigation instruments, lines, anchors). Among operating costs, categories with multiple IMPLAN sectors included utility expenses, professional services, and other costs. To avoid the biases associated with aggregating, it was necessary to divide the estimated expenditures under these categories across IMPLAN sectors. For several categories, expenses were divided across IMPLAN sectors using the average proportion of final household demand in each sector across the states included within a given model. These categories included accessories, fishing apparel, and utility expenses. The data needed to make these adjustments were provided within the IMPLAN database. However, for several expenditure categories, there was good reason to believe that the household demand proportions were not representative of expenditure breakdowns for stores that sell bait and tackle. In these cases, category expenditures were divided equally across the

associated IMPLAN sectors. For example, the household demand proportions in IMPLAN predicted that sales of wireless communication devices would exceed sales of navigation instruments by a factor of 10. While this is reasonable for overall household expenditures (households buy far more cell phones and wireless internet–connected devices than GPS units), it was not reasonable to assume such a breakdown in sales of boat electronics at stores selling bait and tackle, which are much more likely to sell GPS units. The same could be said of professional services (legal and accounting services). While household demand data shows far greater

Table 2. Inputs for national bait and tackle store economic input model.

Expenditure/Income Category	IMPLAN Sector(s)	Description
Inventory		
Bait	17	Fish
Fishing tackle (rods, lures, etc.)	311	Sporting goods
Fishing lines and nets	129	Artificial and synthetic fibers and filaments
Accessories (clippers, pliers, etc.)	185, 184	Handtools; Cutlery
Fishing apparel	88, 89, 93, 311	All other textile products; Footwear
Boat accessories and electronics (Electronics, lines, anchors)	249, 238, 170, 129	Search, detection, and navigation instruments; Broadcast and wireless communication equipment; Iron and steel manufacturing; Artificial and synthetic fibers and filaments
Spearfishing	311	Sporting goods
Employee pay and benefits	Institutional spending pattern	Households (Employee compensation)
Building rent/mortgage	39	Maintenance of non-residential structures
Facility and equipment maintenance	385	Facilities support services
Utility expenses	351, 31, 33	Telecommunications; Electricity and distribution services; Water, sewage treatment, and other utility services
Marketing/advertising	377	Advertising and related services
Professional services (legal, accounting)	367, 368	Legal services, accounting services
Insurance	357	Insurance
Shipping fees	427	US Postal delivery services
Other costs	354, 3110, 3115, 3313	Monetary authorities (banks), paper products, fuel, non-paper office supplies
Net Returns + Taxes	Institutional spending pattern	Households (Owner net revenue + taxes)

demand for legal services than accounting services, the demand should be more evenly divided for small businesses, so it was divided evenly for the input-output analysis. Finally, costs listed under the "other costs" category were evenly divided into four sectors (i.e., monetary authorities or banks, paper products, fuel, and non-paper office supplies) based on descriptive information provided by store owners who reported other costs.

Adjustments were also made to expenditure estimates for the banking and insurance sectors before inputting the data into IMPLAN as described in Steinback and Brinson (2013, p. 46). Only a portion of the expenditures made in these sectors generate economic impacts in input-output models, as their outputs are measured on a net basis in IMPLAN. For the insurance sector, claims and policy dividends paid back to businesses must be subtracted from premiums paid to avoid overstating the impact to the insurance sector. To do this, insurance premium expenditures by retail stores were adjusted by the average net profit margin percentage (10.7%) for property and casualty insurance firms in the United States (Yahoo! Finance, 2015a). For the banking sector, retail store expenditures on bank fees and interest payments were adjusted for each IMPLAN model by the average net profit margin percentage for each respective region (9.3% to 22.9%) and the United States (14.7%) (Yahoo Finance, 2015b). Next, tax expenses were divided between federal and state/local taxes using an 80/20 ratio. Federal taxes were assigned to the federal government non-defense institutional spending pattern, and state/local taxes were assigned to the state/local government non-education institutional spending pattern contained in IMPLAN. These spending patterns represent the region-wide average expenditure patterns by state/local and federal government institutions not involved in education or defense activities, respectively. These spending patterns include goods and services purchased by government institutions as well as wages and salaries paid to government employees.

For each model, employee pay was assigned to Employee Compensation under the Labor Income Change Activity which uses a Personal Consumption Expenditure (PCE) activity database containing data on average household expenditures of disposable income. Because this survey primarily targeted small businesses, it was assumed net revenues went to store owners' household income, so these values were also assigned to the appropriate Household Income Change sector. Household Income Change Activities in IMPLAN are organized based on household income levels, as spending patterns vary across income levels (Minnesota IMPLAN Group, Inc., 2010). For each model, average store net revenues were estimated to determine the appropriate Household Income Change sector to include within the input-output model. However, only the proportion of net revenues that were supported by sales of saltwater fishing bait and tackle were inputted into each model.

In IMPLAN, regional purchase coefficients (RPCs) reflect the proportion of the total demand for a commodity by all users in a region that is supplied by producers located within the region (Minnesota IMPLAN Group, Inc., 2010). IMPLANs default RPCs were applied to most inventory expenditure estimates to ensure that imported goods were not included in the impact estimates. The one exception for inventory items was for bait purchases. As virtually all bait is derived from local harvesters, all RPC values for bait inventory purchases were increased to 100 percent. Similarly, margins are used in IMPLAN to convert the retail-level prices paid by

anglers into appropriate producer values (Minnesota IMPLAN Group, Inc., 2010). Margins ensure that correct values are assigned to products as they move from producers, to wholesalers, through the transportation sectors, and finally on to retail establishments. Retail margins were also modified to 100 percent for select sectors where all small business purchases were expected to made within the region. Among operating expense sectors, this adjustment was made for all utility sectors (electric, water, telecommunications), building rent, facility maintenance, advertising, and professional services. Additionally, margins for inventory purchases were adjusted by reassigning retail-level margins to wholesale trade businesses, because the objective was to model the economic impacts of the operating expenditures of retail businesses instead of consumer purchases.

Throughout this report, the results of the input-output analyses are referred to as either "economic contributions" or "economic impacts" with no implied distinction in the terms. Note that impact estimates for specific regional models measure only the impacts that occurred within that region due to business expenditures in that region. Impacts that occur across regions are captured in the aggregate U.S. model. For this reason, the impacts estimated by the aggregate U.S. model exceed the sum of the impacts estimated by the regional models.

SURVEY IMPLEMENTATION

Response Rate

Of the 5,290 stores in the initial RBTES sample frame, 1,792 were determined to be ineligible to participate in the study, leaving us with an eligible population of 3,514 potential stores that sold bait and tackle (Table 3). Stores were determined to be ineligible to participate either because they reported that they did not sell bait and tackle (n = 906), they had undeliverable addresses (n = 646), or they were confirmed to be out of business or a non-retail establishment (n = 224). Surveys were returned by 944 stores across the country for a national response rate of 27 percent (Table 3). Of the 944 returned surveys, 884 provided adequate data for inclusion in the data analysis. Regional response rates ranged from a low of 25.0percent (204 out of 789 eligible) in the Gulf of Mexico, to a high of 34.4 percent (11 out of 32 eligible) in Hawaii (Table 3). The percentage of sample units that were identified as being ineligible stayed consistently around 31 percent for all regions with the exception of Alaska, where 63 percent of the firms in the original sample were determined to be ineligible. This was due to the large number of guide services, outfitters, and fishing lodges that were in the list of fishing license vendors in the state. These businesses were considered for removal from the sample frame before the survey began, but were kept in the frame on the small chance any sold bait and tackle to their clients. Due to a near complete lack of reporting from these businesses, and information gathered during the telephone recruitment calls following the second mailing, it was determined that all of these businesses should be classified as not selling bait and tackle. A final population of 3,514 stores that were believed to sell bait and tackle in the study area remained after removing stores that were determined to be ineligible for the study.

Table 3. Response rates by region and nationally for the Marine Recreational Bait and Tackle Store Economic Survey.

Region	Initial Sample	Returned Surveys[1]	Refusals	Ineligible			Final Eligible Population[3]	Response Rate[4]
				Do not sell bait & tackle	Undeliverable	Other[2]		
New England	656	122	9	91	72	26	467	26.3
Mid-Atlantic	926	172	8	107	148	39	632	27.3
South Atlantic	1,033	177	14	145	138	42	708	25.0
Gulf of Mexico	1,164	204	14	161	140	74	789	25.9
West Coast	1,029	206	8	182	85	38	724	28.6
Alaska	435	52	13	215	58	0	162	32.5
Hawaii	47	11	0	5	5	5	32	34.4
National	5,290	944	66	906	646	224	3,514	27.0

[1] Of the 944 returned surveys, 884 provided adequate data for inclusion in all economic analyses.

[2] Other ineligible includes operations that were confirmed to be out of business or non-retail firms.

[3] Final eligible population = initial sample minus ineligibles.

[4] Response rates = completed returns divided by eligible businesses (initial sample minus those with undeliverable addresses, did not sell bait and tackle, or other ineligible).

Non-response Bias Analysis

A short telephone survey of non-respondents was conducted 3 weeks after the second mailing of the survey instrument. Attempted calls were made to 178 stores, of which 34 completed the non-respondent survey. An additional 25 stores were determined to be ineligible for participation in the RBTES, and 60 refused to participate. Non-respondents were asked to answer several questions regarding their business operations in 2013. These questions included selecting the category that best described their business, the number of stores they owned, the number of people they employed, how much they generated in gross sales using four broad ranges, whether fishing bait and tackle sales accounted for more or less than 50 percent of their sales, and whether saltwater bait and tackle sales accounted for more or less than 50 percent of their fishing-related sales.

Results of the non-response survey were compared to data provided by survey respondents, and minimal differences were found between the two groups (Table 4). The distribution of stores

across business categories was largely similar for most categories. Bait & Tackle stores made up 35 percent of respondents and 31 percent of non-respondents that participated in the non-response follow-up. More variation was found across the other store categories but, as these categories were lumped for analysis purposes in this report, it was felt to be of minor concern. The distribution of gross sales between respondents and non-respondents also showed minimal difference, with non-respondents actually reporting slightly greater earnings. No significant difference was found between responding and non-responding store owners based on the number of stores owned or number of employees. Finally, stores were categorized in both samples based on their responses to the two questions pertaining to the percentage of their sales that were for fishing and saltwater fishing bait and tackle. It was found that non-respondents were more likely to be stores whose fishing-related sales accounted for less than 50 percent of their gross sales, but only if less than 50 percent of their fishing-related sales were for saltwater fishing bait and tackle. Conversely, respondents were more likely to have answered greater than 50 percent for both questions.

Table 4. Comparison of key variables between respondents and non-respondents to the RBTES survey.

	Respondents		Non-respondents	
Variable	Frequency	Percent	Frequency	Percent
Business Category				
Bait & Tackle	312	35.3	11	31.4
Sporting Goods	137	15.5	2	5.7
Convenience	132	14.9	4	11.4
Gen Retail	104	11.8	3	8.6
Hardware	88	10.0	6	17.1
Marina	111	12.3	9	25.7
Gross Sales				
Less than $200K	294	33.3	9	30.0
$200K - $600K	196	22.2	7	23.3
$600K - $1M	270	30.5	6	20.0
$1 million +	124	14.0	8	26.7
Fishing/Saltwater Sales				
< 50% / < 50%	200	22.6	11	34.4
< 50% / > 50%	326	36.9	10	31.3
> 50% / < 50%	73	8.3	3	9.4
> 50% / > 50%	285	46.6	8	25.0
Mean no. stores	1.1 (0.02)		1.2 (0.11)	
Mean no. employees	8.7 (0.46)		8.0 (1.69)	

NATIONAL OVERVIEW

Characteristics of Marine Bait and Tackle Retailers in the United States

Of the 884 stores that provided usable cost and earnings data, 312 classified themselves as Bait & Tackle stores that catered exclusively to recreational anglers (Table US_1). Of the 572 Other Stores that returned usable surveys, 137 (23.9%) were sporting goods stores that sold merchandise for a variety of sports, 132 (23.1%) were convenience stores, 111 (19.4%) were marinas, 104 (18.2%) were general retail stores, and 88 (15.4%) were hardware stores. Based on these percentages, it was estimated that the final population of 3,514 stores selling bait and tackle in the study area included 1,259 Bait & Tackle stores and 2,255 Other Stores. These numbers are important, as they were used to extrapolate average business costs and earnings figures to total figures for economic impact analysis. The vast majority of store owners in both categories reported owning only one store (93.9% Bait & Tackle, 91.4% Other Stores). Less than 2 percent of store owners reported owning three or more stores (Table US_1). Years of selling saltwater fishing bait and tackle averaged approximately 25 years for both categories, with 13 percent of stores having done so for 50 years or more. Bait & Tackle stores reported employing an average of 3.2 full-time positions and 3.7 part-time positions in 2013 (Table US_1). Other Stores reported having a total of 6.9 full-time and 5.7 part-time employees on average.

Table US_ 1. Characteristics of businesses that sell recreational fishing bait, tackle, and related equipment in near coastal counties of the United States. Stores are categorized as either Bait & Tackle stores that cater almost exclusively to recreational anglers, or other stores that generate a significant portion of their business from other clientele.

	Business Type			
	Bait & Tackle		**Other Stores**	
	N	**%**	**N**	**%**
Business type				
Bait and tackle	312	100.0		
Sporting goods			137	23.9
Convenience store			132	23.1
General goods retailer			104	18.2
Hardware store			88	15.4
Marina			111	19.4
Number of stores owned				
One	292	93.9	521	91.4
Two	13	4.2	38	6.7
Three or more	6	1.9	11	1.9
	Mean	**SE**	**Mean**	**SE**
Years selling fishing bait and tackle	25.0	1.2	25.1	1.0
Number of employees				
Full time	3.2	0.3	6.8	0.5
Part time	3.7	0.4	5.7	0.4

Store Costs and Earnings in the United States

Total Gross, Fishing, and Saltwater Fishing Sales

Nationally, Bait & Tackle stores reported an average of $794 thousand in total gross sales per store in 2013 (Table US_2). However, the distribution of gross sales was somewhat skewed, as 61.7 percent of Bait & Tackle stores reported gross sales of $400 thousand or less (Figure US_1). Bait & Tackle stores generated sales averaging $623 thousand for recreational fishing bait, tackle, and related equipment excluding boats, representing 78.4 percent of total sales (Table US_2). Bait & Tackle stores reported $426 thousand in saltwater fishing–related sales representing 68.4 percent of fishing-related sales and 53.7 percent of total gross sales on average (Table US_2). Extrapolating by the estimated 1,259 Bait & Tackle stores in coastal and near coastal counties, it was estimated that saltwater recreational fishing bait and tackle sales by local, independent Bait & Tackle stores in near coastal counties in 2013 totaled $536 million (Table US_3).

Table US_ 2. Estimated mean gross sales (all sales, fishing, and saltwater fishing) per store (using mid-point of selected sales range) by business type (Bait & Tackle versus Other). Saltwater fishing sales are also reported by item category.

	Bait & Tackle (N = 312)		**Other Stores (n = 572)**	
Variable	**Mean**	**SE**	**Mean**	**SE**
Gross sales				
Total	794,151	95,860	1,675,830	107,122
Fishing related	622,591	80,137	211,793	18,337
Saltwater related	425,898	48,199	140,981	14,482
SW Sales by Category				
Bait	71,735	6,142	27,807	3,322
Live bait	14,633	1,522	6,947	1,461
Fishing tackle	199,624	27,910	50,845	6,003
Fishing lines/nets	44,989	6,075	14,278	1,992
Accessories	36,499	8,469	11,535	1,479
Fishing apparel	37,524	6,881	8,593	1,418
Boat accessories and electronics	21,646	5,843	21,555	5,119
Spearfishing	1,675	1,379	948	651
Total costs	612,323	76,075	1,290,839	83,252

Table US_ 3. Estimated median, average, and total cash flow of retail stores in the United States that sell recreational fishing bait and tackle adjusted for the owners' estimated percentage of sales for saltwater fishing items. Figures are reported for Bait & Tackle stores and Other Stores.

	Bait & Tackle (N = 312)				Other Stores (n = 572)			
Expenditure/Income Category	**Median**	**Mean**	**SE**	**Total (1,000)**	**Median**	**Mean**	**SE**	**Total (1,000)**
Inflow – Gross revenue	148,500	425,898	48,199	536,206	23,275	140,981	14,482	317,911
Inventory								
Bait	9,094	28,759	2,693	36,208	276	9,945	1,351	22,425
Fishing tackle	17,577	86,916	13,818	109,427	1,131	20,070	2,647	45,258
Fishing lines and nets	4,070	18,496	2,583	23,287	142	5,046	777	11,380
Accessories	2,645	14,781	3,582	18,610	107	4,265	594	9,618
Fishing apparel	408	16,622	3,446	20,927	0	3,020	574	6,811
Boat accessories and electronics	0	8,363	2,451	10,529	0	9,302	2,761	20,976
Spearfishing	0	367	293	462	0	403	285	908
Employee pay and benefits	14,388	54,329	6,752	68,400	2,076	19,745	2,128	44,524
Building rent/mortgage	8,332	25,240	3,414	31,777	395	7,739	1,035	17,451
Facility and equipment maintenance	2,424	8,540	1,169	10,752	319	3,901	431	8,796
Utility expenses	5,373	15,708	1,875	19,776	694	6,133	852	13,830
Marketing/advertising	2,592	9,940	1,529	12,514	112	4,434	1,020	9,998
Professional services (legal, accounting)	1,681	5,495	703	6,918	149	2,823	456	6,365
Insurance	2,608	12,212	2,068	15,376	321	4,496	557	10,138
Taxes and licensing fees	2,222	12,489	2,100	15,724	333	5,011	675	11,300
Shipping fees	282	6,555	1,281	8,253	4	2,958	1,068	6,671
Other costs	0	8,089	2,316	10,184	0	1,422	312	3,207
Net Returns	74,804	92,999		117,085	17,216	30,269		68,256

Nearly 30 percent of Bait & Tackle stores indicated that saltwater fishing–related sales accounted for over 90 percent of their total gross sales, and the majority (54.4%) reported saltwater fishing–related sales made up over 70 percent of their total gross sales (Figure US_2). Fishing tackle sales (which included rods and reels, lures, terminal tackle, and tackle storage boxes and containers) accounted for nearly half (47.0%) of saltwater fishing sales, at just under $200 thousand. Bait, both alive and dead, was the category with the second highest sales volume, at $71.7 thousand followed by fishing lines and nets at $45 thousand, fishing apparel at

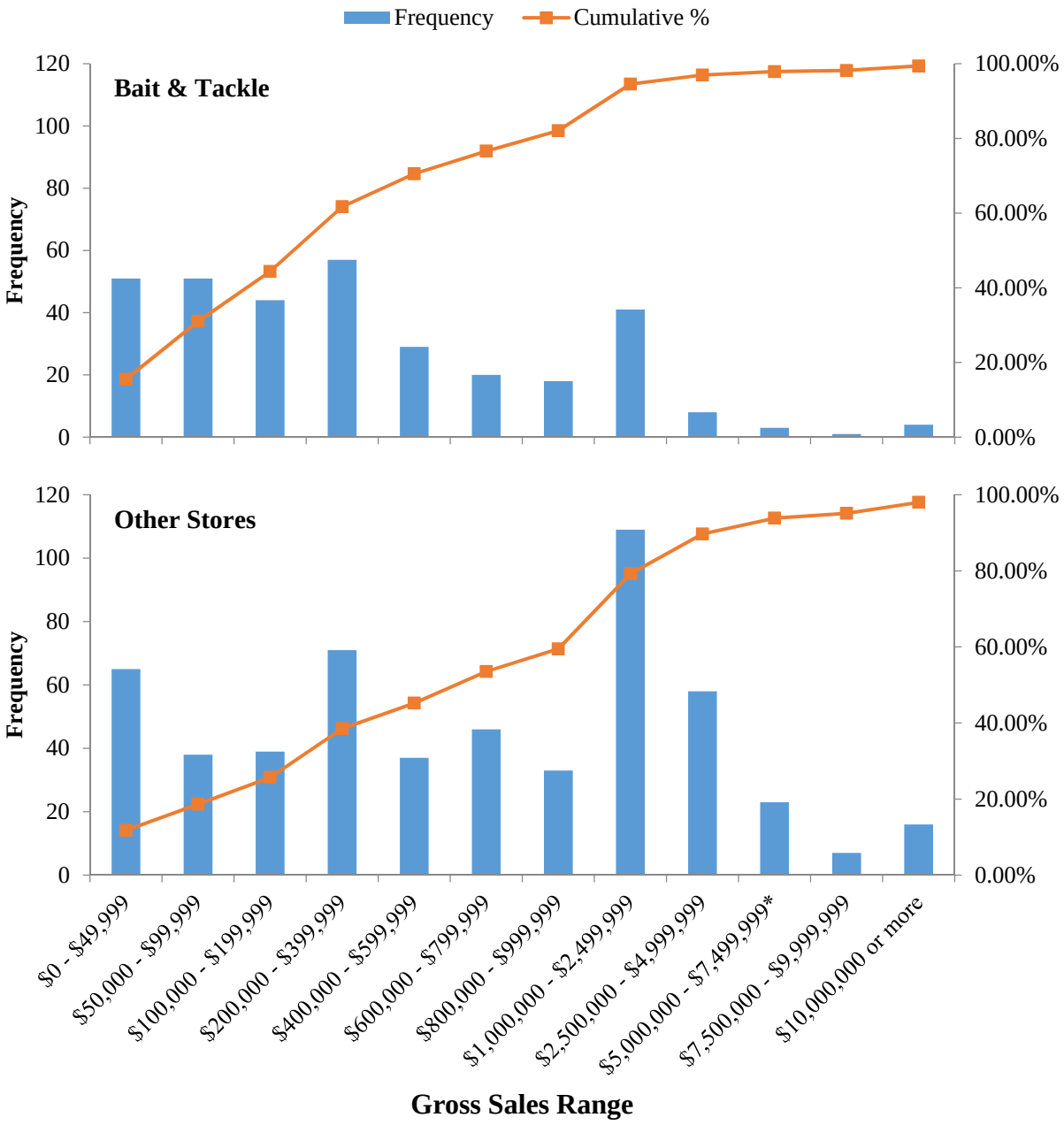


Figure US_ 1. Frequency and cumulative percentage distribution of reported total gross sales of retail stores that sell marine recreational fishing bait and tackle by their selected business category.

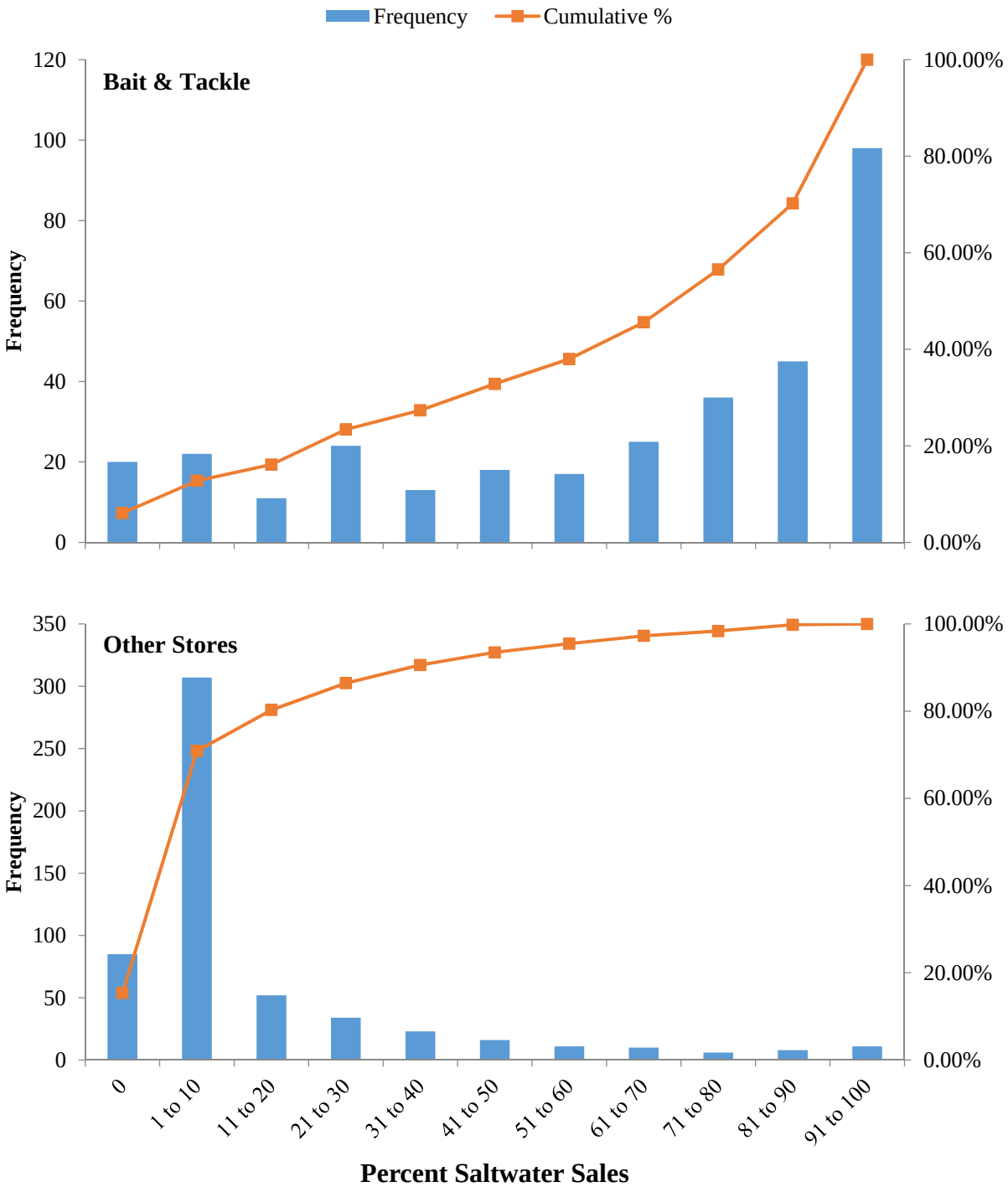


Figure US_ 2. Frequency and cumulative percentage of stores by the proportion of total gross sales consisting of sales of saltwater recreational fishing bait, tackle, and related equipment by business category.

$37.5 thousand, fishing accessories (e.g., knives, clippers, pliers) at $36.5 thousand, boating electronics and accessories at $21.6 thousand, and spearfishing equipment at $1.7 thousand.

Other Stores reported an average of $1.68 million in total gross sales per store in 2013, twice what Bait & Tackle stores reported (Table US_2). Sales figures of Other Stores were even more skewed than those for Bait & Tackle stores, as 53.5 percent of Other Stores reported gross sales of $800 thousand or less (Figure US_1). Only $212 thousand of Other Store sales were for recreational fishing bait, tackle, and related equipment, representing only 12.6 percent of total sales (Table US_2). Other Stores reported $141 thousand in saltwater fishing–related sales representing 66.5 percent of fishing-related sales and 8.4 percent of total gross sales (Table US_2). Extrapolating by the estimated 2,255 Other Stores in the study area, it was estimated that saltwater recreational fishing bait and tackle sales by Other Stores in near coastal counties in 2013 were $318 million (Table US_3).

The vast majority (70.9%) of Other Stores reported saltwater fishing sales that represented 10 percent or less of their total gross sales (Figure US_2). Fishing tackle sales (which included rods and reels, lures, terminal tackle, and tackle storage boxes and containers) accounted for a little over a third (36.1%) of saltwater fishing sales, at just under $50.8 thousand. Bait, both alive and dead, was the category with the second highest sales volume at $27.8 thousand, followed by boating electronics and accessories at $21.6 thousand, fishing lines and nets at $14.3 thousand, fishing accessories (e.g., knives, clippers, pliers) at $11.5 thousand, fishing apparel at $8.6 thousand, and spearfishing equipment at $948.

Inventory and Operating Expenses

On average, Bait & Tackle stores reported $612.3 thousand (77% of store earnings) in total expenses, leaving them with $181.8 thousand in average total net revenues per store (Table US_2). After adjusting for the percentage of Bait & Tackle store sales that were for saltwater fishing bait and tackle (53.7%), it was estimated that Bait & Tackle stores averaged $333 thousand in expenses supporting those sales, which extrapolated to all stores resulted in an estimate of $419 million in total inventory and operating expenses. In 2013, the average Bait & Tackle store had an average net cash flow of $93 thousand associated with sales of saltwater bait and tackle, which extrapolated out to an estimated $117 million in net revenues across all Bait & Tackle stores in near coastal communities (Table US_3). The largest expenditures for the average Bait & Tackle store were inventory ($174 thousand), employee pay and benefits ($54.3 thousand), and building rent or mortgage ($25.2 thousand) (Table US_3). Other expenses included utilities ($15.7 thousand), taxes and licensing fees ($12.4 thousand), insurance ($12.2 thousand), marketing and advertising ($9.9 thousand), facility and equipment maintenance ($8.5 thousand), shipping fees ($8.1 thousand), professional services ($5.5 thousand), and other miscellaneous costs ($8.1 thousand) (Table US_3).

On average, Other Stores reported $1.3 million (77% of store earnings) in total expenses, leaving them with $385 thousand in average total net revenues per store (Table US_2). After adjusting for the percentage of Other Store sales that were for saltwater fishing bait and tackle (8.4%), it was estimated that Other Stores averaged $111 thousand in expenses supporting those sales, which extrapolated to all stores resulted in an estimate of approximately $250 million in total inventory and operating expenses. In 2013, the average Other Store had an average net cash flow of $30.2 thousand associated with sales of saltwater bait and tackle, which extrapolated out to an estimated $68.3 million in net revenues across all Other Stores in near coastal communities (Table US_3). The largest expenditures for the average Other Store were inventory ($52.1 thousand), employee pay and benefits ($19.7 thousand), and building rent or mortgage ($7.7 thousand) (Table US_3). Other expenses included utilities ($6.1 thousand), taxes and licensing fees ($5.0 thousand), insurance ($4.5 thousand), marketing and advertising ($4.4 thousand), facility and equipment maintenance ($3.9 thousand), shipping fees ($3.0 thousand), professional services ($2.8 thousand), and other miscellaneous costs ($1.4 thousand) (Table US_3).

Economic Contributions of Marine Bait and Tackle Retailers in the United States

Using the expenditure data described above, national input-output models were constructed in IMPLAN to estimate the economic contributions of retail store operations supported by 2013 sales of saltwater recreational fishing bait and tackle in near coastal communities. Separate models were estimated for Bait & Tackle stores and Other Stores. In 2013, Bait & Tackle stores in near coastal communities contributed an estimated $1.45 billion in total sales output to United States businesses, $496 million in income to individuals working in the United States, and supported 9,791 jobs (full- and part-time) (Table US_4). Other Stores contributed an estimated $872 million in total sales output to United States businesses, $300 million in income to individuals working in the United States, and supported 6,535 jobs (full- and part-time) (Table US_4). Combined, the sale of saltwater fishing bait and tackle by local, independent retailers in near coastal communities contributed a total economic impact of $2.33 billion in total sales, $796 million in income, and 16,326 jobs (Table US_4). These contributions were the result of a combined $854 million in sales of saltwater recreational fishing bait and tackle, indicating a multiplier ratio of 2.7 between direct sales and total sales output generated.

Table US_ 4. National economic impacts (employment, labor income, and output) generated by retail store operations that are supported by the sale of marine recreational bait and tackle.

Business category	Total Saltwater Bait & Tackle Sales ($1,000)	Economic Contributions		
		Employment (Jobs)	Income ($1,000)	Total Output ($1,000)
Bait & Tackle	536,206	9,791	495,748	1,454,177
Other Stores	317,911	6,535	300,359	872,076
Total	854,117	16,326	796,107	2,326,253

The top 10 industries with the most employment supported by the operations of marine bait and tackle retailers are shown in Table US_5. Naturally, individuals directly employed by retailers that sell bait and tackle made up the largest percentage (47.6%) of total employees supported. Following those directly employed by the industry, the highest numbers of jobs supported were in wholesale trade (863), commercial fishing (529) which provides bait, and food services and drinking places (498) (Table US_5). Top 10 industries supported primarily by store operational expenses include wholesale trade, commercial fishing, maintenance and repair of nonresidential structures, and employment services. Industries supported by employee household spending include food services and drinking places, offices of physicians, private hospitals, and retail stores. Table US_6 provides a summary of total output and employment impacts by industry type. After marine bait and tackle retailers, the broader industry types most supported by sales of saltwater bait and tackle were the service sector ($628 million in total sales, 4,453 jobs), manufacturing ($339 million in total sales, 589 jobs), and retail and wholesale trade ($247 million in total sales, 1,683 jobs).

Table US_ 5. Employment supported by retail stores that sell marine recreational fishing bait and tackle in near coastal counties of the United States: Top Ten Industries.

	Employment (Jobs)	
Industry	Bait & Tackle	Other Stores
Marine bait and tackle retailers	4,452	3,329
Wholesale trade businesses	568	295
Commercial Fishing	327	202
Food services and drinking places	308	190
Maintenance and repair construction of nonresidential structures	268	151
Real estate establishments	146	89
Employment services	125	--
Offices of physicians, dentists, and other health practitioners	122	76
Private hospitals	119	76
Retail Stores - General merchandise	110	74
U.S. Postal Service	--	83

Table US_ 6. Employment and total output supported by the sale of marine recreational bait and tackle in the United States by industry type.

	Bait & Tackle		Other Stores	
Industry Type	Employment (Jobs)	Total Output ($1,000)	Employment (Jobs)	Total Output ($1,000)
Total	9,791	1,454,177	6,535	872,076
Marine bait and tackle retailers	4,452	536,206	3,329	317,911
Agriculture	388	31,421	240	19,398
Mining	32	12,270	20	7,643
Construction	273	39,934	154	22,565
Manufacturing	375	211,278	214	127,290
Transportation, communications, and public utilities	236	53,278	134	32,231
Retail and wholesale trade	1,101	161,600	582	85,262
Services	2,736	384,703	1,717	242,970
Government	198	23,488	144	16,806

Factors Affecting Bait and Tackle Sales in the United States

Store owners were presented with a list of 10 factors, and asked for their opinion on whether those factors had a positive or negative effect on their sales of recreational fishing bait and tackle in 2013 (Table US_7). A majority of Bait & Tackle store owners indicated that seasonal fishery closures (67.5%), fisheries regulations (65.9%), the status of the economy (58.7%), and other government regulations (55.2%) had negative effects on their sales of bait and tackle in 2013. Among owners of Other Stores, the only factors that a majority felt negatively affected their business were the status of the economy (59.7%) and seasonal fisheries closures (50.1%). The factors Bait & Tackle store owners were most likely to feel had a positive effect on their sales in 2013 were the weather (20.2%), the status of the economy (18.8%), and improvements in fish stock status (16.0%). The factors Other Store owners were most likely to feel had a positive effect on their sales in 2013 were the weather (16.1%), the status of the economy (13.5%), and changes in fishing participation (12.9%).

Table US_ 7. Retail store owner opinions on how outside factors affected their sales of recreational fishing bait and tackle in 2013.

	Bait & Tackle Stores (%)			Other Stores (%)		
Factor	Negative	Positive	Neutral	Negative	Positive	Neutral
Fisheries regulations	65.9	7.6	26.5	43.7	6.7	49.6
Fishery seasonal closures	67.5	6.0	26.5	50.1	5.9	44.0
Marine protected areas	31.2	5.0	63.8	21.9	5.8	72.3
Other government regulations	55.2	6.1	38.7	45.4	4.5	50.1
Status of the economy	58.7	18.8	22.4	59.7	13.5	26.8
Changes in fishing participation	43.8	13.8	42.4	29.7	12.9	57.3
Changes in fish stock status	41.2	16.0	42.9	29.4	12.0	58.5
Changes in operating costs	49.5	8.4	42.1	38.2	6.1	55.7
Internet sales of bait & tackle	38.7	10.8	50.5	23.7	1.8	74.5
Weather	49.7	20.2	30.1	35.2	16.1	48.7

DISCUSSION

Study Design

The RBTES focused primarily on independent, primarily small, retail businesses as opposed to larger national and regional chains like Bass Pro Shops, Academy Sports, and Walmart. The RBTES focused on smaller businesses, as these stores may be more disproportionately affected by regional fisheries management actions. Saltwater fishing–related sales make up a relatively small portion of total sales for larger regional and national chains. This, plus their larger regional footprint, makes it comparatively easier for national and regional chains to absorb any negative effects to saltwater fishing sales. However, efforts were made to collect data on national and regional chains for comparison purposes. Annual financial reports were acquired for those chains that are public companies, and efforts were made to reach out to private firms for limited financial data. Unfortunately, no participation was received from privately owned national chains, and the annual reports of the public firms rarely broke out sales figures specifically for fishing and never for saltwater fishing. Attempts were made to contact the public national chains for supplementary information on the percentage of their sales that were for fishing and saltwater fishing, but responses were received from only a few firms. As the number of firms providing data was inadequate to reliably typify the rest of the national and regional firms, it was decided not to include those data in this report.

The sampling frame for this study was assembled from a multitude of sources. The primary sources used to build the frame were state fish and wildlife agencies. In most cases, these agencies provided lists of businesses that are fishing license vendors, although some states had separately maintained lists of stores that sold bait and tackle, and in a few cases their lists were supplemented by stores holding permits authorizing the sale of live bait. In the case of four states (New York, New Jersey, North Carolina, and Hawaii), lists of stores used for previous assessments of bait and tackle stores were provided by sources within NOAA Fisheries. Finally, customer lists were provided by two major industry wholesalers to supplement the frame built through state and federal contacts. All of these sources combined resulted in an initial sample frame of 5,290 stores after identifying and removing duplicate entries. Given the tractable number of sampling elements this list provided, it was decided to send mail surveys to all stores instead of sampling from the frame.

Through the process of conducting the survey, 906 of the originally identified sampling elements were determined to be ineligible for the study, as they did not sell bait and tackle. These were mostly retail stores and other establishments that were authorized to sell fishing licenses but that did not sell recreational fishing bait and tackle. These included stores that catered exclusively to hunters and gun enthusiasts in addition to grocery, convenience, and hardware stores that sold licenses but no bait and tackle. In Alaska, another large portion of businesses that did not sell bait and tackle, but were authorized to sell fishing licenses, included hunting and fishing guides, outfitters, and lodges. Removing these businesses from the sample frame before the survey began was considered, but they were kept on the off chance any sold bait and tackle to their

clients. Due to a near complete lack of reporting from these businesses, and information gathered during the telephone recruitment calls following the second mailing, it was determined that all of these businesses should be classified as not selling bait and tackle. Additionally, some sampling units from the original frame were classified as not selling bait and tackle when they were determined to be wholesalers instead of retailers. Finally, an additional 886 sampling units were determined to be ineligible for the study as they proved to have undeliverable addresses or were confirmed to be out of business, leaving a final eligible sampling frame of 3,514 retail stores.

It is difficult to say with certainty how complete this final tally of stores is, which is an important caveat as the sample frame size was used to extrapolate average cost and earnings estimates to total expenditures for economic impact analysis. As such, the economic impact estimates presented in this report should be viewed as conservative estimates. However, at an average of 8.3 independent stores selling bait and tackle per county surveyed, it is assumed that the sampling frame is fairly complete.

Economic Status of the Independent Marine Bait and Tackle Retail Industry

This report presents the costs and earnings of independent retail stores that sell marine recreational fishing bait, tackle, and related equipment, and the economic contributions of the associated expenditures are presented for seven coastal regions and the combined United States. Stores were divided into two groups for analysis purposes: 1) Bait & Tackle stores that catered exclusively to recreational anglers and 2) Other Stores that sold recreational fishing bait and tackle in addition to other unrelated merchandise. The justification for this separation in the analysis was that Bait & Tackle stores are dependent on recreational anglers for their business. Conversely, sales of bait and tackle are more likely to provide supplementary income for Other Stores. Data collected by the RBTES shows these assumptions to hold up in most cases. A majority of Bait & Tackle stores reported that sales of saltwater fishing bait, tackle, and related equipment made up over 70 percent of their total gross sales, and nearly 30 percent reported such sales accounting for over 90 of their total gross sales. Conversely, nearly 71 percent of Other Stores reported that saltwater fishing sales made up 10 percent or less of their total gross sales, and less than 3 percent reported that greater than 70 percent of their sales came from saltwater fishing related sales. This is not to suggest that saltwater fishing–related sales are not important to Other Stores. Indeed, the extra income provided by these sales can mean the difference between a profitable year and a less successful one. However, most Other Stores would have much greater flexibility to weather periodic downturns in sales of saltwater bait and tackle.

The data provided by store owners suggests that businesses are experiencing good cash flow, with the data showing strong average net returns for both Bait & Tackle and Other Stores. For both business categories, inventory and operating costs for saltwater bait, tackle, and related equipment averaged approximately 79 percent of sales, leaving them with a 21 percent profit rate. On face value, this would seem to be a high profit margin for a retail business; however, this study targeted small, independent stores where net revenues commonly represent the

owner's personal household income. That being the case, the estimated net revenues would appear to be reasonable. Furthermore, data were not collected on the more sensitive questions of total business assets and liabilities, as many industry insiders expressed reservations during the survey design phase about participating or providing specific dollar values on these items. While stores were asked for costs on facility rent and mortgage payments, it is possible that other debt payments may have been excluded from some cost estimates. Additionally, tax deductions and depreciation were not considered in calculations of net earnings, which would have increased effective net revenues and profits. As such, it is difficult to make any definitive conclusions about the overall financial condition of bait and tackle retailers.

Considerable variation was found in the financial figures for bait and tackle retailers, notwithstanding the differences between Bait & Tackle and Other Stores. All figures showed considerable variation, and median values were always considerably lower than mean values, with several categories having median values of $0. This can be credited in part to the fact that 6 percent of Bait & Tackle stores and 15 percent of Other Stores reported no sales of saltwater bait and tackle in 2013. These stores could not be removed from analysis, however, as total sales and expenditure estimates were generated by extrapolating mean estimates by the number of stores within the sampling frame. One positive related to the number of stores reporting $0 in saltwater bait and tackle sales is the fact that it suggests the counties selected for the study area effectively covered the area where independent retailers sell saltwater bait and tackle.

Total sales of saltwater bait, tackle, and related equipment by independent retailers in near coastal communities were estimated to be $854 million in 2013. Out of this figure it was estimated that $543 million in sales were for tackle (including lures, terminal tackle, rods and reels, and tackle boxes and containers), fishing line, nets, knives, and other tool accessories. Comparatively, the 2011 National Marine Recreational Fishing Expenditure Survey (NES) estimated $3.6 billion in total sales for saltwater fishing–related tackle and equipment in the same categories (Lovell et al., 2013). These numbers would suggest that tackle sales by independent retailers in near coastal communities account for approximately 15 percent of the total market. While 15 percent may seem like a small share, the RBTES did not include the larger national and regional retail chains such as Bass Pro, Dick's Sporting Goods, and Walmart, in addition to the growing sector of online-only tackle retailers. Walmart alone is known to hold a massive piece of the market, and reported over $274 billion in total net sales in the United States in their annual financial report (Walmart, 2013). In regard to bait sales, the RBTES estimated sales of $150 million between Bait & Tackle and Other Stores combined in 2013, while the NES estimated $370 million in sales for bait in 2011. Again these figures suggest that sales by independent retailers make up approximately 40 percent of the market compared to the larger chains. One would expect independent retailers to make up a substantially larger proportion of the bait market than the tackle market, as bait is perishable and more likely to be purchased on the day of trip at a store close to the fishing site. However, it is important to point out that the RBTES and NES estimates are developed using markedly different approaches. While the RBTES uses a direct survey of retail store owners, the NES estimates are based on surveys of recreational anglers from mail and on-site intercept surveys. Another possible reason

for the differences in the RBTES and NES estimates are the degree to which either store owners or anglers attributed the percentages of sales/expenditures to saltwater fishing versus to either freshwater fishing or other uses for the equipment (such as pleasure boating). Anglers may have attributed a higher percentage of the item's use to saltwater fishing than the percentage assumed by the retail store owners, resulting in a higher estimate via the NES average expenditures. Finally, while the RBTES only targeted retailers in coastal and near coastal counties, the NES asked anglers for expenditures made anywhere in their state of residence. As such, the NES would have captured sales outside the geographical area covered in the RBTES, although one would expect a substantial majority of independent saltwater bait and tackle retailers to be located in counties close to the coast.

As always, it is difficult to say with certainty the accuracy of the estimated total sales figures. It is known from the non-response survey that stores where saltwater fishing sales made up a smaller portion of their total sales were less likely to respond. This suggests that average sales and costs may be overestimated. At the same time, it is certain that the sampling frame did not include all stores that sold recreational fishing bait and tackle in the study area. This is likely especially true for Other Stores that only sold some bait on the side, such as gas stations that keep a few boxes of night crawlers in stock. However, this under-representation would have the effect of causing the analysis to underestimate total sales, suggesting the combined biases may cancel each other out to some extent, although to what degree is uncertain.

The results of the input-output models show that sales of saltwater bait and tackle by independent retailers in coastal communities support a substantial amount of economic activity in the United States. The sale of saltwater fishing bait and tackle by independent coastal retailers in 2013 contributed a total economic impact of $2.33 billion in total sales, $796 million in income, and supported 16,326 jobs. In addition to individuals directly employed by coastal retailers that sold saltwater bait and tackle in the United States in 2013 (7,781 jobs), it was estimated that an additional 8,545 jobs were supported in other business sectors through indirect and induced transactions. Service sector businesses (4,453 jobs) and retail and wholesale trade businesses (1,683 jobs) were found to be most dependent on saltwater bait and tackle sales.

Based on the summed total sales outputs of the regional input-output models, it can be estimated that $1.8 billion of those sales outputs were supported in the 23 coastal states, while the other $501 million were supported in the other 27 states or through economic interactions between the various coastal regions. The reason for this discrepancy is because the aggregate United States input-output model estimated economic impacts over all 50 states, while the regional models only estimate economic impacts within the states of each region (Lovell et al., 2013). This is also why the national model had a multiplier ratio of 2.7 while the regional models multiplier ratios ranged from 1.6 to 2.3. The aggregate United States model is able to capture more economic interactions not only because it includes 27 more states than the combined regional models, but also because it captures economic interactions between coastal states in different regions.

New England

- **Maine**
- **New Hampshire**
- **Massachusetts**
- **Rhode Island**
- **Connecticut**

Characteristics of Marine Bait and Tackle Retailers in New England

Of the 117 New England stores that provided usable data, 66 classified themselves as Bait & Tackle stores that catered exclusively to recreational anglers (Table NE_1). Of the 51 Other Stores that returned usable surveys, 19 (37.2%) were sporting goods stores that sold merchandise for a variety of sports, 11 (21.6%) were marinas, nine (17.7%) were hardware stores, eight (15.7%) were general retail stores, and five (7.8%) were convenience stores. Based on these percentages, it was estimated that the final population of 467 stores selling bait and tackle in the study area included 261 Bait & Tackle stores and 206 Other Stores. These numbers are important, as they were used to extrapolate average business cost and earnings figures to total figures for economic impact analysis. The vast majority of store owners in both categories reported owning only one store (100.0% Bait & Tackle, 90.2% Other Stores). Only 2 percent of Other Store owners reported owning three or more stores (Table NE_1). Years of selling saltwater fishing bait and tackle averaged around 25 years for both categories. Bait & Tackle stores reported employing an average of 1.6 full-time positions and 2.1 part-time positions in 2013 (Table NE_1). Other Stores reported having a total of 7.8 full-time and 5.1 part-time employees on average.

Table NE_ 1. Characteristics of businesses that sell recreational fishing bait, tackle, and related equipment in near coastal counties of New England. Stores are categorized as either Bait & Tackle stores that cater almost exclusively to recreational anglers, or Other Stores that generate a significant portion of their business from other clientele.

	Business Type			
	Bait & Tackle (N = 66)		**Other Stores (n = 51)**	
	N	**%**	**N**	**%**
Business type				
Bait and tackle	66	100.0		
Sporting goods			19	37.2
Convenience store			4	7.8
General goods retailer			8	15.7
Hardware store			9	17.7
Marina			11	21.6
Number of stores owned				
One	66	100.0	46	90.2
Two	0	0.0	4	7.8
Three or more	0	0.0	1	2.0
	Mean	**SE**	**Mean**	**SE**
Years selling fishing bait and tackle	24.1	2.5	25.8	2.7
Number of employees				
Full time	1.6	0.2	7.8	1.9
Part time	2.1	0.3	5.1	0.8

Store Costs and Earnings in New England

Total Gross, Fishing, and Saltwater Fishing Sales

In New England, Bait & Tackle stores reported an average of $374 thousand in total gross sales per store in 2013 (Table NE_2). However, the distribution of gross sales was somewhat skewed, as 62.5 percent of Bait & Tackle stores reported gross sales of $200 thousand or less (Figure NE_1). Bait & Tackle stores generated sales averaging $322 thousand for recreational fishing bait, tackle, and related equipment excluding boats, representing 86.1 percent of total sales (Table NE_2). Bait & Tackle stores reported $250 thousand in saltwater fishing–related sales, representing 77.6 percent of fishing-related sales and 66.8 percent of total gross sales on average (Table NE_2). Extrapolating by the estimated 261 Bait & Tackle stores in coastal and near coastal counties, it was estimated there were $64.5 million in saltwater recreational fishing bait and tackle sales by local, independent Bait & Tackle stores in near coastal counties in 2013 (Table NE_3).

Table NE_ 2. Estimated mean gross sales (all sales, fishing, and saltwater fishing) per store (using mid-point of selected sales range) by business type (Bait & Tackle versus Other) in New England. Saltwater fishing sales are also reported by item category.

	Bait & Tackle (N = 66)		Other Stores (n = 51)	
Variable	**Mean**	**SE**	**Mean**	**SE**
Gross sales				
Total	373,864	101,935	2,374,510	492,073
Fishing related	321,988	96,988	311,526	96,528
Saltwater related	249,999	96,128	140,040	72,096
SW Sales by Category				
Bait	46,814	7,954	20,110	12,420
Live bait	11,370	2,862	899	479
Fishing tackle	158,502	79,840	44,732	25,445
Fishing lines/nets	12,918	2,851	18,766	12,294
Accessories	11,908	2,784	9,993	4,174
Fishing apparel	14,848	7,629	10,151	5,207
Boat accessories and electronics	2,290	822	34,604	27,462
Total costs	275,978	80,653	1,784,757	381,870

Table NE_ 3. Estimated median, average, and total cash flow of retail stores in New England that sell recreational fishing bait and tackle, adjusted for the owners' estimated percentage of sales for saltwater fishing items. Figures are reported for Bait & Tackle stores and Other Stores.

	Bait & Tackle (N = 66)				Other Stores (n = 51)			
Expenditure/Income Category	**Median**	**Mean**	**SE**	**Total (1,000)**	**Median**	**Mean**	**SE**	**Total (1,000)**
Inflow – Gross revenue	49,575	249,999	96,128	64,500	3,750	140,040	72,096	29,268
Inventory								
Bait	7,187	18,274	3,695	4,715	21	3,980	1,791	832
Fishing tackle	5,063	68,921	42,526	17,782	221	9,576	4,015	2,001
Fishing lines and nets	664	4,245	854	1,095	30	3,583	1,721	749
Accessories	541	4,035	913	1,041	28	2,461	1,093	514
Fishing apparel	57	6,532	4,065	1,685	0	2,113	855	442
Boat accessories and electronics	0	833	338	215	0	9,795	8,158	2,047
Spearfishing	0	0	0	0	0	0	0	0
Employee pay and benefits	2,889	29,195	9,924	7,532	483	17,862	8,217	3,733
Building rent/mortgage	2,520	10,772	2,743	2,779	56	11,403	7,652	2,383
Facility and equipment maintenance	921	3,299	596	851	48	4,238	2,231	886
Utility expenses	2,597	14,285	6,279	3,686	139	10,813	7,510	2,260
Marketing/advertising	638	3,731	1,047	962	45	3,949	2,142	825
Professional services (legal, accounting)	371	2,496	814	644	54	6,648	3,926	1,390
Insurance	1,673	4,693	995	1,211	75	4,462	2,336	933
Taxes and licensing fees	1,269	4,894	1,594	1,263	33	4,603	2,248	962
Shipping fees	319	3,826	1,638	987	0	1,484	790	310
Other costs	0	10,418	8,438	2,688	0	913	548	191
Net Returns	22,866	59,550		15,364	2,517	42,154		8,810

Twenty-five percent of Bait & Tackle stores in New England indicated that saltwater fishing–related sales accounted for over 90 percent of their total gross sales, and the majority (54.7%) reported saltwater fishing–related sales made up over 50 percent of their total gross sales (Figure NE_2). Fishing tackle sales (which included rods and reels, lures, terminal tackle, and tackle storage containers) accounted for 63.4 percent of saltwater fishing sales, at $158.5 thousand. Bait, both alive and dead, was the category with the second highest sales volume at $46.8 thousand, followed by fishing apparel at $14.8 thousand, fishing lines and nets at $12.9 thousand, fishing tool accessories at $11.9 thousand, and boat accessories and electronics at $2.3 thousand.

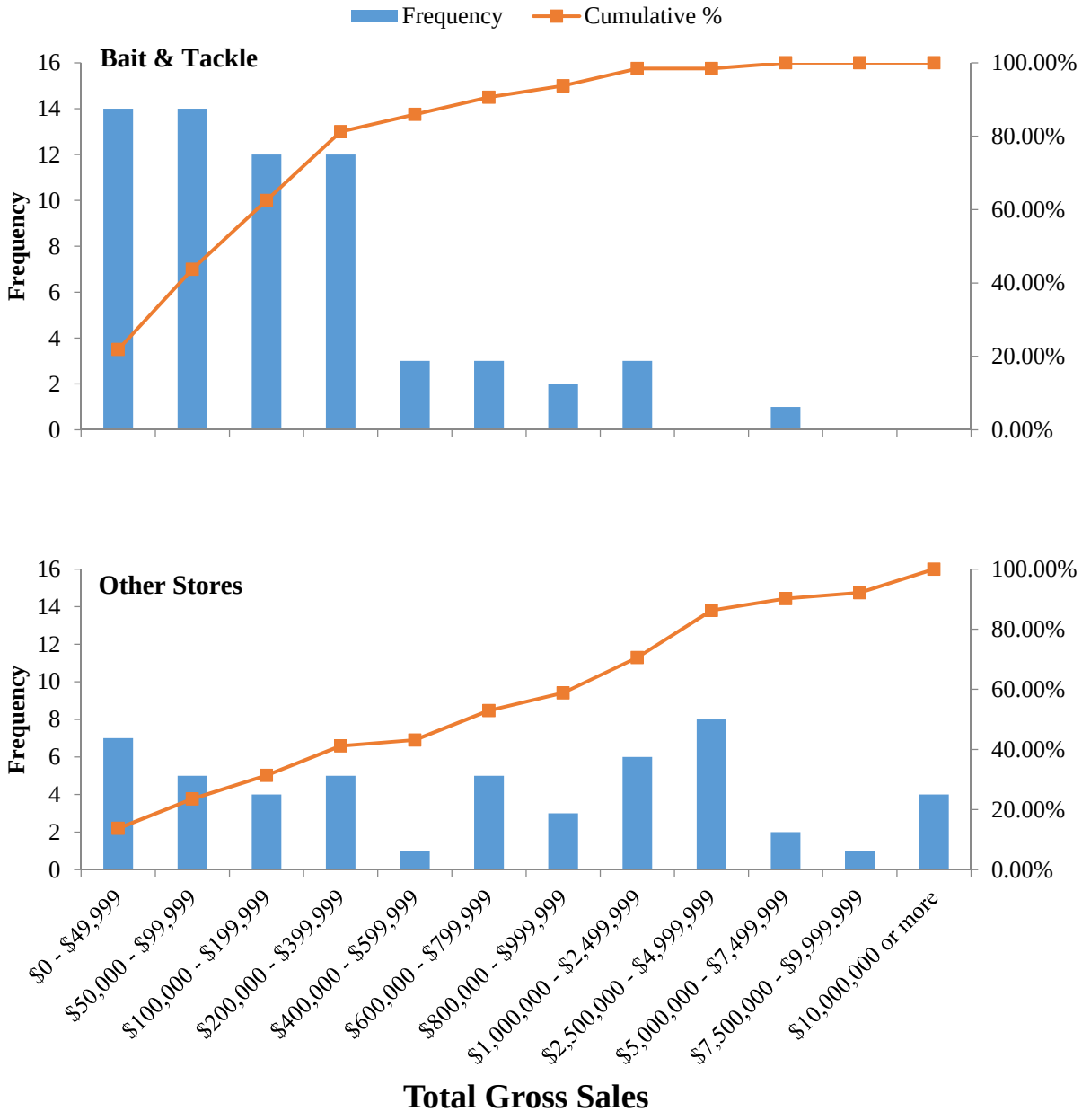


Figure NE_ 1. Frequency and cumulative percentage distribution of reported total gross sales of New England retail stores that sell marine recreational fishing bait and tackle by their selected business category.

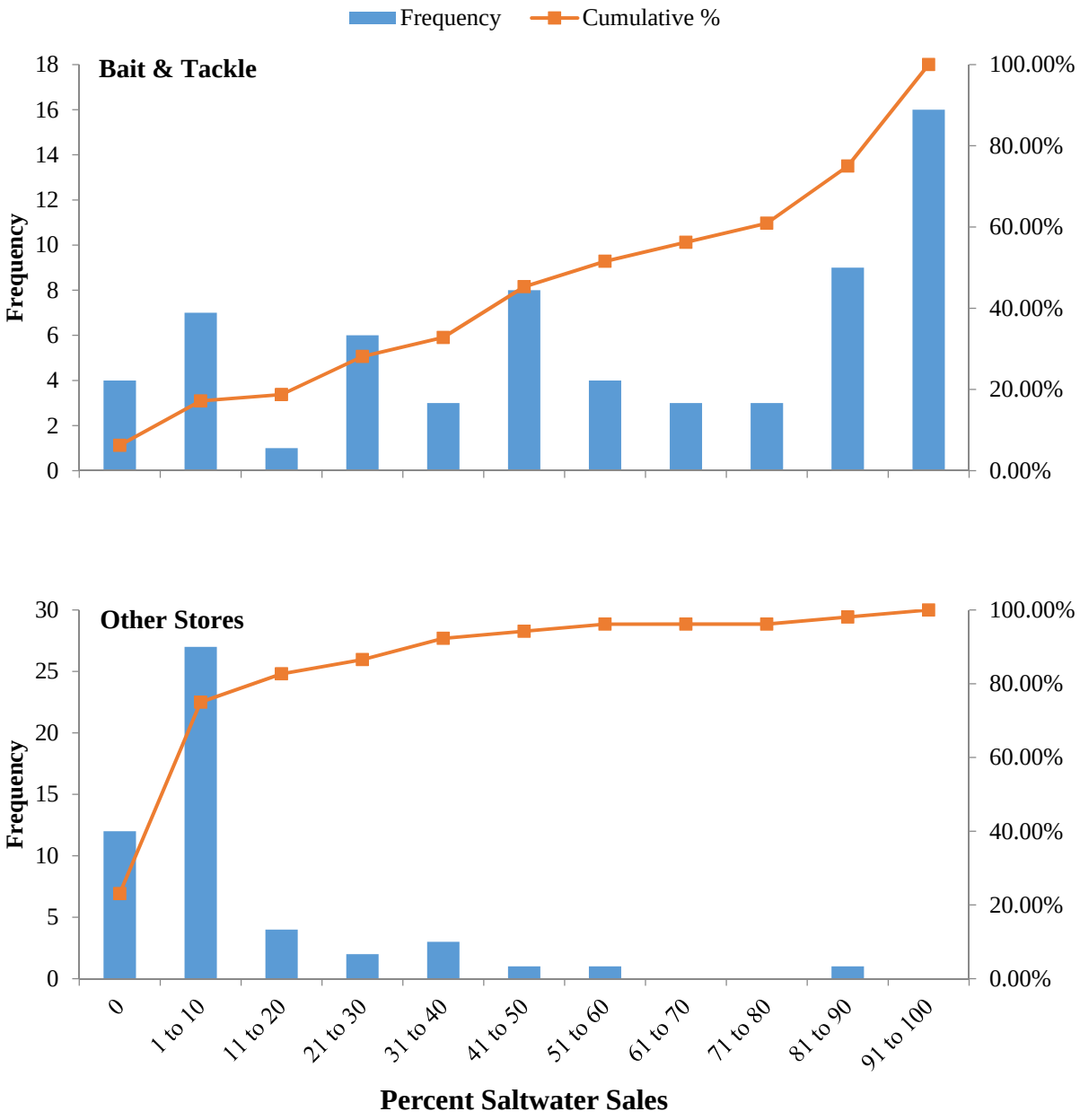


Figure NE_ 2. Frequency and cumulative percentage of New England stores by the proportion of total gross sales consisting of sales of saltwater recreational fishing bait, tackle, and related equipment by business category.

Other Stores in New England reported an average of $2.37 million in total gross sales per store in 2013, more than six times the average reported by Bait & Tackle stores (Table NE_2). Sales figures of Other Stores were even more skewed than those for Bait & Tackle stores, as 52.9 percent of Other Stores reported gross sales of $800 thousand or less (Figure NE_1). Only $312 thousand of Other Store sales were for recreational fishing bait, tackle, and related equipment, representing only 13.1 percent of total sales (Table NE_2). Other Stores reported $140 thousand in saltwater fishing–related sales, representing 45.0 percent of fishing-related sales and 5.9 percent of total gross sales (Table NE_2). Extrapolating by the estimated 206 Other Stores in the study area, it was estimated there were $29.3 million in saltwater recreational fishing bait and tackle sales by Other Stores in near coastal counties of New England in 2013 (Table NE_3).

The vast majority (75.0%) of Other Stores in New England reported saltwater fishing sales that represented 10 percent or less of their total gross sales (Figure NE_2). Fishing tackle sales (which included rods and reels, lures, terminal tackle, and tackle storage boxes and containers) accounted for a little under a third (31.9%) of saltwater fishing sales, at just over $44.7 thousand (Table NE_2). Boating electronics and accessories was the category with the second highest sales volume at $34.6 thousand, followed by bait at $20.1 thousand, fishing lines and nets at $18.8 thousand, fishing apparel at $10.2 thousand, and fishing accessories (e.g., knives, clippers, pliers) at just under $10.0 thousand.

Inventory and Operating Expenses

On average, Bait & Tackle stores in New England reported $276 thousand (74% of store earnings) in total operating costs, leaving them with $97.9 thousand in average total net revenues per store (Table NE_2). After adjusting for the percentage of Bait & Tackle store sales that were for saltwater fishing bait and tackle (66.9%), it was estimated that Bait & Tackle stores averaged $186 thousand in expenses supporting those sales, which extrapolated to all stores resulted in an estimate of $48.4 million in total inventory and operating expenses. In 2013, the average Bait & Tackle store had an average net cash flow of $59.6 thousand associated with sales of saltwater bait and tackle, which extrapolated out to an estimated $15.4 million in net revenues across all Bait & Tackle stores in near coastal communities in New England (Table NE_3). The largest expenditures for the average Bait & Tackle store were inventory ($102.8 thousand), employee pay and benefits ($29.2 thousand), and utility expenses ($14.3 thousand) (Table NE_3). Other expenses included building rent and mortgage ($10.8 thousand), other miscellaneous costs ($10.4 thousand), taxes and licensing fees ($4.9 thousand), insurance ($4.6 thousand), shipping fees ($3.8 thousand), marketing and advertising ($3.7 thousand), facility and equipment maintenance ($3.3 thousand), and professional services ($2.5 thousand) (Table NE_3).

On average, Other Stores in New England reported $1.8 million (75% of store earnings) in total operating costs, leaving them with $590 thousand in average total net revenues per store (Table NE_2). After adjusting for the percentage of Other Store sales that were for saltwater fishing bait and tackle (5.9%), it was estimated that Other Stores averaged $97.9 thousand in expenses supporting those sales, which extrapolated to all stores resulted in an estimate of approximately

$20.2 million in total inventory and operating expenses. In 2013, the average Other Store had an average net cash flow of $42.2 thousand associated with sales of saltwater bait and tackle, which extrapolated out to an estimated $8.8 million in net revenues across all Other Stores in near coastal communities in New England (Table NE_3). The largest expenditures for the average Other Store were inventory ($31.5 thousand), employee pay and benefits ($17.9 thousand), and building rent or mortgage ($11.4 thousand) (Table NE_3). Other expenses included utilities ($10.8 thousand), professional services ($6.6 thousand), taxes and licensing fees ($4.6 thousand), insurance ($4.5 thousand), facility and equipment maintenance ($4.2 thousand), marketing and advertising ($3.9 thousand), shipping fees ($1.5 thousand), and other miscellaneous costs ($913) (Table NE_3).

Economic Contributions of Marine Bait and Tackle Retailers in the United States

Using the expenditure data described above, regional input-output models were constructed in IMPLAN to estimate the economic contributions of retail store operations supported by 2013 sales of saltwater recreational fishing bait and tackle in near coastal communities of New England. Separate models were estimated for Bait & Tackle stores and Other Stores. In 2013, Bait & Tackle stores near coastal counties contributed an estimated $140.3 million in total sales output to New England businesses, $54.0 million in income to individuals working in New England, and supported 958 jobs (full- and part-time) (Table NE_4). Other Stores contributed an estimated $59.5 million in total sales output to New England businesses, $24.9 million in income to individuals working in New England, and supported 298 jobs (full- and part-time) (Table NE_4). Combined, the sale of saltwater fishing bait and tackle by local, independent retailers in near coastal communities contributed a total economic impact of $200 million in total sales, $78.9 million in income, and 1,256 jobs (Table NE_4). These contributions were the result of a combined $93.7 million in sales of saltwater recreational fishing bait and tackle, indicating a multiplier ratio of 2.1 between direct sales and total sales output generated.

Table NE_ 4. National economic impacts (employment, labor income, and output) generated by retail store operations that are supported by the sale of marine recreational bait and tackle in New England.

Business category	Total Saltwater Bait & Tackle Sales ($1,000)	Economic Contributions		
		Employment (Jobs)	Labor Income ($1,000)	Total Output ($1,000)
Bait & Tackle	64,500	958	53,999	140,287
Other	29,268	298	24,905	59,472
Total	93,768	1,256	78,904	199,759

The top 10 New England industries with the most employment supported by the operations of marine bait and tackle retailers are shown in Table NE_5. Naturally, individuals directly employed by retailers that sell bait and tackle made up the largest percentage (44.4%) of total employees supported. Following those directly employed by the industry, the highest numbers of jobs supported were in wholesale trade (81), commercial fishing (51) which provides bait, and food services and drinking places (47) (Table NE_5). Top 10 industries supported primarily by store operational expenses likely include wholesale trade, commercial fishing, maintenance and repair of nonresidential structures, and employment services. Industries more likely to be supported by employee household spending were likely to include food services and drinking places, offices of physicians, private hospitals, and retail stores. Table NE_6 provides a summary of total output and employment impacts by industry type. After marine bait and tackle retailers, the broader industry types most supported by sales of saltwater bait and tackle were the service sector ($55.5 million in total sales, 361 jobs), and retail and wholesale trade ($24.3 million in total sales, 172 jobs).

Table NE_ 5. Employment supported by retail stores that sell marine recreational fishing bait and tackle in near coastal counties of New England: Top 10 Industries.

	Employment (Jobs)	
Industry Sector	Bait & Tackle	Other Stores
Retail stores selling bait and tackle	455	103
Wholesale trade businesses	66	15
Commercial Fishing	43	8
Food services and drinking places	34	13
Maintenance and repair construction of nonresidential structures	24	19
Private hospitals	17	6
Retail Stores - General merchandise	15	--
Offices of physicians, dentists, and other health practitioners	15	5
Real estate establishments	14	5
US Postal Service	12	--
Accounting, tax preparation, bookkeeping, and payroll services	--	7
Legal services	--	6

Table NE_ 6. Employment and total output supported by the sale of marine recreational bait and tackle in New England by industry type.

	Bait & Tackle		Other Stores	
Industry Type	Employment (Jobs)	Total Output ($1,000)	Employment (Jobs)	Total Output ($1,000)
Total	958	140,287	298	59,472
Marine bait and tackle retailers	455	64,500	103	29,268
Agriculture	44	3,066	8	559
Mining	1	76	0	39
Construction	24	3,462	19	2,679
Manufacturing	12	4,856	4	1,622
Transportation, communications, and public utilities	20	4,542	7	1,959
Retail and wholesale trade	135	19,475	37	4,847
Services	249	38,066	112	17,471
Government	19	2,244	8	1,027

Recreational Fisheries Supporting Bait and Tackle Sales in New England

Store owners were asked to identify the three saltwater fisheries they believed generated the greatest sales of bait, tackle, and related equipment for their business in 2013. In New England, striped bass and bluefish generated the greatest sales for both Bait & Tackle (78.8%) and Other Stores (53.8%) (Table NE_7). Bait & Tackle store owners indicated that summer and winter flounder (33.3%) and scup (24.2%) were the second and third greatest generators of sales for their businesses. Other Store owners indicated that Atlantic mackerel (25.0%) and other fisheries (23.1%) were the second and third greatest producers of sales for their businesses. While mackerel are rarely pursued by recreational anglers, they are commonly caught for use as bait for striped bass, so high sales of the specialty rigs used to catch them is not surprising. Commonly listed other fisheries in New England included black sea bass, haddock, and sharks.

Table NE_ 7. Saltwater recreational fisheries that generated the greatest sales of bait and tackle for retail stores in New England as identified by store owners and/or managers. Percentages exceed 100% as respondents were asked to select the top three fisheries.

	Bait & Tackle Stores		Other Stores	
Fishery	N	%	N	%
Striped bass/Bluefish	52	78.8	28	53.8
Summer or Winter flounder	22	33.3	7	13.5
Scup	16	24.2	5	9.6
Tautog	11	16.7	3	5.8
Atlantic cod	8	12.1	6	11.5
Atlantic mackerel	7	10.6	13	25.0
Bluefin tuna	6	9.1	6	11.5
Bonito	1	1.5	0	0.0
Other	11	16.7	12	23.1

Factors Affecting Bait and Tackle Sales in New England

Store owners were presented with a list of 10 factors, and asked for their opinion on whether those factors had a positive or negative effect on their sales of recreational fishing bait and tackle in 2013 (Table NE_8). A majority of Bait & Tackle store owners indicated that seasonal fishery closures (65.6%), the status of the economy (65.6%), changes in operating costs (63.3%), fisheries regulations (65.0%), changes in fish stock status (58.3%), other government regulations (51.7%), and the weather (51.6%) all had negative effects on their sales of bait and tackle in 2013. Among owners of Other Stores, no one factor was felt to have a negative effect on sales by a majority of store owners. However, over 40 percent indicated that the status of the economy (46.0%), changes in operating costs (44.9%), other government regulations (42.9%), and the weather (40.8%) all had negative effects on their sales of bait and tackle in 2013.

Table NE_ 8. New England retail store owner opinions on how outside factors affected their sales of recreational fishing bait and tackle in 2013.

	Bait & Tackle Stores			Other Stores		
Factor	Negative	Positive	Neutral	Negative	Positive	Neutral
Fisheries regulations	65.0	10.0	25.0	38.0	4.0	58.0
Fishery seasonal closures	65.6	3.3	31.2	30.0	6.0	64.0
Marine protected areas	22.6	3.2	74.2	18.4	0.0	81.6
Other government regulations	51.7	6.7	41.7	42.9	2.0	55.1
Status of the economy	65.6	13.1	21.3	46.0	20.0	34.0
Changes in fishing participation	48.3	6.9	44.8	38.8	14.3	46.9
Changes in fish stock status	58.3	13.3	28.3	36.7	10.2	53.1
Changes in operating costs	63.3	6.7	30.0	44.9	4.1	51.0
Internet sales of bait & tackle	44.8	8.6	46.6	27.1	2.1	70.8
Weather	51.6	12.9	35.5	40.8	6.1	53.1

Mid-Atlantic

- **New York**
- **New Jersey**
- **Delaware**
- **Maryland**
- **Virginia**

Characteristics of Marine Bait and Tackle Retailers in the Mid-Atlantic

Of the 160 Mid-Atlantic stores that provided usable data, 73 classified themselves as Bait & Tackle stores that catered exclusively to recreational anglers (Table MA_1). Of the 87 Other Stores that returned usable surveys, 27 (31.0%) were sporting goods stores that sold merchandise for a variety of sports, 22 (25.3%) were marinas, 16 (18.4%) were convenience stores, 12 (13.8%) were hardware stores, and 10 (11.5%) were general retail stores. Based on these percentages, it was estimated that the final population of 632 stores selling bait and tackle in the study area included 286 Bait & Tackle stores and 346 Other Stores. These numbers are important, as they were used to extrapolate average business cost and earnings figures to total figures for economic impact analysis. The vast majority of store owners in both categories reported owning only one store (94.5% Bait & Tackle, 94.3% Other Stores) (Table MA_1). Years of selling saltwater fishing bait and tackle averaged 28.2 years for Bait & Tackle stores and 24.5 years for Other Stores. Bait & Tackle stores reported employing an average of 2.0 full-time positions and 3.4 part-time positions in 2013 (Table MA_1). Other Stores reported having a total of 4.4 full-time and 5.0 part-time employees on average.

Table MA_ 1. Characteristics of businesses that sell recreational fishing bait, tackle, and related equipment in near coastal counties of the Mid-Atlantic. Stores are categorized as either Bait & Tackle stores that cater almost exclusively to recreational anglers, or Other Stores that generate a significant portion of their business from other clientele.

	Business Type			
	Bait & Tackle (N = 73)		**Other Stores (n = 87)**	
	N	**%**	**N**	**%**
Business type				
Bait and tackle	73	100.0		
Sporting goods			27	31.0
Convenience store			16	18.4
General goods retailer			10	11.5
Hardware store			12	13.8
Marina			22	25.3
Number of stores owned				
One	69	94.5	82	94.3
Two	4	5.5	2	2.3
Three or more	0	0.0	3	3.4
	Mean	**SE**	**Mean**	**SE**
Years selling fishing bait and tackle	28.2	2.5	24.5	2.2
Number of employees				
Full time	2.0	0.2	4.4	0.6
Part time	3.4	0.5	5.0	1.0

Store Costs and Earnings in the Mid-Atlantic

Total Gross, Fishing, and Saltwater Fishing Sales

In the Mid-Atlantic, Bait & Tackle stores reported an average of $601 thousand in total gross sales per store in 2013 (Table MA_2). However, the distribution of gross sales was somewhat skewed, as 70.4 percent of Bait & Tackle stores reported gross sales of $400 thousand or less (Figure MA_1). Bait & Tackle stores generated sales averaging $534 thousand for recreational fishing bait, tackle, and related equipment excluding boats, representing 88.8 percent of total sales (Table MA_2). Bait & Tackle stores reported $476 thousand in saltwater fishing–related sales representing 89.2 percent of fishing-related sales and 79.3 percent of total gross sales on average (Table MA_2). Extrapolating by the estimated 286 Bait & Tackle stores in coastal and near coastal counties, it was estimated there were $136 million in saltwater recreational fishing bait and tackle sales by local, independent Bait & Tackle stores in near coastal counties in 2013 (Table MA_3).

Table MA_ 2. Estimated mean gross sales (all sales, fishing, and saltwater fishing) per store (using mid-point of selected sales range) by business type (Bait & Tackle versus Other) in the Mid-Atlantic. Saltwater fishing sales are also reported by item category.

	Bait & Tackle (N = 73)		Other Stores (n = 87)	
Variable	**Mean**	**SE**	**Mean**	**SE**
Gross sales				
Total	600,685	175,374	1,087,356	189,177
Fishing related	533,827	173,759	207,233	44,538
Saltwater related	476,206	173,110	128,042	28,097
SW Sales by Category				
Bait	113,228	21,287	27,495	7,578
Live bait	20,871	4,500	8,006	2,929
Fishing tackle	128,905	31,436	38,908	9,487
Fishing lines/nets	50,821	18,391	10,577	2,715
Accessories	93,601	68,008	11,600	3,480
Fishing apparel	33,083	10,980	9,787	3,018
Boat accessories and electronics	46,812	34,093	26,613	11,375
Total costs	476,268	149,632	848,239	144,648

Table MA_ 3. Estimated median, average, and total cash flow of retail stores in the Mid-Atlantic that sell recreational fishing bait and tackle, adjusted for the owners' estimated percentage of sales for saltwater fishing items. Figures are reported for Bait & Tackle stores and Other Stores.

	Bait & Tackle (N = 73)				Other Stores (n = 87)			
Expenditure/Income Category	**Median**	**Mean**	**SE**	**Total (1,000)**	**Median**	**Mean**	**SE**	**Total (1,000)**
Inflow – Gross revenue	150,000	476,206	173,110	136,195	32,850	128,042	28,097	44,303
Inventory								
Bait	11,856	46,346	9,234	13,255	1,667	10,305	2,669	3,566
Fishing tackle	14,364	55,385	14,461	15,840	2,051	14,832	3,685	5,132
Fishing lines and nets	4,108	20,704	7,852	5,921	345	3,825	960	1,323
Accessories	2,807	40,197	29,834	11,496	361	4,544	1,445	1,572
Fishing apparel	810	14,556	5,484	4,163	0	3,597	1,174	1,244
Boat accessories and electronics	0	19,877	14,939	5,685	0	10,289	4,954	3,560
Employee pay and benefits	11,250	54,271	18,711	15,522	1,960	14,654	3,427	5,070
Building rent/mortgage	11,250	40,746	20,453	11,653	1,879	9,671	2,187	3,346
Facility and equipment maintenance	3,159	10,101	3,750	2,889	819	3,818	915	1,321
Utility expenses	7,560	17,667	4,009	5,053	911	5,123	1,188	1,773
Marketing/advertising	2,820	12,115	5,869	3,465	340	2,481	585	858
Professional services (legal, accounting)	2,142	4,445	738	1,271	245	1,784	404	617
Insurance	3,240	19,589	8,770	5,602	827	4,275	1,048	1,479
Taxes and licensing fees	2,537	21,664	9,553	6,196	612	4,978	1,361	1,722
Shipping fees	0	2,159	465	618	45	992	235	343
Other costs	0	11,022	7,870	3,152	0	996	257	345
Net Returns	72,097	85,362		24,413	20,788	31,880		11,030

Thirty-eight percent of Bait & Tackle stores in the Mid-Atlantic indicated that saltwater fishing–related sales accounted for over 90 percent of their total gross sales, and half (50.0%) reported saltwater fishing–related sales made up over 70 percent of their total gross sales (Figure MA_2). Fishing tackle sales (which included rods and reels, lures, terminal tackle, and tackle storage boxes and containers) accounted for 27.1 percent of saltwater fishing sales, at $128.9 thousand. Bait, both alive and dead, was the category with the second highest sales volume at $113.2 thousand, followed by fishing tool accessories at $93.6 thousand, fishing lines and nets at $50.8 thousand, boat accessories and electronics at $46.8 thousand, and fishing apparel at $33.1 thousand.

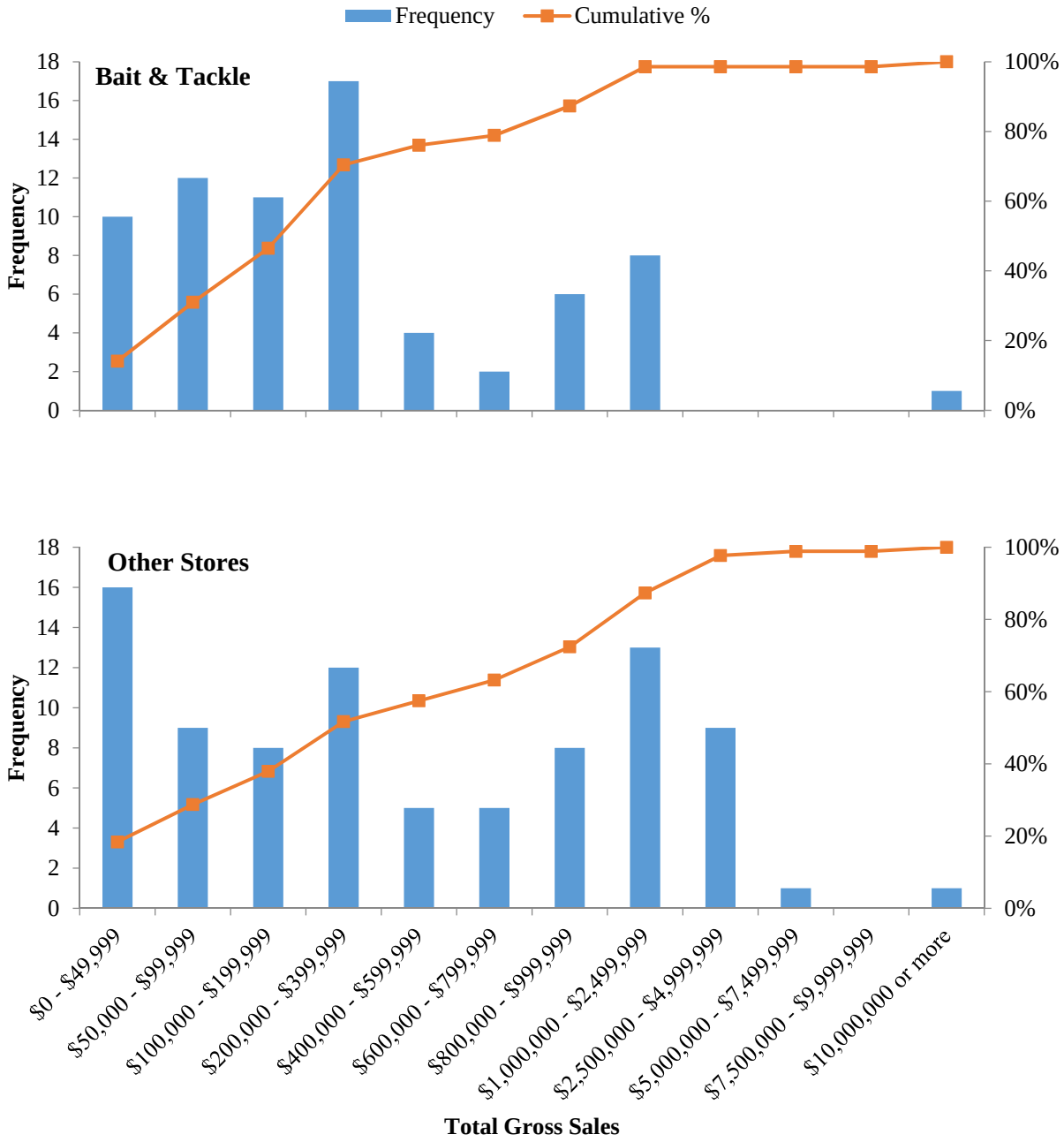


Figure MA_ 1. Frequency and cumulative percentage distribution of reported total gross sales of Mid-Atlantic retail stores that sell marine recreational fishing bait and tackle by their selected business category.

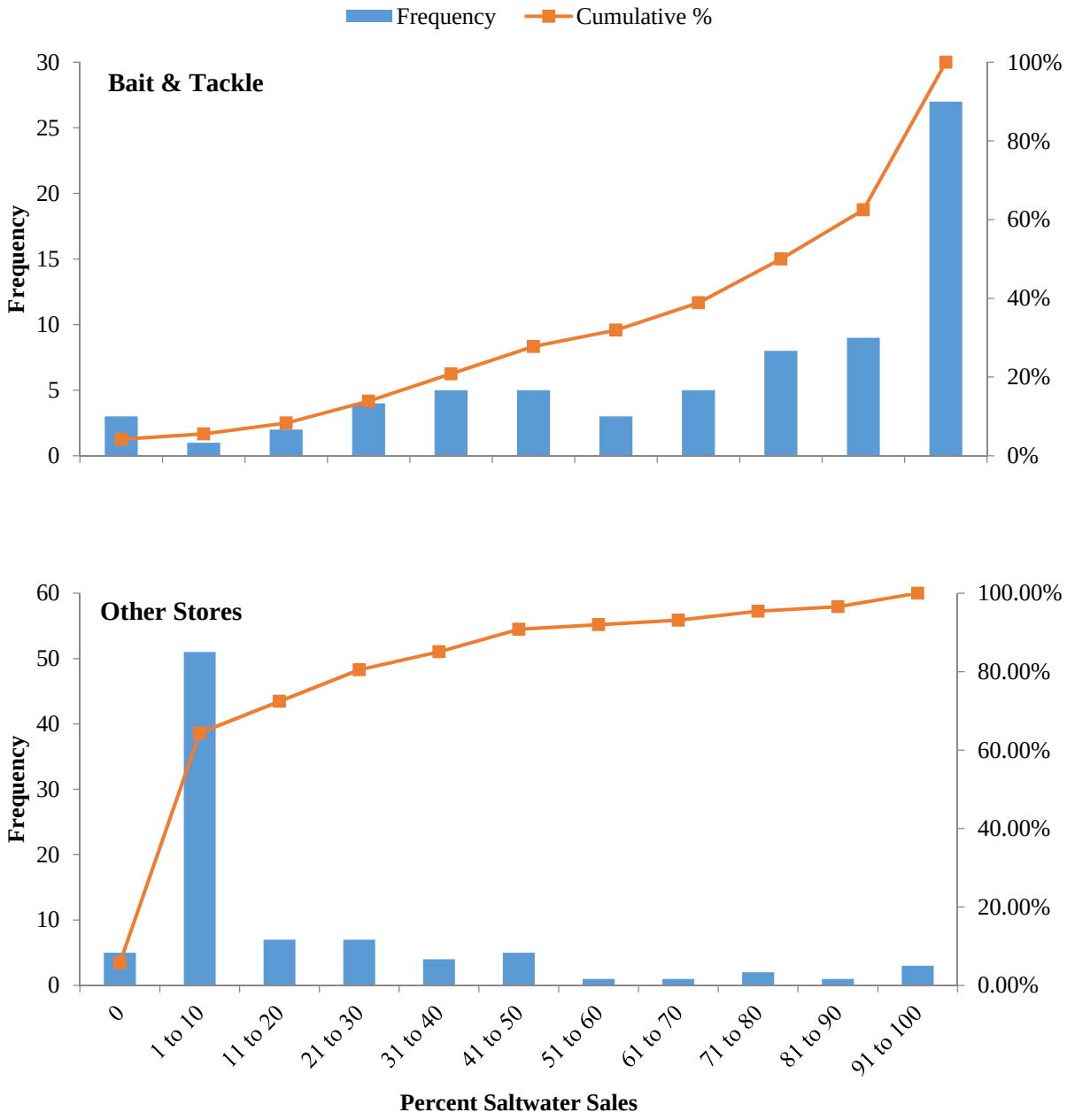


Figure MA_ 2. Frequency and cumulative percentage of Mid-Atlantic stores by the proportion of total gross sales consisting of sales of saltwater recreational fishing bait, tackle, and related equipment by business category.

Other Stores in the Mid-Atlantic reported an average of $1.09 million in total gross sales per store in 2013, almost double the average reported by Bait & Tackle stores (Table MA_2). Sales figures of Other Stores were even more skewed than those for Bait & Tackle stores, as 57.5 percent of Other Stores reported gross sales of $600 thousand or less (Figure MA_1). Only $207 thousand of Other Store sales were for recreational fishing bait, tackle, and related equipment, representing only 19.0 percent of total sales (Table MA_2). Other Stores reported $128 thousand in saltwater fishing–related sales, representing 61.8 percent of fishing-related sales and 8.4 percent of total gross sales (Table MA_2). Extrapolating by the estimated 346 Other Stores in the study area, it was estimated there were $44.3 million in saltwater recreational fishing bait and tackle sales by Other Stores in near coastal counties of the Mid-Atlantic in 2013 (Table MA_3).

The majority (64.4%) of Other Stores in New England reported saltwater fishing sales that represented 10 percent or less of their total gross sales (Figure MA_2). Fishing tackle sales (which included rods and reels, lures, terminal tackle, and tackle storage boxes and containers) accounted for a just under a third (30.4%) of saltwater fishing sales, at just over $38.9 thousand (Table MA_2). Bait was the category with the second highest sales volume at $27.5 thousand, followed boating electronics and accessories at $26.6 thousand, fishing accessories (e.g., knives, clippers, pliers) at $11.6 thousand, fishing lines and nets at $10.6 thousand, and fishing apparel at $9.8 thousand.

Inventory and Operating Expenses

On average, Bait & Tackle stores in the Mid-Atlantic reported $476 thousand (79% of store earnings) in total operating costs, leaving them with $124 thousand in average total net revenues per store (Table MA_2). After adjusting for the percentage of Bait & Tackle store sales that were for saltwater fishing bait and tackle (79.3%), it was estimated that Bait & Tackle stores averaged $391 thousand in expenses supporting those sales, which extrapolated to all stores resulted in an estimate of $112 million in total inventory and operating expenses. In 2013, the average Bait & Tackle store had an average net cash flow of $85.4 thousand associated with sales of saltwater bait and tackle, which extrapolated out to an estimated $24.4 million in net revenues across all Bait & Tackle stores in near coastal communities in the Mid-Atlantic (Table MA_3). The largest expenditures for the average Bait & Tackle store were inventory ($197 thousand), employee pay and benefits ($54.3 thousand), and building rent and mortgage ($40.7 thousand) (Table MA_3). Other expenses included taxes and licensing fees ($21.7 thousand), insurance ($19.6 thousand), utilities ($17.7 thousand), marketing and advertising ($12.1 thousand), other miscellaneous costs ($11.0 thousand), facility and equipment maintenance ($10.1 thousand), professional services ($4.5 thousand), and shipping fees ($2.2 thousand) (Table MA_3).

On average, Other Stores in the Mid-Atlantic reported $848 thousand (78% of store earnings) in total operating costs, leaving them with $239 thousand in average total net revenues per store (Table MA_2). After adjusting for the percentage of Other Store sales that were for saltwater fishing bait and tackle (11.8%), it was estimated that Other Stores averaged $96.2 thousand in

expenses supporting those sales, which extrapolated to all stores resulted in an estimate of approximately $33.3 million in total inventory and operating expenses. In 2013, the average Other Store had an average net cash flow of $31.9 thousand associated with sales of saltwater bait and tackle, which extrapolated out to an estimated $11.0 million in net revenues across all Other Stores in near coastal communities in the Mid-Atlantic (Table MA_3). The largest expenditures for the average Other Store were inventory ($47.4 thousand), employee pay and benefits ($14.7 thousand), and building rent or mortgage ($9.7 thousand) (Table MA_3). Other expenses included utilities ($5.1 thousand), taxes and licensing fees ($5.0 thousand), insurance ($4.3 thousand), facility and equipment maintenance ($3.8 thousand), marketing and advertising ($2.5 thousand), professional services ($1.8 thousand), shipping fees ($992), and other miscellaneous costs ($996) (Table MA_3).

Economic Contributions of Marine Bait and Tackle Retailers in the United States

Using the expenditure data described above, regional input-output models were constructed in IMPLAN to estimate the economic contributions of retail store operations supported by 2013 sales of saltwater recreational fishing bait and tackle in near coastal communities of the Mid-Atlantic. Separate models were estimated for Bait & Tackle stores and Other Stores. In 2013, Bait & Tackle stores near coastal counties contributed an estimated $292.6 million in total sales output to Mid-Atlantic businesses, $102.5 million in income to individuals working in the Mid-Atlantic, and supported 1,922 jobs (full- and part-time) (Table MA_4). Other Stores contributed an estimated $90.8 million in total sales output to Mid-Atlantic businesses, $34.7 million in income to individuals working in the Mid-Atlantic, and supported 656 jobs (full- and part-time) (Table MA_4). Combined, the sale of saltwater fishing bait and tackle by local, independent retailers in near coastal communities contributed a total economic impact of $383.5 million in total sales, $137.2 million in income, and 2,578 jobs (Table MA_4). These contributions were the result of a combined $180.5 million in sales of saltwater recreational fishing bait and tackle, indicating a multiplier ratio of 2.1 between direct sales and total sales output generated.

Table MA_ 4. Regional economic impacts (employment, labor income, and output) generated by retail store operations that are supported by the sale of marine recreational bait and tackle in the Mid-Atlantic.

Business category	Total Saltwater Bait & Tackle Sales ($1,000)	Economic Contributions		
		Employment (Jobs)	Labor Income ($1,000)	Total Output ($1,000)
Bait & Tackle	136,195	1,922	102,497	292,655
Other	44,303	656	34,679	90,799
Total	180,497	2,578	137,176	383,454

The top 10 Mid-Atlantic industries with the most employment supported by the operations of marine bait and tackle retailers are shown in Table MA_5. Naturally, individuals directly employed by retailers that sell bait and tackle made up the largest percentage (47.6%) of total employees supported. Following those directly employed by the industry, the highest numbers of jobs supported were in commercial fishing (216) which provides bait, wholesale trade (150), and maintenance and repair of nonresidential structures (104) (Table MA_5). Top 10 industries supported primarily by store operational expenses likely include wholesale trade, commercial fishing, maintenance and repair of nonresidential structures, and employment services. Industries more likely to be supported by employee household spending were likely to include food services and drinking places, offices of physicians, private hospitals, and retail stores. Table MA_6 provides a summary of total output and employment impacts by industry type. After marine bait and tackle retailers, the broader industry types most supported by sales of saltwater bait and tackle were the service sector ($96.4 million in total sales, 607 jobs), retail and wholesale trade ($45.5 million in total sales, 288 jobs), and construction ($16.6 million in total sales, 109 jobs).

Table MA_ 5. Employment supported by retail stores that sell marine recreational fishing bait and tackle in near coastal counties of the Mid-Atlantic: Top 10 Industries.

	Employment (Jobs)	
Industry S	Bait & Tackle	Other Stores
Retail stores selling bait and tackle	877	351
Commercial Fishing	170	46
Wholesale trade businesses	117	33
Maintenance and repair construction of nonresidential structures	84	24
Food services and drinking places	57	17
Offices of physicians, dentists, and other health practitioners	26	8
Private hospitals	26	7
Real estate establishments	24	7
Retail Stores - General merchandise	23	5
Advertising and related services	18	--
Facilities support services	--	6

Table MA_ 6. Employment and total output supported by the sale of marine recreational bait and tackle in the Mid-Atlantic by industry type.

	Bait & Tackle		Other Stores	
Industry Type	Employment (Jobs)	Total Output ($1,000)	Employment (Jobs)	Total Output ($1,000)
Total	1,922	292,655	656	90,799
Marine bait and tackle retailers	877	136,195	351	44,303
Agriculture	173	8,678	47	2,341
Mining	1	275	0	80
Construction	85	12,883	24	3,717
Manufacturing	23	11,471	7	3,427
Transportation, communications, and public utilities	36	8,783	11	2,752
Retail and wholesale trade	226	35,564	62	9,967
Services	465	73,749	142	22,614
Government	37	5,058	12	1,598

Recreational Fisheries Supporting Bait and Tackle Sales in the Mid-Atlantic

Store owners were asked to identify the three saltwater fisheries they believed generated the greatest sales of bait, tackle, and related equipment for their business in 2013. In the Mid-Atlantic, striped bass and bluefish generated the greatest sales for both Bait & Tackle (76.3%) and Other Stores (69.0%) (Table MA_7). Bait & Tackle and Other Store owners both indicated that summer and winter flounder (60.5%, 42.5%), and bottom fish such as Atlantic croaker, spot, and scup (25.0%, 34.5%) were the second and third greatest generators of sales for their businesses, respectively.

Table MA_ 7. Saltwater recreational fisheries that generated the greatest sales of bait and tackle for retail stores in the Mid-Atlantic as identified by store owners and/or managers. Percentages exceed 100% as respondents were asked to select the top three fisheries.

	Bait & Tackle Stores		Other Stores	
Fishery	N	%	N	%
Striped bass/Bluefish	58	76.3	60	69.0
Summer of Winter flounder	46	60.5	37	42.5
Atlantic croaker/Spot/Scup	19	25.0	30	34.5
Black seabass	9	11.8	7	8.0
Marlin/Tuna	9	11.8	0	0.0
Tautog/Triggerfish	8	10.5	6	6.9
Red or Black drum	5	6.6	5	5.7
Weakfish	4	5.3	6	6.9
Other	13	17.1	17	19.5

Factors Affecting Bait and Tackle Sales in the Mid-Atlantic

Store owners were presented with a list of 10 factors, and asked for their opinion on whether those factors had a positive or negative effect on their sales of recreational fishing bait and tackle in 2013 (Table MA_8). A majority of Bait & Tackle store owners indicated that the status of the economy (81.3%), fisheries regulations (77.0%), seasonal fishery closures (69.9%), changes in fishing participation (66.2%), the weather (63.05), changes in operating costs (62.0%), changes in fish stock status (58.3%), other government regulations (56.3%), and internet sales of bait and tackle (51.5%) all had negative effects on their sales of bait and tackle in 2013. Among owners of Other Stores, a majority indicated that the status of the economy (73.5%) and the weather (50.0%) had negative effects on their sales of bait and tackle in 2013.

Table MA_ 8. Retail store owner opinions on how outside factors affected their sales of recreational fishing bait and tackle in 2013.

	Bait & Tackle Stores			Other Stores		
Factor	Negative	Positive	Neutral	Negative	Positive	Neutral
Fisheries regulations	77.0	6.8	16.2	38.6	8.4	53.0
Fishery seasonal closures	69.9	5.5	24.7	44.5	8.6	46.9
Marine protected areas	20.6	6.9	72.6	18.5	12.4	69.1
Other government regulations	56.3	4.2	39.4	40.7	7.4	51.9
Status of the economy	81.3	8.0	10.7	73.5	9.6	16.9
Changes in fishing participation	66.2	8.1	25.7	41.5	7.3	51.2
Changes in fish stock status	57.1	2.9	40.0	28.8	11.3	60.0
Changes in operating costs	62.0	7.0	31.0	37.8	6.1	56.1
Internet sales of bait & tackle	51.5	7.4	41.2	27.6	2.6	69.7
Weather	63.0	15.1	21.9	50.0	21.3	28.8

South Atlantic

- **North Carolina**
- **South Carolina**
- **Georgia**
- **Florida (Atlantic coast)**

Characteristics of Marine Bait and Tackle Retailers in the South Atlantic

Of the 162 South Atlantic stores that provided usable data, 45 classified themselves as Bait & Tackle stores that catered exclusively to recreational anglers (Table SA_1). Of the 114 Other Stores that returned usable surveys, 29 (24.8%) were convenience stores, 24 (20.5%) were marinas, 23 (19.7%) were general retail stores, 23 (19.7%) were hardware stores, and 18 (15.4%) were sporting goods stores that sold merchandise for a variety of sports. Based on these percentages, it was estimated that the final population of 708 stores selling bait and tackle in the study area included 197 Bait & Tackle stores and 511 Other Stores. These numbers are important, as they were used to extrapolate average business cost and earnings figures to total figures for economic impact analysis. The vast majority of store owners in both categories reported owning only one store (97.8% Bait & Tackle, 91.5% Other Stores). Years of selling saltwater fishing bait and tackle averaged approximately 29 years for Bait & Tackle stores and 25 for Other Stores. Bait & Tackle stores reported employing an average of 3.3 full-time positions and 3.2 part-time positions in 2013 (Table SA_1). Other Stores reported having a total of 6.8 full-time and 6.4 part-time employees on average.

Table SA_ 1. Characteristics of businesses that sell recreational fishing bait, tackle, and related equipment in near coastal counties of the South Atlantic. Stores are categorized as either Bait & Tackle stores that cater almost exclusively to recreational anglers, or Other Stores that generate a significant portion of their business from other clientele.

	Business Type			
	Bait & Tackle (N = 45)		**Other Stores (n = 117)**	
	N	**%**	**N**	**%**
Business type				
Bait and tackle	45	100.0		
Sporting goods			18	15.4
Convenience store			29	24.8
General goods retailer			23	19.7
Hardware store			23	19.7
Marina			24	20.5
Number of stores owned				
One	44	97.8	107	91.5
Two	0	0.0	9	7.7
Three or more	1	2.2	1	0.9
	Mean	**SE**	**Mean**	**SE**
Years selling fishing bait and tackle	28.8	3.0	24.6	2.0
Number of employees				
Full time	3.3	0.6	6.8	1.0
Part time	3.2	0.5	6.4	0.8

Store Costs and Earnings in the South Atlantic

Total Gross, Fishing, and Saltwater Fishing Sales

In the South Atlantic, Bait & Tackle stores reported an average of $727 thousand in total gross sales per store in 2013 (Table SA_2). However, the distribution of gross sales was slightly skewed, as 60.0 percent of Bait & Tackle stores reported gross sales of $600 thousand or less (Figure SA_1). Bait & Tackle stores generated sales averaging $587 thousand for recreational fishing bait, tackle, and related equipment excluding boats, representing 80.7 percent of total sales (Table SA_2). Bait & Tackle stores reported $543 thousand in saltwater fishing–related sales representing 92.5 percent of fishing-related sales and 74.6 percent of total gross sales on average (Table SA_2). Extrapolating by the estimated 197 Bait & Tackle stores in coastal and near coastal counties, it was estimated there were $107 million in saltwater recreational fishing bait and tackle sales by local, independent Bait & Tackle stores in near coastal counties in 2013 (Table SA_3).

Table SA_ 2. Estimated mean gross sales (all sales, fishing, and saltwater fishing) per store (using mid-point of selected sales range) by business type (Bait & Tackle versus Other) in the South Atlantic. Saltwater fishing sales are also reported by item category.

	Bait & Tackle (N = 45)		**Other Stores (n = 117)**	
Variable	**Mean**	**SE**	**Mean**	**SE**
Gross sales				
Total	726,667	153,407	1,655,769	234,901
Fishing related	586,718	147,105	248,381	55,892
Saltwater related	543,288	146,158	154,389	36,291
SW Sales by Category				
Bait	84,921	14,574	27,700	6,976
Live Bait	11,949	3,003	6,152	3,808
Fishing tackle	267,560	88,057	56,991	17,909
Fishing lines/nets	68,599	27,803	15,328	5,507
Accessories	46,662	13,510	10,799	3,657
Fishing apparel	35,772	14,363	5,098	1,618
Boat accessories and electronics	26,702	17,364	32,606	15,475
Total costs	521,344	101,504	1,348,045	201,101

Table SA_ 3. Estimated median, average, and total cash flow of retail stores in the South Atlantic that sell recreational fishing bait and tackle, adjusted for the owners' estimated percentage of sales for saltwater fishing items. Figures are reported for Bait & Tackle stores and Other Stores.

	Bait & Tackle (N = 45)				Other Stores (n = 117)			
Expenditure/Income Category	**Median**	**Mean**	**SE**	**Total (1,000)**	**Median**	**Mean**	**SE**	**Total (1,000)**
Inflow – Gross revenue	256,500	543,288	146,158	107,028	25,000	154,389	36,291	78,893
Inventory								
Bait	15,701	30,368	5,340	5,982	676	8,806	2,193	4,500
Fishing tackle	36,926	102,148	34,940	20,123	959	23,358	8,339	11,936
Fishing lines and nets	6,129	25,410	10,610	5,006	270	5,888	2,692	3,009
Accessories	4,207	17,710	5,202	3,489	149	3,646	1,196	1,863
Fishing apparel	995	13,235	5,431	2,607	0	1,999	788	1,021
Boat accessories and electronics	0	13,435	10,316	2,647	0	17,308	10,690	8,844
Employee pay and benefits	33,470	60,791	13,305	11,976	2,548	23,906	5,436	12,216
Building rent/mortgage	16,820	38,573	8,842	7,599	346	6,076	1,405	3,105
Facility and equipment maintenance	3,029	10,153	2,452	2,000	543	4,101	953	2,096
Utility expenses	9,768	18,317	3,323	3,608	824	6,199	1,467	3,168
Marketing/advertising	2,128	16,504	7,967	3,251	161	4,655	1,555	2,379
Professional services (legal, accounting)	2,156	6,185	1,470	1,218	180	2,413	731	1,233
Insurance	4,355	11,030	2,218	2,173	368	3,996	987	2,042
Taxes and licensing fees	2,253	9,863	2,154	1,943	480	5,649	2,315	2,887
Shipping fees	611	14,466	6,791	2,850	44	1,368	509	699
Other costs	0	12,339	6,234	2,431	0	1,379	534	705
Net Returns	117,952	142,761		28,124	17,452	33,642		17,191

Twenty percent of Bait & Tackle stores in the South Atlantic indicated that saltwater fishing–related sales accounted for over 90 percent of their total gross sales, and the majority (62.2%) reported saltwater fishing–related sales made up over 70 percent of their total gross sales (Figure SA_2). Fishing tackle sales (which included rods and reels, lures, terminal tackle, and tackle storage boxes and containers) accounted for 49.4 percent of saltwater fishing sales, at $268 thousand. Bait, both alive and dead, was the category with the second highest sales volume at $84.9 thousand, followed by fishing lines and nets at $68.6 thousand, fishing tool accessories at $46.7 thousand, fishing apparel at $35.8 thousand, and boat accessories and electronics at $26.7 thousand.

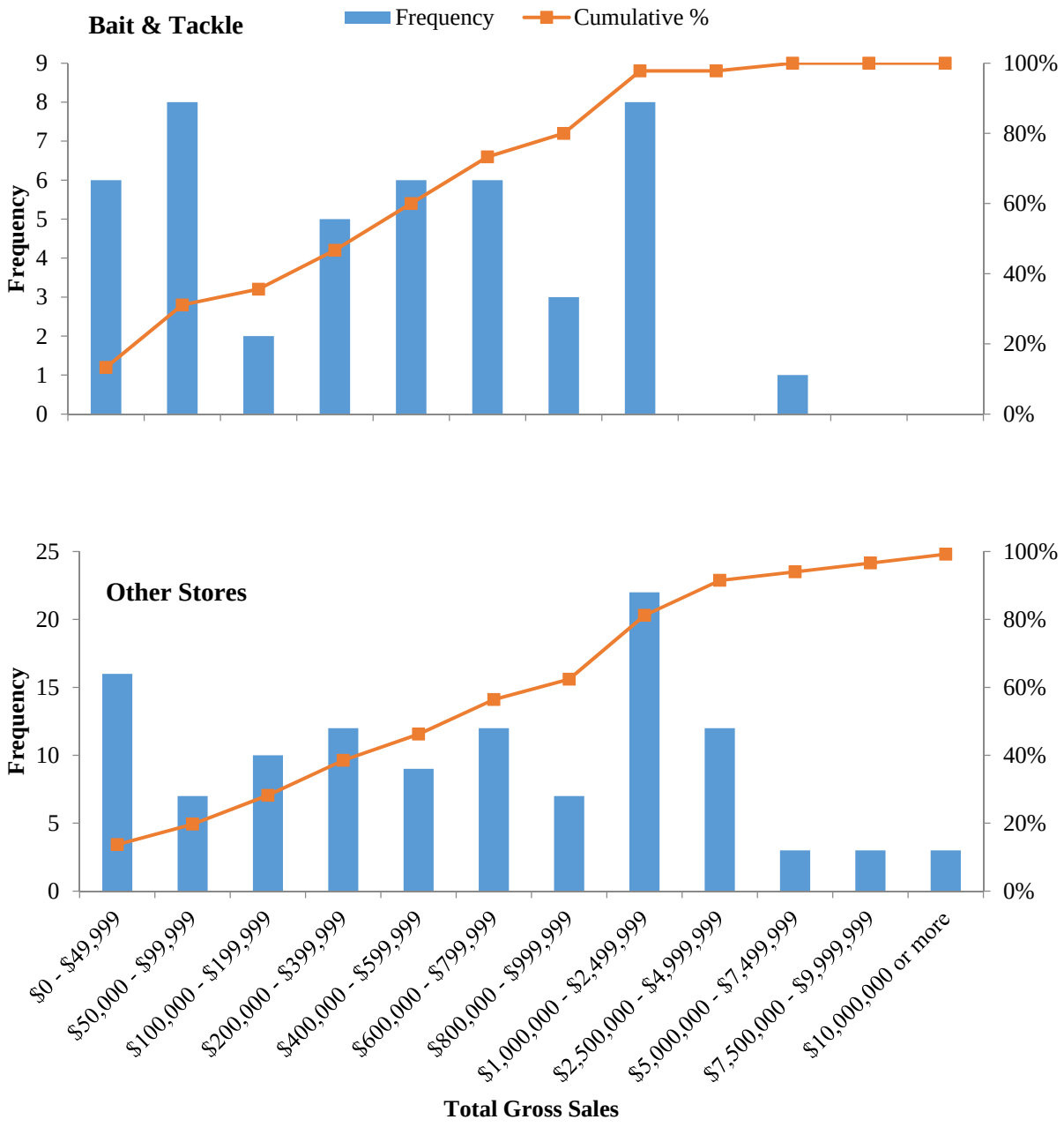


Figure SA_ 1. Frequency and cumulative percentage distribution of reported total gross sales of South Atlantic retail stores that sell marine recreational fishing bait and tackle by their selected business category.

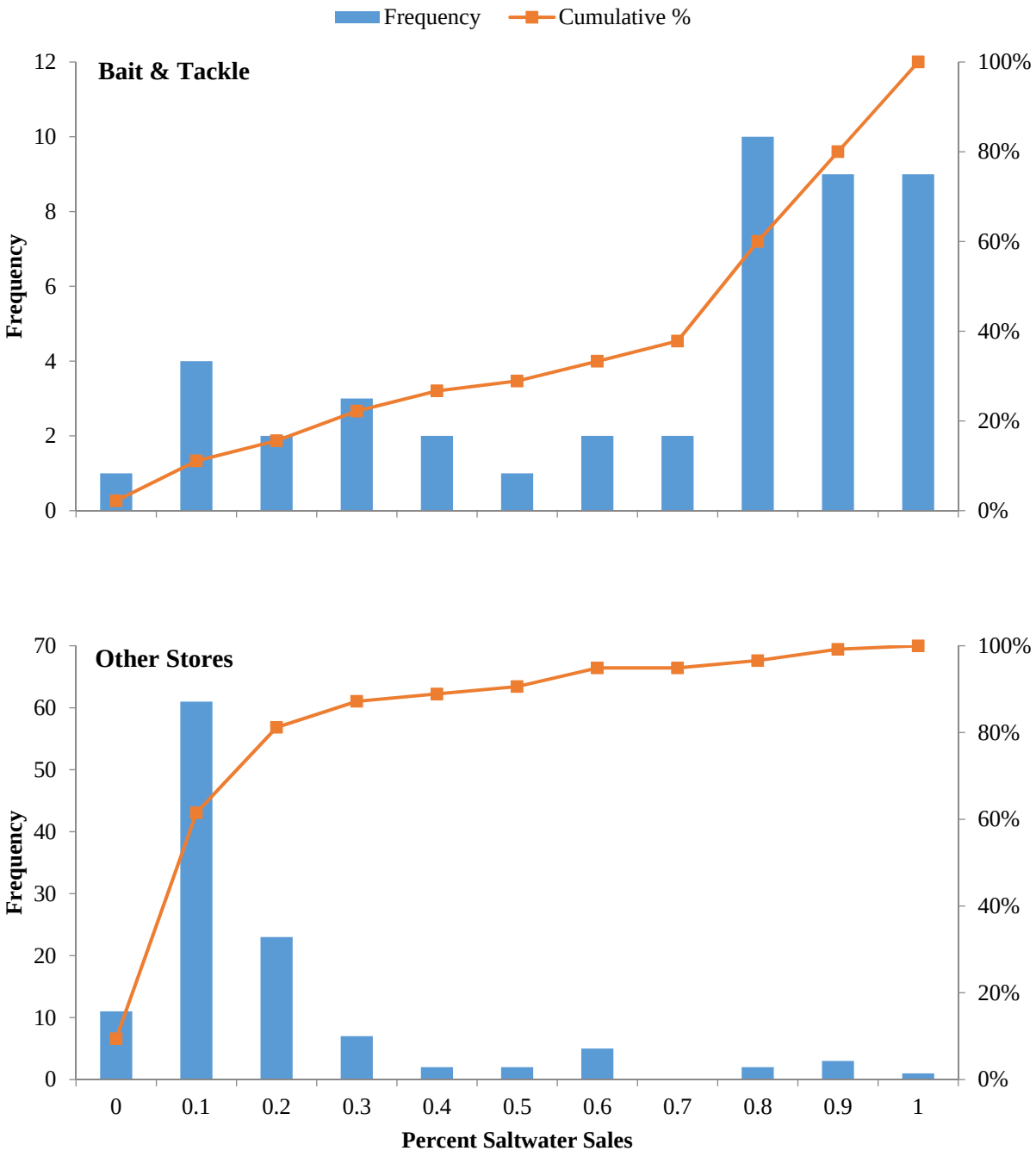


Figure SA_ 2. Frequency and cumulative percentage of South Atlantic stores by the proportion of total gross sales consisting of sales of saltwater recreational fishing bait, tackle, and related equipment by business category.

Other Stores in the South Atlantic reported an average of $1.66 million in total gross sales per store in 2013, more than double the average reported by Bait & Tackle stores (Table SA_2). Sales figures of Other Stores were even more skewed than those for Bait & Tackle stores, as 56.4 percent of Other Stores reported gross sales of $800 thousand or less (Figure SA_1). Only $248 thousand of Other Store sales were for recreational fishing bait, tackle, and related equipment, representing only 12.6 percent of total sales (Table SA_2). Other Stores reported $154 thousand in saltwater fishing–related sales, representing 62.1 percent of fishing-related sales and 9.2 percent of total gross sales (Table SA_2). Extrapolating by the estimated 511 Other Stores in the study area, it was estimated there were $78.9 million in saltwater recreational fishing bait and tackle sales by Other Stores in near coastal counties of the South Atlantic in 2013 (Table SA_3).

The majority (61.5%) of Other Stores in the South Atlantic reported saltwater fishing sales that represented 10 percent or less of their total gross sales (Figure SA_2). Fishing tackle sales (which included rods and reels, lures, terminal tackle, and tackle storage boxes and containers) accounted for a little over a third (36.9%) of average saltwater fishing sales, at just over $57.0 thousand (Table SA_2). Boating electronics and accessories was the category with the second highest sales volume at $32.6 thousand, followed by bait at $27.7 thousand, fishing lines and nets at $15.3 thousand, fishing accessories (e.g., knives, clippers, pliers) at $10.8 thousand, and fishing apparel at $5.1 thousand.

Inventory and Operating Expenses

On average, Bait & Tackle stores in the South Atlantic reported $521 thousand (71.7% of store earnings) in total operating costs, leaving them with $184 thousand in average total net revenues per store (Table SA_2). It was estimated that Bait & Tackle stores averaged $400 thousand in expenses supporting those sales, which extrapolated to all stores resulted in an estimate of $78.9 million in total inventory and operating expenses. In 2013, the average Bait & Tackle store had an average net cash flow of $143 thousand associated with sales of saltwater bait and tackle, which extrapolated out to an estimated $28.1 million in net revenues across all Bait & Tackle stores in near coastal communities in the South Atlantic (Table SA_3). The largest expenditures for the average Bait & Tackle store were inventory ($202.3 thousand), employee pay and benefits ($60.8 thousand), and building rent and mortgage ($38.6 thousand) (Table SA_3). Other expenses included utilities ($18.3 thousand), marketing and advertising ($16.5 thousand), shipping fees ($14.5 thousand), other miscellaneous costs ($12.3 thousand), insurance ($11.0 thousand), facility and equipment maintenance ($10.2 thousand), taxes and licensing fees ($9.9 thousand), and professional services ($6.2 thousand) (Table SA_3).

On average, Other Stores in the South Atlantic reported $1.35 million (81% of store earnings) in total operating costs, leaving them with $308 thousand in average total net revenues per store (Table SA_2). It was estimated that Other Stores averaged $121 thousand in expenses supporting those sales, which extrapolated to all stores resulted in an estimate of approximately $61.7 million in total inventory and operating expenses. In 2013, the average Other Store had an average net cash flow of $33.6 thousand associated with sales of saltwater bait and tackle, which

extrapolated out to an estimated $17.2 million in net revenues across all Other Stores in near coastal communities in the South Atlantic (Table SA_3). The largest expenditures for the average Other Store were inventory ($61.0 thousand), employee pay and benefits ($23.9 thousand), and building rent or mortgage ($6.1 thousand) (Table SA_3). Other expenses included utilities ($6.2 thousand), taxes and licensing fees ($5.7 thousand), marketing and advertising ($4.7 thousand), facility and equipment maintenance ($4.1 thousand), insurance ($4.0 thousand), professional services ($2.4 thousand), shipping fees ($1.4 thousand), and other miscellaneous costs ($1.4 thousand) (Table SA_3).

Economic Contributions of Marine Bait and Tackle Retailers in the South Atlantic

Using the expenditure data described above, regional input-output models were constructed in IMPLAN to estimate the economic contributions of retail store operations supported by 2013 sales of saltwater recreational fishing bait and tackle in near coastal communities of the South Atlantic. Separate models were estimated for Bait & Tackle stores and Other Stores. In 2013, Bait & Tackle stores near coastal counties contributed an estimated $225 million in total sales output to South Atlantic businesses, $83.9 million in income to individuals working in the South Atlantic, and supported 1,733 jobs (full- and part-time) (Table SA_4). Other Stores contributed an estimated $163.8 million in total sales output to South Atlantic businesses, $60.3 million in income to individuals working in the South Atlantic, and supported 1,159 jobs (full- and part-time) (Table SA_4). Combined, the sale of saltwater fishing bait and tackle by local, independent retailers in near coastal communities contributed a total economic impact of $389 million in total sales, $144 million in income, and 2,892 jobs (Table SA_4). These contributions were the result of a combined $186 million in sales of saltwater recreational fishing bait and tackle, indicating a multiplier ratio of 2.1 between direct sales and total sales output generated.

Table SA_ 4. National economic impacts (employment, labor income, and output) generated by retail store operations that are supported by the sale of marine recreational bait and tackle in the South Atlantic.

Business category	Total Saltwater Bait & Tackle Sales ($1,000)	Economic Contributions		
		Employment (Jobs)	Labor Income ($1,000)	Total Output ($1,000)
Bait & Tackle	107,028	1,733	83,892	225,074
Other	78,893	1,159	60,251	163,767
Total	185,921	2,892	144,142	388,841

The top 10 South Atlantic industries with the most employment supported by the operations of marine bait and tackle retailers are shown in Table SA_5. Naturally, individuals directly employed by retailers that sell bait and tackle made up the largest percentage (45.0%) of total employees supported. Following those directly employed by the industry, the highest numbers of jobs supported were in commercial fishing (240) which provides bait, wholesale trade (166), and maintenance and repair construction of nonresidential structures (87) (Table SA_5). Top 10 industries supported primarily by store operational expenses likely include wholesale trade, commercial fishing, maintenance and repair of nonresidential structures, and employment services. Industries more likely to be supported by employee household spending were likely to include food services and drinking places, offices of physicians, private hospitals, and retail stores. Table SA_6 provides a summary of total output and employment impacts by industry type. After marine bait and tackle retailers, the broader industry types most supported by sales of saltwater bait and tackle were the service sector ($98.5 million in total sales, 759 jobs) and retail and wholesale trade ($45.9 million in total sales, 325 jobs).

Table SA_ 5. Employment supported by retail stores that sell marine recreational fishing bait and tackle in near coastal counties of the South Atlantic: Top 10 Industries.

	Employment (Jobs)	
Industry S	Bait & Tackle	Other Stores
Retail stores selling bait and tackle	800	502
Commercial Fishing	137	103
Wholesale trade businesses	96	70
Maintenance and repair construction of nonresidential structures	60	27
Food services and drinking places	52	38
US Postal Service	32	--
Real estate establishments	24	18
Advertising and related services	23	17
Offices of physicians, dentists, and other health practitioners	21	16
Retail Stores - General merchandise	21	13
Employment services	--	16

Table SA_ 6. Employment and total output supported by the sale of marine recreational bait and tackle in the South Atlantic by industry type.

	Bait & Tackle		Other Stores	
Industry Type	Employment (Jobs)	Total Output ($1,000)	Employment (Jobs)	Total Output ($1,000)
Total				
Marine bait and tackle retailers	800	107,028	502	78,893
Agriculture	140	4,199	105	3,140
Mining	1	219	1	148
Construction	61	8,592	27	3,874
Manufacturing	26	9,984	19	7,871
Transportation, communications, and public utilities	35	7,363	25	5,578
Retail and wholesale trade	193	26,891	132	19,029
Services	434	56,117	325	42,373
Government	43	4,681	23	2,861

Recreational Fisheries Supporting Bait and Tackle Sales in the South Atlantic

Store owners were asked to identify the three saltwater fisheries they believed generated the greatest sales of bait, tackle, and related equipment for their business in 2013. In the South Atlantic, red drum and sea trout were identified as a top generator of sales by owners of both Bait & Tackle (55.3%) and Other Stores (58.1%) (Table SA_7). Bait & Tackle store owners indicated that other species (34.2%); coastal pelagics such as dolphin, cobia, and wahoo (31.6%); sharks (31.6%); and highly migratory species (marlin, tuna, sailfish, swordfish) were also large generators of sales for their businesses. Among Other Store owners, Atlantic croaker and spot (35.5%) and other fisheries (29.9%) were the second and third most commonly indicated fisheries as top producers of sales for their businesses. Other fisheries commonly listed in the South Atlantic included flounder, bluefish, striped bass, and king mackerel.

Table SA_ 7. Saltwater recreational fisheries that generated the greatest sales of bait and tackle for retail stores in the South Atlantic, as identified by store owners and/or managers. Percentages exceed 100% as respondents were asked to select the top three fisheries.

	Bait & Tackle Stores		Other Stores	
Fishery	N	%	N	%
Red or Black drum/Sea trout	21	55.3	68	58.1
Dolphin/Cobia/Wahoo	12	31.6	28	23.9
Sharks	12	31.6	2	1.7
Marlin/Tuna/Sailfish/Swordfish	11	28.9	10	8.5
Spot/Atlantic croaker	8	21.1	45	38.5
Red snapper/Grouper	7	18.4	18	15.4
Black seabass	5	13.2	12	10.3
Jacks (Amberjack, Crevalle, pompano)	5	13.2	3	2.6
Other	13	34.2	35	29.9

Factors Affecting Bait and Tackle Sales in the South Atlantic

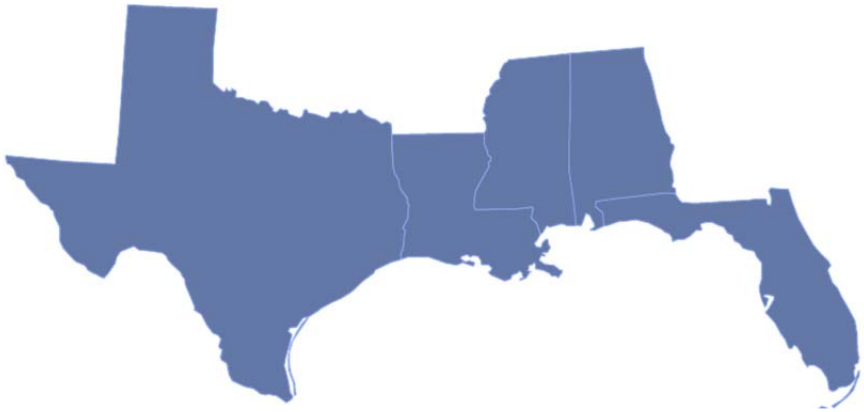
Store owners were presented with a list of 10 factors, and asked for their opinion on whether those factors had a positive or negative effect on their sales of recreational fishing bait and tackle in 2013 (Table SA_8). A majority of Bait & Tackle store owners indicated that other government regulations (68.6%), seasonal fishery closures (63.9%), the weather (55.6%), and the status of the economy (52.8%) all had negative effects on their sales of bait and tackle in 2013. Among owners of Other Stores, a majority of store owners indicated that the status of the economy (70.8%) and seasonal fisheries closures (54.9%) had negative effects on their sales of bait and tackle in 2013.

Table SA_ 8. Retail store owner opinions on how outside factors affected their sales of recreational fishing bait and tackle in 2013.

	Bait & Tackle Stores			Other Stores		
Factor	Negative	Positive	Neutral	Negative	Positive	Neutral
Fisheries regulations	50.0	11.1	38.9	47.0	5.2	47.8
Fishery seasonal closures	63.9	11.1	25.0	54.9	4.4	40.7
Marine protected areas	37.5	9.4	53.1	27.0	7.0	66.1
Other government regulations	68.6	5.7	25.7	48.7	5.3	46.0
Status of the economy	52.8	27.8	19.5	70.8	9.7	19.5
Changes in fishing participation	37.1	20.0	42.9	26.1	16.2	57.7
Changes in fish stock status	37.2	25.7	37.1	28.1	7.9	64.0
Changes in operating costs	47.2	8.3	44.5	40.4	5.3	54.4
Internet sales of bait & tackle	38.2	14.7	47.1	19.8	0.9	79.3
Weather	55.6	16.7	27.8	37.7	13.2	49.1

Gulf of Mexico

- **Florida (Gulf coast)**
- **Alabama**
- **Mississippi**
- **Louisiana**
- **Texas**



Characteristics of Marine Bait and Tackle Retailers in the Gulf of Mexico

Of the 199 Gulf of Mexico stores that provided usable data, 63 classified themselves as Bait & Tackle stores that catered exclusively to recreational anglers (Table GM_1). Of the 136 Other Stores that returned usable surveys, 35 (25.7%) were marinas, 34 (25.0%) were sporting goods stores that sold merchandise for a variety of sports, 32 (23.5%) were convenience stores, 19 (14.0%) were general retail stores, and 16 (11.8%) were hardware stores. Based on these percentages, it was estimated that the final population of 789 stores selling bait and tackle in the study area included 250 Bait & Tackle stores and 539 Other Stores. These numbers are important, as they were used to extrapolate average business cost and earnings figures to total figures for economic impact analysis. The vast majority of store owners in both categories reported owning only one store (89.6% Bait & Tackle, 89.6% Other Stores). Approximately 2 percent of Bait & Tackle and Other Store owners reported owning three or more stores (Table GM_1). Years of selling saltwater fishing bait and tackle averaged approximately 21 years for both categories. Bait & Tackle stores reported employing an average of 4.3 full-time positions and 4.4 part-time positions in 2013 (Table GM_1). Other Stores reported having a total of 5.9 full-time and 4.2 part-time employees on average.

Table GM_ 1. Characteristics of businesses that sell recreational fishing bait, tackle, and related equipment in near coastal counties of the Gulf of Mexico. Stores are categorized as either Bait & Tackle stores that cater almost exclusively to recreational anglers, or Other Stores that generate a significant portion of their business from other clientele.

	Business Type			
	Bait & Tackle (N = 63)		**Other Stores (n = 136)**	
	N	**%**	**N**	**%**
Business type				
Bait and tackle	63	100.0		
Sporting goods			34	25.0
Convenience store			32	23.5
General goods retailer			19	14.0
Hardware store			16	11.8
Marina			35	25.7
Number of stores owned				
One	56	89.6	121	89.6
Two	5	8.2	11	8.2
Three or more	1	1.6	3	2.2
	Mean	**SE**	**Mean**	**SE**
Years selling fishing bait and tackle	19.9	2.3	21.8	1.6
Number of employees				
Full time	4.3	0.9	5.9	0.5
Part time	4.4	0.8	4.2	0.5

Store Costs and Earnings in the Gulf of Mexico

Total Gross, Fishing, and Saltwater Fishing Sales

In the Gulf of Mexico, Bait & Tackle stores reported an average of $989 thousand in total gross sales per store in 2013 (Table GM_2). However, the distribution of gross sales was highly skewed, as 54.0 percent of Bait & Tackle stores reported gross sales of $400 thousand or less (Figure GM_1). Bait & Tackle stores generated sales averaging $841 thousand for recreational fishing bait, tackle, and related equipment excluding boats, representing 85.1 percent of total sales (Table GM_2). Bait & Tackle stores reported $725 thousand in saltwater fishing–related sales, representing 86.1 percent of fishing-related sales and 73.3 percent of total gross sales on average (Table GM_2). Extrapolating by the estimated 250 Bait & Tackle stores in coastal and near coastal counties, it was estimated there were $181 million in total saltwater recreational fishing bait and tackle sales by local, independent Bait & Tackle stores in near coastal counties of the Gulf of Mexico in 2013 (Table GM_3).

Table GM_ 2. Estimated mean gross sales (all sales, fishing, and saltwater fishing) per store (using mid-point of selected sales range) by business type (Bait & Tackle versus Other) in the Gulf of Mexico. Saltwater fishing sales are also reported by item category.

	Bait & Tackle (N = 63)		**Other Stores (n = 136)**	
Variable	**Mean**	**SE**	**Mean**	**SE**
Gross sales				
Total	989,286	236,819	1,644,526	198,383
Fishing related	841,408	222,345	254,916	34,942
Saltwater related	724,793	200,578	157,426	21,802
SW Sales by Category				
Bait	85,707	15,398	45,396	8,903
Live bait	24,089	1,544	16,765	4,677
Fishing tackle	354,084	116,741	56,033	9,098
Fishing lines/nets	72,178	20,932	13,760	2,777
Accessories	42,456	8,671	13,137	2,478
Fishing apparel	98,515	38,435	6,617	2,036
Boat accessories and electronics	47,549	21,790	13,238	5,926
Total costs	833,191	214,186	1,332,536	164,291

Table GM_ 3. Estimated median, average, and total cash flow of retail stores in the Gulf of Mexico that sell recreational fishing bait and tackle, adjusted for the owners' estimated percentage of sales for saltwater fishing items. Figures are reported for Bait & Tackle stores and Other Stores.

	Bait & Tackle (N = 63)				Other Stores (n = 136)			
Expenditure/Income Category	**Median**	**Mean**	**SE**	**Total (1,000)**	**Median**	**Mean**	**SE**	**Total (1,000)**
Inflow – Gross revenue	162,500	724,793	200,578	181,198	45,422	157,426	21,802	84,852
Inventory								
Bait	10,764	36,205	7,636	9,051	268	17,068	4,412	9,200
Fishing tackle	27,000	167,528	59,927	41,882	2,574	21,902	4,022	11,805
Fishing lines and nets	5,472	34,341	10,857	8,585	325	5,060	1,071	2,728
Accessories	5,472	17,291	4,273	4,323	417	5,333	1,189	2,875
Fishing apparel	1,421	48,529	19,837	12,132	0	2,177	675	1,174
Boat accessories and electronics	0	17,124	8,986	4,281	0	2,942	972	1,586
Employee pay and benefits	19,688	119,752	38,609	29,938	5,198	19,905	2,765	10,729
Building rent/mortgage	11,315	40,569	18,662	10,142	763	6,849	1,159	3,692
Facility and equipment maintenance	4,828	20,043	6,358	5,011	792	5,306	1,012	2,860
Utility expenses	6,325	22,513	5,112	5,628	1,584	6,924	1,153	3,732
Marketing/advertising	5,094	18,157	4,318	4,539	208	2,931	781	1,580
Professional services (legal, accounting)	2,474	12,564	4,046	3,141	296	3,275	752	1,765
Insurance	5,735	23,554	6,513	5,888	778	5,594	987	3,015
Taxes and licensing fees	5,214	22,944	7,310	5,736	720	5,692	1,010	3,068
Shipping fees	138	8,010	2,508	2,002	0	1,735	667	935
Other costs	0	4,192	1,119	1,048	0	3,123	1,185	1,683
Net Returns	51,560	111,479		27,870	31,499	41,607		22,426

Thirty-two percent of Bait & Tackle stores in the Gulf of Mexico indicated that saltwater fishing–related sales accounted for over 90 percent of their total gross sales, and the vast majority (74.6%) reported saltwater fishing–related sales made up over 50 percent of their total gross sales (Figure GM_2). Fishing tackle sales (which included rods and reels, lures, terminal tackle, and tackle storage boxes and containers) accounted for 48.9 percent of saltwater fishing sales, at $354 thousand. Fishing apparel was the category with the second highest sales volume at $89.7 thousand, followed by bait at $98.5 thousand, fishing lines and nets at $72.2 thousand, boat accessories and electronics at $47.6 thousand, and fishing tool accessories at $42.5 thousand.

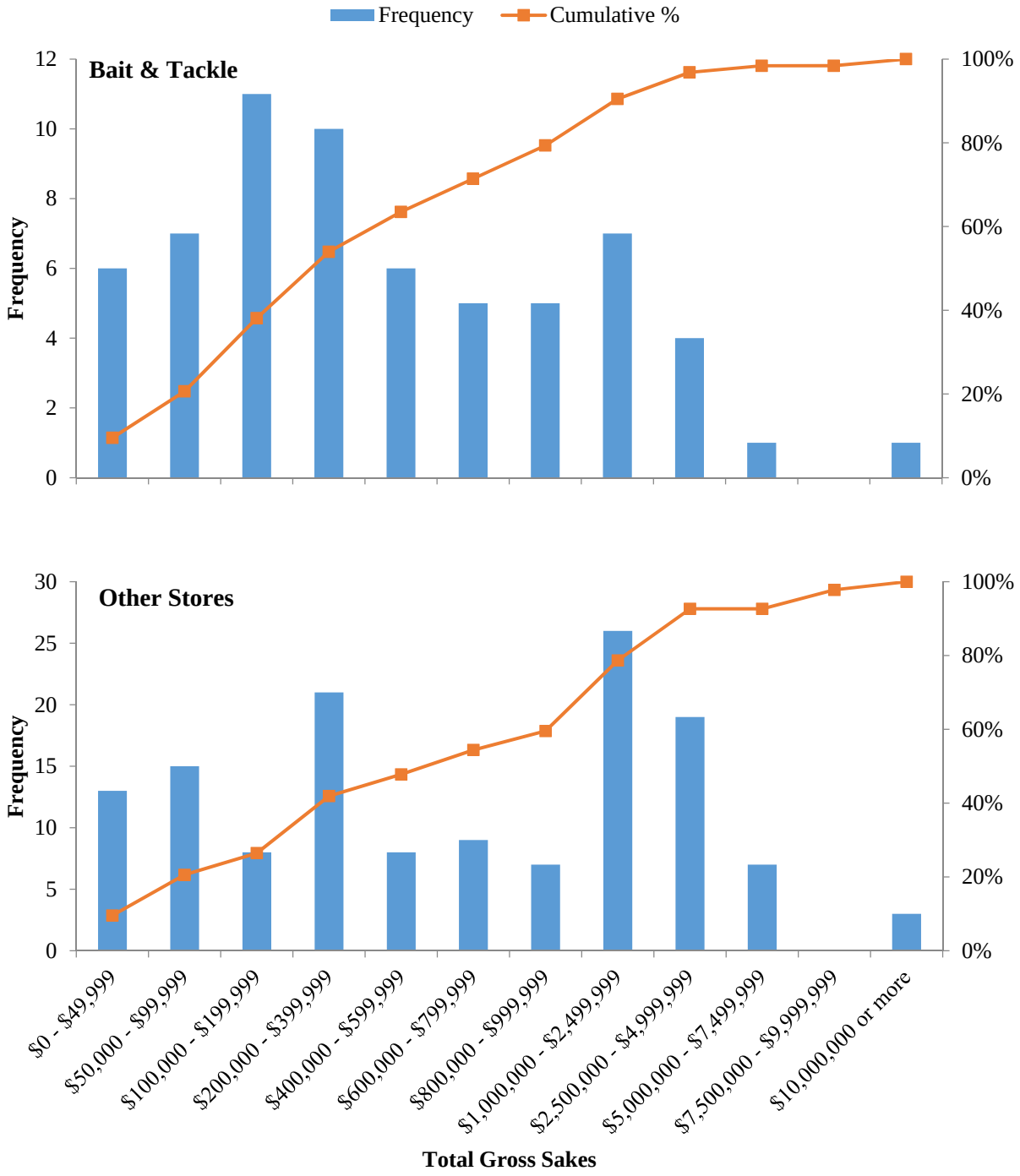


Figure GM_ 1. Frequency and cumulative percentage distribution of reported total gross sales of Gulf of Mexico retail stores that sell marine recreational fishing bait and tackle by their selected business category.

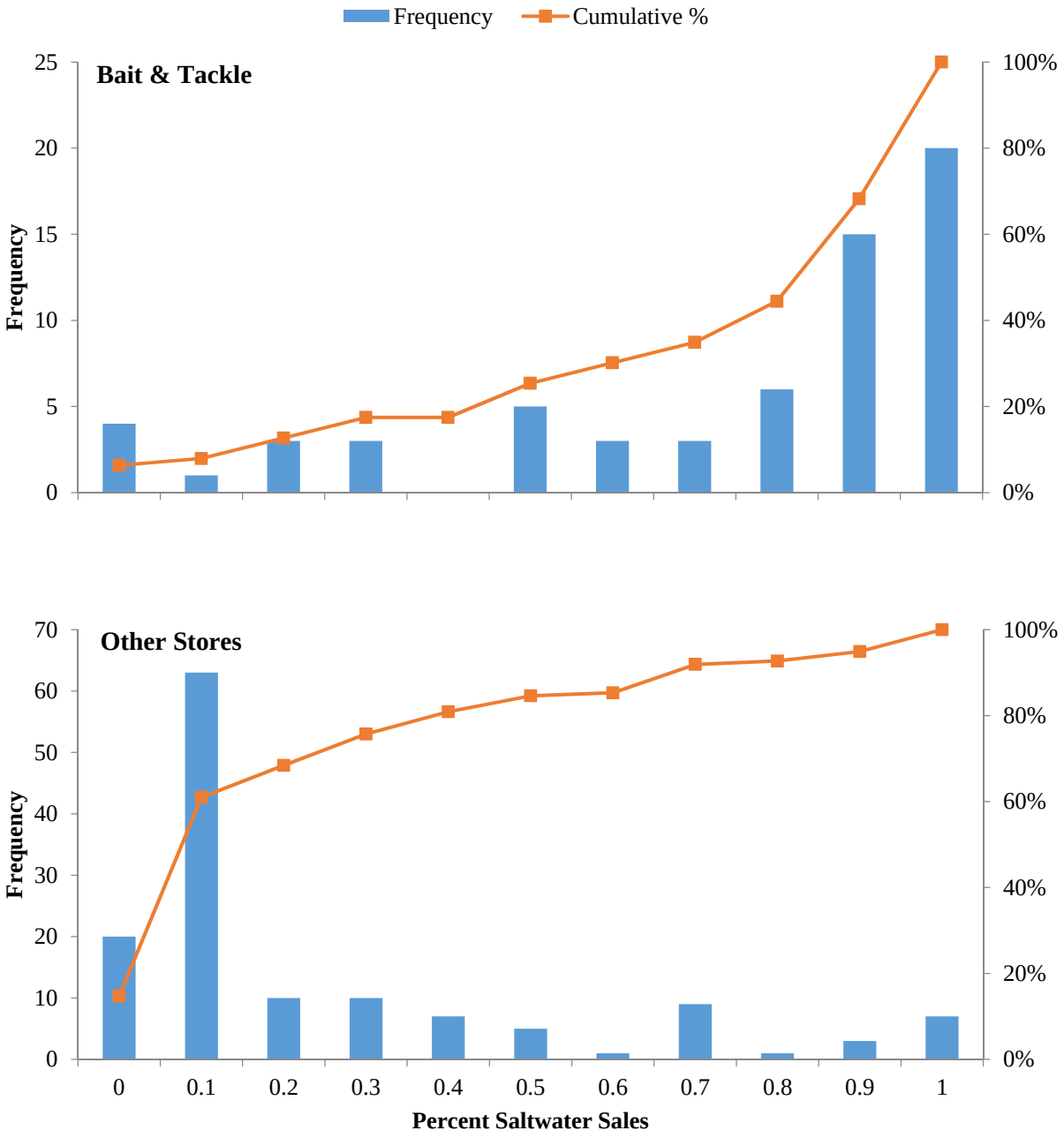


Figure GM_ 2. Frequency and cumulative percentage of Gulf of Mexico stores by the proportion of total gross sales consisting of sales of saltwater recreational fishing bait, tackle, and related equipment by business category.

Other Stores in the Gulf of Mexico reported an average of $1.64 million in total gross sales per store in 2013, almost twice the average reported by Bait & Tackle stores (Table GM_2). Sales figures of Other Stores were also skewed, as 59.6 percent of Other Stores reported gross sales of less than $1.0 million (Figure GM_1). Only $255 thousand of Other Store sales were for recreational fishing bait, tackle, and related equipment, representing only 15.5 percent of total sales (Table GM_2). Other Stores reported $157 thousand in saltwater fishing–related sales, representing 61.7 percent of fishing-related sales and 9.3 percent of total gross sales (Table GM_2). Extrapolating by the estimated 539 Other Stores in the study area, it was estimated there were $84.9 million in total saltwater recreational fishing bait and tackle sales by Other Stores in near coastal counties of the Gulf of Mexico in 2013 (Table GM_3).

The majority (61.0%) of Other Stores in the Gulf of Mexico reported saltwater fishing sales that represented 10 percent or less of their total gross sales (Figure GM_2). Fishing tackle sales (which included rods and reels, lures, terminal tackle, and tackle storage boxes and containers) accounted for over a third (35.6%) of saltwater fishing sales, at just over $56 thousand (Table GM_2). Bait, alive and dead combined, was the category with the second highest sales volume at $45.4 thousand, followed by fishing lines and nets at $13.8 thousand, boating electronics and accessories at $13.2 thousand, fishing accessories (e.g., knives, clippers, pliers) at $13.1 thousand, and fishing apparel at $6.6 thousand.

Inventory and Operating Expenses

On average, Bait & Tackle stores in the Gulf of Mexico reported $833 thousand (84% of store earnings) in total operating costs, leaving them with $156 thousand in average total net revenues per store (Table GM_2). After adjusting for the percentage of Bait & Tackle store sales that were for saltwater fishing bait and tackle (72.3%), it was estimated that Bait & Tackle stores averaged $613 thousand in expenses supporting those sales, which extrapolated to all stores resulted in an estimate of $153 million in total inventory and operating expenses. In 2013, the average Bait & Tackle store had an average net cash flow of $111 thousand associated with sales of saltwater bait and tackle, which extrapolated out to an estimated $28 million in net revenues across all Bait & Tackle stores in near coastal communities in the Gulf of Mexico (Table GM_3). The largest expenditures for the average Bait & Tackle store were inventory ($321 thousand), employee pay and benefits ($120 thousand), and building rent and mortgage ($40.6 thousand) (Table GM_3). Other expenses included insurance ($23.6 thousand), taxes and licensing fees ($22.9 thousand), utility expenses ($22.5 thousand), facility and equipment maintenance ($20.0 thousand), marketing and advertising ($18.2 thousand), professional services ($12.6 thousand), shipping fees ($8.0 thousand), and other miscellaneous costs ($4.2 thousand) (Table GM_3).

On average, Other Stores in the Gulf of Mexico reported $1.33 million (81% of store earnings) in total operating costs, leaving them with approximately $312 thousand in average total net revenues per store (Table GM_2). After adjusting for the percentage of Other Store sales that were for saltwater fishing bait and tackle (9.8%), it was estimated that Other Stores averaged $116 thousand in expenses supporting those sales, which extrapolated to all stores resulted in an

estimate of approximately $62.4 million in total inventory and operating expenses. In 2013, the average Other Store had an average net cash flow of $41.6 thousand associated with sales of saltwater bait and tackle, which extrapolated out to an estimated $22.4 million in net revenues across all Other Stores in near coastal communities in the Gulf of Mexico (Table GM_3). The largest expenditures for the average Other Store were inventory ($54.5 thousand), employee pay and benefits ($19.9 thousand), and utility expenses ($6.9 thousand) (Table GM_3). Other expenses included building rent or mortgage ($6.9 thousand), taxes and licensing fees ($5.7 thousand), insurance ($5.6 thousand), facility and equipment maintenance ($5.3 thousand), professional services ($3.3 thousand), other miscellaneous costs ($3.1 thousand), marketing and advertising ($2.9 thousand), and shipping fees ($1.7 thousand) (Table GM_3).

Economic Contributions of Marine Bait and Tackle Retailers in the Gulf of Mexico

Using the expenditure data described above, regional input-output models were constructed in IMPLAN to estimate the economic contributions of retail store operations supported by 2013 sales of saltwater recreational fishing bait and tackle in near coastal communities of the Gulf of Mexico. Separate models were estimated for Bait & Tackle stores and Other Stores. In 2013, Bait & Tackle stores near coastal counties contributed an estimated $393 million in total sales output to Gulf of Mexico businesses, $108 million in income to individuals working in the Gulf of Mexico, and supported 2,873 jobs (full- and part-time) (Table GM_4). Other Stores contributed an estimated $180 million in total sales output to Gulf of Mexico businesses, $46.5 million in income to individuals working in the Gulf of Mexico, and supported 1,247 jobs (full- and part-time) (Table GM_4). Combined, the sale of saltwater fishing bait and tackle by local, independent retailers in near coastal communities contributed a total economic impact of $573 million in total sales, $155 million in income, and 4,120 jobs (Table GM_4). These contributions were the result of a combined $266 million in sales of saltwater recreational fishing bait and tackle, indicating a multiplier ratio of 2.2 between direct sales and total sales output generated.

Table GM_ 4. Regional economic impacts (employment, labor income, and output) generated by retail store operations that are supported by the sale of marine recreational bait and tackle in the Gulf of Mexico.

Business category	Total Saltwater Bait & Tackle Sales ($1,000)	Economic Contributions		
		Employment (Jobs)	Labor Income ($1,000)	Total Output ($1,000)
Bait & Tackle	181,198	2,873	108,112	392,817
Other	84,852	1,247	46,458	179,904
Total	266,051	4,120	154,570	572,722

The top 10 Gulf of Mexico industries with the most employment supported by the operations of marine bait and tackle retailers are shown in Table GM_5. Naturally, individuals directly employed by retailers that sell bait and tackle made up the largest percentage (43.0%) of total employees supported. Following those directly employed by the industry, the highest numbers of jobs supported were in wholesale trade (415), commercial fishing (253) which provides bait, and food services and drinking places (131) (Table GM_5). Top 10 industries supported primarily by store operational expenses likely include wholesale trade, commercial fishing, maintenance and repair of nonresidential structures, and employment services. Industries more likely to be supported by employee household spending were likely to include food services and drinking places, offices of physicians, private hospitals, and retail stores. Table GM_6 provides a summary of total output and employment impacts by industry type. After marine bait and tackle retailers, the broader industry types most supported by sales of saltwater bait and tackle were the service sector (141 million in total sales, 1,103 jobs), retail and wholesale trade ($70.9 million in total sales, 467 jobs), and manufacturing ($28.8 million in total sales, 73 jobs).

Table GM_ 5. Employment supported by retail stores that sell marine recreational fishing bait and tackle in near coastal counties of the Gulf of Mexico: Top 10 Industries.

	Employment (Jobs)	
Industry	Bait & Tackle	Other Stores
Retail stores selling bait and tackle	1,321	450
Wholesale trade businesses	206	209
Commercial Fishing	186	67
Food services and drinking places	91	40
Maintenance and repair construction of nonresidential structures	79	30
Real estate establishments	42	18
Offices of physicians, dentists, and other health practitioners	39	17
Employment services	36	16
Advertising and related services	35	--
Private hospitals	33	14
Facilities support services	30	17

Table GM_ 6. Employment and total output supported by the sale of marine recreational bait and tackle in the Gulf of Mexico by industry type.

	Bait & Tackle		Other Stores	
Industry Type	Employment (Jobs)	Total Output ($1,000)	Employment (Jobs)	Total Output ($1,000)
Total	2,873	392,817	1,247	179,904
Marine bait and tackle retailers	1,321	181,198	450	84,852
Agriculture	212	6,446	212	6,138
Mining	4	2,008	2	1,050
Construction	81	11,950	31	4,601
Manufacturing	54	20,881	19	8,908
Transportation, communications, and public utilities	59	13,104	26	6,242
Retail and wholesale trade	329	51,869	138	19,976
Services	760	98,996	343	45,012
Government	53	6,364	26	3,124

Recreational Fisheries Supporting Bait and Tackle Sales in the Gulf of Mexico

Store owners were asked to identify the three saltwater fisheries they believed generated the greatest sales of bait, tackle, and related equipment for their business in 2013. In the Gulf of Mexico, red drum and sea trout were identified as a top generator of sales by owners of both Bait & Tackle (62.9%) and Other Stores (59.2%) (Table GM_7). Store owners indicated that red snapper and grouper were also large generators of sales for both Bait & Tackle (50.0%) and Other Stores (47.9%).

Table GM_ 7. Saltwater recreational fisheries that generated the greatest sales of bait and tackle for retail stores in the Gulf of Mexico as identified by store owners and/or managers. Percentages exceed 100% as respondents were asked to select the top three fisheries.

	Bait & Tackle Stores		Other Stores	
Fishery	N	%	N	%
Red or Black drum/Sea trout	44	62.9	84	59.2
Red snapper/Grouper	35	50.0	68	47.9
Dolphin/Cobia/Wahoo	11	15.7	23	16.2
Spanish mackerel	12	17.1	15	10.6
Jacks (Amberjack, Crevalle, pompano)	4	5.7	18	12.7
Gulf and southern kingfish	7	10.0	14	9.9
Marlin/Tuna/Sharks/Swordfish	8	11.4	8	5.6
Black seabass	2	2.9	3	2.1
Other	14	20.0	28	19.7

Factors Affecting Bait and Tackle Sales in Gulf of Mexico

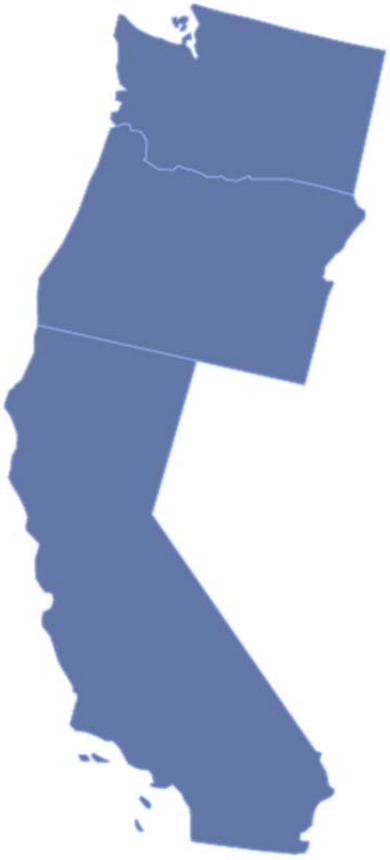
Store owners were presented with a list of 10 factors, and asked for their opinion on whether those factors had a positive or negative effect on their sales of recreational fishing bait and tackle in 2013 (Table GM_8). A majority of Bait & Tackle store owners indicated that seasonal fishery closures (71.0%) and fisheries regulations (65.2%) had negative effects on their sales of bait and tackle in 2013. A large percentage of Bait & Tackle store owners also identified other government regulations (45.6%) and the status of the economy (41.2%) as factors that negatively affected their sales in 2013. Among owners of Other Stores, a majority indicated that seasonal fishery closures (57.5%) and the status of the economy (56.8%) had negative effects on their sales of bait and tackle in 2013. Fisheries regulations (47.5%), other government regulations (47.1%), and changes in operating costs (43.5%) were also identified by a large percentage of Other Store owners as negatively affecting sales.

Table GM_ 8. Retail store owner opinions on how outside factors affected their sales of recreational fishing bait and tackle in 2013.

	Bait & Tackle Stores			Other Stores		
Factor	Negative	Positive	Neutral	Negative	Positive	Neutral
Fisheries regulations	65.2	5.8	29.0	47.5	8.5	44.0
Fishery seasonal closures	71.0	8.7	20.3	57.5	6.4	36.2
Marine protected areas	22.9	2.9	74.3	15.2	8.7	76.1
Other government regulations	45.6	8.8	45.6	47.1	5.8	47.1
Status of the economy	41.2	27.9	30.9	56.8	19.4	23.7
Changes in fishing participation	29.9	16.4	53.7	28.3	15.2	56.5
Changes in fish stock status	17.9	23.9	58.2	21.0	11.6	67.4
Changes in operating costs	35.8	10.5	53.7	43.5	8.0	48.6
Internet sales of bait & tackle	28.4	9.0	62.7	27.9	3.0	69.1
Weather	36.2	33.3	30.4	36.5	15.3	48.2

West Coast

- **California**
- **Oregon**
- **Washington**



Characteristics of Marine Bait and Tackle Retailers on the West Coast

Of the 187 West Coast stores that provided usable data, 54 classified themselves as Bait & Tackle stores that catered exclusively to recreational anglers (Table WC_1). Of the 133 Other Stores that returned usable surveys, 39 (29.3%) were convenience stores, 29 (21.8%) were sporting goods stores that sold merchandise for a variety of sports, 26 (19.6%) were hardware stores, 25 (18.8%) were general retail stores, and 14 (10.5%) were marinas. Based on these percentages, it was estimated that the final population of 724 stores selling bait and tackle in the study area included 198 Bait & Tackle stores and 526 Other Stores. These numbers are important, as they were used to extrapolate average business cost and earnings figures to total figures for economic impact analysis. The vast majority of store owners in both categories reported owning only one store (87.0% Bait & Tackle, 91.7% Other Stores) (Table WC_1). Years of selling saltwater fishing bait and tackle averaged approximately 25 to 27 years for both categories. Bait & Tackle stores reported employing an average of 4.8 full-time employees and 5.1 part-time employees in 2013 (Table WC_1). Other Stores reported having a total of 8.9 full-time and 6.9 part-time employees on average.

Table WC_ 1. Characteristics of businesses that sell recreational fishing bait, tackle, and related equipment in near coastal counties of the West Coast. Stores are categorized as either Bait & Tackle stores that cater almost exclusively to recreational anglers, or other stores that generate a significant portion of their business from other clientele.

	Business Type			
	Bait & Tackle (N = 54)		**Other Stores (n = 133)**	
	N	**%**	**N**	**%**
Business type				
Bait and tackle	54	100.0		
Sporting goods			29	21.8
Convenience store			39	29.3
General goods retailer			25	18.8
Hardware store			26	19.6
Marina			14	10.5
Number of stores owned				
One	47	87.0	121	91.7
Two	3	5.6	8	6.1
Three or more	4	7.4	3	2.2
	Mean	**SE**	**Mean**	**SE**
Years selling fishing bait and tackle	24.9	3.1	27.3	2.6
Number of employees				
Full time	4.8	1.0	8.9	1.5
Part time	5.1	1.5	6.9	1.0

Store Costs and Earnings on the West Coast

Total Gross, Fishing, and Saltwater Fishing Sales

West Coast Bait & Tackle stores reported an average of $1.2 million in total gross sales per store in 2013 (Table WC_2). However, the distribution of gross sales was significantly skewed, as 51.9 percent of Bait & Tackle stores reported gross sales of $400 thousand or less (Figure WC_1). Bait & Tackle stores generated sales averaging $911 thousand for recreational fishing bait, tackle, and related equipment excluding boats, representing 74.8 percent of total sales (Table WC_2). Bait & Tackle stores reported $326 thousand in saltwater fishing–related sales, representing 35.8 percent of fishing-related sales (the lowest percentage of any region) and 26.8 percent of total gross sales on average (Table WC_2). Extrapolating by the estimated 198 Bait & Tackle stores in coastal and near coastal counties, it was estimated there were $64.5 million in saltwater recreational fishing bait and tackle sales by local, independent Bait & Tackle stores in near coastal counties in 2013 (Table WC_3).

Table WC_ 2. Estimated mean gross sales (all sales, fishing, and saltwater fishing) per store (using mid-point of selected sales range) by business type (Bait & Tackle versus Other) of the West Coast. Saltwater fishing sales are also reported by item category.

	Bait & Tackle (N = 54)		Other Stores (n = 133)	
Variable	**Mean**	**SE**	**Mean**	**SE**
Gross sales				
Total	1,217,593	291,787	1,759,398	215,781
Fishing related	911,093	240,102	137,483	23,469
Saltwater related	325,891	61,501	60,853	13,330
SW Sales by Category				
Bait	37,475	11,415	10,930	2,298
Live bait	4,372	1,393	1,688	774
Fishing tackle	179,354	36,789	28,816	7,158
Fishing lines/nets	38,677	7,680	8,183	2,479
Accessories	24,634	6,399	5,443	1,580
Fishing apparel	24,764	8,764	3,813	1,414
Boat accessories and electronics	9,659	3,819	2,481	785
Total costs	972,581	239,172	1,294,103	157,240

Table WC_ 3. Estimated median, average, and total cash flow of retail stores in the West Coast that sell recreational fishing bait and tackle, adjusted for the owners' estimated percentage of sales for saltwater fishing items. Figures are reported for Bait & Tackle stores and Other Stores.

	Bait & Tackle (N = 54)				Other Stores (n = 133)			
Expenditure/Income Category	**Median**	**Mean**	**SE**	**Total (1,000)**	**Median**	**Mean**	**SE**	**Total (1,000)**
Inflow – Gross revenue	159,625	325,891	61,501	64,526	6,125	60,853	13,330	32,009
Inventory								
Bait	7,292	17,126	4,935	3,391	98	3,690	820	1,941
Fishing tackle	29,553	90,042	20,080	17,828	305	11,667	3,232	6,137
Fishing lines and nets	5,474	18,953	3,945	3,753	7	3,073	1,087	1,617
Accessories	2,859	12,211	3,526	2,418	2	2,101	664	1,105
Fishing apparel	1,433	11,387	3,876	2,255	0	1,510	576	794
Boat accessories and electronics	0	4,508	1,789	893	0	929	333	488
Employee pay and benefits	14,789	35,472	7,975	7,023	480	9,823	2,691	5,167
Building rent/mortgage	10,726	18,461	3,520	3,655	71	3,381	881	1,778
Facility and equipment maintenance	1,323	4,017	889	795	29	1,808	520	951
Utility expenses	4,875	8,305	1,654	1,644	144	3,031	854	1,594
Marketing/advertising	3,927	7,072	1,297	1,400	5	1,047	263	551
Professional services (legal, accounting)	1,313	3,422	751	677	14	960	264	505
Insurance	1,776	6,883	1,844	1,363	61	2,021	546	1,063
Taxes and licensing fees	2,024	7,909	1,903	1,566	29	2,439	628	1,283
Shipping fees	398	6,126	2,219	1,213	0	573	175	301
Other costs	0	9,514	3,824	1,884	0	428	144	225
Net Returns	71,863	64,483		12,768	4,880	12,373		6,508

Fifteen percent of Bait & Tackle stores on the West Coast indicated that saltwater fishing–related sales accounted for 90 percent or more of their total gross sales, and the majority (51.9%) reported saltwater fishing–related sales made up over 50 percent of their total gross sales (Figure WC_2). Fishing tackle sales (which included rods and reels, lures, terminal tackle, and tackle storage boxes and containers) accounted for 55.0 percent of saltwater fishing sales, at $179.4 thousand. Fishing lines and nets was the category with the second highest sales volume at $38.7 thousand, followed by bait at $37.5 thousand, fishing apparel at $24.8 thousand, fishing tool accessories at $24.6 thousand, and boat accessories and electronics at $9.7 thousand.

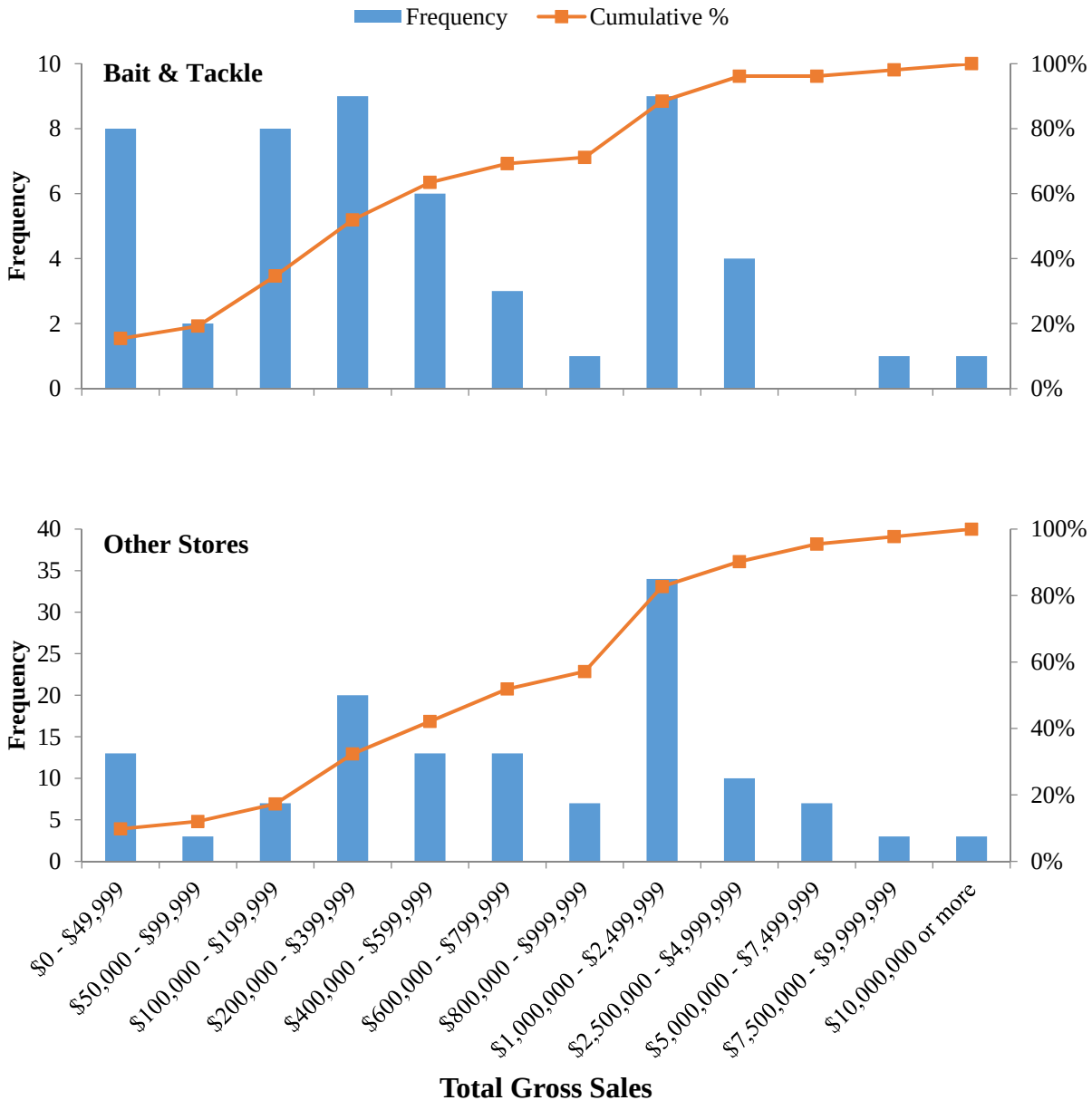


Figure WC_ 1. Frequency and cumulative percentage distribution of reported total gross sales of West Coast retail stores that sell marine recreational fishing bait and tackle by their selected business category.

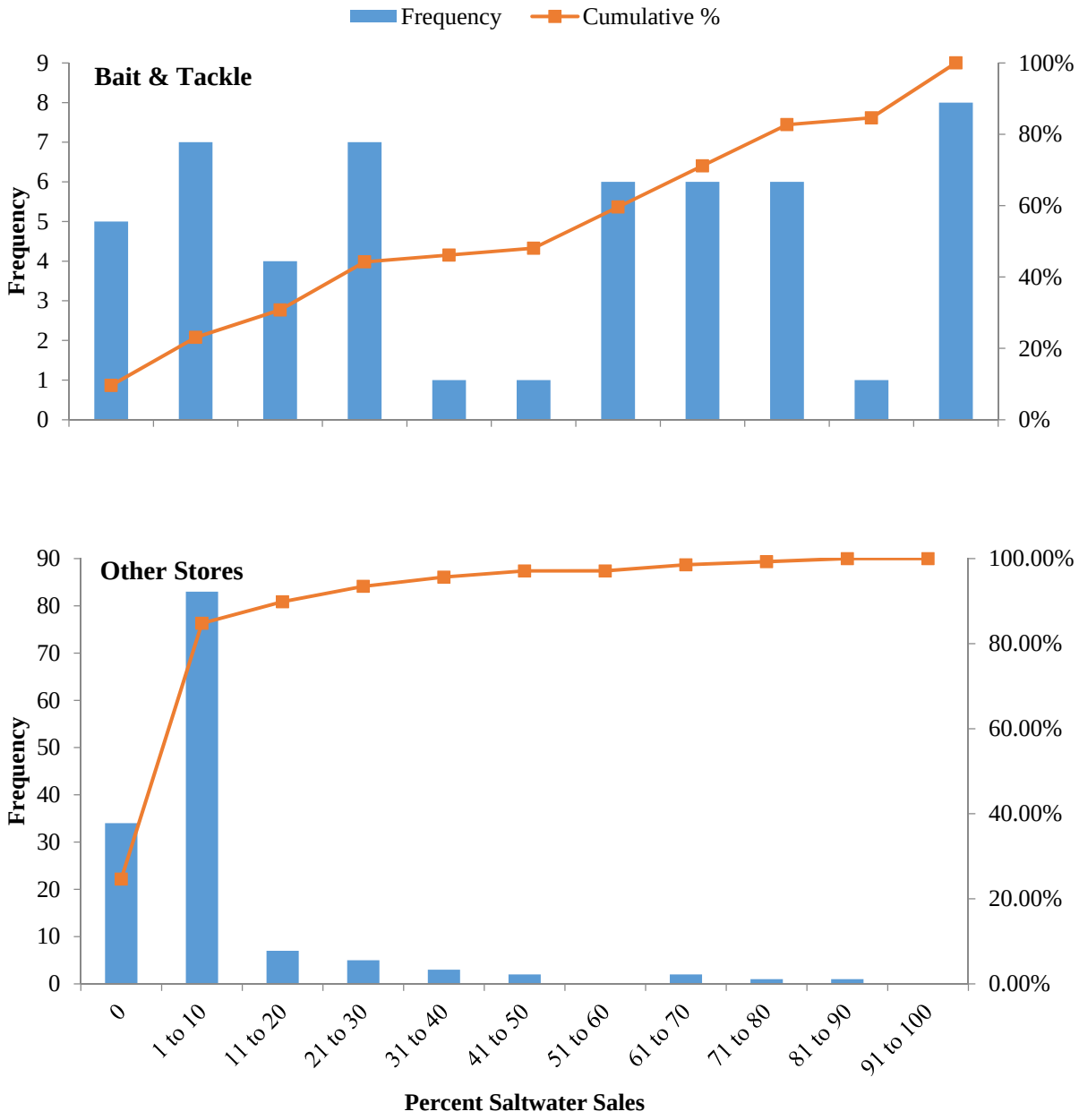


Figure WC_ 2. Frequency and cumulative percentage of West Coast stores by the proportion of total gross sales consisting of sales of saltwater recreational fishing bait, tackle, and related equipment by business category.

Other Stores on the West Coast reported an average of $1.76 million in total gross sales per store in 2013 (Table WC_2). Sales figures of Other Stores were also skewed, as 51.9 percent of Other Stores reported gross sales of $800 thousand or less (Figure WC_1). Only $137.5 thousand of Other Store sales were for recreational fishing bait, tackle, and related equipment, representing only 7.8 percent of total sales (Table WC_2). Other Stores reported $60.9 thousand in saltwater fishing–related sales, representing 44.3 percent of fishing-related sales and 3.5 percent of total gross sales (Table WC_2). Extrapolating by the estimated 529 Other Stores in the study area, it was estimated there were $32.03 million in saltwater recreational fishing bait and tackle sales by Other Stores in near coastal counties of the West Coast in 2013 (Table WC_3).

The vast majority (84..8%) of Other Stores on the West Coast reported saltwater fishing sales that represented 10 percent or less of their total gross sales (Figure WC_2). Fishing tackle sales (which included rods and reels, lures, terminal tackle, and tackle storage boxes and containers) accounted for nearly half (47.4%) of saltwater fishing sales, at $28.8 thousand (Table WC_2). Bait was the category with the second highest sales volume at $18.0 thousand, followed by fishing lines and nets at $8.2 thousand, fishing accessories (e.g., knives, clippers, pliers) at just under $5.5 thousand, fishing apparel at $3.8 thousand, and boating electronics and accessories at $2.5 thousand.

Inventory and Operating Expenses

On average, Bait & Tackle stores on the West Coast reported $973 thousand (80% of store earnings) in total operating costs, leaving them with $245 thousand in average total net revenues per store (Table WC_2). After adjusting for the percentage of Bait & Tackle store sales that were for saltwater fishing bait and tackle (26.8%), it was estimated that Bait & Tackle stores averaged $261 thousand in expenses supporting those sales, which extrapolated to all stores resulted in an estimate of $51.8 million in total inventory and operating expenses. In 2013, the average Bait & Tackle store had an average net cash flow of $64.5 thousand associated with sales of saltwater bait and tackle, which extrapolated out to an estimated $12.8 million in net revenues across all Bait & Tackle stores in near coastal communities on the West Coast (Table WC_3). The largest expenditures for the average Bait & Tackle store were inventory ($154.2 thousand), employee pay and benefits ($35.5 thousand), and building rent and mortgage ($18.5 thousand) (Table WC_3). Other expenses included utility expenses ($8.3 thousand), other miscellaneous costs ($9.5 thousand), taxes and licensing fees ($7.9 thousand), marketing and advertising ($7.1 thousand), insurance ($6.9 thousand), shipping fees ($6.1 thousand), facility and equipment maintenance ($4.0 thousand), and professional services ($3.4 thousand) (Table WC_3).

On average, Other Stores on the West Coast reported $1.29 million (74% of store earnings) in total operating costs, leaving them with $465 thousand in average total net revenues per store (Table WC_2). After adjusting for outliers and the percentage of Other Store sales that were for saltwater fishing bait and tackle (3.5%), it was estimated that Other Stores averaged $48.5

thousand in expenses supporting those sales, which extrapolated to all stores resulted in an estimate of approximately $25.5 million in total inventory and operating expenses. In 2013, the average Other Store had an average net revenue of $12.4 thousand associated with sales of saltwater bait and tackle, which extrapolated out to an estimated $6.5 million in net revenues across all Other Stores in near coastal communities on the West Coast (Table WC_3). The largest expenditures for the average Other Store were inventory ($23.0 thousand), employee pay and benefits ($9.8 thousand), and building rent or mortgage ($3.4 thousand) (Table WC_3). Other expenses included utilities ($3.0 thousand), taxes and licensing fees ($2.4 thousand), insurance ($2.0 thousand), facility and equipment maintenance ($1.8 thousand), marketing and advertising ($1.0 thousand), professional services ($960), shipping fees ($573 thousand), and other miscellaneous costs ($428) (Table WC_3).

Economic Contributions of Marine Bait and Tackle Retailers on the West Coast

Using the expenditure data described above, regional input-output models were constructed in IMPLAN to estimate the economic contributions of retail store operations supported by 2013 sales of saltwater recreational fishing bait and tackle in near coastal communities on the West Coast. Separate models were estimated for Bait & Tackle stores and Other Stores. In 2013, Bait & Tackle stores in near coastal counties contributed an estimated $138.4 million in total sales output to West Coast businesses, $48.1 million in income to individuals working on the West Coast, and supported 1,083 jobs (full- and part-time) (Table WC_4). Other Stores contributed an estimated $70.3 million in total sales output to West Coast businesses, $22.0 million in income to individuals working on the West Coast, and supported 595 jobs (full- and part-time) (Table WC_4). Combined, the sale of saltwater fishing bait and tackle by local, independent retailers in near coastal communities contributed a total economic impact of $208.7 million in total sales, $70.1 million in income, and 1,678 jobs (Table WC_4). These contributions were the result of a combined $96.5 million in sales of saltwater recreational fishing bait and tackle, indicating a multiplier ratio of 2.2 between direct sales and total sales output generated.

Table WC_ 4. National economic impacts (employment, labor income, and output) generated by retail store operations that are supported by the sale of marine recreational bait and tackle on the West Coast.

Business category	Total Saltwater Bait & Tackle Sales ($1,000)	Economic Contributions		
		Employment (Jobs)	Labor Income ($1,000)	Total Output ($1,000)
Bait & Tackle	64,526	1,083	48,117	138,366
Other	32,009	595	21,993	70,300
Total	96,535	1,678	70,110	208,666

The top 10 West Coast industries with the most employment supported by the operations of marine bait and tackle retailers are shown in Table WC_5. Naturally, individuals directly employed by retailers that sell bait and tackle made up the largest percentage (60.1%) of total employees supported. Following those directly employed by the industry, the highest numbers of jobs supported were in wholesale trade (99), food services and drinking places (41), and maintenance and repair of nonresidential structures (40) (Table WC_5). Table WC_6 provides a summary of total output and employment impacts by industry type. After marine bait and tackle retailers, the broader industry types most supported by sales of saltwater bait and tackle were the service sector ($49.3 million in total sales, 334 jobs), retail and wholesale trade ($27.8 million in total sales, 169 jobs), and manufacturing ($14.6 million in total sales, 33 jobs).

Table WC_ 5. Employment supported by retail stores that sell marine recreational fishing bait and tackle in near coastal counties of the West Coast: Top 10 Industries.

	Employment (Jobs)	
Industry S	Bait & Tackle	Other Stores
Retail stores selling bait and tackle	642	366
Wholesale trade businesses	71	28
Maintenance and repair construction of nonresidential structures	27	13
Food services and drinking places	26	15
Commercial Fishing	16	9
US Postal Service	13	--
Offices of physicians, dentists, and other health practitioners	11	7
Retail Stores - General merchandise	11	4
Real estate establishments	10	6
Advertising and related services	10	--
Facilities support services	--	5
Employment services	--	5

Table WC_ 6. Employment and total output supported by the sale of marine recreational bait and tackle in the West Coast by industry type.

	Bait & Tackle		Other Stores	
Industry Type	Employment (Jobs)	Total Output ($1,000)	Employment (Jobs)	Total Output ($1,000)
Total	1,175	151,812	670	82,949
Marine bait and tackle retailers	642	64,526	366	32,009
Agriculture	19	2,485	11	1,425
Mining	1	261	0	137
Construction	27	4,152	14	2,075
Manufacturing	23	9,947	10	4,657
Transportation, communications, and public utilities	21	3,869	10	2,170
Retail and wholesale trade	118	19,581	51	8,234
Services	211	31,023	123	18,312
Government	21	2,521	10	1,281

Recreational Fisheries Supporting Bait and Tackle Sales on the West Coast

Store owners were asked to identify the three saltwater fisheries they believed generated the greatest sales of bait, tackle, and related equipment for their business in 2013. On the West Coast, bottomfish such as rockfish, greenling, and sculpin were identified as a top sales generator by a majority (57.4%) of Bait & Tackle store owners (Table WC_7). Bait & Tackle store owners also indicated that pelagics (tuna, yellowtail, durado) (37.0%), ocean-run salmon (33.3%), and halibut and seabass (33.3%) were also top generators of sales for their businesses. Other Store owners were most likely to indicate that ocean-run salmon (50.0%), shellfish (36.2%), and bottomfish (19.6%) were the greatest producers of sales for their businesses.

Table WC_ 7. Saltwater recreational fisheries that generated the greatest sales of bait and tackle for retail stores on the West Coast as identified by store owners and/or managers. Percentages exceed 100% as respondents were asked to select the top three fisheries.

	Bait & Tackle Stores		Other Stores	
Fishery	N	%	N	%
Rockfish, greenling, sculpin, bottomfish	31	57.4	27	19.6
Tuna, yellowtail, durado	20	37.0	9	6.5
Ocean-run Salmon	18	33.3	69	50.0
Halibut, other flatfish, seabass	18	33.3	18	13.0
Crab, lobster, abalone, clams, shellfish	10	18.5	50	36.2
Bonito, barracuda, wahoo	7	13.0	7	5.1
Sturgeon, striped bass	6	11.1	17	12.3
Surfperch, corbina, croakers	3	5.6	6	4.3
Swordfish, marlin, sharks	3	5.6	0	0.0
Other	7	13.0	23	16.7

Factors Affecting Bait and Tackle Sales on the West Coast

Store owners were presented with a list of 10 factors, and asked for their opinion on whether those factors had a positive or negative effect on their sales of recreational fishing bait and tackle in 2013 (Table WC_8). A majority of Bait & Tackle store owners indicated that seasonal fishery closures (67.3%), fisheries regulations (65.4%), marine protected areas (60.4%), other government regulations (57.7%), and the status of the economy (53.9%) all had negative effects on their sales of bait and tackle in 2013. Among owners of Other Stores, the majority indicated that the status of the economy (55.2%) and seasonal fishery closures (51.9%) had negative effects on their sales of bait and tackle in 2013.

Table WC_ 8. Retail store owner opinions on how outside factors affected their sales of recreational fishing bait and tackle in 2013.

	Bait & Tackle Stores			Other Stores		
Factor	Negative	Positive	Neutral	Negative	Positive	Neutral
Fisheries regulations	65.4	5.8	28.9	40.3	7.5	52.2
Fishery seasonal closures	67.3	3.9	28.9	51.9	4.5	43.6
Marine protected areas	60.4	5.7	34.0	29.8	0.8	69.5
Other government regulations	57.7	5.8	36.5	46.2	3.0	50.8
Status of the economy	53.9	17.3	28.9	55.2	11.9	32.8
Changes in fishing participation	32.7	19.2	48.1	26.1	11.9	61.9
Changes in fish stock status	35.3	21.6	43.1	31.8	18.2	50.0
Changes in operating costs	36.5	9.6	53.9	26.5	7.6	65.9
Internet sales of bait & tackle	26.5	20.4	53.1	18.3	0.8	80.9
Weather	43.1	21.6	35.3	25.8	21.2	53.0

Alaska

Characteristics of Marine Bait and Tackle Retailers in Alaska

Of the 46 Alaska stores that provided usable data, five (10.9%) classified themselves as Bait & Tackle stores that catered exclusively to recreational anglers (Table AK_1). Of the 41 Other Stores that returned usable surveys, 16 (34.8%) were convenience stores, 12 (26.1%) were sporting goods stores that sold merchandise for a variety of sports, eight (17.4%) were marinas, four (8.7%) were hardware stores, and one (2.2%) was a general retail store. Due to the low number of Bait & Tackle stores reporting, it was decided to combine all stores in Alaska for analysis purposes. Combined, 93.5% of store owners in Alaska reported owning only one store. No store owners reported owning three or more stores (Table AK_1). Years of selling saltwater fishing bait and tackle averaged 27.4 years. Stores reported employing an average of 7.2 full-time positions and 5.7 part-time positions in 2013 (Table AK_1).

Table AK_ 1. Characteristics of businesses that sell recreational fishing bait, tackle, and related equipment in near coastal boroughs of Alaska.

Variable	**N**	**%**
Business type		
Bait and tackle	5	10.9
Sporting goods	12	26.1
Convenience store	16	34.8
General goods retailer	1	2.2
Hardware store	4	8.7
Marina	8	17.4
Number of stores owned		
One	43	93.5
Two	3	6.5
Three or more	0	0.0
	Mean	**SE**
Years selling fishing bait and tackle	27.4	3.6
Number of employees		
Full time	7.2	1.4
Part time	5.7	1.2

Store Costs and Earnings in Alaska

Total Gross, Fishing, and Saltwater Fishing Sales

In Alaska, stores that sell recreational fishing bait, tackle, and related equipment reported an average of $1.67 million in total gross sales per store in 2013 (Table AK_2). However, the distribution of gross sales was highly skewed, as 50.0 percent of stores reported gross sales of $400 thousand or less (Figure AK_1). Stores generated sales averaging $193 thousand for recreational fishing bait, tackle, and related equipment excluding boats, representing 11.6 percent of total sales (Table AK_2). Stores reported $168 thousand in saltwater fishing–related sales, representing 87.2 percent of fishing-related sales and 10.1 percent of total gross sales on average (Table AK_2). Extrapolating by the estimated 162 eligible stores in coastal boroughs of Alaska, it was estimated there were $27.3 million in saltwater recreational fishing bait and tackle sales by local, independent Bait & Tackle stores in coastal boroughs in 2013 (Table AK_3).

Table AK_ 2. Estimated mean gross sales (all sales, fishing, and saltwater fishing) per store (using mid-point of selected sales range) in Alaska. Saltwater fishing sales are also reported by item category.

Variable	Mean	SE
Gross sales		
Total	1,670,109	464,688
Fishing related	193,074	72,346
Saltwater related	168,333	70,187
SW Sales by Category		
Bait	17,990	6,682
Fishing tackle	53,259	23,914
Fishing lines/nets	15,162	6,478
Accessories	10,388	4,278
Fishing apparel	18,219	5,908
Boat accessories and electronics	42,737	36,829
Total costs	1,331,156	365,165

Table AK_ 3. Estimated median, average, and total cash flow of retail stores in Alaska that sell recreational fishing bait and tackle, adjusted for the owners' estimated percentage of sales for saltwater fishing items. Figures are reported for all stores combined only due to sample size.

	All Stores (N = 46)			
Expenditure/Income Category	**Median**	**Mean**	**SE**	**Total (1,000)**
Inflow – Gross revenue	26,000	168,333	70,187	27,270
Inventory				
Bait	25	5,510	1,920	893
Fishing tackle	837	23,269	12,599	3,770
Fishing lines and nets	116	5,458	2,495	884
Accessories	68	4,240	2,125	687
Fishing apparel	374	4,961	1,688	804
Boat accessories and electronics	0	23,770	21,933	3,851
Employee pay and benefits	3,931	24,247	9,723	3,928
Building rent/mortgage	504	8,859	3,958	1,435
Facility and equipment maintenance	185	3,723	1,228	603
Utility expenses	1,110	5,575	1,634	903
Marketing/advertising	68	3,980	1,566	645
Professional services (legal, accounting)	19	3,013	1,289	488
Insurance	523	4,478	1,295	726
Taxes and licensing fees	531	5,059	1,996	820
Shipping fees	366	9,918	5,869	1,607
Other costs	0	894	348	145
Net Returns	17,343	31,377		5,083

Only one store in Alaska indicated that saltwater fishing–related sales accounted for 100 percent of their total gross sales, and the majority (59.2%) reported saltwater fishing–related sales made up 10 percent or less of their total gross sales (Figure AK_2). Fishing tackle sales (which included rods and reels, lures, terminal tackle, and tackle storage boxes and containers) accounted for 31.6 percent of saltwater fishing sales, at $53.3 thousand. Boat accessories and electronics was the category with the second highest sales volume at $42.7 thousand, followed by fishing apparel at $18.2 thousand, bait at $18.0 thousand, fishing lines and nets at $15.2 thousand, and fishing tool accessories at $10.4 thousand.

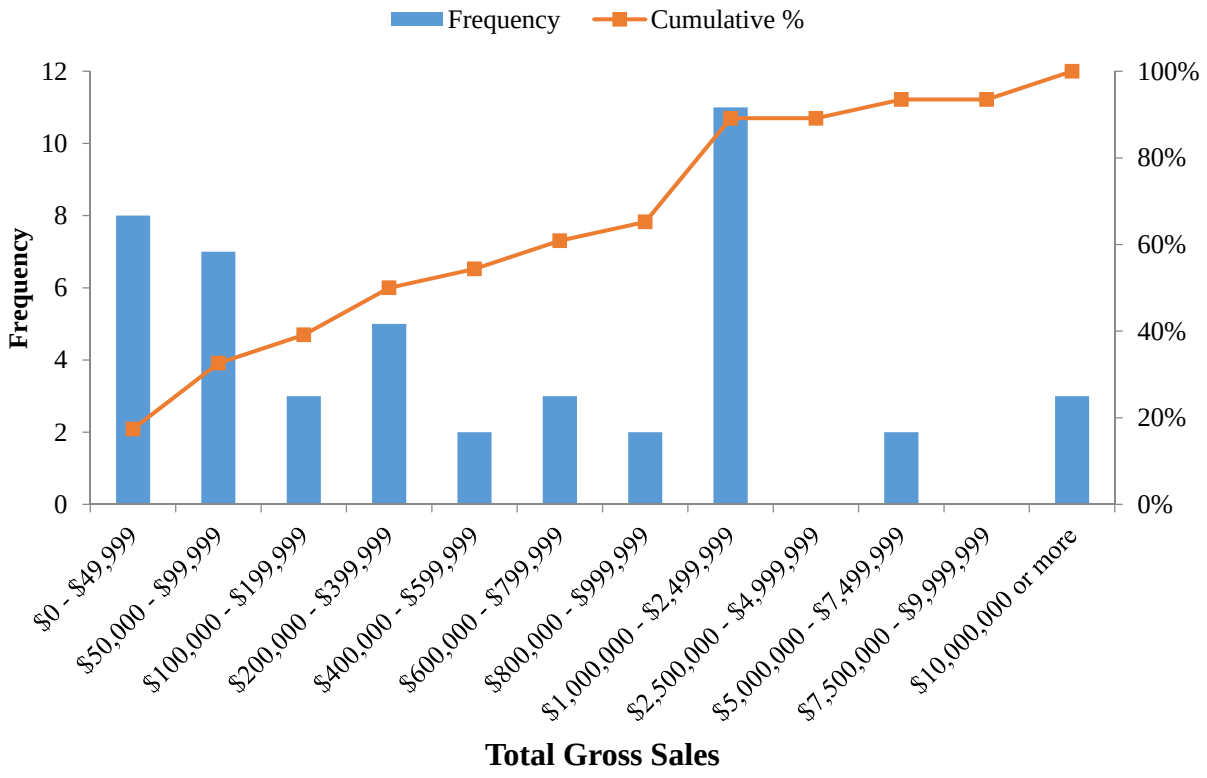


Figure AK_ 1. Frequency and cumulative percentage distribution of reported total gross sales of Alaska retail stores that sell marine recreational fishing bait and tackle.

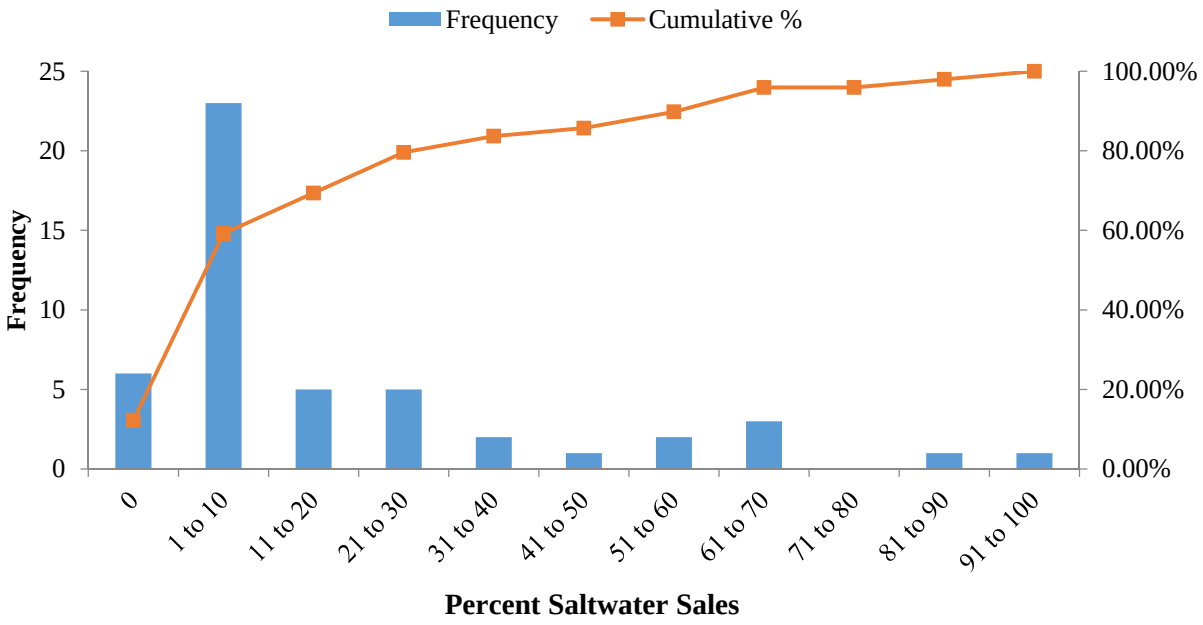


Figure AK_ 2. Frequency and cumulative percentage of Alaska stores by the proportion of total gross sales consisting of sales of saltwater recreational fishing bait, tackle, and related equipment.

Inventory and Operating Expenses

On average, stores in Alaska reported $1.33 million (79.7% of store earnings) in total operating costs, leaving them with $339 thousand in average total net revenues per store (Table AK_2). After adjusting for the percentage of Bait & Tackle store sales that were for saltwater fishing bait and tackle (10.1%), it was estimated that Alaska stores averaged $137 thousand in expenses supporting those sales, which extrapolated to all stores resulted in an estimate of $22.2 million in total inventory and operating expenses. In 2013, the average Alaska store had an average net cash flow of $31.4 thousand associated with sales of saltwater bait and tackle, which extrapolated out to an estimated $5.1 million in net revenues across all stores in near coastal boroughs in Alaska (Table AK_3). The largest expenditures for the average store were inventory ($67.2 thousand), employee pay and benefits ($24.2 thousand), and shipping fees ($9.9 thousand) (Table AK_3). Other expenses included building rent and mortgage ($8.9 thousand), taxes and licensing fees ($5.1 thousand), insurance ($4.5 thousand), marketing and advertising ($4.0 thousand), facility and equipment maintenance ($3.7 thousand), professional services ($3.0 thousand), and other miscellaneous costs ($894) (Table AK_3).

Economic Contributions of Marine Bait and Tackle Retailers in Alaska

Using the expenditure data described above, a regional input-output model was constructed in IMPLAN to estimate the economic contributions of retail store operations supported by 2013 sales of saltwater recreational fishing bait and tackle in near coastal boroughs of Alaska. In 2013, sales of saltwater bait and tackle from independent stores contributed an estimated $44.3 million in total sales output to Alaska businesses, $15.9 million in income to individuals working in Alaska, and supported 319 jobs (full- and part-time) (Table AK_4). These contributions were the result of $27.3 million in sales of saltwater recreational fishing bait and tackle, indicating a multiplier ratio of 1.6 between direct sales and total sales output generated.

Table AK_ 4. National economic impacts (employment, labor income, and output) generated by retail store operations that are supported by the sale of marine recreational bait and tackle in Alaska.

Business category	Total Saltwater Bait & Tackle Sales ($1,000)	Economic Contributions		
		Employment (Jobs)	Labor Income ($1,000)	Total Output ($1,000)
Total	27,270	319	15,866	44,269

The top 10 Alaska industries with the most employment supported by the operations of marine bait and tackle retailers are shown in Table AK_5. Naturally, individuals directly employed by retailers that sell bait and tackle made up the largest percentage (63.6%) of total employees supported. Following those directly employed by the industry, the highest numbers of jobs supported were wholesale trade (12) and the U.S. Postal Service (10) (Table AK_5). Top 10 industries supported primarily by store operational expenses likely include wholesale trade, commercial fishing, maintenance and repair of nonresidential structures, and employment services. Industries more likely to be supported by employee household spending were likely to include food services and drinking places, offices of physicians, private hospitals, and retail

Table AK_ 5. Employment supported by retail stores that sell marine recreational fishing bait and tackle in near coastal boroughs of Alaska: Top 10 Industries.

Industry S	Employment (Jobs)
Retail stores selling bait and tackle	203
Wholesale trade businesses	12
US Postal Service	10
Maintenance and repair construction of nonresidential structures	9
Commercial Fishing	9
Advertising and related services	7
Food services and drinking places	6
Facilities support services	4
Offices of physicians, dentists, and other health practitioners	3
Accounting, tax preparation, bookkeeping, and payroll services	3

stores. Table AK_6 provides a summary of total output and employment impacts by industry type. After marine bait and tackle retailers, the broader industry types most supported by sales of saltwater bait and tackle were the service sector ($7.71 million in total sales, 55 jobs), retail and wholesale trade ($3.5 million in total sales, 23 jobs), and construction ($1.6 million in total sales, 10 jobs).

Table AK_ 6. Employment and total output supported by the sale of marine recreational bait and tackle in Alaska by industry type.

Industry Type	Employment (Jobs)	Total Output ($1,000)
Total	319	44,269
Marine bait and tackle retailers	203	27,270
Agriculture	9	574
Mining	0	267
Construction	10	1,585
Manufacturing	1	550
Transportation, communications, and public utilities	5	1,273
Retail and wholesale trade	23	3,474
Services	55	7,682
Government	13	1,596

Recreational Fisheries Supporting Bait and Tackle Sales in Alaska

Store owners were asked to identify the three saltwater fisheries they believed generated the greatest sales of bait, tackle, and related equipment for their business in 2013. In Alaska, coho salmon were indicated to be a top generator of sales by a majority (56.5%) of store owners (Table AK_7). Store owners indicated that Chinook salmon (41.3%) and halibut (32.6%) were also major generators of sales for their businesses.

Table AK_ 7. Saltwater recreational fisheries that generated the greatest sales of bait and tackle for retail stores in the near coastal boroughs of Alaska as identified by store owners and/or managers. Percentages exceed 100% as respondents were asked to select the top three fisheries.

Fishery	N	%
Coho salmon	26	56.5
Chinook salmon	19	41.3
Pacific halibut	15	32.6
Sockeye salmon	14	30.4
Pink salmon	9	19.6
Chum salmon	6	13.0
Greenling (lingcod)	3	6.5
Rockfish	2	4.3
Other	5	10.9

Factors Affecting Bait and Tackle Sales in Alaska

Store owners were presented with a list of 10 factors, and asked for their opinion on whether those factors had a positive or negative effect on their sales of recreational fishing bait and tackle in 2013 (Table AK_8). A majority of Alaska store owners indicated that fisheries regulations (54.6%) and seasonal fishery closures (50.0%) had negative effects on their sales of bait and tackle in 2013. Over 40 percent indicated that other government regulations (45.5%), changes in fish stock status (45.5%), and changes in operating costs (43.2%) all had negative effects on their sales of bait and tackle in 2013.

Table AK_ 8. Retail store owner opinions on how outside factors affected their sales of recreational fishing bait and tackle in 2013.

	Respondent Rating (%)		
Factor	Negative	Positive	Neutral/Don't Know
Fisheries regulations	54.6	2.3	43.2
Fishery seasonal closures	50.0	4.5	45.5
Marine protected areas	16.7	0.0	83.3
Other government regulations	45.5	0.0	54.6
Status of the economy	38.6	9.1	52.3
Changes in fishing participation	22.7	6.8	70.5
Changes in fish stock status	45.5	6.8	47.7
Changes in operating costs	43.2	0.0	56.8
Internet sales of bait & tackle	18.6	2.3	79.1
Weather	19.1	11.9	69.0

Hawaii

Characteristics of Marine Bait and Tackle Retailers in Hawaii

Of the 11 Hawaiia stores that provided usable data, six (54.6%) classified themselves as Bait & Tackle stores that catered exclusively to recreational anglers (Table HI_1). Of the five Other Stores that returned usable surveys, three (27.3%) were general retail stores, one (9.1%) was a sporting goods store that sold merchandise for a variety of sports, and one (9.1%) was a hardware store. Due to the low number of stores reporting, it was decided to combine all stores in Hawaii for analysis purposes. Combined, 81.8% of store owners in Hawaii reported owning only one store. No store owners reported owning three or more stores (Table HI_1). Years of selling saltwater fishing bait and tackle averaged 36.8 years, the highest of any region by approximately 10 years. Stores reported employing an average of 5.7 full-time positions and 7.2 part-time positions in 2013 (Table HI_1).

Table HI_ 1. Characteristics of businesses that sell recreational fishing bait, tackle, and related equipment in near coastal counties of Hawaii.

	N	**%**
Business type		
Bait and tackle	6	54.6
Sporting goods	1	9.1
Convenience store	0	0.0
General goods retailer	3	27.3
Hardware store	1	9.1
Marina	0	0.0
Number of stores owned		
One	9	81.8
Two	2	18.2
Three or more	0	0.0
	Mean	**SE**
Years selling fishing bait and tackle	36.8	6.4
Number of employees		
Full time	5.7	1.9
Part time	7.2	3.4

Store Costs and Earnings in Hawaii

Total Gross, Fishing, and Saltwater Fishing Sales

In Hawaii, stores that sell recreational fishing bait, tackle, and related equipment reported an average of $2.86 million in total gross sales per store in 2013 (Table HI_2). The distribution of stores by their reported gross sales can be seen in Figure HI_1. Stores generated sales averaging $710 thousand for saltwater recreational fishing bait, tackle, and related equipment excluding boats, representing 24.8 percent of total sales (Table HI_2). Stores reported $707 thousand in saltwater fishing-related sales, representing 99.5 percent of fishing-related sales and 24.7 percent of total gross sales on average (Table HI_2). Extrapolating by the estimated 32 eligible stores in Hawaii, it was estimated there were $22.6 million in total saltwater recreational fishing bait and tackle sales by local, independent Bait & Tackle stores in 2013 (Table HI_3).

Table HI_ 2. Estimated mean gross sales (all sales, fishing, and saltwater fishing) per store (using mid-point of selected sales range) in Hawaii. Saltwater fishing sales are also reported by item category.

	All Stores (N = 11)	
Variable	**Mean**	**SE**
Gross sales		
Total	2,861,364	1,077,324
Fishing related	709,966	189,985
Saltwater related	706,652	190,060
SW Sales by Category		
Bait	31,149	18,724
Fishing tackle	361,998	93,021
Fishing lines/nets	110,856	34,690
Accessories	36,659	8,760
Fishing apparel	15,783	7,165
Boat accessories and electronics	31,456	14,164
Spearfishing	96,777	42,802
Total costs	1,805,398	606,568

Table HI_ 3. Estimated median, average, and cash flow of retail stores in Hawaii that sell recreational fishing bait and tackle, adjusted for the owners' estimated percentage of sales for saltwater fishing items. Figures are reported for all stores combined only due to sample size.

	All Stores (N = 11)			
Expenditure/Income Category	**Median**	**Mean**	**SE**	**Total (1,000)**
Inflow – Gross revenue	487,500	706,652	190,060	22,613
Inventory				
Bait	0	4,296	2,718	137
Fishing tackle	73,500	100,401	40,409	3,213
Fishing lines and nets	20,275	24,615	8,679	788
Accessories	3,326	8,124	3,040	260
Fishing apparel	142	2,995	1,640	96
Boat accessories and electronics	0	8,570	4,198	274
Spearfishing	731	21,491	11,691	688
Employee pay and benefits	54,000	54,728	14,227	1,751
Building rent/mortgage	16,351	25,237	8,559	808
Facility and equipment maintenance	4,158	5,880	1,968	188
Utility expenses	5,994	24,826	13,567	794
Marketing/advertising	4,320	7,548	2,867	242
Professional services (legal, accounting)	8,175	8,322	2,730	266
Insurance	2,997	8,937	2,488	286
Taxes and licensing fees	14,985	15,770	4,400	505
Shipping fees	5,994	19,480	13,517	623
Other costs	0	719	460	23
Net Returns	272,552	364,713		11,671

Among stores in Hawaii, 54.5 percent indicated that saltwater fishing–related sales accounted for 60 percent or more of their total gross sales (Figure HI_2). Fishing tackle sales (which included rods and reels, lures, terminal tackle, and tackle storage boxes and containers) accounted for 51.2 percent of saltwater fishing sales, at $362 thousand. Fishing lines and nets was the category with the second highest sales volume at $111 thousand, followed by spearfishing at $96.8 thousand, fishing tool accessories at $36.7 thousand, boat accessories and electronics at $31.5 thousand, bait at $31.2 thousand, and fishing apparel at $15.8 thousand.

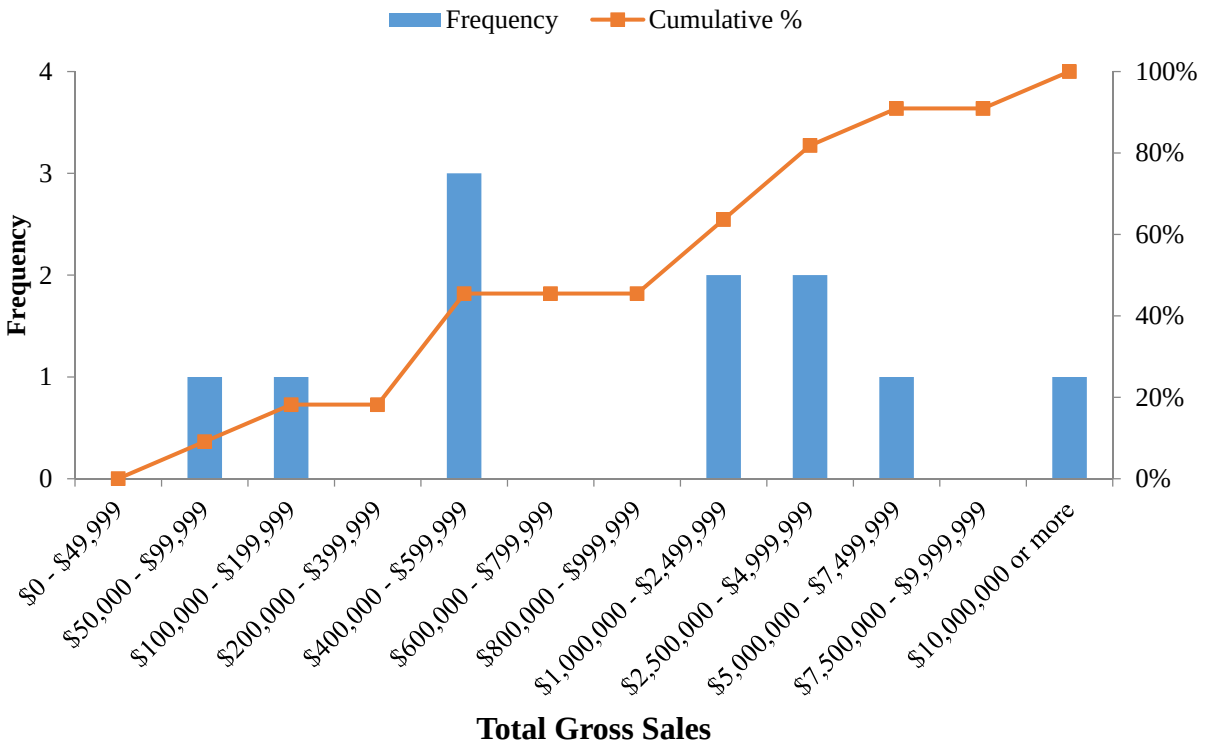


Figure HI_ 1. Frequency and cumulative percentage distribution of reported total gross sales of Hawaii retail stores that sell marine recreational fishing bait and tackle.

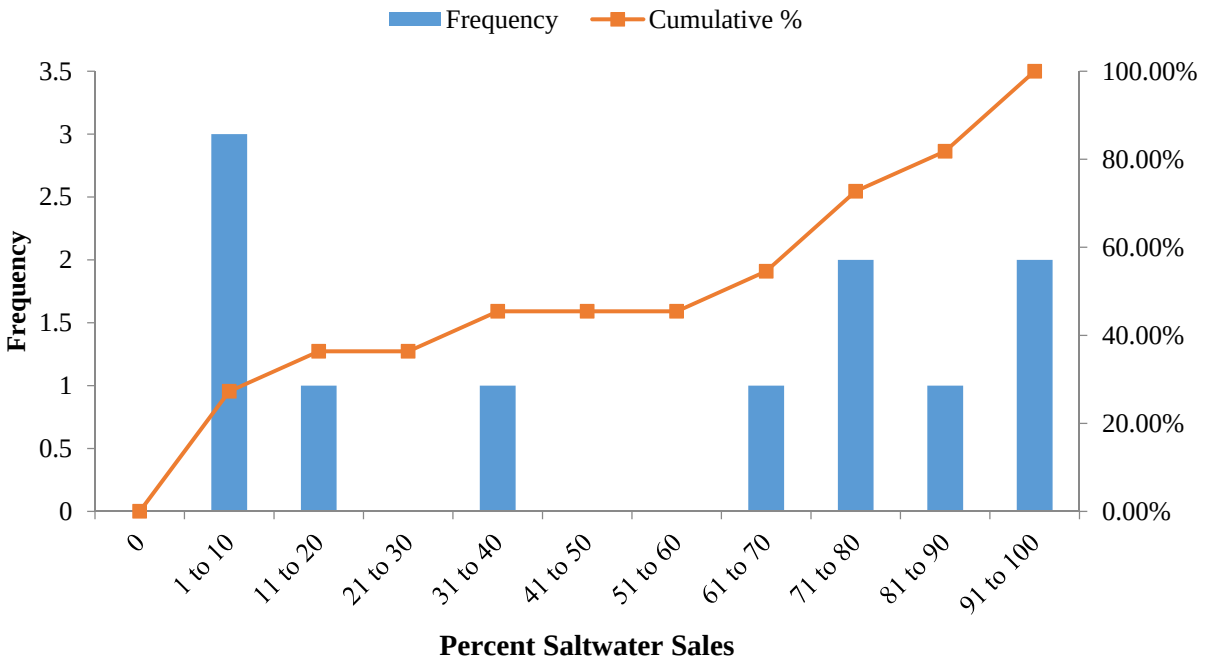


Figure HI_ 2. Frequency and cumulative percentage of Hawaii stores by the proportion of total gross sales consisting of sales of saltwater recreational fishing bait, tackle, and related equipment.

Inventory and Operating Expenses

On average, stores in Hawaii reported $1.81 million (63.1% of store earnings) in total operating costs, leaving them with $1.06 million in average total net revenues per store (Table HI_2). After adjusting for the percentage of Bait & Tackle store sales that were for saltwater fishing bait and tackle (24.7%), it was estimated that Hawaiia stores averaged $342 thousand in expenses supporting those sales, which extrapolated to all stores resulted in an estimate of $10.9 million in total inventory and operating expenses. In 2013, the average Hawaiia store had an average net cash flow of $365 thousand associated with sales of saltwater bait and tackle, which extrapolated out to an estimated $11.7 million in net revenues across all stores in Hawaii (Table HI_3). The largest expenditures for the average store were inventory ($72.4 thousand), employee pay and benefits ($54.7 thousand), and building rent and mortgage ($25.2 thousand) (Table HI_3). Other expenses included utility expenses ($24.8 thousand), shipping fees ($19.5 thousand), taxes and licensing fees ($15.8 thousand), insurance ($8.9 thousand), professional services ($8.3 thousand), marketing and advertising ($7.5 thousand), facility and equipment maintenance ($5.9 thousand), and other miscellaneous costs ($719) (Table HI_3).

Economic Contributions of Marine Bait and Tackle Retailers in Hawaii

Using the expenditure data described above, a regional input-output model was constructed in IMPLAN to estimate the economic contributions of retail store operations supported by 2013 sales of saltwater recreational fishing bait and tackle in Hawaii. In 2013, sales of saltwater bait and tackle from independent stores contributed an estimated $38.1 million in total sales output to Hawaiian businesses, $19.0 million in income to individuals working in Hawaii, and supported 285 jobs (full- and part-time) (Table HI_4). These contributions were the result of $22.6 million in sales of saltwater recreational fishing bait and tackle, indicating a multiplier ratio of 1.7 between direct sales and total sales output generated.

Table HI_ 4. Regional economic impacts (employment, labor income, and output) generated by retail store operations that are supported by the sale of marine recreational bait and tackle in Hawaii.

Business category	Total Saltwater Bait & Tackle Sales ($1,000)	Economic Contributions		
		Employment (Jobs)	Labor Income ($1,000)	Total Output ($1,000)
Total	22,613	285	18,957	38,060

The top 10 Hawaiia industries with the most employment supported by the operations of marine bait and tackle retailers are shown in Table HI_5. Naturally, individuals directly employed by retailers that sell bait and tackle made up the largest percentage (61.1%) of total employees supported. Following those directly employed by the industry, the highest numbers of jobs supported were in wholesale trade (13) and food services and drinking places (9) (Table HI_5). Top 10 industries supported primarily by store operational expenses likely include wholesale trade, commercial fishing, maintenance and repair of nonresidential structures, and employment services. Industries more likely to be supported by employee household spending were likely to include food services and drinking places, offices of physicians, private hospitals, and retail stores.

Table HI_ 5. Employment supported by retail stores that sell marine recreational fishing bait and tackle in Hawaii: Top 10 Industries.

Industry S	Employment (Jobs)
Retail stores selling bait and tackle	174
Wholesale trade businesses	13
Food services and drinking places	9
Maintenance and repair construction of nonresidential structures	5
Offices of physicians, dentists, and other health practitioners	4
US Postal Service	4
Private household operations	3
Private hospitals	3
Real estate establishments	3
Retail Stores - Food and beverage	3

Table HI_6 provides a summary of total output and employment impacts by industry type. After marine bait and tackle retailers, the broader industry types most supported by sales of saltwater bait and tackle were the service sector ($8.3 million in total sales, 64 jobs); retail and wholesale trade ($3.2 million in total sales, 26 jobs); and transportation, communications, and public utilities ($1.2 million in total sales, 5 jobs).

Table HI_ 6. Employment and total output supported by the sale of marine recreational bait and tackle in Hawaii by industry type.

	Bait and Tackle	
Industry Type	Employment (Jobs)	Total Output ($1,000)
Total	285	38,060
Marine bait and tackle retailers	174	22,613
Agriculture	3	129
Mining	0	16
Construction	5	960
Manufacturing	2	782
Transportation, communications, and public utilities	5	1,246
Retail and wholesale trade	26	3,174
Services	64	8,345
Government	6	797

Recreational Fisheries Supporting Bait and Tackle Sales in Hawaii

Store owners were asked to identify the three saltwater fisheries they believed generated the greatest sales of bait, tackle, and related equipment for their business in 2013. In Hawaii, offshore fisheries for pelagics (tuna, mahi, ono, billfish) were indicated to be a top generator of sales by a majority (63.6%) of store owners (Table HI_7). Store owners indicated that fisheries for bonefish and jacks (54.5%) and spearfishing (36.4%) were also major generators of sales.

Table HI_ 7. Saltwater recreational fisheries that generated the greatest sales of bait and tackle for retail stores in Hawaii as identified by store owners and/or managers. Percentages exceed 100% as respondents were asked to select the top three fisheries.

Fishery	N	%
Offshore trolling (tuna, mahi, ono, billfish)	7	63.6
Casting (bonefish, jacks)	6	54.5
Spearfishing	4	36.4
Reef trolling (papio, barracuda, etc.)	2	18.2
Shallow bottom fishing (moana, ulua, weke-ula)	2	18.2
Tuna hand-lining	1	9.1
Deep bottom fishing (opakapaka, onaga, etc.)	0	0.0
Kona crabbing	0	0.0
Other	2	18.2

Factors Affecting Bait and Tackle Sales in Hawaii

Store owners were presented with a list of 10 factors, and asked for their opinion on whether those factors had a positive or negative effect on their sales of recreational fishing bait and tackle in 2013 (Table HI_8). A majority of Hawaiia store owners indicated that other government regulations (54.6%) and changes in operating costs (50.0%) had negative effects on their sales of bait and tackle in 2013. Over 40 percent indicated that marine protected areas (45.5%), and the weather (45.5%) also had negative effects on their sales of bait and tackle in 2013.

Table HI_ 8. Retail store owner opinions on how outside factors affected their sales of recreational fishing bait and tackle in 2013.

	Respondent Rating (%)		
Factor	Negative	Positive	Neutral/Don't Know
Fisheries regulations	36.4	9.1	54.6
Fishery seasonal closures	20.0	10.0	70.0
Marine protected areas	45.5	9.1	45.5
Other government regulations	54.6	0.0	45.5
Status of the economy	36.4	45.5	18.2
Changes in fishing participation	27.3	36.4	36.4
Changes in fish stock status	27.3	18.2	54.6
Changes in operating costs	50.0	10.0	40.0
Internet sales of bait & tackle	72.7	0.0	27.3
Weather	45.5	18.2	36.4

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